Recently Chartered Banks' Vulnerability to Real Estate Crisis

*by Chiwon Yom**

Even while the U.S. banking industry continues to consolidate and the number of banks continues to shrink, de novo banking activity remains vigorous. De novo banks play important roles in preserving competition in the market, providing credit to small businesses (DeYoung, Goldberg, and White [2000]), and promoting an entrepreneurial spirit (Brislin and Santomero [1991]).[1] At the same time, however, these fledgling institutions are financially fragile and more susceptible to failure. Although they are sound in their early years, with large capital cushions and low levels of nonperforming loans, their financial condition typically deteriorates as capital reserves and the quality of their loans move toward industry levels but earnings remain low. Furthermore—and this may not be widely known—new banks are vulnerable to real estate crises because they concentrate heavily in real estate loans. The extent of new banks' exposure to the real estate market is reflected in their poor ratings on the Real Estate Stress Test (REST). This model measures the severity of a bank's exposure to real estate lending, projecting what would happen to a bank if the real estate market experienced a downturn similar to the New England real estate crisis in the 1990s.[2]

The FDIC closely monitors recently chartered banks and thrifts. For purposes of offsite monitoring, the FDIC defines young banks as commercial banks and thrifts that are eight years old or younger based on studies showing that new banks need more than three years to fully mature (DeYoung [2000], DeYoung and Hasan [1998]). Newly chartered banks tend to be small, and roughly 80 percent of all young banks are located in metropolitan statistical areas (MSAs). This study examines these young banks. Specifically, it examines the vulnerability of these young banks to real estate problems: how their financial condition evolves over time, the degree of risk they bear because of their real estate lending, how they

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[1] In this article, the terms banks and institutions refer to all insured institutions–commercial banks, savings banks and thrifts.

[2] See Collier, Forbush, and Nuxoll (2003). The stress test was developed on the basis of the New England real estate crisis in the 1990s, and information from a bank's balance sheet and income statement are used to rate the institution. The REST ratings are directly comparable to CAMELS ratings; a REST rating of 1 indicates least vulnerable to a real estate crisis, and a rating of 5 indicates most vulnerable. The REST model is part of the FDIC's offsite monitoring system and is used to help identify and monitor the institutions that are most vulnerable to a real estate crisis.

compare with established banks in this respect, and what explains the heightened vulnerability of young banks to real estate crises.

For our benchmark group we choose small established banks, defined for this study as institutions that are more than eight years old, have assets of less than $300 million, and are located in MSAs. In addition, our benchmark group excludes special-purpose institutions, such as credit card banks and banks with extensive trust operations.

This study is preceded by a review of the literature and followed by a summary and conclusion.

The Purpose of This Study in Relation to the Literature

Recent studies have furthered our understanding of newly established banks by examining the determinants of bank start-ups and identifying the factors that determine the performance of de novo banks. De novo banking activity is more likely during periods of favorable economic conditions (Dunham [1989]) and in areas that have undergone merger activity (Dunham [1989], Berger, Bonime, Goldberg, and White [1999], Seelig and Critchfield [2003]). Moreover, new banks tend to locate in urban areas (DeYoung [2000]) and in markets where economic growth is high (Moore and Skelton [1998]).

Among researchers who identify the factors that determine the performance of de novo banks, DeYoung (2003) finds that the relationship between external conditions (for example, intense competitive rivalry or slow economic growth) and higher failure rates is more systematic for the de novo banks than for established banks. Hunter, Verbrugge, and Whidbee (1996) find that adverse economic conditions have contributed to the failure of recently chartered thrifts.

Endogenous factors have also been found to play a significant role in the performance and survival of newly chartered banks. Hunter, Verbrugge, and Whidbee (1996) find that credit risk, low capital stocks, and cost inefficiencies have contributed to the failure of de novo banks. Hunter and Srinivasan (1990) find that differences in operating costs, credit policy, and leverage account for most of the performance variations among the sample banks relative to the established target group during the early years of operation. Arshadi and Lawrence (1987) find that operating costs, deposit growth, composition of loan portfolios, and deposit pricing are important in determining the performance of newly chartered banks; they conclude that the performance of new banks is a function of endogenous factors.

Other studies relate the performance of de novo banks to the banks' business strategies and risk management. Brislin and Santomero (1991) find that de novo banks in the third Federal Reserve district (Pennsylvania, New Jersey, and Delaware) tend to concentrate in single types of loans—for example, real estate loans—and they caution that because of the lack of diversification, such strategies increase portfolio risks. Gunther (1990) attributes the large number of failures of new Texas banks in the 1980s to the banks' aggressive strategies, such as concentrating in commercial and industrial (C&I) loans, maintaining low liquidity, and relying heavily on purchased funds. Hunter and Srinivasan (1990) find that real estate lending has consistent and significant effects on the performance of new banks in the later years of operation.

The present study adds to the literature by exploring the role of real estate lending in relation to the performance and lending strategies of banks established between 1995 and 2003. In the latter half of the 1990s, after severe problems in the banking industry during the 1980s and early 1990s, de novo banking activity picked up. Table 1 reports the number of banks and savings institutions chartered in the United States between 1995 and 2003 that were not affiliates of a holding company.[3] The table disaggregates de novo institutions by state and type of charter (national bank charter, state bank charter, and savings institution charter). During this period, the five

[3] I thank Tim Critchfield at the FDIC's Division of Insurance and Research for providing these data.

