The Entry, Performance, and Viability of De Novo Banks*

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September 9, 2014

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Abstract

De novos are of interest as they represent the beginning of a community bank's life cycle. From 2000 to 2008, 1,042 new banks were chartered, mostly in large, rapidly growing regions, with incumbent banks focused on construction and development (C&D) lending. Compared to small established banks, de novos failed at higher rates and were acquired at lower rates during the recent financial crisis. De novo banks that failed tend to have lower equity, lower earnings, higher non-performing loans, higher reliance on noncore funds, and higher concentration in C&D loans.

*The views expressed here are solely of the authors and do not necessarily reflect the views of Federal Deposit Insurance Corporation.

In studying community banks, de novos are of interest as they represent the beginning of a bank's life cycle. In this paper we begin by documenting recent trends in de novo chartering activity from 2000 to 2008, the years preceding the crisis. Using vintage analysis, we then present characteristics of these de novo banks, including growth, earnings, capital positions, and non-performing loans. Lastly, we investigate whether there were differences in their financial characteristics, based on whether the de novo eventually failed, were acquired, or survived.

1. De Novo Entry

1.A Trends in De Novo Entry

Not all newly-chartered institutions are traditional de novo banks. De novo entry can be measured with error in various ways. For instance, existing non-bank financial institutions, such as a credit union, can change charters and become a new start-up bank. Therefore, we describe the criteria we used to determine when a "new" institution is a "traditional community bank de novo." We then document the volume and geographic location of these new institutions and their areas of lending specialization.

Between 2000 and 2008, 1,341 new institutions were chartered in the U.S. Of these new banks, 225 were part of a multi-bank holding company at inception, which indicates that they were not new free-standing institutions, and therefore they were excluded from the de novo population. Of the remaining institutions, 34 began with a relatively large level of assets (greater than $100 million). Bank-by-bank investigation of these 34 entities indicated that 19 were not in fact traditional de novos. Of the 89 de novo institutions that were not considered a community bank according to the FDIC's

research definition[1], we retain 34 that eventually appeared on the community bank list, three years after charter.[2] In total, we identified 1,042 institutions that we consider community bank de novos.

Figure 1 shows total community bank de novos by year of charter, for these 1,042 institutions. The left axis shows the number of new charters each year, while the right axis shows the share of community bank de novos to total community banks. There are two peaks in community bank de novo chartering activity in our period of study. The first occurred in 2000, with 159 new charters. The second volume year is 2006, with 151 new charters. Figure 1 shows that de novos are typically a small share of existing community banks, never exceeding 2.0 percent of all community banks in a given year.

Figure 2 shows total de novo charters, by year and primary regulator. The majority of community bank de novos are state-chartered and regulated by the Federal Deposit Insurance Corporation (FDIC). In total, 76.5 percent of the de novos in the period were chartered as state non-member banks.

The majority (83.6 percent) of these community bank de novos were headquartered in Metropolitan Statistical Areas (MSAs). Figure 3 shows the share of de novos chartered in the 2000 to 2008 period, by the nine census regions. The largest share, 32.6 percent, of community bank de novos were chartered in the South Atlantic, which consists of Delaware, the District of Columbia, Florida, Georgia, Maryland, North

[1] The FDIC defines community banks as those banking organizations with assets less than $1 billion in 2010. For banking organizations above that size threshold, other considerations are employed, such as a loan-to-assets ratio greater than 33%, core deposits-to-assets ratio greater than 50%, and the number of offices, location, and geographic dispersion of the bank's offices. For the exact definition, see FDIC Community Banking Study, December 2012.

[2] At inception, a de novo may not yet have the characteristics of a community bank, such as a high loan-to-asset ratio. Of the 34 retained, 32 appeared on the community bank list one year after chartering, another appeared two years after chartering, and one more three years after chartering. The remaining 55 institutions (89 less 34) did not appear on the community bank list even up to five years after chartering.

Carolina, South Carolina, Virginia, and West Virginia. The Pacific region, consisting of Alaska, California, Hawaii, Oregon, and Washington, had the next largest share, at 15.6 percent. New England experienced the smallest share, with 21 community bank de novo charters.

Maps 1 and 2 explore chartering activity by state. Map 1 shows the location of total charters over the period, by state. The states with the largest volume of de novos were California, Florida, Georgia, and Texas, with 123, 118, 112, and 72 charters, respectively. Map 2 depicts the share of de novos to the total number of community banks at the beginning of the period. Arizona had the largest share of de novo to existing institutions, at 95.5 percent, followed by Nevada (66.7 percent), and then California (47.1 percent).

In summary, from 2000 to 2008, there were 1,042 newly-chartered community bank de novos, with the majority FDIC-regulated and formed in MSAs. The South Atlantic region experienced the largest overall share of de novo chartering activity, while the individual states of California, Florida, and Georgia received the most new banks.

1.B De Novo Entry Regression Analysis

In this section, we model the determinants of de novo entry in local markets from 2000 to 2008 using regression analysis. Similar to earlier studies (Keeton (2000), Seelig and Critchfield (2003), Berger et al. (2004)), we model de novo entry into local areas by controlling for M&A activity, local market conditions, and the financial conditions of incumbent banks in the local market. Table 1 reports the results of the regression analysis.

