



The Competitive Effects of Megabanks on Community Banks

Troy Kravitz, FDIC
Jon Pogach, FDIC

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Summary

- Big banks expanding in particular parts of country
- Small banks doing relatively worse in these areas
- Exploit merger activity as exogenous variation in big bank competition to measure effects on small banks





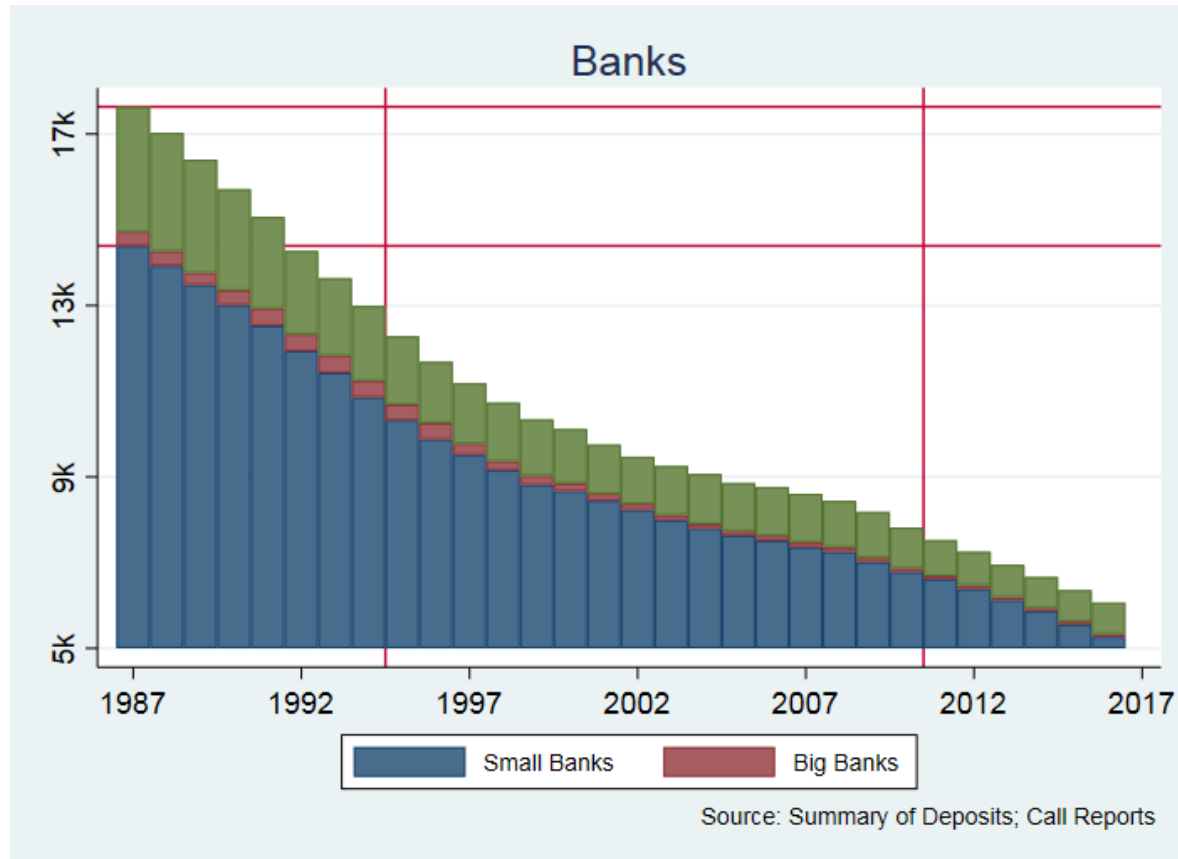
Findings

- Small banks impacted positively from big bank merger activity
 - Acquired branches see less deposit growth
 - Small branches do not attrit more or grow less
 - Greater small branch entrance into affected areas
 - No effects of proximity on deposit growth



