A. Appendix

A.1. Administration of the 7(a) loan program

This section provides additional detail on the administration of SBA loan programs. The SBA oversees various assistance programs, such as the Lending Programs, Entrepreneurial Development Programs, and Federal Contracting and Assistance Programs, which provide loan guarantees to small businesses. The maximum loan size limit is capped at $5 million, and the use of proceeds ranges widely from traditional term loans to debt refinancing. Since there is no formal limit as to how much SBA loans a given lender can underwrite, the Office of Credit Risk Management monitors lender performance and oversees the growth of loan portfolios of banks.

While loan maturity depends largely on borrower's ability to repay, loans for working capital, machinery, and equipment have a maturity of up to five to ten years while loans for real estate have a maturity of up to 25 years. Lenders and borrowers can negotiate the interest rate, but it may not exceed the maximum rate set by the SBA. The maximum interest rates are based on a loan amount and maturity such that they decrease in loan amount and increase in loan maturity within two tiered maturity groups defined by a seven-year maturity mark.

A new lender that is not familiar with the SBA loan submission process uses the General Program (GP). Under this program, the lender submits a full application requesting SBA guarantee to the Loan guarantee Processing Center (LGPC). The more experienced SBA lenders are given the "delegated" lender status. Experienced lenders that have met certain performance standards are eligible to use the Certified Lender Program (CLP). Under the CLP, a lender undergoes the same application process as non-delegated lenders, but the SBA expedites the loan processing and services. The most experienced lenders use the Preferred Lender Program (PLP). PLP lenders have the authority to process, service, or close any SBA loans without SBA's prior approval.

There are benefits and costs associated with becoming an SBA lender. A key benefit is that the SBA guarantee helps lenders mitigate credit risks while allowing them to expand their customer base by serving borrowers who may not meet the conventional lending requirements. From a regulatory perspective, since the risk weight of guaranteed loans is lower than for unguaranteed loans, the 7(a) guarantee lowers a lender's risk-weighting for meeting the Basel II capital requirements.

SBA loans also have the potential to receive Community Reinvestment Act (CRA) consideration if the loans meet the definition of "loans to small business."

The costs for lenders include a one-time guarantee fee, annual ongoing servicing fee for each loan approved and disbursed, and other applicable fees associated with ongoing SBA oversight, late payment, or packaging and other services. The lender is required to submit the one-time guarantee fee with the loan application for loans with maturities of 12 months or less, and within 90 days of the date of the loan's approval for loans with maturities exceeding 12 months. This guarantee fee is based on the loan maturity and the guaranteed portion of the loan.[1] Lenders could pass-through this one-time guarantee to borrowers, and borrowers in turn may use loan proceeds to pay the guarantee fee in the initial disbursement. The annual ongoing servicing fee is set at the time of loan approval and based on the outstanding principal balance of the guaranteed portion of the loan. In fiscal year 2018, this fee is set to 0.55% of the outstanding balance of the SBA's share. Note that this cost structure could incentivize the lenders to not always charge the maximum allowable interest rates and guarantee rate on loans to reduce the amount of fees paid to SBA.

Table A.2 reports the industry breakdown of the borrowers that receive SBA loans. In our sample, small businesses in accommodation and food services industry receive SBA loans most frequently (i.e., 18% of all loans), and the top 10 industries make up nearly 90% of all loans originated to small businesses. Small businesses in accommodation and food services industry is over-represented in the SBA data when compared to the industry composition of small businesses at the national level, where businesses in this industry only make up 8% of all small businesses. On the other hand, businesses in professional services and construction are under-represented in the SBA sample. In other industries, SBA industry composition line up well with the industry composition at the national level.

A.2. Calculation of Γ

We calculate Γ_i as the expected guarantee subsidy for a loan, net of expected charge-offs, guarantee fee payments, and guarantee reimbursements using the following steps:

[1] For any short-term loans with maturities of 12 months or less, the fee is 0.25% of the guaranteed portion of the loan. For loans with longer maturities, loans of $150,000 or less require 2%; loans of amount greater than $150,000 but less than $700,000 require 3%; loans of amount greater than $700,000 but less than $1 million require 3.5%; and loans of size greater than a million require 3.75% of the guaranteed portion of the loan.

1. Run the logistic regression $\pi_i = \alpha + \beta D_i + e_i$, where π_i is an indicator that a loan was charged off and D_i is the loan size. We use all loans in the estimation sample, pooling across multiple years.

2. Predict back $\hat{\pi}_i$, the expected charge-off probability, for each loan in the sample. Since the specification in step one did not have year effects, $\hat{\pi}_i$ is not time-varying. This means that all variation in Γ_i over time comes from policy-driven changes in the guarantee rates.

3. Calculate the expected reimbursement rate (as a percentage of loan principal) as the guarantee reimbursement rate for that particular loan multiplied by the expected charge-off probability: $\gamma_i * \hat{\pi}_i$. The reimbursement rate varies by loan size and by year.

4. The yearly fee is expressed as the amount paid *yearly* as a percent of loan principal. We therefore multiply it by the term of the loan to convert it to the same units as the one-time fee and the expected charge-off probability. We add together the converted yearly fee and one-time fee to get the net fees paid on the loan: σ_i. These fees vary by loan size and by year.

5. We then calculate Γ_i for each loan in the sample as: $\Gamma_i = \gamma_i * \hat{\pi}_i - \sigma_i$.

A.3. FDIC Statistics on Depository Institutions

This section describes the FDIC Statistics on Depository Institutions (SDI) data used in the paper, and our construction of shares. The SDI data records the total number and amount of small business loans outstanding at a quarterly level per institution, and further splits small business lending into categories of loan size and purpose. We specifically look at small business commercial and industrial loans. The FDIC SDI statistics will *include* SBA lending by a particular institution– therefore when combined with the SBA data they allow us to calculate the bank-specific "share of small business lending that is through the SBA". We observe the yearly stock of loans outstanding in the SDI data, and the yearly “flow" of SBA loans in the SBA data. Therefore, we convert the SDI data into a comparable flow measure, and then calculate the bank-year specific SBA share as follows:

1. From the SDI report we observe the stock of number of small business loans from a bank in a given year.

2. We divide this stock by the average maturity (10 years) to get the approximate flow of small business loans from that bank.

3. Calculate from the SBA data the flow of SBA small business loans in a given year.

4. Calculate the bank-year specific SBA share as $\frac{flow\ of\ SBA\ loans}{flow\ of\ all\ small\ business\ loans}$ in a given year.

This calculation generates a distribution of high to low intensity SBA lenders. Banks that lend primarily through the SBA have less ability to substitute between their SBA and non-SBA portfolios. Therefore if we find a similar response to the guarantee across the SBA share distribution, it is unlikely that the portfolio substitution response has biased our elasticity estimates.

A.4. Data appendix: 2003 Survey of Small Business Finances

The 2003 Survey of Small Business Finances (SSBF) is the fourth survey of U.S. Small businesses conducted by the Board of Governors, and the last wave before the releases of the Small Business Credit Surveys. The survey collected information on firm and owner characteristics, an inventory of small businesses' use of financial services and of their financial service suppliers, and income and balance sheet information.

The data set for the 2003 Survey of Small Business Finances contains information on 4,240 small businesses that were in operation during December 2003 and at the time of the interview. The interview for most firms took place between June and December in 2004. The reference date for most questions is the date of the interview; the reference date for the income statement and balance sheet information is the date of the firm's most recent fiscal year-end and can range from July 1, 2003 to June 30, 2004. For the 2003 release, the SSBF data set includes five implicates. Each implicate includes 4,240 firms. In total, the entire data set contains 21,200 observations. There are 4,240 firm observations in total. There are in total 225 firms which took loans from a government agency, including the SBA.

Appendix Table A.3 shows the fraction of firms that access credit from more than one source in the past three years. The table indicates that very few firms access credit from more than one

source. Appendix figure A.11 shows the fraction of firms by the number of lending institutions dealt with. The fact that many firms deal with many lending institutions, but only borrow from one (typically an SBA lender) is indicative of inability to obtain credit elsewhere.

Figure A.1: Simulated Changes in Loan Size by n and Γ

Notes: This figure simulates how loan size responds to a varying type of the underlying variance distribution n_i (top) and to Γ for high and low variance distribution of expected returns.

