Motivation

- Interconnected firms and industries lead to propagation and amplification of shocks throughout the economy (Acemoglu, Carvalho, Ozdaglar, and Tahbaz-Salehi 2012)

- Negative shocks can lead to fire sales and deplete firms’ balance sheets in an industry (Lang and Stulz 1992)

- Shocks may also ripple through the supply chain (Hertzel, Li, Officer, and Rodgers 2008; Barrot and Sauvagnat 2016)
This paper

- Is banking structure related to the extent to which cascade effects due to interconnections propagate?

- **Main idea:** Lenders may be prone to internalize externalities of industry distress if they have large shares of the loans outstanding in that industry.
Related literature

- Banking literature focuses on bank type/bank-firm relationships
  - Foreign banks, local banks, etc. (Berger et al. 2005)
  - Foreign banks are fickle lenders (Giannetti and Laeven 2012)
  - Close relationships help borrowers during crises (Bolton, Freixas, and Gambacorta 2016; Liberti and Sturgess 2016)

- Notable exception: bank presence
  - Lenders with a large fraction of outstanding mortgages in a neighborhood are more likely to renegotiate defaulting mortgages/less likely to default (Favara and Giannetti 2017)
Related literature

- **Bank concentration and market power**
  - Affects loan supply (Garmaise and Moskowitz 2006) and the transmission of monetary policy to mortgage rates (Scharfstein and Sunderam 2016)

- **Our paper**: alternative interpretation to the view that credit-market competition erodes financial stability (Keeley 1990)
Main findings

- Banks with higher market shares are more likely to extend new loans to distressed industries
- Consistent with lenders’ desire to minimize externalities
  - More pronounced in industries prone to fire sales
  - New loans to customers and suppliers, especially if relationship disruptions would be costly
- Bright side of credit concentration: fewer firm exits and higher long-term abnormal returns following distress
Data description

- U.S. syndicated loans from DealScan
  - Data aggregated at the bank-industry-time level, $ijt$
  - Loan amount $y_{ijt}$ ($t$: six months) and $\text{Market share}_{ijt-2}$ (measured over the previous six years)

- Historical industry stock returns from CRSP
  - $\text{Industry distress}_{it-1}$ indicates whether industry $i$ experienced a cumulative average stock-return of less than $-10\%$ in the previous half-year $t - 1$
Sample composition

- 57 industries and 211 banks
- On average, each industry obtains credit from 44 banks, and each bank covers 12 industries
- Our sample includes a total of 2,516 bank-industry relationships
Empirical strategy

- Analyze lending by bank $j$ to industry $i$ following distress as a function of bank $j$’s past market share in $i$:

$$y_{ijt} = \beta_1 \text{Market share}_{ijt-2} \times \text{Industry distress}_{it-1}$$

$$+ \beta_2 \text{Market share}_{ijt-2} + \mu_{ij} + \theta_{it} + \psi_{jt} + \epsilon_{ijt}$$

- $\theta_{it}$ and $\psi_{jt}$ absorb shocks to industry demand and credit supply

- Endogeneity of $\text{Market share}_{ijt-2}$: results robust to using exogenous variation resulting from past bank mergers
## Bank lending to distressed industries

### Regression sample from 1990 to 2013

<table>
<thead>
<tr>
<th>Sample</th>
<th>ln(1+Loan volume)</th>
<th>ln(Avg. loan size) Loan vol. ≠ 0</th>
<th>Any loan</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression sample from 1990 to 2013</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Market share × Ind. distress</td>
<td>4.942*** (1.288)</td>
<td>3.562*** (0.956)</td>
<td>2.177** (0.855)</td>
<td>-0.186 (0.230)</td>
</tr>
<tr>
<td>Market share</td>
<td>8.293*** (1.613)</td>
<td>12.581*** (1.269)</td>
<td>4.806*** (0.923)</td>
<td>-0.199 (0.375)</td>
</tr>
<tr>
<td>Industry distress</td>
<td>-0.087 (0.065)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bank-industry FE</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Bank-period FE</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Industry-period FE</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>N</td>
<td>113,494</td>
<td>113,470</td>
<td>113,470</td>
<td>24,292</td>
</tr>
</tbody>
</table>

- A one-standard-deviation increase in $Market\ share_{ijt-2}$ implies an over 12% increase in lending (column 3).
- Results are not driven by the financial crisis.
Are the effects driven by relationship banks?

