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Performance and growth among de novo subchapter-s banks

Russell Kashian
University of Wisconsin Whitewater

Ronald Tittle
University of Wisconsin Whitewater

Richard Cummings
University of Wisconsin Whitewater

Peter Westort
University of Wisconsin Oshkosh

Abstract

Prior research suggests that shareholder limitations under Subchapter S (Sub-S) status enhance performance but result in slow growth. A sample of up to 882 de novo banks, started between 2001 and 2014 and lasting at least two years, is used to test how early the performance and growth effects appear. Testing uses cross-sectional regressions for performance and growth separately for two years, then three, and so forth up to seven years after bank start-up. During this period, positive performance effects appear early and tend to remain, while negative growth effects tend to be both weaker and appear later in the life-cycle of the bank.

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Contact: Russell Kashian - kashianr@uww.edu, Ronald Tittle - tittlerj10@uww.edu, Richard Cummings - cummingr@uww.edu, Peter Westort - westort@uwosh.edu.
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1. Introduction

U.S. banks were allowed to elect Sub-S status after passage of the Small Business Protection Act of 1996, with the shareholder limit raised over time until the present maximum of 100 was reached with passage of the American Jobs Creation Act in 2004. Banks not electing Sub-S status remain as traditional C corporations for tax purposes.

Studies of differences between Subchapter S corporations (hence Sub-S banks) and C corporation banks tend to focus on the tax advantages of Sub-S status (Depken et al., 2010), and the superior performance of Sub-S banks (Cyree et al., 2010). The Sub-S limitation to 100 shareholders also led to the hypothesis that Sub-S banks grow more slowly than their C corporation peers in terms of equity and assets, a hypothesis which was recently confirmed (Kashian, Cummings and Westort, 2017).

The present analysis seeks to ascertain when the performance enhancing and growth-reducing effects of Sub-S status begin in relation to the age of de novo banks.

2. Prior and current studies

Prior studies of Sub-S banks suggest they are more profitable than comparable C corporation banks. That finding holds after correcting for the tax advantages of Sub-S banks (Gilbert and Wheelock, 2007), and after controlling for a variety of profit determinants and for selection into Sub-S status (Cyree et al., 2010). Those studies attribute this difference to the enhanced ability of Sub-S shareholders to monitor managers due to the limited number of shareholders, thereby improving managerial performance. Consistent with those claims, cost efficiency was found to be higher among a sample of Sub-S and comparable C corporation banks (Kashian et al., 2011).

Accepting that Sub-S banks have performance advantages, they might be expected to grow loans and hence assets more quickly than other banks. The limit to 100 shareholders, however, may also serve as a constraint on growth, given C corporation banks can additionally access equity through sales of new common or preferred stock.

That constraint may have bit particularly hard as banks suffered equity losses due to charge-offs of bad loans during the recession of 2007-2009. Further, capital requirements were initially tightened in 2006, followed by implementation of Basel II rules in 2007, passage of Dodd-Frank in 2010, and a further increase in capital requirements in 2013 under Basel II rules (Posner, 2015, pp. 1870-1871).

A recent study confirms the slow-growth hypothesis for both equity and assets after 2008 (Kashian, Cummings and Westort, 2017).

The present analysis addresses the question of when, in the life-cycle of a de novo bank, these effects appear. To answer that question, cross-sectional regression analyses of de novo banks are undertaken with the following specification for performance:

$$ROA_t = \alpha_t + \beta_{t1}(\text{Sub-S}) + (X_t)\,\boldsymbol{\beta}_t + \varepsilon_t\,, \qquad (1)$$

where ROA is return on assets in year t, α is a constant for that year, β_{t1} is the Sub-S coefficient for that same year, $\boldsymbol{\beta}_t$ is a vector of coefficients for the control variables $\mathbf{X}_t$, with error term ε, and individual bank subscripts left implicit. The time variable t ranges

from two years to seven years after the year of bank start-up. The control variables are discussed below, and replacing ROA with return on equity (ROE) in (1) allows estimation of the latter.

To estimate growth in Assets or Deposits, growth variables are used, as in $\Delta Assets_t = Assets_t/Assets_{t-1}$. The estimator in (1) is used with these growth variables.