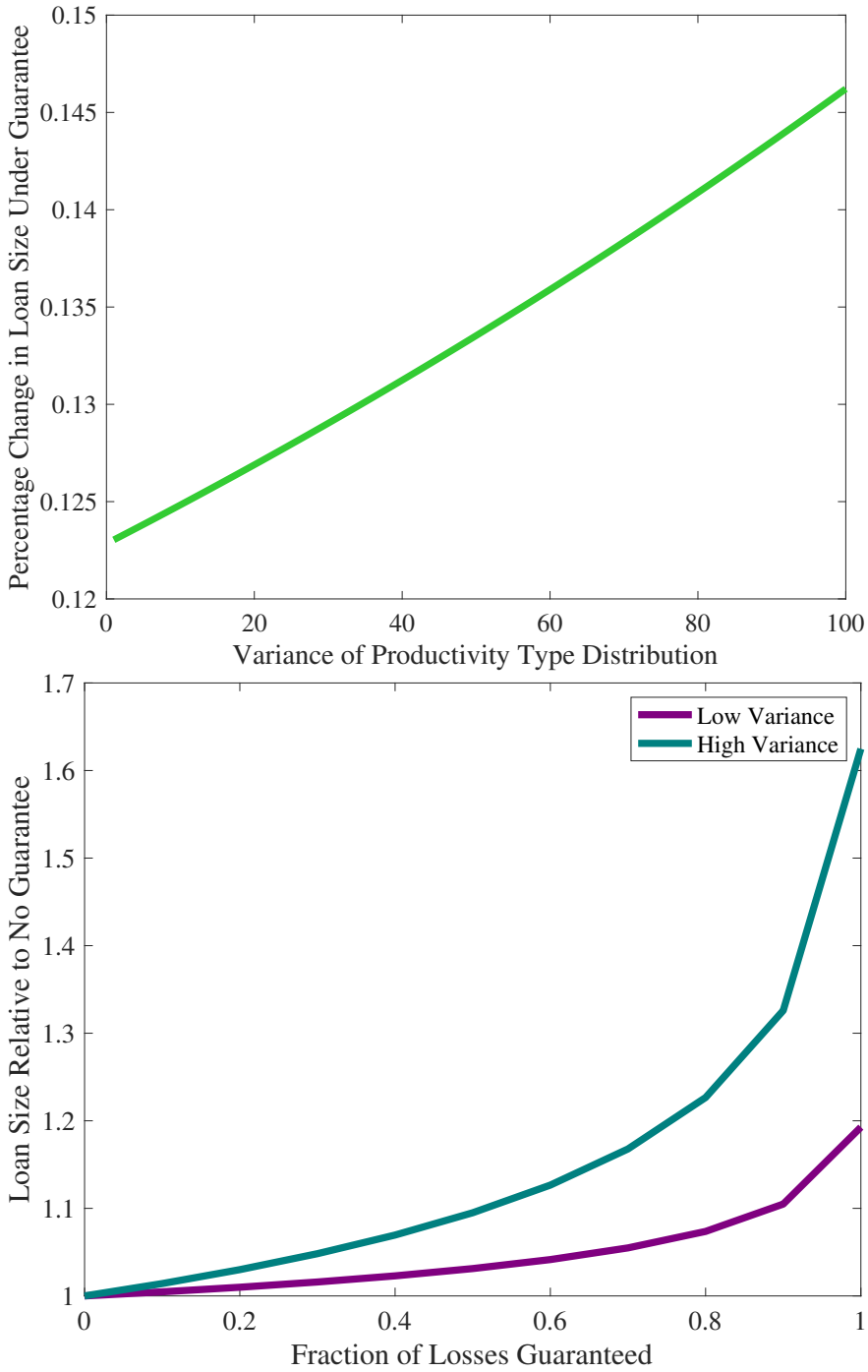


Figure A.2: Bunching at the Guarantee Notch, Wider Axis in Placebo Years

Notes: This figure shows the number of loans made in discrete $2,000 bins across the threshold. The graph includes years 2009 and 2010, when the guarantee notch was eliminated, with an alternative wider axis. Note bunching at round numbers, which is controlled for in the elasticity estimate. Source: SBA.

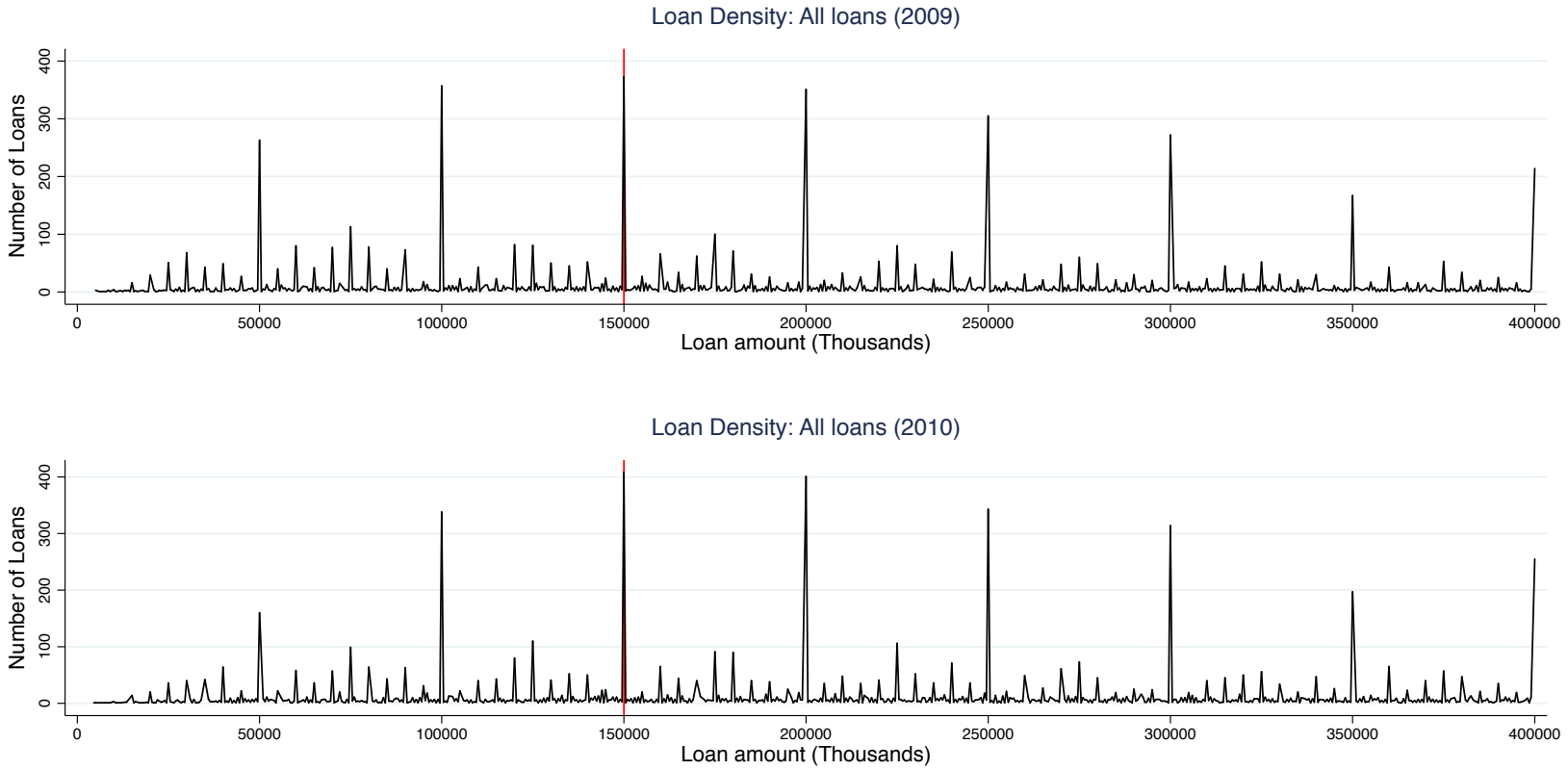


Figure A.3: 3-Year Cohort Default Rates over Time

Notes: This figure shows the 3-year cohort default rates over time. We exclude all loans originated after 2015 in this graph to ensure that every loan in the sample has a valid 3-year cohort default rate. Source: SBA.

Figure A.4: Guarantees and Fees by Loan Amount

Notes: This figure shows the average expected guarantee fees and reimbursement rate as a percentage of the loan principal amount for discrete 2000 bins across the threshold. The graph pools over all years 2008-2017. Source: SBA.