The dependent variable, $ENTRY_{it}$, measures whether or not a new bank was formed in county *i* in year *t*. The explanatory variables are measured as the average of the previous three years (*t-3*, *t-2*, and *t-1*) or as of the end of year *t-1*. The variable *Merger Deposits* is defined as a share of county deposits held by banks involved in mergers (where the charters of the banks involved in the merger are consolidated), averaged over the past three years. The variable *Acquisition Deposits* is defined as the county share of deposits held by banks involved in acquisitions (where the acquired bank retains its own separate charter, but its BHC ownership changes), averaged over the past three years.

The model presented in Column (1) includes controls for local market conditions such as share of deposits owned by large banks, market concentration, market size, and recent market growth rate.

Mergers and acquisitions can encourage de novo entry when they result in reductions in small business lending and other banking services in the local area. This can occur when small banks focused on providing banking services in the local market merge with or are acquired by large banks or distant banks. Small banks tend to specialize in small business lending and other services with greater emphasis on personal contact with the customers. If mergers and acquisitions result in these services being diminished because large banking organizations are less likely to focus on these types of services, then there is potential for de novo institutions to meet these needs.[3]

[3] Keeton (2000) finds that relationship between entry and mergers is strongest when small banks were taken over by large banks or local banks by distant banks. His findings support that a positive relationship between mergers and entry can be attributed to reductions in small business lending or other services to customers with preferences for personal contact.

Mergers and acquisitions can also lead to de novo entry when displaced senior managers of merged out or acquired banks start a new bank. Or, ones who repeatedly start new banks with the goal of selling them can result in a positive correlation between mergers and acquisitions and de novo entry.

The impacts of mergers and acquisitions on de novo entry can differ because mergers tend to be more disruptive to a bank than an acquisition (Berger, Bonime, Goldberg, and White (2004)). For instance, mergers can involve replacing the senior managers and board of directors of one of the banks, changing policies and procedures, and integrating financial and accounting systems. Acquisitions, in contrast, tend to involve fewer organizational changes. We expect therefore that the estimated coefficients on *Merger Deposits* and *Acquisition Deposits* to be positive, and to potentially differ.

Column (1) of Table 1 reports results supporting the hypothesis that bank mergers and acquisitions increase the probability of de novo entry into the market where mergers and acquisitions occur. The estimated coefficients on *Merger Deposits* and *Acquisition Deposits* are positive and statistically significant. Mergers and acquisitions increasing the probability of subsequent entry is consistent with the earlier studies' findings (Keeton (2000), Seelig and Critchfield (2003), Berger, Bonime, Goldberg, and White (2004)).

To evaluate the economic significance of *Merger Deposits* and *Acquisition Deposits* variables on entry, we estimate the change in predicted probability of entry when there are no bank mergers or acquisitions in the county. To approximate the de novo entry probability of an "average" county, we compute the predicted entry probability using mean values of the explanatory variables. For our sample period, an

"average" county has an annual entry probability 1.64 percent. Calculating the probability of entry when the *Merger Deposits* value is its mean value and comparing to when the value is zero yields a decrease in entry probability of 0.25 of a percentage point. Thus, when an average county has no mergers, the entry probability is lowered by 15.2 percent. A similar exercise using the *Acquisition Deposits* variable shows that the effect of bank acquisitions on de novo entry is smaller than that of mergers. Calculating the effect of a change in *Acquisition Deposits* from its mean value to zero lowers entry probability by 0.14 of a percentage point, or by 8.5 percent.

The model includes a variable *Large Bank Deposits*, which measures the share of deposits owned by large banks ($1 billion or more in assets) in the county. To the extent that large banking organizations focus less on small business lending and other services that emphasize personal contact, counties with a higher share of large bank deposits should attract de novo entry. Column (1) of Table 1 shows that the estimated coefficient on *Large Bank Deposits* is statistically insignificant.

Market concentration, measured by Herfindahl-Hirschman Index (HHI) on deposits, is negative and statistically significant, indicating that entry probability is higher for counties with less concentrated deposit market.[4] This finding is consistent with the presence of barriers to entry.

We include two market size variables: log of county deposits and log of county population. The estimated coefficients on these variables are positive and statistically significant, indicating that de novo banks are attracted to large markets. Conceivably, there is greater demand for services of de novo banks in large markets.

[4] The greater the county's HHI, the more concentrated are its deposits.

To measure recent market growth, we include the housing price index growth rate, deposit growth rate, and population growth rate. State income growth rate is also included. The estimated coefficients on population growth rate and state income growth rates are positive and statistically significant. This finding is consistent with de novo entrants being attracted to markets that are growing and expanding, with increasing demand for banking services. Although positive, the estimated coefficients on HPI growth rate and county deposit growth rate are statistically insignificant.

The regression also includes census region dummy variables. The New England region is excluded as the base case. The estimated coefficients on the census region indicators are positive and statistically significant, indicating that the probability of de novo entry in other census regions differs from that in the New England region.[5]

Column (2) of Table 1 expands the model specification by including incumbent banks' financial ratios, which are deposit-weighted average values of financial ratios for incumbent banks with over 50% of their deposits in the county, and their portfolio shares. We include measures of financial health of these local market banks, given that more efficient or financially sound incumbents should make stronger competitors, which is likely to deter entry.