A variety of control variables are used. An asset quadratic is included to capture any economy of scale effects (it is excluded from the Asset growth regressions), and the Herfindahl index is used as a measure of market competition. As is standard, the index is constructed with markets defined as Metropolitan Statistical Areas (MSAs) for urban areas, and by county in rural areas (Kashian, McGregory and Drago, 2016). To account for the fact that many banks operate in multiple markets, the index is estimated for the share of market deposits held by any bank, for each market the bank operates in, then summed and weighted by the distribution of deposits across markets. It is expected that market competition (a low Herfindahl value) will be associated with reduced performance and growth. The proportion of non-performing loans is included as an indicator of past risky behavior which may adversely affect performance or growth. The Tier 1 Risk-based ratio, an indicator of the soundness of the bank, is also included, although the direction of any effect is unknown. The 1-year Treasury bill rate (as of July 1 each year) is included to capture market shifts, and the proportion of bank deposits in urban areas is included to reflect geographic market differences. Given bank start-up occurs in different years, year dummy variables are included in $\mathbf{X}_t$, to control for any year fixed effects, which are particularly important given the financial collapse and subsequent recession may have affected bank performance and growth across the economy.

Most data are from FDIC Call Reports and were provided by SNL, with equity and assets corrected for inflation using a measure of inflation (CPI-U) from the BLS (2015). Data on the location of deposits is from annual FDIC Summary of Deposits data. The Summary of Deposits data are valid as of June 30 of each year, so Sub-S status, and Call Report data are similarly drawn from 2nd quarter data each year.

Descriptive statistics for the study variables, using the sample of de novo banks, are provided in Table 1. Given the figures are for de novo banks, it is not surprising that both ROA and ROE are negative for these young banks.

Table 1. Descriptive Statistics

Variable	Mean	Standard Error
ROA – return on investment	-0.75%	4.83
ROE – return on equity	-2.85%	34.5
Deposits	$181m	295m
Assets	$218m	353m
Hirfendahl index	.144	.076
Non-performing loans	2.34%	4.25
Tier 1 risk-based ratio	24.3%	40.3
Treasury rate	1.45%	1.78
Urban proportion	.863	.339
Sub-S bank	13.4%	34.1

Notes: Minimum N 8,517 for ROA, maximum 8,706 for Treasury rate. Deposits and Assets corrected for inflation.

Note that 106 of these de novo banks failed between 2008 and 2014, with 86 of these occurring between 2009 and 2011. Of those failures, 15 (14.2%) were Sub-S banks. That figure is slightly higher than the proportion of Sub-S banks among all de novo banks (13.5%), but that difference might be due to Sub-S banks becoming increasingly popular during the mid-2000s, reaching peaks among de novo banks of 19.4% in 2003, and 20.3% in 2005, which were particularly unlucky years to start new banks. Additionally, although only 23 de novo banks date to 2009 and later, none of these were Sub-S banks. Given the failures, the main analysis uses data on all banks, with a specification check involving replication of the analyses for banks which did not fail during this period.

3. Results

ROA regression results are provided in Table 2. As expected, the direct effect of Assets is typically positive, with some negative quadratic effects, consistent with diseconomies of scale. The lone positive Herfindahl index coefficient suggest monopoly power is correlated with profitability. Non-performing loans are significantly negatively associated with ROA, as expected, while the Tier 1 risk-based ratio is significant in three cases, but flips sign between Year6 and Year7. The treasury rate tends to positively affect ROA, although the Year7 coefficient flips to negative and significant, perhaps because many relevant observations were late in the period when quantitative easing was ending (e.g., the rate rose from 0.11% in 2014, to 0.51% in 2016). The urban proportion tends to exert negative effects. The year dummy coefficients are consistent with negative effects from the financial collapse. The Sub-S coefficient is uniformly positive, and significant in five of the six cases. The adjusted R^2 statistics are reasonable, suggesting the independent variables explain around one-third of the variation in the dependent variable.

Results for ROE are presented in Table 3. In general, these results mimic but are slightly weaker than those for ROA. For example, the Sub-S coefficient remains positive, but is only significant in four (instead of five) of the six regressions.