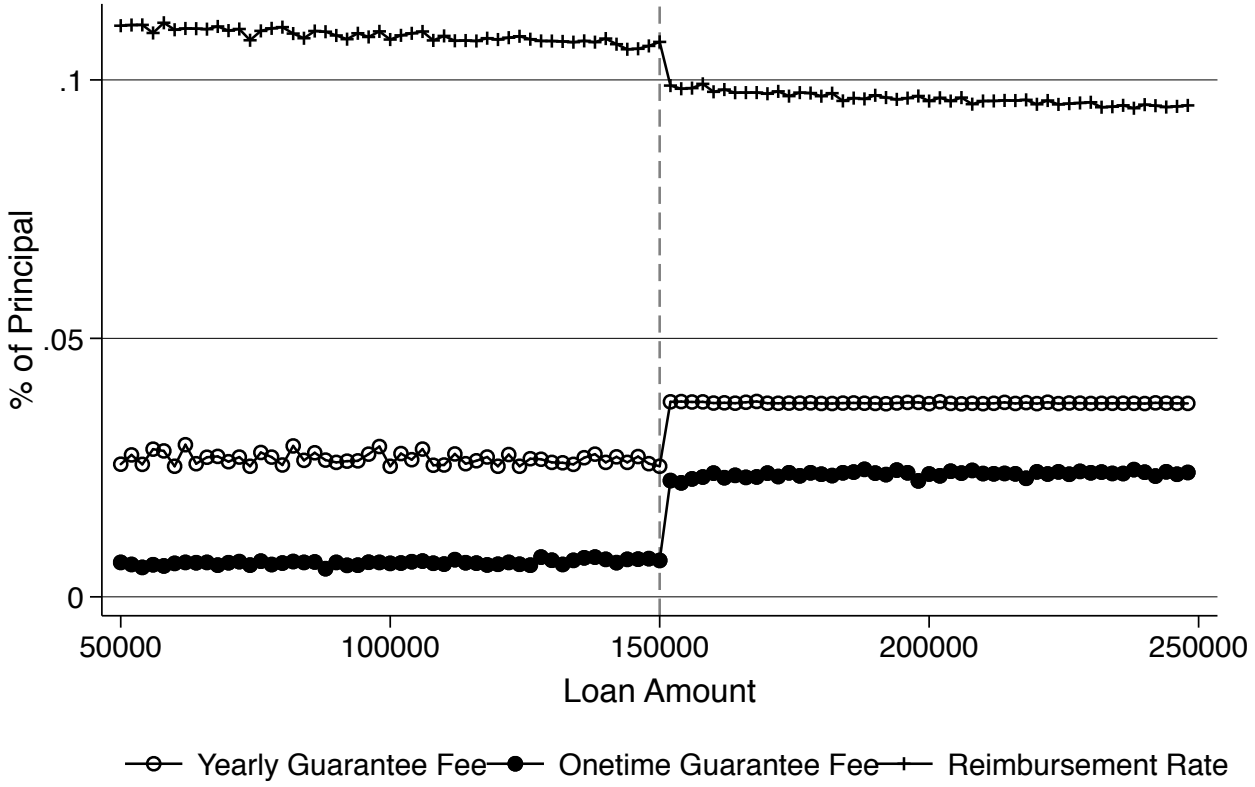


Figure A.5: Observed and Estimated Loan Density for Elasticity Estimation during Placebo Years

Notes: This figure plots the observed loan density (black) and the estimated counterfactual density (red) for 2009 and 2010, the "placebo" years, when the guarantee notch did not exist. This allows us to directly test the fit of our estimated counterfactual distribution against years when there was no discontinuity at $150,000. For estimation, we restrict the loan size to be between $75,000 to $225,000. The counterfactual is estimated for each notch separately by fitting a 6th-order polynomial with round-number fixed-effects to the empirical distribution using step size of 500, and excluding data around the notch, as specified in equation 15. The missing mass at the threshold is measured as the distance between the black and red lines at $150,000.

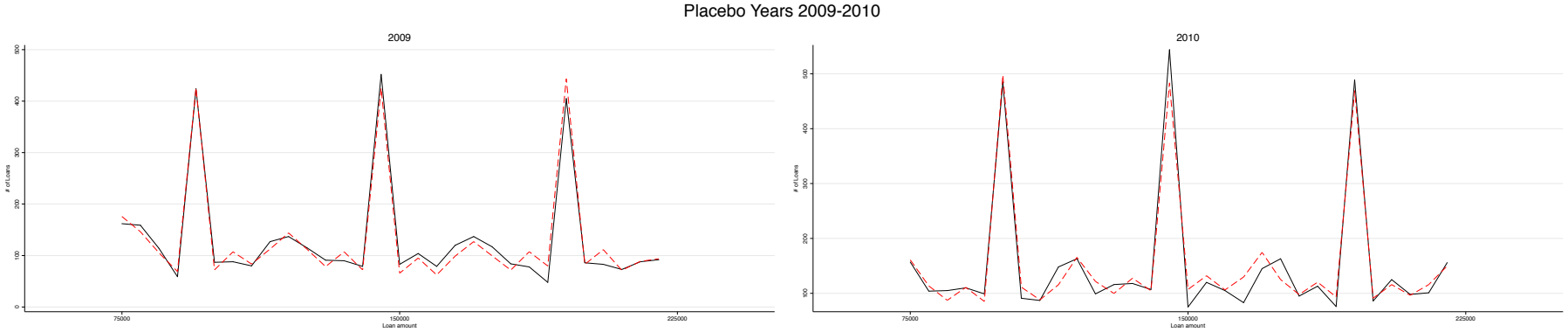


Figure A.6: Bunching at the Guarantee Notch, Wider Axis

Notes: This figure shows the number of loans made in discrete $2,000 bins across the threshold. The graph pools over all years 2008-2017 with an alternative wider axis. Note bunching at round numbers, which is controlled for in the elasticity estimate. Source: SBA.

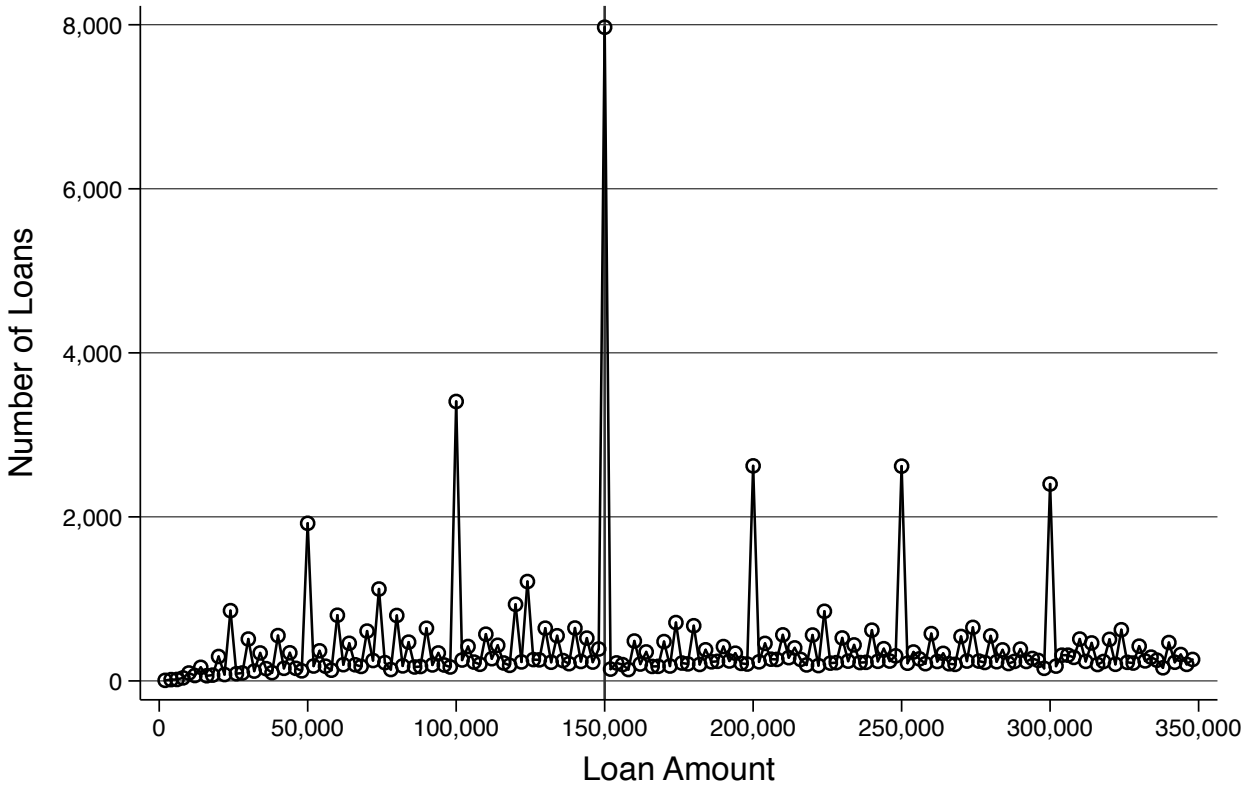


Figure A.7: Percentage of Loans at the Binding Interest Rate Maximum

Notes: This figure shows the percentage of loans made at the maximum interest rate cap in discrete $2,000 bins across the threshold. The graph pools over all years 2008-2017, absorbing year-month effects and bank fixed effects. Source: SBA.