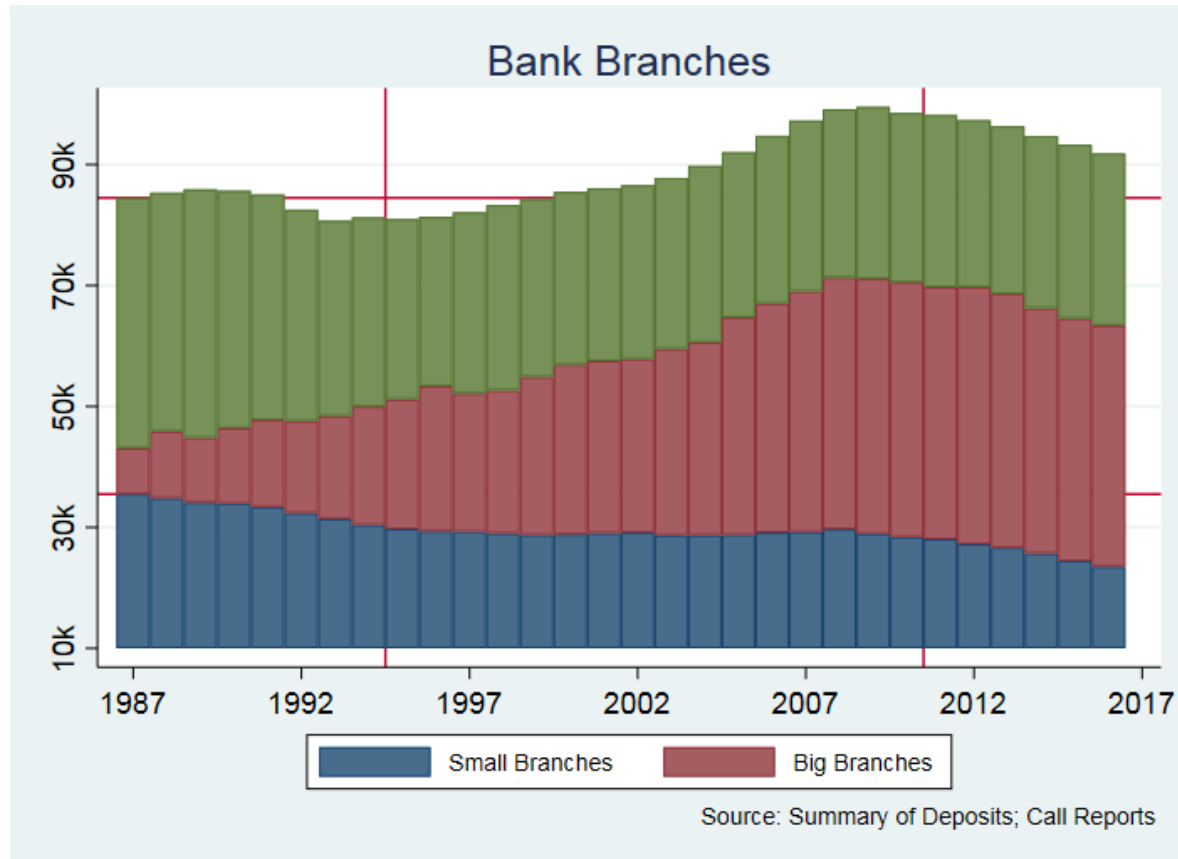


What You Probably Already Know, 1



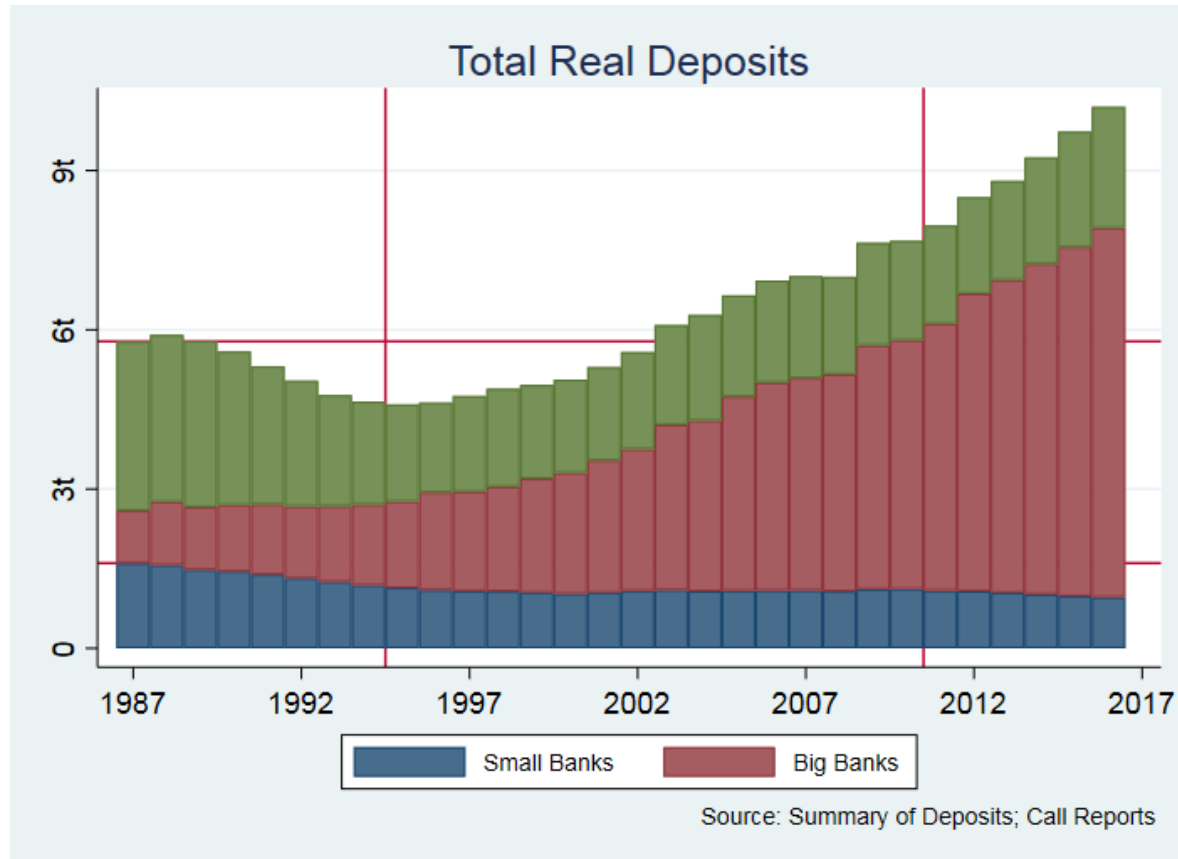


What You Probably Already Know, 2





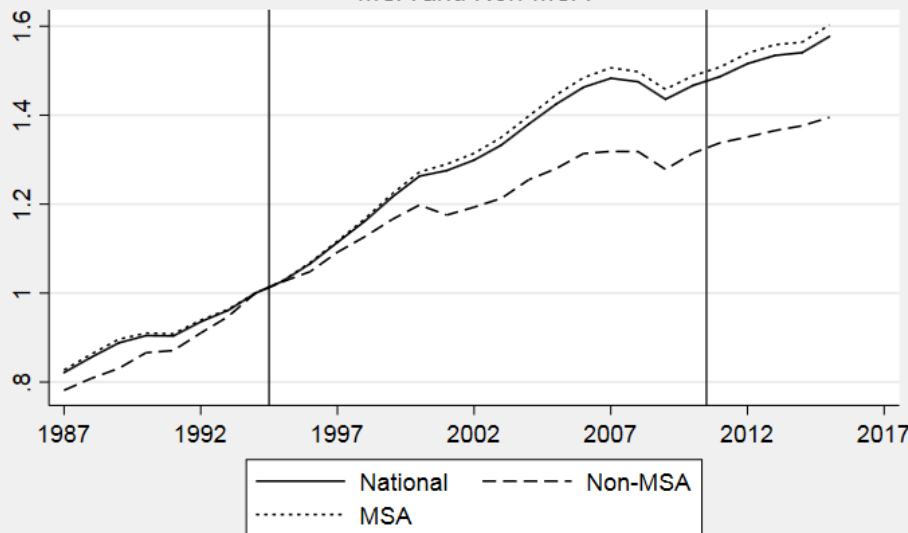
What You Probably Already Know, 3