Table 4 presents regression results for annual growth in deposits. Assets tend to have a positive effect on deposit growth as the bank ages, with a negative Herfindahl index coefficient in years 3 and 4, suggesting monopoly power reduces growth in deposits (even if it facilitates having a large share of local market deposits). Non-performing loans are negatively related to deposit growth in four of six cases, consistent with the possibility that poor management tends to yield both low deposit growth and poor loan performance. The Tier 1 risk-based ratio only has one significant effect, which is negative in the 7^{th} year; there is no intuitively obvious explanation for this result. The treasury rate effect is negative in Year3 and Year7, but positive in Year5 (the latter may represent a fluke due to 2009 being the mean year for Year5 observations). The urban proportion is positive in Year2, suggesting a mild urban location growth benefit, but not beyond. The year dummy patterns do not follow any particular pattern around the

Table 2. ROA Regressions for De Novo Banks

Variables	Year2	Year3	Year4	Year5	Year6	Year7
Assets	0.000***	0.000***	0.000***	0.000	0.000*	0.000*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Assets-squared	-0.000***	-0.000	-0.000*	0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Herfindahl index	-0.247	2.072	-1.242	0.344	1.144*	0.129
	(1.142)	(1.600)	(1.639)	(0.934)	(0.681)	(0.606)
Non-performing loans	-0.285***	-0.378***	-0.252***	-0.288***	-0.247***	-0.174***
	(0.062)	(0.085)	(0.035)	(0.058)	(0.051)	(0.033)
Tier 1 risk-based ratio	-0.039***	0.018	-0.018	0.035	0.074***	-0.013*
	(0.010)	(0.015)	(0.026)	(0.023)	(0.027)	(0.007)
Treasury rate	0.566***	0.308***	0.528	0.298***	0.154***	-0.345***
	(0.185)	(0.095)	(0.335)	(0.099)	(0.043)	(0.101)
Urban proportion	-0.539***	-0.305	-0.508***	-0.400**	-0.264	-0.331**
	(0.184)	(0.242)	(0.164)	(0.176)	(0.192)	(0.137)
2004	-1.097***					
	(0.393)					
2005	-1.384**	-0.476*				
	(0.612)	(0.264)				
2006	-2.491***	-0.920**	-1.008*			
	(0.897)	(0.402)	(0.553)			
2007	-2.936***	-1.374***	-1.046**	-0.300**		
	(0.855)	(0.369)	(0.472)	(0.143)		
2008	-2.240***	-1.182***	-0.284	-0.951	-0.451	
	(0.386)	(0.229)	(0.488)	(0.700)	(0.502)	
2009	-1.247***	-1.285***	0.132	0.147	-0.803***	-1.047***
	(0.217)	(0.265)	(1.084)	(0.532)	(0.299)	(0.309)
2010	-0.235	0.380	1.396	1.047*	0.630	-0.778*
	(0.171)	(0.291)	(1.128)	(0.587)	(0.436)	(0.406)
2011	-0.348	0.650***	1.800	1.887***	0.906*	0.039
	(0.353)	(0.235)	(1.157)	(0.553)	(0.488)	(0.260)
2012	-2.940	0.070	2.052*	1.711***	1.287***	0.079
	(1.973)	(0.412)	(1.149)	(0.506)	(0.288)	(0.259)
2013		-2.904	0.904	1.565***	1.071***	0.235
		(2.019)	(1.272)	(0.485)	(0.229)	(0.203)
2014				1.560***	0.928***	-0.025
				(0.533)	(0.194)	(0.195)
2015					0.484***	0.218
					(0.155)	(0.249)
Subs	0.793***	0.361	0.389*	0.807***	0.477*	0.982***
	(0.162)	(0.223)	(0.208)	(0.204)	(0.271)	(0.224)
Constant	-0.015	-0.519	-0.411	-0.924	-1.137**	1.253***
	(0.388)	(0.503)	(1.368)	(0.745)	(0.541)	(0.265)
N	882	871	839	813	766	719
R^2	0.350	0.423	0.378	0.306	0.339	0.284
Adjusted R^2	0.337	0.411	0.366	0.292	0.325	0.268

Notes: Ordinary Least Squares regressions with robust standard errors. Significance levels: * 10%, ** 5%, *** 1%.

