Competition in Agricultural Lending Markets: The Effect of Including the Farm Credit System

Chuck Morris, Jim Wilkinson, and Eric Hogue
September 30, 2015

The views presented here are those of the authors and not those of the Federal Reserve Bank of Kansas City, the Federal Reserve System, or its Board of Governors.
Motivation

• Bank merger applications in rural markets, which tend to be highly concentrated, are often challenged for antitrust/competitive concerns.
• The tradeoff from not approving some of these applications can be a loss of local banking services.
• The initial screen for the competitiveness of a market is based on bank deposit shares, which may not fully account for significant competitors.
• This paper investigates the effect of Farm Credit Associations (FCAs) on competition in rural markets where agriculture is an important economic activity.
Presentation Summary

• U.S. antitrust laws and structure-conduct-performance paradigm

• Federal banking agencies’ role in enforcing the anti-trust laws with a focus on the Federal Reserve

• Empirical methodology and results
Primary Results

• Bank and FCA data on agricultural loans are used to estimate local market, loan-based HHIs.
• HHIs often decline significantly when FCAs are included in the market.
• Effect is stronger and more prevalent in markets more reliant on agriculture.
• Suggests that excluding FCAs may understate market competitiveness in rural markets where agriculture is important.
U.S. Antitrust Laws and S-C-P Paradigm

• Goal of antitrust policy is “good” performance by firms and industries, i.e., maximize consumer welfare.
• Federal banking agencies required to deny mergers and acquisitions that are anti-competitive unless they would on net meet the “convenience and needs of the community”.
• Performance depends on firm conduct, which is often affected by market structure.
Federal Banking Agencies’ Role in Antitrust Enforcement

• Assess competitive effects of M&As – initial screen based on post-merger HHI (1,800) and change in HHI (200).
• Product market – “cluster” of commercial banking products and services, proxied by deposits.
• Geographic market – local, often counties or MSAs.
• Additional analysis if proposed merger fails initial screen – “mitigating” factors to determine if the market is more competitive or merger is less anticompetitive.
Farm Credit System

• GSE established in 1916 to provide affordable long-term financing to farmers, current structure set in 1971.
• Structure – 4 regional wholesale banks and 76 Farm Credit Associations (FCAs).
• FCAs are cooperatives with specific, often overlapping, territories.
• Loans – real estate, production, agribusiness, small-town residential mortgages.
Farm Credit System Institution Territories
FCAs and Banks are Largest Farm Lenders

Market Share

- Commercial Banks
- Farm Credit System
- Farm Service Agency
- Individuals, Life Insurance and Others
Agricultural Loan Local Market Share Estimates for HHIs

- Local markets based on Federal Reserve CASSIDI™ definitions.
- Agricultural loan data at FCA and bank level.
- Estimate county level loans, and aggregate to market for multiple-county markets.
- FCAs – allocate ag loans based on county-level crop and livestock marketing proceeds.
- Banks – allocate ag loans based on “rural area” deposits.
- Generally focus on markets that are comprised of complete counties where agriculture is important part of economy.
Agriculture-Important Banking Markets

Number of Counties in Markets:
- 1
- 2
- 3
- 6
- 11
## Local Banking Market Summary Statistics

<table>
<thead>
<tr>
<th></th>
<th>Agriculture-Important Markets&lt;sup&gt;1&lt;/sup&gt;</th>
<th>Agriculture-Dependent Markets&lt;sup&gt;1&lt;/sup&gt;</th>
<th>&quot;Agricultural-Bank&quot; Markets&lt;sup&gt;2&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Markets</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Banks (median)</td>
<td>86</td>
<td>86</td>
<td>48</td>
</tr>
<tr>
<td>FCA Market Share of Agricultural Loans (median)</td>
<td>37%</td>
<td>45%</td>
<td>39%</td>
</tr>
<tr>
<td>HHI: Deposits, Banks (median)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Markets &lt;1800</td>
<td>2,934</td>
<td>2,970</td>
<td>3,050</td>
</tr>
<tr>
<td>HHI: Agricultural Loans, Banks (median)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Markets &lt;1800</td>
<td>14 (16%)</td>
<td>11 (13%)</td>
<td>5 (10%)</td>
</tr>
<tr>
<td>ΔHII: Agr. Loans - Dep., Banks (median)</td>
<td>3,457</td>
<td>3,690</td>
<td>3,549</td>
</tr>
<tr>
<td>Markets &lt;1800</td>
<td>434</td>
<td>672</td>
<td>265</td>
</tr>
<tr>
<td>HHI: Agricultural Loans, Banks &amp; FCAs (median)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Markets &lt;1800</td>
<td>11 (13%)</td>
<td>7 (8%)</td>
<td>5 (10%)</td>
</tr>
<tr>
<td>ΔHII: Agr. Loans, Banks &amp; FCAs - Banks (median)</td>
<td>3,343</td>
<td>3,688</td>
<td>3,343</td>
</tr>
<tr>
<td>Markets &lt;1800</td>
<td>-413</td>
<td>-419</td>
<td>-554</td>
</tr>
</tbody>
</table>

<sup>1</sup> Based on earnings and employment criteria as of 2013.

<sup>2</sup> Agricultural banks are banks with a ratio of agricultural loans to total loans of 25 percent or more. An "Agricultural-Bank" market denotes a market in which 20 percent or more of the banks are agricultural banks.

Sources: Farm Credit Administration, Reports of Condition and Income (Call Reports), FDIC Summary of Deposits, www.bea.gov, and www.census.gov.
Agricultural Loan HHIs: Agriculture-Important Markets
Agricultural Loan HHIs: Agriculture-Dependent Markets
Agricultural Loan HHIs: Agricultural-Bank Markets
Conclusions

• Including FCAs as a competitor can significantly affect local banking market concentration.
• HHIs often decline significantly when FCAs are included in the market.
• Effect is stronger and more prevalent in markets more reliant on agriculture.
• Suggests that excluding FCAs may understate market competitiveness in rural markets where agriculture is important.