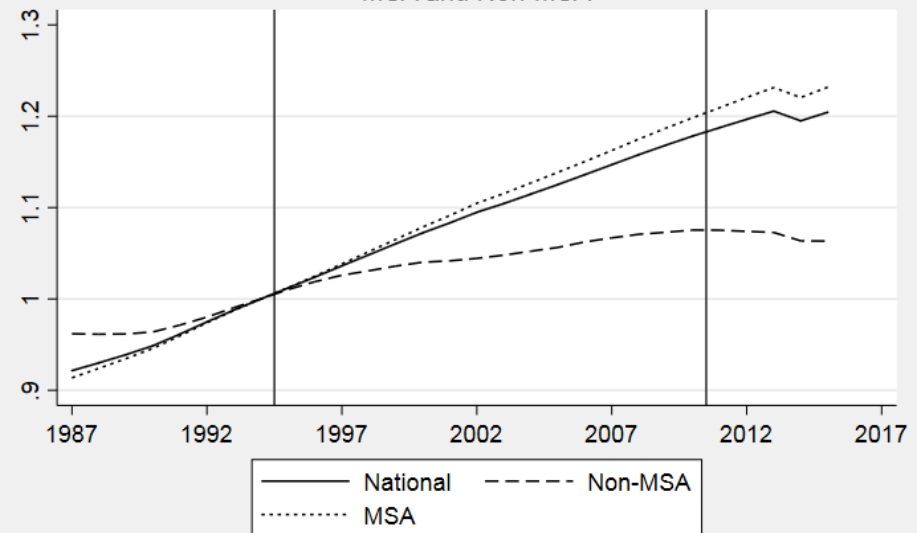
Two Types of Areas

Total Gross County Product
MSA and Non-MSA



Source: Call Reports; Moody's

Total Population
MSA and Non-MSA



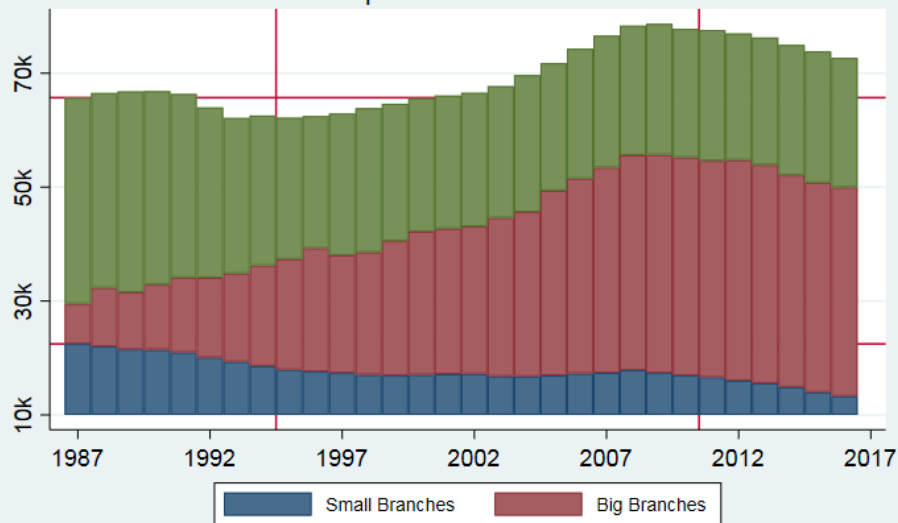
Source: Call Reports; Moody's