Table 3. ROE Regressions for De Novo Banks

Variables	Year2	Year3	Year4	Year5	Year6	Year7
Assets	0.000***	0.000**	0.000**	0.000	0.000**	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Assets-squared	-0.000***	-0.000	-0.000*	0.000	-0.000*	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Herfindahl index	-0.426	30.444	-27.324	4.473	-0.162	1.680
	(6.786)	(21.554)	(31.788)	(20.985)	(13.684)	(9.564)
Non-performing loans	-2.763***	-4.854***	-4.848***	-6.015***	-3.276***	-3.138***
	(0.748)	(1.326)	(1.275)	(1.099)	(0.785)	(0.720)
Tier 1 risk-based ratio	-0.061	0.446**	0.312	1.916***	1.836***	0.031
	(0.039)	(0.189)	(0.207)	(0.597)	(0.622)	(0.083)
Treasury rate	4.703***	3.167***	6.044**	5.088***	2.522***	-2.039*
	(1.432)	(1.129)	(2.511)	(0.987)	(0.899)	(1.137)
Urban proportion	-3.869***	-1.792	-3.516	-5.286*	-3.209	-3.774*
	(1.286)	(2.811)	(4.150)	(3.153)	(4.454)	(2.192)
2004	-9.490***					
	(3.543)					
2005	-11.749**	-7.416**				
	(4.784)	(3.390)				
2006	-20.854***	-10.315**	-11.319***			
	(6.951)	(4.670)	(4.262)			
2007	-22.773***	-14.268***	-11.683***	-3.213		
	(6.612)	(4.313)	(3.633)	(2.420)		
2008	-15.186***	-8.637***	0.280	0.391	0.090	
	(2.891)	(2.817)	(4.925)	(7.537)	(5.386)	
2009	-5.271***	-11.601***	11.086	17.014**	-10.882	-6.842*
	(1.518)	(3.395)	(9.751)	(8.546)	(8.303)	(3.871)
2010	-0.442	6.440	20.729**	30.272***	6.604	-13.194*
	(1.397)	(4.294)	(9.431)	(10.030)	(7.186)	(6.762)
2011	-2.644	6.489**	25.742***	28.563***	15.882**	6.138
	(3.069)	(2.945)	(9.728)	(6.185)	(7.703)	(4.380)
2012	-13.882*	-1.438	24.292***	30.742***	18.783***	2.722
	(8.430)	(4.613)	(9.049)	(5.569)	(4.939)	(4.022)
2013		-24.343*	12.934	24.506***	13.546***	6.462**
		(14.492)	(10.184)	(4.288)	(4.113)	(2.885)
2014				23.606***	12.988***	2.134
				(4.539)	(3.727)	(2.503)
2015					7.980**	2.248
					(3.393)	(2.735)
Subs	5.798***	4.164	4.281**	10.895***	6.138	10.782***
	(1.175)	(2.723)	(2.155)	(3.205)	(4.363)	(2.977)
Constant	-3.391	-10.516	-12.290	-39.864***	-30.917***	10.656***
	(2.374)	(7.199)	(12.140)	(13.972)	(11.530)	(3.653)
N	881	871	839	811	764	718
R^2	0.296	0.380	0.417	0.347	0.245	0.275
Adjusted R^2	0.282	0.367	0.406	0.333	0.228	0.259

Notes: Ordinary Least Squares regressions with robust standard errors. Significance levels: * 10%, ** 5%, *** 1%.

