**Offshore Schemes and Tax Evasion: the Role of Banks**

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**Online Appendix:**

**Appendix A1. List of offshore jurisdictions 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. Malta
1.5. China (Hong Kong)
1.6. Luxembourg
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. Malaysia (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

**Appendix A2. Measuring Tax Fraud from individual car values and reported incomes** (based on Braguinsky, Mityakov, and Liscovich (2014) and Braguinsky and Mityakov (2015))**.**

This approach to measuring income tax fraud at the level of individual bank starts from the observation that it is relatively easy to misreport earnings, but it is costly to drive an unregistered vehicle.[1] This difference is the key to the following identification strategy, which employs administrative data on wages and car values to measure hidden earnings. Specifically, Braguinsky et al. consider the following relation between reported and actual earnings:

$$\ln E^R_{i,t} = \ln E^*_{i,t} - T_{j(i,t),t} + \mathbf{g'_1 X}^{(1)}_{i,t} + \phi_1(t) + u^{(1)}_{i,t}, \quad \text{(A1)}$$

Here $E^R_{i,t}$ and $E^*_{i,t}$ are reported earnings of individual $i$ in year $t$ respectively. Reported earnings of individual $i$ working in year $t$ for a firm $j(i,t)$ differ from actual earnings depending on individual level controls (such as age, gender, position in the firm's hierarchy $\mathbf{X}^{(1)}_{i,t}$) as well as firm-level (time-varying) propensity to underreport incomes by a certain percentage ($T_{j,t}$) common for all employees of a given company in a given year. Firm-level tax evasion scores $T_{j,t}$ is the main variable of interest. Obviously one cannot use regression (A1) to estimate these scores, since actual earnings $E^*$ are not observed. To measure tax evasion at the firm level Braguinsky et al. bring additional information in the form of car values of employees. Namely, they consider the following log-linear relation between car values $C$ and actual incomes $E^*$:

$$\ln C_{i,t} = \lambda \ln E^*_{i,t} + \mathbf{g}'_2 \mathbf{X}^{(2)}_{i,t} + \phi_2(t) + u^{(2)}_{i,t}. \quad \text{(A2)}$$

To calculate $T_{j,t}$, Braguinsky et al. combine equations (A1) and (A2) to get:

$$\ln E^R_{i,t} - \frac{1}{\lambda} \ln C_{i,t} = -T_{j(i,t),t} + \mathbf{g'X}_{i,t} + \phi(t) + u_{i,t}. \quad \text{(A3)}$$

In calculation of tax evasion scores $T_{j,t}$ they employ the value of $\lambda$=0.35 which itself is estimated from subsample of employees of foreign multinationals from Western countries assuming that in those cases earnings are unlikely to be falsified and, thus, $\lambda$ can be estimated on this subsample using specification given in equation (A2).

[1] Moscow police routinely conduct traffic stops to check the paperwork. Unregistered vehicles are impounded and can be recovered only after paying a fine and producing the registration document.

## Appendix A3: Flexible functional form specifications.

Table A3.1: Tax evasion of non-financial companies and offshore operations: flexible functional form. Weighted offshore exposure measure

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| VARIABLES | Tax evasion | Mean reported incomes (log) | Mean car values (log) | Tax evasion | Mean reported incomes (log) | Mean car values (log) |
| | *(calculated from all employees)* | | | *(calculated from top management)* | | |
| 0%<offshore exposure<=1% | 0.173*** | -0.213*** | -0.020*** | 0.126*** | -0.194*** | -0.026*** |
| | (0.017) | (0.010) | (0.005) | (0.026) | (0.013) | (0.008) |
| 1%<offshore exposure<=10% | 0.407*** | -0.329*** | 0.021*** | 0.421*** | -0.333*** | 0.034*** |
| | (0.020) | (0.010) | (0.006) | (0.031) | (0.014) | (0.010) |
| 10%<offshore exposure<=20% | 0.499*** | -0.392*** | 0.029*** | 0.508*** | -0.421*** | 0.035*** |
| | (0.024) | (0.011) | (0.007) | (0.036) | (0.016) | (0.012) |
| 20%<offshore exposure<=50% | 0.562*** | -0.418*** | 0.045*** | 0.611*** | -0.434*** | 0.067*** |
| | (0.024) | (0.012) | (0.007) | (0.037) | (0.016) | (0.012) |
| offshore exposure>50% | 0.547*** | -0.415*** | 0.041*** | 0.601*** | -0.441*** | 0.061*** |
| | (0.028) | (0.013) | (0.009) | (0.044) | (0.018) | (0.015) |
| Log financial transactions | -0.129*** | 0.168*** | 0.021*** | -0.082*** | 0.196*** | 0.042*** |
| | (0.003) | (0.001) | (0.001) | (0.004) | (0.002) | (0.001) |
| Log international transactions | -0.062*** | 0.050*** | -0.003*** | -0.058*** | 0.054*** | -0.002* |
| (connected banks) | (0.002) | (0.001) | (0.001) | (0.004) | (0.002) | (0.001) |
| Observations | 234,310 | 234,767 | 234,767 | 123,554 | 123,921 | 123,921 |
| R-squared | 0.094 | 0.256 | 0.043 | 0.114 | 0.384 | 0.058 |

Notes: Dependent variables are indicated in respective columns. Tax evasion is calculated from the discrepancy between reported earnings and car values of company employees as described in Braguinsky and Mityakov (2015). Tax evasion, mean reported incomes, and car values are calculated over all employees (specifications (1)-(3)) and top managers (specifications (4)-(6)) of a given company. Top managers are defined as employees in the top 10% of a given company earnings distribution. Offshore variables are dummy variables that company offshore exposure falls between certain thresholds. Omitted category is offshore exposure equal to zero. Offshore exposure is calculated as weighted sum of offshore measures for all banks the company sends+receives wire transfers in a given year, with weights proportional to the amount of transfers through a given bank. Offshore measure for the banks is calculated from international transactions (Panel A) and balances on foreign accounts (Panel B). Offshore countries are defined as countries from groups 2 and 3 of offshores jurisdictions list of Russian Central Bank. Log total wire transfers is the log of total wire transfers (sent+received) by a company through all banks. Log international transactions is the weighted sum of (log) international transactions done by different banks a company deals with, with weights being proportional to the amount of transfers through a given bank. All specifications are estimated by OLS. Log # employees, year fixed effects are included but not reported. Robust standard errors are clustered at the company level. ***, **, And * indicate statistical significance at 1%, 5%, and 10% respectively.

Table A3.2: Tax evasion of non-financial companies and offshore operations: Alternative flexible functional form.

| VARIABLES | (1) Tax evasion | (2) Mean reported incomes (log) | (3) Mean car values (log) | (4) Tax evasion | (5) Mean reported incomes (log) | (6) Mean car values (log) |
|---|---|---|---|---|---|---|
| | *(calculated from all employees)* | | | *(calculated from top management)* | | |
| 0%< offshore exposure<=0.5% | 0.213*** | -0.268*** | -0.026*** | 0.185*** | -0.263*** | -0.031*** |
| | (0.018) | (0.010) | (0.005) | (0.028) | (0.014) | (0.009) |
| 0.5%< offshore exposure<=2% | 0.398*** | -0.327*** | 0.025** | 0.363*** | -0.335*** | 0.014 |
| | (0.031) | (0.015) | (0.010) | (0.047) | (0.021) | (0.016) |
| 2%< offshore exposure<=5% | 0.335*** | -0.266*** | 0.022* | 0.435*** | -0.283*** | 0.054*** |
| | (0.036) | (0.016) | (0.012) | (0.057) | (0.023) | (0.019) |
| 5%< offshore exposure<=10% | 0.501*** | -0.429*** | 0.019** | 0.595*** | -0.457*** | 0.052*** |
| | (0.028) | (0.013) | (0.009) | (0.044) | (0.018) | (0.014) |
| 10%< offshore exposure<=20% | 0.515*** | -0.411*** | 0.030*** | 0.546*** | -0.456*** | 0.037*** |
| | (0.024) | (0.011) | (0.007) | (0.037) | (0.016) | (0.012) |
| 20%< offshore exposure<=30% | 0.542*** | -0.400*** | 0.042*** | 0.612*** | -0.423*** | 0.068*** |
| | (0.032) | (0.015) | (0.010) | (0.050) | (0.022) | (0.017) |
| 30%< offshore exposure<=50% | 0.606*** | -0.435*** | 0.057*** | 0.667*** | -0.459*** | 0.081*** |
| | (0.030) | (0.014) | (0.010) | (0.047) | (0.020) | (0.016) |
| 50%< offshore exposure<=70% | 0.579*** | -0.453*** | 0.038*** | 0.637*** | -0.472*** | 0.061*** |
| | (0.033) | (0.015) | (0.011) | (0.051) | (0.021) | (0.017) |
| offshore exposure>70% | 0.470*** | -0.337*** | 0.041*** | 0.537*** | -0.398*** | 0.053*** |
| | (0.037) | (0.016) | (0.012) | (0.056) | (0.022) | (0.019) |
| Observations | 229,756 | 230,210 | 230,210 | 121,125 | 121,487 | 121,487 |
| R-squared | 0.094 | 0.259 | 0.043 | 0.114 | 0.387 | 0.058 |

Notes: Dependent variables are as indicated in respective columns. Tax evasion is calculated from the discrepancy between reported earnings and car values of a given company employees in a given year as described in Braguinsky and Mityakov (2015). Tax evasion, mean reported incomes, and car values are calculated over all employees (specifications (1)-(3)) and top managers (specifications (4)-(6)) of a given company. Top managers are defined as employees in the top 10% of a given company earnings distribution. Offshore variables are dummy variables that company offshore exposure falls between certain thresholds. Omitted category is offshore exposure equal to zero. Offshore exposure is calculated as offshore score of the bank the company deals with (sends+receives wire transfers) most often in a given year. Offshore measure for the banks is calculated from international transactions (Panel A) and balances on foreign accounts (Panel B). Offshore countries are defined as countries from groups 2 and 3 of offshores jurisdictions list published by Russian Central Bank. Log total wire transfers is the log of total wire transfers (both sent and received) by a given company in a given year (through all banks). All specifications are estimated by OLS. Log total wire transfers, log (connected bank) transaction with foreign countries, log # employees, and year fixed effects are included but not reported. Robust standard errors (in parentheses) are clustered at the company level. ***, **, And * indicate statistical significance at 1%, 5%, and 10% respectively.

