

**Internet Appendix  
for**

**Entrusted Loans: A Close Look at China's Shadow Banking System**

**Franklin Allen**

Imperial College London  
f.allen@imperial.ac.uk

**Yiming Qian**

The University of Iowa  
yiming-qian@uiowa.edu

**Guoqian Tu**

Chongqing University  
tuguoqian@cqu.edu.cn

**Frank Yu**

China Europe International Business School  
fyu@ceibs.edu

March 22, 2018

**Table A1. Determinants of loan decisions**

The sample includes the 18,003 firm-years observations for all the listed nonfinancial Chinese firms during the period 2004–2013. We run logit regressions using *Loan dummy* as the dependent variable, and we run Tobit regressions using *Loan amount/assets (%)* as the dependent variable. Variable definitions are in Appendix B. Financial variables are winsorized at 1% and 99%. *p*-values are based on standard errors double-clustered by firm and year. \*\*\*, \*\*, and \* denote significance at the 1%, 5%, and 10% levels, respectively.

| Panel A: Logit regression    |                    |   |  |                   |   |  |                   |   |  |
|------------------------------|--------------------|---|--|-------------------|---|--|-------------------|---|--|
|                              | Full sample        |   |  | Before 2010       |   |  | From 2010         |   |  |
|                              | (1)                | (2)   | (3)  | (4)               | (5)   | (6)  | (7)               | (8)   | (9)  |
| <i>Loan Dummy</i>            | All firm-years     | Firm-years with nonaffiliated loans and without entrusted loans | Firm-years with affiliated loans and without entrusted loans | All firm-years    | Firm-years with nonaffiliated loans and without entrusted loans | Firm-years with affiliated loans and without entrusted loans | All firm-years    | Firm-years with nonaffiliated loans and without entrusted loans | Firm-years with affiliated loans and without entrusted loans |
| <i>Ln(assets)</i>            | 0.48***<br>(0.00)  | 0.38***<br>(0.00)   | 0.49***<br>(0.00)  | 0.56***<br>(0.00) | 0.43***<br>(0.00)   | 0.58***<br>(0.00)  | 0.43***<br>(0.00) | 0.35***<br>(0.00)   | 0.44***<br>(0.00)  |
