

The Impact of the U.S. Financial Crisis on Global Retail Lending

1. Introduction

2. Institutional Background and Data

A. Savings Banks as the Owners and Guarantors of Landesbanken

B. The Savings Banks' Support for Landesbanken in the Financial Crisis

3. Empirical Strategy

$$\beta \qquad \delta \qquad \beta \qquad \varepsilon$$

$$\varepsilon$$

$$\beta \quad \beta$$

4. Data Description and Summary Statistics

A. Data Sources

B. Loan and Borrower Characteristics

5. Empirical Results

A. Loan Acceptance Rates after the Beginning of the Financial Crisis

A.1. Bivariate Results

A.2. Multivariate Results

B. The Demand for Loans after the Beginning of the Financial Crisis

β β

B.1. The Number of Loans Requested by Applicants

B.2. The Amount of Loans Requested by Applicants

C. Bank-Borrower Relationships after the Beginning of the Financial Crisis

β δ β β β

β β β β

ε

β

β

6. Robustness

A. Linear Probability Model vs. Probit Model

$\sqrt{}$

$\rightarrow \infty$

B. Parallel-Trend Assumption

C. Borrower Quality and Loan Acceptance Rates

7. Conclusion

References

Appendix 1

Main Variable Definition

Inference Variables

Loan Type

Dependent Variable

Control Variable

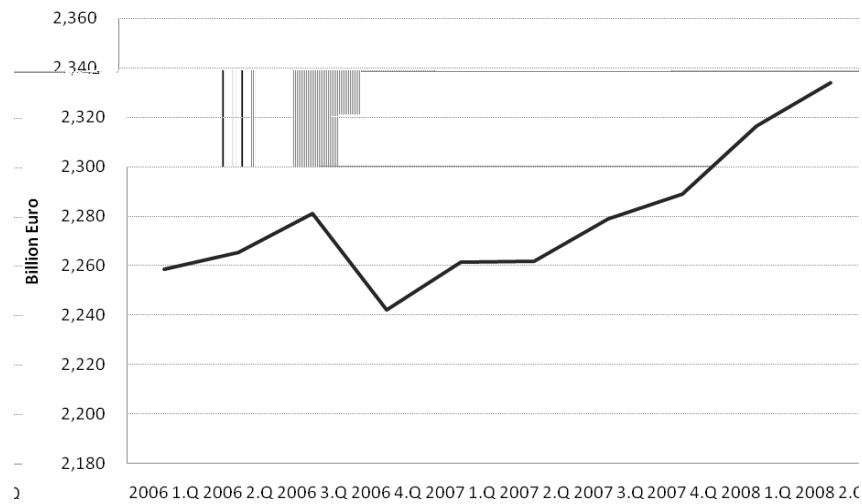
Borrower Characteristics

Relationships Characteristics

Figure 1

Aggregate Lending in Germany

A. Total Lending



B. Lending by Savings Banks

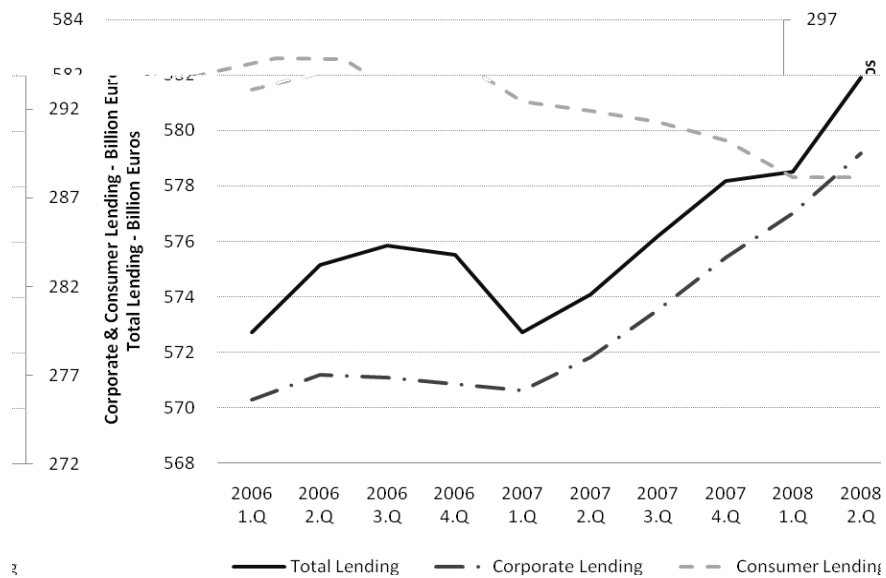


Figure 2
Geographical reach of affected Landesbanken



Table 1
Ownership structures of Landesbanken

[illegible]

Table 2
Descriptive Statistics

	Obs.	Mean	Std. dev.	p(25)	Median	p(75)	Min	Max
Inference Variables								
Loan Type								
Dependent Variables								
Borrower Characteristics								
Relationship Characteristics								

Table 3: Aggregate Acceptance Rates - Affected versus Non-Affected Banks

Quarter	Affected Banks	Non-Affected Banks

Table 4: Loan Acceptance Rates at the Onset of the Financial Crisis (Bivariate Tests)

Panel A: Pooled Consumer & Mortgage Loans			