The coefficient on *Non-performing Loans_County* is negative and statistically significant, which is consistent with favorable economic conditions in the county and good credit quality customers encouraging entry. The estimated coefficients on the *ROA_County* and *Equity_County* are statistically insignificant. Counties where incumbent banks have high concentration in Construction and Development (C&D) loans have higher de novo entry, suggesting that investors of new banks are attracted to

[5] The estimated coefficients on the census regional dummies are not reported.

markets with investment opportunities in C&D loans. Alternatively, incumbent banks' high share in C&D loans may proxy for growing markets. Incumbent banks' concentration in other types of loans, Commercial and Industrial (C&I), Commercial Real Estate (CRE), and consumer, do not affect entry probability with statistical significance.

Lastly, Column (3) reports the results for the model which includes variables to control for the regulatory environment. The Conference of State Bank Supervisors compiles new bank charter application filing requirements by state in areas of minimum capital requirements, application fees, and board requirements. We categorized these requirements into ordinal measures. The minimum capital required to charter a new bank ranges from $0 to $10 million. We translate these amounts into "low," "moderate," and "high," where the capital requirement between $0 and $3 million is defined as "low," over $3 million to $6 million is "moderate," and over $6 million is "high," Similarly, we define application fees between $0 and $5,000 as "low," between $5,001 and $10,000 as "moderate," between $10,001 and $15,000 as "medium," and over $15,000 as "high." Whether or not board members are required to be state residents and whether or not they are required to be US citizens are used to construct a measure stringency of the board requirement. We did not include a requirement on number of board members because the majority of states require 5 members. The board member requirement variable are "0" (not required to be a state resident or a US citizen), "1" (required to be either a state resident or a US citizen), or "2" (required to be both a state resident and a US citizen).

Column (3) of Table 1 reports that the estimated coefficient on *Application Fee* is positive and statistically significant, indicating that a higher application fee is associated

with greater entry. Plausibly, states where there is a high demand for new charters can charge higher application fees. In contrast, the estimated coefficient on *Minimum Capital Requirement* is negative and statistically significant, indicating that higher initial capital requirement discourages entry. The variable *Board Member Requirement* is not statistically significant.

In summary, regression analysis on de novo entry in local markets shows that new bank start-ups are more likely to occur in counties that have experienced bank mergers or acquisitions. This finding is consistent with new institutions entering markets to fill in the gap of reduced banking services resulting from mergers or acquisitions. New banks are also attracted to large, growing, and less concentrated markets. Moreover, new entrants are attracted to counties where incumbent banks have low non-performing loans and high concentrations in C&D. High initial capital requirements by state banking regulators discourage entry.

2. Vintage Analysis of De Novo Banks

In the previous section, we examined the factors that determine de novo entry. In this section, we examine how the recent cohort of de novo banks perform once chartered, especially during and before the crisis.

We group de novo banks by the year in which they are chartered, or vintage, because existing research suggests that newly chartered banks follow a distinct life cycle pattern.[6] Figures 4 through 8 graph the median values of financial ratios for each class of de novo banks. These figures also graph the median ratios of a benchmark group of banks, which are comparable in size and located in metropolitan areas. Specifically,

[6] DeYoung (2000).

these are small established community banks that are older than 15 years, headquartered in a MSA, and with an asset size that is less than the asset size of de novo banks at the 95th percentile, at each quarter.

Figure 4 shows that de novo banks grow very rapidly in their first few years. For instance, during their first year of operation, the median one-year asset growth for the de novo banks in this period ranged between 169 to 246 percent. In comparison, the median growth rate for established banks ranged from 1.6 to 7.2 percent. Growth in the first few years is vitally important for de novo banks' survival and sound performance.[7] With low business volume, these banks are likely to spend disproportionally more on salaries and overhead expenses. To become profitable and viable, these new institutions need to grow and use their facilities and staff efficiently.

De novo banks lack established customer relationships and market recognition. Many have limited ability to attract core deposits, therefore, to grow de novo banks studied here rely heavily on noncore sources of funds which tend to be more volatile and expensive. Figure 5 shows that although initially de novo banks have lower non-core funds to assets ratios, the ratio quickly rises in the early stages of a de novo's life cycle and remains higher than that of established banks.[8]

Figure 6 shows that de novo banks lose money in early years. Even after de novo banks earn positive income, they continue to under-perform relative to small established banks, often for many years. For the vintages of de novo banks studied here, their median earnings ratios lag that of small established banks. Especially during the recent crisis, de novo banks earned lower income than established banks. While some early

[7] Arshadi and Lawrence (1987).

[8] Noncore funds are defined as a sum of time deposits over $100,000, foreign office deposits, fed funds purchased and securities sold under agreement to repurchase, and other borrowed money.

cohorts of de novo banks caught up in 2006 and 2007, their earnings deteriorated during the crisis, often more severely than for small established banks. And, the de novo banks of later vintages, specifically those chartered at the beginning of the recession or were very young when the recession began, suffered lower earnings than de novo banks of earlier classes. This is consistent with DeYoung (2000) who finds that de novo banks' performance also depends on the position of their formative years relative to the stage of the business cycle.

