CEO Succession and Performance at Rural Banks

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September, 2018

Abstract. Managerial succession at community banks in rural areas often is said to be hindered by difficulties in attracting "talent." We empirically examine this issue from the perspective of changes in performance following turnover of chief executive officers at 1,513 urban and rural banks, 2003 to 2016. We reject hypotheses that urban banks, relative to rural banks, are slower to experience downgrades, or faster to experience upgrades, in regulatory-assessed ratings of management performance. This is inconsistent with a widely-held belief that rural banks are unable to replace key personnel as effectively as urban banks.

JEL Codes: G21, L20

Keywords: Management Succession, Rural Banks, Bank Management

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1. Introduction

The recovery of community banks in the aftermath of the financial crisis has allowed some bankers the relative luxury of shifting their focus from survival to passing along what they have preserved to another generation of bankers.[1] This shift is underscored by the prominence of management succession as topics in banking conferences organized by the Federal Deposit Insurance Corporation (FDIC, 2016) and the Conference of State Bank Supervisors (CSBS, 2017, 2018). It coincides with a renewed regulatory focus on succession planning (Petty, 2016).

Of particular concern are successions at banks in rural areas that occur against a backdrop of population decline (Fox, 2017), non-existent business formation (Tankersley, 2016), closures of bank branches (Ensign et al, 2018) and stagnant deposit growth (FDIC, 2017). These trends underscore long-recognized problems with rural bank succession resulting from smaller local labor pools (Myers, 2001), difficulties in recruiting employees from outside local communities (Myers, 2001) and a lack of family members groomed to replace retirees (Walser and Anderlik, 2004). They reflect comments of bankers interviewed by the CSBS (2017):

"Community banks in rural areas face challenges in attracting sufficient talent for the future leadership of the bank…It is more difficult to entice qualified individuals to move to rural areas with depressed economies, substandard school systems and limitations on city services…More educated people tend to move closer to cities…Our best high school graduates

[1] The financial crisis was said to have created a "bunker mentality" in which worried bankers were reluctant to retire (Fritz and Marget, 2014).

are going off to college, but they are not coming back…A lack of appeal to living in rural communities is a significant roadblock to acquiring qualified talent."

The foregoing suggests a threat to rural banks. If "talent" is correlated with performance, and is less accessible in rural communities, then replacement of managers at rural banks, compared to equivalent replacement at urban banks, could, over time, erode their competitiveness. From this perspective, "challenges to recruit talent (Fritz and Marget, 2014)" could create "greater economic development challenges in rural markets (Covington and Courtney, 2014)."

We investigate differences in performance between urban and rural banks after changes in chief executive officers (CEOs). We hypothesize that managerial "talent" influences performance. We note, however, that "talent" may encompass more than individual ability if differences in organizational environments condition performance; some banks, for instance, may have more sophisticated boards of directors or greater access to other resources used in the support of incoming management. We interpret these factors, collectively, in terms of "succession planning" and its effectiveness.

We use an accelerated failure time model to identify factors influencing changes in performance that occur within five years of CEO turnover. Our key empirical advantage is access to confidential regulatory ratings of bank management that we use to identify performance outcomes. These ratings, which range from a numerical score of "1," for the best banks, to "5," for the worst, are part of a bank's composite performance, or "CAMELS," rating. They are established during on-site bank examinations.

Management ratings have advantages relative to alternative measures of performance. Unlike accounting-based measures, such as returns on assets, they are less prone to manipulation

by management (Bornemann et al, 2015). Compared to market-based indicators, they are less influenced by factors beyond management control (Shen and Canella, 2002).

And they are broad in scope. According to regulatory instructions, "appraisal of the competency of the management team" encompasses day-to day operations, asset quality and planning for the future. "The past and present certainly are significant, requiring an in-depth analysis of financial condition, earnings and capital adequacy, both on an absolute basis and as a trend, but, the determination of what management will do for the bank in the future is most significant."[2]

Our tests are framed in the context of changes in performance ratings following CEO turnover. We hypothesize that newly hired CEOs at urban banks, compared to those hired at rural banks, experience shorter times to ratings upgrades and longer times to ratings downgrades. Our sample consists of successions at 1,513 urban and rural banks, 2003 to 2016.