| <i>ROA (%)</i>               | 0.01<br>(0.12)     | 0.007<br>(0.60)   | 0.013**<br>(0.05)  | 0.01<br>(0.38)    | -0.006<br>(0.76)  | 0.013<br>(0.20)  | 0.01<br>(0.32)    | 0.01<br>(0.57)  | 0.012<br>(0.17)  |
| <i>Sales growth (%)</i>      | -0.001**<br>(0.03) | -0.004***<br>(0.01)   | -0.001<br>(0.20)   | -0.001<br>(0.15)  | -0.002<br>(0.58)  | -0.001<br>(0.12)   | -0.001<br>(0.16)  | -0.005***<br>(0.00)   | -0.000<br>(0.78)   |
| <i>Ln(Firm age)</i>          | 0.20**<br>(0.03)   | 0.33*<br>(0.06)   | 0.13<br>(0.18)   | 0.25**<br>(0.02)  | 0.41**<br>(0.02)  | 0.21<br>(0.11)   | 0.16<br>(0.14)    | 0.29<br>(0.19)  | 0.10<br>(0.40)   |
| <i>Tobin's Q</i>             | -0.02<br>(0.63)    | -0.08<br>(0.25)   | -0.01<br>(0.85)  | 0.06<br>(0.26)    | -0.12<br>(0.32)   | 0.01<br>(0.16)   | -0.08*<br>(0.09)  | -0.07<br>(0.29)   | -0.10<br>(0.17)  |
| <i>Debt/assets (%)</i>       | -0.01<br>(0.12)    | -0.02***<br>(0.00)  | -0.001<br>(0.86)   | -0.01<br>(0.15)   | -0.02**<br>(0.03)   | -0.004<br>(0.55)   | -0.004<br>(0.39)  | -0.02**<br>(0.02)   | 0.001<br>(0.86)  |
| <i>Change of debt (%)</i>    | 0.01***<br>(0.00)  | 0.005<br>(0.14)   | 0.01***<br>(0.00)  | 0.01<br>(0.15)    | -0.005<br>(0.20)  | 0.01*<br>(0.07)  | 0.01***<br>(0.00) | 0.01***<br>(0.00)   | 0.01**<br>(0.04)   |
| <i>Cash/assets (%)</i>       | 0.006<br>(0.24)    | 0.004<br>(0.58)   | 0.005<br>(0.32)  | 0.02***<br>(0.00) | 0.02**<br>(0.02)  | 0.02***<br>(0.01)  | 0.001<br>(0.88)   | -0.002<br>(0.75)  | 0.001<br>(0.91)  |
| <i>SOE lender</i>            | 0.37***<br>(0.01)  | -0.30<br>(0.20)   | 0.69***<br>(0.00)  | 0.29<br>(0.13)    | -0.09<br>(0.80)   | 0.49**<br>(0.04)   | 0.40***<br>(0.00) | -0.48*<br>(0.06)  | 0.81***<br>(0.00)  |
| <i>Year fixed effect</i>     | Yes                | Yes   | Yes  | Yes               | Yes   | Yes  | Yes               | Yes   | Yes  |
| <i>Industry fixed effect</i> | Yes                | Yes   | Yes  | Yes               | Yes   | Yes  | Yes               | Yes   | Yes  |
| <i>N</i>                     | 18,003             | 17,185  | 17,696   | 8,867             | 8,548   | 8,756  | 9,136             | 8,637   | 8,940  |
| <i>Pseudo R<sup>2</sup></i>  | 0.11               | 0.09  | 0.14   | 0.12              | 0.09  | 0.15   | 0.11              | 0.10  | 0.15   |