<table>
<thead>
<tr>
<th>Sample</th>
<th>ln(1+Loan volume)</th>
<th>ln(Avg. loan size) Loan vol. ≠ 0</th>
<th>ln(Avg. loan size) Any loan</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>All</td>
<td>All</td>
<td>All</td>
</tr>
<tr>
<td>Regression sample from 1990 to 2013, no relationship loans</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Market share × Ind. distress</td>
<td>3.712**</td>
<td>3.381**</td>
<td>2.650**</td>
</tr>
<tr>
<td></td>
<td>(1.453)</td>
<td>(1.495)</td>
<td>(1.245)</td>
</tr>
<tr>
<td>Market share</td>
<td>21.712***</td>
<td>21.014***</td>
<td>11.400***</td>
</tr>
<tr>
<td></td>
<td>(3.745)</td>
<td>(3.527)</td>
<td>(2.832)</td>
</tr>
<tr>
<td>Industry distress</td>
<td>0.006</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.066)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bank-industry FE</td>
<td>N</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>Bank-period FE</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Industry-period FE</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>N</td>
<td>59,444</td>
<td>59,425</td>
<td>59,412</td>
</tr>
</tbody>
</table>
Cross-sectional tests

- Are high-market-share lenders more likely to provide liquidity to industries prone to fire sales?
  - Measures of asset specificity: asset redeployability using capital-flow table from the BEA (Kung and Kim 2016) and ratio of machinery and equipment to total assets in year $t$

- Do high-market-share lenders provide liquidity along the supply chain to stave off externalities?
  - Identify main supplier and customer industries using BEA input-output tables (1997 – 2013)
## Industry propensity to fire sales and bank lending to distressed industries

<table>
<thead>
<tr>
<th>Specificity measure</th>
<th>( \ln(1 + \text{Loan vol.}) ) Any loan ( \ln(1 + \text{Loan vol.}) ) Any loan</th>
<th>Low asset redeployability</th>
<th>High M&amp;E/assets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market share × Ind. distressed × Specific</td>
<td>8.266*** (2.009)</td>
<td>0.372*** (0.107)</td>
<td>4.837** (2.387)</td>
</tr>
<tr>
<td>Market share × Industry distress</td>
<td>1.029 (1.146)</td>
<td>0.065 (0.056)</td>
<td>0.532 (0.895)</td>
</tr>
<tr>
<td>Market share × Specific</td>
<td>0.919 (2.542)</td>
<td>0.016 (0.133)</td>
<td>-3.269 (2.522)</td>
</tr>
<tr>
<td>Market share</td>
<td>-0.864 (1.494)</td>
<td>-0.055 (0.073)</td>
<td>-0.659 (2.297)</td>
</tr>
<tr>
<td>Bank-industry FE</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Bank-period FE</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Industry-period FE</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>N</td>
<td>80,973</td>
<td>80,973</td>
<td>74,666</td>
</tr>
</tbody>
</table>
### Bank lending to distressed industries’ suppliers