Empirical tests reject these hypotheses. This contrasts with considerable anecdotal evidence of difficulties encountered by rural banks in managerial succession (FDIC, 2017; CSBS, 2017; Fritz and Marget, 2014; and Covington and Courtney, 2014) It appears to support, alternatively, a capacity for incoming managers at rural banks "to adjust capably to economic environments" despite depopulation, a lack of strong loan demand and shrinking customer bases (Walser and Anderlik, 2004).

The inability of urban banks to outperform rural banks following turnover appears relevant to regulatory policies emphasizing succession planning (Petty, 2016). Although succession has long been evaluated by regulators--difficulties in attracting staff for key positions

[2] Commercial Bank Examination Manual (https://www.federalreserve.gov/publications/supervision_cbem.htm)

was identified as a "supervisory concern" 15 years ago (Myers, 2001)--more recent regulatory "attention" has involved evaluation of "succession plans in each exam" that "include comments in the management report (Fritz and Marget, 2014)."

Our results, however, suggest that succession planning is not a unique challenge for rural banks. Similar points were made previously by Myers (2001), who noted that the absence of written plans at banks that are "less sophisticated in structures and policies" may understate the effectiveness of their succession planning, as well as by the FDIC (2012), which said that rural banks "are successfully dealing with the problem of succession planning" despite "demographic trends that pose a direct challenge to the ability" to attract qualified managers.

More generally, our results offer insight into widely-expressed concerns about the viability of rural banks and earlier predictions, made more than ten years ago, of "increasing bank consolidation in depopulating rural areas (Walser and Anderlik, 2004)." This stands in contrast to recent contractions of banking offices that have been more pronounced in urban areas than in rural areas (FDIC, 2017). It also contrasts with higher earnings reported by banks in depopulating rural areas compared to those in metro areas (FDIC, 2012).

2. Methodology

Our study is the first, to our knowledge, to isolate performance consequences of managerial succession at rural banks. It extends related research, inclusive of both urban and rural location, on closely-held banks (Dahl, 1996), nationally-chartered banks (Palvia, 2012) and banks outside the U.S. (Bornemann et al, 2015).

2.1 The Model

We follow Palvia (2012) in measuring performance on the basis of management ratings established by regulators. We model the log of the time (T) to a change in rating, $Y = \log(T)$, using an accelerated failure time (AFT) model:

$$y = x'B + \sigma y_0, \tag{1}$$

where *x* is a vector of covariates for a given observation y, *B* is a vector of unknown regression parameters, $y_0 = \log(T_0)$ is the log of the time to rating change for the baseline distribution (values of all covariates are zero) and σ is the associated scale parameter.[3] In this setting, y_0 plays the role of the error term in a linear model and is assumed to follow a logistic distribution.

In terms of the original time to rating change, our model is equivalent to $T = e^{(x'B)} T_0^{\sigma}$, making the effect of the covariates multiplicative on the event time while the scale parameter powers the baseline time to a change in rating. A positive estimated value of the j^{th} parameter, B_j, indicates a longer predicted time to a rating change; the opposite is true if the parameter is negative.

We apply this model to alternate specifications for upgrades and downgrades. The former is specified as:

$$\begin{aligned}\log(\text{Time to Upgrade}) = {} & \text{Examination Interval}_{(t-1)} + \log(\text{Assets})_{(t-1)} + \text{Bad Rating}_{(t-1)} \\ & + \sum \text{Years} + \text{Rural}_{(t-1)}\end{aligned} \tag{2}$$

[3] See Maddala (1983) or Bagdonavicius and Nikulin (2002).

The dependent variable is the log of the number of quarters from the quarter of CEO succession to the quarter in which a bank is upgraded on its management rating. Observations on banks that are not upgraded are censored in a given quarter if a bank goes out of existence, reaches the end of the sampling period (2017) or reaches a maximum of 20 quarters (five years) after succession. For these tests, we eliminate from our sample banks in the best ratings category (it is impossible to ascend from a "1" rating).

Among control variables in equation (2), Examination Interval is the number of quarters between prior examination of a bank and the quarter of CEO succession. This variable is necessary because examinations are scheduled at discrete intervals, typically between four and eight quarters. Its impact on time to upgrade reflects a tradeoff of the time it takes an incoming CEO to make operational changes that influence performance assessment (negatively related to pre-examination intervals) and the time at which such changes in assessment can first be recorded in an examination (positively related to pre-examination intervals). The sign on its coefficient is indeterminate.