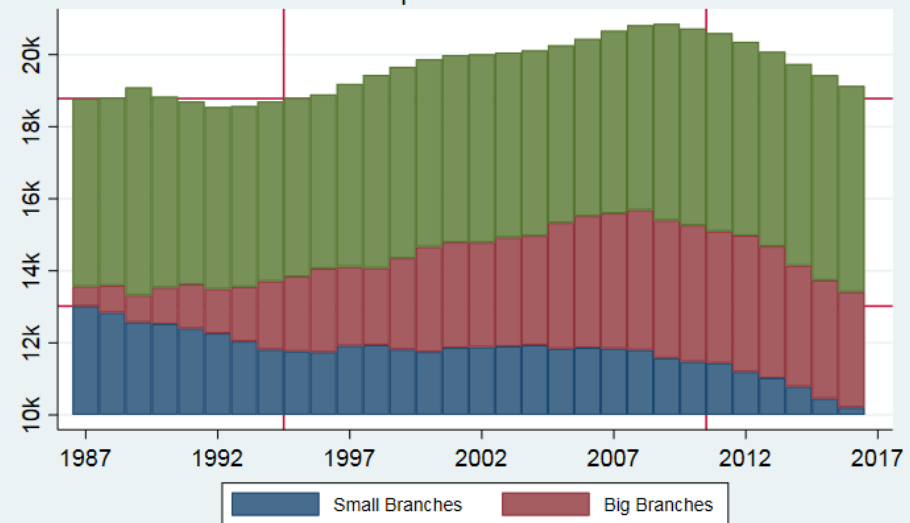


Branches Across the Urban-Rural Divide

Bank Branches
Metropolitan Statistical Areas



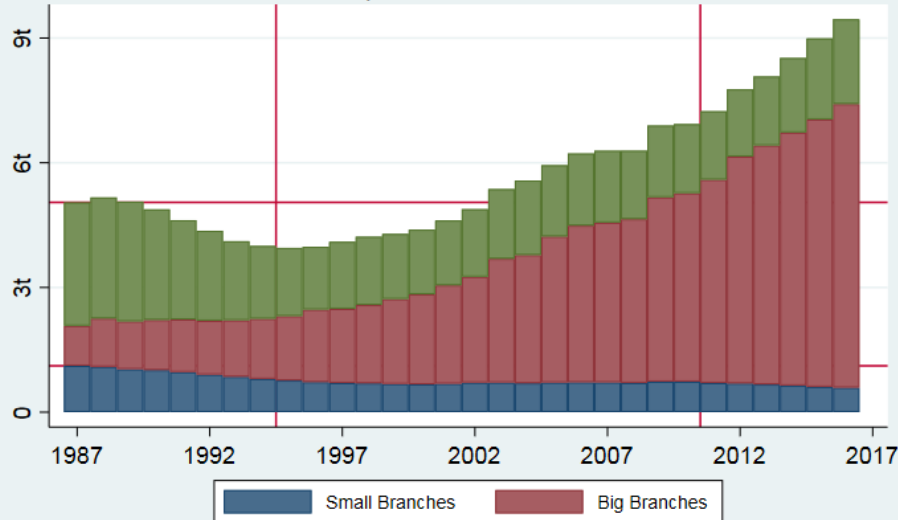
Bank Branches
Non-Metropolitan Statistical Areas