<table>
<thead>
<tr>
<th>Sample</th>
<th>(\ln(1+\text{Loan vol.}))</th>
<th>(\ln(\text{Avg. loan size}))</th>
<th>Any loan</th>
<th>(\ln(1+\text{Loan vol.}))</th>
<th>Any loan</th>
</tr>
</thead>
<tbody>
<tr>
<td>(\text{All})</td>
<td>(\text{Loan vol.} \neq 0)</td>
<td>(\text{Loan vol.} \neq 0)</td>
<td>(\text{Loan vol.} \neq 0)</td>
<td>(\text{Loan vol.} \neq 0)</td>
<td>(\text{Loan vol.} \neq 0)</td>
</tr>
<tr>
<td>Cust. share (\times) Cust. distress</td>
<td>3.065*** (1.144)</td>
<td>-0.199 (0.430)</td>
<td>0.148*** (0.052)</td>
<td>3.070*** (1.140)</td>
<td>0.148*** (0.052)</td>
</tr>
<tr>
<td>Customer share</td>
<td>2.086 (2.173)</td>
<td>0.291 (0.310)</td>
<td>0.079 (0.098)</td>
<td>2.046 (2.100)</td>
<td>0.078 (0.095)</td>
</tr>
<tr>
<td>Mkt. share (\times) Ind. distress</td>
<td>2.603 (2.127)</td>
<td>-0.742 (2.039)</td>
<td>0.130 (0.105)</td>
<td>0.130 (0.105)</td>
<td>0.057 (0.103)</td>
</tr>
<tr>
<td>Market share</td>
<td>2.603 (2.127)</td>
<td>-0.742 (2.039)</td>
<td>0.130 (0.105)</td>
<td>0.130 (0.105)</td>
<td>0.057 (0.103)</td>
</tr>
<tr>
<td>Bank-industry FE</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Bank-period FE</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Industry-period FE</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>N</td>
<td>51,534</td>
<td>12,530</td>
<td>51,534</td>
<td>51,516</td>
<td>51,516</td>
</tr>
</tbody>
</table>

**Notes:**
- *** indicates statistical significance at the 1% level.
## Bank lending to distressed industries’ customers

<table>
<thead>
<tr>
<th>Sample</th>
<th>ln(1+Loan vol.) All</th>
<th>ln(Avg. loan size) Loan vol. ≠ 0</th>
<th>Any loan All</th>
<th>ln(1+Loan vol.) All</th>
<th>Any loan All</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supp. share × Supp. distress</td>
<td>2.289* (1.170)</td>
<td>0.028 (0.359)</td>
<td>0.116** (0.057)</td>
<td>2.008 (1.241)</td>
<td>0.103* (0.059)</td>
</tr>
<tr>
<td>Supplier share</td>
<td>-0.075 (2.399)</td>
<td>-0.362 (0.225)</td>
<td>-0.018 (0.115)</td>
<td>-0.148 (2.257)</td>
<td>-0.020 (0.109)</td>
</tr>
<tr>
<td>Mkt. share × Ind. distress</td>
<td>3.880** (1.666)</td>
<td>0.188** (0.083)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Market share</td>
<td>-0.538 (2.268)</td>
<td>-0.044 (0.116)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bank-industry FE</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Bank-period FE</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Industry-period FE</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
</tbody>
</table>

N: 46,228 11,071 46,228 46,210 46,210
## Bank lending over the supply chain: relationship industries

<table>
<thead>
<tr>
<th></th>
<th>( \ln(1+\text{Loan vol.}) )</th>
<th>Any loan</th>
<th>( \ln(1+\text{Loan vol.}) )</th>
<th>Any loan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cust. share ( \times ) Cust. distress ( \times ) Rel. industries</td>
<td>7.475** (3.075)</td>
<td>0.389** (0.160)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer share ( \times ) Customer distress</td>
<td>1.399 (1.523)</td>
<td>0.060 (0.070)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer share ( \times ) Relationship industries</td>
<td>-1.769 (3.178)</td>
<td>-0.125 (0.151)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer share</td>
<td>2.735 (3.088)</td>
<td>0.124 (0.142)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supp. share ( \times ) Supp. distress ( \times ) Rel. industries</td>
<td>6.230* (3.275)</td>
<td>0.265* (0.155)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supplier share ( \times ) Supplier distress</td>
<td>-0.213 (1.584)</td>
<td>0.010 (0.072)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supplier share ( \times ) Relationship industries</td>
<td>-2.148 (2.182)</td>
<td>-0.112 (0.114)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supplier share</td>
<td>0.621 (2.712)</td>
<td>0.018 (0.131)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bank-industry FE</td>
<td>Y Y</td>
<td>Y</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>Bank-period FE</td>
<td>Y Y</td>
<td>Y</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>Industry-period FE</td>
<td>Y Y</td>
<td>Y</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td><strong>N</strong></td>
<td>51,534</td>
<td>51,534</td>
<td>46,228</td>
<td>46,228</td>
</tr>
</tbody>
</table>
Bank mergers as source of variation in market shares: IVE

