

Internet Appendix

for

M&A Efficiency Gains: Evidence from Branch-Level Data

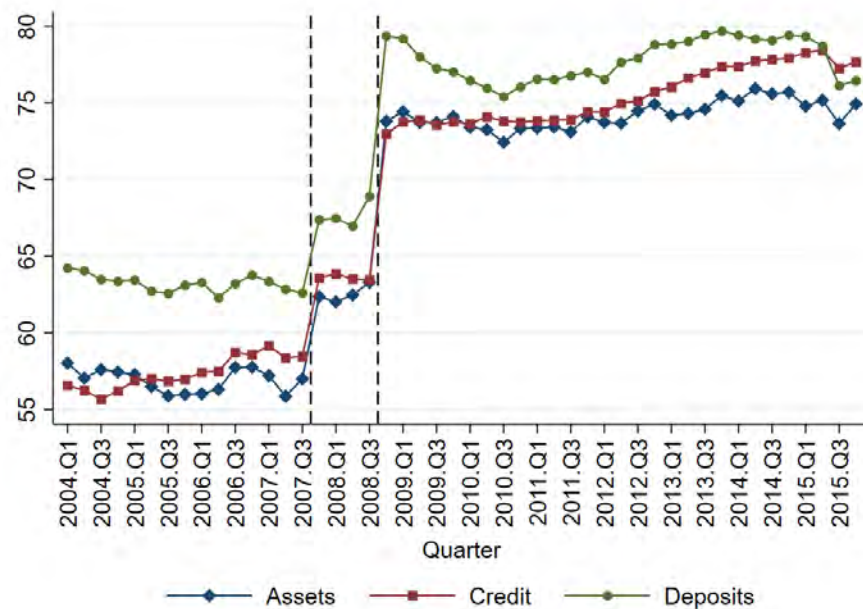
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A1. Concentration Ratio: Share of the Five Largest Banks Around the M&As

FIGURE A1

Share of the Five Largest Banks

Figure A1 reports the share of total assets, credit, and deposits held by the five largest financial institutions. We exclude government-owned development banks. Dashed lines indicate the dates of the two M&As analyzed in the study. Data come from the Central Bank of Brazil (IF.data).

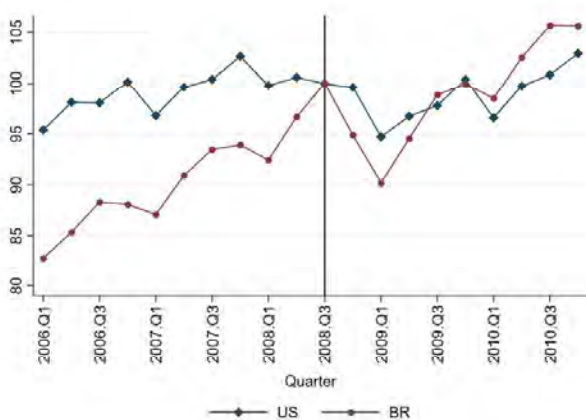


A2. Global Financial Crisis: Brazil vs. the United States

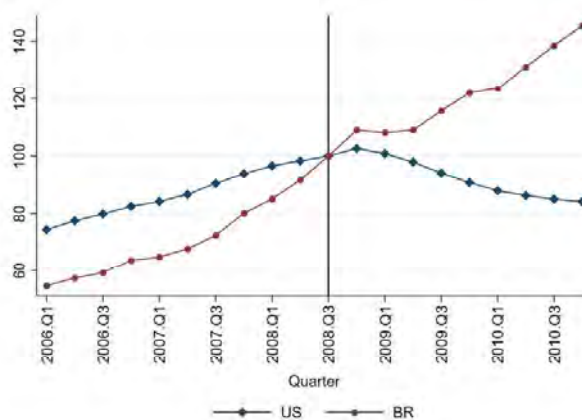
FIGURE A2

Effect of the Financial Crisis: Brazil vs. the United States

Figure A2 compares Brazil and the United States during the Global Financial Crisis. Panel (a) reports quarterly real GDP (not seasonally adjusted). Panel (b) reports the stock of bank loans to firms (not seasonally adjusted). For the United States, loans to firms are from the Board of Governors of the Federal Reserve System (H.8) and are computed as the sum of commercial and industrial loans and commercial real estate loans. For Brazil, loans to firms correspond to series 20023 (“Credit operations in the financial system—Total to legal entities”) from the Central Bank of Brazil’s Time Series Management System. The vertical black line marks 2008:Q3 (value = 100). Lehman Brothers filed for bankruptcy on September 15, 2008.



(a) Quarterly GDP



(b) Stock of bank loans to firms

A3. Data and Variables Description

Classification of target and acquirer branches. Following an M&A, we classify as target branches those that change their 14-digit tax identification numbers. Since these numbers are the identifiers we use to link datasets, we need to obtain the new tax identification number of the target branches in order to track their balance sheet and employment information following the consolidation. To identify the new identifiers, we use monthly data on branch addresses. The data we use to perform this operation come from the Register of Branches, Offices, and Subsidiaries of Consortium Administrators from Central Bank of Brazil.

Branch-level balance sheet and income statement data. We use ESTBAN (*Estatística Bancária Mensal*), a dataset provided by the Central Bank of Brazil. The database originates from Document No. 13, a mandatory monthly branch-level report that banks submit to the Central Bank of Brazil. In the publicly available version of this dataset, many of the original account-level entries from the form are aggregated. Deposits are assigned to the branch where the customer opened the account and remain recorded at that branch, even if the customer uses services elsewhere in the bank. Loans are assigned in a similar way to the branch where the loan contract was originated and remain on the books of that branch. Using the end-of-year (December) data, we construct the following variables:²⁷

- **Total assets:** the value of all assets booked at the branch. The original variable in the data is account 399 total assets (*verbete 399 total do ativo*).²⁸
- **Outstanding loans:** the total stock of loans originated by the branch. The original variable in the data is account 160 credit operations (*verbete 160 operações de crédito*).
- **Total deposits:** the stock of deposits in accounts opened at the branch. We are able to observe total demand deposits, which are an aggregation of (i) demand deposits from public sector entities (*verbete 401 + verbete 402 + verbete 403*); (ii) demand deposits from individuals and firms (including other financial institutions) (*verbete 411 + verbete 412 + verbete 413 + verbete 414 + verbete 415 + verbete 416 + verbete 417 + verbete 418 + verbete 419*); (iii) savings deposits (*verbete 420*); and (iv) term deposits (*verbete 432*), excluding term deposits from other financial institutions (*verbete 431*).²⁹
- **Total revenues:** total income accrued by the branch during the period. The original variable in the data is account 711 credit accounts (*verbete 711 contas credoras*).

²⁷While balance sheet variables represent a snapshot in December, income statement variables reflect flows from July to December. We divide these flows by six to obtain a monthly figure.

²⁸In this dataset, total assets include some entries that do not represent actual rights or obligations. For example, when banks originate a mortgage, they become the legal owners of the property (a process known as fiduciary alienation). The mortgage is recorded as a standard credit asset, while the property (collateral) value is entered in account 300, with an offsetting entry in account 800. Our results are unchanged when we use an adjusted measure of total assets that removes this mechanical double-counting.

²⁹The fact that we cannot exclude interbank demand deposits from our deposit measure is not a concern, as these deposits are typically recorded in headquarters branches, which are excluded from our analysis.

- **Total costs:** total expenditures recorded by the branch during the period. The original variable in the data is account 712 debit accounts (*verbete 712 contas devedoras*).

Matched branch-employee data. We use the *Relação Anual de Informações Sociais* (RAIS) data from the Ministry of Labor. The identified microdata is not publicly available. We observe the universe of formal employees in Brazil at the establishment level. In the case of banks, the majority of establishments are bank branches. The worker is classified as a loan officer if the first four digits of the occupation code are 1417 ("Service operations managers in a financial intermediation institution"), 2532 ("Banking services sales and consulting professionals"), 1423 ("Sales, marketing and communication managers"), 3541 ("Product promotion and sales experts"), 2525 ("Economic and financial administration professionals"), 1421 ("Administrative, financial, risk and related managers"), or 1231 ("Administrative and financial directors"). We compute the wage bill of a branch in December by aggregating the wages of workers who are employed in that month.

