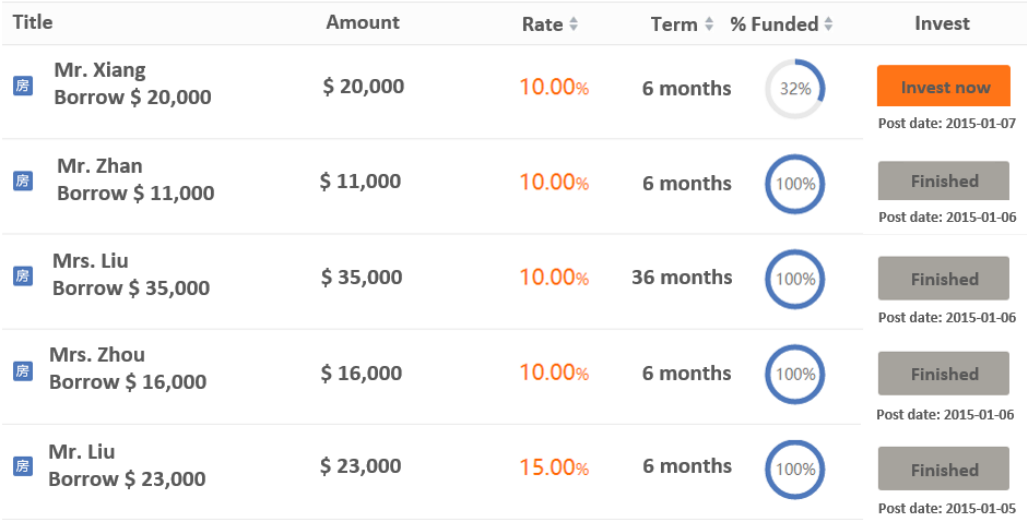
Online Supplement to

When Online Lending Meets Real Estate: Examining Investment Decisions in Lending-Based Real Estate Crowdfunding

Figure A1. An Example of Listing Page



Title	Amount	Rate	Term	% Funded	Invest
Mr. Xiang Borrow $ 20,000	$ 20,000	10.00%	6 months	32%	Invest now Post date: 2015-01-07
Mr. Zhan Borrow $ 11,000	$ 11,000	10.00%	6 months	100%	Finished Post date: 2015-01-06
Mrs. Liu Borrow $ 35,000	$ 35,000	10.00%	36 months	100%	Finished Post date: 2015-01-06
Mrs. Zhou Borrow $ 16,000	$ 16,000	10.00%	6 months	100%	Finished Post date: 2015-01-06
Mr. Liu Borrow $ 23,000	$ 23,000	15.00%	6 months	100%	Finished Post date: 2015-01-05