Table A3.3: Tax evasion of non-financial companies and offshore operations: Alternative flexible functional form: cutoffs from percentiles.

| VARIABLES | (1) Tax evasion | (2) Mean reported incomes (log) | (3) Mean car values (log) | (4) Tax evasion | (5) Mean reported incomes (log) | (6) Mean car values (log) |
|---|---|---|---|---|---|---|
| | *(calculated from all employees)* | | | *(calculated from top management)* | | |
| 0%< offshore exposure<=0.5% | 0.212*** | -0.267*** | -0.026*** | 0.185*** | -0.262*** | -0.031*** |
| | (0.018) | (0.010) | (0.005) | (0.028) | (0.014) | (0.009) |
| 0.5%< offshore exposure<=1% | 0.459*** | -0.326*** | 0.048*** | 0.423*** | -0.326*** | 0.040 |
| | (0.050) | (0.022) | (0.016) | (0.076) | (0.032) | (0.026) |
| 1%< offshore exposure<=2.7% | 0.353*** | -0.302*** | 0.016 | 0.378*** | -0.315*** | 0.023 |
| | (0.032) | (0.015) | (0.010) | (0.050) | (0.021) | (0.017) |
| 2.7%< offshore exposure<=9.1% | 0.451*** | -0.374*** | 0.026*** | 0.521*** | -0.384*** | 0.052*** |
| | (0.029) | (0.013) | (0.009) | (0.044) | (0.018) | (0.015) |
| 9.1%< offshore exposure<=17% | 0.493*** | -0.408*** | 0.022*** | 0.553*** | -0.457*** | 0.038*** |
| | (0.024) | (0.012) | (0.007) | (0.037) | (0.016) | (0.012) |
| 17%< offshore exposure<=43% | 0.550*** | -0.412*** | 0.043*** | 0.603*** | -0.440*** | 0.062*** |
| | (0.024) | (0.012) | (0.008) | (0.037) | (0.016) | (0.012) |
| 43%< offshore exposure<=66% | 0.599*** | -0.454*** | 0.044*** | 0.669*** | -0.482*** | 0.070*** |
| | (0.030) | (0.014) | (0.010) | (0.047) | (0.020) | (0.016) |
| offshore exposure>66% | 0.491*** | -0.343*** | 0.047*** | 0.544*** | -0.393*** | 0.057*** |
| | (0.035) | (0.015) | (0.011) | (0.053) | (0.021) | (0.018) |
| Observations | 229,756 | 230,210 | 230,210 | 121,125 | 121,487 | 121,487 |
| R-squared | 0.094 | 0.259 | 0.043 | 0.114 | 0.387 | 0.058 |

Notes: Dependent variables are as indicated in respective columns. Tax evasion is calculated from the discrepancy between reported earnings and car values of a given company employees in a given year as described in Braguinsky and Mityakov (2015). Tax evasion, mean reported incomes, and car values are calculated over all employees (specifications (1)-(3)) and top managers (specifications (4)-(6)) of a given company. Top managers are defined as employees in the top 10% of a given company earnings distribution. Offshore variables are dummy variables that company offshore exposure falls between certain thresholds. Thresholds above 1% represent $10^{th}$ $25^{th}$ $50^{th}$ $75^{th}$ and $90^{th}$ percentiles in distribution of offshore exposure (conditional on being above 1%). Omitted category is offshore exposure equal to zero. Offshore exposure is calculated as offshore score of the bank the company deals with (sends+receives wire transfers) most often in a given year. Offshore measure for the banks is calculated from international transactions (Panel A) and balances on foreign accounts (Panel B). Offshore countries are defined as countries from groups 2 and 3 of offshores jurisdictions list published by Russian Central Bank. Log total wire transfers is the log of total wire transfers (both sent and received) by a given company in a given year (through all banks). All specifications are estimated by OLS. Log total wire transfers, log (connected bank) transaction with foreign countries, log # employees, and year fixed effects are included but not reported. Robust standard errors (in parentheses) are clustered at the company level. ***, **, And * indicate statistical significance at 1%, 5%, and 10% respectively.

## Appendix A4: Company tax evasion and offshore exposure: Alternative measure of company-bank relationships.

Table A4.1: Tax evasion of non-financial companies and offshore operations: Offshore measure from the bank with maximum send (receive) wire transfers.

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| | *Panel A: Company bank link from transactions received by the company* | | | | | |
| VARIABLES | Tax evasion | Mean reported incomes (log) | Mean car values (log) | Tax evasion | Mean reported incomes (log) | Mean car values (log) |
| | *(calculated from all employees)* | | | *(calculated from top management)* | | |
| Offshore exposure | 0.653*** | -0.413*** | 0.083*** | 0.787*** | -0.484*** | 0.117*** |
| | (0.033) | (0.014) | (0.011) | (0.051) | (0.020) | (0.017) |
| Log financial transactions | -0.060*** | 0.090*** | 0.014*** | -0.033*** | 0.110*** | 0.029*** |
| | (0.002) | (0.001) | (0.001) | (0.004) | (0.002) | (0.001) |
| Log international transactions | -0.041*** | 0.030*** | -0.004*** | -0.042*** | 0.034*** | -0.003*** |
| (connected banks) | (0.002) | (0.001) | (0.001) | (0.003) | (0.001) | (0.001) |
| Log # employees | -0.340*** | 0.101*** | -0.067*** | -0.448*** | 0.242*** | -0.076*** |
| | (0.004) | (0.002) | (0.001) | (0.006) | (0.003) | (0.002) |
| Observations | 210,585 | 210,951 | 210,951 | 110,681 | 110,976 | 110,976 |
| | *Panel B: Company bank link from transactions sent by the company* | | | | | |
| Offshore exposure | 0.708*** | -0.441*** | 0.090*** | 0.817*** | -0.495*** | 0.124*** |
| | (0.032) | (0.014) | (0.010) | (0.049) | (0.020) | (0.016) |
| Log financial transactions | -0.135*** | 0.179*** | 0.023*** | -0.082*** | 0.207*** | 0.046*** |
| | (0.003) | (0.002) | (0.001) | (0.004) | (0.002) | (0.001) |
| Log international transactions | -0.044*** | 0.031*** | -0.004*** | -0.044*** | 0.035*** | -0.003*** |
| (connected banks) | (0.002) | (0.001) | (0.001) | (0.003) | (0.001) | (0.001) |
| Log # employees | -0.275*** | 0.019*** | -0.075*** | -0.401*** | 0.153*** | -0.091*** |
| | (0.004) | (0.002) | (0.001) | (0.006) | (0.003) | (0.002) |
| Observations | 228,320 | 228,771 | 228,771 | 120,296 | 120,656 | 120,656 |

Notes: Dependent variables are as indicated in respective columns. Tax evasion is calculated from the discrepancy between reported earnings and car values of a given company employees in a given year as described in Braguinsky and Mityakov (2015). Tax evasion, mean reported incomes, and car values are calculated over all employees (specifications (1)-(3)) and top managers (specifications (4)-(6)) of a given company. Top managers are defined as employees in the top 10% of a given company earnings distribution. Offshore exposure is calculated as offshore measure for the bank the company deals most often (sends (Panel A) or receives (Panel B)) most wire transfers) in a given year; offshore measure for this bank is calculated from international transactions. Offshore countries are defined as countries from groups 2 and 3 of offshores jurisdictions list published by Russian Central Bank. Log total wire transfers is the log of total wire transfers (both sent and received) by a given company in a given year (through all banks). Log international transactions (connected bank) are log of total international transactions done by the bank from which company offshore exposure is calculated. All specifications are estimated by OLS. Year fixed effects are included (not reported). Robust standard errors (in parentheses) are clustered at the company level. ***, **, And * indicate statistical significance at 1%, 5%, and 10% respectively.

Table A4.2 Tax evasion of non-financial companies and offshore operations: Weighted offshore exposure measure on the basis of send (receive) wire transfers.

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| | *Panel A: Company-bank link from the volume of transactions received by the company* | | | | | |
| VARIABLES | Tax evasion | Mean reported incomes (log) | Mean car values (log) | Tax evasion | Mean reported incomes (log) | Mean car values (log) |
| | *(calculated from all employees)* | | | *(calculated from top management)* | | |
| Offshore exposure | 0.703*** | -0.442*** | 0.090*** | 0.860*** | -0.517*** | 0.132*** |
| | (0.034) | (0.015) | (0.011) | (0.053) | (0.021) | (0.018) |
| Log financial transactions | -0.060*** | 0.091*** | 0.014*** | -0.033*** | 0.111*** | 0.029*** |
| | (0.002) | (0.001) | (0.001) | (0.003) | (0.002) | (0.001) |
| Log international transactions | -0.045*** | 0.032*** | -0.004*** | -0.045*** | 0.037*** | -0.003*** |
| (connected banks) | (0.002) | (0.001) | (0.001) | (0.003) | (0.001) | (0.001) |
| Log # employees | -0.338*** | 0.100*** | -0.067*** | -0.447*** | 0.240*** | -0.076*** |
| | (0.004) | (0.002) | (0.001) | (0.006) | (0.003) | (0.002) |
| Observations | 214,425 | 214,792 | 214,792 | 112,737 | 113,034 | 113,034 |
| R-squared | 0.081 | 0.195 | 0.043 | 0.110 | 0.318 | 0.056 |
| | *Panel B: Company-bank link from the volume of transactions sent by the company* | | | | | |
| Offshore exposure | 0.766*** | -0.476*** | 0.098*** | 0.900*** | -0.533*** | 0.140*** |
| | (0.034) | (0.015) | (0.011) | (0.051) | (0.020) | (0.017) |
| Log financial transactions | -0.134*** | 0.178*** | 0.023*** | -0.081*** | 0.206*** | 0.046*** |
| | (0.003) | (0.002) | (0.001) | (0.004) | (0.002) | (0.001) |
| Log international transactions | -0.048*** | 0.033*** | -0.004*** | -0.047*** | 0.038*** | -0.004*** |
| (connected banks) | (0.002) | (0.001) | (0.001) | (0.003) | (0.001) | (0.001) |
| Log # employees | -0.275*** | 0.019*** | -0.075*** | -0.401*** | 0.152*** | -0.092*** |
| | (0.004) | (0.002) | (0.001) | (0.006) | (0.003) | (0.002) |
| Observations | 232,436 | 232,889 | 232,889 | 122,513 | 122,876 | 122,876 |
| R-squared | 0.092 | 0.254 | 0.043 | 0.112 | 0.381 | 0.058 |