Bank-level data. We use bank-level data, including income statement and balance sheet information, from IF.data , a database maintained by the Central Bank of Brazil.

A4. Descriptive Statistics Restricting the Sample to Municipalities with Both Treated and Control Branches

TABLE A1

Branch-level Descriptive Statistics, Restriction to Municipalities with Both Treated and Control Branches

Table A1 reports branch-level descriptive statistics as of December 2006, restricting the sample to municipalities with both treated and control branches. All monetary variables are in millions of Brazilian reais (BRL). Column 1 reports the number of observations, column 2 the mean, column 3 the standard deviation, column 4 the 1st percentile, column 5 the median, column 6 the 99th percentile, and column 7 the ratio of the mean to the median. Headquarters establishments (tax identification numbers with digits 9–12 equal to “0001”) are excluded. The sample includes only active branches, defined as those with at least one employee and positive credit and deposit balances. Local market shares (in %) refer to a branch’s market share in the municipality where it is located. Panel A includes all treatment and control branches; Panel B excludes the 50 largest branches based on total assets.

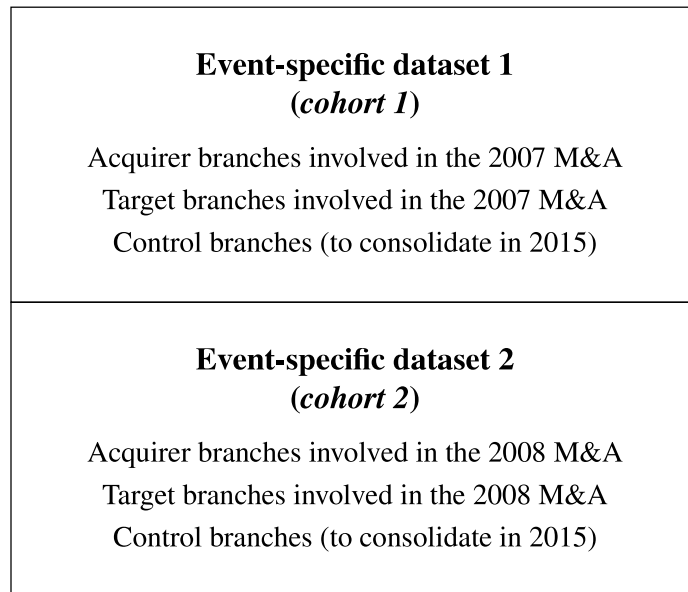
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	N	Mean	SD	p1	p50	p99	p50/mean
<i>Panel A: Unrestricted sample</i>							
Assets	8,034	329	12480	0.9	37	743	8.8
Loans	8,034	26	456	0.1	6	210	4.2
Ratio loans to assets	8,034	0.23	0.17	0.01	0.19	0.79	1.2
Deposits	8,034	27	207	0.4	14	154	2.0
Number of workers	8,034	17	31	2	12	86	1.4
Profit per employee	8,034	0.10	1.62	-0.08	0.11	0.63	1.0
Loans per employee	8,034	4.56	324.00	0.01	0.52	6.26	8.7
Deposits per employee	8,034	1.53	7.30	0.06	1.07	6.73	1.4
Loans - local market share	8,034	4	8	0.0002	0	35	9.2
Deposits - local market share	8,034	4	8	0.0011	1	38	6.6
<i>Panel B: Excluding the 50 largest branches</i>							
Assets	7,984	62	95	0.9	37	505	1.7
Loans	7,984	13	33	0.1	6	142	2.1
Ratio loans to assets	7,984	0.23	0.17	0.01	0.19	0.79	1.2
Deposits	7,984	22	34	0.4	13	130	1.6
Number of workers	7,984	17	22	2	12	80	1.4
Profit per employee	7,984	0.13	0.15	-0.08	0.11	0.60	1.2
Loans per employee	7,984	0.79	1.35	0.01	0.52	5.48	1.5
Deposits per employee	7,984	1.36	1.48	0.06	1.07	6.21	1.3
Loans - local market share	7,984	4	8	0.0002	0	35	9.4
Deposits - local market share	7,984	4	8	0.0011	1	38	6.7

A5. Stacked Dataset Construction

FIGURE A3

Stacked Data

Figure A3 illustrates the construction of the stacked dataset by combining event-specific datasets (cohorts) for the 2007 and 2008 M&As, with control branches defined as branches that consolidate in 2015.

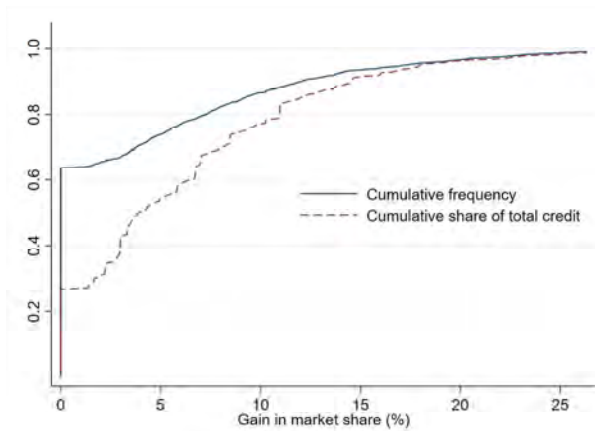


A6. Distribution of the Local Gains in Market Share

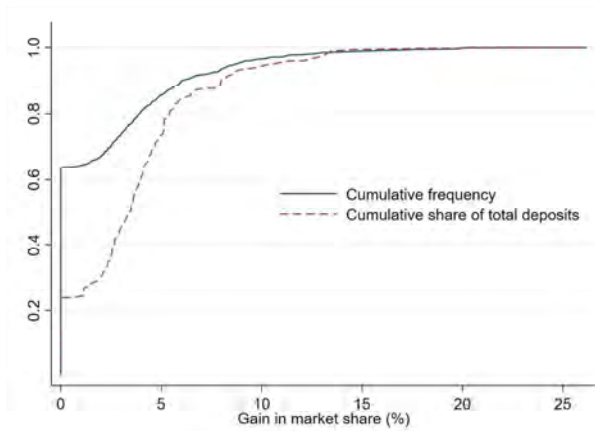
FIGURE A4

Cumulative Distribution Functions of Gains in Market Share

Figure A4 reports cumulative distribution functions of gains in market share per municipality. The solid line represents the cumulative frequency, and the dashed line represents the cumulative share of total credit (panel a) or total deposits (panel b). The sample includes municipalities where control banks are present. Data are from December 2006.



(a) Credit



(b) Deposits

A7. AKM Decomposition

In this section, we describe how we decompose the earnings in a Abowd et al. (1999) framework. This framework allows us to decompose the workers' ability (unobservables) from workers' observables and bank-branch unobservables. We augment Mincer's framework proposed in Alvarez, Benguria, Engbom, and Moser (2018) in the Brazilian setting to incorporate local, bank, and branch-level components. This allows us to control for workers' changes in observables, local economic conditions, and branch changes from their returns in Mincer equation.

To do so, we regress the log of monthly real earnings on worker observables interacted with municipality-time dummies, occupation interacted with bank-time dummies, and branch-time dummies. Specifically, we include as workers observables: experience³⁰, worker tertiary education indicator variable, worker age, and worker gender. Our setting also controls for possible bank-occupation differential earnings and branches change in earnings over time:

$$(3) \quad \begin{aligned} \log(y_{it}) = & (\beta_{mt}^1 age_{it} + \beta_{mt}^2 edu_{it} + \beta_{mt}^3 exp_{it} + \beta_{mt}^4 gender_{it}) \\ & + \beta_{bt} occupation_{it} + \beta_{jt} + \alpha_i + \varepsilon_{it}. \end{aligned}$$

where workers are indexed by i , branches by j , municipalities by m , and banks by b . In our setting, the first summation incorporates observable changes in workers' characteristics with an interaction term for each municipality time. This set of parameters incorporates any market-specific time-varying effects (municipality-time) of worker characteristics (age, education, experience and gender) on wages. The second set of parameters incorporates bank-time-occupation-specific changes in worker compensation. This component can capture how the banks' characteristics evolve during the integration process, such as through management changes, cost-cutting, or technology upgrades. The third set incorporates possible heterogeneity at the branch level that can be time-varying. This component incorporates any branch-specific change in management quality, technological resources, among other changes happening at the branch-level. Finally, α_i represents the time-invariant worker component of the earnings that are not explained by all the other components, which we interpret as worker ability.

