

Differences in Bank Competition Across U.S. Markets in 2018

August 9, 2019

BCI Quartiles

The Bank Competition Index (BCI) measures the intensity of competition across all U.S. banking markets where markets are either rural counties or MSAs. Higher values indicate more intense competition.

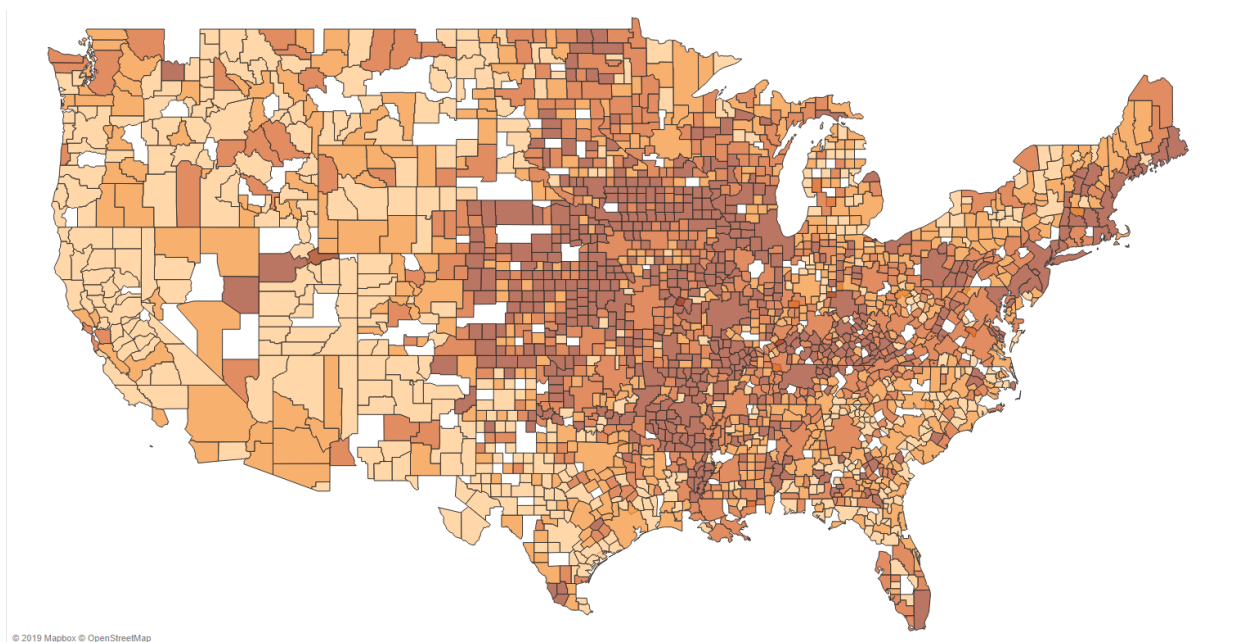
To assess banking market competition *within a given year*, a useful approach is to divide all banking markets into quartiles. Banks with the most intense competition are in the highest quartile (4), and banks with the least intense competition are in the lowest quartile (1). Figure 1 displays a heat map of the rural counties and MSAs in the continental U.S. by BCI quartile in 2018.¹ Darker colors represent banking markets with more intense competition. The most competitive markets are in the North-Central and South-Central regions, and along the northeastern seaboard.

Table 1. BCI and components by quartile in 2018

Quartile	BCI	Mat Liab	Offices	1-HHI
1	-0.67	0.38	0.23	0.66
2	-0.51	0.45	0.28	0.71
3	-0.39	0.49	0.32	0.73
4	-0.20	0.54	0.39	0.73
Q4-Q1	0.47	0.16	0.17	0.07

Table 1 lists the mean BCI value and its components for each market quartile in 2018. BCI values are normalized so that the value equals 0 for the “average” market over the 1997-2015 period. The mean BCI in the most competitive market quartile in 2018 is -0.20, which means that competitive conditions in these markets *increases* the mean net interest income to average assets (NII) of banks in the top quartile 20bp relative to the “average”

Figure 1. Counties and MSAs by BCI quartiles in 2018



¹ An interactive map of BCI quartiles can be viewed from the [Bank Competition Index webpage](#).

market. The BCI value of -0.67 for banks in the least competitive quartiles signals an increase in net interest income of 67bp relative to the average market. The 47bp difference in BCI between quartile (4) and quartile (1) means that, relative to average market conditions over the 1997-2015 period, banks in 2018 in the most competitive market quartile earn an average NII 47bp lower than banks in the least competitive market quartile.