Table 1

De Novo Institutions by State[a]

(1) State	(2) National Bank Charters	(3) State Bank Charters	(4) Savings Institutions	(5) Total
AL	2	14	–	16
AR	2	15	2	19
AZ	2	17	–	19
CA	28	54	3	85
CO	3	22	1	26
CT	2	11	6	19
DC	1	–	–	1
DE	2	3	2	7
FL	18	86	17	121
GA	32	61	3	96
IA	3	9	1	13
ID	–	6	1	7
IL	4	69	8	81
IN	3	10	3	16
KS	8	9	2	19
KY	12	27	3	42
LA	2	16	–	18
MA	2	2	1	5
MD	3	6	5	14
ME	–	2	–	2
MI	–	26	1	27
MN	6	29	3	38
MO	7	25	4	36
MS	2	8	–	10
MT	1	1	1	3
NC	2	38	3	43
NE	2	–	–	2
NH	–	2	1	3
NJ	5	30	6	41
NM	1	8	–	9
NV	3	18	1	22
NY	4	14	4	22
OH	7	12	7	26
OK	5	4	2	11
OR	–	16	1	17
PA	1	27	7	35
RI	1	1	1	3
SC	12	8	4	24
SD	4	–	–	4
TN	5	38	3	46
TX	36	20	8	64
UT	–	26	1	27
VA	14	19	1	34
VI	–	2	–	2
WA	7	31	3	41
WI	2	21	5	28
WV	–	11	–	11
WY	1	3	–	4
Total	257	877	125	1259
Percent	20.4	69.7	9.9	100.0

[a] De Novo institutions chartered between 1995 and 2003.

states with the highest number of new start-ups were Florida, Georgia, Illinois, California, and Texas at 121, 96, 81, 85, and 64, respectively. State charters, at 877, constituted the largest share of new institutions (69.7 percent); there were 257 national charters (20.4 percent) and 125 new savings institutions (9.9 percent).

For a number of reasons, this new batch of de novo institutions may differ in performance and viability from the de novo banks in the 1980s. First, economic conditions are more favorable now than they were in the 1980s, when many banking institutions operated under severe regional recessions. Second, regulation and supervision are more stringent now. The Federal Deposit Insurance Corporation Improvement Act of 1991 (FDICIA) requires all institutions, including those with national charters, to apply formally to the FDIC for federal deposit insurance. Before FDICIA, the FDIC granted deposit insurance to national banks as a matter of law once the Office of the Comptroller of the Currency had approved a bank's charter. In contrast, the chartering of state banks depended heavily on whether the FDIC approved the bank's application for insurance: without the FDIC's approval of the application, a state was unlikely to grant a bank charter.

Third, once chartered, a new bank is now supervised more closely by its regulatory agency. The FDIC conducts a limited-scope examination at each newly chartered state nonmember bank within the first six months of operation, followed by a full-scope examination within the first twelve months. Subsequently, each state nonmember bank is examined each year until the end of the third year, although the FDIC may alternate with the state supervisors in conducting the examination.[4] Similarly, the Federal Reserve Banks examine newly chartered state member banks at a higher frequency compared to established banks, conducting full-scope examinations for safety and soundness at newly chartered state

[4] I thank Don Hamm at the FDIC's Division of Supervision and Consumer Protection for referring me to the Manual of Examination Policies, Section 1.1 Basic Examination Concepts and Guidelines.

member banks at 6-month intervals (whereas established banks are examined every 12 to 18 months) and continuing to schedule exams at this frequency until the bank receives a strong composite CAMELS ratings (a rating of 1 or 2) in two consecutive exams (DeYoung [2000]).[5]

Fourth, new banks are required to maintain a higher capital ratio than their established counterparts. Normally the FDIC requires all proposed depository institutions to start with enough capital to provide "a Tier 1 capital to assets leverage ratio (as defined in the appropriate capital regulation of the institution's primary federal regulator) of not less than 8.0% throughout the first three years of operation."[6] These temporary capital requirements are meant to ensure that new banks have enough capital cushion to absorb the negative earnings and rapid asset growth of the first few years.

Finally, bank supervisors typically place restrictions on dividend payouts by new banks, limit the amount of debt that new bank holding companies can issue, and require new banks to maintain minimum levels of loan-loss reserves (DeYoung [2000]).

The Life Cycle of the Performance of Young Banks

We begin our examination of young banks' exposure to the real estate market by describing the evolution of the performance of young banks. To document this evolution, we group young banks chartered between 1995 and 2003 into classes according to the year they are chartered. For example, new banks chartered in 1997 and 1998 are grouped into Class 1997 and Class 1998. Grouping young banks this way is motivated by recent studies that have found that newly chartered banks follow a distinct life-cycle pattern (DeYoung [1999, 2000]).

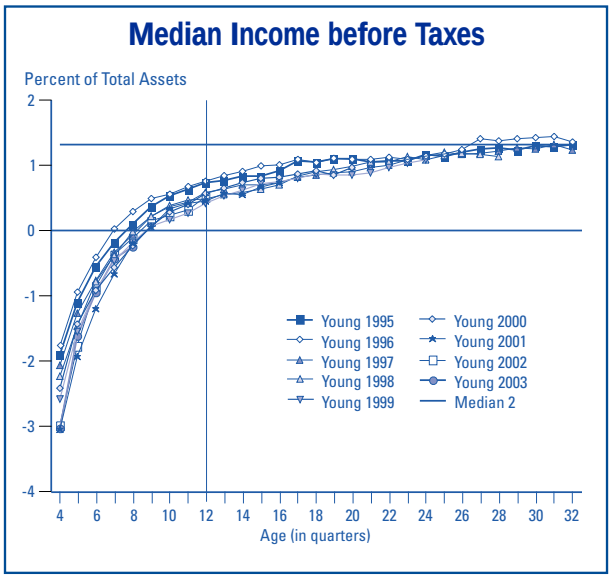
Figures 1 through 5 graph the median values of financial ratios for each of our classes of young banks, starting when the banks are four quarters old (the flow variables are four-quarter sums). For each ratio, the financial performance of all the classes of young banks is compared with the median 2—the median financial ratio of all institutions with a CAMELS composite rating of 2—serving as an industry benchmark.

