

Internet Appendix for
Shadow Banking in a Crisis: Evidence from FinTech During COVID-19
Zhengyang Bao and Difang Huang
(not for publication)

In this Internet Appendix, we provide additional results supporting the main text.

Table IA.1

Borrower's Characteristics and the Loan Amount, Cycle Duration, and the Interest Rate.

This table reports the estimation results for regressions that use borrower's characteristics to explain three key loan characteristics (amount, duration, and interest rate) using the sample for borrowers with either FinTech or Bank loans. Column (1) shows the results for loan amount, Column (2) displays the results for cycle duration and Column (3) presents the results for loan interest rate. The p -values are reported in parentheses below each coefficient. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. Standard errors are clustered at the city and time level.

	Loan Amount (1)	Cycle Duration (2)	Interest Rate (3)
Fintech Indicator	2132.480*** (0.000)	-4.269*** (0.000)	2.642*** (0.000)
Borrower Age	65.614*** (0.000)	0.012 (0.698)	0.019*** (0.000)
Employment Indicator	-99.885** (0.012)	-0.077*** (0.000)	0.063*** (0.000)
High Income Indicator	-1.706 (0.777)	0.006 (0.336)	0.005 (0.320)
Higher Education Indicator	-781.003*** (0.000)	0.053*** (0.000)	0.630*** (0.000)
Male Indicator	-101.720*** (0.000)	0.044*** (0.000)	0.336*** (0.000)
Married Indicator	-62.136*** (0.000)	-0.005 (0.192)	-0.007** (0.012)
Hist. DLQ Indicator	-728.472*** (0.000)	0.031** (0.032)	0.195*** (0.000)
Car Loan Indicator	-40.272 (0.444)	0.007 (0.537)	-0.267*** (0.000)
Car Indicator	-22.256** (0.022)	0.001 (0.742)	0.002 (0.329)
House Indicator	-7.445 (0.380)	-0.002 (0.574)	0.002 (0.604)
Mortgage Indicator	-38.045*** (0.000)	-0.001 (0.744)	-0.004** (0.029)
Hist. Balance	0.108*** (0.002)	0.000*** (0.000)	-0.000*** (0.000)
Hist. No of Credit Access	-62.919*** (0.001)	-0.003*** (0.000)	-0.009*** (0.000)
Hist. No. of DLQ	-78.752*** (0.000)	-0.010*** (0.000)	0.076*** (0.000)
Loan Amount			-0.000*** (0.000)
Cycle Duration			0.015*** (0.002)
Borrower FEs	No	No	No
City FEs	Yes	Yes	Yes
City*Time FEs	Yes	Yes	Yes
Adjusted R^2	0.112	0.512	0.400
Observations	1,303,043	1,303,043	1,303,043

Table IA.2

Borrower's Characteristics and the Loan Amount, Cycle Duration, and the Interest Rate.

This table reports the estimation results for regressions that use borrower's characteristics to explain three key loan characteristics (amount, duration, and interest rate) using the sample for borrowers with both FinTech and Bank loans. Column (1) shows the results for loan amount, Column (2) displays the results for cycle duration and Column (3) presents the results for loan interest rate. The p -values are reported in parentheses below each coefficient. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. Standard errors are clustered at the city and time level.

	Loan Amount (1)	Cycle Duration (2)	Interest Rate (3)
Fintech Indicator	2556.255*** (0.000)	-4.409*** (0.000)	2.203*** (0.000)
Borrower Age	90.832*** (0.010)	-0.004 (0.369)	0.008 (0.142)
Employment Indicator	-22.245 (0.899)	0.023 (0.723)	0.107** (0.028)
High Income Indicator	-55.978 (0.233)	-0.036 (0.491)	-0.046 (0.263)
Higher Education Indicator	-789.489*** (0.001)	0.155** (0.017)	0.644*** (0.000)
Male Indicator	-89.343 (0.295)	0.051 (0.175)	0.373*** (0.000)
Married Indicator	-10.552 (0.860)	0.022 (0.589)	0.008 (0.766)
Hist. DLQ Indicator	-702.237** (0.023)	-0.074 (0.539)	0.339*** (0.006)
Car Loan Indicator	-202.117 (0.636)	-0.052 (0.735)	-0.487** (0.035)
Car Indicator	-43.420 (0.324)	-0.074 (0.133)	-0.001 (0.983)
House Indicator	-16.056 (0.820)	-0.053 (0.150)	-0.023 (0.310)
Mortgage Indicator	83.620 (0.396)	0.003 (0.951)	-0.037 (0.377)
Hist. Balance	0.032 (0.429)	0.000* (0.093)	-0.000*** (0.001)
Hist. No of Credit Access	-17.671 (0.239)	-0.006 (0.280)	-0.006** (0.049)
Hist. No. of DLQ	-74.050 (0.185)	-0.029 (0.274)	0.023 (0.520)
Loan Amount			-0.000*** (0.000)
Cycle Duration			0.024 (0.132)
Borrower FEs	Yes	Yes	Yes
City FEs	Yes	Yes	Yes
City*Time FEs	Yes	Yes	Yes
Adjusted R^2	0.459	0.724	0.639
Observations	7,371	7,371	7,371

Table IA.4

Severity of the Pandemic and Borrower's Credit Access

This table presents the estimation results for regressions studying how the severity of the pandemic in the borrower's city of residency affects credit access for FinTech and bank loans and reports the results for extensive margins of credit access. The p -values are reported in parentheses below each coefficient. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. Standard errors are clustered at the city and time level.

