Competition in Community Banking Survey

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As part of the paper "Threat of Entry and the Use of Discretion in Banks Financial Reporting",[1] I conducted a survey of corporate-level executives at community banks in order to understand bank response to current and expected competition. The survey was conducted in June - August, 2015, and addressed five main questions:

1. Who are the main competitors of community banks?
2. What factors do these banks consider to be important in making expansion decisions?
3. What sources of information do these banks use in assessing current and expected competition in their market?
4. What actions do these banks take in response to current and expected competition?
5. What factors influence the estimation of loan loss provisions?

Several facets of the community banking industry make it an ideal laboratory in which to study firms' use of competitor information. The industry has faced and continues to face significant competitive pressure from several sources, including large national and regional banks, other community banks, credit unions,[2] online banks, and shadow banking organizations. This situation makes dealing with competitive threat paramount in the minds of senior

[1] Forthcoming in the *Journal of Accounting and Economics*

[2] Credit unions are very similar to community banks in the services they provide. However, unlike community banks, credit unions have the advantage of being tax-exempt entities.

executives at these banks. Further, the industry is largely homogeneous and well-organized, making it a favorable environment in which to share information between firms.

Findings from the survey are likely to be informative to academics and practitioners. For academics, it provides systematic evidence that firms access and use competitors' disclosures, as well as insights into sources of information, types of information items used, and actions taken in response to an actual or perceived increase in competition. Although a substantial literature in accounting is built on the premise that firms analyze competitors' financial statements in order to assess the competitive environment,[3] little systematic evidence underlies this assumption.

The survey would also aid practitioners in decisions related to market expansion and competitor analysis.

Survey Design and Implementation

The survey questionnaire was created using the software Qualtrics and consisted of five main parts, corresponding to the survey objectives stated above. I received feedback from several academic researchers on survey content and design. This feedback included researchers with significant experience in conducting survey-based research.[4] I also pretested the survey questionnaire on three community bankers at the CEO/CFO level. Pretesting the survey allowed me to fine tune the questions so that they would be easily understood by survey participants who were in similar roles, as well as expand on options provided in some of the questions. The final survey instrument consisted of 23 questions, of which 3 were open-ended.

The survey was administered with the help of staff at the American American Bankers Association (ABA)[5] who sent the survey questionnaire to their networks of corporate-level executives at community banks. The networks included a group of 100 CFOs who were

[3]See, for instance, Dye (1985), Darrough and Stoughton (1990), Wagenhofer (1990), Newman and Sansing (1993), Darrough (1993), and Gigler (1994).

[4]I am especially grateful to Neil Malhotra and Nicholas Hall of Stanford University for help with the survey questionnaire.

[5]http://www.aba.com/Pages/default.aspx

participants at a conference held in Nashville, Tennessee, in June 2015.[6] The survey was also sent to 99 CEOs, the ABA Marketing Network of about 650 members, and was included in a periodic newsletter (ABA CFO Bullets) emailed to approximately 1,000 CFOs. To encourage response, a $10 donation was offered to an ABA charity (ABA Community Engagement Foundation) for every completed survey.

Of the 65 people who clicked on the survey link, 6 did not answer any question. I delete these 6 observations from the sample, and am left with a total of 59 usable responses. The remaining respondents substantially answered all questions. The 59 usable responses corresponds to an average response rate of 3.2%. Even though the response rate is low, there are several factors to be kept in mind in assessing the response rate. First, survey response rates vary based on the sub-sample considered. For instance, in the sample of CFOs who were conference participants and with whom I had more direct contact, the response rate was 12%. The response rate was also higher (at 7%) within the sample of CEOs and bank presidents. It is possible that this group of executives is more likely to make decisions related to market expansion and are therefore more interested in the survey. Furthermore, not all intended recipients of an email newsletter open the email or even receive it. A survey by Abrahams et al. (2010) finds that a third of marketing emails get marked as spam by email hosting servers. Finally, the survey was targeted at a very specific group of experts. The respondents were all community bankers and thus able to provide an informed opinion on issues related to the community banking industry.

There are several potential concerns associated with the survey methodology in this case. First, are the targeted firms representative of the community banking industry? Second, is there an issue with non-truthful responses?

The targeted community bankers belonged to ABA's network. The ABA is active on a national level and a prominent organizer of this industry, for instance, leading lobbying and educational efforts. Therefore, there are reasons to believe that the ABA network is fairly

[6] I attended this conference and was able to conduct interviews as well as advertise the survey, which may have increased response rates for this sub-sample.

extensive. Also, Figure 1 shows that the respondents are geographically spread out and not concentrated in any particular region.