Assets controls for size. If it is easier (harder) to implement changes that result in quicker upgrades at smaller banks, the coefficient on this variable would be negative (positive).

Bad Rating is a dummy variable coded as one if a bank has a rating of "3," "4" or "5" in the quarter prior to CEO succession and zero if a bank has a rating of "2" (recall that banks with "1" ratings are excluded from these tests). If upgrades occur more quickly when inherited ratings are worse, the coefficient on this variable should be negative. In these situations, changes in performance are measured within an operating environment characterized by an outgoing CEO that is more likely to have left the bank involuntarily.[4]

[4] Our database does not indicate whether the outgoing CEO was fired, died, retired, etc.

$\sum$ Years is a series of dummy variables for the year in which a succession took place. We omit these variables from our reported results to conserve space.

The key independent variable is Rural. It is coded as one if a bank is located outside a standard metropolitan or micropolitan statistical area and 0 if a bank is located inside a standard metropolitan statistical area (we exclude banks in micropolitan statistical areas from the sample in order to highlight the urban/rural contrast). The hypothesized coefficient on this variable will be explained below.

The second specification is for time to downgrade:

$$\log(\text{Time to Downgrade}) = \text{Examination Interval}_{(t-1)} + \log(\text{Assets})_{(t-1)} + \text{Bad Rating}_{(t-1)} + \text{Good Rating}_{(t-1)} + \sum \text{Years} + \text{Rural}_{(t-1)} \quad (3)$$

The dependent variable is the log of the number of quarters from the quarter of CEO succession to the quarter in which a bank is downgraded on its management rating. Observations on banks that are not downgraded are censored in a given quarter if a bank goes out of existence, reaches the end of the sampling period or reaches a maximum of 20 quarters (five years) after succession. For these tests, we eliminate banks in the worst category (it is impossible to descend from a "5" rating).

Examination Interval and Assets are interpreted as in the previous equation. The coefficient on Bad Rating (representing banks rated "3" or "4") would be positive if a bank is less likely to experience a downgrade when the inherited rating is worse.

Good Rating is a dummy variable coded as one if a bank has a rating of "1" and zero otherwise (in this equation, banks with ratings of "2" constitute the excluded category). If banks

are more likely to experience a downgrade sooner when the inherited rating is better, the coefficient on this variable should be negative. In these situations, changes in performance are measured within an operating environment characterized by an outgoing CEO that is more likely to have left the bank voluntarily.

2.2 Hypotheses

We test two null hypotheses based on the previously identified problems in managerial succession for rural banks. The first is

H1: Banks experiencing CEO succession in urban areas will exhibit shorter times to upgrade in management rating compared to those in rural areas.

A non-negative coefficient on Rural in equation (2) would be consistent with the belief that urban banks experiencing CEO succession, compared to rural banks, are able to improve performance more quickly from levels inherited from their predecessors. This null hypothesis is one-sided insofar as there is no support of which we are aware for an alternative hypothesis that succession planning is easier at rural banks.

The second hypothesis is

H2: Banks experiencing CEO succession in urban areas will experience longer times to downgrade in management rating.

A non-positive coefficient on Rural in equation (3) would be consistent with the belief that urban banks experiencing CEO succession, compared to rural banks, are better able to defer declines in managerial performance ratings from levels inherited from their predecessors. This null hypothesis also is one-sided.

2.3 The Sample

Our sample consists of 1,513 observations on community banks experiencing CEO succession, 2003 to 2016, which were identified in a database maintained by S&P Global Market Intelligence, a part of S&P Global, Inc.[5,6] The database includes a repository of information on top executives at financial institutions. It is extensive but not comprehensive. Our results must be qualified accordingly.

The sample period, the first quarter of 2003, coincides with changes to definitions of geographic statistical areas on which we base categorizations of banks as urban or rural. It extends through the fourth quarter of 2017. Bank-specific and publicly-available data are obtained from Reports of Condition Income (Call Reports). Confidential bank ratings are obtained through the Federal Reserve Bank of St. Louis.

The successions are listed by year and location, urban or rural, in Table 1. More occur in urban areas. They reached a peak in 2014, at 176 (131 urban and 45 rural), before declining to 64 in 2016 (at the point of our analysis successions were unavailable for the entirety of this year). The ratio of rural to urban successions varies across years without a discernible pattern.