	Dummy = 1 if credit > 0			
	(1)	(2)	(3)	(4)
FinTech*After	0.031*** (0.004)	0.031*** (0.004)	0.032*** (0.003)	0.031*** (0.004)
FinTech*After* $D_{\text{Wuhan City}}$	0.002*** (0.000)			
FinTech*After* $D_{\text{Hubei Province}}$		0.001*** (0.002)		
FinTech*After* $D_{\text{Top10 Wuhan inflow cities}}$			0.001* (0.087)	
FinTech*After* $D_{\text{Top10 COVID infected cities}}$				0.004*** (0.000)
FinTech	0.005 (0.424)	0.005 (0.424)	0.005 (0.423)	0.005 (0.424)
Borrower Age	-0.000 (0.875)	-0.000 (0.875)	-0.000 (0.894)	-0.000 (0.874)
Employment Indicator	-0.000 (0.970)	-0.000 (0.970)	0.000 (0.958)	-0.000 (0.970)
High Income Indicator	-0.001 (0.370)	-0.001 (0.371)	-0.001 (0.391)	-0.001 (0.371)
Higher Education Indicator	-0.000 (0.974)	-0.000 (0.973)	0.000 (0.923)	-0.000 (0.973)
Male Indicator	0.000 (0.808)	0.000 (0.809)	0.000 (0.839)	0.000 (0.808)
Married Indicator	0.002* (0.064)	0.002* (0.066)	0.002 (0.111)	0.002* (0.065)
Hist. DLQ Indicator	-0.001 (0.505)	-0.001 (0.505)	-0.001 (0.756)	-0.001 (0.506)
Car Loan Indicator	-0.001 (0.796)	-0.001 (0.798)	-0.001 (0.846)	-0.001 (0.798)
Car Indicator	-0.000 (0.834)	-0.000 (0.834)	-0.000 (0.789)	-0.000 (0.834)
House Indicator	-0.001 (0.559)	-0.001 (0.561)	-0.000 (0.681)	-0.001 (0.560)
Mortgage Indicator	0.000 (0.795)	0.000 (0.798)	0.000 (0.845)	0.000 (0.796)
Hist. Balance	0.000 (0.584)	0.000 (0.584)	0.000 (0.469)	0.000 (0.584)
Hist. No of Credit Access	-0.000 (0.199)	-0.000 (0.199)	-0.000 (0.125)	-0.000 (0.199)
Hist. No. of DLQ	0.001 (0.215)	0.001 (0.215)	0.000 (0.378)	0.001 (0.215)
Loan Amount	0.000 (0.894)	0.000 (0.894)	0.000 (0.834)	0.000 (0.894)
Cycle Duration	-0.000 (0.761)	-0.000 (0.761)	-0.000 (0.922)	-0.000 (0.761)
Loan Interest	0.000 (0.522)	0.000 (0.522)	0.000 (0.452)	0.000 (0.522)
City FEs	Yes	Yes	Yes	Yes
City*Time FEs	Yes	Yes	Yes	Yes
Adjusted R^2	0.382	0.382	0.382	0.382
Observations	4,520,652	4,520,652	4,520,652	4,520,652

Table IA.5

Severity of the Pandemic and Borrower's Credit Access

This table presents the estimation results for regressions studying how the severity of the pandemic in the borrower's city of residency affects credit access for FinTech and bank loans and the displays the results for intensive margins of credit access. The p -values are reported in parentheses below each coefficient. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. Standard errors are clustered at the city and time level.