The figures show that in the early years of young banks, the banks' financial ratios follow similar time paths regardless of the year of chartering. Figure 1 shows that the median bank of each class earned negative profits in the first few years. But although the median banks start to earn profits after about two years, they continue to underperform established banks (the median 2). In the early years, however, young banks' negative or low earnings are offset by a large initial capital and low nonperforming assets: as figures 2 and 3 show, in the first few years young banks have very high capital and very few nonperforming loans. For instance, in their fourth quarter since establishment, the median equity-to-assets ratios for Class 1995, Class 1998, and Class 2000 are 17.40 percent, 18.46 percent, and 18.77 percent, respectively. This is substantially higher than the median 2 equity-to-assets ratio of 8.96 percent. Similarly, the median nonaccruing-loans-to-total-assets ratio is zero for all classes of young banks in their fourth quarter, compared with 0.24 percent for the median 2. A number of years after having been chartered, however, young banks experience financial deterioration, as their capital cushions are depleted by low earnings and fast growth. Figure 4 shows that the median asset growth (annualized) of young banks is very high in the first few years.

But as the rapid rise in nonaccrual loans indicates, assets begin to show signs of trouble. Notably, young banks' performance begins to deteriorate for the most part after the third year (12th quarter), the age when supervisors stop paying close attention to these institutions. The

[5] CAMELS is an acronym for *C*apital, *A*sset quality, *M*anagement, *E*arnings, *L*iquidity, and market *S*ensitivity.
[6] The FDIC Statement of Policy on Applications for Deposit Insurance.

Figure 1



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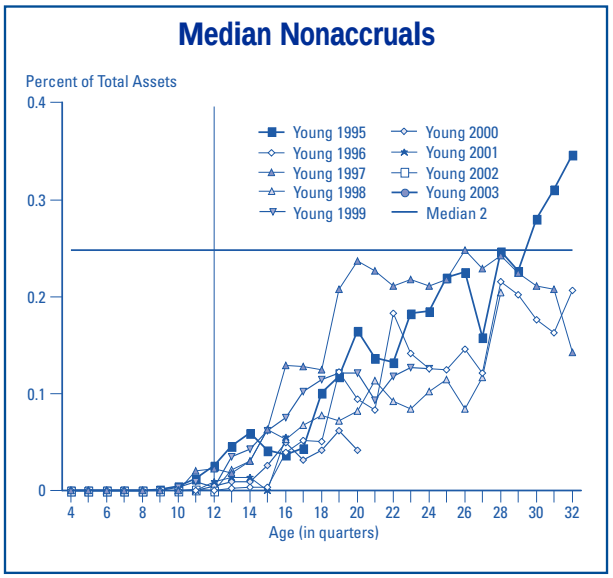

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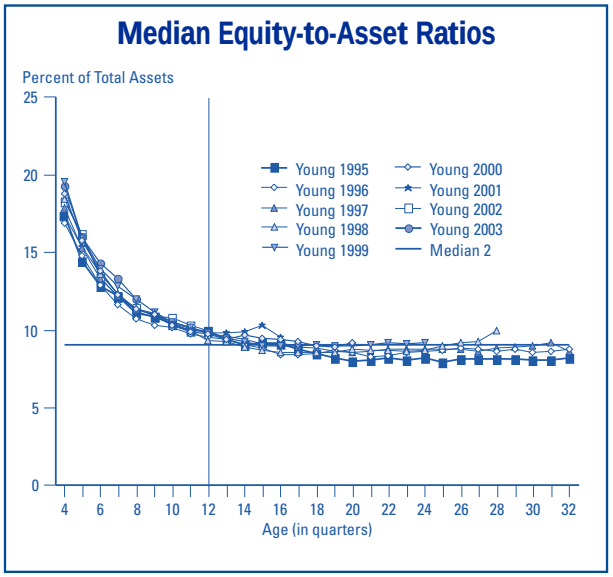

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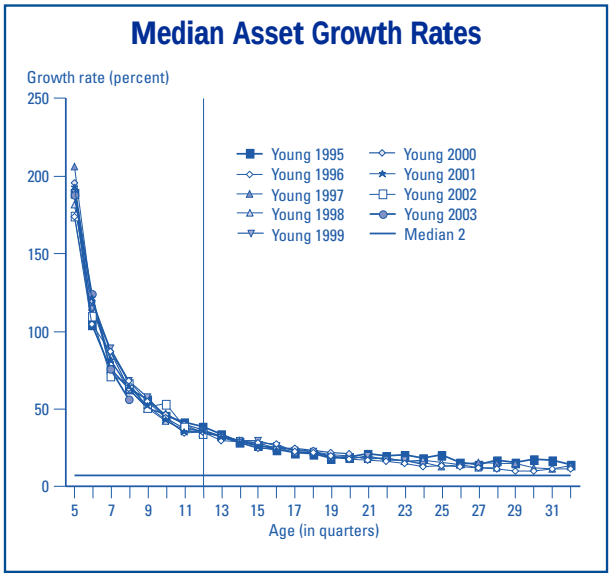
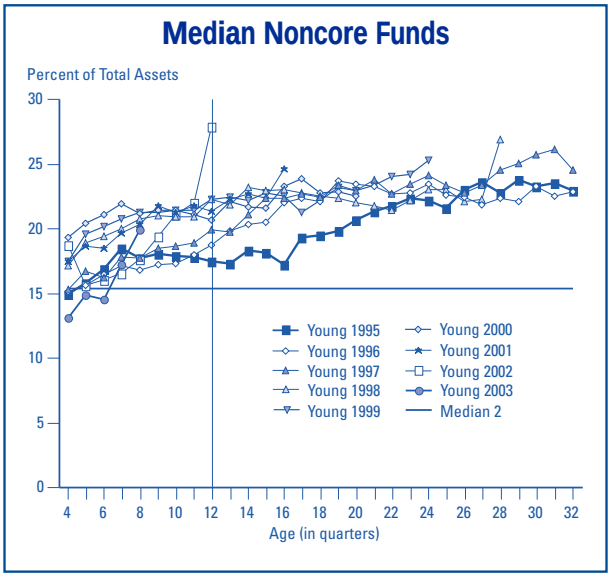