Figure 7 shows that de novo banks have very high initial capital-to-assets ratios, with median ratios ranging from roughly 48 percent to 77 percent. As these banks grow, their high start-up capital ratios converge quickly to that of established banks. The decline in capital ratios is driven by high growth rates and low earnings in early years.

While a signature pattern is not as strong as in some other performance measures, de novo loan performance measures also show a life cycle pattern. Figure 8 shows median non-performing loans-to-assets ratios, by de novo vintage. While the recession figures prominently in the loan performance of all vintages, typically, de novo banks have low non-performing loan ratios in early years, because a large share of their loan portfolio is unseasoned. After a few years in operation, de novo banks' problem loans begin to increase as their loans season. Of course, strong business cycles can swamp this seasoning effect. Starting in late 2007 and early 2008, de novos experienced a sharp increase in non-performing loans regardless of the charter year. During the crisis, the median non-performing loans ratios for de novo banks were worse than those for established banks except for the youngest classes, Classes 2007 and 2008, which had a higher share of unseasoned loans.

De novo banks are financially fragile and take many years to reach full maturity (DeYoung and Hasan (1998) and DeYoung (2000)). The prior figures generally show that the financial ratios of de novo banks display a distinctive life-cycle pattern, following similar time paths regardless of the year of chartering. They appear sound in early years, with large capital cushions and low levels of non-performing loans. However, measures of de novos' financial condition deteriorate as they grow their loan portfolios and their loans season, with earnings typically remaining below that of established peers.

3. De Novo Bank Failures, Mergers, and Survivors

3.A De Novo Outcomes

De novo banks studied in this paper were chartered under an economic environment that was characterized by rapid expansion followed by a severe recession. In this section, we investigate the outcomes of these fledgling institutions.

Out of 1,042 de novo banks chartered between 2000 and 2008, 131 (12.6 percent) failed while 180 (17.3 percent) exited without failing, specifically, via merger or liquidation.[9] In comparison, 4.9 percent of small established banks exited via failure while 25.3 percent exited without failing. Thus de novo banks' failure exit rate is more than twice the rate of small established banks, while their non-failure exit rate is lower than that of small established banks. De novo banks' higher failure rate is consistent with previous studies which found that they are financially fragile and more susceptible to

[9] Among 131 failure exits, 125 were purchase and assumptions where a bank purchases some or all of the assets of a failed bank and assumes some or all of its liabilities. Failures were as of April 2014, while mergers were as of December 31, 2013.

failure, especially when business cycle conditions deteriorate.[10] Among 180 non-failure de novo exits, 172 were mergers and 8 were liquidations. In terms of timing, Figure 9 shows the number of de novo exits via failure or acquisition each year. De novo failures are concentrated in the crisis period, starting in 2008, with sharp rises from 2009 to 2011. De novo acquisitions are dispersed across 2002 to 2013, with a sharp rise in 2012 and 2013.

Are there differences in financial health across de novo banks with different exit outcomes? We compare their financial health by investigating de novo banks' last CAMELS rating before exit. Table 2 reports the last composite CAMELS rating of failed, acquired, and liquidated de novo banks. While all 131 failure exits were CAMELS 5 rated, more than half (61.7 percent) of acquisitions were 1 or 2 rated at their last examination. Among liquidations, three banks were 2 rated, while the remaining five were rated 4 or 5, suggesting that de novo banks tend to be poorly-performing when they decide to liquidate. In the remaining discussion, the five liquidated de novo banks with CAMELS 4 or 5 ratings are combined with the failures. The 2-rated liquidations are excluded from the analysis.

Table 3 lists five states with highest number of de novo bank failures. Georgia had the highest number of failures with 41 banks, followed by Florida with 23. Ilinois, California, and Arizona are the remaining states with 10, 9, and 6 de novo failures, respectively.

Figure 10 shows de novo failures by census region, as a percent of total de novo failures in the U.S. More than half (54 percent) of all failed de novo banks are

[10] DeYoung (2003) finds that the relationship between external conditions (such as intense competitive rivalry or slow economic growth) and higher failure rates is more systematic for de novo banks than for established banks.

headquartered in the South Atlantic region. In comparison, other regions have substantially lower shares of de novo failures. For instance, the regions with the second and third largest shares of failed de novos are Mountain, with 11 percent, and East North Central, with 10 percent. The disproportionately large share of failed de novos in the South Atlantic region is in part explained by the large share of de novos that were chartered in that region. Figure 11 shows de novo failures by census region, as a percent of total de novos in that region. When measured as a percentage of the total number of de novo banks in the region, the de novo failure rate in the South Atlantic region is 22 percent (compared to 54 percent when the base is all de novos). The South Atlantic region was not only the most active charting region, it also had the highest rate of new charters failing. The three regions with the highest rate of de novos failing remain South Atlantic (22.0 percent), Mountain (20.0 percent), and East North Central (15.0 percent).