Survey responses were anonymous to protect the identity of respondents and encourage truthful responses. No identifying information was collected as part of the survey. To further encourage truthful responses, questions about the industry were asked in an indirect manner. For instance, instead of asking the question "Do you knowingly over-reserve for loan losses?", I ask, "Based on your judgment, what percent of competing banks knowingly over-reserve for loan losses?".

Non-Response Bias

Non-response bias in this setting can be item level, that is, some respondents did not answer all the questions in the survey, or unit level, they did not respond to the entire survey. The issue is to assess whether the sample of responses is representative of the population. Assessing non-response bias generally requires one to know the identities of respondents, and those to whom the survey was sent. Item level bias was not an issue in this survey as all respondents substantially answered all questions. The only exception was with respect to the open-ended questions which were answered by only a few respondents.[7]

It is challenging to assess unit level non-response bias in this survey because survey responses were anonymous to protect the identity of respondents, and encourage truthful responses. To prevent inadvertent identification of a respondent, I collected only limited demographic information related to the banks. Furthermore, I do not have access to the ABA membership list. Given these limitations, I assess non-response bias in two different ways, described below.

Respondents were asked for the range of asset size to which their bank belonged, and not a single asset size number which could potentially be used to identify a bank. Table 1 compares

[7]Three open-ended questions were asked. These are: (1) Please elaborate on how competition can influence loan loss provisions, (2) Please provide any feedback related to this survey, and (3) Are you willing to participate in a follow-up interview? If yes, please provide your contact details.

the size distribution of banks in the survey to banks in the study sample. As the table shows, respondents of the survey were larger than banks in the study sample. However, community banks have been getting larger over time. In 1992, 94% of all community banks had total assets of less than $250 million, compared to 75% in 2008. That survey respondents, on average, are larger than banks in the study sample is further borne out by the fact that 24% of survey respondents were publicly listed banks. Only 3.6% of banks in the study sample are public. Publicly listed community banks tend to be larger than private banks. Also, the median bank in the survey operated six branches whereas the median bank in the study sample operated only one branch. Because survey respondents are larger than banks in the study sample, I assess non-response bias with respect to the range of asset sizes. That is, I assess whether responses on certain key questions were systematically different for smaller community banks. Table 2 presents the results of this analysis. As can be seen from the table, there are no significant differences in the responses of large and small banks.

Prior literature has used extrapolation-based methods to assess non-response bias (Armstrong and Overton, 1977). The underlying assumption for extrapolation-based methods is that participants who answer less readily are similar to non-respondents. I define "less readily" as participants who take a longer time to respond. However, it is possible that participants who respond in less time may be less attentive. To address this concern, I split the sample into two groups by median response time (8 minutes), and compare responses across these two groups. I find no significant differences in responses across the two groups.

Discussion of Survey Findings

Survey responses indicate that community banks deal with a variety of competitors. These include large national banks, regional banks, other community banks, and credit unions. To a lesser extent, community banks also compete with on-line banks, shadow banking institutions, mortgage brokers, lease finance companies, and insurance companies.

Respondents were asked which factors they thought competitors took into consideration

while making expansion decisions, as well as which factors they themselves considered. Respondents considered economic indicators such as population and household income growth to be critical factors in making expansion decisions. Incremental to these, financial statement information also played a role, with 75% of all respondents indicating that financial statement information (profitability and credit quality) would be assessed by competitors in making expansion decisions.

Survey respondents were asked for the sources of information that they used in assessing current and future competition. 94% of all respondents stated that they used financial statements of competitors. Other sources of information included market surveys and professional networks. Banks assessed several financial statement items of competitors, including net interest margin, loan portfolio composition, profitability, charge-offs, and loan loss provisions.

I asked respondents about the actions that they would take in response to current and expected competition. The most frequently used strategies were to increase loan and deposit growth. Other strategies included expanding the product offering, and increasing lobbying activity. In all cases, except for increasing lobbying, banks were more likely to react to current competition than to anticipated competition.

The final set of questions related to loan loss provisions. To elicit a truthful response, I asked bankers how likely competing banks were to misstate loan loss provisions (as opposed to directly asking them whether they misstated provisions). 95% of all respondents answered that some percentage of competing banks misstated provisions. Of these, 16% stated that more than half the industry misstated provisions. These responses suggest misstatement of provisions is a widespread practice. Banks stated there were several reasons to overstate loan loss provisions. Prominent among these were regulators' expectations. Banks also misstated provisions under increased threat of competition, and an actual increase in competition. Other motivating factors to over-reserve included potential weaknesses identified with specific borrowers, a decline in the quality of the loan portfolio, anticipated growth in portfolio, anticipated economic downturn, anticipated loss expectations relating to specific credits,

being overly conservative, or an inability to re-capture excess provisions due to regulator objections. Reasons to under-provision included earnings pressure, and the desire to inflate earnings.

Aggregated survey results are presented below, and titled "Summary of Survey Responses".