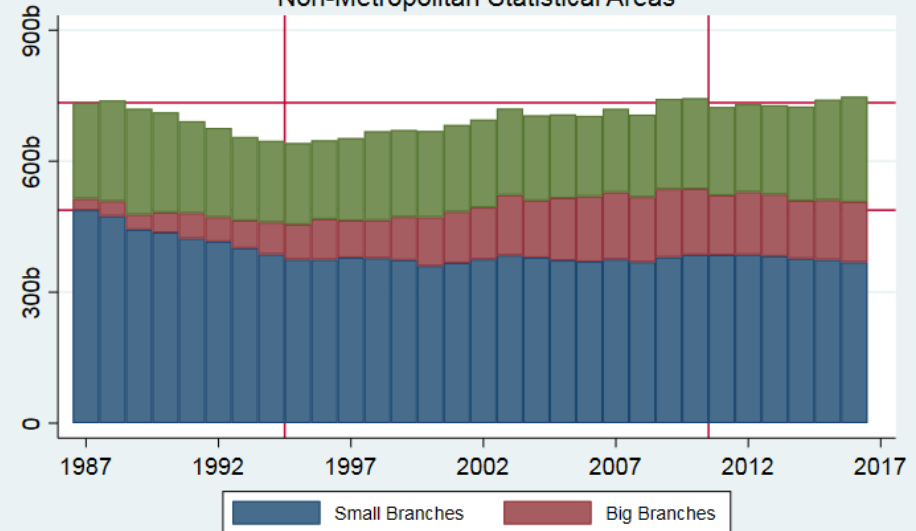


Deposits Across the Urban-Rural Divide

Total Real Deposits
Metropolitan Statistical Areas



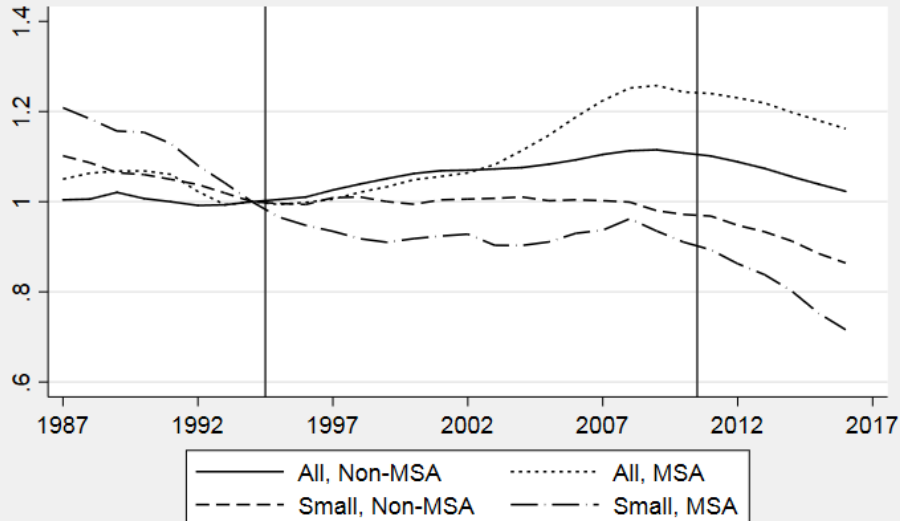
Total Real Deposits
Non-Metropolitan Statistical Areas





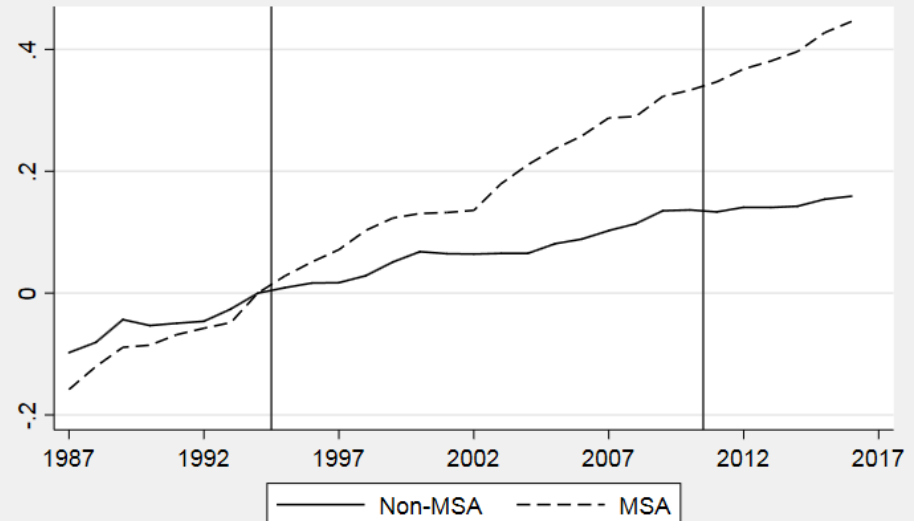
Growth-Economy Small-Bank Gap

Branch Growth, Overall and Small
MSA and Non-MSA



Source: Summary of Deposits; Call Reports

Small Branch Growth Gap
MSA and Non-MSA



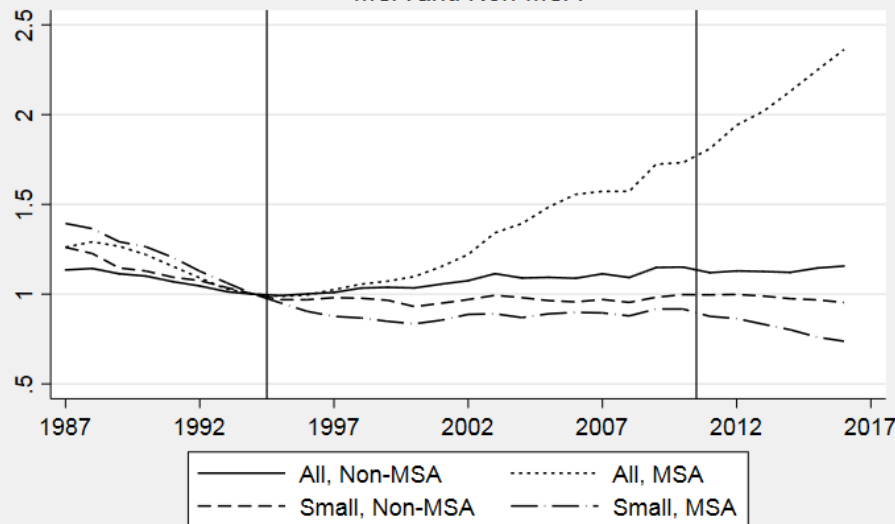
Source: Summary of Deposits; Call Reports