Notes: Dependent variables are as indicated in respective columns. Tax evasion is calculated from the discrepancy between reported earnings and car values of a given company employees in a given year as described in Braguinsky and Mityakov (2015). Tax evasion, mean reported incomes, and car values are calculated over all employees (specifications (1)-(3)) and top managers (specifications (4)-(6)) of a given company. Top managers are defined as employees in the top 10% of a given company earnings distribution. Offshore exposure is calculated as a weighted sum of offshore measures for all banks the company deals with (sends (Panel A) or receives (Panel B) wire transfers) in a given year, weights are proportional to the amount sent/received. Offshore measures for these banks are calculated from international transactions. Offshore countries are defined as countries from groups 2 and 3 of offshores jurisdictions list published by Russian Central Bank. Log total wire transfers is the log of total transfers (sent/received) by a given company in a year. Log international transactions (connected banks) is a weighted sum of international transactions of all banks a company deals with, with weights proportional to the amount of wire transfers. All specifications are estimated by OLS. Year fixed effects are included but not reported. Robust standard errors (in parentheses) are clustered at the company level. ***, **, And * indicate statistical significance at 1%, 5%, and 10% respectively.

Table A4.3 Tax evasion of non-financial companies and offshore operations (flexible functional form):
Company offshore exposure measure from the offshore score of the bank with maximum wire transfers *received* by the company.

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| VARIABLES | Tax evasion | Mean reported incomes (log) | Mean car values (log) | Tax evasion | Mean reported incomes (log) | Mean car values (log) |
| | *(calculated from all employees)* | | | *(calculated from top management)* | | |
| 0%<offshore exposure<=1% | 0.235*** | -0.292*** | -0.028*** | 0.190*** | -0.293*** | -0.040*** |
| | (0.019) | (0.011) | (0.005) | (0.028) | (0.015) | (0.009) |
| 1%<offshore exposure<=10% | 0.392*** | -0.345*** | 0.014* | 0.461*** | -0.369*** | 0.036*** |
| | (0.023) | (0.011) | (0.007) | (0.035) | (0.016) | (0.012) |
| 10%<offshore exposure<=20% | 0.482*** | -0.396*** | 0.024*** | 0.505*** | -0.448*** | 0.025** |
| | (0.024) | (0.012) | (0.008) | (0.038) | (0.017) | (0.012) |
| 20%<offshore exposure<=50% | 0.524*** | -0.393*** | 0.043*** | 0.585*** | -0.426*** | 0.061*** |
| | (0.025) | (0.013) | (0.008) | (0.039) | (0.018) | (0.013) |
| offshore exposure>50% | 0.501*** | -0.392*** | 0.032*** | 0.564*** | -0.438*** | 0.048*** |
| | (0.027) | (0.012) | (0.009) | (0.042) | (0.017) | (0.014) |
| Log financial transactions | -0.060*** | 0.089*** | 0.014*** | -0.034*** | 0.110*** | 0.028*** |
| | (0.002) | (0.001) | (0.001) | (0.004) | (0.002) | (0.001) |
| Log international transactions | -0.064*** | 0.057*** | -0.001 | -0.060*** | 0.062*** | 0.001 |
| (connected bank) | (0.003) | (0.001) | (0.001) | (0.004) | (0.002) | (0.001) |
| Log # employees | -0.336*** | 0.100*** | -0.066*** | -0.443*** | 0.240*** | -0.075*** |
| | (0.004) | (0.002) | (0.001) | (0.006) | (0.003) | (0.002) |
| Observations | 210,585 | 210,951 | 210,951 | 110,681 | 110,976 | 110,976 |
| R-squared | 0.084 | 0.205 | 0.043 | 0.112 | 0.328 | 0.056 |

Notes: Dependent variables are as indicated in respective columns. Tax evasion is calculated from the discrepancy between reported earnings and car values of a given company employees in a given year as described in Braguinsky and Mityakov (2015). Tax evasion, mean reported incomes, and car values are calculated over all employees (specifications (1)-(3)) and top managers (specifications (4)-(6)) of a given company. Top managers are defined as employees in the top 10% of a given company earnings distribution. Offshore variables are dummy variables that company offshore exposure falls between certain thresholds. Omitted category is offshore exposure equal to zero. Offshore exposure is calculated as offshore score of the bank the company receives most wire transfers in a given year; log of international transactions (connected bank) is the log of international transactions done by this bank in a given year. Offshore measure for this bank is calculated from international transactions. Offshore countries are defined as countries from groups 2 and 3 of offshores jurisdictions list published by Russian Central Bank. Log total wire transfers is the log of total transfers (received) by a given company in a year. All specifications are estimated by OLS. Year fixed effects are included but not reported. Robust standard errors (in parentheses) are clustered at the company level. ***, **, And * indicate statistical significance at 1%, 5%, and 10% respectively.

Table A4.4 Tax evasion of non-financial companies and offshore operations (flexible functional form):
Offshore exposure measure from the offshore score of the bank with maximum wire transfers *sent* by the company.

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| VARIABLES | Tax evasion | Mean reported incomes (log) | Mean car values (log) | Tax evasion | Mean reported incomes (log) | Mean car values (log) |
| | *(calculated from all employees)* | | | *(calculated from top management)* | | |
| 0%<offshore exposure<=1% | 0.210*** | -0.255*** | -0.021*** | 0.181*** | -0.251*** | -0.028*** |
| | (0.018) | (0.010) | (0.005) | (0.027) | (0.014) | (0.009) |
| 1%<offshore exposure<=10% | 0.414*** | -0.348*** | 0.020*** | 0.482*** | -0.369*** | 0.043*** |
| | (0.022) | (0.010) | (0.007) | (0.034) | (0.014) | (0.011) |
| 10%<offshore exposure<=20% | 0.502*** | -0.390*** | 0.033*** | 0.527*** | -0.435*** | 0.038*** |
| | (0.024) | (0.011) | (0.007) | (0.037) | (0.016) | (0.012) |
| 20%<offshore exposure<=50% | 0.560*** | -0.401*** | 0.052*** | 0.626*** | -0.425*** | 0.076*** |
| | (0.025) | (0.012) | (0.008) | (0.038) | (0.017) | (0.012) |
| offshore exposure>50% | 0.515*** | -0.387*** | 0.040*** | 0.570*** | -0.419*** | 0.057*** |
| | (0.026) | (0.012) | (0.008) | (0.040) | (0.017) | (0.013) |
| Log financial transactions | -0.135*** | 0.176*** | 0.022*** | -0.083*** | 0.205*** | 0.044*** |
| | (0.003) | (0.001) | (0.001) | (0.004) | (0.002) | (0.001) |
| Log international transactions | -0.064*** | 0.055*** | -0.002*** | -0.062*** | 0.059*** | -0.001 |
| (connected bank) | (0.002) | (0.001) | (0.001) | (0.004) | (0.002) | (0.001) |
| Log # employees | -0.273*** | 0.020*** | -0.074*** | -0.397*** | 0.153*** | -0.090*** |
| | (0.004) | (0.002) | (0.001) | (0.006) | (0.003) | (0.002) |
| Observations | 228,320 | 228,771 | 228,771 | 120,296 | 120,656 | 120,656 |
| R-squared | 0.095 | 0.263 | 0.043 | 0.114 | 0.390 | 0.058 |

Notes: Dependent variables are as indicated in respective columns. Tax evasion is calculated from the discrepancy between reported earnings and car values of a given company employees in a given year as described in Braguinsky and Mityakov (2015). Tax evasion, mean reported incomes, and car values are calculated over all employees (specifications (1)-(3)) and top managers (specifications (4)-(6)) of a given company. Top managers are defined as employees in the top 10% of a given company earnings distribution. Offshore variables are dummy variables that company offshore exposure falls between certain thresholds. Omitted category is offshore exposure equal to zero. Offshore exposure is calculated as offshore score of the bank the company sends most wire transfers in a given year; log of international transactions (connected bank) is the log of international transactions done by this bank in a given year. Offshore measure for this bank is calculated from international transactions. Offshore countries are defined as countries from groups 2 and 3 of offshores jurisdictions list published by Russian Central Bank. Log total wire transfers is the log of total transfers (received) by a given company in a year. All specifications are estimated by OLS. Year fixed effects are included but not reported. Robust standard errors (in parentheses) are clustered at the company level. ***, **, And * indicate statistical significance at 1%, 5%, and 10% respectively.