	Log of (1+credit)			
	(1)	(2)	(3)	(4)
FinTech*After	0.725*** (0.001)	0.720*** (0.001)	0.724*** (0.000)	0.723*** (0.001)
FinTech*After* $D_{\text{Wuhan City}}$	0.041** (0.010)			
FinTech*After* $D_{\text{Hubei Province}}$		0.027*** (0.000)		
FinTech*After* $D_{\text{Top10 Wuhan inflow cities}}$			0.005* (0.099)	
FinTech*After* $D_{\text{Top10 COVID infected cities}}$				0.016** (0.041)
FinTech	0.213*** (0.001)	0.213*** (0.001)	0.213*** (0.001)	0.213*** (0.001)
Borrower Age	0.007*** (0.002)	0.007*** (0.002)	0.008*** (0.002)	0.007*** (0.002)
Employment Indicator	-0.051*** (0.004)	-0.051*** (0.004)	-0.050*** (0.005)	-0.051*** (0.004)
High Income Indicator	-0.037** (0.024)	-0.037** (0.024)	-0.037** (0.026)	-0.037** (0.025)
Higher Education Indicator	-0.126*** (0.000)	-0.126*** (0.000)	-0.126*** (0.000)	-0.126*** (0.000)
Male Indicator	-0.017 (0.106)	-0.017 (0.107)	-0.018 (0.121)	-0.017 (0.106)
Married Indicator	0.015 (0.166)	0.015 (0.170)	0.011 (0.282)	0.015 (0.166)
Hist. DLQ Indicator	-0.064*** (0.002)	-0.064*** (0.002)	-0.058*** (0.004)	-0.064*** (0.002)
Car Loan Indicator	-0.071** (0.014)	-0.071** (0.014)	-0.071** (0.021)	-0.071** (0.014)
Car Indicator	-0.007 (0.465)	-0.007 (0.467)	-0.008 (0.450)	-0.007 (0.465)
House Indicator	-0.015 (0.158)	-0.015 (0.158)	-0.014 (0.211)	-0.015 (0.161)
Mortgage Indicator	0.008 (0.561)	0.008 (0.565)	0.006 (0.656)	0.008 (0.564)
Hist. Balance	-0.000** (0.037)	-0.000** (0.037)	-0.000** (0.049)	-0.000** (0.037)
Hist. No of Credit Access	-0.001 (0.450)	-0.001 (0.450)	-0.001 (0.376)	-0.001 (0.451)
Hist. No. of DLQ	0.017*** (0.002)	0.017*** (0.002)	0.015*** (0.004)	0.017*** (0.002)
Loan Amount	0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)
Cycle Duration	-0.037*** (0.000)	-0.037*** (0.000)	-0.036*** (0.000)	-0.037*** (0.000)
Loan Interest	0.017** (0.045)	0.017** (0.045)	0.018** (0.042)	0.017** (0.045)
City FEs	Yes	Yes	Yes	Yes
City*Time FEs	Yes	Yes	Yes	Yes
Adjusted R^2	0.727	0.727	0.727	0.727
Observations	4,520,652	4,520,652	4,520,652	4,520,652

Table IA.6

Financially Constrained Borrowers and Credit Access.

This table presents the estimation results for regressions studying the correlation between financially constrained borrowers and the credit access for FinTech and bank loans and report the results for extensive margins of credit access. The p -values are reported in parentheses below coefficients. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. Standard errors are clustered at the city and time level. Standard errors are clustered at the city-month level.

	Dummy = 1 if credit >0			
	FinTech Borrowers		Bank Borrowers	
	(1)	(2)	(3)	(4)
After*High Income	0.061*** (0.000)		0.046** (0.011)	
After*Low Income	0.058*** (0.000)		0.007 (0.191)	
After*Employed		0.063*** (0.000)		0.039** (0.024)
After*Unemployed		0.056*** (0.000)		0.017 (0.112)
Borrower Age	0.000 (0.967)	0.000 (0.967)	0.000 (0.815)	0.000 (0.815)
Employment Indicator	-0.000 (0.816)	-0.001 (0.660)	0.001 (0.698)	0.001 (0.634)
High Income Indicator	0.001 (0.705)	-0.000 (0.985)	-0.001 (0.607)	-0.002 (0.353)
Higher Education Indicator	-0.000 (0.929)	-0.000 (0.929)	0.001 (0.673)	0.001 (0.673)
Male Indicator	0.001 (0.628)	0.001 (0.628)	-0.000 (0.894)	-0.000 (0.894)
Married Indicator	0.003** (0.033)	0.003** (0.033)	0.001 (0.648)	0.001 (0.648)
Hist. DLQ Indicator	-0.002 (0.239)	-0.002 (0.239)	0.000 (0.983)	0.000 (0.983)
Car Loan Indicator	-0.001 (0.812)	-0.001 (0.812)	-0.006 (0.771)	-0.006 (0.771)
Car Indicator	0.000 (0.848)	0.000 (0.848)	-0.001 (0.745)	-0.001 (0.745)
House Indicator	0.000 (0.801)	0.000 (0.801)	-0.002 (0.356)	-0.002 (0.356)
Mortgage Indicator	0.000 (0.979)	0.000 (0.979)	0.001 (0.742)	0.001 (0.742)
Hist. Balance	0.000 (0.401)	0.000 (0.401)	0.000 (0.774)	0.000 (0.774)
Hist. No of Credit Access	-0.000 (0.145)	-0.000 (0.145)	-0.000 (0.427)	-0.000 (0.428)
Hist. No. of DLQ	0.000 (0.270)	0.000 (0.270)	0.002 (0.278)	0.002 (0.278)
Loan Amount	-0.000 (0.580)	-0.000 (0.580)	0.000 (0.967)	0.000 (0.967)
Cycle Duration	0.000 (0.470)	0.000 (0.469)	-0.000 (0.918)	-0.000 (0.918)
Loan Interest	0.001 (0.266)	0.001 (0.266)	-0.000 (0.543)	-0.000 (0.543)
City FEs	Yes	Yes	Yes	Yes
City*Time FEs	Yes	Yes	Yes	Yes
Adjusted R^2	0.366	0.366	0.415	0.415
Observations	2,614,104	2,614,104	1,906,548	1,906,548

Table IA.7

Financially Constrained Borrowers and Credit Access.

This table presents the estimation results for regressions studying the correlation between financially constrained borrowers and the credit access for FinTech and bank loans and displays the results for intensive margins of credit access. The p -values are reported in parentheses below coefficients. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. Standard errors are clustered at the city and time level. Standard errors are clustered at the city-month level.