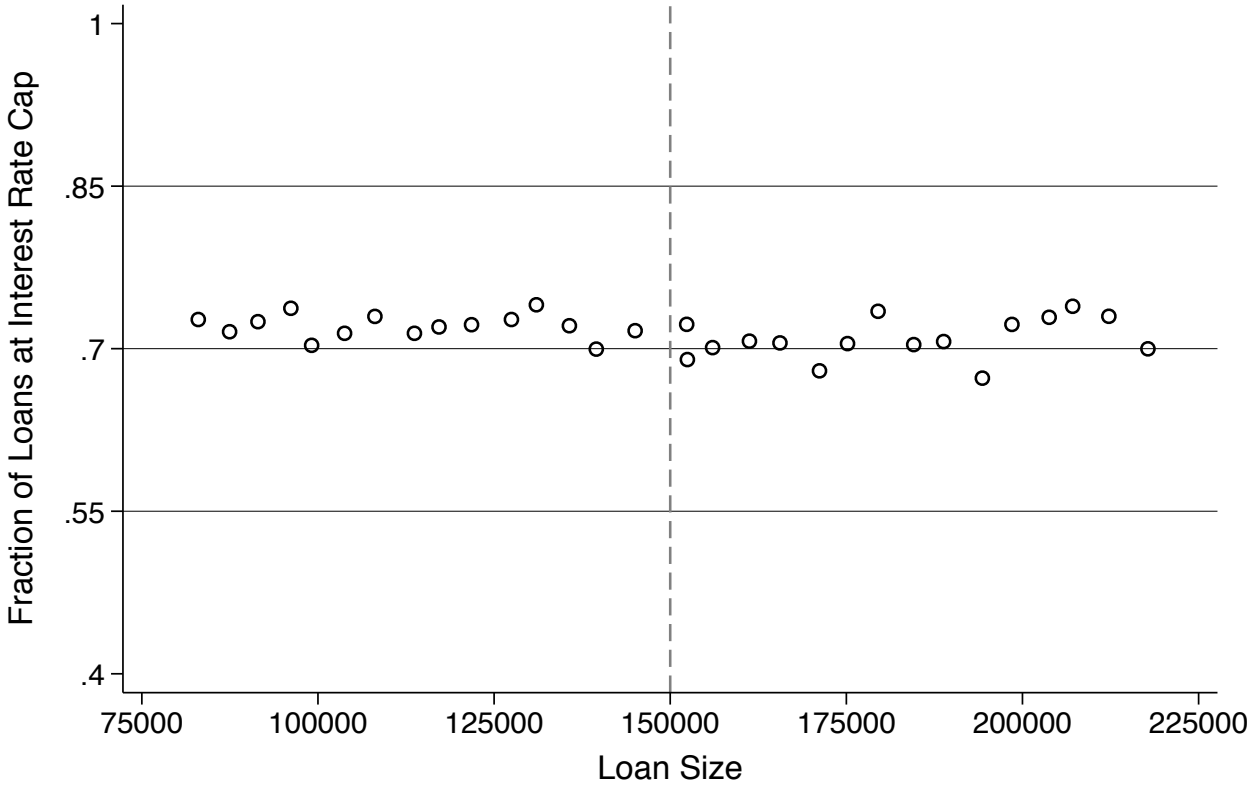


Figure A.8: Other Variables at the Guarantee Notch

Notes: This figure plots the average interest rate, revolving loan percentage, charge-off percentage, and loan term across the threshold. They are normalized with respect to the value of the variable at the threshold. There is no significant difference in initial interest rate, the percentage of revolving loans, the charge-off percentage across the threshold. Note the presence of round number bunching in the bottom right panel. The graph pools over all years 2008-2017, absorbing year-month effects and bank fixed effects. Source: SBA.

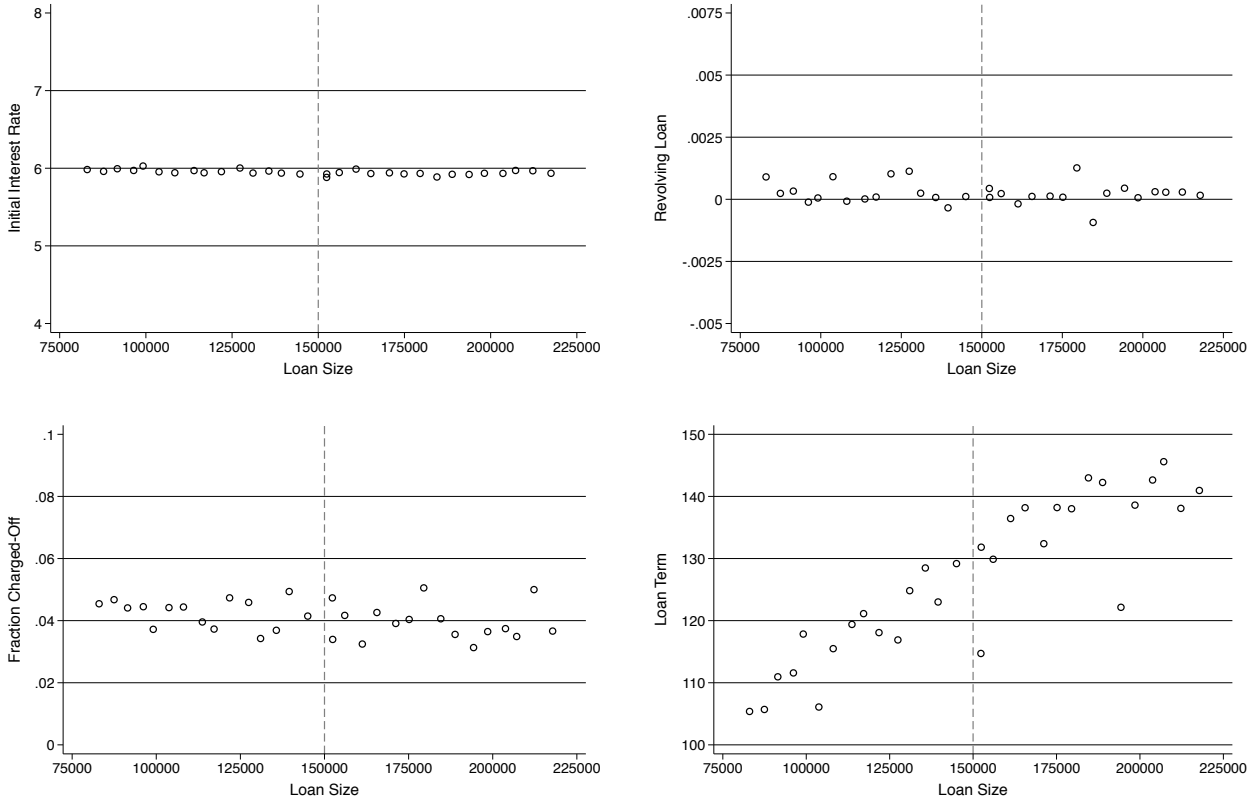
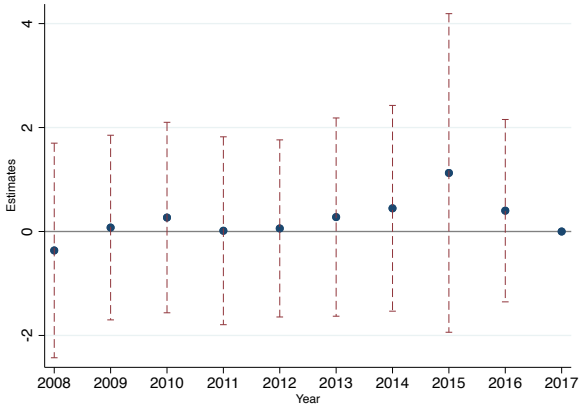
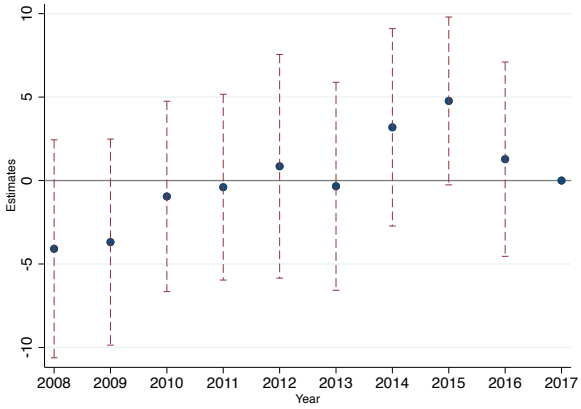