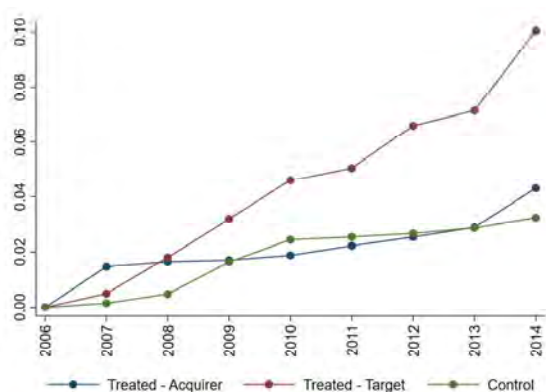
Our sample consists of the connected group of banks in Brazil between 2003-2015, which in the end comprises all the commercial banks registered in the country. The identification of worker effects comes from the relatively high mobility of workers across bank branches under the long period considered: more than 75% of the workers. All our measures of workers' ability rely on the assumptions of exogenous mobility of workers across branches, conditional on observables and local shocks (Card, Heining, and Kline, 2013; Flabbi, Macis, Moro, and Schivardi, 2019).

³⁰Measured by the years of working experience in the banking sector.

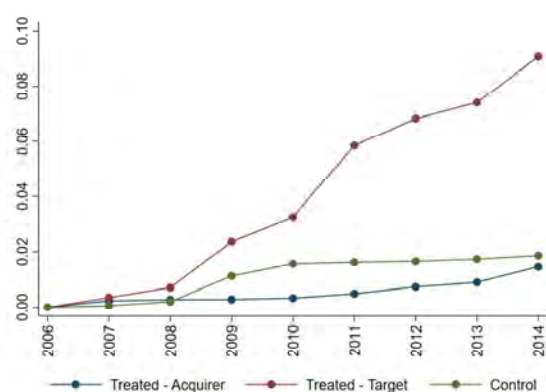
A8. Evolution of Branch Closures

FIGURE A5
Branch Closures

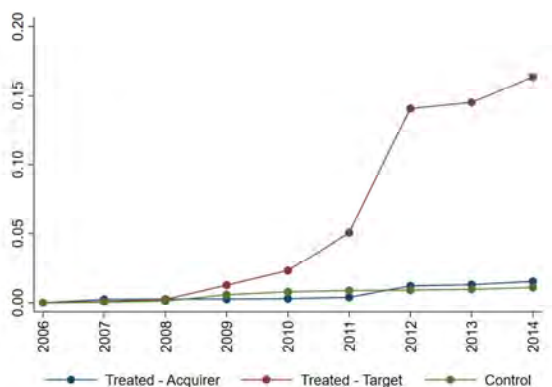
Figure A5 shows the evolution of closures among branches that were active in December 2006. Panel (a) reports the fraction of branches active in December 2006 that close in each subsequent year. Panels (b)–(d) report, respectively, the shares of workers, deposits, and credit (measured as of December 2006) associated with branches that close in a given year.



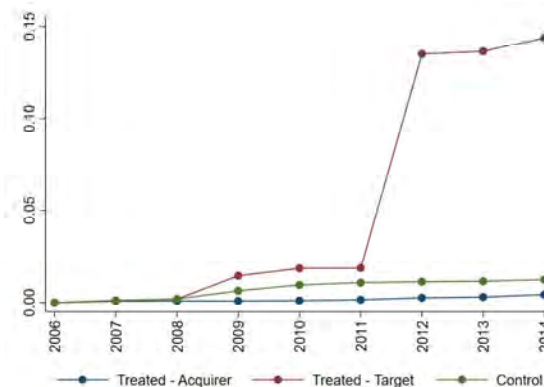
(a) Share of branches closed



(b) Share of workers in closed branches



(c) Share of deposits in closed branches



(d) Share of credit in closed branches

A9. Excluding 50 Largest Branches (Proxy for Regional Headquarters)

TABLE A2

Excluding 50 Largest Branches (Proxy for Regional Headquarters)

Table A2 reports robustness estimates using the specification in equation (1) after excluding the 50 largest branches (proxy for regional headquarters). Dependent variables are inverse hyperbolic sine transformations of the original variables. Branch size characteristics include dummy variables for quartile-based bins of branch assets, the number of branch employees, and the branch's credit market share (measured in 2006). Market power controls include an indicator for municipalities with both target and acquirer branches interacted with the consolidated bank's pre-merger local credit market share. Standard errors (in parentheses) are clustered at the branch-cohort and bank-time-cohort levels. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Lending	Deposits	Emp.	Int. Transf.	L. O. Ability	Lending Employees	Deposits Employees	Revenues	Costs
Post M&A × Target	-0.129* (0.074)	-0.116 (0.093)	-0.185*** (0.051)	-0.234** (0.098)	-0.035 (0.032)	0.056 (0.052)	0.069 (0.082)	-0.085 (0.058)	-0.443*** (0.142)
Post M&A × Acquirer	0.385*** (0.051)	0.236*** (0.046)	0.080** (0.034)	0.136** (0.063)	0.083*** (0.024)	0.304*** (0.048)	0.156*** (0.051)	0.244*** (0.036)	0.428*** (0.053)
Observations	84,254	84,254	84,254	83,961	84,254	84,254	84,254	84,254	84,254
R Squared	0.899	0.927	0.931	0.233	0.753	0.880	0.844	0.880	0.916
Branch X Date M&A FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
City x Time X Date M&A FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
Size X Time X Date M&A FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
Market Power Controls X Post	✓	✓	✓	✓	✓	✓	✓	✓	✓

A10. Just Acquirer as Control Group

TABLE A3
Just Acquirer as Control Group

Table A3 reports robustness estimates using the specification in equation (1), restricting the control group to acquirer branches only. Dependent variables are inverse hyperbolic sine transformations of the original variables. Branch size characteristics include dummy variables for quartile-based bins of branch assets, the number of branch employees, and the branch's credit market share (measured in 2006). Market power controls include an indicator for municipalities with both target and acquirer branches interacted with the consolidated bank's pre-merger local credit market share. Standard errors (in parentheses) are clustered at the branch-cohort and bank-time-cohort levels. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Lending	Deposits	Emp.	Int. Transf.	L. O. Ability	$\frac{\text{Lending}}{\text{Emp.}}$	$\frac{\text{Deposits}}{\text{Emp.}}$	Revenues	Costs
Post M&A $\times$ Target	-0.188** (0.073)	-0.141 (0.090)	-0.317*** (0.050)	-0.119 (0.107)	0.046* (0.027)	0.130** (0.049)	0.177** (0.078)	-0.114** (0.056)	-0.425*** (0.142)
Post M&A $\times$ Acquirer	0.350*** (0.051)	0.241*** (0.040)	-0.043** (0.019)	0.225*** (0.066)	0.152*** (0.022)	0.393*** (0.049)	0.284*** (0.043)	0.239*** (0.037)	0.466*** (0.051)
Observations	68,586	68,586	68,586	68,300	68,586	68,586	68,586	68,586	68,586
R Squared	0.902	0.929	0.939	0.250	0.790	0.887	0.856	0.874	0.892
Branch $\times$ Cohort FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
City $\times$ Time $\times$ Cohort FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
Size $\times$ Time $\times$ Cohort FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
Market Power $\times$ Post M&A	✓	✓	✓	✓	✓	✓	✓	✓	✓