- Bank merger in $t - 2$, market share in industry $i$ instrumented by sum of historical market shares of surviving bank $j$ and target bank in $t - 4$

<table>
<thead>
<tr>
<th>Term</th>
<th>Coefficient</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market share $\times$ Industry distress (instrumented)</td>
<td>6.249*</td>
<td>(3.366)</td>
</tr>
<tr>
<td>Market share (instrumented)</td>
<td>-27.469***</td>
<td>(5.810)</td>
</tr>
<tr>
<td>Customer share $\times$ Customer distress (instrumented)</td>
<td>3.788**</td>
<td>(1.536)</td>
</tr>
<tr>
<td>Customer share (instrumented)</td>
<td>24.781***</td>
<td>(3.904)</td>
</tr>
<tr>
<td>Supplier share $\times$ Supplier distress (instrumented)</td>
<td>2.293</td>
<td>(2.012)</td>
</tr>
<tr>
<td>Supplier share (instrumented)</td>
<td>14.087</td>
<td>(15.865)</td>
</tr>
<tr>
<td>Bank-industry FE</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Bank-period FE</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Industry-period FE</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>N</td>
<td>43,931</td>
<td>27,065</td>
</tr>
</tbody>
</table>
To which customers do banks extend new loans?

**Strategic dimension of banks’ decision to extend new loans to distressed industries’ customers**

1. Customers less levered than distressed suppliers

2. Highly concentrated customers to distressed suppliers
   - No differential effect for distressed suppliers that are important for their customers
Alternative explanations

- Less diversified lenders may be better informed (Acharya, Hasan, and Saunders 2006; Loutskina and Strahan 2011)
  - Stronger effects for industries prone to fire sales, but fixed assets associated with lower degree of information asymmetry
  - Variation in market shares due to bank mergers (IVE) unlikely to capture lenders’ informational advantage, especially along the supply chain
  - No effect of lenders’ portfolio diversification

- No evidence of differential rents accruing to high-market-share lenders after distress (Wilner 2000)
Real effects

Does higher industry-wide credit concentration alleviate consequences of distress?

1. Fewer firm exits following industry distress

2. Higher long-run abnormal returns after industry distress
   - 3 – 4% higher return p.a. up to seven years after distress
   - High-market-share banks’ lending decisions are efficient
Conclusion

- Lenders’ liquidity provision is affected by the degree to which they internalize potential feedback effects of negative shocks.

- Lenders with a larger share of the loans outstanding to an industry in distress more likely to extend credit, also along the supply chain.

- Transmission of industry shocks depends on concentration of outstanding loans.
Bank lending to distressed industries’ customers: relative leverage of suppliers vs. customers

<table>
<thead>
<tr>
<th>Sample</th>
<th>( \ln(1+\text{Loan volume}) ) All</th>
<th>( \ln(\text{Avg. loan size}) ) Loan volume ( \neq 0 )</th>
<th>Any loan All</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supp. share ( \times ) Supp. distress ( \times ) Relative leverage</td>
<td>4.187***</td>
<td>0.334</td>
<td>0.204***</td>
</tr>
<tr>
<td></td>
<td>(1.406)</td>
<td>(0.339)</td>
<td>(0.074)</td>
</tr>
<tr>
<td>Supplier share ( \times ) Supplier distress</td>
<td>-2.949*</td>
<td>-0.500</td>
<td>-0.131</td>
</tr>
<tr>
<td></td>
<td>(1.714)</td>
<td>(0.641)</td>
<td>(0.091)</td>
</tr>
<tr>
<td>Supplier share ( \times ) Relative leverage</td>
<td>2.206*</td>
<td>-0.199</td>
<td>0.096</td>
</tr>
<tr>
<td></td>
<td>(1.160)</td>
<td>(0.324)</td>
<td>(0.062)</td>
</tr>
<tr>
<td>Supplier share</td>
<td>-0.977</td>
<td>-0.152</td>
<td>-0.054</td>
</tr>
<tr>
<td></td>
<td>(3.868)</td>
<td>(0.560)</td>
<td>(0.188)</td>
</tr>
<tr>
<td>Bank-industry FE</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Bank-period FE</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Industry-period FE</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>N</td>
<td>43,476</td>
<td>10,493</td>
<td>43,476</td>
</tr>
</tbody>
</table>
Bank lending to distressed industries’ customers: importance of customers for their suppliers