Table 1 also includes the components of BCI. The most competitive markets have an average ratio of maturity deposits to total liabilities of 54%, 16 percentage points above the markets in the first quartile. Indeed, the maturity liability ratio is the dominant influence on the BCI. The most competitive markets have an average of 0.39 offices per 1,000 people, 0.17 more than the least competitive markets. Finally, the average complement to the deposit-share Herfindahl-Hirschman Index (1-HHI) is 0.73 in the most competitive markets, 0.07 greater than the mean value in the least competitive markets. 1-HHI ranges from 0 to 1, and higher values indicate more

competition because deposit shares are more equally distributed across banks in the market.

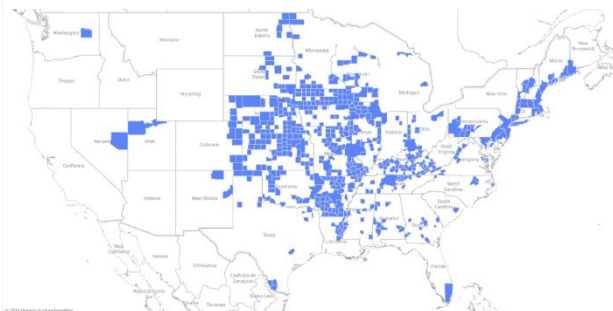
Figure 2 more clearly visualizes the separation of banking markets in 2018 into quartiles. Panels A through D display four heat maps of banking markets in 2018, one for each BCI quartile. Panel A identifies the most competitive markets, and Panel D, the least competitive markets.

Panel A affirms that the most competitive markets are in the North-Central and South-Central regions, and in the northeast. Panels B and C show markets spread evenly across the U.S. except for the southwestern region in the 3rd quartile. Finally, Panel D shows a concentration of banking markets in the northwest, southwest, and the southeastern seaboard.

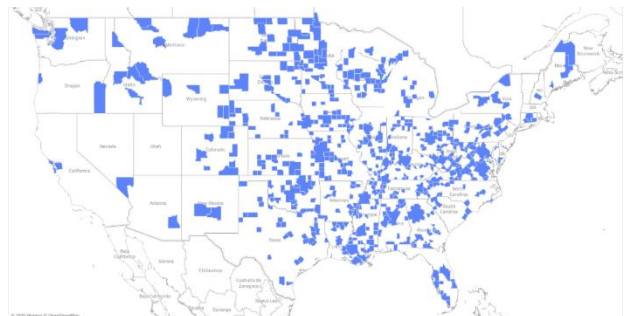
Figure 3 illustrates the ten states in 2018 with the highest shares of counties in the most competitive BCI quartile. The state with the highest percentage is Rhode Island where each of its five counties is in the top quartile. New Jersey, Massachusetts, Arkansas, and Nebraska round out the top five states where more than two-thirds of the counties are in the top

Figure 2. Counties and MSAs in each BCI quartile in 2018

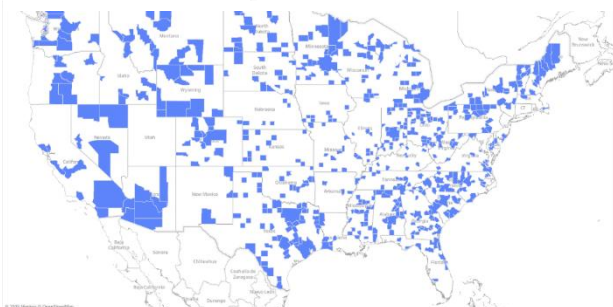
Panel A. Most competitive quartile (Q4)



Panel B. Third quartile (Q3)



Panel C. Second quartile (Q2)



Panel D. Least competitive quartile (Q1)