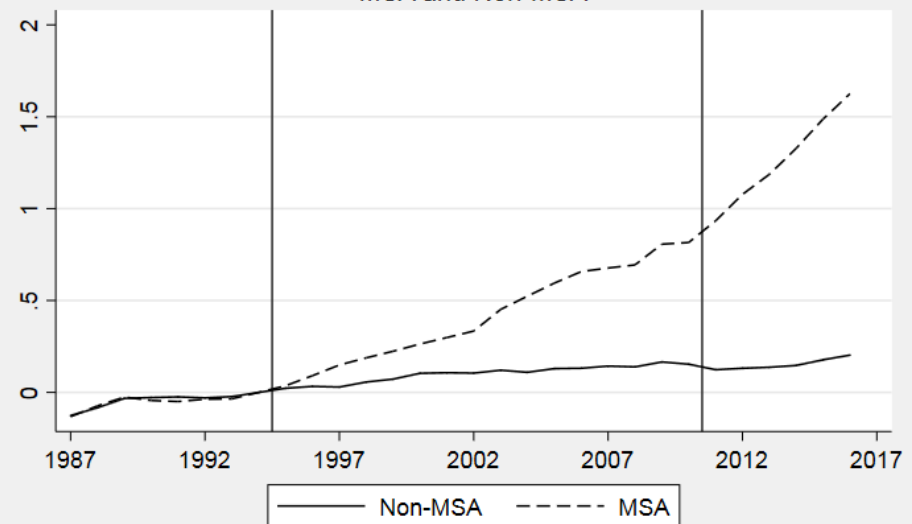
Growth-Economy Small-Bank Gap

Real Deposit Growth, Overall and Small
MSA and Non-MSA



Source: Summary of Deposits; Call Reports

Small Branch Deposit Growth Gap
MSA and Non-MSA



Source: Summary of Deposits; Call Reports





Natural Question

- Is big bank expansion harming small banks?
 - Do small banks that are more affected by big bank merger activity see:
 - Greater attrition?
 - Lower deposit growth?
 - Foreclosed growth opportunities?





What We Do

- Consider mergers in which:
 - At least 10 branches acquired
 - Banking organization of acquired cert was intermediate-sized ($\$1b < \text{real assets} < \$50b$)
 - Newly combined banking organization is big ($>\$50b$ in real assets)
 - Look at counties and zips where big bank entered