**Table A1**

| Panel B: Tobit regression     |                    |   |  |                    |   |  |                    |   |  |
|-------------------------------|--------------------|---|--|--------------------|---|--|--------------------|---|--|
|                               | Full sample        |   |  | Before 2010        |   |  | From 2010          |   |  |
|                               | (1)                | (2)   | (3)  | (4)                | (5)   | (6)  | (7)                | (8)   | (9)  |
| <i>Loan amount/assets (%)</i> | All firm-years     | Firm-years with nonaffiliated loans and without entrusted loans | Firm-years with affiliated loans and without entrusted loans | All firm-years     | Firm-years with nonaffiliated loans and without entrusted loans | Firm-years with affiliated loans and without entrusted loans | All firm-years     | Firm-years with nonaffiliated loans and without entrusted loans | Firm-years with affiliated loans and without entrusted loans |
| <i>Ln(assets)</i>             | 3.12***<br>(0.00)  | 2.62***<br>(0.00)   | 3.09***<br>(0.00)  | 2.86***<br>(0.00)  | 2.13***<br>(0.00)   | 3.20***<br>(0.00)  | 3.03***<br>(0.00)  | 2.65***<br>(0.00)   | 2.90***<br>(0.00)  |
| <i>ROA (%)</i>                | 0.08***<br>(0.00)  | 0.07<br>(0.20)  | 0.08***<br>(0.00)  | 0.06***<br>(0.03)  | 0.002<br>(0.97)   | 0.09***<br>(0.01)  | 0.08***<br>(0.01)  | 0.10<br>(0.12)  | 0.07***<br>(0.00)  |
| <i>Sales growth (%)</i>       | -0.02***<br>(0.01) | -0.03***<br>(0.00)  | -0.01<br>(0.25)  | -0.01***<br>(0.01) | -0.01***<br>(0.00)  | -0.01***<br>(0.00)   | -0.02***<br>(0.01) | -0.04***<br>(0.01)  | -0.007<br>(0.39)   |
| <i>Ln(Firm age)</i>           | 1.79***<br>(0.00)  | 2.77***<br>(0.00)   | 1.02*<br>(0.06)  | 1.15***<br>(0.01)  | 2.11***<br>(0.00)   | 0.91*<br>(0.10)  | 2.13***<br>(0.00)  | 3.01***<br>(0.00)   | 1.16*<br>(0.07)  |
| <i>Tobin's Q</i>              | 0.01<br>(0.95)     | -0.49<br>(0.16)   | 0.20***<br>(0.00)  | 0.70***<br>(0.00)  | -0.49**<br>(0.04)   | 1.02***<br>(0.00)  | -0.66***<br>(0.00) | -0.48*<br>(0.06)  | -0.60***<br>(0.00)   |
| <i>Debt/assets (%)</i>        | -0.07***<br>(0.00) | -0.16***<br>(0.00)  | -0.02<br>(0.31)  | -0.06***<br>(0.00) | -0.12***<br>(0.00)  | -0.02<br>(0.14)  | -0.07***<br>(0.01) | -0.16***<br>(0.00)  | -0.02<br>(0.41)  |
| <i>Change of debt (%)</i>     | 0.09***<br>(0.00)  | 0.05<br>(0.14)  | 0.08***<br>(0.00)  | 0.05***<br>(0.00)  | -0.01<br>(0.76)   | 0.06***<br>(0.00)  | 0.12***<br>(0.00)  | 0.10***<br>(0.00)   | 0.09***<br>(0.00)  |
| <i>Cash/assets (%)</i>        | 0.06***<br>(0.00)  | 0.06**<br>(0.02)  | 0.02<br>(0.18)   | 0.09***<br>(0.00)  | 0.14***<br>(0.00)   | 0.08***<br>(0.00)  | 0.03*<br>(0.07)    | 0.02<br>(0.38)  | -0.01<br>(0.75)  |
| <i>SOE lender</i>             | 2.27***<br>(0.01)  | -2.49*<br>(0.09)  | 3.86***<br>(0.00)  | 1.21<br>(0.14)     | -1.14<br>(0.34)   | 2.66***<br>(0.01)  | 2.83***<br>(0.00)  | -4.10***<br>(0.01)  | 4.70***<br>(0.00)  |
| <i>Year fixed effect</i>      | Yes                | Yes   | Yes  | Yes                | Yes   | Yes  | Yes                | Yes   | Yes  |
| <i>Industry fixed effect</i>  | Yes                | Yes   | Yes  | Yes                | Yes   | Yes  | Yes                | Yes   | Yes  |
| <i>N</i>                      | 18,003             | 17,185  | 17,696   | 8,867              | 8,548   | 8,756  | 9,136              | 8,637   | 8,940  |
| <i>Pseudo R<sup>2</sup></i>   | 0.05               | 0.06  | 0.07   | 0.05               | 0.07  | 0.08   | 0.05               | 0.05  | 0.07   |