Figure 12 shows that 33 percent of the de novo banks that exited via mergers were also headquartered in the South Atlantic region. Other regions had substantially lower shares of de novo mergers. The second and third regions with the largest shares of acquired de novos are the Pacific (19 percent) and West South Central regions (15 percent). Figure 13 next shows the number of de novo bank exits via merger in each census region, as a percent of the total number of de novo banks in that region. The New England region had the highest percentage, where 35 percent of all de novo banks chartered were acquired, followed by the West South Central (29.0 percent) and Pacific (20.0 percent) regions. Figures 11 and 13 show that while in the New England region, 5 percent of de novo banks exited via failure and 35 percent exited via acquisitions, in

contrast, de novo banks headquartered in the South Atlantic, East North Central and Mountain regions exited via failures at a higher rate than via acquisitions.

3.B Comparison of Failed, Merged, and Survived De Novo Banks

Next, we group de novo banks into three groups, survived, merged out, and failed, and compare their median financial ratios starting five years prior to exit outcome. For survived banks, the exit period is assumed to be end of their 6th year.[11]

Figure 14 shows that roughly three years prior to exit, the median equity ratio for failed banks start to decline and deviate from those of other two groups. In their last quarter prior to failure, the median equity ratio is close to 0 percent. For the earnings ratio, Figure 15 shows that failed de novos had the highest median ratio five years prior to exit. Roughly three years prior to exit, however, their median earnings ratio begin to decline, reaching as low as -6.0 percent before failure. Figure 16 shows a rise in failed de novos' median non-performing loans ratio starting three years prior to exit.

These figures show that financial deterioration of failed de novos begin roughly three years prior to exit. They also show that median financial ratios of survived and merged de novos remain comparable throughout the five year period. Figures 17 and 18 show that failed de novos relied more heavily on noncore funds and brokered deposits. Lastly, Figures 19 to 21 show that they also invested more heavily in C&D loans compared to survived and merged de novos, and had lower concentrations in C&I and CRE loans.

[11] The average age of failed and merged de novos were 26 and 22 quarters, respectively. Hence, we assigned an exit age for survived de novos as 24 quarters.

3.C Determinants of De Novo Outcomes

What factors determine the different exit outcomes of de novo banks? In this section, we employ Shumway's (2001) discrete-time hazard model to investigate whether de novo banks' financial characteristics affect their probability of failure.[12]

Covariates in the hazard models include measures of de novo banks' financial characteristics, such as equity, income before taxes, noncore funds, non-performing loans-to-assets ratios, and one-year asset growth rates. Also included are measures of the bank's loan portfolio composition, such as construction and development, commercial and industrial, 1-to-4 family residential, commercial real estate, and small business loans-to-assets ratios.[13]

Table 4 reports the estimation results of the de novo bank failure model which includes controls for the bank's financial characteristics. Column (1) of Table 4 shows that de novo banks with higher equity and income before taxes to assets ratios were less likely to fail. In contrast, those with higher noncore funds and non-performing loans ratios were more likely to fail. These results are largely similar to the findings on established bank failure models.[14] Column (2) reports the results of the model when de novo banks' loan concentration ratios are also added to the model. The estimated coefficients on the financial ratios remain largely similar. The exception is the estimated coefficient on noncore funds ratio, which is no longer statistically significant. Among the

[12] Since the likelihood function of a multi-period logit model is equivalent to that of a discrete-time hazard model, Shumway (2001) shows that the discrete-time hazard model can be estimated using standard logistic regression estimation method on pooled time series of bank data. The test statistics produced by a logit program needs to be adjusted to account for the lack of independence between bank-year observations.
[13] Small business loans are proxied by C&I loans with original loan amount less than $1 million.
[14] See Cole and Wu (2009) and Wheelock and Wilson (2000).

loan concentration ratios, only the C&D-to-assets ratio is positive and statistically significant.

These results suggest that de novo banks in poor financial health, with lower equity, lower earnings, and higher non-performing loans were more likely to fail. In addition, de novo banks that failed tended to invest more heavily in C&D loans.

4. Conclusion

New bank chartering remained active in the 2000 to 2008 period, with 1,042 new charters. Many of these banks were chartered in markets that experienced bank mergers or acquisitions. Moreover, they were chartered in large, growing, and less concentrated markets, with many incumbent banks focused on C&D lending. Compared to small established banks, de novos are financially fragile, failed at higher rates during the recent financial crisis, and were acquired at lower rates compared to small established banks. Discrete-time hazards models confirm that de novo banks that fail tend to be financially unhealthy and invest heavily in C&D lending.