A11. Controlling for Lending per Employee Pre-M&A

TABLE A4
Controlling for Lending per Employee Pre M&A

Table A4 reports robustness estimates using the specification in equation (1) while controlling for pre-merger lending per employee. Dependent variables are inverse hyperbolic sine transformations of the original variables. Branch size characteristics include dummy variables for quartile-based bins of branch assets, the number of branch employees, and the branch's credit market share (measured in 2006). Market power controls include an indicator for municipalities with both target and acquirer branches interacted with the consolidated bank's pre-merger local credit market share. Standard errors (in parentheses) are clustered at the branch-cohort and bank-time-cohort levels. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Lending	Deposits	Emp.	Int. Transf.	L. O. Ability	$\frac{\text{Lending}}{\text{Emp.}}$	$\frac{\text{Dep.}}{\text{Emp.}}$	Reven.	Costs
Post M&A $\times$ Target	-0.157* (0.079)	-0.144* (0.084)	-0.227*** (0.048)	-0.195* (0.109)	-0.022 (0.029)	0.070 (0.056)	0.083 (0.076)	-0.121* (0.063)	-0.471*** (0.145)
Post M&A $\times$ Acquirer	0.294*** (0.052)	0.209*** (0.041)	0.081** (0.032)	0.130** (0.061)	0.079*** (0.023)	0.212*** (0.047)	0.127** (0.050)	0.187*** (0.037)	0.388*** (0.052)
Observations	76,220	76,220	76,220	75,960	76,220	76,220	76,220	76,220	76,220
R Squared	0.902	0.933	0.933	0.224	0.758	0.883	0.853	0.884	0.918
Branch $\times$ Cohort FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
City $\times$ Time $\times$ Cohort FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
Size $\times$ Time $\times$ Cohort FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
$\frac{\text{Lending}}{\text{Emp.}}$ $\times$ Time $\times$ Cohort FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mkt Pow. Controls $\times$ Post M&A	✓	✓	✓	✓	✓	✓	✓	✓	✓
Closed Branches Controls	✓	✓	✓	✓	✓	✓	✓	✓	✓

A12. Controlling for Deposits per Employee pre-M&A

TABLE A5

Controlling for Deposits per Employee Pre M&A

Table A5 reports robustness estimates using the specification in equation (1) while controlling for pre-merger deposits per employee. Dependent variables are inverse hyperbolic sine transformations of the original variables. Branch size characteristics include dummy variables for quartile-based bins of branch assets, the number of branch employees, and the branch's credit market share (measured in 2006). Market power controls include an indicator for municipalities with both target and acquirer branches interacted with the consolidated bank's pre-merger local credit market share. Standard errors (in parentheses) are clustered at the branch-cohort and bank-time-cohort levels. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Lending	Deposits	Emp.	Int. Transf.	L. O. Ability	$\frac{\text{Lending}}{\text{Emp.}}$	$\frac{\text{Dep.}}{\text{Emp.}}$	Reven.	Costs
Post M&A $\times$ Target	-0.160** (0.079)	-0.149* (0.083)	-0.225*** (0.048)	-0.194* (0.109)	-0.023 (0.029)	0.065 (0.056)	0.076 (0.074)	-0.123* (0.063)	-0.475*** (0.145)
Post M&A $\times$ Acquirer	0.293*** (0.051)	0.203*** (0.042)	0.083** (0.032)	0.130** (0.061)	0.078*** (0.023)	0.209*** (0.046)	0.120** (0.049)	0.185*** (0.036)	0.384*** (0.051)
Observations	76,220	76,220	76,220	75,960	76,220	76,220	76,220	76,220	76,220
R Squared	0.900	0.934	0.933	0.224	0.758	0.881	0.856	0.881	0.917
Branch $\times$ Cohort FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
City $\times$ Time $\times$ Cohort FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
Size $\times$ Time $\times$ Cohort FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
$\frac{\text{Deposits}}{\text{Emp.}} \times \text{Time} \times \text{Cohort FE}$	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mkt Pow. Controls $\times$ Post M&A	✓	✓	✓	✓	✓	✓	✓	✓	✓

A13. Additional Market Power Controls

TABLE A6
Additional Market Power Controls

Table A6 reports robustness estimates using the specification in equation (1) with an expanded set of market power controls. Dependent variables are inverse hyperbolic sine transformations of the original variables. Branch size characteristics include dummy variables for quartile-based bins of branch assets, the number of branch employees, and the branch's credit market share (measured in 2006). Market power controls include an indicator for municipalities with overlapping target and acquirer presence interacted with the consolidated bank's pre-merger local market shares in total credit, agricultural lending, deposits, and employment. Standard errors (in parentheses) are clustered at the branch-cohort and bank-time-cohort levels. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Lending	Deposits	Emp.	Int. Transf.	L. O. Ability	Lending Emp.	Deposits Emp.	Reven.	Costs
Post M&A $\times$ Target	-0.171** (0.079)	-0.146* (0.085)	-0.228*** (0.047)	-0.189* (0.109)	-0.022 (0.030)	0.058 (0.056)	0.082 (0.078)	-0.132** (0.063)	-0.479*** (0.146)
Post M&A $\times$ Acquirer	0.289*** (0.051)	0.208*** (0.041)	0.080** (0.032)	0.132** (0.061)	0.078*** (0.023)	0.208*** (0.046)	0.127** (0.049)	0.184*** (0.037)	0.386*** (0.051)
Observations	76,220	76,220	76,220	75,960	76,220	76,220	76,220	76,220	76,220
R Squared	0.899	0.932	0.933	0.223	0.758	0.880	0.851	0.880	0.915
Branch $\times$ Cohort FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
City $\times$ Time $\times$ Cohort FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
Size $\times$ Time $\times$ Cohort FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
Baseline M. Power $\times$ Post M&A	✓	✓	✓	✓	✓	✓	✓	✓	✓
Labor M. share $\times$ Post M&A	✓	✓	✓	✓	✓	✓	✓	✓	✓
Deposits M. Share $\times$ Post M&A	✓	✓	✓	✓	✓	✓	✓	✓	✓
Agr. Loan M. Share $\times$ Post M&A	✓	✓	✓	✓	✓	✓	✓	✓	✓

TABLE A7
Additional Market Power Controls: HHI

Table A7 reports robustness estimates using the specification in equation (1) with alternative market power controls based on changes in market concentration (HHI) induced by the M&A. Dependent variables are inverse hyperbolic sine transformations of the original variables. Branch size characteristics include dummy variables for quartile-based bins of branch assets, the number of branch employees, and the branch's credit market share (measured in 2006). Market power controls include an indicator for municipalities with overlapping target and acquirer presence interacted with the M&A-induced change in HHI for total credit, agricultural lending, deposits, and employment. Standard errors (in parentheses) are clustered at the branch-cohort and bank-time-cohort levels. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Lending	Deposits	Emp.	Int. Transf.	L. O. Ability	$\frac{\text{Lending}}{\text{Emp.}}$	$\frac{\text{Deposits}}{\text{Emp.}}$	Reven.	Costs
Post M&A $\times$ Target	-0.149** (0.074)	-0.138 (0.093)	-0.210*** (0.045)	-0.198** (0.095)	-0.014 (0.028)	0.062 (0.054)	0.072 (0.084)	-0.103* (0.058)	-0.451*** (0.141)
Post M&A $\times$ Acquirer	0.380*** (0.051)	0.233*** (0.042)	0.070** (0.028)	0.153** (0.062)	0.089*** (0.021)	0.309*** (0.049)	0.162*** (0.050)	0.241*** (0.038)	0.425*** (0.053)
Observations	84,264	84,264	84,264	83,971	84,264	84,264	84,264	84,264	84,264
R Squared	0.900	0.930	0.933	0.235	0.760	0.881	0.846	0.881	0.917
Branch $\times$ Cohort FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
City $\times$ Time $\times$ Cohort FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
Size $\times$ Time $\times$ Cohort FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
Overlapping M. $\times$ Post M&A	✓	✓	✓	✓	✓	✓	✓	✓	✓
Δ Credit HHI $\times$ Post M&A	✓	✓	✓	✓	✓	✓	✓	✓	✓
Δ Labor HHI $\times$ Post M&A	✓	✓	✓	✓	✓	✓	✓	✓	✓
Δ Deposits HHI $\times$ Post M&A	✓	✓	✓	✓	✓	✓	✓	✓	✓
Δ Agri. Loans HHI $\times$ Post M&A	✓	✓	✓	✓	✓	✓	✓	✓	✓