Figure A.9: Substitution: Lending Supply Response by Year

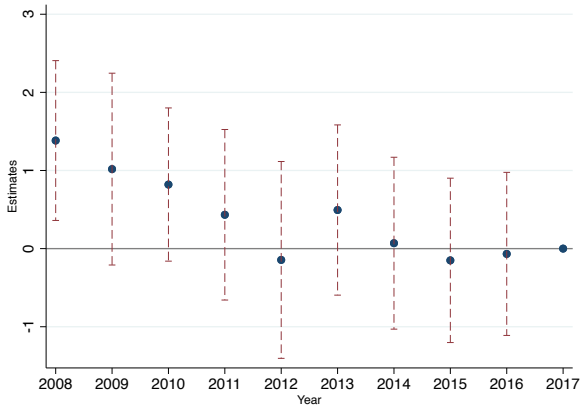
Notes: This figure plots the coefficient ζ_t on the interaction term between the bank's pre-ARRA propensity to issue SBA loans and year indicators in equation 6.2.1, along with 95% confidence interval. The dependent variables are log of total, non-SBA, or SBA small business loans. The baseline is 2017. Total and non-SBA small business lending are from FDIC SDI and converted into flows as described in appendix A.3. The sample is restricted to loan size between $\$50,000$ and $\$225,000$, and for banks that operated in 2008 such that it has non-missing pre-ARRA exposure. The regressions are estimated at the bank-year level. Standard errors are clustered at the bank-level and reported in parentheses. Source: SBA and FDIC SDI.



(a) Total Small Business Loans



(b) Non-SBA Small Business Loans



(c) SBA Loans

Figure A.10: Estimates Varying Beginning and Ending Limit

Notes: This figure shows elasticity estimates varying the starting and ending range. The left panel varies the starting range, while the right panel varies the ending range around the $150,000 threshold. A sixth order polynomial is used. Source: SBA.

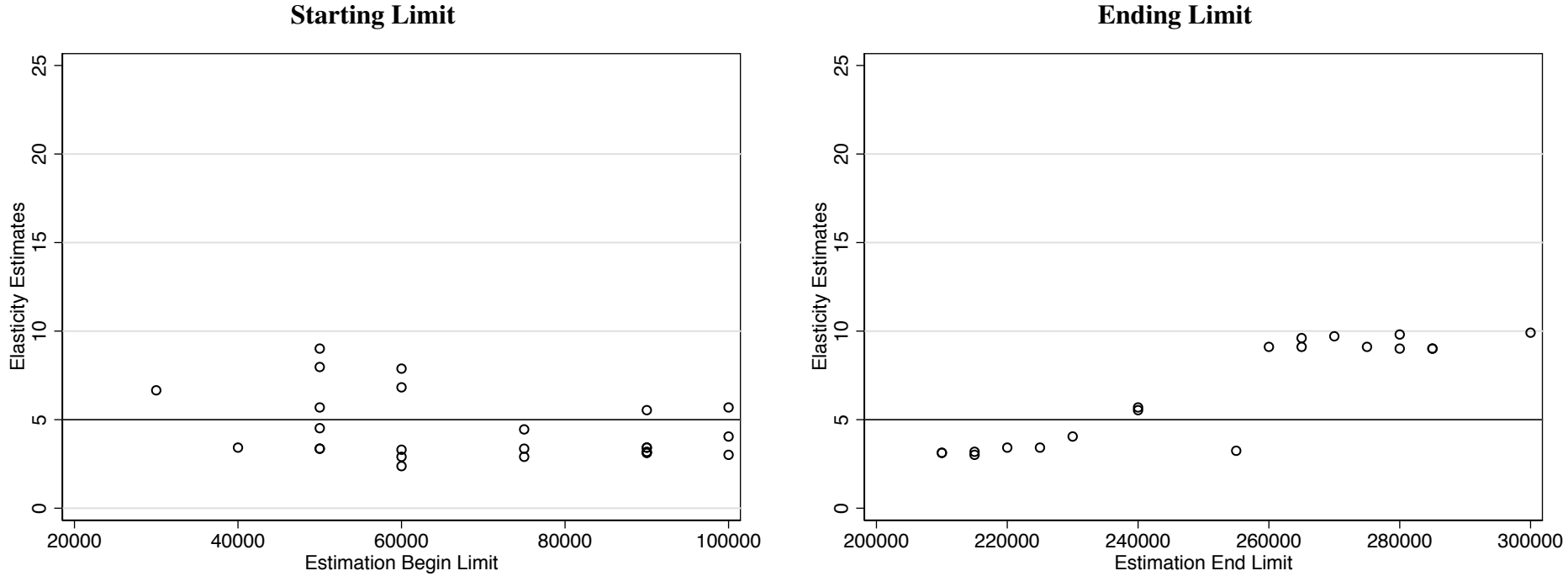


Figure A.11: Number of Lending Institutions

Notes: This figure shows the fraction of firms by the number of lending institutions that a small business dealt with in the past 3 years. The sample is restricted to firms with a loan from a government agency, including the SBA Source: SSBF.

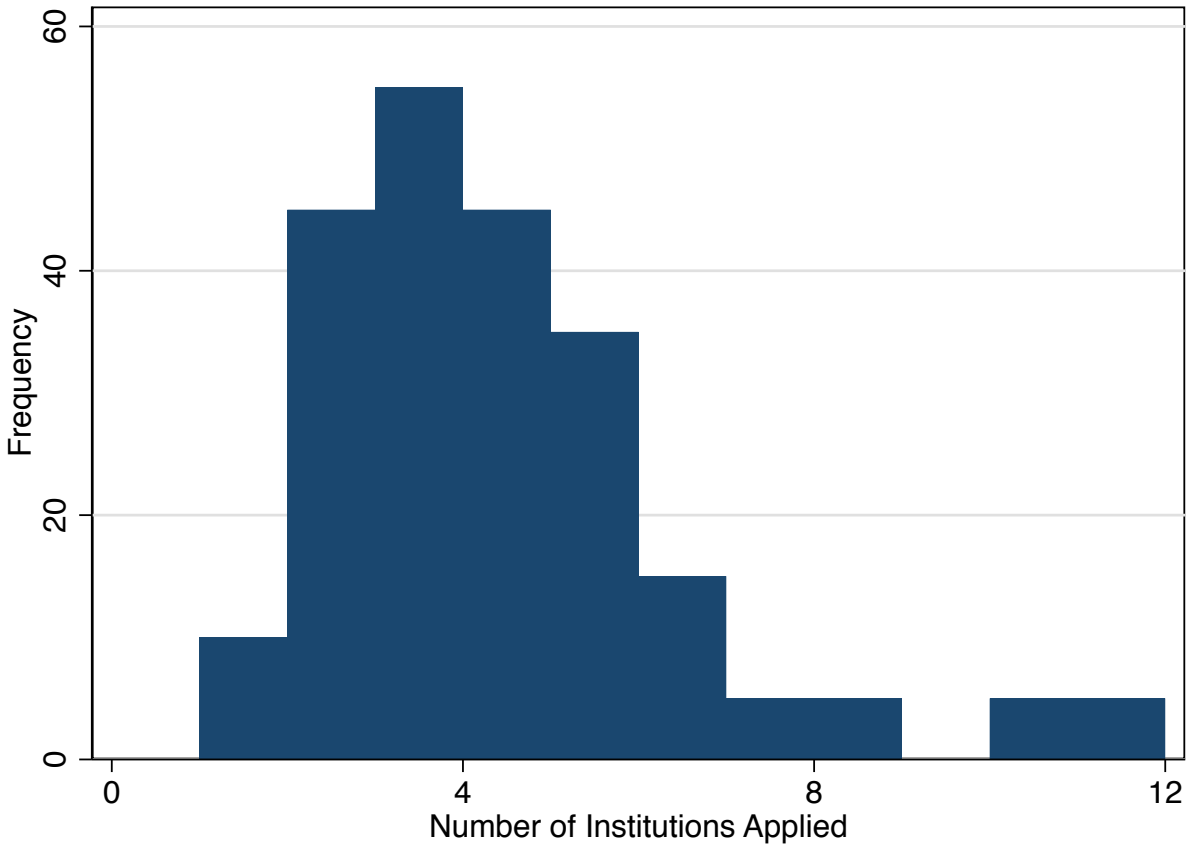


Figure A.12: Observed and Estimated Loan Density for Elasticity Estimation

Notes: This figure plots the observed loan density (black) and the estimated counterfactual density (red) for each year. We separately show the years in which a notch at the $150,000 threshold existed, and when it did not (2009 and 2010, the "placebo" years). For estimation, we restrict the loan size to be between $75,000 to $225,000. The counterfactual is estimated for each notch separately by fitting a 6th-order polynomial with round-number fixed-effects to the empirical distribution using step size of 500, and excluding data around the notch, as specified in equation 15. The missing mass at the threshold is measured as the distance between the black and red lines at $150,000.