	Log(1+credit)			
	FinTech Borrowers		Bank Borrowers	
	(1)	(2)	(3)	(4)
After*High Income	0.889*** (0.000)		0.201*** (0.002)	
After*Low Income	0.871*** (0.000)		0.081* (0.093)	
After*Employed		0.891*** (0.000)		0.192*** (0.002)
After*Unemployed		0.884*** (0.000)		0.087 (0.108)
Borrower Age	0.010*** (0.000)	0.010*** (0.000)	0.003** (0.038)	0.003** (0.038)
Employment Indicator	-0.043** (0.016)	-0.046** (0.023)	0.012 (0.544)	0.015 (0.415)
High Income Indicator	0.003 (0.892)	-0.001 (0.979)	-0.010 (0.584)	-0.016 (0.362)
Higher Education Indicator	-0.149*** (0.000)	-0.149*** (0.000)	-0.011 (0.597)	-0.011 (0.597)
Male Indicator	-0.022 (0.129)	-0.022 (0.129)	0.002 (0.914)	0.002 (0.914)
Married Indicator	0.024* (0.069)	0.024* (0.069)	0.008 (0.626)	0.008 (0.626)
Hist. DLQ Indicator	-0.087*** (0.000)	-0.087*** (0.000)	-0.077* (0.068)	-0.077* (0.068)
Car Loan Indicator	-0.128*** (0.000)	-0.128*** (0.000)	-0.090 (0.559)	-0.090 (0.559)
Car Indicator	0.005 (0.697)	0.005 (0.697)	-0.003 (0.879)	-0.003 (0.879)
House Indicator	0.002 (0.855)	0.002 (0.855)	-0.015 (0.387)	-0.015 (0.388)
Mortgage Indicator	-0.005 (0.767)	-0.005 (0.767)	0.014 (0.496)	0.014 (0.496)
Hist. Balance	-0.000 (0.137)	-0.000 (0.137)	0.000* (0.079)	0.000* (0.079)
Hist. No of Credit Access	0.000 (0.846)	0.000 (0.846)	-0.003** (0.010)	-0.003** (0.010)
Hist. No. of DLQ	0.007 (0.112)	0.007 (0.112)	0.025* (0.050)	0.025* (0.050)
Loan Amount	0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)
Cycle Duration	-0.035** (0.012)	-0.035** (0.012)	-0.000 (0.912)	-0.000 (0.912)
Loan Interest	0.012* (0.062)	0.012* (0.062)	0.006 (0.183)	0.006 (0.183)
City FEs	Yes	Yes	Yes	Yes
City*Time FEs	Yes	Yes	Yes	Yes
Adjusted R^2	0.685	0.685	0.747	0.747
Observations	2,614,104	2,614,104	1,906,548	1,906,548

Table IA.8

The Pandemic and Loan Delinquency Rates.

This table shows the estimation results for the difference-in-differences regressions that compare the delinquency behavior before and after the pandemic outbreak after controlling a set of borrower and loan characteristics for both bank and FinTech loans. The p -values are reported in parentheses below each coefficient. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. Standard errors are clustered at the city and time level.

	Loan Delinquency Indicator			
	(1)	(2)	(3)	(4)
FinTech*After	0.082*** (0.002)	0.081*** (0.001)	0.075*** (0.001)	0.074*** (0.001)
FinTech	0.004 (0.175)	0.003 (0.213)	0.003 (0.117)	0.002 (0.121)
Borrower Age		-0.000 (0.938)	-0.000 (0.724)	0.000* (0.058)
Employment Indicator		-0.019*** (0.000)	-0.019*** (0.000)	-0.020*** (0.000)
High Income Indicator		-0.001* (0.062)	-0.001** (0.036)	-0.000 (0.455)
Higher Education Indicator		-0.003*** (0.000)	-0.003*** (0.000)	-0.004*** (0.000)
Male Indicator		-0.025*** (0.000)	-0.025*** (0.000)	-0.025*** (0.000)
Married Indicator		0.001* (0.067)	0.001* (0.067)	0.001* (0.071)
Hist. DLQ Indicator		0.012*** (0.000)	0.012*** (0.000)	0.011*** (0.000)
Car Loan Indicator		0.018*** (0.000)	0.018*** (0.000)	0.018*** (0.000)
Car Indicator		-0.000 (0.740)	-0.000 (0.791)	-0.000 (0.382)
House Indicator		-0.001* (0.056)	-0.001* (0.065)	-0.000 (0.279)
Mortgage Indicator		0.001 (0.209)	0.001 (0.223)	0.000 (0.386)
Hist. Balance		0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.001)
Hist. No of Credit Access		0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)
Hist. No. of DLQ		0.001*** (0.001)	0.001*** (0.001)	0.001*** (0.001)
Loan Amount		-0.000** (0.020)	-0.000** (0.018)	-0.000*** (0.000)
Cycle Duration		-0.001*** (0.007)	-0.001*** (0.000)	0.000 (0.597)
Loan Interest		0.000 (0.882)	0.000 (0.914)	-0.001* (0.060)
City FEs	No	No	Yes	Yes
City*Time FEs	No	No	Yes	Yes
Loan Amount Bin FEs	No	No	No	Yes
Cycle Duration Bin FEs	No	No	No	Yes
Adjusted R^2	0.024	0.056	0.166	0.168
Observations	1,303,043	1,303,043	1,303,043	1,303,043

Table IA.9

Loan Delinquency Rate Based on Matched Sample.