A14. Branch Closings and M&A Outcomes

TABLE A8
Controlling for Branch Closings

Table A8 reports robustness estimates using the specification in equation (1) augmented with controls for branch closings at the municipality level. Dependent variables are inverse hyperbolic sine transformations of the original variables. The estimation sample includes branches that remained open throughout the estimation window (three years before and six years after the events). Branch size characteristics include dummy variables for quartile-based bins of branch assets, the number of branch employees, and the branch's credit market share (measured in 2006). Market power controls include an indicator for municipalities with both target and acquirer branches interacted with the consolidated bank's pre-merger local credit market share. Closed-branch controls include (i) the share of branches that close in the municipality, measured using 2006 deposits and lending, (ii) its interaction with a post-M&A indicator, and (iii) a triple interaction between this share, the post-M&A indicator, and an indicator equal to one if the branch belonged to the target bank. Standard errors (in parentheses) are clustered at the branch-cohort and bank-time-cohort levels. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Lending	Deposits	Emp.	Int. Transf.	L. O. Ability	Lending Employees	Deposits Employees	Revenues	Costs
Post M&A $\times$ Target	-0.076 (0.073)	-0.125 (0.085)	-0.202*** (0.045)	-0.201* (0.107)	-0.002 (0.028)	0.127** (0.051)	0.077 (0.075)	-0.064 (0.059)	-0.342** (0.129)
Post M&A $\times$ Acquirer	0.358*** (0.050)	0.217*** (0.042)	0.057** (0.028)	0.177*** (0.062)	0.096*** (0.022)	0.300*** (0.049)	0.159*** (0.050)	0.220*** (0.036)	0.412*** (0.054)
Observations	84,264	84,264	84,264	83,971	84,264	84,264	84,264	84,264	84,264
R Squared	0.900	0.930	0.934	0.235	0.761	0.881	0.848	0.882	0.919
Branch $\times$ Cohort FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
City $\times$ Time $\times$ Cohort FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
Size $\times$ Time $\times$ Cohort FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
M. Power Controls $\times$ Post	✓	✓	✓	✓	✓	✓	✓	✓	✓
Closed Branches Controls	✓	✓	✓	✓	✓	✓	✓	✓	✓

TABLE A9
Sample Without Any Branch Closings at the City Level

Table A9 reports robustness estimates using the specification in equation (1), restricting the sample to cities with no branch closings by banks in our sample during the sample period. Dependent variables are inverse hyperbolic sine transformations of the original variables. The estimation sample includes branches that remained open throughout the estimation window (three years before and six years after the events). Branch size characteristics include dummy variables for quartile-based bins of branch assets, the number of branch employees, and the branch's credit market share (measured in 2006). Market power controls include an indicator for municipalities with both target and acquirer branches interacted with the consolidated bank's pre-merger local credit market share. Standard errors (in parentheses) are clustered at the branch-cohort and bank-time-cohort levels. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Lending	Deposits	Emp.	Int. Transf.	L. O. Ability	Lending Employees	Deposits Employees	Revenues	Costs
Post M&A $\times$ Target	-0.040 (0.091)	-0.091 (0.081)	-0.179*** (0.048)	-0.193 (0.118)	-0.015 (0.029)	0.140* (0.073)	0.090 (0.073)	-0.002 (0.062)	-0.416*** (0.137)
Post M&A $\times$ Acquirer	0.345*** (0.047)	0.207*** (0.044)	0.052** (0.024)	0.129** (0.065)	0.089*** (0.021)	0.292*** (0.049)	0.154*** (0.055)	0.216*** (0.034)	0.407*** (0.057)
Observations	28,194	28,194	28,194	28,073	28,194	28,194	28,194	28,194	28,194
R Squared	0.915	0.935	0.951	0.385	0.795	0.903	0.850	0.890	0.940
Branch $\times$ Cohort FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
City $\times$ Time $\times$ Cohort FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
Size $\times$ Time $\times$ Cohort FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
M. Power Controls $\times$ Post	✓	✓	✓	✓	✓	✓	✓	✓	✓

TABLE A10
**Consolidated Bank M&A Effects and Internal Labor Markets (Sample Without Any
Branch Closings)**

Table A10 reports coefficients from estimating equation (2) augmented with a triple interaction between the Post M&A indicator, the treatment indicator, and an indicator for a large local internal labor market (ILM). Dependent variables are inverse hyperbolic sine transformations of the original variables. The data are aggregated at the consolidated bank–municipality–year level, aggregating target and acquirer branches into a single bank before and after the M&As. Large Local ILM equals one if consolidated-bank employees in the municipality are above the median in 2006. Size controls include 2006 quartiles of employees and total assets (pre M&A). Market power controls include an indicator for municipalities with both target and acquirer branches interacted with the consolidated bank’s pre-merger local credit market share. The estimation sample includes branches that remained open throughout the estimation window (three years before and six years after the events) and is restricted to cities with no branch closings by banks in our sample during the sample period. Standard errors (in parentheses) are clustered at the bank–municipality–cohort and municipality–time–cohort levels. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Lending		Deposits		Employees		Lending Employees		Deposits Employees	
Post M&A × Treated	0.041 (0.032)	0.027 (0.053)	0.117*** (0.026)	0.116*** (0.036)	-0.082*** (0.016)	-0.144*** (0.023)	0.103*** (0.028)	0.171*** (0.048)	0.193*** (0.021)	0.261*** (0.035)
Post M&A × Treated × Large Local ILM	0.127** (0.051)	0.202*** (0.068)	0.040 (0.036)	-0.010 (0.047)	-0.033 (0.029)	0.030 (0.034)	0.164*** (0.036)	0.164*** (0.056)	0.072*** (0.026)	-0.040 (0.040)
Observations	33,297	14,756	33,297	14,756	33,297	14,756	33,017	14,660	33,017	14,660
R Squared	0.919	0.955	0.941	0.980	0.895	0.982	0.858	0.911	0.792	0.907
Bank-City × Cohort FE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
City × Time × Cohort FE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Size × Time × Cohort FE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Market P. Controls × Post		✓		✓		✓		✓		✓

A15. Transfers from Closed Branches

TABLE A11

M&As, Branch Closings and Internal Labor Markets

Table A11 reports coefficients from estimating equation (1). Dependent variables are inverse hyperbolic sine transformations of the original variables. The estimation sample includes branches that remained open throughout the estimation window (three years before and six years after the events). *Net Transfers from Always Active Branches* are internal transfers within the bank from workers employed in branches that never close during the sample period, and *Net Transfers from Eventually Closed Branches* are internal transfers within the bank from workers employed in branches that eventually close. Branch size characteristics include dummy variables for quartile-based bins of branch assets, the number of branch employees, and the branch's credit market share (measured in 2006). Market power controls include an indicator for municipalities with both target and acquirer branches interacted with the consolidated bank's pre-merger local credit market share. Standard errors (in parentheses) are clustered at the branch-cohort and bank-time-cohort levels. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

	(1)	(2)	(3)	(4)
	Net Transfers from Always Active Branches		Net Transfers from Eventually Closed Branches	
Post M&A $\times$ Target	-0.132** (0.059)	-0.167** (0.063)	0.170*** (0.061)	0.066 (0.059)
Post M&A $\times$ Acquirer	0.087 (0.088)	0.056 (0.077)	0.236** (0.099)	0.144** (0.072)
Observations	83,971	83,971	83,971	83,971
R Squared	0.227	0.227	0.213	0.213
Branch $\times$ Cohort FE	✓	✓	✓	✓
City $\times$ Time $\times$ Cohort FE	✓	✓	✓	✓
Branch Size $\times$ Time $\times$ Cohort FE	✓	✓	✓	✓
Market Power Controls $\times$ Post		✓		✓