Figure 1: Location of Survey Respondents

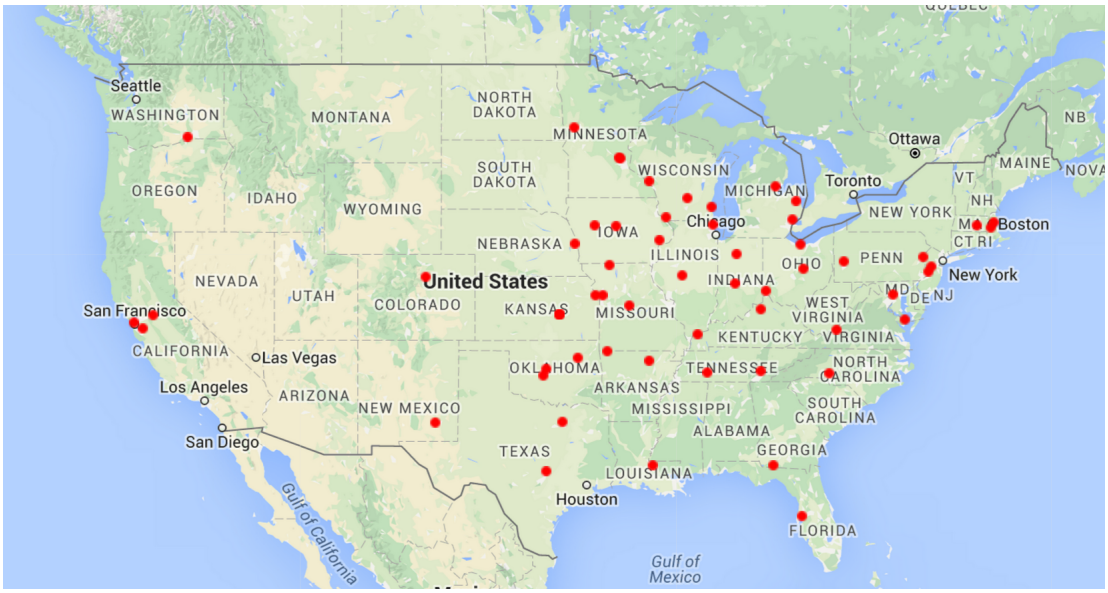

Table 1: Percent Distribution of Asset Size

	Survey Sample	**Sample of Community Banks**		
		1992 - 2008	**1992**	**2008**
>250 mn	33%	87%	94%	75%
250 to 500	31%	8%	4%	15%
500 to 1bn	21%	3%	1%	7%
>1bn	16%	1%	0%	3%

Table 2: Assessing Non-Response Bias

	Responses by asset size			Responses by time taken to complete survey		
	<500 mn	**=>500 mn**	**pvalue**	**<= 8 minutes**	**>8 minutes**	**pvalue**
What factors do you think competitor banks assess before entering into your local market?						
Economic growth	100%	100%	1.000	100%	100%	1.000
Identified opportunity in new market	100%	95%	0.375	97%	100%	1.000
Population growth	91%	90%	1.000	97%	85%	0.186
Household income	89%	76%	0.272	93%	74%	0.073
Profitability of incumbent banks	81%	71%	0.533	79%	70%	0.542
Credit quality of incumbent banks' loan portfolio	71%	76%	0.764	76%	70%	0.766
Existing branch density in new market	71%	76%	0.764	76%	70%	0.766
Proximity	63%	76%	0.382	62%	74%	0.399
Talent	46%	57%	0.582	48%	52%	1.000
How would you rate the following markets in terms of attractiveness of de novo entry?						
Markets where incumbent banks have high profitability	85%	83%	1.000	85%	85%	1.000
Markets where incumbent banks have high credit losses	0%	6%	0.346	0%	4%	1.000
How would you rate the following markets in terms of attractiveness of entry through mergers and acquisitions?						
Markets where incumbent banks have high profitability	91%	83%	0.406	92%	85%	0.668
Markets where incumbent banks have high credit losses	6%	6%	1.000	4%	8%	1.000
What information do you use to analyze current and expected competition in your market?						
Financial statements of competitors	94%	94%	1.000	92%	96%	1.000
Market surveys	70%	83%	0.336	81%	68%	0.349
Other	27%	28%	1.000	23%	32%	0.541
N	38	21		32	27	

Summary of Survey Responses

1. What is your role within the bank?

	No. of Responses	Percent Responses	Response Rate
CEO/President	7	12%	7%
CFO	32	54%	3%
CMO/Others	20	34%	3%
Total	**59**	**100%**	**3%**

2. What is your bank's approximate asset size?

	Percent answered
<$250 million	33%
$250 to $500 million	31%
$500 million to $1 billion	21%
>$1 billion	16%

3 & 4. How many branches and loan production offices does your bank currently operate?

