

## Appendix for “Flood and Loan Reallocation New Evidence” (Ogura, Y., D. Nguyen, and T.H. Nguyen)

**Table A1: Results with damage1 (1 percentile flood dummy)**

(Note) Estimated coefficients are listed. Dependent variable is indicated at the top of each column. Damage1 is a dummy to indicate that a firm is located in a municipality hit by a 1 percentile flood. Firm and sector-year two-way clustered standard errors are in parentheses. The set of control variables are the same as that in Table 8 (Columns (1)-(7)), or that in Table 15 (Columns (8),(9)). Constant term is omitted from the report. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1 (two-sided).

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
		Along-term loan	short-term loan	Δtrade credit	Δpayable	Δreceivable	Δcash	I/K	Δemployee
VARIABLES	Δloan/asset	/asset	/asset	/asset	/asset	/asset	hold		
damage1(t)	0.0033*** (0.0012)	0.0024** (0.0009)	0.0009 (0.0008)	-0.0029*** (0.0010)	-0.0002 (0.0009)	0.0027*** (0.0009)	0.0032 (0.0026)	0.0010* (0.0005)	0.0143 (0.0156)
damage1(t-1)	-0.0001 (0.0012)	0.0005 (0.0011)	-0.0006 (0.0008)	0.0003 (0.0013)	-0.0008 (0.0011)	-0.0011 (0.0008)	0.0018 (0.0040)	0.0008 (0.0005)	0.0051 (0.0213)
damage1(t-2)	-0.0029* (0.0015)	-0.0011 (0.0014)	-0.0018** (0.0009)	0.0004 (0.0011)	-0.0005 (0.0009)	-0.0009 (0.0012)	-0.0048** (0.0024)	0.0002 (0.0006)	0.0261 (0.0209)
damage1 *tangible loss(t)	-0.0039* (0.0022)	-0.0012 (0.0019)	-0.0027** (0.0014)	0.0042** (0.0020)	0.0029* (0.0016)	-0.0013 (0.0023)	0.0046 (0.0037)	-0.0005 (0.0011)	-0.1040 (0.0700)
damage1 *tangible loss(t-1)	-0.0044* (0.0023)	-0.0035* (0.0018)	-0.0009 (0.0016)	0.0032 (0.0023)	0.0010 (0.0015)	-0.0022 (0.0025)	0.0028 (0.0042)	-0.0016 (0.0011)	-0.0313 (0.0606)
damage1 *tangible loss(t-2)	0.0026 (0.0026)	0.0003 (0.0020)	0.0024 (0.0019)	-0.0003 (0.0016)	0.0027 (0.0019)	0.0031 (0.0023)	-0.0025 (0.0038)	-0.0001 (0.0010)	0.0361 (0.0577)
N	873,864	873,864	873,864	873,864	873,864	873,864	873,864	873,864	873,864
Adj. R-sq.	0.6377	0.0292	0.7983	-0.1089	-0.0708	-0.0756	0.0108	0.1110	0.0738
Controls	yes	yes	yes	yes	yes	yes	yes	yes	yes
year*industry fe	yes	yes	yes	yes	yes	yes	yes	yes	yes
firm fe	yes	yes	yes	yes	yes	yes	yes	yes	yes

**Table A2: Results with damage5 (5 percentile flood dummy)**

(Note) Estimated coefficients are listed. Dependent variable is indicated at the top of each column. Damage5 is a dummy to indicate that a firm is located in a municipality hit by a 5-percentile flood. Firm and sector-year two-way clustered standard errors are in parentheses. The set of control variables are the same as that in Table 8 (Columns (1)-(7)), or that in Table 15 (Columns (8),(9)). Constant term is omitted from the report. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1 (two-sided).