TABLE A12
Excluding Outlier Growth Rates

Table A12 reports robustness estimates using the specification in equation (1) after excluding outlier growth rates following Lee (2009). Dependent variables are inverse hyperbolic sine transformations of the original variables. The estimation sample includes branches that remained open throughout the estimation window (three years before and six years after the events). Growth rates are computed as the change in the inverse hyperbolic sine of the outcome between one year before the event and six years after the event. Branch size characteristics include dummy variables for quartile-based bins of branch assets, the number of branch employees, and the branch's credit market share (measured in 2006). Market power controls include an indicator for municipalities with both target and acquirer branches interacted with the consolidated bank's pre-merger local credit market share. Standard errors (in parentheses) are clustered at the branch-cohort and bank-time-cohort levels. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Lending	Deposits	Emp.	Int. Transf.	L. O. Ability	Lending Employees	Deposits Employees	Revenues	Costs
<i>Panel A: Excluding branches below the 5 percentile in outcomes growth rate in the treatment group between the baseline and 6 years after the event</i>									
Post M&A × Target	-0.067 (0.064)	-0.059 (0.078)	-0.175*** (0.041)	-0.172* (0.098)	0.024 (0.025)	0.108** (0.048)	0.130* (0.075)	-0.074 (0.056)	-0.350** (0.134)
Post M&A × Acquirer	0.355*** (0.046)	0.217*** (0.040)	0.064** (0.027)	0.183*** (0.065)	0.114*** (0.021)	0.301*** (0.046)	0.166*** (0.048)	0.223*** (0.035)	0.425*** (0.049)
Observations	82,586	82,636	82,616	82,343	82,366	82,576	82,606	82,596	82,626
<i>Panel B: Excluding branches above the 95 percentile in outcomes growth rate in the treatment group between the baseline and 6 years after the event</i>									
Post M&A × Target	-0.119* (0.067)	-0.168** (0.084)	-0.211*** (0.044)	-0.184* (0.096)	-0.044 (0.027)	0.054 (0.051)	0.017 (0.070)	-0.094* (0.052)	-0.441*** (0.134)
Post M&A × Acquirer	0.347*** (0.046)	0.213*** (0.039)	0.044 (0.027)	0.148** (0.064)	0.053*** (0.020)	0.264*** (0.045)	0.162*** (0.049)	0.179*** (0.029)	0.383*** (0.051)
Observations	82536	82556	82540	82359	82286	82556	82616	82516	82526
Branch × Date M&A FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
City × Time × Date M&A FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
Size × Time × Date M&A FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
M. Power Controls × Post	✓	✓	✓	✓	✓	✓	✓	✓	✓

A16. Alternative Transformation of Variable

TABLE A13
Alternative Transformation of Variables ($\log(1 + \cdot)$)

Table A13 reports robustness estimates using the specification in equation (1) with an alternative outcome transformation, $\log(1 + \cdot)$. Branch size characteristics include dummy variables for quartile-based bins of branch assets, the number of branch employees, and the branch's credit market share (measured in 2006). Market power controls include an indicator for municipalities with both target and acquirer branches interacted with the consolidated bank's pre-merger local market share. Standard errors (in parentheses) are clustered at the branch-cohort and bank-time-cohort levels. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Lending	Deposits	Emp.	Int. Transf.	L. O. Ability	Lending Emp.	Deposits Emp.	Revenues	Costs
Post M&A $\times$ Target	-0.155** (0.072)	-0.148 (0.091)	-0.201*** (0.042)	-0.078** (0.037)	-0.026 (0.029)	0.058 (0.051)	0.065 (0.081)	-0.112** (0.056)	-0.466*** (0.138)
Post M&A $\times$ Acquirer	0.374*** (0.050)	0.224*** (0.042)	0.061** (0.026)	0.051* (0.027)	0.082*** (0.023)	0.306*** (0.048)	0.155*** (0.050)	0.233*** (0.036)	0.421*** (0.051)
Observations	84,264	84,264	84,264	49,051	83,840	84,264	84,264	84,264	84,262
R Squared	0.900	0.930	0.934	0.419	0.744	0.881	0.846	0.883	0.926
Branch $\times$ Cohort FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
City $\times$ Time $\times$ Cohort FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
Size $\times$ Time $\times$ Cohort FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
Market Power $\times$ Post M&A	✓	✓	✓	✓	✓	✓	✓	✓	✓

A17. Excluding Cities Treated in Both M&As

TABLE A14
Excluding Cities Treated in Both M&As

Table A14 reports robustness estimates using the specification in equation (1) after excluding municipalities treated in both M&As. Dependent variables are inverse hyperbolic sine transformations of the original variables. Branch size characteristics include dummy variables for quartile-based bins of branch assets, the number of branch employees, and the branch's credit market share (measured in 2006). Market power controls include an indicator for municipalities with both target and acquirer branches interacted with the consolidated bank's pre-merger local credit market share. Standard errors (in parentheses) are clustered at the branch-cohort and bank-time-cohort levels. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Lending	Deposits	Emp.	Int. Transf.	L. O. Ability	Lending Emp.	Deposits Emp.	Revenues	Costs
Post M&A $\times$ Target	0.001 (0.138)	-0.117 (0.090)	-0.353*** (0.064)	-0.133 (0.198)	0.137* (0.072)	0.357*** (0.129)	0.239** (0.100)	-0.019 (0.105)	-0.302** (0.145)
Post M&A $\times$ Acquirer	0.266*** (0.078)	0.142*** (0.052)	-0.043 (0.037)	0.046 (0.099)	0.098** (0.046)	0.309*** (0.074)	0.185** (0.072)	0.101 (0.063)	0.376*** (0.081)
Observations	6,778	6,778	6,778	6,767	6,778	6,778	6,778	6,778	6,778
R Squared	0.918	0.950	0.953	0.485	0.785	0.911	0.875	0.915	0.900
Branch $\times$ Cohort FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
City $\times$ Time $\times$ Cohort FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
Size $\times$ Time $\times$ Cohort FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
Market Power $\times$ Post M&A	✓	✓	✓	✓	✓	✓	✓	✓	✓

A18. Controlling for Alternative Measures of Pre-Consolidation Branch Assets

TABLE A15
Controlling for an Alternative Measure of Total Assets

Table A15 The table reports coefficients obtained from the estimation of equation (1). The dependent variables are the inverse hyperbolic sine transformation of the original variables. Branch size characteristics include dummy variables for quartile-based bins of branch assets (adjusted for account 300, see Section A3), the number of branch employees, and the branch's credit market share (measured in 2006). Market power controls are an indicator variable if the local market contained both target and acquirer branches interacted with the new consolidated bank's local market share in the credit market before the M&A. The estimation sample consists of branches that remained open throughout the estimation window (three years before and six years after the events). Standard errors, reported in parentheses, are clustered at branch-cohort and bank-time-cohort levels. The symbols *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Lending	Deposits	Emp.	Int. Transf.	L. O. Ability	Lending Employees	Deposits Employees	Reven.	Costs
Post M&A $\times$ Target	-0.142* (0.074)	-0.145 (0.093)	-0.179*** (0.050)	-0.231** (0.096)	-0.035 (0.032)	0.037 (0.051)	0.034 (0.078)	-0.102* (0.058)	-0.468*** (0.141)
Post M&A $\times$ Acquirer	0.384*** (0.051)	0.234*** (0.046)	0.079** (0.033)	0.138** (0.063)	0.083*** (0.024)	0.304*** (0.046)	0.155*** (0.047)	0.243*** (0.036)	0.425*** (0.053)
Observations	84,264	84,264	84,264	83,971	84,264	84,264	84,264	84,264	84,264
R Squared	0.900	0.930	0.932	0.234	0.755	0.881	0.852	0.881	0.917
Branch $\times$ Cohort FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
City $\times$ Time $\times$ Cohort FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
Size $\times$ Time $\times$ Cohort FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
M. Power Controls $\times$ Post	✓	✓	✓	✓	✓	✓	✓	✓	✓
Closed Branches Controls	✓	✓	✓	✓	✓	✓	✓	✓	✓

TABLE A16
Excluding total assets as controls

Table A16 reports coefficients obtained from the estimation of Equation 1. The dependent variables are the inverse hyperbolic sine transformation of the original variables. Branch size characteristics include dummy variables for quartile-based bins of the number of branch employees and the branch's credit market share (measured in 2006). Market power controls are an indicator variable if the local market contained both target and acquirer branches interacted with the new consolidated bank's local market share in the credit market before the M&A. The estimation sample consists of branches that remained open throughout the estimation window (three years before and six years after the events). Standard errors, reported in parentheses, are clustered at branch-cohort and bank-time-cohort levels. The symbols *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