<table>
<thead>
<tr>
<th>Sample</th>
<th>In(1+Loan volume) All</th>
<th>In(Avg. loan size) Loan volume ≠ 0</th>
<th>Any loan All</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supp. share × Supp. distress × Customer HHI</td>
<td>10.971**</td>
<td>-3.838**</td>
<td>0.584**</td>
</tr>
<tr>
<td></td>
<td>(5.445)</td>
<td>(1.582)</td>
<td>(0.268)</td>
</tr>
<tr>
<td>Supplier share × Supplier distress</td>
<td>0.852</td>
<td>0.566</td>
<td>0.037</td>
</tr>
<tr>
<td></td>
<td>(0.977)</td>
<td>(0.397)</td>
<td>(0.053)</td>
</tr>
<tr>
<td>Supplier share × Customer HHI</td>
<td>3.744</td>
<td>2.239**</td>
<td>-0.100</td>
</tr>
<tr>
<td></td>
<td>(9.573)</td>
<td>(0.977)</td>
<td>(0.490)</td>
</tr>
<tr>
<td>Supplier share</td>
<td>-0.667</td>
<td>-0.671***</td>
<td>-0.004</td>
</tr>
<tr>
<td></td>
<td>(2.794)</td>
<td>(0.224)</td>
<td>(0.139)</td>
</tr>
<tr>
<td>Bank-industry FE</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Bank-period FE</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Industry-period FE</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>N</td>
<td>46,228</td>
<td>11,071</td>
<td>46,228</td>
</tr>
</tbody>
</table>
## Impact on cost of debt

<table>
<thead>
<tr>
<th>Horizon Sample</th>
<th>( \ln(\text{Spread}) ) After 12 months</th>
<th>( \ln(\text{TCB}) ) Loan volume ( \neq 0 )</th>
<th>( \ln(\text{Spread}) ) After 24 months</th>
<th>( \ln(\text{TCB}) )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market share ( \times ) Industry distress</td>
<td>0.033 ( (0.139) )</td>
<td>0.057 ( (0.398) )</td>
<td>0.002 ( (0.139) )</td>
<td>-0.119 ( (0.272) )</td>
</tr>
<tr>
<td>Market share</td>
<td>0.102 ( (0.218) )</td>
<td>0.441** ( (0.168) )</td>
<td>0.143 ( (0.243) )</td>
<td>0.419** ( (0.161) )</td>
</tr>
<tr>
<td>Bank-industry FE</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Bank-period FE</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Industry-period FE</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>( N )</td>
<td>16,160</td>
<td>6,635</td>
<td>14,998</td>
<td>6,104</td>
</tr>
</tbody>
</table>
### Distressed industries’ shares in banks’ loan portfolios

<table>
<thead>
<tr>
<th>Term</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-stat</th>
<th>( p )</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \ln(1+\text{Loan volume}) )</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Portfolio share of industry × Industry distress</td>
<td>-1.831***</td>
<td>0.609</td>
<td>-3.03</td>
<td><strong>&lt;0.001</strong></td>
</tr>
<tr>
<td>Portfolio share of industry</td>
<td>-0.448</td>
<td>0.375</td>
<td>-1.19</td>
<td>0.235</td>
</tr>
<tr>
<td>Portfolio share of supplier × Supplier distress</td>
<td>0.191</td>
<td>0.904</td>
<td>0.21</td>
<td>0.833</td>
</tr>
<tr>
<td>Portfolio share of supplier</td>
<td>0.480</td>
<td>0.715</td>
<td>0.68</td>
<td>0.497</td>
</tr>
<tr>
<td>Portfolio share of customer × Customer distress</td>
<td>-0.505</td>
<td>1.809</td>
<td>-0.28</td>
<td>0.780</td>
</tr>
<tr>
<td>Portfolio share of customer</td>
<td>1.316</td>
<td>0.953</td>
<td>1.38</td>
<td>0.168</td>
</tr>
<tr>
<td>Bank-industry FE</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>Bank-period FE</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>Industry-period FE</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>71,983</td>
<td>41,845</td>
<td>46,607</td>
<td></td>
</tr>
</tbody>
</table>