	All	Affected	Non-Affected
Before August 2007			
After August 2007			
Difference			-0.110***
Panel B: Consumer Loans			
Before August 2007			
After August 2007			
Difference			-0.105***
Panel C: Mortgage Loans			
Before August 2007			
After August 2007			
Difference			-0.134***

Panel D: Diff-in-Diff By Rating Classes

	Before August 2007			After August 2007		
	Affected	Non-Affected	Difference (p-value)	Affected	Non-Affected	Difference (p-value)
						Diff-in-Diff (p-value)
Borrower Risk (Internal Rating)						

Table 5: Loan Acceptance Rates at the Onset of the Financial Crisis (Multivariate Tests)

Panel A: Pooled Sample (Consumer and Mortgage Loans)

Consumer & Mortgage Loans		
(1)	(2)	(3)

Borrower Risk (Internal Rating)

Diagnostics

Panel B: Consumer and Mortgage Loans

Consumer Loans (A)				Mortgage Loans (B)	
(4)	(5)	(6)	(7)	(8)	(9)

Borrower Risk (Internal Rating)

Diagnostics

Table 6: The Demand for Loans After the Onset of the Financial Crisis (Applications)

Consumer & Mortgage Loans		Consumer Loans		Mortgage Loans	
(1) OLS	(2) Negative Binomial	(3) OLS	(4) Negative Binomial	(5) OLS	(6) Negative Binomial

Diagnostics

α

Table 7: The Demand for Loans After the Onset of the Financial Crisis (Loan Amount)

	(1) OLS	(2) OLS	(3) OLS
Borrower Risk (Internal Rating)			
Diagnostics			

Table 8: Bank-Borrower Relationships During the Financial Crisis

	Dependent Variable: Approved (Yes/No)		
	Pooled Sample	Consumer Loans	Mortgage Loans
	(1)	(2)	(3)
	LPM	LPM	LPM
Secular Effects			
Second Level Interactions			
Diff-in-Diff-in-Diff			
Borrower Risk (Internal Rating)			
Diagnostics			
	Δ		
	Δ		

Table 9: Compare Models for Loan Supply

	Dependent Variable: Approved (Yes/No)		
	Pooled Sample	Consumer Loans	Mortgage Loans
Linear Probability Model			
<i>Diff-in-Diff (p-value)</i>	<0.0001***	<0.0001***	<0.0001***
Probit (without Fixed Effects)			
<i>Diff-in-Diff (p-value)</i>	<0.0001***	<0.0001***	<0.0001***
Probit (with Fixed Effects)			
<i>Diff-in-Diff (p-value)</i>	<0.0001***	<0.0001***	<0.0001***