poor performance continues for a number of years until these banks reach full maturity and perform much like established banks. Young banks' reliance on noncore funds, too, remains high up to the eighth year. Figure 5 shows that throughout the sample period, young banks have a higher median ratio of noncore-funds-to-total-assets than the median 2.

These findings are consistent with those of studies that examined the performance trend of new banks chartered in the 1980s. Using the sample of new banks chartered between 1980 and 1985, DeYoung and Hasan (1998), and DeYoung (2000), conclude that it takes many years for de novo banks to reach full maturity and perform as well as established banks. In fact, DeYoung and Hasan (1998) find that it takes nine years for new

Figure 5



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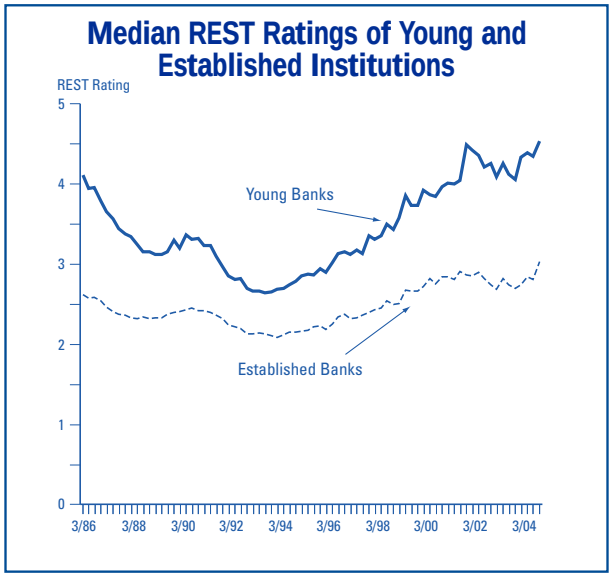


banks to become as efficient, in terms of profitability, as established banks.

The Real Estate Exposure of Young Banks Compared with That of Established Banks

We have seen that young banks are financially fragile. This is well known. What is less well known is that they concentrate heavily in risky assets—more heavily than established banks do. Table 2 reports the median REST ratings of young and established banks across time and the number of banks in each of the two groups, and figure 6 represents the two "median" columns graphically. As figure 6 shows, the median REST ratings of young banks are consistently worse than those of established banks. A formal test using Kendall's rank correlation confirms that the REST ratings of young banks are worse (with statistical significance) than those of established banks. Like Pearson's correlation coefficient, Kendall's rank correlation takes values between –1 (perfect negative correlation) and +1 (perfect positive correlation). Moreover, figure 6 shows that the REST ratings of both young and established banks steadily worsened in the latter half of the sample period—yet the gap between the median ratings widened. It can be inferred, therefore, that the REST ratings of young banks deteriorated more rapidly than those of established banks.

Figures 7 and 8, whose solid lines trace the percentage of young and established banks with poor REST ratings over time, show the percentages of both young and established banks with REST ratings of 4 or 5 rose between 1993 and 2004, but at the same time, the percentage of young banks with poor ratings became higher. It rose from 21 percent in 1993 to 77 percent in 2004, whereas the percentage for established banks with poor ratings rose from 8 percent in 1993 to 40 percent in 2004. These figures show the extent to which young banks are more vulnerable to the stress of a real estate crisis than their established counterparts are.

(Parenthetically, figures 7 and 8 also trace the percentage of young and established banks with poor CAMELS composite ratings. The broken lines in these figures show the percentage of banks with a CAMELS rating of 4 or 5. During the period 1993–2004, when the percentage of institutions with poor REST was rising, the percentage of institutions with poor exam ratings was falling. The contrast between the trend in the health of the banking industry and the trend in the industry's risk exposures to real estate lending