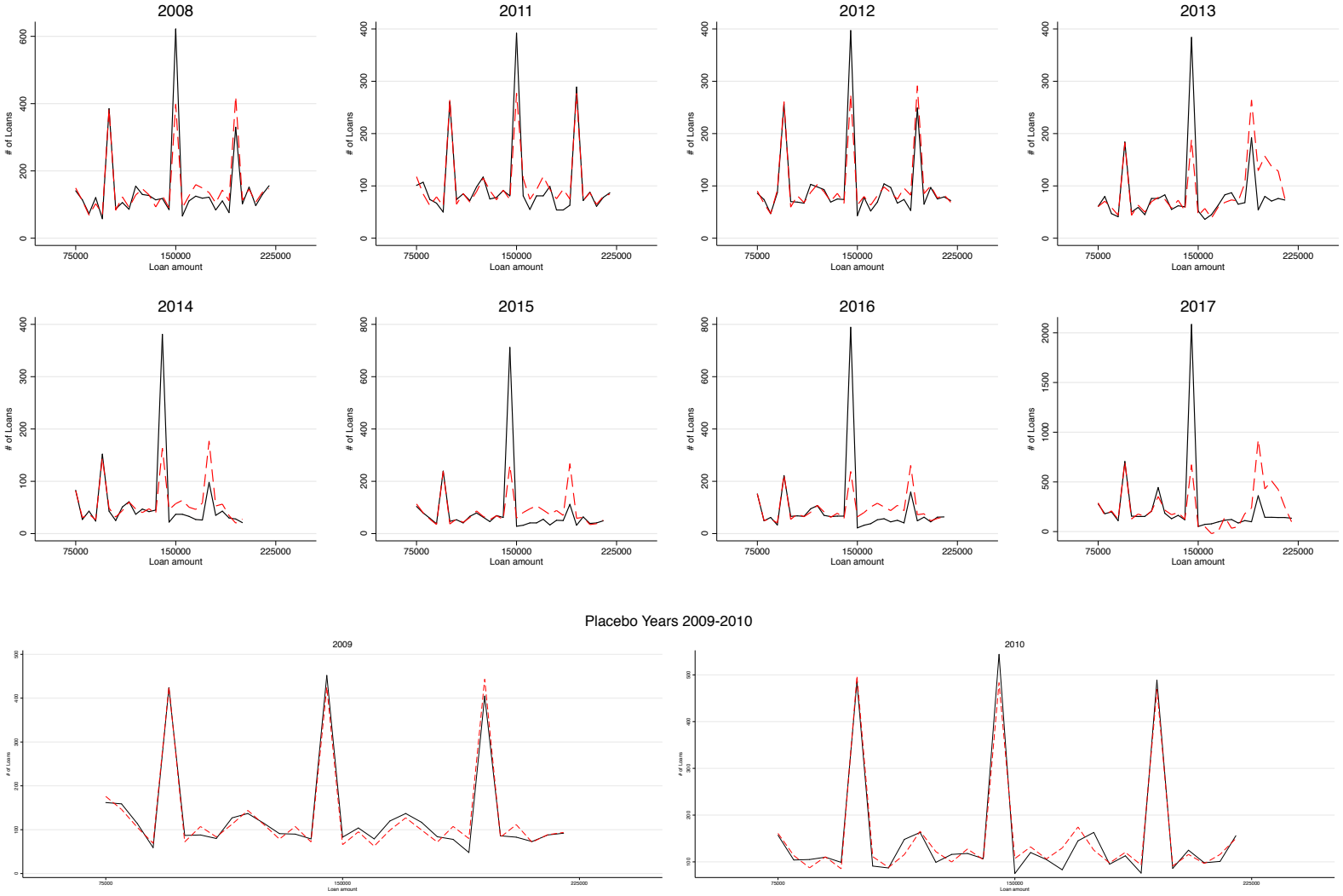
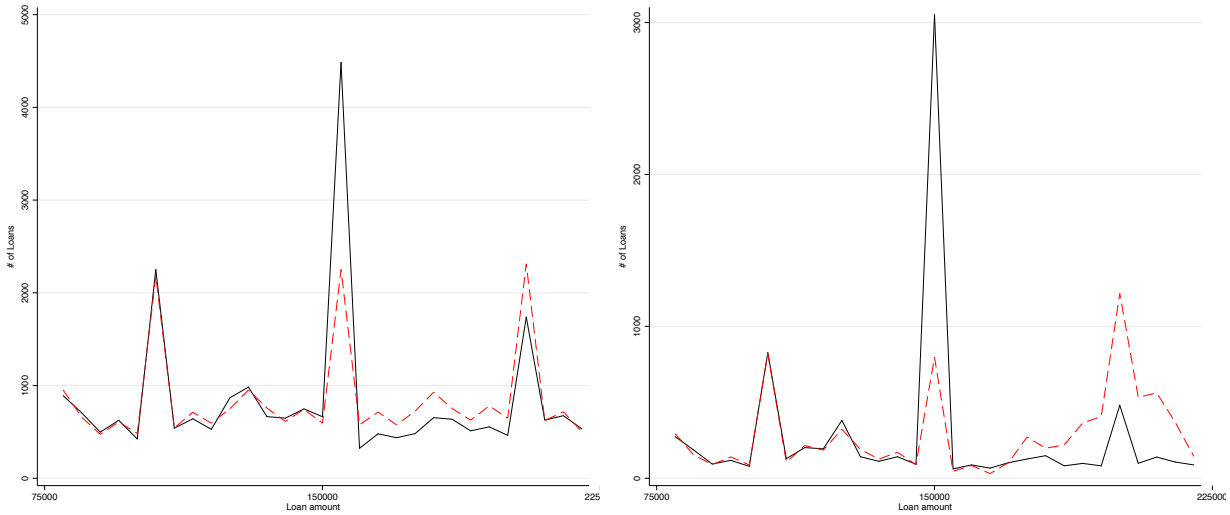
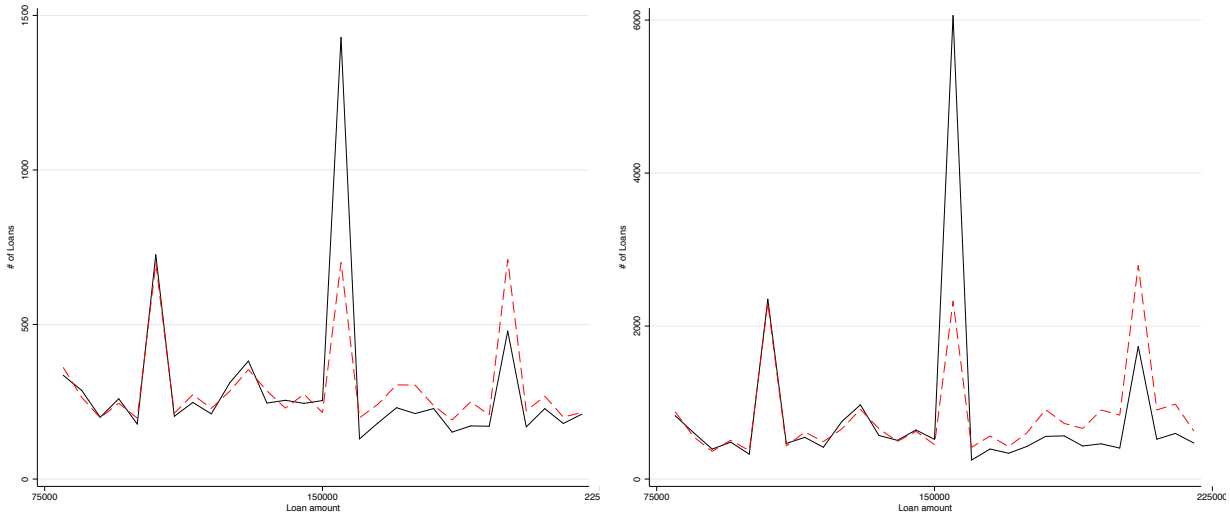


Figure A.13: Observed and Estimated Loan Density by SBA Share and Market Concentration

Notes: This figure plots the observed loan density (black) and the estimated counterfactual density (red) for subsamples of banks with high/low SBA lending shares and in high/low concentration markets. The first row splits the sample into banks who issue fewer than 80% of their small business loans through the SBA (left), and banks with $\geq 80\%$ of their small business lending through the SBA (right). The second row splits the sample by banks in regions with fewer than 7 SBA lenders (left), or ≥ 7 lenders (right).