Mergers in Our Sample

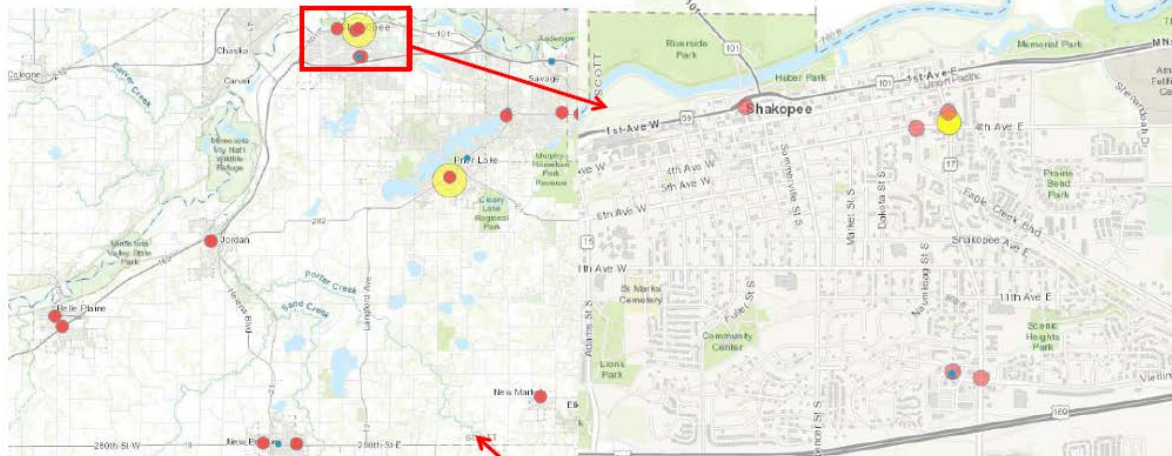
Acquired					Acquiring			
Year	Bank	Cert	Branches	Counties	BHC (mil.)	Bank	Cert	Combined BHC (mil.)
1993	HOMEFED	33628	17	5	6,983	GREAT WESTERN	29602	77,485
1993	CITIZENS & PEOPLES	3585	8	2	2,623	BARNETT BANK	144	57,271
1993	PEOPLES WESTCHESTER	16044	31	1	1,529	FIRST FIDELITY	33601	58,955
1994	STERLING BANK	90292	11	1	1,127	FLEET BANK	26305	70,099
1994	PIONEER	27459	15	3	4,367	FIRST NB OF BOSTON	2558	66,509
1994	SACRAMENTO SAVINGS	30678	13	5	4,046	FIRST INTSTATE BK OF CA	1226	86,935
1995	COLUMBIA FIRST	28093	1	1	5,591	FIRST UNION NB OF VA	6904	197,246
1996	CENTERBANK	18262	45	5	45,394	FIRST FIDELITY	9230	209,308
1997	US NB OF OREGON	2916	581	127	16,218	FIRST NB OF E G FORKS	5134	96,976
1997	SIGNET	11589	171	38	10,284	FIRST UNION	4885	309,091
1998	FEDERAL SAVINGS	28910	14	3	10,284	REGIONS	12368	53,789
1998	FIRST COMMERCIAL	13739	27	3	28,301	REGIONS	12368	53,789
1999	FIRST AMERICAN	4956	305	82	8,129	AMSOUTH	26800	55,775
2000	ONE VALLEY B	840	22	5	8,129	BB&T	9846	85,764
2000	ONE VALLEY B-EAST	6775	8	3	8,129	BB&T	9846	85,764
2000	ONE VALLEY B-SOUTH	9027	11	5	8,129	BB&T	9846	85,764
2000	ONE VALLEY BANK	12658	18	5	8,129	BB&T	9846	85,764
2000	ONE VALLEY B-CNTR VA	27639	28	15	28,937	BB & T CO OF VA	22584	85,764
2000	FIRST SECURITY CA	23496	1	1	1,789	WELLS FARGO	3511	358,213
2003	CAMBRIDGEPORT	90172	4	1	13,049	CITIZENS	18562	98,057
2003	FIRST VA BANK BLUE RIDGE	6134	15	8	13,049	BB & T CO OF VA	22584	122,079
2003	FIRST VA B HAMPTON	6141	15	9	13,049	BB & T CO OF VA	22584	122,079
2003	FIRST VANTAGE BK TRI-C	9982	8	3	13,049	BB & T CO OF VA	22584	122,079
2003	FIRST VIRGINIA BANK	17092	14	7	13,049	BB & T CO OF VA	22584	122,079
2003	FIRST VA BANK COLONIAL	20450	5	3	13,049	BB & T CO OF VA	22584	122,079
2003	FIRST VA BANK-SOUTHWEST	20877	29	10	13,049	BB & T CO OF VA	22584	122,079
2003	FARMERS BANK OF MD	4821	10	7	13,049	BB&T	9846	122,079
2003	ATLANTIC	21641	13	5	6,120	BB&T	9846	122,079
2004	COMPASS	23291	33	4	6,352	SOVEREIGN	29950	68,893
2004	COMMUNITY FIRST	3924	148	94	21,049	BANK OF THE WEST	3514	60,771
2006	INDEPENDENCE	16018	104	13	17,391	SOVEREIGN	29950	97,727
2007	SKY	5982	268	54	45,869	HUNTINGTON	6560	57,373
2010	CAROLINA FIRST	26849	151	49	11,577	TD BANK	18409	192,337
2011	MARSHALL & ILSLEY	1020	269	73	44,750	HARRIS NATIONAL	16571	89,284
2011	STERLING	21726	48	8	4,885	COMERICA	983	60,482
2012	BANK ATLANTIC	30559	3	1	3,617	BB&T	9846	168,970
2012	SANTA BARBARA	18169	11	4	5,586	UNION BANK	22826	96,827
2015	SUSQUEHANNA	7579	212	32	16,918	BB&T	9846	198,347
2015	HUDSON CITY	13074	41	13	32,347	M & T	588	114,550

Source: Summary of Deposits, Merger Transactions Database, Call Reports



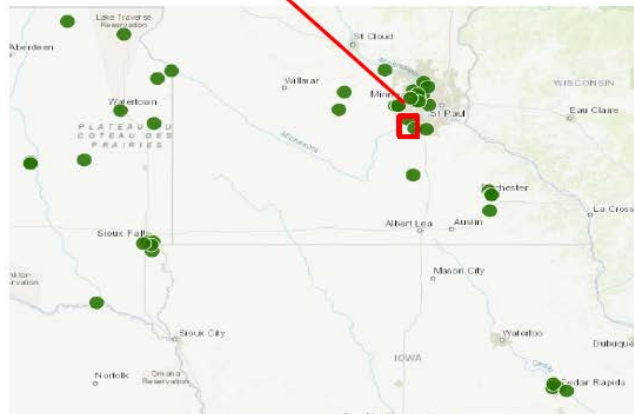


Identification



Competitive Environment: Scott County, MN

Competitive Environment: Shakopee, Scott County, MN



Marquette Branch Network (MN, SD, IA)





Deposit Growth at Acquired Branches Slows Post-Merger

VARIABLES	(1) Dep. Growth	(2) Dep. Growth	(3) Dep. Growth
interaction	-0.145*** (0.0378)	-0.107*** (0.0378)	-0.107* (0.0582)
acquired	-0.0639** (0.0261)	-0.0612** (0.0261)	-0.0612 (0.0563)
post	0.00635 (0.0119)	0.00786 (0.0118)	0.00786 (0.00553)
lnrasset		-0.0216*** (0.00160)	-0.0216*** (0.00347)
Constant	0.00122 (0.0241)	0.354*** (0.0355)	0.354*** (0.0559)
Observations	73,725	73,725	73,725
R-squared	0.001	0.003	0.003
Unit of Analysis	Branch	Branch	Branch
Model	Linear	Linear	Linear
Year FE	YES	YES	YES
Cluster			Merger year