Table 2

Comparison of Median REST Ratings for Young and Established Institutions

	Young Banks		Established Banks			Young Banks		Established Banks	
Date	Number	Median	Number	Median	Date	Number	Median	Number	Median
(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
Mar-86	84	4.11***[a]	5465	2.62	Mar-96	496	2.90***	3792	2.19
Jun-86	169	3.95***	5386	2.58	Jun-96	461	3.02***	3748	2.26
Sep-86	267	3.96***	5369	2.59	Sep-96	435	3.14***	3688	2.34
Dec-86	346	3.79***	5219	2.54	Dec-96	414	3.16***	3623	2.38
Mar-87	410	3.66***	5137	2.47	Mar-97	402	3.12***	3566	2.32
Jun-87	473	3.57***	5037	2.41	Jun-97	384	3.18***	3521	2.33
Sep-87	527	3.45***	4978	2.38	Sep-97	378	3.14***	3466	2.37
Dec-87	569	3.38***	4898	2.37	Dec-97	383	3.36***	3401	2.40
Mar-88	607	3.35***	4833	2.33	Mar-98	378	3.31***	3332	2.43
Jun-88	638	3.25***	4732	2.32	Jun-98	386	3.36***	3263	2.45
Sep-88	676	3.16***	4636	2.34	Sep-98	400	3.50***	3214	2.54
Dec-88	708	3.16***	4503	2.32	Dec-98	409	3.44***	3134	2.50
Mar-89	732	3.12***	4431	2.33	Mar-99	429	3.58***	3085	2.51
Jun-89	766	3.12***	4389	2.33	Jun-99	447	3.86***	3025	2.68
Sep-89	798	3.16***	4302	2.38	Sep-99	472	3.74***	2971	2.67
Dec-89	837	3.30***	4235	2.40	Dec-99	514	3.74***	2904	2.67
Mar-90	860	3.20***	4163	2.41	Mar-00	533	3.93***	2849	2.72
Jun-90	894	3.37***	4079	2.43	Jun-00	575	3.87***	2801	2.82
Sep-90	922	3.31***	4009	2.45	Sep-00	625	3.85***	2739	2.76
Dec-90	960	3.32***	3953	2.42	Dec-00	679	3.97***	2664	2.84
Mar-91	990	3.23***	3899	2.42	Mar-01	727	4.02***	2591	2.85
Jun-91	1019	3.24***	3829	2.40	Jun-01	773	4.00***	2548	2.81
Sep-91	1041	3.10***	3759	2.37	Sep-01	824	4.05***	2508	2.91
Dec-91	1048	2.97***	4781	2.32	Dec-01	860	4.49***	2434	2.87
Mar-92	1008	2.86***	4702	2.24	Mar-02	897	4.43***	2388	2.86
Jun-92	977	2.81***	4676	2.22	Jun-02	882	4.36***	2325	2.90
Sep-92	938	2.82***	4652	2.20	Sep-02	902	4.21***	2265	2.82
Dec-92	916	2.70***	4567	2.13	Dec-02	937	4.26***	2222	2.75
Mar-93	879	2.67***	4541	2.13	Mar-03	943	4.09***	2184	2.69
Jun-93	841	2.67***	4497	2.14	Jun-03	942	4.26***	2144	2.82
Sep-93	815	2.65***	4431	2.13	Sep-03	947	4.13***	2125	2.75
Dec-93	770	2.66***	4348	2.11	Dec-03	939	4.06***	2100	2.70
Mar-94	737	2.69***	4286	2.09	Mar-04	931	4.34***	2066	2.75
Jun-94	699	2.70***	4234	2.12	Jun-04	930	4.39***	2032	2.85
Sep-94	662	2.74***	4172	2.15	Sep-04	915	4.35***	2018	2.81
Dec-94	635	2.79***	4123	2.15	Dec-04	905	4.54***	2002	3.03
Mar-95	608	2.86***	4034	2.17					
Jun-95	586	2.88***	3965	2.18					
Sep-95	553	2.87***	3899	2.22					
Dec-95	517	2.94***	3852	2.23					

[a] Based on Kendall's rank correlation test.
*** Indicates statistical signfifcance at the 1 percent level.

is consistent with the high cyclicality of the real estate market. During periods of favorable economic conditions, the real estate market expands, and meeting the increasing demand for real estate loans leads banks to large exposures.)

The reason the REST ratings of young banks are worse than the ratings of established banks is that the kinds of real estate lending done by young banks are riskier than the kinds done by established banks. Table 3 shows that as of December 2004, young banks tended to have more commercial and industrial (C&I), construction and development (C&D), and nonresidential real estate loans—the three types generally considered risky. Specifically, the new institutions' median ratio of C&I loans to total assets was roughly twice that of the established peer: young banks' 11.85 percent versus established banks' 6.59 percent. Similarly, nonresidential real estate lending made up a

Figure 7

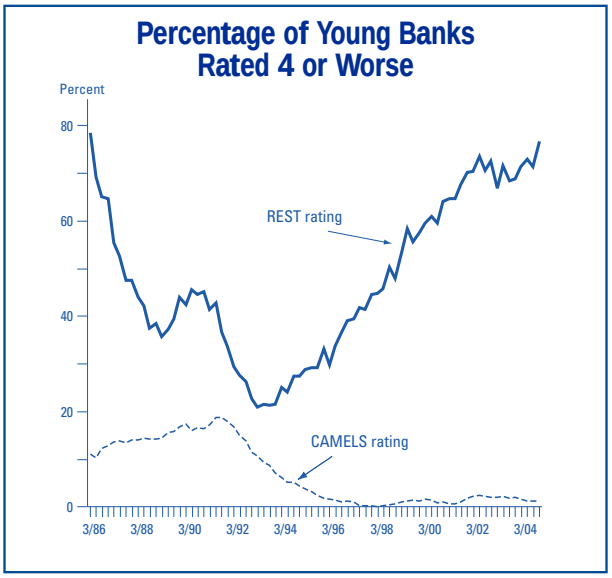
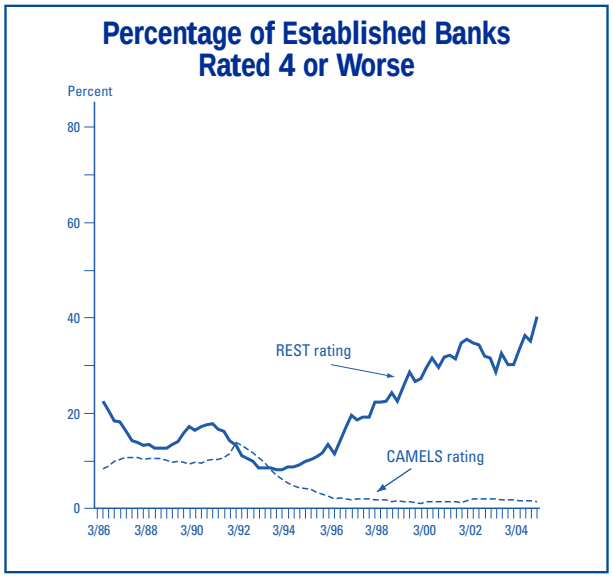