## Appendix A5: Different sets of controls in tax evasion-offshore operations specification.

Table A5.1: Tax evasion: different sets of controls

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|---|
| VARIABLES | *Dependent variable: Company tax evasion* | | | | | | | |
| Offshore Exposure | 0.839*** | 0.792*** | 0.611*** | 0.727*** | 0.696*** | 0.624*** | 0.499*** | 0.595*** |
| | (0.034) | (0.032) | (0.032) | (0.032) | (0.028) | (0.027) | (0.027) | (0.027) |
| Log total wire transfers | | -0.120*** | | -0.123*** | | -0.119*** | | -0.123*** |
| | | (0.003) | | (0.003) | | (0.003) | | (0.003) |
| Log foreign transactions | | -0.294*** | -0.391*** | -0.288*** | | -0.294*** | -0.390*** | -0.287*** |
| of connected bank | | (0.004) | (0.004) | (0.004) | | (0.004) | (0.004) | (0.004) |
| Log # employees | | | -0.042*** | -0.045*** | | | -0.048*** | -0.053*** |
| | | | (0.002) | (0.002) | | | (0.002) | (0.002) |
| Constant | 19.182*** | 21.923*** | 20.907*** | 22.450*** | 19.179*** | 21.915*** | 20.809*** | 22.355*** |
| | (0.011) | (0.037) | (0.026) | (0.043) | (0.011) | (0.037) | (0.023) | (0.042) |
| Observations | 231,561 | 231,561 | 229,756 | 229,756 | 231,561 | 231,561 | 229,629 | 229,629 |
| R-squared | 0.006 | 0.087 | 0.078 | 0.091 | 0.006 | 0.086 | 0.077 | 0.090 |
| Notes | flows | flows | flows | flows | balances | balances | balances | balances |

Notes: Dependent variable is company tax evasion score, it is calculated from the discrepancy between reported earnings and car values of company employees in a given year as described in Braguinsky and Mityakov (2015). Offshore exposure is calculated as offshore measure for the bank the company deals most often (sends+receives most wire transfers) in a given year. Offshore measure for the banks is calculated from foreign transactions (specifications 1-4) and balances on foreign accounts (specifications 5-8). Offshore countries are defined as countries from groups 2 and 3 of offshores jurisdictions list published by Russian Central Bank. Log total wire transfers is the log of total wire transfers (both sent and received) by a given company in a given year (through all banks). Log bank foreign transactions is the log of total international transactions by the bank a company deals with the most in a given year. All specifications are estimated by OLS. Year fixed effects are included but not reported. Robust standard errors (in parentheses) are clustered at the company level. ***, **, And * indicate statistical significance at 1%, 5%, and 10% respectively.

Table A5.2: Reported incomes: different sets of controls

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|---|
| VARIABLES | *Dependent variable: Company employees mean reported incomes (log)* | | | | | | | |
| Offshore Exposure | -0.418*** | -0.504*** | -0.302*** | -0.457*** | -0.345*** | -0.401*** | -0.251*** | -0.379*** |
| | (0.015) | (0.014) | (0.014) | (0.014) | (0.013) | (0.012) | (0.012) | (0.012) |
| Log total wire transfers | | 0.162*** | | 0.164*** | | 0.161*** | | 0.164*** |
| | | (0.001) | | (0.001) | | (0.001) | | (0.001) |
| Log foreign transactions | | 0.039*** | 0.171*** | 0.034*** | | 0.038*** | 0.171*** | 0.033*** |
| of connected bank | | (0.002) | (0.002) | (0.002) | | (0.002) | (0.002) | (0.002) |
| Log # employees | | | 0.028*** | 0.032*** | | | 0.032*** | 0.039*** |
| | | | (0.001) | (0.001) | | | (0.001) | (0.001) |
| Constant | 5.639*** | 3.101*** | 4.779*** | 2.725*** | 5.640*** | 3.106*** | 4.845*** | 2.787*** |
| | (0.006) | (0.018) | (0.012) | (0.021) | (0.006) | (0.018) | (0.011) | (0.020) |
| Observations | 232,018 | 232,018 | 230,210 | 230,210 | 232,018 | 232,018 | 230,083 | 230,083 |
| R-squared | 0.096 | 0.240 | 0.155 | 0.248 | 0.096 | 0.240 | 0.154 | 0.248 |
| Notes | flows | flows | flows | flows | balances | balances | balances | balances |

Notes: Dependent variable is mean reported incomes (log) of company employees. Offshore exposure is calculated as offshore measure for the bank the company deals most often (sends+receives most wire transfers) in a given year. Offshore measure for the banks is calculated from foreign transactions (specifications 1-4) and balances on foreign accounts (specifications 5-8). Offshore countries are defined as countries from groups 2 and 3 of offshores jurisdictions list published by Russian Central Bank. Log total wire transfers is the log of total wire transfers (both sent and received) by a given company in a given year (through all banks). Log bank foreign transactions is the log of total international transactions by the bank a company deals with the most in a given year. All specifications are estimated by OLS. Year fixed effects are included but not reported. Robust standard errors (in parentheses) are clustered at the company level. ***, **, And * indicate statistical significance at 1%, 5%, and 10% respectively.

Table A5.3: Car values: different sets of controls

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|---|
| VARIABLES | *Dependent variable: Company employees car values (log)* | | | | | | | |
| Offshore Exposure | 0.140*** | 0.096*** | 0.110*** | 0.090*** | 0.115*** | 0.074*** | 0.088*** | 0.071*** |
| | (0.010) | (0.010) | (0.010) | (0.010) | (0.009) | (0.008) | (0.009) | (0.009) |
| Log total wire transfers | | 0.022*** | | 0.021*** | | 0.022*** | | 0.021*** |
| | | (0.001) | | (0.001) | | (0.001) | | (0.001) |
| Log foreign transactions | | -0.074*** | -0.056*** | -0.074*** | | -0.074*** | -0.056*** | -0.074*** |
| of connected bank | | (0.001) | (0.001) | (0.001) | | (0.001) | (0.001) | (0.001) |
| Log # employees | | | -0.004*** | -0.004*** | | | -0.005*** | -0.004*** |
| | | | (0.001) | (0.001) | | | (0.001) | (0.001) |
| Constant | 8.113*** | 8.030*** | 8.343*** | 8.075*** | 8.113*** | 8.029*** | 8.334*** | 8.066*** |
| | (0.003) | (0.012) | (0.008) | (0.013) | (0.003) | (0.012) | (0.007) | (0.013) |
| Observations | 232,018 | 232,018 | 230,210 | 230,210 | 232,018 | 232,018 | 230,083 | 230,083 |
| R-squared | 0.023 | 0.042 | 0.038 | 0.042 | 0.023 | 0.042 | 0.038 | 0.042 |
| Notes | flows | flows | flows | flows | balances | balances | balances | balances |

Notes: Dependent variable is mean value of cars (log) of company employees. Offshore exposure is calculated as offshore measure for the bank the company deals most often (sends+receives most wire transfers) in a given year. Offshore measure for the banks is calculated from foreign transactions (specifications 1-4) and balances on foreign accounts (specifications 5-8). Offshore countries are defined as countries from groups 2 and 3 of offshores jurisdictions list published by Russian Central Bank. Log total wire transfers is the log of total wire transfers (both sent and received) by a given company in a given year (through all banks). Log bank foreign transactions is the log of total international transactions by the bank a company deals with the most in a given year. All specifications are estimated by OLS. Year fixed effects are included but not reported. Robust standard errors (in parentheses) are clustered at the company level. ***, **, And * indicate statistical significance at 1%, 5%, and 10% respectively.

Table A5.4: Tax evasion of top management: different sets of controls

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|---|
| VARIABLES | *Dependent variable: Company tax evasion (top management)* | | | | | | | |
| Offshore Exposure | 1.065*** | 0.906*** | 0.783*** | 0.845*** | 0.951*** | 0.763*** | 0.681*** | 0.735*** |
| | (0.051) | (0.049) | (0.049) | (0.049) | (0.043) | (0.041) | (0.041) | (0.041) |
| Log total wire transfers | | -0.071*** | | -0.075*** | | -0.071*** | | -0.075*** |
| | | (0.004) | | (0.004) | | (0.004) | | (0.004) |
| Log foreign transactions | | -0.415*** | -0.474*** | -0.409*** | | -0.414*** | -0.472*** | -0.407*** |
| of connected bank | | (0.006) | (0.005) | (0.006) | | (0.006) | (0.005) | (0.006) |
| Log # employees | | | -0.043*** | -0.045*** | | | -0.050*** | -0.053*** |
| | | | (0.003) | (0.003) | | | (0.003) | (0.003) |
| Constant | 17.728*** | 20.193*** | 19.787*** | 20.714*** | 17.719*** | 20.184*** | 19.691*** | 20.625*** |
| | (0.017) | (0.056) | (0.038) | (0.064) | (0.018) | (0.056) | (0.034) | (0.062) |
| Observations | 122,084 | 122,084 | 121,125 | 121,125 | 122,084 | 122,084 | 121,057 | 121,057 |
| R-squared | 0.008 | 0.108 | 0.107 | 0.111 | 0.009 | 0.108 | 0.107 | 0.111 |
| Notes | flows | flows | flows | flows | balances | balances | balances | balances |

Notes: Dependent variable is company tax evasion score for top management, it is calculated from the discrepancy between reported earnings and car values of a given company top 10% employees in a given year as described in Braguinsky and Mityakov (2015). Offshore exposure is calculated as offshore measure for the bank the company deals most often (sends+receives most wire transfers) in a given year. Offshore measure for the banks is calculated from foreign transactions (specifications 1-4) and balances on foreign accounts (specifications 5-8). Offshore countries are defined as countries from groups 2 and 3 of offshores jurisdictions list published by Russian Central Bank. Log total wire transfers is the log of total wire transfers (both sent and received) by a given company in a given year (through all banks). Log bank foreign transactions is the log of total international transactions by the bank a company deals with the most in a given year. All specifications are estimated by OLS. Year fixed effects are included but not reported. Robust standard errors (in parentheses) are clustered at the company level. ***, **, And * indicate statistical significance at 1%, 5%, and 10% respectively.