Figure A2. An Example of Loan Page

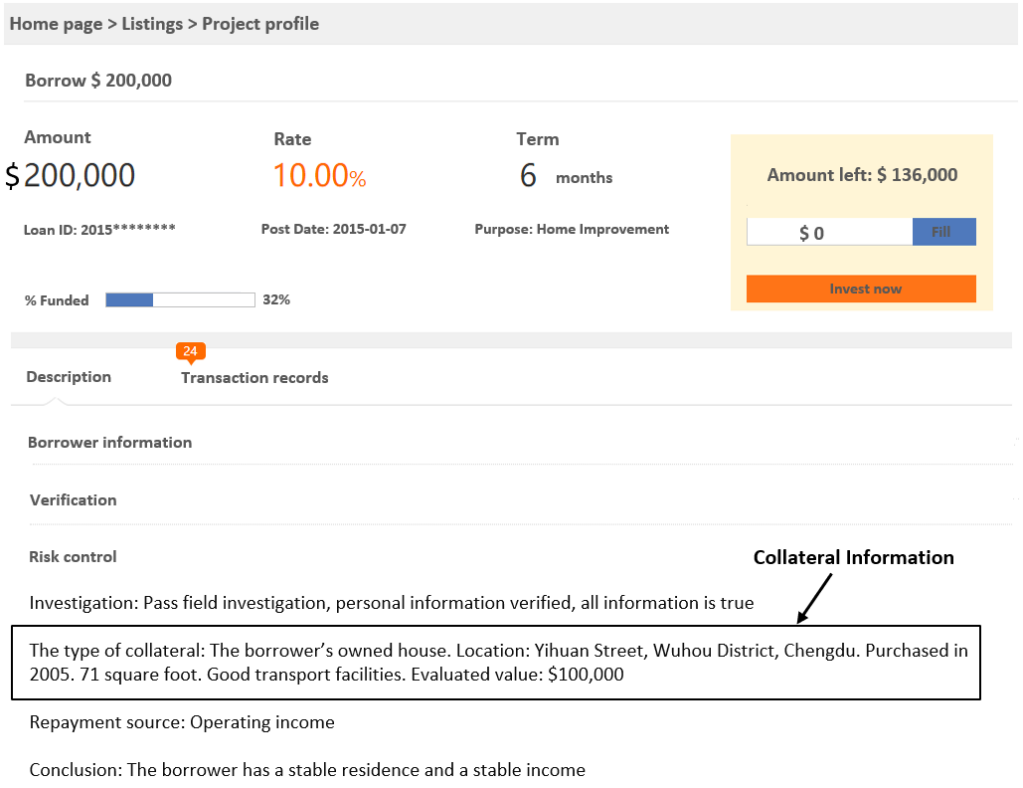


Figure A3. Distribution of Propensity Score Before and After Kernel Matching

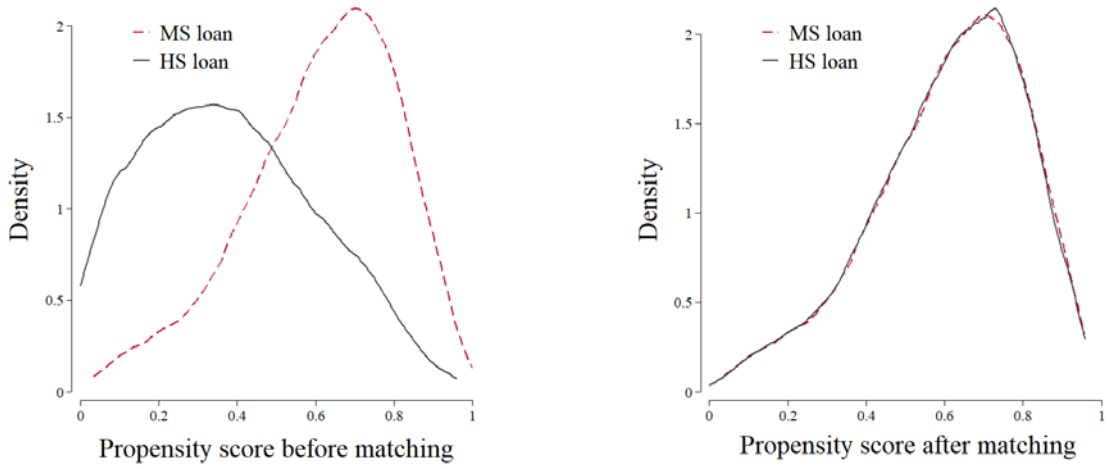


Table A1. Sensitivity to Fundraising performance for Time-to-invest Analysis

Percent Funded	**<=25%**		**25%~50%**		**50%~75%**		**>75%**	
	(1)		(2)		(3)		(4)	
Collateral type(1=MS)	0.399***	(0.050)	0.419***	(0.052)	0.504***	(0.055)	0.485***	(0.056)
log Loan amount	0.781***	(0.034)	0.597***	(0.025)	0.607***	(0.027)	0.571***	(0.018)
log Loan rate	234.824***	(99.107)	246.410***	(124.073)	20.957***	(11.199)	375.570***	(176.429)
log Loan duration	0.628***	(0.055)	0.897	(0.110)	1.415**	(0.191)	0.904	(0.109)
Age	0.999	(0.002)	1.000	(0.002)	1.001	(0.002)	0.999	(0.002)
Gender	1.194***	(0.051)	1.036	(0.039)	1.021	(0.033)	0.961	(0.027)
Education	1.305***	(0.046)	1.160***	(0.037)	1.187***	(0.045)	1.158***	(0.037)
Marital status	0.869***	(0.036)	0.915*	(0.047)	1.019	(0.033)	1.019	(0.031)
Monthly income	0.729***	(0.031)	0.979	(0.030)	1.071**	(0.030)	1.072**	(0.037)
Employment	1.014	(0.056)	1.029	(0.048)	0.954	(0.050)	0.883***	(0.035)
Co-borrower	1.302***	(0.076)	1.256***	(0.097)	1.179**	(0.090)	1.140**	(0.076)
Repeat borrower	0.778***	(0.059)	1.218***	(0.091)	1.142	(0.105)	0.859	(0.083)
Years of purchase	1.036***	(0.006)	1.019***	(0.007)	0.978***	(0.005)	0.987**	(0.005)
log Gross area	1.472***	(0.087)	1.723***	(0.089)	1.246***	(0.064)	1.196***	(0.071)
log Estimated value	0.738***	(0.033)	0.859***	(0.043)	0.952	(0.046)	1.109**	(0.045)
Percent funded	0.001***	(0.000)	0.003**	-0.008	2.6E+04**	-1.3E+05	0.001***	(0.000)
Sq Percent funded	3.6E+10***	(-1.3E+11)	3.6E+02*	(-1.2E+03)	1.0E-03**	(0.000)	1.5E+06***	(-3.8E+06)
EXP	1.329***	(0.053)	1.326***	(0.059)	1.493***	(0.076)	1.523***	(0.079)
ΔHPI	1.700***	(0.210)	2.231***	(0.173)	1.453***	(0.159)	1.632***	(0.171)
SMR	1.002	(0.005)	1.006	(0.004)	0.980***	(0.004)	0.997	(0.004)
SMV	0.924***	(0.010)	0.890***	(0.011)	0.878***	(0.012)	0.927***	(0.015)
Collateral type × EXP	1.050***	(0.019)	1.038*	(0.020)	0.973	(0.019)	1.072***	(0.018)
Collateral type × ΔHPI	1.513***	(0.195)	0.594***	(0.057)	0.735***	(0.081)	0.732***	(0.077)
Collateral type × SMR	1.005	(0.006)	0.993	(0.005)	1.005	(0.005)	0.998	(0.004)
Collateral type × SMV	1.034**	(0.015)	1.100***	(0.013)	1.112***	(0.013)	1.069***	(0.014)
Loan repayment	Yes		Yes		Yes		Yes	
Loan purpose	Yes		Yes		Yes		Yes	
Observations	8,098		8,645		9,160		11,952	
Log-likelihood	-17,336		-19,733		-20,437		-25,976	