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Table 1: De Novo Entry Logistic Regression Model[1]

Variable	Entry	Entry	Entry
Intercept	-18.44***	-18.67***	-19.23***
Merger Deposits	0.07***	0.07***	0.06***
Acquisition Deposits	0.05***	0.05***	0.05***
Large banks deposit share	-0.002	-0.005*	-0.004
HHI	-1.17**	-0.93*	-0.80
Log of population	0.51***	0.56***	0.61***
Log of deposits	0.55***	0.53***	0.50***
Population growth	0.15***	0.13***	0.12***
Deposit growth	0.001	0.001	0.001
State income growth	0.05**	0.05**	0.05**
HPI growth rate	0.01	0.02	0.02
ROA_County		0.07	0.06
Equity_County		-0.01	-0.002
Non-performing loans_County		-0.18***	-0.16***
C&D_County		0.03***	0.02***
CRE_County		-0.003	-0.003
Single family residential_County		0.01	0.01**
Small business loans_County		-0.01	-0.01
Charter application fee			0.35***
Minimum capital requirement			-0.20***
Director requirements			-0.04
Likelihood Ratio	2495***	2301***	2350***
Regional dummies	Yes	Yes	Yes

[1]De Novo entry refers to a new bank branch entry in a county. The sample includes De Novo entry from 2000 to 2008.
[2]Deposits at merged-out banks.
[3]Deposits at acquired banks.
*** indicates statistical significance at 1%, ** indicates statistical significance at 5%, and * indicates statistical significance at 10%.

Table 2: Last CAMELS Rating of De Novo Banks, Before Exit

Last Rating	Failures		Acquisitions		Liquidations	
1			12	(7.0%)		
2			94	(54.7%)	3	(37.5%)
3			36	(20.9%)		
4			20	(11.6%)	3	(37.5%)
5	131	(100%)	8	(4.7%)	2	(25.0%)
No rating			2	(1.2%)		
Total	**131**		**172**		**8**	

Table 3: Five States with Highest Number of De Novo Bank Failures

STATE	FAILURES	(PERCENT)	MERGERS	(PERCENT)	SURVIVED	(PERCENT)
GA	41	(37%)	12	(11%)	58	(52%)
FL	23	(19%)	20	(17%)	76	(64%)
IL	10	(24%)	4	(10%)	27	(66%)
CA	9	(7%)	24	(20%)	90	(73%)
AZ	6	(29%)	2	(10%)	13	(62%)

Table 4: Failure Hazards Models

Variable	Failure	Failure
Intercept	-3.05***	-3.37
Equity	-0.14**	-0.14*
Income before taxes	-0.25***	-0.29***
Noncore funds	0.03**	0.03
Non-performing loans	0.21***	0.17**
Liquid assets	-0.03	-0.01
One-year asset growth rate	0.01	-0.0001
C&D loans		0.08***
1-4 family residential loans		-0.01
CRE loans		-0.02
Small business loans		-0.03
Likelihood Ratio	326***	401***
No. of observations	1,023	1,023

*** indicates statistical significance at 1%, ** indicates statistical significance at 5%, and * indicates statistical significance at 10%.