Table A5.5: Reported incomes of top management: different sets of controls

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|---|
| VARIABLES | *Dependent variable: Company employees mean reported incomes (log): top management* | | | | | | | |
| Offshore Exposure | -0.560*** | -0.568*** | -0.356*** | -0.517*** | -0.481*** | -0.449*** | -0.288*** | -0.425*** |
| | (0.023) | (0.020) | (0.021) | (0.020) | (0.020) | (0.017) | (0.018) | (0.017) |
| Log total wire transfers | | 0.189*** | | 0.191*** | | 0.189*** | | 0.192*** |
| | | (0.002) | | (0.002) | | (0.002) | | (0.002) |
| Log foreign transactions | | 0.174*** | 0.336*** | 0.170*** | | 0.174*** | 0.335*** | 0.169*** |
| of connected bank | | (0.003) | (0.003) | (0.003) | | (0.003) | (0.003) | (0.003) |
| Log # employees | | | 0.032*** | 0.037*** | | | 0.038*** | 0.045*** |
| | | | (0.001) | (0.001) | | | (0.002) | (0.001) |
| Constant | 6.222*** | 2.796*** | 4.745*** | 2.367*** | 6.225*** | 2.801*** | 4.811*** | 2.428*** |
| | (0.009) | (0.026) | (0.017) | (0.030) | (0.009) | (0.026) | (0.016) | (0.029) |
| Observations | 122,449 | 122,449 | 121,487 | 121,487 | 122,449 | 122,449 | 121,419 | 121,419 |
| R-squared | 0.063 | 0.369 | 0.273 | 0.378 | 0.063 | 0.368 | 0.273 | 0.377 |
| Notes | flows | flows | flows | flows | balances | balances | balances | balances |

Notes: Dependent variable is mean reported incomes (log) of top 10% (by reported income) of a given company employees. Offshore exposure is calculated as offshore measure for the bank the company deals most often (sends+receives most wire transfers) in a given year. Offshore measure for the banks is calculated from foreign transactions (specifications 1-4) and balances on foreign accounts (specifications 5-8). Offshore countries are defined as countries from groups 2 and 3 of offshores jurisdictions list published by Russian Central Bank. Log total wire transfers is the log of total wire transfers (both sent and received) by a given company in a given year (through all banks). Log bank foreign transactions is the log of total international transactions by the bank a company deals with the most in a given year. All specifications are estimated by OLS. Year fixed effects are included but not reported. Robust standard errors (in parentheses) are clustered at the company level. ***, **, And * indicate statistical significance at 1%, 5%, and 10% respectively.

Table A5.6: Car values (top management): different sets of controls

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|---|
| VARIABLES | *Dependent variable: Company employees car values (log): top management* | | | | | | | |
| Offshore Exposure | 0.191*** | 0.130*** | 0.162*** | 0.126*** | 0.177*** | 0.120*** | 0.148*** | 0.118*** |
| | (0.017) | (0.016) | (0.016) | (0.016) | (0.014) | (0.014) | (0.014) | (0.014) |
| Log total wire transfers | | 0.043*** | | 0.043*** | | 0.043*** | | 0.042*** |
| | | (0.001) | | (0.001) | | (0.001) | | (0.001) |
| Log foreign transactions | | -0.089*** | -0.051*** | -0.088*** | | -0.088*** | -0.051*** | -0.088*** |
| of connected bank | | (0.002) | (0.002) | (0.002) | | (0.002) | (0.002) | (0.002) |
| Log # employees | | | -0.004*** | -0.003*** | | | -0.005*** | -0.004*** |
| | | | (0.001) | (0.001) | | | (0.001) | (0.001) |
| Constant | 8.190*** | 7.843*** | 8.409*** | 7.881*** | 8.188*** | 7.841*** | 8.399*** | 7.871*** |
| | (0.005) | (0.018) | (0.013) | (0.021) | (0.005) | (0.018) | (0.011) | (0.020) |
| Observations | 122,449 | 122,449 | 121,487 | 121,487 | 122,449 | 122,449 | 121,419 | 121,419 |
| R-squared | 0.034 | 0.057 | 0.045 | 0.057 | 0.034 | 0.057 | 0.045 | 0.057 |
| Notes | flows | flows | flows | flows | balances | balances | balances | balances |

Notes: Dependent variable is mean value of cars (log) of top 10% of a given company employees. Offshore exposure is calculated as offshore measure for the bank the company deals most often (sends+receives most wire transfers) in a given year. Offshore measure for the banks is calculated from foreign transactions (specifications 1-4) and balances on foreign accounts (specifications 5-8). Offshore countries are defined as countries from groups 2 and 3 of offshores jurisdictions list published by Russian Central Bank. Log total wire transfers is the log of total wire transfers (both sent and received) by a given company in a given year (through all banks). Log bank foreign transactions is the log of total international transactions by the bank a company deals with the most in a given year. All specifications are estimated by OLS. Year fixed effects are included but not reported. Robust standard errors (in parentheses) are clustered at the company level. ***, **, And * indicate statistical significance at 1%, 5%, and 10% respectively.

## Appendix A6. Instrumental variables estimates for bank business model specifications:

Table A6.1: Arellano-Bond estimates

| VARIABLES | (1) Business loans/ assets, % | (2) | (3) Investment in securities/ assets, % | (4) | (5) Cash/assets, % | (6) |
|---|---|---|---|---|---|---|
| Offshore fraction | -10.796*** | | 2.345 | | 2.482 | |
| | (4.161) | | (4.671) | | (6.528) | |
| Offshore dummy | | -6.250** | | 1.839 | | 2.284 |
| | | (2.427) | | (2.870) | | (3.554) |
| Tax evasion | -0.858 | -0.842 | 0.719 | 0.436 | 4.394*** | 4.542** |
| | (0.910) | (0.945) | (1.376) | (1.466) | (1.640) | (1.793) |
| Observations | 701 | 701 | 408 | 408 | 408 | 408 |
| Weak identification stat: | 76.84 | 79.94 | 24.04 | 23.61 | 24.04 | 23.61 |
| Under-identification stat: | 59.63 | 58.33 | 29.27 | 27.85 | 29.27 | 27.85 |
| VARIABLES | (7) Business deposits/ liabilities, % | (8) | (9) HH deposits/ liabilities, % | (10) | (11) Interbank liabilities/ liabilities, % | (12) |
| Offshore fraction | -8.892 | | -5.997* | | 19.150*** | |
| | (6.776) | | (3.306) | | (4.376) | |
| Offshore dummy | | -5.427 | | -3.280** | | 12.698*** |
| | | (3.480) | | (1.663) | | (2.130) |
| Tax evasion | 4.112* | 4.394** | -0.847 | -0.789 | 0.197 | -0.014 |
| | (2.150) | (2.166) | (0.620) | (0.628) | (0.815) | (0.822) |
| Observations | 408 | 408 | 701 | 701 | 701 | 701 |
| Weak identification stat | 24.04 | 23.61 | 76.84 | 79.94 | 76.84 | 79.94 |
| Under-identification stat | 29.27 | 27.85 | 59.63 | 58.33 | 59.63 | 58.33 |
| VARIABLES | (13) Equity capital/assets, % | (14) | (15) Net interest margin, % | (16) | (17) Return on assets (ROAA), % | (18) |
| Offshore fraction | -2.999 | | -0.340 | | 0.108 | |
| | (4.063) | | (0.831) | | (0.415) | |
| Offshore dummy | | 0.309 | | 0.241 | | -0.113 |
| | | (2.303) | | (0.502) | | (0.254) |
| Tax evasion | 0.166 | -0.016 | -0.787*** | -0.832*** | -0.367*** | -0.357*** |
| | (0.846) | (0.870) | (0.245) | (0.253) | (0.119) | (0.121) |
| Observations | 701 | 701 | 408 | 408 | 408 | 408 |
| Weak identification stat: | 76.84 | 79.94 | 24.04 | 23.61 | 24.04 | 23.61 |
| Under-identification stat: | 59.63 | 58.33 | 29.27 | 27.85 | 29.27 | 27.85 |

Notes: See notes for Table A6.2 below.

Table A6.2 Tax office dummies IV estimates:

| VARIABLES | (1) Business loans/assets, % | (2) | (3) Invstment in securities/ assets, % | (4) | (5) Cash/assets, % | (6) |
|---|---|---|---|---|---|---|
| Offshore fraction | -17.412** | | 3.038 | | 7.218 | |
| | (6.772) | | (6.795) | | (7.833) | |
| Offshore dummy | | -8.649** | | -0.291 | | 9.864** |
| | | (3.496) | | (3.478) | | (4.774) |
| Observations | 1,219 | 1,219 | 897 | 897 | 897 | 897 |
| Weak identification: | 5.128 | 13.27 | 7.274 | 13.90 | 7.274 | 13.90 |
| Under-identification: | 93.94 | 109.4 | 82.58 | 93.36 | 82.58 | 93.36 |
| J-statistic | 97.60 | 108.9 | 60.08 | 60.85 | 79.71 | 79.03 |
| VARIABLES | (7) Business deposits/ liabilities, % | (8) | (9) HH deposits/ liabilities, % | (10) | (11) Interbank liabilities/ liabilities, % | (12) |
| Offshore fraction | -21.751** | | -10.314** | | 18.108*** | |
| | (8.854) | | (4.632) | | (5.845) | |
| Offshore dummy | | -6.095 | | -7.192*** | | 14.661*** |
| | | (5.066) | | (2.268) | | (3.068) |
| Observations | 897 | 897 | 1,219 | 1,219 | 1,219 | 1,219 |
| Weak identification: | 7.274 | 13.90 | 5.128 | 13.27 | 5.128 | 13.27 |
| Under-identification: | 82.58 | 93.36 | 93.94 | 109.4 | 93.94 | 109.4 |
| J-statistic | 66.34 | 73.41 | 112.5 | 115.1 | 101.4 | 86.27 |
| VARIABLES | (13) Equity capital/assets, % | (14) | (15) Net interest margin, % | (16) | (17) Return on assets(ROAA) | (18) |
| Offshore fraction | 5.792 | | -1.739 | | -0.925 | |
| | (6.812) | | (1.319) | | (0.604) | |
| Offshore dummy | | 3.050 | | -0.465 | | -1.334*** |
| | | (3.488) | | (0.725) | | (0.369) |
| Observations | 1,219 | 1,219 | 888 | 888 | 888 | 888 |
| Weak identification: | 5.128 | 13.27 | 7.411 | 14.12 | 7.411 | 14.12 |
| Under-identification: | 93.94 | 109.4 | 82.41 | 94.17 | 82.41 | 94.17 |
| J-statistic | 103.3 | 107.2 | 66.55 | 68.37 | 73.07 | 61.18 |

Notes for tables A6.1,A6.2: Dependent variables are as indicated in respective columns. All variables are expressed as a fraction of assets/liabilities in percent. Business loans, household deposits, equity capital, and assets and liabilities data are taken from Banks-Rate agency for 2000-2003. Investment in securities, cash holdings, business deposits are taken from balance sheet reports to the Central Bank (Form 101) for 2000-2002. Return on assets is constructed as the ratio of profits to average assets. Net interest margin is constructed as a ratio of net interest income to bank assets. Profits and net interest income are taken from bank income statement reports to the Central Bank (Form 102) for 2000-2003. Offshore fraction is a fraction of total international transactions through offshore countries of a given Russian bank relative to total transactions through all foreign accounts of this bank. Offshore countries are defined as countries from groups 2 and 3 of offshores jurisdictions list published by Russian Central Bank. Offshore dummy is a dummy variable for whether a bank had positive volume of transactions with offshore countries in a given year. Tax evasion scores are calculated from the discrepancy between car values and reported incomes as described in Braguinsky and Mityakov (2015). All specifications include bank size (log of assets). In addition, specifications with offshore fraction include log of total international transactions. Year fixed effects are included in all specifications. All specifications are estimated by IV with offshore variables and tax evasion scores treated as endogenous. In Table A6.1 lagged values of endogenous variables are used as instruments. In Table A6.2 tax office dummies to which a given bank reports to are used as instruments. Robust standard errors (in parentheses) are clustered at the bank level. ***, **, And * indicate statistical significance at 1%, 5%, and 10% respectively.