This table presents the estimation results for the difference-in-differences regressions in two matched samples that compare the delinquency behavior before and after the outbreak of the pandemic after controlling a set of borrower and loan characteristics for both FinTech and bank loans using the matched sample based on propensity score methods. The p -values are reported in parentheses below each coefficient. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. Standard errors are clustered at the city and time level.

	Loan Delinquency Indicator			
	(1)	(2)	(3)	(4)
FinTech*After	0.069*** (0.002)	0.067*** (0.001)	0.065*** (0.001)	0.064*** (0.001)
FinTech	0.005 (0.123)	0.004 (0.198)	0.003 (0.147)	0.004 (0.386)
Borrower Age		-0.000 (0.959)	-0.000 (0.817)	0.000* (0.056)
Employment Indicator		-0.020*** (0.000)	-0.020*** (0.000)	-0.021*** (0.000)
High Income Indicator		-0.001 (0.178)	-0.001 (0.157)	-0.001 (0.559)
Higher Education Indicator		-0.003* (0.093)	-0.003* (0.097)	-0.003* (0.068)
Male Indicator		-0.024*** (0.001)	-0.024*** (0.000)	-0.024*** (0.000)
Married Indicator		0.001 (0.543)	0.001 (0.523)	0.001 (0.545)
Hist. DLQ Indicator		0.010*** (0.000)	0.010*** (0.000)	0.009*** (0.000)
Car Loan Indicator		0.017*** (0.000)	0.017*** (0.000)	0.018*** (0.000)
Car Indicator		-0.000 (0.846)	-0.000 (0.910)	-0.000 (0.744)
House Indicator		-0.002** (0.018)	-0.002** (0.018)	-0.002** (0.038)
Mortgage Indicator		0.003** (0.018)	0.003** (0.032)	0.002** (0.044)
Hist. Balance		0.000** (0.010)	0.000*** (0.006)	0.000** (0.034)
Hist. No of Credit Access		0.000*** (0.001)	0.000*** (0.001)	0.000*** (0.001)
Hist. No. of DLQ		0.002** (0.040)	0.002** (0.038)	0.002** (0.030)
Loan Amount		-0.000* (0.060)	-0.000* (0.065)	-0.000* (0.095)
Cycle Duration		-0.001** (0.010)	-0.001*** (0.001)	-0.000 (0.637)
Loan Interest		0.000 (0.958)	0.000 (0.974)	-0.001 (0.157)
City FEs	No	No	Yes	Yes
City*Time FEs	No	No	Yes	Yes
Loan Amount Bin FEs	No	No	No	Yes
Cycle Duration Bin FEs	No	No	No	Yes
Adjusted R^2	0.028	0.035	0.273	0.275
Observations	195,456	195,456	195,456	195,456

Table IA.10

Loan Delinquency Rate Based on Matched Sample.

This table presents the estimation results for the difference-in-differences regressions in two matched samples that compare the delinquency behavior before and after the outbreak of the pandemic after controlling a set of borrower and loan characteristics for both FinTech and bank loans using the matched sample based on entropy balancing method. The p -values are reported in parentheses below each coefficient. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. Standard errors are clustered at the city and time level.

	Loan Delinquency Indicator			
	(1)	(2)	(3)	(4)
FinTech*After	0.073*** (0.001)	0.071*** (0.003)	0.070*** (0.002)	0.070*** (0.001)
FinTech	0.004 (0.215)	0.004 (0.137)	0.003 (0.174)	0.004 (0.163)
Borrower Age		-0.000 (0.998)	-0.000 (0.882)	0.000* (0.062)
Employment Indicator		-0.020*** (0.000)	-0.020*** (0.000)	-0.020*** (0.000)
High Income Indicator		-0.002* (0.081)	-0.002* (0.055)	-0.001 (0.331)
Higher Education Indicator		-0.003*** (0.005)	-0.003*** (0.007)	-0.004*** (0.003)
Male Indicator		-0.024*** (0.000)	-0.025*** (0.000)	-0.025*** (0.000)
Married Indicator		0.001 (0.497)	0.001 (0.492)	0.001 (0.524)
Hist. DLQ Indicator		0.011*** (0.000)	0.011*** (0.000)	0.010*** (0.000)
Car Loan Indicator		0.017*** (0.000)	0.017*** (0.000)	0.018*** (0.000)
Car Indicator		-0.000 (0.933)	-0.000 (0.981)	-0.000 (0.743)
House Indicator		-0.001* (0.090)	-0.001* (0.079)	-0.001 (0.198)
Mortgage Indicator		0.001** (0.036)	0.001* (0.057)	0.001* (0.093)
Hist. Balance		0.000*** (0.002)	0.000*** (0.001)	0.000*** (0.004)
Hist. No of Credit Access		0.000*** (0.001)	0.000*** (0.001)	0.000*** (0.001)
Hist. No. of DLQ		0.001** (0.038)	0.001** (0.045)	0.001** (0.034)
Loan Amount		-0.000** (0.022)	-0.000** (0.016)	-0.000*** (0.001)
Cycle Duration		-0.001*** (0.007)	-0.001*** (0.000)	-0.000 (0.903)
Loan Interest		-0.000 (0.756)	-0.000 (0.725)	-0.001* (0.054)
City FEs	No	No	Yes	Yes
City*Time FEs	No	No	Yes	Yes
Loan Amount Bin FEs	No	No	No	Yes
Cycle Duration Bin FEs	No	No	No	Yes
Adjusted R^2	0.014	0.043	0.196	0.201
Observations	977,282	977,282	977,282	977,282

Table IA.11

Loan Delinquency Rate Based on Matched Sample with Seemingly Unrelated Regression.