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
VARIABLES	$\Delta$ loan/asset	$\Delta$ long-term loan /asset	short-term loan /asset	$\Delta$ trade credit /asset	$\Delta$ payable /asset	$\Delta$ receivable /asset	$\Delta$ cash hold	I/K	$\Delta$ employee
damage5(t)	0.0019*** (0.0007)	0.0020*** (0.0006)	-0.0001 (0.0005)	-0.0006 (0.0006)	0.0012** (0.0005)	0.0018*** (0.0006)	0.0063*** (0.0020)	0.0008** (0.0003)	0.0192* (0.0098)
damage5(t-1)	-0.0002 (0.0009)	0.0009 (0.0009)	-0.0010* (0.0006)	0.0011* (0.0006)	0.0005 (0.0004)	-0.0006 (0.0006)	0.0025 (0.0017)	0.0005 (0.0003)	0.0259** (0.0111)
damage5(t-2)	-0.0004 (0.0009)	0.0012* (0.0007)	-0.0016** (0.0007)	-0.0000 (0.0006)	-0.0006 (0.0005)	-0.0005 (0.0006)	-0.0038** (0.0017)	0.0003 (0.0004)	0.0197 (0.0125)
damage5 *tangible loss(t)	-0.0006 (0.0012)	-0.0005 (0.0011)	-0.0001 (0.0010)	0.0025** (0.0012)	0.0006 (0.0008)	-0.0020 (0.0012)	0.0016 (0.0031)	-0.0000 (0.0009)	-0.0470 (0.0419)
damage5 *tangible loss(t-1)	-0.0018 (0.0015)	-0.0020 (0.0013)	0.0003 (0.0010)	0.0009 (0.0012)	-0.0002 (0.0010)	-0.0011 (0.0012)	0.0013 (0.0020)	-0.0008 (0.0007)	-0.0659** (0.0331)
damage5 *tangible loss(t-2)	0.0002 (0.0018)	-0.0007 (0.0014)	0.0009 (0.0013)	0.0003 (0.0013)	0.0003 (0.0011)	-0.0001 (0.0017)	-0.0015 (0.0024)	-0.0006 (0.0007)	-0.0102 (0.0384)
N	873,864	873,864	873,864	873,864	873,864	873,864	873,864	873,864	873,864
Adj. R-sq.	0.6377	0.0292	0.7983	-0.1089	-0.0708	-0.0756	0.0108	0.1110	0.0738
Controls	yes	yes	yes	yes	yes	yes	yes	yes	yes
year*industry fe	yes	yes	yes	yes	yes	yes	yes	yes	yes
firm fe	yes	yes	yes	yes	yes	yes	yes	yes	yes

**Table A3: Pretrend**

(Note) Estimated coefficients are listed. Dependent variable is indicated at the top of each column. Firm and sector-year two-way clustered standard errors are in parentheses. The set of control variables are the same as that in Table 8 (Columns (1)-(7)), or that in Table 15 (Columns (8),(9)). Constant term is omitted from the report. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1 (two-sided).

VARIABLES	(1) Δloan/asset	(2) Δlong-term loan/asset	(3) short-term loan/asset	(4) Δtrade credit /asset	(5) Δpayable /asset	(6) Δreceivable /asset	(7) Δcash hold	(8) I/K	(9) Δemployee
damage10(t+1)	-0.0005 (0.0011)	-0.0012 (0.0008)	0.0006 (0.0007)	-0.0006 (0.0006)	0.0003 (0.0005)	0.0008 (0.0007)	-0.0013 (0.0016)	-0.0000 (0.0004)	0.0070 (0.0105)
damage10(t)	0.0023*** (0.0009)	0.0016*** (0.0006)	0.0006 (0.0007)	-0.0012 (0.0009)	0.0020*** (0.0006)	0.0031*** (0.0009)	0.0049*** (0.0017)	0.0009** (0.0004)	0.0404*** (0.0139)
damage10(t-1)	-0.0001 (0.0008)	0.0007 (0.0007)	-0.0008 (0.0007)	0.0010 (0.0007)	-0.0004 (0.0005)	-0.0014** (0.0006)	0.0004 (0.0010)	0.0010** (0.0004)	0.0290** (0.0134)
damage10(t-2)	-0.0008 (0.0008)	0.0003 (0.0007)	-0.0011 (0.0007)	0.0001 (0.0008)	-0.0002 (0.0007)	-0.0003 (0.0006)	-0.0030** (0.0013)	0.0006** (0.0003)	0.0237 (0.0145)
damage10 *tangible loss(t+1)	0.0013 (0.0016)	0.0005 (0.0012)	0.0008 (0.0009)	-0.0015 (0.0011)	0.0012 (0.0012)	0.0027** (0.0013)	-0.0027 (0.0021)	-0.0009 (0.0008)	0.0245 (0.0520)
damage10 *tangible loss(t)	-0.0003 (0.0015)	-0.0000 (0.0011)	-0.0003 (0.0013)	0.0021* (0.0011)	0.0010 (0.0010)	-0.0012 (0.0014)	-0.0004 (0.0028)	-0.0003 (0.0009)	0.0134 (0.0453)
damage10 *tangible loss(t-1)	-0.0017 (0.0018)	-0.0013 (0.0013)	-0.0004 (0.0011)	0.0010 (0.0012)	0.0008 (0.0011)	-0.0001 (0.0015)	0.0010 (0.0023)	-0.0022*** (0.0008)	-0.0453 (0.0358)
damage10 *tangible loss(t-2)	-0.0007 (0.0016)	-0.0006 (0.0012)	-0.0001 (0.0012)	0.0002 (0.0013)	0.0001 (0.0012)	-0.0000 (0.0016)	-0.0030 (0.0020)	-0.0017*** (0.0006)	0.0136 (0.0408)
N	630,623	630,623	630,623	630,623	630,623	630,623	630,623	630,623	630,623
Adj. R-sq.	0.6455	0.0220	0.8113	-0.1262	-0.0819	-0.0900	-0.0053	0.1114	0.0761
Controls	yes	yes	yes	yes	yes	yes	yes	yes	yes
year*industry fe	yes	yes	yes	yes	yes	yes	yes	yes	yes
firm fe	yes	yes	yes	yes	yes	yes	yes	yes	yes