[5] We define community banks as those with assets less than $10 billion.
[6] Our sample of "banks" also includes savings institutions.

Table 2 lists successions by location and prior examination interval. The greater frequency of shorter intervals appears to suggest that successions, in at least some cases, may be associated with incidence of examination. The ratio of rural to urban successions varies across intervals without a discernible pattern.

Descriptive statistics for the subsample used to test the first hypothesis, that urban banks experiencing succession have shorter times to upgrade, are presented in Table 3. This subsample of 249 rural banks and 991 urban banks excludes those with the best management rating (273 banks).

Management ratings are lower (better) at rural banks, 2.36, than they are at urban banks, 2.55. Rural banks are smaller. They have slightly longer times to upgrade, 13.32 quarters vs. 12.96 quarters. They are slightly less likely to experience censoring, 58 per cent vs. 59 percent. This can be expressed alternatively as a slightly greater incidence of upgrade.

The same information for the subsample used to test the second hypothesis, that urban banks experiencing succession have longer times to downgrade, is presented in Table 4. This subsample of 304 rural banks and 1,161 urban banks excludes those with the worst management ratings (48 banks). Management ratings, once again, are lower (better) at rural banks, 2.08, than they are urban banks. 2.17. Rural banks are smaller. They are more likely to be subject to censoring, 72 percent vs. 65 percent, which means that they are less likely to be downgraded. They have longer times to downgrade, 14.16 quarters vs. 12.96 quarters.

3. Empirical Findings

In this section we present results for estimation of equation (2), time to upgrade, and equation (3), time to downgrade, as described in the previous section. We also include related tests of robustness using subsamples stratified by management rating and examination interval.

We acknowledge that our sample necessarily excludes banks that may have merged out of existence in anticipation of potential succession problems. In this regard, about 20 percent of community bankers surveyed by the CSBS (2018) said succession was "very important" in their consideration of acquisition offers. To the extent that acquisitions associated with succession are more likely to occur in rural areas, our reported results are subject to bias. They must be qualified accordingly.

Further analysis of this survey data, on the other hand, shows that, on average, banks located outside metropolitan areas ranked succession issues as lower in importance--not higher--than did banks located inside metropolitan areas. This is inconsistent with a perceived lack of younger, capable bank managers in rural areas that motivates retiring bankers to prepare for the sale of their institutions (Walser and Anderlik, 2004; Covington and Courtney, 2014).

3.1 Results for Basic Model

Empirical results are presented in Table 5. With respect to control variables, the coefficients on Examination Interval are positive in both columns but statistically significant only in the case of downgrades. The coefficients on Assets are statistically insignificant.

The coefficient on Bad Rating is negative and statistically significant in the case of time to upgrade, indicating that it is more (less) difficult to improve performance when starting from a relatively superior (inferior) position, and positive and statistically significant in the case of time

to downgrade, indicating that it is easier (harder) to avoid declines in performance when starting from a relatively inferior (superior) position. The coefficient on Good Rating is negative and statistically significant in the case of time to downgrade. This indicates that it is more difficult (less difficult) to avoid declines in performance when starting from a relatively superior (inferior) position.

Evidence with respect to H1 is reflected in the coefficient on Rural in the first column of Table 5. Its sign is negative and statistically significant at the one percent level. We therefore reject the null hypothesis that CEO succession at banks in urban areas results in shorter times to upgrade in management rating than at banks in rural areas. Incoming CEOs at urban banks, relative to their predecessors, are incapable of enhancing performance when compared to the same transition at rural banks. This is inconsistent with succession difficulties at rural banks that are sufficient to mitigate improvement in relative performance.

Evidence with respect to H2 is provided by the coefficient on Rural in the second column of Table 5. Its sign is positive and statistically significant at the one percent level. We reject the null hypothesis that CEO succession at banks in urban areas result in longer times to downgrade in performance than banks in rural areas. This is inconsistent with succession difficulties at rural banks that are sufficient to prevent deterioration in relative performance.

Our results, overall, fail to support a widely-disseminated opinion that succession is particularly challenging at rural banks (Myers, 2001; Walser and Anderlik, 2004; Covington and Courtney, 2014; Fritz and Marget, 2014; CSBS, 2017; FDIC, 2017). They are inconsistent with a "brain drain" in rural areas that limits the ability of banks to recruit new managers from inside or outside the bank (Walser and Anderlik, 2004). And they appear to raise doubts about the inevitability of a "most likely outcome" for retiring bankers that involves "sale of their

institutions, which could dramatically increase the pace of rural bank consolidation (Walser and Anderlik, 2004)."