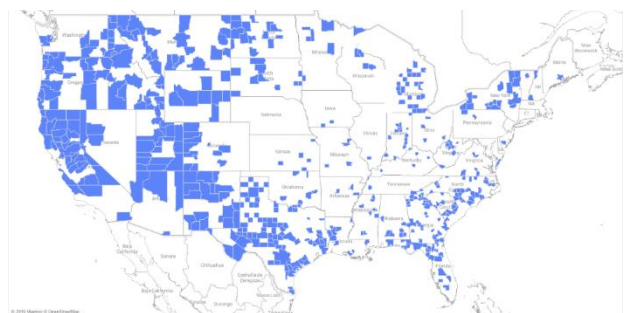
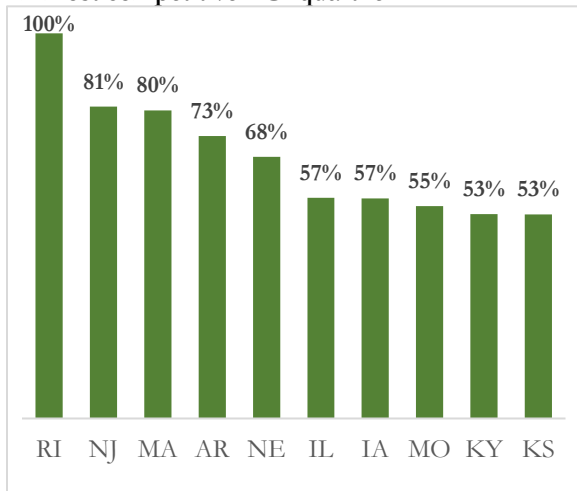


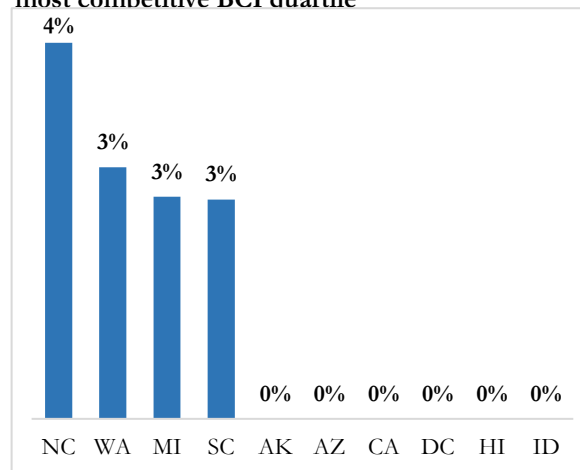
Figure 3. States with highest shares of counties in most competitive BCI quartile



competition quartile, and Kansas rounds out the top ten at 53%.

Figure 4 plots the ten states with the lowest shares of counties in the most competitive BCI quartile. Just 4% of North Carolina’s counties are in the top quartile, and Alaska, Arizona, California, the District of Columbia, Hawaii, and Idaho have no counties in the top quartile.

Figure 4. States with lowest shares of counties in most competitive BCI quartile



Survey evidence on ATM fees from Bankrate.com² in 2018 is consistent with the ranking of competitive markets by BCI. Bankrate surveyed 10 banks and thrifts in each of 25 large U.S. MSAs. Table 2 lists average ATM fees ranked from highest to lowest. The

Table 2. ATM fees by MSA in 2018

Survey Rank	MSA Name	ATM Fees	BCI Rank
1	Detroit	\$5.28	23
2	Atlanta	\$5.19	15
3	Houston	\$5.18	21
4	Denver	\$5.06	22
5	Tampa	\$4.97	16
6	Washington DC	\$4.92	13
6	Cleveland	\$4.92	5
8	Philadelphia	\$4.91	7
9	Baltimore	\$4.90	4
10	Pittsburgh	\$4.87	1
11	San Diego	\$4.77	20
12	Minneapolis	\$4.66	25
12	Phoenix	\$4.66	24
14	New York	\$4.63	3
15	Seattle	\$4.58	18
16	Kansas City	\$4.55	14
17	Cincinnati	\$4.48	2
18	Los Angeles	\$4.44	8
19	Boston	\$4.43	6
20	Dallas	\$4.39	19
21	Miami	\$4.37	10
22	Milwaukee	\$4.34	12
23	Chicago	\$4.31	9
24	San Francisco	\$4.27	17
25	St. Louis	\$4.25	11

BCI Rank column in the table ranks the same 25 MSAs from most to least competitive. We should expect a negative correlation between the two rankings if ATM fees are highest where market competition is weakest. Indeed, the correlation coefficient is -0.25, confirming the inverse relationship.

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² See the Bankrate.com checking account and ATM fee study referenced on August 8, 2019 at

<https://www.bankrate.com/banking/checking/checking-account-survey/>.