## Appendix A7. Robustness checks for bank business model specifications:

Table A7.1 Different controls in bank business model: no log international transactions both in the regression and sample restriction

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| VARIABLES | Business loans/ assets, % | | Investment in securities/ assets, % | | Cash/assets, % | |
| Offshore fraction | -8.416*** | | 0.700 | | 10.661*** | |
| | (2.128) | | (2.538) | | (3.659) | |
| Offshore dummy | | -5.143*** | | 1.112 | | 5.907*** |
| | | (1.423) | | (1.562) | | (1.986) |
| Tax evasion | -0.545 | -0.519 | -0.106 | -0.130 | 0.979* | 0.924* |
| | (0.340) | (0.341) | (0.406) | (0.406) | (0.510) | (0.512) |
| Observations | 1,148 | 1,148 | 788 | 788 | 788 | 788 |
| R-squared | 0.239 | 0.239 | 0.037 | 0.038 | 0.129 | 0.123 |
| | (7) | (8) | (9) | (10) | (11) | (12) |
| VARIABLES | Business deposits/ liabilities, % | | HH deposits/ liabilities, % | | Interbank liabilities/ liabilities, % | |
| Offshore fraction | -4.007 | | -4.361** | | 16.728*** | |
| | (3.108) | | (1.795) | | (2.753) | |
| Offshore dummy | | -3.523* | | -2.601** | | 11.594*** |
| | | (2.017) | | (1.037) | | (1.499) |
| Tax evasion | 0.505 | 0.562 | -0.185 | -0.174 | 0.100 | 0.014 |
| | (0.571) | (0.567) | (0.244) | (0.245) | (0.321) | (0.313) |
| Observations | 788 | 788 | 1,148 | 1,148 | 1,148 | 1,148 |
| R-squared | 0.089 | 0.091 | 0.043 | 0.042 | 0.114 | 0.135 |
| | (13) | (14) | (15) | (16) | (17) | (18) |
| VARIABLES | Equity capital/assets, % | | Net interest margin, % | | Return on assets (ROAA) | |
| Offshore fraction | -1.843 | | -1.270*** | | -0.498*** | |
| | (2.215) | | (0.438) | | (0.192) | |
| Offshore dummy | | 0.818 | | -0.491 | | -0.333** |
| | | (1.430) | | (0.303) | | (0.141) |
| Tax evasion | 0.256 | 0.213 | -0.242*** | -0.242*** | -0.101*** | -0.097*** |
| | (0.389) | (0.389) | (0.068) | (0.068) | (0.032) | (0.031) |
| Observations | 1,148 | 1,148 | 782 | 782 | 782 | 782 |
| R-squared | 0.132 | 0.131 | 0.062 | 0.053 | 0.044 | 0.045 |

Notes: Dependent variables are as indicated in respective columns. All variables are expressed as a fraction of assets/liabilities in percent. Business loans, household deposits, equity capital, and assets and liabilities data are taken from Banks-Rate agency for 2000-2003. Investment in securities, cash holdings, business deposits are taken from balance sheet reports to the Central Bank (Form 101) for 2000-2002. Return on assets is constructed as the ratio of profits to average assets. Net interest margin is constructed as a ratio of net interest income to bank assets. Profits and net interest income are taken from bank income statement reports to the Central Bank (Form 102) for 2000-2003. Offshore fraction is a fraction of total international transactions through offshore countries of a given Russian bank relative to total transactions through all foreign accounts of this bank. Offshore countries are defined as countries from groups 2 and 3 of offshores jurisdictions list published by Russian Central Bank. Offshore dummy is a dummy variable for whether a bank had positive volume of transactions with offshore countries in a given year. Sample contains bank-year observations with available data on dependent variables. Offshore fraction and offshore dummy for countries not interacting with foreign countries are set at zeros. All specifications include bank size (log of assets). In addition,

specifications with offshore fraction include log of total transactions through foreign countries. Year fixed effects are included as well in all specifications. All specifications are estimated by OLS Robust standard errors (in parentheses) are clustered at the bank level. ***, **, And * indicate statistical significance at 1%, 5%, and 10% respectively.

Table A7.2: Income from commissions and fees: ratios to assets

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| VARIABLES | Total commissions and fees/ assets, % | | | Wire transfer fees/ assets, % | | |
| Offshore fraction | 0.474 | 0.202 | | 0.050 | -0.076 | |
| | (0.415) | (0.398) | | (0.159) | (0.152) | |
| Offshore dummy | | | 0.223 | | | 0.150 |
| | | | (0.227) | | | (0.098) |
| Tax evasion | | 0.053 | 0.048 | | 0.032 | 0.026 |
| | | (0.060) | (0.059) | | (0.022) | (0.022) |
| Size | Yes | Yes | Yes | Yes | Yes | Yes |
| Deposits controls | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 899 | 724 | 724 | 899 | 724 | 724 |
| R-squared | 0.087 | 0.097 | 0.099 | 0.109 | 0.135 | 0.139 |
| | (10) | (11) | (12) | (13) | (14) | (15) |
| VARIABLES | International wire transfer fees/ assets, % | | | Domestic wire transfer fees/ assets, % | | |
| Offshore fraction | 0.054** | 0.046 | | -0.103 | -0.146 | |
| | (0.027) | (0.029) | | (0.142) | (0.142) | |
| Offshore dummy | | | 0.090*** | | | 0.001 |
| | | | (0.018) | | | (0.089) |
| Tax evasion | | 0.003 | 0.001 | | 0.026 | 0.025 |
| | | (0.004) | (0.004) | | (0.020) | (0.020) |
| Size | Yes | Yes | Yes | Yes | Yes | Yes |
| Deposits controls | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 899 | 724 | 724 | 899 | 724 | 724 |
| R-squared | 0.047 | 0.043 | 0.093 | 0.101 | 0.122 | 0.120 |

Notes: Dependent variables are as indicated in respective columns. All variables are taken from bank income statement reports to the Central Bank over 2000-2002 (CB Form 102). Total commissions and fees represent income from all commissions and fees. Total transfer fees represent revenue from wire transfer fees. International wire transfer fees represent revenue from wire transfer fees paid in foreign currency. Domestic wire transfer fees represent wire transfer fees paid in domestic currency (rubles). All variables are expressed as a percentage of assets (in percent). All figures are reported in rubles deflated by CPI. Sample includes only banks that have positive amount of international transactions. Offshore fraction is a fraction of total international transactions through offshore countries of a given Russian bank relative to total transactions through all foreign accounts of this bank. Offshore countries are defined as countries from groups 2 and 3 of offshores jurisdictions list published by Russian Central Bank. Offshore dummy is a dummy variable for whether a bank had positive volume of transactions with offshore countries in a given year. All specifications include bank size (log of assets), log of household and business deposits, and year fixed effects (not reported). All specifications are estimated by OLS Robust standard errors (in parentheses) are clustered at the bank level. ***, **, And * indicate statistical significance at 1%, 5%, and 10% respectively.

Table A7.3: Flexible functional form for bank business model. Sample includes banks with no international operations.

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
|---|---|---|---|---|---|---|---|---|---|
| VARIABLES | Bus. Loans/ assets, % | Investmnt securities/ assets, % | Cash/ assets, % | Business deposits/ liabs, % | HH deposits/ liabilities | Due other banks/ liabilities | Equity/ assets % | NIM % | ROAA % |
| 0%<Offshore fraction<=1% | -2.455 | 2.812 | -0.685 | -2.836 | -0.779 | 4.240** | 5.838** | 0.427 | 0.154 |
| | (2.569) | (2.806) | (3.161) | (3.204) | (1.381) | (2.090) | (2.499) | (0.608) | (0.214) |
| 1%<Offshore fraction<=10% | -2.436 | 1.761 | 2.290 | -0.903 | -0.630 | 8.504*** | 0.819 | 0.031 | -0.291 |
| | (1.988) | (2.580) | (3.223) | (3.299) | (1.441) | (2.509) | (2.171) | (0.467) | (0.196) |
| 10%<Offshore fraction<=20% | -1.223 | -1.353 | 1.252 | -7.601*** | -0.987 | 12.184*** | 3.839* | 0.112 | -0.503** |
| | (2.882) | (2.725) | (3.455) | (2.607) | (1.632) | (2.342) | (2.202) | (0.557) | (0.220) |
| 20%<Offshore fraction<=50% | -4.917** | -0.367 | 3.910 | -3.690 | -2.834** | 13.264*** | 0.955 | -0.337 | -0.344 |
| | (1.998) | (2.590) | (3.339) | (2.941) | (1.313) | (2.252) | (2.254) | (0.499) | (0.255) |
| Offshore fraction>=50% | -7.270*** | 0.799 | 8.919*** | -5.722** | -3.261** | 15.794*** | -1.232 | -0.860** | -0.484*** |
| | (1.811) | (2.020) | (3.039) | (2.705) | (1.425) | (2.288) | (1.740) | (0.353) | (0.151) |
| Tax evasion | -0.689** | -0.285 | 1.388*** | 0.399 | -0.092 | 0.196 | 0.113 | -0.219*** | -0.098*** |
| | (0.287) | (0.374) | (0.478) | (0.533) | (0.229) | (0.270) | (0.358) | (0.067) | (0.029) |
| Size | 5.485*** | -2.036*** | -4.697*** | -5.168*** | -0.617* | 2.083*** | -5.052*** | -0.020 | 0.006 |
| | (0.452) | (0.526) | (0.663) | (0.701) | (0.334) | (0.370) | (0.470) | (0.108) | (0.049) |
| Observations | 1,435 | 999 | 999 | 999 | 1,435 | 1,435 | 1,435 | 986 | 986 |
| R-squared | 0.238 | 0.033 | 0.130 | 0.134 | 0.026 | 0.186 | 0.161 | 0.049 | 0.049 |