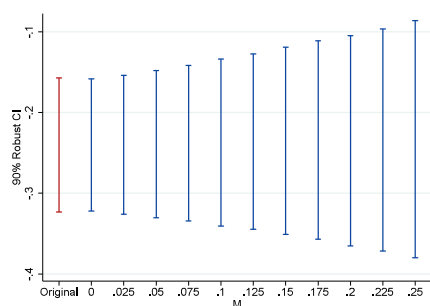
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Lending	Deposits	Emp.	Int. Transf.	L. O. Ability	Lending Employees	Deposits Employees	Revenues	Costs
Post M&A $\times$ Target	-0.134* (0.075)	-0.120 (0.094)	-0.185*** (0.051)	-0.231** (0.097)	-0.035 (0.032)	0.051 (0.053)	0.065 (0.082)	-0.090 (0.059)	-0.449*** (0.143)
Post M&A $\times$ Acquirer	0.385*** (0.052)	0.237*** (0.046)	0.080** (0.034)	0.136** (0.063)	0.083*** (0.024)	0.305*** (0.048)	0.156*** (0.051)	0.245*** (0.036)	0.429*** (0.053)
Observations	84,264	84,264	84,264	83,971	84,264	84,264	84,264	84,264	84,264
R Squared	0.899	0.927	0.931	0.233	0.753	0.879	0.843	0.879	0.915
Branch $\times$ Cohort FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
City $\times$ Time $\times$ Cohort FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
Size $\times$ Time $\times$ Cohort FE	✓	✓	✓	✓	✓	✓	✓	✓	✓
Market Power Controls $\times$ Post	✓	✓	✓	✓	✓	✓	✓	✓	✓

A19. Robustness Checks Based on Rambachan and Roth (2023)

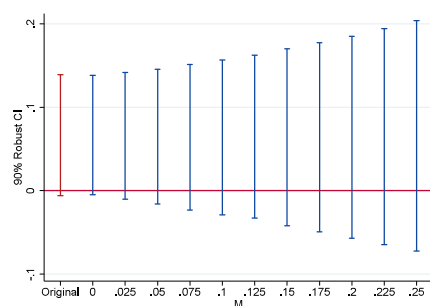
FIGURE A6

Pre-trend Robustness: Employment Reallocation

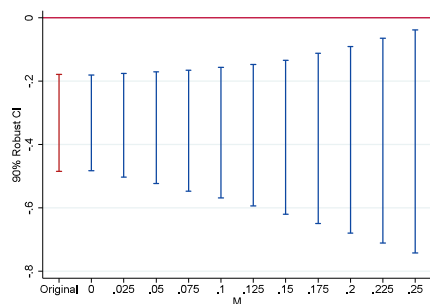
Figure A6 reports 90% confidence intervals for average treatment effects under different deviations from parallel trends using the methodology of Rambachan and Roth (2023), based on the baseline event-study results in Figure 2. *Original* reports the average treatment effects assuming no violation of parallel trends, while the remaining estimates allow for linear ($M = 0$) and non-linear ($M > 0$) deviations from parallel trends.



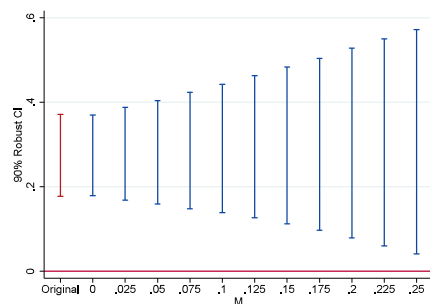
(a) Target Branch Employment



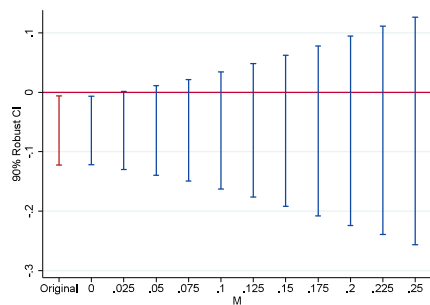
(b) Acquirer Branch Employment



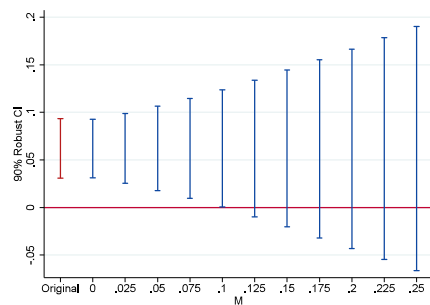
(c) Target Branch Net Labor Transfers



(d) Acquirer Branch Net Labor Transfers



(e) Target Branch Average Loan Officer Ability



(f) Acquirer Branch Average Loan Officer Ability

FIGURE A7

Pre-trend Robustness: M&A Effects on Branch Output

Figure A7 reports 90% confidence intervals for average treatment effects under different deviations from parallel trends using the methodology of Rambachan and Roth (2023), based on the baseline event-study results in Figure 3. *Original* reports the average treatment effects assuming no violation of parallel trends, while the remaining estimates allow for linear ($M = 0$) and non-linear ($M > 0$) deviations from parallel trends.

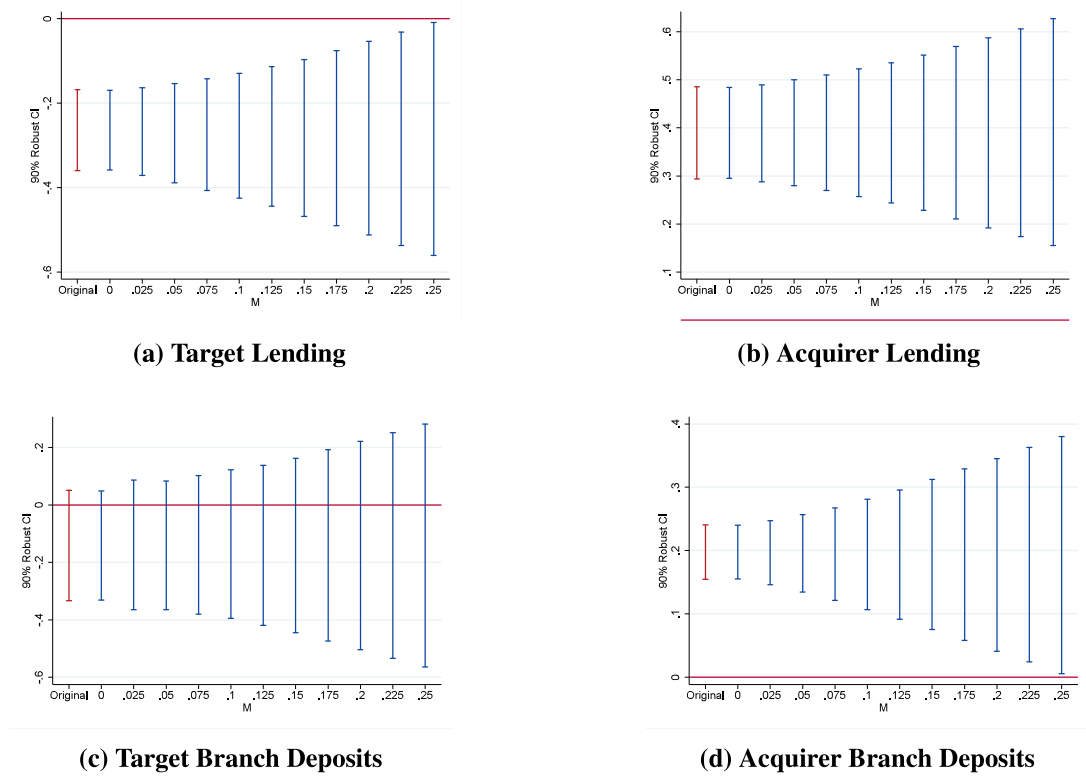
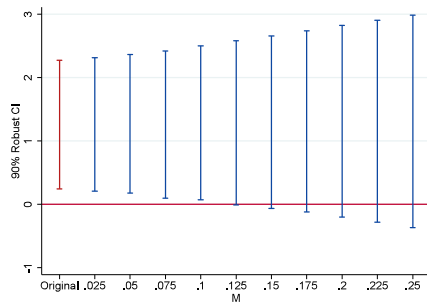


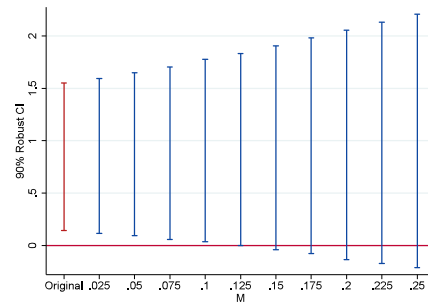
FIGURE A8

Pre-trend Robustness: M&A and Productivity

Figure A8 reports 90% confidence intervals for average treatment effects under different deviations from parallel trends using the methodology of Rambachan and Roth (2023), based on the baseline event-study results referenced in Figure 3. *Original* reports the average treatment effects assuming no violation of parallel trends, while the remaining estimates allow for linear ($M = 0$) and non-linear ($M > 0$) deviations from parallel trends.