3.2 Robustness

The AFT models examined in Table 5 assume that effects of control variables for inherited management rating and examination interval are linear across the entire scale. To address the possibility that this assumption does not hold, we fit the models to subsamples of banks with the same rating and, separately, the same interval. Statistically, these approaches are equivalent to (i) changing the role of the control variable to a factor rather than a linear predictor, which allows for the effect to differ between levels of the predictor, and (ii) interacting this factor with each of the other variables in the AFT model.

Table 6 presents results for subsamples that vary by management rating category. For time to upgrade (first two columns), coefficients on Rural are non-positive for both ratings categories, which fails to provide evidence in support of the hypothesis that urban banks perform better after CEO turnover. For time to downgrade (third through fifth columns), non-negative coefficients on Rural across all ratings categories fail to provide evidence in support of the hypothesis that urban banks perform better after CEO turnover.

Table 7 presents results for the subsamples stratified by examination interval.[7] In Panel A, for time to upgrade, the coefficients on Rural are negative across all quarters. In Panel B, for time to downgrade, the coefficients are positive across all quarters.[8]

[7] Consideration is limited to four intervals because of the small numbers of banks experiencing longer intervals.

[8] Examiners consider asset quality as a performance attribute in the determination of management rating. Thus, our empirical results may be affected by changes in asset quality that: 1) are correlated with changes in management rating; 2) occur after succession; 3) are exogenous

4. Conclusions

We analyze changes in performance at rural and urban banks following turnovers of 1,513 CEOs, 2003 to 2016. We reject null hypotheses that urban banks are slower to experience downgrades, or quicker to experience upgrades, in regulatory-assessed management ratings.

We interpret our results, collectively, as inconsistent with an inability of rural banks to replace CEOs with the same effectiveness as urban banks--i.e., the hiring of rural CEOs, relative to urban CEOs, does not require compromises that are evident in subsequent declines in performance as assessed by regulators. Our results are consistent, on the other hand, with the notion that "disparities in population and growth have not necessarily hurt the financial performance of community banks that operate in nonmetro areas (FDIC, 2012)." They are important as a counterweight to perceived difficulties in succession planning at rural banks (FDIC, 2017; CSBS, 2017; Fritz and Marget, 2014; and Myers, 2001).

The viability of rural banks going forward, of course, is uncertain. But our finding that urban banks fail to outperform rural banks following changes in CEOs suggests that any problems rural banks encounter in the future will not necessarily be aggravated by succession difficulties. This contrasts with a "disappearance of banks in rural America" that is expected to accelerate because of a lack of succession planning (Covington and Courtney, 2014).

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to the bank; and 4) are systematically different across rural and urban location. Conclusions must be qualified accordingly.

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Table 1—CEO Successions at Rural and Urban Banks by Year

	Urban	Rural	Ratio		Urban	Rural	Ratio
2003	24	7	.29	2004	31	7	.22
2005	31	8	.26	2006	58	11	.19
2007	71	19	.27	2008	110	28	.25
2009	101	38	.27	2010	125	22	.18
2011	118	25	.21	2012	94	30	.31
2013	129	30	.23	2014	131	45	.34
2015	127	29	.23	2016	56	8	.14

Notes: The sample consists of 1,513 banks, of which 1,206 are located in urban areas and 307 are located in rural areas. Urban banks are in metropolitan statistical areas and rural banks are outside a metropolitan, or micropolitan, statistical area. Ratio is the ratio of rural banks to urban banks.

Table 2—CEO Successions at Rural and Urban Banks by Examination Interval

	Urban	Rural	Ratio
Zero Quarters	348	69	.20
One Quarter	264	71	.27
Two Quarters	224	51	.23
Three Quarters	208	51	.24
Four Quarters	89	33	.37
Five Quarters	54	26	.48
Six Quarters	16	5	.31
Seven Quarters	1	1	1.0
Eight Quarters	2	0	0.0

The sample consists of 1,513 banks, of which 1,206 are located in urban areas and 307 are located in rural areas. Urban banks are in metropolitan statistical areas and rural banks are outside a metropolitan, or micropolitan, statistical area. Ratio is the ratio of rural banks to urban banks. Examination interval is the number of quarters to prior examination from the quarter of succession.