This table presents the estimation results for the seemingly unrelated regressions that compare the delinquency behavior before and after the outbreak of the pandemic after controlling a set of borrower and loan characteristics for both FinTech and bank loans using the propensity score matched sample. The p -values are reported in parentheses below each coefficient. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	Loan Delinquency Indicator			
	(1)	(2)	(3)	(4)
FinTech*After	0.068*** (0.004)	0.066*** (0.002)	0.065*** (0.001)	0.064*** (0.002)
FinTech	0.005 (0.137)	0.004 (0.164)	0.003 (0.143)	0.004 (0.328)
Borrower Age		-0.000 (0.938)	-0.000 (0.724)	0.000* (0.058)
Employment Indicator		-0.019*** (0.000)	-0.019*** (0.000)	-0.020*** (0.000)
High Income Indicator		-0.001* (0.062)	-0.001** (0.036)	-0.000 (0.455)
Higher Education Indicator		-0.003*** (0.000)	-0.003*** (0.000)	-0.004*** (0.000)
Male Indicator		-0.025*** (0.000)	-0.025*** (0.000)	-0.025*** (0.000)
Married Indicator		0.001* (0.067)	0.001* (0.067)	0.001* (0.071)
Hist. DLQ Indicator		0.012*** (0.000)	0.012*** (0.000)	0.011*** (0.000)
Car Loan Indicator		-0.018*** (0.000)	-0.018*** (0.000)	-0.018*** (0.000)
Car Indicator		0.000 (0.740)	0.000 (0.791)	0.000 (0.382)
House Indicator		-0.001* (0.056)	-0.001* (0.065)	-0.000 (0.279)
Mortgage Indicator		0.001 (0.209)	0.001 (0.223)	0.000 (0.386)
Hist. Balance		0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.001)
Hist. No of Credit Access		0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)
Hist. No. of DLQ		0.001*** (0.001)	0.001*** (0.001)	0.001*** (0.001)
Loan Amount		-0.000** (0.020)	-0.000** (0.018)	-0.000*** (0.000)
Cycle Duration		-0.001*** (0.007)	-0.001*** (0.000)	0.000 (0.597)
Loan Interest		0.000 (0.882)	0.000 (0.914)	-0.001* (0.060)
City FEs	No	No	Yes	Yes
City*Time FEs	No	No	Yes	Yes
Loan Amount Bin FEs	No	No	No	Yes
Cycle Duration Bin FEs	No	No	No	Yes
Adjusted R^2	0.028	0.035	0.272	0.275
Observations	195,456	195,456	195,456	195,456

Table IA.12

Severity of the Pandemic and Loan Delinquency Rate.

This table presents the estimation results for regressions studying how the severity of the pandemic in the borrower's city of residency affects the delinquency rate for FinTech and bank loans. The p -values are reported in parentheses below coefficients. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. Standard errors are clustered at the city and time level.

	Loan Delinquency Indicator			
	(1)	(2)	(3)	(4)
FinTech*After	0.075*** (0.001)	0.075*** (0.001)	0.075*** (0.001)	0.075*** (0.001)
FinTech*After* $D_{\text{Wuhan City}}$	0.004** (0.010)			
FinTech*After* $D_{\text{Hubei Province}}$		0.001* (0.085)		
FinTech*After* $D_{\text{Top10 Wuhan inflow cities}}$			0.001** (0.027)	
FinTech*After* $D_{\text{Top10 COVID infected cities}}$				0.002** (0.036)
FinTech	0.003 (0.117)	0.003 (0.116)	0.003 (0.117)	0.003 (0.117)
Borrower Age	-0.000 (0.725)	-0.000 (0.727)	-0.000 (0.721)	-0.000 (0.728)
Employment Indicator	-0.019*** (0.000)	-0.019*** (0.000)	-0.019*** (0.000)	-0.019*** (0.000)
High Income Indicator	-0.001** (0.037)	-0.001** (0.037)	-0.001** (0.012)	-0.001** (0.036)
Higher Education Indicator	-0.003*** (0.000)	-0.003*** (0.000)	-0.003*** (0.000)	-0.003*** (0.000)
Male Indicator	-0.025*** (0.000)	-0.025*** (0.000)	-0.025*** (0.000)	-0.025*** (0.000)
Married Indicator	0.001* (0.067)	0.001* (0.067)	0.001** (0.035)	0.001* (0.077)
Hist. DLQ Indicator	0.012*** (0.000)	0.012*** (0.000)	0.012*** (0.000)	0.012*** (0.000)
Car Loan Indicator	0.018*** (0.000)	0.018*** (0.000)	0.018*** (0.000)	0.018*** (0.000)
Car Indicator	-0.000 (0.791)	-0.000 (0.792)	-0.000 (0.686)	-0.000 (0.792)
House Indicator	-0.001* (0.065)	-0.001* (0.067)	-0.001 (0.102)	-0.001* (0.065)
Mortgage Indicator	0.001 (0.223)	0.001 (0.223)	0.000 (0.245)	0.001 (0.228)
Hist. Balance	0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)
Hist. No of Credit Access	0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)
Hist. No. of DLQ	0.001*** (0.001)	0.001*** (0.002)	0.001*** (0.002)	0.001*** (0.002)
Loan Amount	-0.000** (0.018)	-0.000** (0.018)	-0.000** (0.012)	-0.000** (0.018)
Cycle Duration	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)
Loan Interest	0.000 (0.914)	0.000 (0.914)	0.000 (0.931)	0.000 (0.914)
City FEs	Yes	Yes	Yes	Yes
City*Time FEs	Yes	Yes	Yes	Yes
Adjusted R^2	0.166	0.166	0.166	0.166
Observations	1,303,043	1,303,043	1,303,043	1,303,043