Figure 1. Total and Share of Community Bank De Novos, By Charter Year

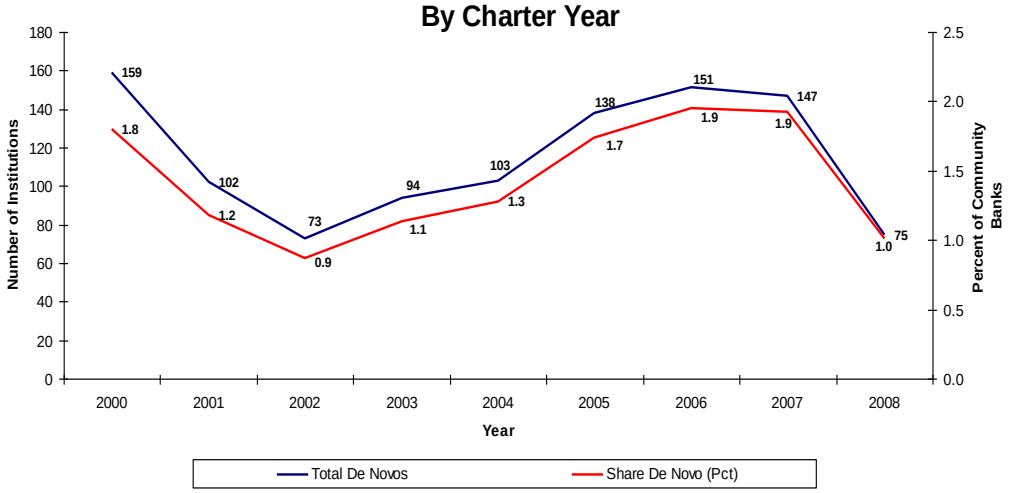


Figure 2. De Novos, by Regulator and Charter Year

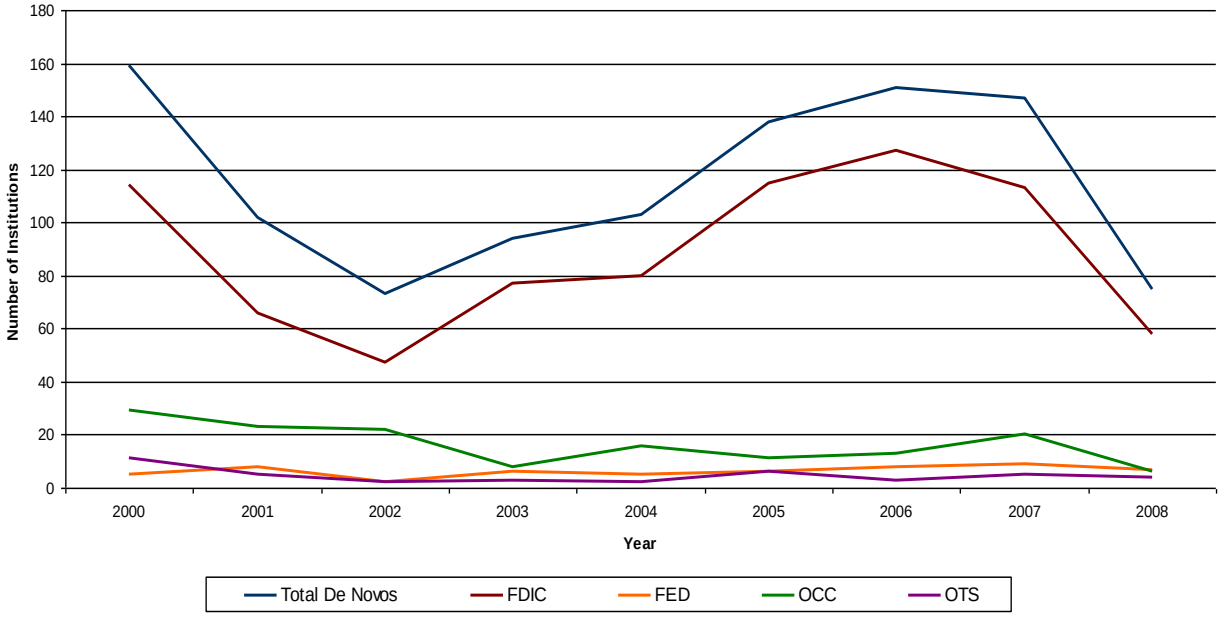
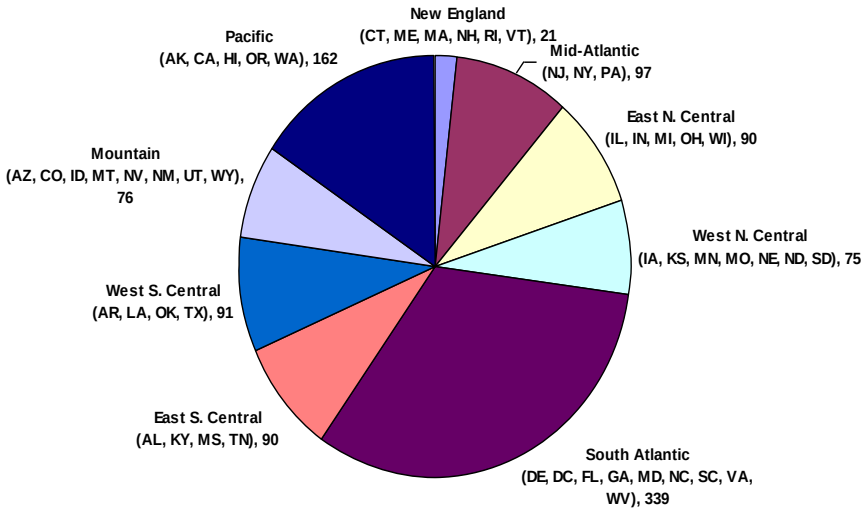
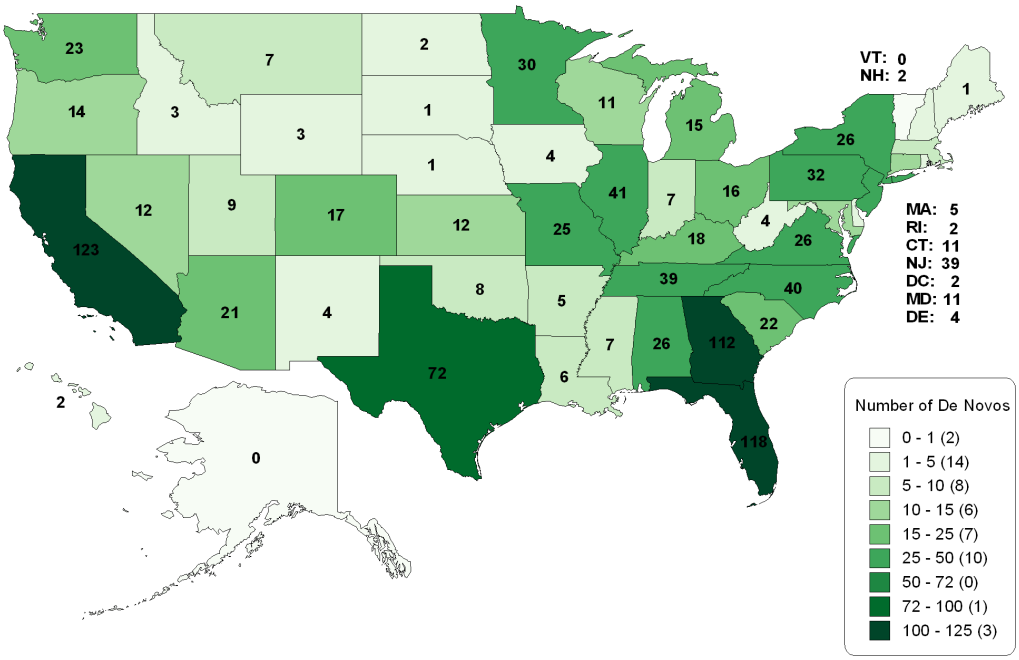