**Table A1**

| Panel C: Logit regression including <i>Shibor</i> |                     |   |  |                   |   |  |                   |   |  |
|---|---------------------|---|--|-------------------|---|--|-------------------|---|--|
|   | Full sample         |   |  | Before 2010       |   |  | From 2010         |   |  |
| <i>Loan amount/assets (%)</i>                     | (1)                 | (2)   | (3)  | (4)               | (5)   | (6)  | (7)               | (8)   | (9)  |
|   | All firm-years      | Firm-years with nonaffiliated loans and without entrusted loans | Firm-years with affiliated loans and without entrusted loans | All firm-years    | Firm-years with nonaffiliated loans and without entrusted loans | Firm-years with affiliated loans and without entrusted loans | All firm-years    | Firm-years with nonaffiliated loans and without entrusted loans | Firm-years with affiliated loans and without entrusted loans |
| <i>Ln(assets)</i>                                 | 0.50***<br>(0.00)   | 0.40***<br>(0.00)   | 0.52***<br>(0.00)  | 0.57***<br>(0.00) | 0.45***<br>(0.00)   | 0.60***<br>(0.00)  | 0.44***<br>(0.00) | 0.36***<br>(0.00)   | 0.44***<br>(0.00)  |
| <i>Shibor (%)</i>                                 | 0.25***<br>(0.00)   | 0.30***<br>(0.00)   | 0.24***<br>(0.00)  | 0.08<br>(0.41)    | -0.15<br>(0.48)   | 0.15<br>(0.28)   | 0.21***<br>(0.00) | 0.41***<br>(0.00)   | 0.15*<br>(0.07)  |
| <i>ROA (%)</i>                                    | 0.01*<br>(0.09)     | 0.006<br>(0.64)   | 0.014**<br>(0.03)  | 0.01<br>(0.22)    | -0.004<br>(0.83)  | 0.016*<br>(0.07)   | 0.01<br>(0.35)    | 0.01<br>(0.58)  | 0.012<br>(0.18)  |
| <i>Sales growth (%)</i>                           | -0.002***<br>(0.01) | -0.004***<br>(0.01)   | -0.001*<br>(0.10)  | -0.002<br>(0.11)  | -0.002<br>(0.57)  | -0.002**<br>(0.05)   | -0.001<br>(0.13)  | -0.005***<br>(0.00)   | -0.000<br>(0.73)   |
| <i>Ln(Firm age)</i>                               | 0.23***<br>(0.01)   | 0.35**<br>(0.04)  | 0.18*<br>(0.08)  | 0.28***<br>(0.01) | 0.42**<br>(0.02)  | 0.26**<br>(0.04)   | 0.17<br>(0.13)    | 0.30<br>(0.18)  | 0.09<br>(0.41)   |
| <i>Tobin's Q</i>                                  | -0.004<br>(0.91)    | -0.06<br>(0.32)   | 0.02<br>(0.73)   | 0.06***<br>(0.01) | -0.05<br>(0.46)   | 0.10***<br>(0.01)  | -0.07*<br>(0.10)  | -0.09<br>(0.25)   | -0.09<br>(0.20)  |
| <i>Debt/assets (%)</i>                            | -0.01<br>(0.11)     | -0.02***<br>(0.00)  | -0.001<br>(0.87)   | -0.01<br>(0.15)   | -0.02**<br>(0.03)   | -0.004<br>(0.55)   | -0.004<br>(0.39)  | -0.02**<br>(0.02)   | 0.001<br>(0.84)  |
| <i>Change of debt (%)</i>                         | 0.01***<br>(0.00)   | 0.005<br>(0.11)   | 0.01***<br>(0.00)  | 0.01<br>(0.11)    | -0.004<br>(0.32)  | 0.01*<br>(0.06)  | 0.01***<br>(0.00) | 0.01***<br>(0.00)   | 0.01**<br>(0.04)   |
| <i>Cash/assets (%)</i>                            | 0.007<br>(0.18)     | 0.005<br>(0.51)   | 0.007<br>(0.23)  | 0.02***<br>(0.00) | 0.02**<br>(0.02)  | 0.02***<br>(0.01)  | 0.001<br>(0.89)   | -0.002<br>(0.75)  | 0.001<br>(0.92)  |
| <i>SOE lender</i>                                 | 0.33***<br>(0.01)   | -0.35<br>(0.12)   | 0.64***<br>(0.00)  | 0.26<br>(0.15)    | -0.08<br>(0.82)   | 0.45**<br>(0.05)   | 0.40***<br>(0.00) | -0.50**<br>(0.04)   | 0.81***<br>(0.00)  |
| <i>Industry fixed effect</i>                      | Yes                 | Yes   | Yes  | Yes               | Yes   | Yes  | Yes               | Yes   | Yes  |
| <i>N</i>  | 18,003              | 17,185  | 17,696   | 8,867             | 8,548   | 8,756  | 9,136             | 8,637   | 8,940  |
| <i>Pseudo R<sup>2</sup></i>                       | 0.11                | 0.09  | 0.14   | 0.12              | 0.11  | 0.14   | 0.11              | 0.09  | 0.15   |