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1





More Small Branches Post-Merger

VARIABLES	(1) Sm Branch	(2) Sm Branch	(3) Sm Branch
interaction	0.0139*** (0.00250)	0.00741*** (0.00258)	0.0607*** (0.0156)
<i>affected_{zip}</i>	-0.0641*** (0.00196)	-0.0608*** (0.00198)	-0.101*** (0.0108)
post	-0.0282*** (0.00160)	0.00145 (0.00322)	-0.0563*** (0.0106)
Constant	0.267*** (0.00116)	0.352*** (0.00914)	-0.844*** (0.0396)
Observations	415,512	415,512	415,512
R-squared	0.004	0.005	
Number of stcntybr	704	704	
Unit of Analysis	Branch	Branch	Branch
Model	Linear	Linear	Logit
Year FE	NO	YES	YES
County FE	YES	YES	NO

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1





Exposed Small Branches No More Likely to Attrit

VARIABLES	(1) 1 yr	(2) 2 yr	(3) 3 yr	(4) 4 yr	(5) 5 yr
<i>affected_{zip}</i>	-0.191 (0.127)	-0.153 (0.104)	-0.0685 (0.0876)	0.0247 (0.0783)	0.0542 (0.0721)
Constant	2.051*** (0.114)	1.700*** (0.100)	1.481*** (0.0932)	1.125*** (0.0843)	1.000*** (0.0818)
Observations	9,763	9,063	9,063	9,063	9,021
Unit of Analysis	Branch	Branch	Branch	Branch	Branch
Model	Logit	Logit	Logit	Logit	Logit
Year FE	YES	YES	YES	YES	YES

Robust standard errors in parentheses

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$





More Entrance/Expansion of Small Branches Post-Merger

VARIABLES	(1) Sm Branch Gr	(2) Sm Branch Gr
interaction	0.0483*** (0.0165)	0.0462*** (0.0164)
<i>affected_{zip}</i>	0.000440 (0.0114)	-0.0124 (0.0121)
post	-0.0152 (0.0106)	0.105 (0.347)
Constant	1.066*** (0.0186)	0.872* (0.482)
Observations	8,556	8,556
R-squared	0.025	0.014
Unit of Analysis	Zip Code	Zip Code
Model	Linear	Linear
Year FE	YES	YES
County FE	NO	YES
Number of stcntybr	671	671

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1





No Differences in Small Branch Deposit Growth Within County

VARIABLES	(1) Dep. Growth	(2) Dep. Growth
interaction	-0.0187 (0.0312)	-0.0187 (0.0154)
<i>affected_{zip}</i>	0.00352 (0.0223)	0.00352 (0.0197)
post	0.00637 (0.0224)	0.00637 (0.00659)
Constant	-0.000221 (0.0377)	-0.000221 (0.00124)
Observations	15,884	15,884
R-squared	0.000	0.000
Unit of Analysis	Branch	Branch
Model	Linear	Linear
Year FE	YES	YES
Cluster	-	Merger year

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1





No Differences in Small Branch Deposit Growth Within Zip Code

VARIABLES	(1) Dep Gr	(2) Dep Gr	(3) Dep Gr	(4) Dep Gr	(5) Dep Gr	(6) Dep Gr
interaction	0.00224 (0.0301)	0.0356 (0.0390)	0.0483 (0.0610)	-0.00351 (0.0145)	0.0112 (0.0178)	0.00596 (0.0614)
lnmiles	-0.00827 (0.0315)	-0.0417 (0.0306)	-0.0426 (0.0605)			
close				-0.000742 (0.0180)	-0.00194 (0.0147)	-0.0307 (0.0620)
post	0.0226 (0.0510)	-0.0263 (0.0580)	-0.256*** (0.0678)	0.0260 (0.0382)	-0.00598 (0.0452)	-0.222** (0.0724)
Constant	1.594*** (0.0813)	1.605*** (0.0925)	0.923*** (0.142)	1.590*** (0.0880)	1.588*** (0.0939)	0.934*** (0.126)
Observations	16,629	9,705	1,497	16,629	9,705	1,497
R-squared	0.025	0.022	0.047	0.025	0.021	0.047
Number of zipbr	540	225	22	540	225	22
Min. Exposed Branches	3	5	10	3	5	10
Zip Code FE	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES
Cluster	Merger year	Merger year	Merger year	Merger year	Merger year	Merger year

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1





Main Threat; Ongoing and Future Exploration

- Threat: how we handle multi-merger counties
- Robustness using single-merger counties
- Placebo tests using other mergers
- Hypothesis: heterogeneous counties
 - Population Turnover
 - Internet Penetration





Conclusion

- Look at competitive effects on small banks of big bank competition
 - Using merger activity as exogenous variation
- Find overall modest but positive effect:
 - Exposure associated with small branches seeing: no greater attrition, more entrance/expansion, no slower deposit growth