**Table A4: Construction sector only**

(Note) Estimated coefficients are listed. Constriction sector only. Dependent variable is indicated at the top of each column. Firm and sector-year two-way clustered standard errors are in parentheses. The set of control variables are the same as that in Table 8 (Columns (1)-(7)), or that in Table 15 (Columns (8),(9)). Constant term is omitted from the report. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1 (two-sided).

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
VARIABLES	$\Delta$ loan/asset	$\Delta$ long-term loan /asset	short-term loan /asset	$\Delta$ trade credit /asset	$\Delta$ payable /asset	$\Delta$ receivable /asset	$\Delta$ cash hold	I/K	$\Delta$ employee
damage10(t)	0.0023** (0.0008)	0.0023*** (0.0006)	-0.0000 (0.0005)	0.0005 (0.0007)	0.0018** (0.0008)	0.0013 (0.0012)	0.0089*** (0.0027)	0.0012*** (0.0004)	0.0319** (0.0111)
damage10(t-1)	-0.0003 (0.0013)	0.0010 (0.0011)	-0.0013 (0.0007)	0.0021** (0.0008)	0.0003 (0.0005)	-0.0018* (0.0008)	0.0034 (0.0024)	0.0010** (0.0004)	0.0180 (0.0119)
damage10(t-2)	-0.0005 (0.0011)	0.0011 (0.0009)	-0.0016 (0.0010)	0.0001 (0.0009)	-0.0003 (0.0009)	-0.0004 (0.0008)	-0.0046 (0.0025)	0.0007 (0.0004)	0.0291** (0.0118)
damage10 *tangible loss(t)	-0.0022 (0.0016)	-0.0006 (0.0017)	-0.0016 (0.0015)	0.0017 (0.0018)	0.0002 (0.0014)	-0.0015 (0.0021)	0.0030 (0.0056)	-0.0021 (0.0014)	-0.0573 (0.0406)
damage10 *tangible loss(t-1)	-0.0043 (0.0024)	-0.0027 (0.0022)	-0.0016 (0.0012)	-0.0008 (0.0019)	-0.0017 (0.0018)	-0.0009 (0.0020)	0.0016 (0.0038)	-0.0032*** (0.0009)	0.0007 (0.0333)
damage10 *tangible loss(t-2)	-0.0005 (0.0027)	-0.0002 (0.0019)	-0.0003 (0.0021)	0.0022 (0.0023)	-0.0025 (0.0017)	-0.0047 (0.0028)	0.0032 (0.0045)	-0.0022** (0.0009)	-0.0174 (0.0593)
N	532,567	532,567	532,567	532,567	532,567	532,567	532,567	532,567	532,567
Adj. R-sq.	0.6270	0.0232	0.7873	-0.1167	-0.0880	-0.0913	0.0044	0.0852	0.0411
Controls	yes	yes	yes	yes	yes	yes	yes	yes	yes
year*industry fe	yes	yes	yes	yes	yes	yes	yes	yes	yes
firm fe	yes	yes	yes	yes	yes	yes	yes	yes	yes

**Table A5: Other sectors only**

(Note) Estimated coefficients are listed. Construction sector is excluded. Dependent variable is indicated at the top of each column. Firm and sector-year two-way clustered standard errors are in parentheses. The set of control variables are the same as that in Table 8 (Columns (1)-(7)), or that in Table 15 (Columns (8),(9)). Constant term is omitted from the report. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1 (two-sided).