**Table A1**

| Panel D: Tobit regression including <i>Shibor</i> |                    |   |  |                    |   |  |                    |   |  |
|---|--------------------|---|--|--------------------|---|--|--------------------|---|--|
|   | Full sample        |   |  | Before 2010        |   |  | From 2010          |   |  |
|   | (1)                | (2)   | (3)  | (4)                | (5)   | (6)  | (7)                | (8)   | (9)  |
| <i>Loan amount/assets (%)</i>                     | All firm-years     | Firm-years with nonaffiliated loans and without entrusted loans | Firm-years with affiliated loans and without entrusted loans | All firm-years     | Firm-years with nonaffiliated loans and without entrusted loans | Firm-years with affiliated loans and without entrusted loans | All firm-years     | Firm-years with nonaffiliated loans and without entrusted loans | Firm-years with affiliated loans and without entrusted loans |
| <i>Ln(assets)</i>                                 | 3.27***<br>(0.00)  | 2.79***<br>(0.00)   | 3.23***<br>(0.00)  | 2.88***<br>(0.00)  | 2.22***<br>(0.00)   | 3.26***<br>(0.00)  | 3.03***<br>(0.00)  | 2.75***<br>(0.00)   | 2.84***<br>(0.00)  |
| <i>Shibor (%)</i>                                 | 1.91***<br>(0.00)  | 2.37***<br>(0.00)   | 1.67***<br>(0.00)  | 0.28<br>(0.66)     | -1.17<br>(0.29)   | 0.91<br>(0.24)   | 1.67***<br>(0.01)  | 3.65***<br>(0.00)   | 0.98<br>(0.12)   |
| <i>ROA (%)</i>                                    | 0.09***<br>(0.00)  | 0.06<br>(0.20)  | 0.09***<br>(0.00)  | 0.08***<br>(0.01)  | 0.01<br>(0.80)  | 0.11***<br>(0.00)  | 0.08***<br>(0.01)  | 0.10*<br>(0.10)   | 0.06***<br>(0.00)  |
| <i>Sales growth (%)</i>                           | -0.02***<br>(0.01) | -0.03***<br>(0.00)  | -0.01<br>(0.21)  | -0.01***<br>(0.00) | -0.01***<br>(0.00)  | -0.01***<br>(0.00)   | -0.02***<br>(0.01) | -0.04***<br>(0.01)  | -0.007<br>(0.39)   |
| <i>Ln(Firm age)</i>                               | 2.02***<br>(0.00)  | 2.94***<br>(0.00)   | 1.24**<br>(0.02)   | 1.33***<br>(0.00)  | 2.15***<br>(0.00)   | 1.18**<br>(0.03)   | 2.14***<br>(0.00)  | 3.15***<br>(0.00)   | 1.12*<br>(0.08)  |
| <i>Tobin's Q</i>                                  | 0.14<br>(0.68)     | -0.36<br>(0.22)   | 0.35<br>(0.34)   | 0.67***<br>(0.01)  | -0.22**<br>(0.05)   | 0.98***<br>(0.00)  | -0.64***<br>(0.00) | -0.57**<br>(0.02)   | -0.56<br>(0.19)  |
| <i>Debt/assets (%)</i>                            | -0.07***<br>(0.00) | -0.17***<br>(0.00)  | -0.02<br>(0.32)  | -0.06***<br>(0.00) | -0.12***<br>(0.00)  | -0.02<br>(0.15)  | -0.07***<br>(0.01) | -0.17***<br>(0.00)  | -0.02<br>(0.44)  |
| <i>Change of debt (%)</i>                         | 0.09***<br>(0.00)  | 0.05<br>(0.13)  | 0.08***<br>(0.00)  | 0.05***<br>(0.00)  | -0.01<br>(0.87)   | 0.06***<br>(0.00)  | 0.12***<br>(0.00)  | 0.10***<br>(0.00)   | 0.08***<br>(0.00)  |
| <i>Cash/assets (%)</i>                            | 0.06***<br>(0.00)  | 0.06***<br>(0.01)   | 0.03*<br>(0.09)  | 0.10***<br>(0.00)  | 0.14***<br>(0.00)   | 0.08***<br>(0.00)  | 0.03*<br>(0.08)    | 0.01<br>(0.49)  | -0.01<br>(0.78)  |
| <i>SOE lender</i>                                 | 1.90**<br>(0.02)   | -2.96**<br>(0.04)   | 3.56***<br>(0.00)  | 1.08<br>(0.18)     | -1.18<br>(0.32)   | 2.47***<br>(0.01)  | 2.77***<br>(0.00)  | -4.17***<br>(0.01)  | 4.68***<br>(0.00)  |
| <i>Industry fixed effect</i>                      | Yes                | Yes   | Yes  | Yes                | Yes   | Yes  | Yes                | Yes   | Yes  |
| <i>N</i>  | 18,003             | 17,185  | 17,696   | 8,867              | 8,548   | 8,756  | 9,136              | 8,637   | 8,940  |
| <i>Pseudo R<sup>2</sup></i>                       | 0.05               | 0.05  | 0.07   | 0.06               | 0.07  | 0.08   | 0.05               | 0.05  | 0.07   |