We report the hazard ratios (exponentiated coefficients), with values greater than 1 indicating that a higher value of the covariate increases the probability of the occurrence of the transaction. Note that this analysis is performed based on Equation (3). Standard errors are reported in parentheses. Significance level: *$p < 0.10$, **$p < 0.05$, ***$p < 0.01$.

Table A2. Sensitivity to Fundraising performance for Amount-to-invest Analysis

Percent Funded	**<=25%**		**25%~50%**		**50%~75%**		**>75%**	
	(1)		(2)		(3)		(4)	
Collateral type (1=MS)	-0.242	(0.192)	-0.492**	(0.244)	-0.215	(0.168)	-0.076	(0.185)
log Loan amount	0.313***	(0.044)	0.213***	(0.070)	0.328***	(0.058)	0.128***	(0.045)
log Loan rate	4.103***	(0.482)	4.980***	(0.771)	3.309***	(0.546)	2.593***	(0.440)
log Loan duration	-0.120	(0.079)	-0.211*	(0.126)	0.094	(0.106)	0.016	(0.086)
Age	0.001	(0.002)	0.005**	(0.002)	0.001	(0.003)	-0.001	(0.002)
Gender	-0.066	(0.042)	-0.067	(0.050)	-0.079**	(0.036)	0.044	(0.044)
Education	0.082*	(0.045)	0.144***	(0.056)	0.197***	(0.057)	0.002	(0.041)
Marital status	0.125***	(0.037)	0.051	(0.051)	-0.019	(0.053)	0.023	(0.049)
Monthly income	0.002	(0.036)	-0.022	(0.049)	-0.049	(0.055)	0.060	(0.044)
Employment	-0.273***	(0.070)	-0.171*	(0.092)	-0.209***	(0.062)	-0.221***	(0.058)
Co-borrower	-0.154**	(0.076)	-0.222**	(0.092)	0.139	(0.090)	0.011	(0.073)
Repeat borrower	-0.073	(0.070)	0.060	(0.098)	0.014	(0.106)	-0.184*	(0.100)
Years of purchase	0.020***	(0.006)	-0.018**	(0.009)	-0.003	(0.010)	0.004	(0.008)
log Gross area	0.139**	(0.055)	-0.005	(0.070)	0.150**	(0.060)	0.116**	(0.053)
log Estimated value	-0.094**	(0.043)	0.011	(0.071)	-0.100	(0.061)	0.069	(0.056)
Percent funded	25.185***	(1.324)	8.238**	(3.374)	13.579**	(6.131)	-30.868***	(8.061)
Sq Percent funded	-73.403***	(5.071)	-9.757**	(4.403)	-11.447**	(4.926)	17.577***	(4.499)
EXP	0.175***	(0.036)	0.161***	(0.036)	0.124***	(0.032)	0.050**	(0.025)
ΔHPI	0.113	(0.143)	0.213	(0.171)	0.103	(0.127)	0.097	(0.141)
SMR	0.016***	(0.005)	0.005	(0.006)	0.001	(0.005)	0.005	(0.005)
SMV	0.032**	(0.013)	0.013	(0.020)	-0.002	(0.012)	0.004	(0.014)
Collateral type × EXP	-0.043*	(0.025)	-0.036	(0.026)	-0.020	(0.025)	0.028	(0.021)
Collateral type × ΔHPI	0.242*	(0.134)	0.237	(0.150)	0.344***	(0.131)	0.096	(0.121)
Collateral type × SMR	0.009	(0.006)	0.038***	(0.008)	0.012*	(0.006)	0.001	(0.006)
Collateral type × SMV	0.019	(0.015)	0.039*	(0.022)	0.009	(0.014)	-0.020	(0.017)
Intercept	-10.239***	(1.332)	-11.582***	(2.209)	-9.902***	(2.691)	9.961**	(3.897)
Loan repayment	Yes		Yes		Yes		Yes	
Loan purpose	Yes		Yes		Yes		Yes	
Observations	13,765		11,757		11,706		14,827	
Log-likelihood	-23,843.979		-21,743.198		-21,296.019		-26,650.757	