Table 3—Descriptive Statistics: Upgraded and Not Upgraded Banks

Rural Banks (N=249):

	Mean	Standard Deviation	Minimum	Maximum
Assets	$311	$687	$8	$8,699
Rating	2.36	0.653	2.00	5.00
Examination Interval	1.92	1.62	0	6
Quarters to Upgrade	13.32	6.60	1.00	20.00
Censored	.582	.494	0	1

Urban Banks (N=991):

	Mean	Standard Deviation	Minimum	Maximum
Assets	$702	$1,274	$5	$9,624
Rating	2.55	0.860	2.00	5.00
Examination Interval	1.68	1.54	0	8
Quarters to Upgrade	12.96	6.53	1.00	20.00
Censored	.590	.492	0	1

Notes: This subsample excludes banks with the highest management rating. Dollar amounts are expressed in millions. Urban banks are in metropolitan statistical areas and rural banks are outside a metropolitan, or micropolitan, statistical area. Assets are bank total assets. Rating is a management performance rating established by regulators. Examination interval is the number of quarters to prior examination from the quarter of succession. Quarters to upgrade is the number of quarters from the quarter of succession until a bank experiences an upgrade in rating. Observations are censored if they are not upgraded before going out of existence or reaching the end of the sample or a five-year limit.

Table 4—Descriptive Statistics: Downgraded and Not Downgraded Banks

Rural Banks (N=304):

	Mean	Standard Deviation	Minimum	Maximum
Assets	$330	$671	$8	$8,699
Management Rating	2.08	0.746	1.00	4.00
Quarters to Downgrade	14.16	6.49	1.00	20.00
Examination Interval	2.05	1.68	0	7
Censored	.726	.446	0	1

Urban Banks (N=1,161):

	Mean	Standard Deviation	Minimum	Maximum
Assets	$806	$1,378	$5	$9,624
Management Rating	2.17	0.83	1.00	4.00
Quarters to Downgrade	12.96	6.87	1.00	20.00
Examination Interval	1.76	1.57	0	8
Censored	.653	.475	0	1

Notes: This subsample excludes banks with the lowest management rating. Dollar amounts are expressed in millions. Urban banks are in metropolitan statistical areas and rural banks are outside a metropolitan, or micropolitan, statistical area. Assets are bank total assets. Rating is a management performance rating established by regulators. Examination interval is the number of quarters to prior examination from the quarter of succession. Quarters to upgrade is the number of quarters from the quarter of succession until a bank experiences an upgrade in rating. Observations are censored if they are not upgraded before going out of existence or reaching the end of the sample or a five-year limit.

Table 5—Empirical Results

	Time to Upgrade	Time to Downgrade
Intercept	4.420*** (90.72)	3.497*** (29.33)
Examination Interval	0.019 (0.48)	0.106*** (8.69)
Assets	-0.027 (0.91)	0.040 (0.95)
Bad Rating	-1.833*** (350.5)	0.876*** (27.91)
Good Rating		-0.905*** (51.85)
Rural	-0.211*** (6.40)	0.483*** (10.68)
-2 Log Likelihood	2,037	4,267
N	1,240	1,465

Notes: Time to Upgrade (Downgrade) is the log of the number of quarters after the quarter of succession to the quarter of upgrade (downgrade) in rating (or censoring). Examination Interval is the number of quarters from the quarter of succession back to the prior examination. Assets is the log of assets. Bad Rating is a dummy variable for banks in the lowest three of five possible ratings categories and Good Rating is a dummy variable for banks in the highest ratings category (banks in the second highest ratings category are the excluded group). Rural is a dummy variable equal to one if a bank is located outside a metropolitan or micropolitan statistical area and 0 if a bank is located inside a metropolitan statistical area. The "time to downgrade" subsample excludes banks with the lowest management rating. The "time to upgrade" subsample excludes banks with the highest management rating. ***, **, and * indicate statistical significance at the one percent, five percent and ten percent levels. Chi Square values are in parentheses.