Figure 8



higher percentage of total assets for new institutions than for established banks. And most importantly, a typical new bank had 8.58 percent of total assets in construction loans—more than twice the percentage for the established peer. Previous studies have found construction and development lending to be the primary risk factor of real estate crises because the success of construction loans is highly dependent on the future of the real estate market (Collier, Forbush, and Nuxoll [2003]) and because commercial real estate projects are highly leveraged and more sensitive to changes in market conditions (Freund, Curry, Hirsch, and Kelley [1997]).

In contrast, the relatively safer real estate 1–4 family loans make up a smaller share of assets for young banks than for established banks.

As table 3 also shows, the comparison between young and established banks holds for rate of growth and reliance on noncore funds. Young banks grow more rapidly than established banks: a typical young bank grows at the rate of 22.32 percent annually—roughly four times the median growth rate of established banks. And to fuel such rapid growth, young banks rely more heavily on noncore funds, which are expensive sources of funds and the first to be demanded in times of stress. Noncore liabilities make up 24.72 percent of total assets for a typical young institution, compared with 17.33 percent for established banks.

In sum, the statistics presented in table 3 suggest that the poor REST ratings of new banks are likely to be attributable to higher concentrations in construction, C&I, and nonresidential real estate loans; to rapid growth; and to heavy reliance on noncore funds.

Table 3

Comparison of Median Ratios between Young and Established Institutions
(as of December 31, 2004)

Variable[a]	Young	Established
C&I	11.85***[b]	6.59
RE Agricultural	0.00***	0.14
RE C&D	8.58***	3.93
RE Multifamily	1.04***	0.75
RE Nonfarm nonresidential	21.14***	13.12
RE 1-4 family	15.77***	20.47
Noncore liabilities	24.72***	17.33
Asset Growth	22.32***	4.90
Equity Growth	-3.50***	0.68
No. of observations	905	2002

[a] Loan ratios are expressed as a percentage of assets. The growth measures are one-year change (in percent) in assets and equity.
[b] Based on Kendall's rank correlation test.
*** Indicates statistical significance at the 1 percent level.

Possible Explanations for Young Institutions' More Risky Lending

How does one explain young institutions' heavier engagement in riskier real estate lending activities? One might attribute it to the geographic location of these institutions. Young banks tend to start up in areas of rapid economic and population growth (Moore and Skelton [1998]) and therefore young banks may simply be meeting the local market's growing demand for real estate loans. Alternatively, perhaps young banks simply engage in more aggressive risk management.

To evaluate these two possible explanations, we first determined whether young banks in fact are concentrated in rapidly growing states; we then compared the average REST rating of each state with the percentage of new banks in the state. On the one hand, if states with large percentages of new banks have high average REST ratings, that finding will support the first explanation. For if the geographic location of young institutions is important in explaining the institutions' poor REST ratings, other established institutions in the same states will also have poor ratings, and the REST rating of a typical bank in these states will be high. On the other hand, if states with large percentages of new banks do not show high average REST ratings, the second explanation—more aggressive risk management—is the more likely. For if young institutions' poor REST ratings are unrelated to their geographic locations, typical banks in the same states will not necessarily have a poor REST rating. And if aggressive risk management is the answer, what factors might explain it?

Geographic Location

Table 4 reports, by state, the number of young institutions, the total number of institutions, the ratio of young institutions to total institutions, and the median REST rating for the state, based on December 2004 data. In the aggregate, young banks make up 13.3 percent (1,197 out of 8,975) of all banks. But rather than being evenly distributed, young banks are concentrated in a few

Table 4

Median REST Ratings by State (as of December 31, 2004)

State	Young (Number)	All (Number)	Young / All (Percent)	Med. REST Rating (All)
AZ	32	50	64.00	4.98
NV	21	38	55.26	4.88
UT	31	67	46.27	4.43
FL	121	298	40.60	4.25
OR	15	40	37.50	4.49
NC	38	110	34.55	4.50
DC	2	6	33.33	2.50
ID	6	18	33.33	4.41
RI	5	15	33.33	2.65
DE	11	35	31.43	3.71
CA	93	302	30.79	4.51
GA	100	351	28.49	4.36
NJ	40	141	28.37	2.91
WA	28	99	28.28	4.58
VA	38	140	27.14	3.79
SC	23	97	23.71	3.80
TN	46	212	21.70	3.75
CT	12	58	20.69	2.90
MI	33	174	18.97	3.53
NM	11	58	18.97	3.24
CO	27	177	15.25	3.78
KY	32	238	13.45	2.64
NY	26	203	12.81	2.62
MS	13	102	12.75	2.88
MD	14	116	12.07	3.42
PA	31	266	11.65	2.40
AL	19	164	11.59	2.91
WV	8	74	10.81	2.38
LA	15	168	8.93	2.85
MO	33	375	8.80	2.71
IN	17	198	8.59	2.65
TX	58	689	8.42	2.64
MN	40	482	8.30	2.58
AR	13	168	7.74	2.97
IL	58	756	7.67	2.44
IA	30	416	7.21	2.12
OH	21	296	7.09	2.51
WY	3	44	6.82	2.72
WI	20	309	6.47	3.10
MT	5	80	6.25	2.83
KS	16	372	4.30	2.15
ND	4	104	3.85	1.96
OK	10	274	3.65	2.39
NH	1	30	3.33	2.71
NE	7	265	2.64	1.99
ME	1	39	2.56	3.10
SD	2	93	2.15	2.12
MA	3	200	1.50	2.85
AK	0	7	0.00	4.25
HI	0	8	0.00	3.44
VT	0	19	0.00	2.54