Table 4. Annual Deposit Growth Regressions for De Novo Banks

Variables	Year2	Year3	Year4	Year5	Year6	Year7
Assets	0.000	0.000*	0.000*	-0.000	0.000*	0.000**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Assets-squared	-0.000	0.000	-0.000	0.000	-0.000*	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Herfindahl index	0.199	-0.638*	-0.514*	-0.535	0.154	0.025
	(0.548)	(0.372)	(0.294)	(0.629)	(0.181)	(0.102)
Non-performing loans	-0.043**	-0.018***	-0.006	0.097	-0.008***	-0.011***
	(0.022)	(0.007)	(0.006)	(0.065)	(0.003)	(0.003)
Tier 1 risk-based ratio	0.017	0.004	0.002	0.124	0.003	-0.002*
	(0.011)	(0.005)	(0.002)	(0.076)	(0.003)	(0.001)
Treasury rate	0.200	-0.218***	0.014	0.223*	-0.032	-0.097***
	(0.135)	(0.052)	(0.027)	(0.132)	(0.023)	(0.026)
Urban proportion	0.278***	-0.182	-0.030	0.043	-0.110	-0.002
	(0.097)	(0.179)	(0.058)	(0.087)	(0.098)	(0.019)
2004	-0.298					
	(0.250)					
2005	-0.566	0.327**				
	(0.447)	(0.132)				
2006	-0.778	0.653***	-0.046			
	(0.667)	(0.219)	(0.063)			
2007	-0.643	0.590***	-0.068	-0.093		
	(0.643)	(0.195)	(0.052)	(0.155)		
2008	-0.289	-0.042	-0.093*	0.473	0.023	
	(0.290)	(0.095)	(0.050)	(0.339)	(0.131)	
2009	0.575***	-0.230***	0.054	0.897*	-0.049	0.007
	(0.136)	(0.079)	(0.114)	(0.508)	(0.103)	(0.055)
2010	-0.006	-0.315***	-0.052	0.969	-0.158	-0.093*
	(0.095)	(0.064)	(0.109)	(0.593)	(0.110)	(0.053)
2011	-0.225	-0.621***	0.112	0.287	-0.236**	-0.148**
	(0.188)	(0.082)	(0.135)	(0.250)	(0.112)	(0.059)
2012	-0.083	-0.567***	-0.046	0.172	-0.145	-0.136**
	(0.349)	(0.077)	(0.110)	(0.201)	(0.110)	(0.055)
2013		-0.378*	-0.020	0.812	-0.216*	-0.128**
		(0.201)	(0.093)	(0.510)	(0.113)	(0.055)
2014				0.779*	-0.184	-0.127**
				(0.467)	(0.112)	(0.055)
2015					-0.150	-0.062
					(0.107)	(0.053)
Subs	0.058	0.067	-0.024	-0.082	-0.045*	0.006
	(0.236)	(0.091)	(0.026)	(0.100)	(0.023)	(0.019)
Constant	1.104***	1.873***	1.102***	-1.000	1.214***	1.235***
	(0.357)	(0.231)	(0.101)	(1.392)	(0.120)	(0.065)
N	880	873	840	813	766	719
R^2	0.052	0.137	0.038	0.423	0.116	0.193
Adjusted R^2	0.0336	0.120	0.0196	0.412	0.0971	0.176

Notes: Ordinary Least Squares regressions with robust standard errors. Significance levels: * 10%, ** 5%, *** 1%.

financial collapse, while the Sub-S coefficient is negative and significant for Year6, but

otherwise insignificant. The adjusted R^2 statistics tend to be well below those for the ROA and ROE regressions, suggesting deposit growth is largely driven by factors not included in the model.

Turning to the asset growth regressions reported in Table 5, the Herfindahl index

Table 5. Annual Asset Growth Regressions for De Novo Banks

Variables	Year2	Year3	Year4	Year5	Year6	Year7
Herfindahl index	0.054	-0.701	-0.326**	-0.047	0.069	0.050
	(0.310)	(0.454)	(0.129)	(0.584)	(0.159)	(0.097)
Non-performing loans	-0.031**	-0.016**	-0.013***	0.132	-0.012***	-0.012***
	(0.012)	(0.007)	(0.002)	(0.123)	(0.001)	(0.003)
Tier 1 risk-based ratio	-0.004**	0.008*	-0.000	0.174	0.000	-0.002*
	(0.002)	(0.005)	(0.002)	(0.148)	(0.002)	(0.001)
Treasury rate	0.048	-0.091	0.022	0.276	-0.013	-0.078***
	(0.082)	(0.057)	(0.020)	(0.237)	(0.018)	(0.023)
Urban proportion	0.172***	-0.131	0.041**	-0.086	-0.066	0.025
	(0.050)	(0.220)	(0.020)	(0.112)	(0.079)	(0.017)
2004	-0.154					
	(0.152)					
2005	-0.158	0.128				
	(0.273)	(0.146)				
2006	-0.179	0.251	-0.077			
	(0.404)	(0.239)	(0.055)			
2007	-0.224	0.239	-0.070	-0.109		
	(0.380)	(0.216)	(0.048)	(0.172)		
2008	-0.147	-0.007	-0.051	0.601	0.062	
	(0.167)	(0.093)	(0.035)	(0.573)	(0.137)	
2009	0.209***	-0.087	0.106	1.087	-0.023	-0.004
	(0.065)	(0.067)	(0.065)	(0.927)	(0.083)	(0.049)
2010	-0.097**	-0.074	-0.020	1.251	-0.118	-0.118**
	(0.045)	(0.057)	(0.068)	(1.106)	(0.086)	(0.047)
2011	-0.238	-0.366***	0.034	0.327	-0.160*	-0.142**
	(0.156)	(0.072)	(0.084)	(0.410)	(0.087)	(0.056)
2012	0.025	-0.362***	0.018	0.460	-0.086	-0.122**
	(0.107)	(0.083)	(0.067)	(0.424)	(0.088)	(0.048)
2013		-0.301***	-0.037	0.833	-0.124	-0.123**
		(0.096)	(0.071)	(0.778)	(0.086)	(0.049)
2014				0.883	-0.097	-0.089*
				(0.786)	(0.087)	(0.049)
2015					-0.096	-0.043
					(0.088)	(0.048)
Subs	-0.063	-0.003	-0.044**	-0.118	-0.073**	-0.022
	(0.045)	(0.072)	(0.021)	(0.136)	(0.030)	(0.016)
Constant	1.622***	1.672***	1.224***	-2.504	1.297***	1.246***
	(0.108)	(0.261)	(0.083)	(3.163)	(0.119)	(0.055)
N	880	873	840	813	766	719
R^2	0.061	0.055	0.058	0.156	0.070	0.150
Adjusted R^2	0.0443	0.0383	0.0416	0.141	0.0527	0.134