Table 6—Empirical Results, By Rating

	Time to Upgrade		Time to Downgrade		
	Rating = 2	Rating > 2	Rating = 1	Rating = 2	Rating > 2
Intercept	4.974***	2.318***	3.236***	2.645***	5.725**
	(232.6)	(18.7)	(13.60)	(8.07)	(5.80)
Examination Interval	0.092**	-0.016	0.120**	0.040	0.588**
	(4.69)	(0.18)	(6.48)	(0.69)	(6.21)
Assets	-0.063	-0.007	0.006	0.111	-0.180
	(1.25)	(0.04)	(0.01)	(3.20)	(1.07)
Rural	-0.228	-0.205**	0.300	0.678***	0.818
	(2.15)	(4.39)	(0.74)	(11.29)	(1.62)
-2 Log Likelihood	1,530	1,071	689	2,553	554
N	815	425	273	815	377

Notes: Time to Downgrade (Upgrade) is the log of the number of quarters from the quarter of succession to the quarter of downgrade (upgrade) in rating (or censoring). Rating is a management performance rating established by regulators. Examination Interval is the number of quarters from the quarter of succession back to the prior examination. Assets is the log of assets. Rural is a dummy variable equal to one if a bank is located outside a metropolitan or micropolitan statistical area and 0 if a bank is located inside a metropolitan statistical area. The "time to downgrade" subsample excludes banks with the lowest management rating. The "time to upgrade" subsample excludes banks with the highest management rating. ***, **, and * indicate statistical significance at the one percent, five percent and ten percent levels. PR > Chi Square values are in parentheses.

Table 7—Empirical Results, By Examination Interval

Panel A: Time to Upgrade

	Zero Quarters	One Quarter	Two Quarters	Three Quarters
Intercept	3.651***	4.914***	3.673***	5.681**
	(16.66)	(31.5)	(18.2)	(37.9)
Assets	-0.005	-0.076	-0.002	-0.075
	(0.01)	(2.19)	(0.00)	(1.83)
Bad Rating	-2.023***	-1.489***	-1.526***	-1.895***
	(103)	(86.5)	(78.3)	(101)
Rural	-0.255	-0.113	-0.079	-0.349*
	(2.22)	(0.74)	(0.21)	(3.20)
-2 Log Likelihood	1,352	427	321	280
N	354	275	228	211

Notes: Time to Downgrade (Upgrade) is the number of quarters from the quarter of succession to the quarter of downgrade (upgrade) in rating (or censoring). Assets is the log of assets. Bad Rating is a dummy variable for banks in the lowest three of five possible ratings categories and Good Rating is a dummy variable for banks in the highest ratings category (banks in the second highest ratings category are the excluded group). Rural is a dummy variable equal to one if a bank is located outside a metropolitan or micropolitan statistical area and 0 if a bank is located inside a metropolitan statistical area. The "time to downgrade" subsample excludes banks with the lowest management rating. The "time to upgrade" subsample excludes banks with the highest management rating. ***, **, and * indicate statistical significance at the one percent, five percent and ten percent levels. Chi Square values are in parentheses.

Table 7— (continued)

Panel B: Time to Downgrade

	Zero Quarters	One Quarter	Two Quarters	Three Quarters
Intercept	3.446**	4.406***	1.837	2.746**
	(4.82)	(12.38)	(2.51)	(3.93)
Assets	0.073	0.044	0.101	0.096
	(0.57)	(0.41)	(1.36)	(1.44)
Bad Rating	1.213***	0.367*	0.779**	2.026***
	(15.38)	(2.01)	(5.61)	(8.35)
Good Rating	-1.313***	-0.846***	-0.831***	-6.854***
	(18.29)	(14.28)	(11.41)	(9.05)
Rural	0.008	0.343	0.359	1.053***
	(0.00)	(1.68)	(1.68)	(7.60)
-2 Log Likelihood	861	508	464	421
N	391	319	272	257

Notes: Time to Downgrade (Upgrade) is the number of quarters from the quarter of succession to the quarter of downgrade (upgrade) in rating (or censoring). Assets is the log of assets. Bad Rating is a dummy variable for banks in the lowest three of five possible ratings categories and Good Rating is a dummy variable for banks in the highest ratings category (banks in the second highest ratings category are the excluded group). Rural is a dummy variable equal to one if a bank is located outside a metropolitan or micropolitan statistical area and 0 if a bank is located inside a metropolitan statistical area. The "time to downgrade" subsample excludes banks with the lowest management rating. The "time to upgrade" subsample excludes banks with the highest management rating. ***, **, and * indicate statistical significance at the one percent, five percent and ten percent levels. PR > Chi Square values are in parentheses.