Table IA.13

First-time Borrowers and Loan Delinquency Rate.

This table presents the estimation results for regressions studying how the pandemic affected the delinquency rate for first-time and pre-existing FinTech and bank borrowers. The p -values are reported in parentheses below coefficients. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. Standard errors are clustered at the city and time level.

	Loan Delinquency Indicator			
	(1)	(2)	(3)	(4)
FinTech*After*Pre-existing	0.082*** (0.001)	0.081*** (0.002)	0.076*** (0.001)	0.075*** (0.001)
FinTech*After*First-time	0.079** (0.023)	0.075** (0.011)	0.073*** (0.006)	0.071*** (0.004)
FinTech	0.004 (0.175)	0.003 (0.213)	0.003 (0.117)	0.002 (0.121)
Borrower Age		-0.000 (0.938)	-0.000 (0.724)	0.000* (0.058)
Employment Indicator		-0.019*** (0.000)	-0.019*** (0.000)	-0.020*** (0.000)
High Income Indicator		-0.001* (0.062)	-0.001** (0.036)	-0.000 (0.455)
Higher Education Indicator		-0.003*** (0.000)	-0.003*** (0.000)	-0.004*** (0.000)
Male Indicator		-0.025*** (0.000)	-0.025*** (0.000)	-0.025*** (0.000)
Married Indicator		0.001* (0.067)	0.001* (0.067)	0.001* (0.071)
Hist. DLQ Indicator		0.012*** (0.000)	0.012*** (0.000)	0.011*** (0.000)
Car Loan Indicator		0.018*** (0.000)	0.018*** (0.000)	0.018*** (0.000)
Car Indicator		-0.000 (0.740)	-0.000 (0.791)	-0.000 (0.382)
House Indicator		-0.001* (0.056)	-0.001* (0.065)	-0.000 (0.279)
Mortgage Indicator		0.001 (0.209)	0.001 (0.223)	0.000 (0.386)
Hist. Balance		0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.001)
Hist. No of Credit Access		0.000*** (0.000)	0.000*** (0.000)	0.000*** (0.000)
Hist. No. of DLQ		0.001*** (0.001)	0.001*** (0.001)	0.001*** (0.001)
Loan Amount		-0.000** (0.020)	-0.000** (0.018)	-0.000*** (0.000)
Cycle Duration		-0.001*** (0.007)	-0.001*** (0.000)	0.000 (0.597)
Loan Interest		0.000 (0.882)	0.000 (0.914)	-0.001* (0.060)
City FEs	No	No	Yes	Yes
City*Time FEs	No	No	Yes	Yes
Loan Amount Bin FEs	No	No	No	Yes
Cycle Duration Bin FEs	No	No	No	Yes
Adjusted R^2	0.024	0.056	0.166	0.168
Observations	1,303,043	1,303,043	1,303,043	1,303,043

Table IA.14

Differentials in the Changes in Delinquency Rates of FinTech and Bank Loans for Borrowers Holding Both Loan Types.

This table shows the estimation results for the difference-in-differences regressions comparing the delinquency behavior before and after the outbreak of the pandemic after controlling a set of borrower and loan characteristics for both FinTech and bank loans. The p -values are reported in parentheses below each coefficient. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. Standard errors are clustered at the city and time level.