Notes: Ordinary Least Squares regressions with robust standard errors. Significance levels: * 10%, ** 5%, *** 1%.

is negative and significant in Year4, again suggesting monopoly power inhibits growth, as in the deposit growth regressions. The non-performing loan coefficients tend to be negative, again echoing the deposit change results, with inconsistent signs (with significance) for the Tier1 risk-based ratio. The treasury rate is negative and significant in Year7, with the urban proportion being positive and significant in Year2 and Year4, again suggesting growth advantages to urban locations. The year dummy coefficients again yield no obvious pattern, with the Sub-S coefficients being negative and significant as expected, but only for Year4 and Year6. As with deposit growth, the adjusted R^2 statistics tend to be low, suggesting other factors may be driving asset growth.

After replicating all regressions reported above, using the smaller sample of banks which did not fail during the study period (results available upon request), the sample size shrinks dramatically, with a maximum of 107 observations for Year2 (for deposit growth and asset growth) and a minimum of 41 observations for Year7 (for ROE). Considering the pattern of Sub-S coefficients, in the ROA regressions, four of six Sub-S coefficients remain positive and significant, with the cases of insignificance related to Year3, as also found in the main results (see Table 2), and Year5, which is centered on 2009. For ROE, significant and positive coefficients are only found for Year2 and Year7 (Year4 and Year5 coefficients are also positive and significant in Table 3), which may be attributable to the small sample size. For deposit growth, the negative and significant coefficient for Year6 found earlier (Table 4) is now replaced with a positive and significant Year2 coefficient, which can be discounted given only 104 observations are used for that regression. None of the Sub-S coefficients in the asset growth regressions achieve significance for the smaller sample of banks.

4. Discussion

The results suggest that Sub-S status has a reasonably strong, positive association with financial performance among de novo Sub-S banks across their 2nd to 7th years of existence, relative to comparable de novo banks. That finding suggests the enhanced capacity of the relatively small number of Sub-S shareholders to monitor managers has a fairly immediate impact on financial performance.

The same is not true of the growth effects of Sub-S status on de novo banks. Although no positive effects are identified, the expected negative effects do not appear until the 5th year for deposits and the 4th year for assets, and even in those cases the effects do not appear consistently in later years. This finding suggests the growth reducing effects of Sub-S status only appear over a fairly lengthy period of time.

In future research, it might be useful to add data on the number of bank shareholders among both Sub-S and other de novo banks. Such an addition could provide stronger insight into the role of shareholders in monitoring bank performance. Unfortunately, such data are not publicly available at present.

Given the enhanced financial performance of Sub-S banks found in prior literature (e.g., Cyree et al., 2010) and here relatively quickly subsequent to the formation of a de novo bank, it is disappointing that no new Sub-S bank charters are found since 2009. To the extent that phenomenon exists because relatively small investors are

discouraged by increased regulation and tightened capital requirements, on-going bank consolidation (Jarsulic 2010) is likely to continue, absent changes in regulations.

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