**Table A2. Leverage and liquidity ratios of entrusted-loan lenders and listed banks**

This analysis uses 1,107 firm-year observations where the firm makes an entrusted loan, and 123 bank-year observations for listed banks, during 2004-2013. *Debt* is the sum of long-term and short-term debt. *Liabilities* is all liabilities. *Market value of assets* equals to book value of assets minus book value of equity, plus market value of equity. *Cash ratio* is cash and cash equivalents, relative to current liabilities. *Quick ratio* is current assets minus inventories, relative to current liabilities. *Current ratio* is current assets relative to current liabilities. We use t-test for differences in means. \*\*\*, \*\*, and \* denote the difference is significant at the 1%, 5%, and 10% levels, respectively.

|   |        | (1)<br>Listed<br>banks<br>(n=123) | (2)<br><i>Entrusted</i><br><i>lenders</i><br>(n=1,107) | (3)<br>Nonaffiliated<br>lenders<br>(n=289) | (4)<br>Affiliated<br>lenders<br>(n=800) | (2)-(1)  | (3)-(1)  | (4)-(1)  |
|---|--------|-----------------------------------|--|--|---|----------|----------|----------|
| <u>Leverage ratios:</u>                       |        |                                   |  |  |   |          |          |          |
| <i>Debt/assets (%)</i>                        | Mean   | 90.3                              | 21.6   | 16.7                                       | 23.5                                    | -68.7*** | -73.6*** | -66.8*** |
|   | Median | 92.0                              | 20.0   | 14.1                                       | 22.0                                    | -72.0*** | -77.9*** | -70.0*** |
| <i>Liabilities/assets (%)</i>                 | Mean   | 94.6                              | 49.2   | 43.7                                       | 51.3                                    | -45.4*** | -50.9*** | -43.3*** |
|   | Median | 94.4                              | 51.3   | 43.5                                       | 53.5                                    | -43.1*** | -50.9*** | -40.9*** |
| <i>Debt/market value of assets (%)</i>        | Mean   | 84.3                              | 15.7   | 11.5                                       | 17.3                                    | -68.6*** | -72.8*** | -67.0*** |
|   | Median | 87.3                              | 11.9   | 7.4  | 13.5                                    | -75.4*** | -79.9*** | -73.8*** |
| <i>Liabilities/market value of assets (%)</i> | Mean   | 88.4                              | 33.9   | 29.8                                       | 35.4                                    | -54.5*** | -58.6*** | -53.0*** |
|   | Median | 91.0                              | 31.3   | 24.5                                       | 32.9                                    | -59.7*** | -66.5*** | -58.1*** |
| <u>Liquidity ratios:</u>                      |        |                                   |  |  |   |          |          |          |
| <i>Cash ratio (%)</i>                         | Mean   | 16.6                              | 90.8   | 118.7                                      | 79.2                                    | 74.2***  | 102.1*** | 62.6***  |
|   | Median | 15.9                              | 38.0   | 49.2                                       | 35.4                                    | 22.1***  | 33.3***  | 19.5***  |
| <i>Quick ratio (%)</i>                        | Mean   | 75.7                              | 153.9  | 186.5                                      | 139.2                                   | 78.2***  | 110.8*** | 63.5***  |
|   | Median | 77.1                              | 88.0   | 99.1                                       | 84.9                                    | 10.9***  | 22.0***  | 7.8***   |
| <i>Current ratio (%)</i>                      | Mean   | 75.7                              | 199.5  | 242.3                                      | 180.9                                   | 123.8*** | 166.6*** | 105.2*** |
|   | Median | 77.1                              | 131.5  | 157.0                                      | 125.8                                   | 54.4***  | 79.9***  | 48.7***  |
| <i>Cash/assets (%)</i>                        | Mean   | 13.6                              | 18.4   | 21.4                                       | 17.2                                    | 4.8***   | 7.8***   | 3.6***   |
|   | Median | 13.1                              | 14.9   | 17.9                                       | 13.7                                    | 1.8***   | 4.8***   | 0.6*     |
| <i>Current assets/assets (%)</i>              | Mean   | 64.2                              | 52.2   | 57.0                                       | 50.2                                    | -12.0*** | -7.2***  | -14.0*** |
|   | Median | 65.9                              | 53.2   | 60.5                                       | 50.0                                    | -12.7*** | -5.4*    | -15.9*** |