Notes: Dependent variables are as indicated in respective columns. All variables are expressed as a fraction of assets/liabilities in percent. Business loans, household deposits, equity capital, and assets and liabilities data are taken from Banks-Rate agency for 2000-2003. Investment in securities, cash holdings, business deposits are taken from balance sheet reports to the Central Bank (CB Form 101) for 2000-2002. Return on assets is constructed as the ratio of profits to average assets. Net interest margin is constructed as a ratio of net interest income to bank assets. Profits and net interest income are taken from bank income statement reports to the Central Bank (CB Form 102) for 2000-2003. Dummy variables indicate whether offshore fraction falls between particular thresholds. Offshore fraction is a ratio of international transactions through offshore countries of a given Russian bank relative to total transactions through all foreign accounts of this bank. Offshore fraction is assumed to be zero for banks not engaged in international operations. Offshore countries are defined as countries from groups 2 and 3 of offshores jurisdictions list published by Russian Central Bank. All specifications include bank size (log of assets). Year fixed effects are included as well in all specifications. All specifications are estimated by OLS Robust standard errors (in parentheses) are clustered at the bank level. ***, **, And * indicate statistical significance at 1%, 5%, and 10% respectively.

Table A7.4 Other sources of bank income: Income from foreign exchange operations and incomes from other commissions and fees.

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
|---|---|---|---|---|---|---|---|---|---|
| VARIABLES | Net income from forex/assets, % | | | Log other commissions and fees | | | Other commissions, fees/assets, % | | |
| Offshore fraction | -0.175 | -0.290** | | 0.141 | 0.083 | | 0.160 | 0.090 | |
| | (0.147) | (0.147) | | (0.226) | (0.252) | | (0.222) | (0.228) | |
| Offshore dummy | | | -0.051 | | | 0.246 | | | 0.071 |
| | | | (0.100) | | | (0.151) | | | (0.139) |
| Tax evasion | | 0.010 | 0.012 | | 0.001 | 0.002 | | 0.008 | 0.010 |
| | | (0.023) | (0.023) | | (0.038) | (0.037) | | (0.037) | (0.037) |
| Size controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Deposits controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 899 | 724 | 724 | 898 | 725 | 725 | 899 | 724 | 724 |
| R-squared | 0.072 | 0.078 | 0.070 | 0.529 | 0.511 | 0.504 | 0.047 | 0.046 | 0.043 |

Notes: Dependent variables are as indicated in respective columns. All variables are taken from bank income statement reports to the Central Bank over 2000-2002 (CB Form 102). Net income from forex represents income received by the bank on all operations with foreign currency exchange. Other commissions and fees represent all commissions and fees with the exception of wire transfer fees. All figures are reported in rubles deflated by CPI. Sample includes only banks that have positive amount of international transactions. Offshore fraction is a ratio international transactions through offshore countries of a given Russian bank relative to total international transactions of this bank. Offshore countries are defined as countries from groups 2 and 3 of offshores jurisdictions list published by Russian Central Bank. Offshore dummy is a dummy variable for whether a bank had positive volume of transactions with offshore countries in a given year. All specifications include bank size (log of assets), log of household and business deposits, and year fixed effects (not reported). All specifications are estimated by OLS Robust standard errors (in parentheses) are clustered at the bank level. ***, **, And * indicate statistical significance at 1%, 5%, and 10% respectively.

## Appendix A8: Robustness to outliers

Table A8.1: Offshore operations, tax evasion, and bank business model: OLS estimation: no winsorization.

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| VARIABLES | Business loans/ assets, % | | Investment in securities/ assets, % | | Cash/assets, % | |
| Offshore fraction | -7.367*** | | 2.401 | | 7.014* | |
| | (2.368) | | (3.224) | | (3.664) | |
| Offshore dummy | | -5.651*** | | 0.857 | | 6.244*** |
| | | (1.596) | | (1.965) | | (2.128) |
| Tax evasion | -0.545 | -0.552 | -0.558 | -0.655 | 0.850 | 0.889 |
| | (0.390) | (0.396) | (0.679) | (0.704) | (0.557) | (0.591) |
| Observations | 1,072 | 1,072 | 741 | 741 | 741 | 741 |
| R-squared | 0.220 | 0.209 | 0.032 | 0.023 | 0.168 | 0.124 |
| | (7) | (8) | (9) | (10) | (11) | (12) |
| VARIABLES | Business deposits/ liabilities, % | | HH deposits/ liabilities, % | | Interbank liabilities/ liabilities, % | |
| Offshore fraction | -3.808 | | -5.459*** | | 16.294*** | |
| | (3.150) | | (2.038) | | (3.456) | |
| Offshore dummy | | -3.151 | | -3.416*** | | 12.964*** |
| | | (2.108) | | (1.117) | | (1.846) |
| Tax evasion | 0.328 | 0.414 | -0.063 | -0.053 | 0.203 | 0.139 |
| | (0.639) | (0.629) | (0.289) | (0.287) | (0.399) | (0.394) |
| Observations | 741 | 741 | 1,072 | 1,072 | 1,072 | 1,072 |
| R-squared | 0.070 | 0.071 | 0.062 | 0.060 | 0.117 | 0.126 |
| | (13) | (14) | (15) | (16) | (17) | (18) |
| VARIABLES | Equity capital/assets, % | | Net interest margin, % | | Return on assets (ROAA),% | |
| Offshore fraction | -1.863 | | -0.624** | -0.624** | -0.624** | |
| | (2.509) | | (0.312) | (0.312) | (0.312) | |
| Offshore dummy | | -0.080 | | | | -0.783** |
| | | (1.590) | | | | (0.368) |
| Tax evasion | 0.257 | 0.239 | -0.123 | -0.123 | -0.123 | -0.122 |
| | (0.445) | (0.448) | (0.075) | (0.075) | (0.075) | (0.074) |
| Observations | 1,072 | 1,072 | 736 | 736 | 736 | 736 |
| R-squared | 0.129 | 0.128 | 0.014 | 0.014 | 0.014 | 0.010 |

Notes: Dependent variables are as indicated in respective columns. All variables are expressed as a fraction of assets/liabilities in percent. Business loans, household deposits, equity capital, and assets and liabilities data are taken from Banks-Rate agency for 2000-2003. Investment in securities, cash holdings, business deposits are taken from balance sheet reports to the Central Bank (Form 101) for 2000-2002. Return on assets is constructed as the ratio of profits to average assets. Net interest margin is constructed as a ratio of net interest income to bank assets. Profits and net interest income are taken from bank income statement reports to the Central Bank (Form 102) for 2000-2003. Offshore fraction is ratio of international transactions through offshore countries of a given Russian bank relative to total transactions through all foreign accounts of this bank. Offshore countries are defined as countries from groups 2 and 3 of offshores jurisdictions list published by Russian Central Bank. Offshore dummy is a dummy variable for whether a bank had positive volume of transactions with offshore countries in a given year. All specifications include bank size (log of assets). In addition, specifications with offshore fraction include log of total transactions through foreign countries. Year fixed effects are included as well in all specifications. All specifications are estimated by OLS

Robust standard errors (in parentheses) are clustered at the bank level. ***, **, And * indicate statistical significance at 1%, 5%, and 10% respectively.

Table A8.2: Offshore operations, tax evasion, and bank business model: OLS estimation: winsorization at 2.5-97.5 percentiles.

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| VARIABLES | Business loans/ assets, % | | Investment in securities/ assets, % | | Cash/assets, % | |
| Offshore fraction | -7.181*** | | 3.640 | | 6.649* | |
| | (2.368) | | (2.674) | | (3.585) | |
| Offshore dummy | | -5.541*** | | 1.200 | | 6.135*** |
| | | (1.538) | | (1.628) | | (2.050) |
| Tax evasion | -0.511 | -0.509 | -0.054 | -0.139 | 0.900* | 0.931 |
| | (0.380) | (0.388) | (0.410) | (0.431) | (0.532) | (0.567) |
| Observations | 1,072 | 1,072 | 741 | 741 | 741 | 741 |
| R-squared | 0.227 | 0.218 | 0.058 | 0.031 | 0.175 | 0.130 |
| | (7) | (8) | (9) | (10) | (11) | (12) |
| VARIABLES | Business deposits/ liabilities, % | | HH deposits/ liabilities, % | | Interbank liabilities/ liabilities, % | |
| Offshore fraction | -4.269 | | -5.377*** | | 15.690*** | |
| | (3.167) | | (2.036) | | (3.062) | |
| Offshore dummy | | -2.871 | | -3.315*** | | 12.384*** |
| | | (2.058) | | (1.097) | | (1.650) |
| Tax evasion | 0.298 | 0.380 | -0.107 | -0.093 | 0.164 | 0.094 |
| | (0.638) | (0.626) | (0.277) | (0.277) | (0.354) | (0.348) |
| Observations | 741 | 741 | 1,072 | 1,072 | 1,072 | 1,072 |
| R-squared | 0.078 | 0.077 | 0.061 | 0.060 | 0.122 | 0.134 |
| | (13) | (14) | (15) | (16) | (17) | (18) |
| VARIABLES | Equity capital/assets, % | | Net interest margin, % | | Return on assets (ROAA),% | |
| Offshore fraction | -1.353 | | -1.023** | | -0.370* | |
| | (2.438) | | (0.484) | | (0.209) | |
| Offshore dummy | | 0.585 | | -0.514 | | -0.340** |
| | | (1.468) | | (0.327) | | (0.161) |
| Tax evasion | 0.290 | 0.226 | -0.258*** | -0.267*** | -0.124*** | -0.122*** |
| | (0.433) | (0.432) | (0.078) | (0.078) | (0.039) | (0.039) |
| Observations | 1,072 | 1,072 | 736 | 736 | 736 | 736 |
| R-squared | 0.130 | 0.126 | 0.064 | 0.048 | 0.044 | 0.041 |

Notes: Same as Table A8.1. All dependent variables are winsorized at 2.5 and 97.5 percentiles.