Standard errors are reported in parentheses.*$p < 0.10$, **$p < 0.05$, ***$p < 0.01$.

Table A2 and Table A3 report the sensitivity of our results to fundraising performance. From our data, we can only observe loans that are successfully (fully) funded because the platform conceals the loan listings that fail to reach the requested amount at the end of their lending period. In this subsection, we conduct an additional check to assess whether our findings are sensitive to the fundraising performance of loans. The rationale behind our sensitivity analysis is as follows. From a payoff externality standpoint, lenders may perceive loans with lower funding percentage *more likely to fail* and accordingly adjust their investment behavior, as compared to those with higher funding percentage, ceteris paribus. We divide the whole data set into four subsamples based on the percentage of the requested amount that has been reached prior to the occurrence of a given transaction (using *Percent funded* = 25%, 50%, and 75% as cutoff values). We then perform the analysis separately using the resulting subsamples. Despite few minor changes in the significance level, the results are largely consistent across subsamples, suggesting that lenders as a whole do not demonstrate a systematic behavioral change toward loans that are less desirable (i.e., seemingly more likely to fail).

Table A3. Alternative Survival Distributions

Distribution	Log-likelihood	AIC	BIC	Observations
log-normal	-212,617.399	425,282.798	425,487.794	37,855
log-logistic	-212,878.323	425,804.646	426,009.642	37,855
gamma	-222,412.805	444,873.611	445,078.607	37,855
exponential	-275,079.836	550,205.673	550,402.127	37,855
Weibull	**-86,107.587**	**172,263.174**	**172,468.171**	37,855

Table A4. Alternative Competing Risks Analysis

	Hazard Ratio	Std. Err.
Collateral type (1=MS)	0.746***	(0.030)
log Loan amount	0.753***	(0.010)
log Loan rate	9.759***	(1.063)
log Loan duration	0.938**	(0.025)
Age	1.006***	(0.001)
Gender	0.975**	(0.011)
Education	1.258***	(0.015)
Marital status	0.968***	(0.012)
Monthly income	0.921***	(0.011)
Employment	0.900***	(0.016)
Co-borrower	1.108***	(0.023)
Repeat borrower	1.435***	(0.031)
Years of purchase	0.996**	(0.002)
log Gross area	1.018	(0.015)
log Estimated value	0.979	(0.014)
Percent funded	0.094***	(0.007)
Sq Percent funded	3.359***	(0.219)
EXP	1.058***	(0.004)
ΔHPI	1.888***	(0.048)
SMR	1.014***	(0.001)
SMV	0.981***	(0.003)
Collateral type × *EXP*	1.004	(0.006)
Collateral type × ΔHPI	0.921**	(0.033)
Collateral type × *SMR*	0.999	(0.002)
Collateral type × *SMV*	1.032***	(0.004)
Loan repayment	Yes	
Loan purpose	Yes	
Observations	75,710	
Log-likelihood	-357,118.557	

In addition to fitting separate regression models for each transaction type, we perform a single analysis of the two types of transactions at the same time and report results in Table A4. Note that the number of observations increased since the analysis is performed based on an expanded dataset wherein each transaction is represented twice, one for each transaction type. We report the hazard ratios (exponentiated coefficients), with values greater than 1 indicating that a higher value of the covariate increases the probability of the occurrence of the transaction. Standard errors are reported in parentheses. Significance level: *$p < 0.10$, **$p < 0.05$, ***$p < 0.01$.