5. How many separate markets does your bank operate in?

	Qs 3. Branches	Qs 4. LPOs	Qs 5. Markets
Mean	15.5	0.6	6.9
Median	6.0	0.0	3.0
Std	39.0	1.0	17.0
Min	1	0	1
Max	276	5	120

6. Which of the following describes your bank? Please select all options that apply.

	Percent answered
Private company	44%
C Corp	26%
Public company	25%
Mutual	19%
S Corp	18%
Exchange traded	4%

7. Which of the following best describes the geographic area that your bank serves?

	Percent answered
Rural (population < 50,000)	34%
Small Metropolitan Area (population between 50,000 and 500,000)	47%
Large Metropolitan Area (population > 500,000)	19%

8. Which of the following types of organizations does your bank directly compete with?

	Number answered	
	Loan Products and Services	**Deposits**
Large National Banks	51	55
Interstate Regional Banks	46	48
Intrastate Regional Banks	43	43
Other Community Banks	53	55
Credit Unions	50	51
On-line Banks	26	32
Shadow Banking Institutions	11	8
Others	6	3

9. What factors do you think competitor banks assess before entering into your local market?

10. What factors do you assess before expanding into a new geographic market?

	Percent "Very Relevant" and "Relevant"	
	Qs 9. Factors assessed by competitors	**Qs 10. Factors assessed by given bank**
Economic growth	100%	94%
Identified opportunity in new market	98%	96%
Population growth	91%	83%
Household income	84%	79%
Profitability of incumbent banks	75%	56%
Credit quality of incumbent banks' loan portfolio	75%	52%
Existing branch density in new market	73%	87%
Proximity	69%	79%
Talent	50%	55%

11. How would you rate the following markets in terms of attractiveness of de novo entry?

12. How would you rate the following markets in terms of attractiveness of entry through mergers and acquisitions?

	Percent "Very Attractive" and "Attractive"	
	Qs 11. De Novo	**Qs 12. M&A**
Markets where incumbent banks have high profitability	85%	88%
Markets where incumbent banks have high credit losses	2%	6%

13. What information do you use to analyze current and expected competition in your market?

	Percent answered
Financial statements of competitors	94%
Market surveys	75%
Other [8]	27%

[8] Other sources cited were variants of financial statements such as call reports, Uniform Bank Performance Reports, FDIC and Federal Reserve reports, SNL Financial, State Banking associations, and County Recorders Office Mortgage filings. Survey respondents also suggested word-of-mouth and professional networks as sources of competitor information.

14. What types of information do you assess from competitors' financial statements?

	Percent answered
Net Interest Margin	90%
Loan Portfolio Composition and Growth	88%
Profitability	86%
Capital Ratios	84%
Cost of Deposits	82%
Charge-offs	76%
Loan Loss Provisions	53%
Others	16%

15. To what extent are the following actions taken in response to increased competition from larger banks?

16. To what extent are the following actions taken in response to an anticipated increase in competition from larger banks?

	Percent "Always" and "Usually"	
	Qs 15. Actual competition	Qs 16. Anticipated competition
Increase loan growth	48%	40%
Increase deposit growth	48%	37%
Expand products offered	29%	20%
Increase lobbying activity	16%	22%
Re-balance loan portfolio composition	16%	5%
Expand loans to borrowers with lower credit quality	9%	2%
Reduce products offered	0%	0%

17. What are some reasons to change the methodology used to estimate loan loss reserves?

	Percent answered
At the bank examiner's or auditor's request	91%
Change in composition of loan portfolio	84%
Change in lending policy	78%
Change in current macroeconomic conditions	69%
Expected change in macroeconomic conditions	47%
Loss of high quality clients due to increased competition	22%
Expected loss of high quality clients due to increased competition	20%
Current or expected loss of talent due to increased competition	18%
Others	7%

18. Based on your judgment, what percent of competing community banks knowingly over-reserve or under-reserve for loan losses?

	Percent answered
0%	5%
1 - 10%	30%
11 - 30%	34%
31 - 50%	16%
Greater than 50%	16%

19 & 20. What are some factors that motivate community banks to over-reserve/ under-reserve for loan losses?

	Percent answered [9]	
	Qs 19. Reasons to over-reserve	**Qs 20. Reasons to under-reserve**
Regulator's expectation	88%	24%
Threat of increased competition	12%	21%
Actual increase in competition	15%	21%
Others	27%	55%

[9] Responses to Qs. 19 and 20 for the option "Regulator's expectation" are significantly different ($pvalue < 0.0001$). Responses to Qs. 19 and 20 for the options "Threat of increased competition" and "Actual increase in competition" are not significantly different ($pvalues = 0.3144$ & 0.4741).

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