	Loan Delinquency Indicator			
	(1)	(2)	(3)	(4)
FinTech*After	0.047*** (0.002)	0.045*** (0.001)	0.042*** (0.001)	0.040*** (0.001)
FinTech	0.002 (0.412)	0.002 (0.540)	0.001 (0.369)	0.001 (0.478)
Borrower Age		-0.000 (0.205)	-0.000 (0.357)	-0.000 (0.486)
Employment Indicator		-0.020*** (0.004)	-0.020*** (0.006)	-0.018*** (0.008)
High Income Indicator		-0.005 (0.391)	-0.003 (0.524)	-0.004 (0.492)
Higher Education Indicator		-0.006 (0.278)	-0.003 (0.536)	-0.004 (0.499)
Male Indicator		-0.014** (0.019)	-0.013** (0.027)	-0.013** (0.020)
Married Indicator		-0.003 (0.512)	-0.001 (0.840)	-0.001 (0.869)
Hist. DLQ Indicator		0.003 (0.744)	0.005 (0.646)	0.004 (0.690)
Car Loan Indicator		0.011 (0.220)	0.011 (0.188)	0.012 (0.113)
Car Indicator		-0.001 (0.831)	-0.003 (0.596)	-0.003 (0.575)
House Indicator		-0.002 (0.760)	-0.002 (0.769)	-0.002 (0.747)
Mortgage Indicator		0.003 (0.566)	0.005 (0.422)	0.005 (0.419)
Hist. Balance		0.000 (0.939)	0.000 (0.975)	-0.000 (0.853)
Hist. No of Credit Access		0.000 (0.536)	0.000 (0.475)	0.000 (0.424)
Hist. No. of DLQ		0.003 (0.223)	0.003 (0.366)	0.003 (0.321)
Loan Amount		-0.000* (0.078)	-0.000 (0.206)	-0.000* (0.092)
Cycle Duration		-0.000 (0.861)	-0.001 (0.710)	0.005 (0.504)
Loan Interest		-0.003*** (0.009)	-0.003** (0.032)	-0.002* (0.091)
Borrower FEs	No	No	Yes	Yes
City FEs	No	No	No	Yes
City*Time FEs	No	No	No	Yes
Adjusted R^2	0.049	0.078	0.254	0.273
Observations	7,371	7,371	7,371	7,371

Table IA.15

Loan Pricing for FinTech Loans.

This table presents the estimation results for the difference in the relationship between loan performance and interest rate between FinTech and bank loans in our sample for FinTech loans. The p -values are reported in parentheses below each coefficient. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. Standard errors are clustered at the city and time level.

	Loan Delinquency Indicator			
	Before		After	
	(1)	(2)	(3)	(4)
Interest Rate	0.342*** (0.000)	0.316*** (0.004)	0.206 (0.190)	0.169 (0.103)
Borrower Age		0.003 (0.756)		0.012 (0.192)
Employment Indicator		-0.833*** (0.000)		-0.710*** (0.000)
High Income Indicator		-0.096 (0.238)		-0.015 (0.937)
Higher Education Indicator		-0.714*** (0.002)		-0.669*** (0.003)
Male Indicator		-0.279** (0.011)		-0.607** (0.036)
Married Indicator		0.121 (0.147)		0.133 (0.215)
Hist. DLQ Indicator		1.100*** (0.000)		1.941*** (0.000)
Car Loan Indicator		0.464*** (0.001)		0.368*** (0.002)
Car Indicator		-0.022 (0.638)		-0.221 (0.277)
House Indicator		-0.056 (0.315)		-0.112 (0.246)
Mortgage Indicator		0.138 (0.116)		0.059 (0.617)
Hist. Balance		0.000 (0.191)		0.000 (0.781)
Hist. No of Credit Access		0.039*** (0.000)		0.082*** (0.000)
Hist. No. of DLQ		0.141*** (0.003)		0.066 (0.238)
Loan Amount		-0.000*** (0.003)		-0.000** (0.040)
Cycle Duration		-0.055 (0.238)		-0.335** (0.046)
City FEs	No	Yes	No	Yes
City*Time FEs	No	Yes	No	Yes
Adjusted R^2	0.004	0.217	0.000	0.128
Observations	432,740	432,740	288,493	288,493

Table IA.16

Loan Pricing for Bank Loans.

This table presents the estimation results for the difference in the relationship between loan performance and interest rate between FinTech and bank loans in our sample for bank loans. The p -values are reported in parentheses below each coefficient. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. Standard errors are clustered at the city and time level.

	Loan Delinquency Indicator			
	Before		After	
	(1)	(2)	(3)	(4)
Interest Rate	0.314*** (0.001)	0.299** (0.034)	0.302** (0.030)	0.286** (0.019)
Borrower Age		0.031 (0.162)		-0.004 (0.519)
Employment Indicator		-0.113** (0.046)		-0.088 (0.306)
High Income Indicator		-0.114 (0.186)		-0.090 (0.179)
Higher Education Indicator		-0.136* (0.087)		-0.027 (0.652)
Male Indicator		-0.201*** (0.006)		-0.412** (0.046)
Married Indicator		0.053 (0.245)		0.012 (0.798)
Hist. DLQ Indicator		0.353** (0.047)		0.271 (0.197)
Car Loan Indicator		0.582 (0.228)		0.325 (0.677)
Car Indicator		-0.014 (0.838)		-0.079 (0.285)
House Indicator		-0.016 (0.781)		-0.000 (0.999)
Mortgage Indicator		0.025 (0.731)		0.068 (0.462)
Hist. Balance		0.000*** (0.001)		0.000** (0.012)
Hist. No of Credit Access		-0.012* (0.055)		-0.011** (0.018)
Hist. No. of DLQ		0.291** (0.035)		0.142 (0.132)
Loan Amount		0.000*** (0.000)		0.000*** (0.003)
Cycle Duration		0.001 (0.947)		0.002 (0.798)
City FEs	No	Yes	No	Yes
City*Time FEs	No	Yes	No	Yes
Adjusted R^2	0.005	0.175	0.003	0.164
Observations	349,086	349,086	232,724	232,724