(a) Sample Split by SBA Share $\leq 80\%$ (left) and $> 80\%$(right)



(b) Sample Split by Regions with ≤ 7 (left) and > 7 (right) Unique Banks

Table A.1: Variable Descriptions

Notes: This table reports the main analysis variables, their definitions, and source.

Variable Name	Definition	Source
Loan Amount	Total loan amount in dollars.	SBA
Reimbursed Amount	Amount of SBA's loan guarantee.	SBA
Charge-off Amount	Total loan balance charged-off (includes guaranteed and non-guaranteed portion of loan.)	SBA
Interest Rate	Initial interest rate at the time loan was approved (base rate plus spread.)	SBA
Reimbursement Rate	Total guarantee rate for loans. For most years, 85% guarantee for loans of $150,000 or less; 75% guarantee for loans greater than $150,000 (up to $3.75 million maximum guarantee.)	Derived from SBA
Maximum Rate	Maximum interest rate a bank can charge a borrower.	SBA. LIBOR from BNY Mellon
Maturity	Length of loan term	SBA
Yearly Fee	A yearly fee that a lender must pay to SBA for each loan guaranteed under the 7(a) program. Based on the guaranteed portion of the loan and not the total loan amount. This fee cannot be passed on to the borrower.	SBA
One-Time Fee	One-time guarantee fee that a borrower pays the SBA to obtain a loan.	SBA
Average Expected Guarantee Benefit	Predicted guarantee amount as a share of loan principal net of one-time and yearly fees, assuming 100% charge-off.	Derived from SBA
Excess Mass	The amount of bunching at the $150,000 notch computed as the difference between the observed and counterfactual bin counts between the lower limit of the excluded region (d_l) and the threshold (D^T).	Estimated following Kleven and Waseem (2013)
Share of Excess Mass	Excess mass as a share of the total number of loans in the estimation range.	Estimated

Table A.2: Industry Breakdown

Notes: This table reports the industry breakdown of the borrowers that received loans in the full sample. Industries are grouped by NAICS 2-digit sector code. The second and third columns report the number of loans by industry and the share of loans as a fraction of total loans in the SBA sample. The last two columns report the number of small businesses in each industry and their share as a fraction of total number of small businesses in the U.S. The data for the last two columns are obtained from the 2012 Statistics of U.S. Businesses (SUSB) reported by the Census Bureau. "Public Administration" is a newly added NAICS code not represented in the 2012 SUSB data. "N/A" represents missing industry information. Source: SBA and SUSB.

	SBA Sample		Population (SUSB)	
Industry	N of Loans	Share	N firms	Share
Accommodation and Food Services	35,797	0.180	495,347	0.086
Retail Trade	31,748	0.160	650,749	0.112
Health Care and Social Assistance	23,995	0.121	640,724	0.111
Other Services (excl. Public Admin)	19,939	0.100	667,176	0.115
Manufacturing	17,173	0.086	256,363	0.044
Professional Services	14,729	0.074	772,685	0.133
Construction	10,636	0.053	640,951	0.111
Wholesale Trade	9,194	0.046	315,031	0.054
Admin Support and Waste Management	6,452	0.032	327,214	0.056
Arts, Entertainment, and Recreation	6,403	0.032	114,969	0.020
Real Estate and Rental and Leasing	5,943	0.030	270,034	0.047
Transportation and Warehousing	4,773	0.024	168,057	0.029
Agriculture	3,836	0.019	21,351	0.004
Finance and Insurance	3,231	0.016	234,841	0.041
Educational Services	2,424	0.012	84,503	0.015
Information	1,879	0.009	71,108	0.012
Mining and Gas Extraction	578	0.003	22,149	0.004
Utilities	135	0.001	5,973	0.001
Management	125	0.001	26,819	0.005
Public Administration	18	0.000	0	0.000
N/A	5	0.000	7,104	0.001

Table A.3: Alternative Sources of Credit

This table reports the fraction of firms with a loan from a government agency, including the SBA, which have multiple sources of different types of credit in the last 3 years. Source: SSBF.

Outcome	Mean
Multiple Lines of Credit	0.044
Multiple Credit Related Services	0.044
Multiple Equipment Loans	0.044
Multiple Capital Leases	0.000
Multiple Other Loans	0.067
SBA Reason for Loan	0.022
Observations	225

Table A.4: Effect of Guarantee on Loan Substitution

This table reports δ and ζ from equation 18, which capture the effect of guarantee on loan substitution and differential lending supply response for firms with higher propensity to issue SBA loans. The column headers report the dependent variables. Treat equals one for years 2009 and 2010, when the guarantees were increased and equalized on both sides of the threshold as part of the ARRA stimulus. Exposure is a bank-specific share of small business lending that is through the SBA in 2008, which captures a bank's propensity to specialize in SBA lending prior to the ARRA. The outcomes are log of total small business lending, non-SBA small business lending, and SBA lending. Total and non-SBA small business lending are from FDIC SDI and converted into flows as described in appendix A.3. The sample is restricted to loan size between $50,000 and $225,000, and for banks that operated in 2008 such that it has non-missing pre-ARRA exposure. The regressions are estimated at the bank-year level. Standard errors are clustered at the bank-level and reported in parentheses. Source: SBA and FDIC SDI.

	Total Loans		Non-SBA Loans		SBA Loans	
	(1)	(2)	(3)	(4)	(5)	(6)
Treat	-.024	-.110	.104	-.233	.006	.067
	(.068)	(.116)	(.354)	(.563)	(.106)	(.144)
Treat × Exposure	.029	.031	-2.0	-2.01	.525	.539
	(.222)	(.214)	(1.66)	(1.65)	(.292)	(.299)
Number of observations	1,346	1,346	1,346	1,346	1,346	1,346
Bank FEs	X	X	X	X	X	X
Year FEs		X		X		X

Table A.5: Estimates Using Alternative Range and Bin Size

This table reports estimates of excess mass and the main elasticity estimates, varying the range used from the restriction in the main sample to loans between $75,000 to $225,000, use the step size of 500, include round number dummies for multiples of 1,5, 10, 25, and 50 thousand. The estimates are run using a polynomial of degree 6. The change in the guarantee rate ($\Delta\Gamma$) at the threshold for years in which a notch existed is computed as the weighted average of the average expected guarantee benefit as a percentage of the loan principal, where the weights correspond to the number of loans across years 2008, 2011-2017. Source: SBA.