*Note:*** *p < 0.001, **p < 0.01, *p < 0.05.*
### Industry-wide credit concentration and firm exit

<table>
<thead>
<tr>
<th>Horizon</th>
<th>Any bankruptcy-related delisting in industry</th>
<th>Time FE</th>
<th>Industry FE</th>
<th>Market HHI</th>
<th>Market HHI × Ind. distress</th>
<th>Industry distress</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>After 6 months</td>
<td>After 12 months</td>
<td></td>
<td>All banks</td>
<td>Top 1</td>
<td>All banks</td>
<td>Top 1</td>
</tr>
<tr>
<td></td>
<td>All banks</td>
<td>Top 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>After 6 months</td>
<td>Top 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N 2,633</td>
<td>2,633</td>
<td>2,633</td>
<td>2,633</td>
<td>2,579</td>
<td>2,579</td>
<td>2,579</td>
<td></td>
</tr>
<tr>
<td>N 2,633</td>
<td>2,633</td>
<td>2,633</td>
<td>2,633</td>
<td>2,579</td>
<td>2,579</td>
<td>2,579</td>
<td></td>
</tr>
<tr>
<td>N 2,633</td>
<td>2,633</td>
<td>2,633</td>
<td>2,633</td>
<td>2,579</td>
<td>2,579</td>
<td>2,579</td>
<td></td>
</tr>
<tr>
<td>N 2,633</td>
<td>2,633</td>
<td>2,633</td>
<td>2,633</td>
<td>2,579</td>
<td>2,579</td>
<td>2,579</td>
<td></td>
</tr>
<tr>
<td>N 2,633</td>
<td>2,633</td>
<td>2,633</td>
<td>2,633</td>
<td>2,579</td>
<td>2,579</td>
<td>2,579</td>
<td></td>
</tr>
</tbody>
</table>

- **Market HHI × Ind. distress**: -0.409** (0.161), -0.341** (0.151), -0.218 (0.144), -0.403** (0.166), -0.346*** (0.130), -0.268** (0.134)
- **Market HHI**: -0.642*** (0.151), -0.016 (0.084), -0.064 (0.095), -0.646*** (0.150), -0.010 (0.082), -0.044 (0.093)
- **Industry distress**: 0.197*** (0.045), 0.131*** (0.041), 0.137** (0.053), 0.199*** (0.045), 0.133*** (0.035), 0.153*** (0.049)

- **Indicators**: N, Y
- **Significance levels**: **(p < 0.01), * (p < 0.05), * (p < 0.1)
Credit concentration and long-run abnormal returns of industries following distress

<table>
<thead>
<tr>
<th>( \alpha ) (in % per month)</th>
<th>Top-quintile credit concentration</th>
<th>Bottom-quintile credit concentration</th>
<th>Long-short</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three years</td>
<td>-0.858*** (0.170)</td>
<td>-1.127*** (0.129)</td>
<td>0.336** (0.158)</td>
</tr>
<tr>
<td>( N )</td>
<td>288</td>
<td>287</td>
<td>287</td>
</tr>
<tr>
<td>Five years</td>
<td>-0.812*** (0.158)</td>
<td>-1.048*** (0.122)</td>
<td>0.288** (0.133)</td>
</tr>
<tr>
<td>( N )</td>
<td>288</td>
<td>287</td>
<td>287</td>
</tr>
<tr>
<td>Seven years</td>
<td>-0.775*** (0.157)</td>
<td>-0.978*** (0.117)</td>
<td>0.243** (0.119)</td>
</tr>
<tr>
<td>( N )</td>
<td>288</td>
<td>287</td>
<td>287</td>
</tr>
</tbody>
</table>