states. For instance, in Nevada and Arizona young banks make up more than 50 percent of all banks, but Alaska, Hawaii, and Vermont have no young banks.

Table 4 also shows that states with large percentages of young banks tend to have poor median REST ratings. Arizona, where young banks constitute 64 percent of all banks, has the worst median REST rating—4.98. Seven of the ten states with the largest percentages of young banks have ratings worse than 4.

A formal statistical test—again, Kendall's rank correlation—confirms the positive correlation noted above between the ratio of new to all banks in a state and the median REST rating for the state. There is strong evidence that states with larger percentages of young banks tend to have worse median REST ratings. The rank correlation between these two variables is 0.47 and is highly significant.

This result is consistent with the first explanation for young banks' relatively heavier engagement in real estate lending—that the geographic location of these banks is an important contributor to their poor REST ratings. As earlier studies have showed, young banks are concentrated in urban and rapidly growing markets (Moore and Skelton [1998], DeYoung [2000]), and it is plausible that in such markets there are growing amounts of deposits and increasing demands for loans, including commercial and real estate loans. By supplying the loan demands of the local market, both young and established banks lend more heavily to the real estate sector. Consequently, banks in rapidly growing states have poor REST ratings.

Risk Management: Young Banks vs. Established Banks

Although geographic location—a heavy concentration in rapidly growing markets—can be considered an explanation for young banks' poor REST ratings, it may not necessarily offer a full explanation. To explore whether young and established institutions engage in similar lending activities in high-growth states, we compared the loan portfolio composition of young banks in three high-growth states with that of established banks in the same states. As noted above, young banks are predominantly small and urban, so the established institutions with which we compared them are small and located in metropolitan statistical areas.

Three states with relatively large percentages of young banks are Florida, Georgia, and New Jersey. In Florida, the percentage is 40.6; in Georgia, 28.5; and in New Jersey, 28.4. Moreover, in these states the number of institutions, too, is relatively large, so statistical tests can be performed. Florida and Georgia have median REST ratings worse than 4, but a typical bank in New Jersey has a REST rating of 2.9.

To test whether, in these three states, young banks' loan ratios are ranked worse than the ratios of established banks, we used Kendall's rank correlation statistic. (Rank correlation is estimated for each bank's loan ratio and a dummy variable, valued 1 if a young bank and 0 if an established bank.) The results of the rank correlation test are reported in table 5.

In our three states, young banks generally use riskier lending strategies. They tend to devote greater shares of their assets to loans, and they concentrate in riskier loans, such as C&I and construction loans. Moreover, they grow more rapidly than established banks.

In New Jersey, young banks had a statistically significantly higher concentration of riskier loans (C&I loans, C&D loans, and nonresidential real estate loans). And asset- and loan-growth rates were significantly higher for young banks. In contrast, young banks had lower concentrations of safer loans (for example, loans to municipalities and 1-4 family real estate loans), which help shield banks from downturns (Collier, Forbush, and Nuxoll [2003]).

Table 5

Comparison of Median Ratios between Young and Established Institutions (December 2004)

	Florida		Georgia		New Jersey	
Loan Type[a]	Young	Established	Young	Established	Young	Established
Agriculture	0.00	0.00	0.00	0.00	0.00	0.00
C&I	9.66	7.37	10.86***	7.19	8.77***	1.05
Other Consumer	1.39	1.48	2.16**	3.41	0.39	0.47
Credit Card	0.00	0.00	0.00	0.00	0.00	0.00
Depository	0.00**[b]	0.00	0.00	0.00	0.00	0.00
Municipality	0.00**	0.00	0.00*	0.00	0.00*	0.00
Agriculture–Real Estate	0.00	0.00	0.02	0.22	0.00	0.00
Construction	10.43*	6.46	20.97	17.31	5.18***	0.77
Multifamily	1.42	1.53	0.41*	0.35	1.23**	0.58
Non-residential Real Estate	24.11	24.35	22.97	19.28	25.70***	8.19
1–4 Family	15.32	14.02	13.08	15.58	15.99***	37.50
Leases	0.00	0.00	0.00	0.00	0.00	0.00
Assets ($000s)	143,405	175,778	141,793	128,030	132,710	182,949
Asset Growth	56.77***	23.25	46.01***	15.24	45.65***	12.31
Loans to assets	75.68	73.10	79.11**	73.45	68.03***	56.51
Noncore Funds	22.41**	18.86	26.90***	21.00	16.71	17.00
REST Score	4.76***	3.95	5.00**	4.98	3.95***	1.92
No. of Observations	90	79	67	40	34	35

[a] Loan and liability ratios are expressed as a percentage of assets. The asset growth is one-year change (in percent) in assets.
[b] Based on Kendall's rank correlation test.
*** Indicates statistical significance at the 1 percent level.
** Indicates statistical significance at the 5 percent level.
* Indicates statistical significance at the 10 percent level.