Year	Range	Excess Mass	ΔD	Elasticity	Excess Mass	ΔD	Elasticity	Excess Mass	ΔD	Elasticity
		Bin Size = 100			Bin Size = 200			Bin Size = 500		
2008	65,000 - 215,000	4,732	60,400	3.842	4.732	60,600	3.863	4,744	61,000	3.919
2011-2017	65,000 - 225,000	4,737	70,100	5.176	4,736	70,200	5.191	4,747	70,500	5.235
	65,000 - 235,000	4,710	55,500	3.244	4,710	55,200	3.209	4,717	55,500	3.244
	65,000 - 245,000	4,732	90,300	8.589	4,733	91,000	8.722	4,745	91,500	8.818
	75,000 - 225,000	4,744	65,100	4.464	4,736	65,400	4.505	4,710	65,500	4.520
	75,000 - 235,000	4,722	56,400	3.350	4,722	55,600	3.256	4,731	56,000	3.303
	75,000 - 245,000	4725	80,100	6.758	4,725	80,200	6.775	4,736	80,500	6.826
	75,000 - 255,000	4,733	65,100	4.464	5,086	80,200	6.775	5,086	80,500	6.826
	85,000 - 225,000	4,733	65,100	4.464	4,733	65,200	4.477	4,745	65,500	4.519
	85,000 - 235,000	4,727	60,300	3.830	4,726	60,400	3.842	4,735	61,000	3.919
	85,000 - 245,000	4,721	80,100	6.758	4,722	80,200	6.775	4,730	80,500	6.826
	85,000 - 255,000	5,085	80,100	6.758	5,080	80,200	6.775	5,081	80,500	6.826
	85,000 - 265,000	5,085	80,100	6.758	5,077	80,200	6.775	5,080	80,500	6.826

Table A.6: Robustness Tests on Elasticity Estimate Parameters

This table reports estimates of excess mass and the main elasticity estimates in each year, varying the polynomial and bin size. The top panel denotes the polynomial used, while the bottom panel denotes the bin size. The change in the guarantee rate ($\Delta\Gamma$) at the threshold for years in which a notch existed is computed as the weighted average of the expected guarantee benefit as a percentage of the loan principal, where the weights correspond to the number of loans across years 2008, 2011-2017. Source: SBA.

	Polynomial Degree 5			Polynomial Degree 6			Polynomial Degree 7		
Year	Excess Mass	ΔD	Elasticity	Excess Mass	ΔD	Elasticity	Excess Mass	ΔD	Elasticity
2008	302.73	67,000	8.83	301.99	53,000	5.48	302.17	53,000	5.48
2009	19.31	3,500	-	19.12	3,500	-	19.16	3,500	-
2010	35.41	7,500	-	35.02	7,000	-	34.94	7,500	-
2011	194.49	46,500	4.56	195.37	43,500	3.98	196.40	46,500	4.56
2012	153.07	66,500	10.20	152.68	59,000	8.00	153.46	58,000	7.72
2013	238.84	62,500	4.76	240.31	72,500	6.43	240.03	63,000	4.83
2014	335.74	57,000	1.62	335.73	62,500	1.96	337.77	73,000	2.68
2015	637.79	61,500	1.96	637.69	56,500	1.65	634.36	54,000	1.51
2016	806.67	71,500	3.23	804.95	62,500	2.45	804.33	72,000	3.27
2017	2021.43	64,500	4.78	2031.94	71,000	5.80	2029.94	71,500	5.89
	Bin Size = 100			Bin Size = 200			Bin Size = 500		
Year	Excess Mass	ΔD	Elasticity	Excess Mass	ΔD	Elasticity	Excess Mass	ΔD	Elasticity
2008	304.17	71,700	10.13	302.21	54,200	5.74	301.99	53,000	5.48
2009	21.22	3,100	-	21.42	3,200	-	19.12	- 3,500	-
2010	35.18	8,100	-	35.03	9,200	-	35.02	- 7,000	-
2011	192.56	46,100	4.48	193.87	45,600	4.38	195.37	43,500	3.98
2012	147.65	57,300	7.53	149.66	57,800	7.67	152.68	59,000	8.00
2013	231.96	65,000	5.15	232.39	64,200	5.02	240.31	72,500	6.43
2014	331.94	62,700	1.97	331.32	61,200	1.87	335.73	62,500	1.96
2015	638.19	58,100	1.75	637.65	61,200	1.94	637.69	56,500	1.65
2016	794.90	61,100	2.34	800.34	61,200	2.35	804.95	62,500	2.45
2017	2024.25	69,300	5.52	2024.26	70,200	5.67	2031.94	71,000	5.80

Table A.7: Heterogeneity by Location and Industry Characteristics

This table reports estimates of excess mass and the main elasticity estimates by subsamples of loans by borrower's project location and sectors. Bank competition is measured using the Herfendahl-Hirschman Index (HHI) based on the lender's dollar volume lending share in the borrower's project county. High (Low) bank competition refer to counties that are below the 25th percentile (above the 75th percentile) of the distribution of the HHI measure. High (Low) exit industries refer to industries that are above the median percentile of the distribution of average exit rates by industries. The industry exit rates are obtained from the Census Business Dynamics Statistics. The classification for goods- vs. services-producing industries follows the categorization by the Bureau of Labor Statistics. The classification for tradable vs. non-tradable sectors follows the categorization by Mian and Sufi (2014). The estimation restricts the sample to loans to be of size between \$75,000 to \$225,000, uses the step size of 500, and includes round number dummies for multiples of 1,5, 10, 25, and 50 thousand. The degree of the polynomial used in the estimation is denoted in the second column. The change in the guarantee rate ($\Delta\Gamma$) at the threshold for years in which a notch existed is computed as the weighted average of the average expected guarantee benefit as a percentage of the loan principal, where the weights correspond to the number of loans across years 2008, 2011-2017. Source: SBA and FDIC SDI.

Year	Polynomial	Excess Mass	ΔD	$\Delta\Gamma$	Elasticity	Excess Mass	ΔD	$\Delta\Gamma$	Elasticity
		High Bank Competition				Low Bank Competition			
2008, 2011-2017	6	1,533	66,000	0.038	4.588	907	60,500	0.038	3.856
		(13.67)	(4,736)	–	(0.661)	(20.17)	(7,365)	–	(0.963)
	No. obs.		7,316				9,578		
		Low Exit Industries				High Exit Industries			
2008, 2011-2017	6	4,193	66,000	0.038	4.588	553	69,500	0.038	5.088
		(47.90)	(5,822)	–	(0.792)	(8.30)	(5,481)	–	(0.687)
	No. obs.		29,855				3,399		
		Goods-producing industries				Services-producing industries			
2008, 2011-2017	6	3,990	66,000	0.038	4.589	756	68,500	0.038	4.943
		(45.56)	(6,163)	–	(0.832)	(12.20)	(5,736)	–	(0.754)
	No. obs.		28,447				4,807		
		Non-tradable				Tradable			
2008, 2011-2017	6	847	56,000	0.038	3.303	328	66,000	0.038	4.588
		(14.36)	(7,468)	–	(0.950)	(6.73)	(4,159)	–	(0.458)
	No. obs.		7,653				2,177		

Table A.8: Estimate Split by Borrower's Industry

This table reports estimates of excess mass and the main elasticity estimates by the top 5 industries in terms of the share of loans as a fraction of total loans in the SBA sample. The estimation restricts the sample to loans to be of size between $75,000 to $225,000, uses the step size of 500, and includes round number dummies for multiples of 1,5, 10, 25, and 50 thousand. The degree of the polynomial used in the estimation is 6. The change n the guarantee rate ($\Delta\Gamma$) at the threshold for years in which a notch existed is computed as the weighted average of the average expected guarantee benefit as the percentage of the loan principal, where the weights correspond to the number of loans across years 2008, 2011-2017. Source: SBA.

Industry	Excess Mass	ΔD	$\Delta\Gamma$	Elasticity	No. obs.
Accommodation and Food Services	743.052	72,500	0.038	5.537	5,862
Retail Trade	687.019	55,500	0.038	3.245	5,256
Health Care and Social Assistance	360.836	62,500	0.038	4.115	3,354
Other Services (excl. Public Admin)	596.223	70,500	0.038	5.235	4,243
Manufacturing	333.498	67,000	0.038	4.729	2,398

Table A.9: Components of Main Elasticity Estimates

This table lists the main outputs of the bunching estimation routine for each year. For this estimation: Step size = 500, the range was limited to 75,000-225,000, we included round number dummies for multiples of 1,5, 10, 25, and 50 thousand, and we used a polynomial of degree 6. We excluded years 2009 and 2010 when there was no change in the guarantee. D_L refers to the lower bound of the excluded region, D^* is the threshold, D_U is the estimated upper bound of the excluded region, ΔD is the size of the excluded region, B is the excess number of loans estimated at the threshold, and M is the estimated number of missing loans in the excluded region.

Year	D_L	$D^\star$	D_U	ΔD	$\hat{B}$	$\hat{M}$	Step Size
2008	149,000	150,000	201,500	52,500	248.39	-335.98	500
2011	149,000	150,000	190,500	41,500	151.81	-190.00	500
2012	149,000	150,000	210,500	61,500	132.64	-167.35	500
2013	149,000	150,000	221,500	72,500	199.91	-366.70	500
2014	149,000	150,000	212,000	63,000	233.02	-269.15	500
2015	149,000	150,000	205,500	56,500	457.83	-516.82	500
2016	149,000	150,000	210,500	61,500	564.04	-562.26	500
2017	149,000	150,000	219,500	70,500	1386.12	-1462.46	500