(a) Target Branch Profits per employee



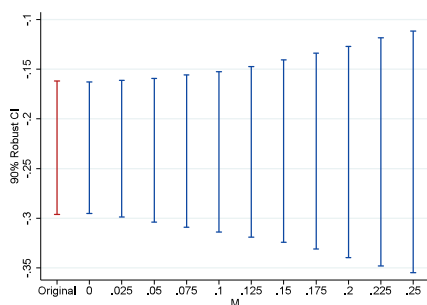
(b) Acquirer Branch Profits per employee

A20. Robustness Checks Based on Rambachan and Roth (2023): Sample Excluding Cities with Branch Closures

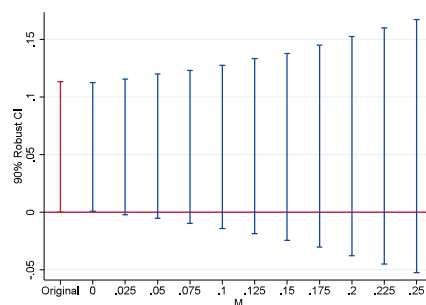
FIGURE A9

Pre-trend Robustness: Employment Reallocation (No Branch Closings)

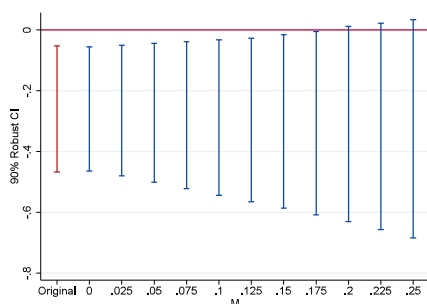
Figure A9 reports 90% confidence intervals for average treatment effects under different deviations from parallel trends using the methodology of Rambachan and Roth (2023), based on the baseline event-study results in Figure 2. *Original* reports the average treatment effects assuming no violation of parallel trends, while the remaining estimates allow for linear ($M = 0$) and non-linear ($M > 0$) deviations. The sample is restricted to branches in cities with no branch closings by banks in our sample during the sample period.



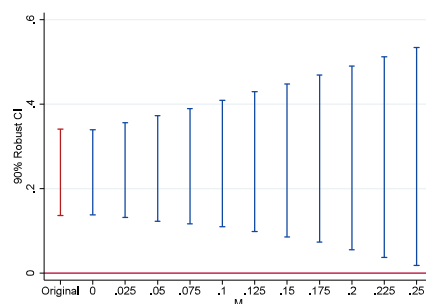
(a) Target Branch Employment



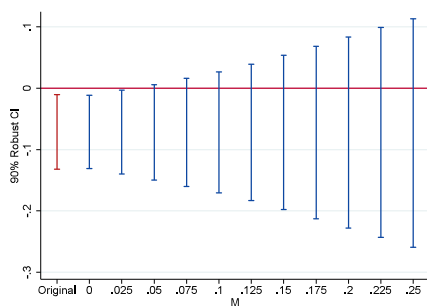
(b) Acquirer Branch Employment



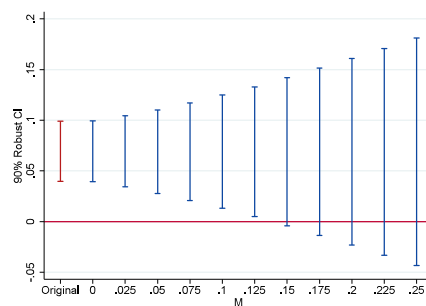
(c) Target Branch Net Labor Transfers



(d) Acquirer Branch Net Labor Transfers



(e) Target Branch Average Loan Officer Ability

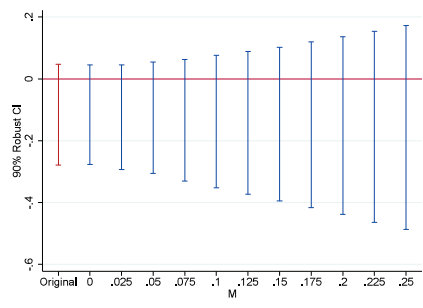


(f) Acquirer Branch Average Loan Officer Ability

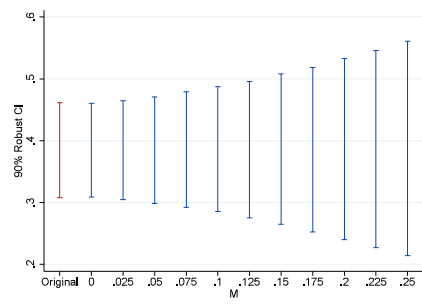
FIGURE A10

Pre-trend Robustness: M&A Effects on Output (No Branch Closings)

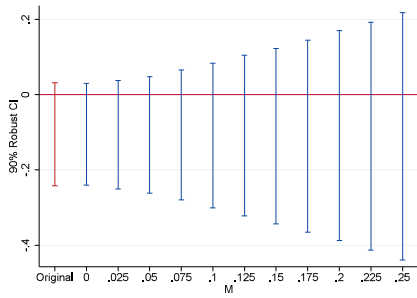
Figure A10 reports 90% confidence intervals for average treatment effects under different deviations from parallel trends using the methodology of Rambachan and Roth (2023), based on the baseline event-study results in Figure 3. *Original* reports the average treatment effects assuming no violation of parallel trends, while the remaining estimates allow for linear ($M = 0$) and non-linear ($M > 0$) deviations. The sample is restricted to branches in cities with no branch closings by banks in our sample during the sample period.



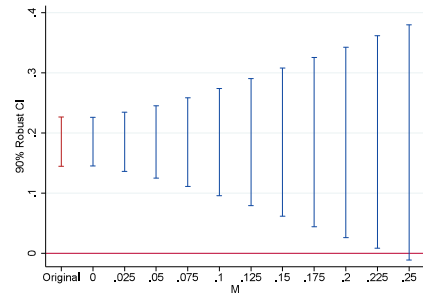
(a) Target Lending



(b) Acquirer Lending



(c) Target Branch Deposits

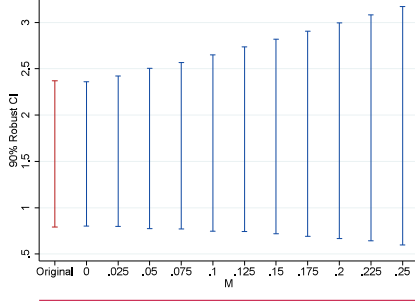


(d) Acquirer Branch Deposits

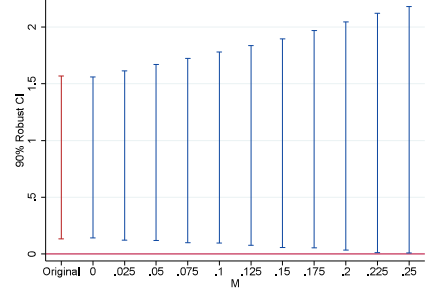
FIGURE A11

Pre-trend Robustness: M&A and Productivity (No Branch Closings)

Figure A11 reports 90% confidence intervals for average treatment effects under different deviations from parallel trends using the methodology of Rambachan and Roth (2023), based on the baseline event-study results in Figure 3. *Original* reports the average treatment effects assuming no violation of parallel trends, while the remaining estimates allow for linear ($M = 0$) and non-linear ($M > 0$) deviations. The sample is restricted to branches in cities with no branch closings by banks in our sample during the sample period.



(a) Target Branch Profits per employee



(b) Acquirer Branch Profits per employee