In Florida the picture was similar. Young banks had a greater percentage of their assets in a riskier loan type (C&D loans). They grew more rapidly (higher asset growth) and relied more on noncore liabilities. And they had fewer loans to depository institutions and municipalities.

In Georgia, young banks concentrated more heavily than established banks in C&I and multi-family loans and grew more rapidly, but their ratio of construction loans did not differ significantly from the ratio for established banks. Nevertheless, young banks in Georgia had a higher percentage of assets devoted to construction loans than did the young banks of New Jersey and Florida. In Georgia young banks devoted more than 20 percent of their assets to construction loans, whereas the comparable percentages in Florida and New Jersey were 10.43 percent and 5.18 percent, respectively.

Explanations for Aggressive Risk Management

These findings suggest that geographic location alone does not fully explain young banks' concentration in riskier loans and greater vulnerability to real estate crises. Even within rapidly growing states, young banks pursue more aggressive lending strategies than established banks. We now explore other factors that may explain young banks' pursuit of riskier activities.

One such factor may be young banks' desire for rapid growth. Arshadi and Lawrence observe that growth in the first few years is vitally important for new banks' survival and sound performance (Arshadi and Lawrence [1987]). With low business volume, new banks are likely to spend proportionately more on salaries and overhead expenses,[7] and to become profitable, they need to

[7] For instance, Brislin and Santomero (1991) note that overhead expenses account for 92 percent of total expenses in the first quarter of operation at a typical de novo bank in the third Federal Reserve district (Pennsylvania, New Jersey, and Delaware).

grow and use their facilities and staff more efficiently. This need may drive young banks to grow rapidly using noncore liabilities and relaxed underwriting standards.

Another reason that young banks may be attracted to the riskier assets is that these assets tend to generate immediate income. For instance, commercial real estate loans have large up-front fees. A third possible reason is that specialized business strategies require expertise in fewer areas and may help young institutions find their market niche (Brislin and Santomero [1991]).

Fourth, young banks' concentration in risky activities may result from the growth constraints they encounter. Unlike their established counterparts, young banks lack established customer relationships and market recognition. As a result, their growth is constrained by limitations on deposits and on good investment opportunities. Young banks may be left to lend to the pool of borrowers with poor credit and to finance highly risky ventures. Economists refer to this phenomenon as adverse selection.

Whatever the rationale for the aggressive lending strategies undertaken by young banks, they are particularly vulnerable to downturns in the real estate market, as the experience of the new Texas banks in the 1980s demonstrates.[8] New Texas banks in the early 1980s were heavily concentrated in growing markets; according to Gunther, new banks made up 54 percent of the banks in the five largest and most rapidly growing markets in Texas (Austin, Dallas, Fort Worth–Arlington, Houston, and San Antonio). Gunther's analysis suggests that new banks pursued riskier strategies, such as concentrating on riskier loans and relying more heavily on wholesale funds.

After oil prices plummeted in 1986, Texas entered a recession and experienced a real estate crisis. Although many banks suffered, it was evident that the recession had an especially great effect on de novo banks. In the subsequent four years 39 percent of de novo banks failed, but only 21 percent of established banks. Finding that new banks with capital levels similar to the levels of established banks and risk did not fail at significantly higher rates than mature banks, Gunther concludes that new banks' relatively higher risk postures led to the high incidence of failure.

The experience of the new Texas banks offers a scenario of what could happen to the current vintage of young banks if the markets now experiencing rapid growth—and where there are many young banks—were to experience busts. Young banks in these states would be likely to experience greater failures and losses. Of course, one must be cautious when extrapolating from a banking experience in the 1980s to a banking experience today, for even if economic conditions were to become comparable to those in the 1980s, the regulatory environment, as noted above, differs greatly from what it was in the 1980s.

Summary and Conclusion

It is well known that new banks are financially fragile and more susceptible to failure than established banks. What is less well known is that new banks have a substantial exposure to the real estate market. The extent of this exposure is reflected in the poor REST ratings of new banks. For example, in December 2004 the median REST rating of young banks was 4.54, whereas the median for established banks was 3.03. This difference is statistically significant.

Part of the explanation for young banks' vulnerability to a real estate crisis is geographic location. Young banks tend to locate in rapidly growing markets, where economic activity is greater and the demand for riskier real estate loans (such as C&D loans and C&I loans) is also greater.

But if geographic location fully explained young banks' vulnerability to a real estate crisis, the established banks in the same market would use strategies roughly similar to those used by the

[8] Gunther (1990) tracks the failure rates during the period 1986 to 1989 of banks that had been established between 1980 and 1985. Accordingly, new banks in his study were ten years old and younger.

young banks. Our research shows that they do not. A closer examination of young banks in three rapidly growing states—Florida, Georgia, and New Jersey—suggests that the young banks in those states use riskier lending strategies than their established counterparts.

The disproportionate use by young banks of the risky strategies may have a number of explanations. Young banks may undertake aggressive business strategies in order to grow rapidly, bolster low earnings, and become profitable. More importantly, their heavy concentration in risky loans may reflect the severe problem of adverse selection that they encounter: lacking a well-established customer base, new banks may find that a disproportionately large share of the loan applications they receive are from borrowers with risky ventures who have been turned down by other banks. In other words, the financial vulnerabilities of young banks may in fact be augmented by these institutions' asset composition.

Past experiences hint at the extent to which adverse episodes in the real estate market could affect these fledgling institutions. Thus, regulators are further motivated to closely monitor not only the banks' performance but also their risk management.

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