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
VARIABLES	$\Delta$ loan/asset	$\Delta$ long-term loan /asset	short-term loan /asset	$\Delta$ trade credit /asset	$\Delta$ payable /asset	$\Delta$ receivable /asset	$\Delta$ cash hold	I/K	$\Delta$ employee
damage10(t)	0.0019*	0.0016**	0.0003	-0.0021***	0.0001	0.0022***	0.0002	0.0001	-0.0038
	(0.0011)	(0.0008)	(0.0008)	(0.0007)	(0.0006)	(0.0008)	(0.0015)	(0.0006)	(0.0258)
damage10(t-1)	0.0011	0.0012	-0.0001	-0.0010	-0.0007	0.0003	0.0029**	-0.0003	0.0466*
	(0.0011)	(0.0009)	(0.0007)	(0.0007)	(0.0006)	(0.0008)	(0.0014)	(0.0005)	(0.0250)
damage10(t-2)	-0.0001	0.0007	-0.0009	0.0012	0.0002	-0.0010	0.0001	-0.0001	0.0104
	(0.0014)	(0.0010)	(0.0008)	(0.0008)	(0.0007)	(0.0008)	(0.0016)	(0.0006)	(0.0277)
damage10	0.0001	-0.0005	0.0007	0.0035***	0.0020*	-0.0015	0.0014	0.0010	0.0327
*tangible loss(t)	(0.0017)	(0.0012)	(0.0011)	(0.0011)	(0.0011)	(0.0012)	(0.0020)	(0.0010)	(0.0579)
damage10	-0.0013	-0.0016	0.0004	0.0036***	0.0017*	-0.0019	-0.0007	0.0005	-0.0970**
*tangible loss(t-1)	(0.0017)	(0.0014)	(0.0012)	(0.0012)	(0.0010)	(0.0012)	(0.0023)	(0.0009)	(0.0471)
damage10	-0.0004	-0.0008	0.0004	-0.0015	0.0010	0.0025*	-0.0037	-0.0000	0.0160
*tangible loss(t-2)	(0.0020)	(0.0015)	(0.0013)	(0.0011)	(0.0010)	(0.0013)	(0.0023)	(0.0009)	(0.0480)
N	336,226	336,226	336,226	336,226	336,226	336,226	336,226	336,226	336,226
Adj. R-sq.	0.6689	0.0443	0.8303	-0.0863	-0.0002	-0.0073	0.0297	0.1682	0.0982
Controls	yes	yes	yes	yes	yes	yes	yes	yes	yes
year*industry fe	yes	yes	yes	yes	yes	yes	yes	yes	yes
firm fe	yes	yes	yes	yes	yes	yes	yes	yes	yes

**Table A6: Longer panel**

(Note) Estimated coefficients are listed. Sample consists only of those with 10 years of observations or more. Dependent variable is indicated at the top of each column. Firm and sector-year two-way clustered standard errors are in parentheses. The set of control variables are the same as that in Table 8 (Columns (1)-(7)), or that in Table 15 (Columns (8),(9)). Constant term is omitted from the report. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1 (two-sided).

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
		$\Delta$ long-term loan	short-term loan	$\Delta$ trade credit	$\Delta$ payable	$\Delta$ receivable			
VARIABLES	$\Delta$ loan/asset	/asset	/asset	/asset	/asset	/asset	$\Delta$ cash hold	I/K	$\Delta$ employee
damage10(t)	0.0033*** (0.0010)	0.0022*** (0.0007)	0.0011 (0.0007)	-0.0002 (0.0008)	0.0017** (0.0007)	0.0019** (0.0009)	0.0058** (0.0025)	0.0013*** (0.0003)	0.0153 (0.0181)
damage10(t-1)	0.0000 (0.0011)	0.0011 (0.0010)	-0.0011 (0.0007)	0.0022** (0.0009)	-0.0002 (0.0005)	-0.0024** (0.0011)	0.0012 (0.0017)	0.0010** (0.0004)	0.0472*** (0.0148)
damage10(t-2)	0.0002 (0.0008)	0.0015 (0.0010)	-0.0012* (0.0007)	0.0002 (0.0010)	0.0006 (0.0009)	0.0004 (0.0008)	-0.0042** (0.0020)	-0.0002 (0.0004)	0.0286 (0.0184)
damage10 *tangible loss(t)	-0.0024 (0.0017)	0.0001 (0.0014)	-0.0025** (0.0011)	0.0007 (0.0014)	0.0008 (0.0011)	0.0001 (0.0014)	0.0009 (0.0029)	-0.0016** (0.0007)	-0.0350 (0.0472)
damage10 *tangible loss(t-1)	-0.0035** (0.0015)	-0.0026** (0.0013)	-0.0009 (0.0011)	-0.0006 (0.0013)	-0.0004 (0.0012)	0.0002 (0.0016)	0.0001 (0.0028)	-0.0018*** (0.0007)	-0.0417 (0.0399)
damage10 *tangible loss(t-2)	-0.0024 (0.0017)	-0.0013 (0.0010)	-0.0011 (0.0013)	0.0003 (0.0014)	-0.0013 (0.0012)	-0.0016 (0.0016)	0.0007 (0.0022)	-0.0004 (0.0008)	-0.0246 (0.0493)
N	399,748	399,748	399,748	399,748	399,748	399,748	399,748	399,748	399,748
Adj. R-sq.	0.6016	-0.0003	0.7601	-0.0834	-0.0169	-0.0343	0.0056	0.0945	0.0881
Controls	yes	yes	yes	yes	yes	yes	yes	yes	yes
year*industry fe	yes	yes	yes	yes	yes	yes	yes	yes	yes
firm fe	yes	yes	yes	yes	yes	yes	yes	yes	yes