Table A8.3: Offshore operations, tax evasion, and bank business model: OLS estimation: winsorization at 1.5-98.5 percentiles.

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| VARIABLES | Business loans/ assets, % | | Investment in securities/ assets, % | | Cash/assets, % | |
| Offshore fraction | -7.218*** | | 3.654 | | 6.622* | |
| | (2.392) | | (2.677) | | (3.588) | |
| Offshore dummy | | -5.568*** | | 1.173 | | 6.106*** |
| | | (1.567) | | (1.646) | | (2.059) |
| Tax evasion | -0.533 | -0.534 | -0.073 | -0.160 | 0.894* | 0.931 |
| | (0.387) | (0.394) | (0.414) | (0.435) | (0.535) | (0.570) |
| Observations | 1,072 | 1,072 | 741 | 741 | 741 | 741 |
| R-squared | 0.223 | 0.214 | 0.058 | 0.030 | 0.176 | 0.130 |
| | (7) | (8) | (9) | (10) | (11) | (12) |
| VARIABLES | Business deposits/ liabilities, % | | HH deposits/ liabilities, % | | Interbank liabilities/ liabilities, % | |
| Offshore fraction | -4.171 | | -5.471*** | | 16.104*** | |
| | (3.165) | | (2.040) | | (3.285) | |
| Offshore dummy | | -2.959 | | -3.365*** | | 12.738*** |
| | | (2.076) | | (1.104) | | (1.749) |
| Tax evasion | 0.300 | 0.385 | -0.085 | -0.072 | 0.178 | 0.109 |
| | (0.639) | (0.627) | (0.282) | (0.281) | (0.374) | (0.368) |
| Observations | 741 | 741 | 1,072 | 1,072 | 1,072 | 1,072 |
| R-squared | 0.076 | 0.075 | 0.062 | 0.061 | 0.119 | 0.130 |
| | (13) | (14) | (15) | (16) | (17) | (18) |
| VARIABLES | Equity capital/assets, % | | Net interest margin, % | | Return on assets (ROAA),% | |
| Offshore fraction | -1.444 | | -0.997* | | -0.358* | |
| | (2.450) | | (0.508) | | (0.213) | |
| Offshore dummy | | 0.526 | | -0.507 | | -0.332** |
| | | (1.473) | | (0.337) | | (0.169) |
| Tax evasion | 0.288 | 0.225 | -0.272*** | -0.281*** | -0.119*** | -0.118*** |
| | (0.446) | (0.445) | (0.083) | (0.083) | (0.041) | (0.041) |
| Observations | 1,072 | 1,072 | 736 | 736 | 736 | 736 |
| R-squared | 0.130 | 0.126 | 0.061 | 0.047 | 0.034 | 0.030 |

Notes: Same as Table A8.1. All dependent variables are winsorized at 1.5 and 98.5 percentiles

## Appendix A9. Alternative offshore lists.

Table A9.1: Bank business model and alternative offshore lists.

| VARIABLES | (1) Bus. loans/ assets, % | (2) Securities/ assets, % | (3) Cash/ assets, % | (4) Bus. depsts/ liabs, % | (5) HH depsts/ liabs, % | (6) Due other banks/liabs | (7) Equity/ assets, % | (8) NIM, % | (9) ROAA, % |
|---|---|---|---|---|---|---|---|---|---|
| | | | | *Panel A: OECD offshore list* | | | | | |
| Offshore fraction | -4.608 | 9.276 | -18.267*** | -16.863*** | 4.760 | 6.606 | -4.401 | -2.536* | -0.267 |
| | (6.489) | (6.059) | (6.343) | (5.493) | (6.719) | (5.562) | (7.158) | (1.324) | (0.576) |
| Observations | 1,067 | 739 | 739 | 739 | 1,067 | 1,067 | 1,067 | 734 | 734 |
| | | | | *Panel B: US Congress offshore list: S506* | | | | | |
| Offshore fraction | -1.295 | 4.322 | -15.159** | -13.779** | 4.052 | 7.560 | -8.480 | -1.840 | 0.061 |
| | (6.214) | (5.321) | (6.260) | (5.644) | (5.397) | (5.539) | (5.424) | (1.582) | (0.543) |
| Observations | 1,067 | 739 | 739 | 739 | 1,067 | 1,067 | 1,067 | 734 | 734 |
| | | | | *Panel C: Hines Rice (1994) offshore list* | | | | | |
| Offshore fraction | 2.671 | 4.226 | -9.327 | -21.115** | -0.782 | 12.282* | -4.468 | -1.877 | -0.102 |
| | (7.432) | (9.703) | (7.036) | (9.693) | (3.714) | (6.645) | (6.160) | (2.525) | (0.725) |
| Observations | 1,067 | 739 | 739 | 739 | 1,067 | 1,067 | 1,067 | 734 | 734 |
| | | | | *Panel D: Intersection of A, B, and C lists* | | | | | |
| Offshore fraction | -1.532 | 16.642 | -14.280 | -29.515*** | -3.693 | 13.313** | 6.705 | -2.836 | -1.177*** |
| | (9.765) | (13.538) | (9.583) | (6.567) | (3.848) | (6.512) | (7.519) | (2.423) | (0.452) |
| Observations | 1,067 | 739 | 739 | 739 | 1,067 | 1,067 | 1,067 | 734 | 734 |

Notes: Dependent variables are indicated in respective columns. All variables are expressed as a fraction of assets/liabilities in percent. Business loans, household deposits, equity capital, and assets and liabilities data are taken from Banks-Rate agency for 2000-2003. Investment in securities, cash holdings, business deposits are taken from balance sheet reports to the Central Bank (Form 101) for 2000-2002. Return on assets is constructed as the ratio of profits to average assets. Net interest margin is constructed as a ratio of net interest income to bank assets. Profits and net interest income are taken from bank income statement reports to the Central Bank (Form 102) for 2000-2003. Offshore fraction is a fraction of total international transactions through offshore countries of a given Russian bank relative to total transactions through all foreign accounts of this bank. Offshore countries are defined as countries from OECD tax havens list (Panel A), 111$^{th}$ US Congress Stop Tax Havens Abuse Act S.506 (Panel B), Hines and Rice (1994) list (Panel C), and countries which belong to all three lists (Panel D). Sample is restricted to bank-year observations with positive amount of international transactions. All specifications include bank

size (log of assets) and year fixed effects. All specifications are estimated by OLS. Robust standard errors (in parentheses) are clustered at the bank level. ***, **, And * indicate statistical significance at 1%, 5%, and 10% respectively.

Table A9.2: Income from payments and fees

| VARIABLES | (6) Log total fees | (7) Log wire fees | (8) Log foreign wire fees | (9) Log dmstic wire fees | (10) Log other fees |
|---|---|---|---|---|---|
| | | | *Panel A: OECD offshore list* | | |
| Offshore fraction | 0.253 | 0.889* | 1.879* | 0.528 | -1.157 |
| | (0.292) | (0.499) | (1.050) | (0.636) | (0.786) |
| Observations | 727 | 722 | 576 | 722 | 725 |
| | | | *Panel B: US Congress offshore list: S506* | | |
| Offshore fraction | 0.351 | 0.845* | 1.265 | 0.564 | -0.851 |
| | (0.286) | (0.440) | (0.929) | (0.547) | (0.779) |
| Observations | 727 | 722 | 576 | 722 | 725 |
| | | | *Panel C: Hines Rice (1994) offshore list* | | |
| Offshore fraction | 0.275 | 0.628 | 1.013 | 0.233 | -0.333 |
| | (0.500) | (0.701) | (0.979) | (0.728) | (0.571) |
| Observations | 727 | 722 | 576 | 722 | 725 |
| | | | *Panel D: Intersection of A, B, and C lists* | | |
| Offshore fraction | 0.165 | 0.785 | 1.849 | 0.160 | -0.758 |
| | (0.569) | (1.024) | (1.289) | (0.958) | (0.522) |
| Observations | 727 | 722 | 576 | 722 | 725 |

Notes: Dependent variables are as indicated in respective columns. All variables are taken from bank income statement reports to the Central Bank over 2000-2002 (CB Form 102). Total commissions and fees represent income from all commissions and fees. Total transfer fees represent revenue from all wire transfer fees. International wire transfer fees represent revenue (converted to rubles) from wire transfer fees paid in foreign currency. Domestic wire transfer fees represent wire transfer fees paid in domestic currency (rubles). All figures are reported in rubles deflated by CPI. Sample includes only banks that have positive amount of international transactions. Offshore fraction is a fraction of total international transactions through offshore countries of a given Russian bank relative to total transactions through all foreign accounts of this bank. Offshore countries are defined as countries from OECD tax havens list (Panel A), 111$^{th}$ US Congress Stop Tax Havens Abuse Act S.506 (Panel B), Hines and Rice (1994) list (Panel C), and countries which belong to all three lists (Panel D). All specifications include bank size (log of assets), log of household and business deposits, and year fixed effects (not reported). All specifications are estimated by OLS Robust standard errors (in parentheses) are clustered at the bank level. ***, **, And * indicate statistical significance at 1%, 5%, and 10% respectively.