Figure 3. 2000-2008 De Novos by Census Region

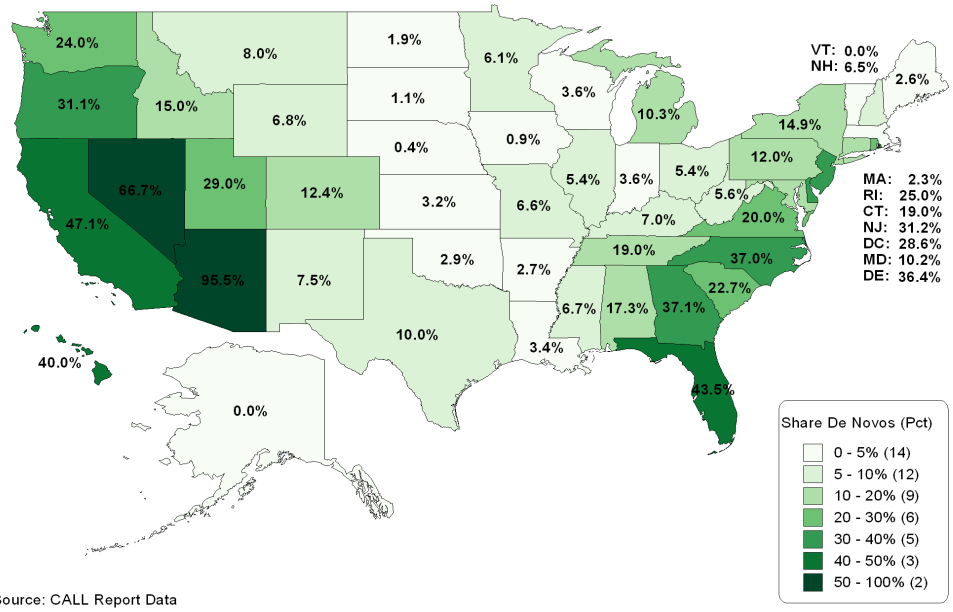


Total De Novos, 2000-2008



Source: CALL Report Data

Total De Novos (2000-2008) to Community Banks in 2000



Source: CALL Report Data

Figure 4. Median One Year Asset Growth Rates, by De Novo Charter Year

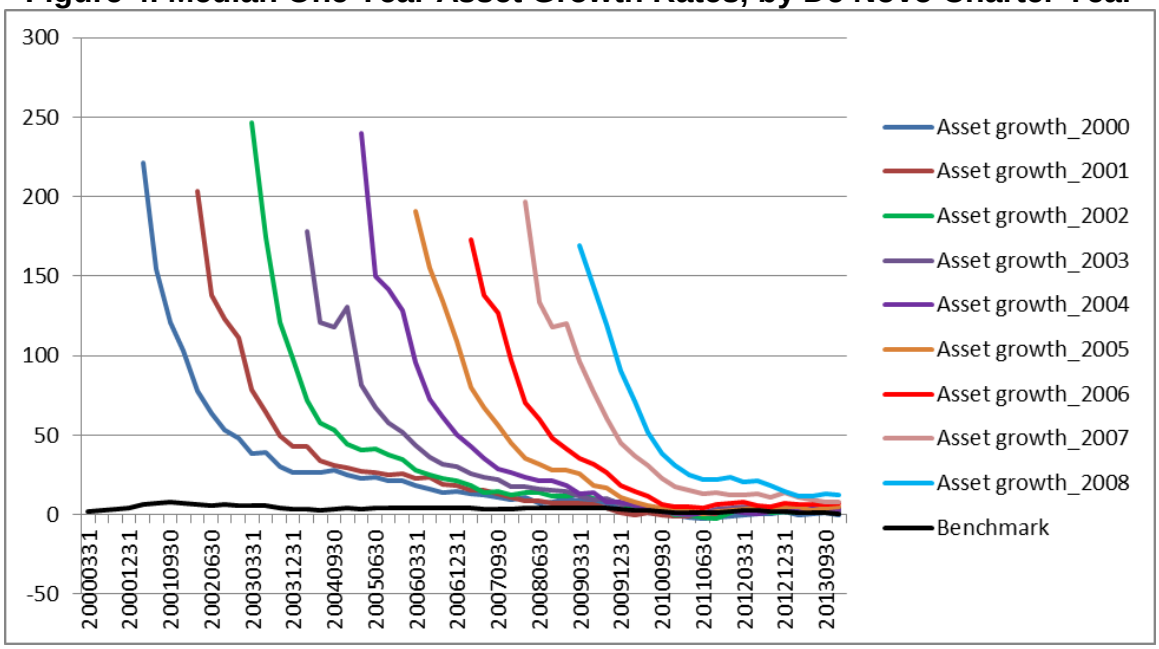


Figure 5. Median Noncore Funds-to-Assets Ratios, by De Novo Charter Year

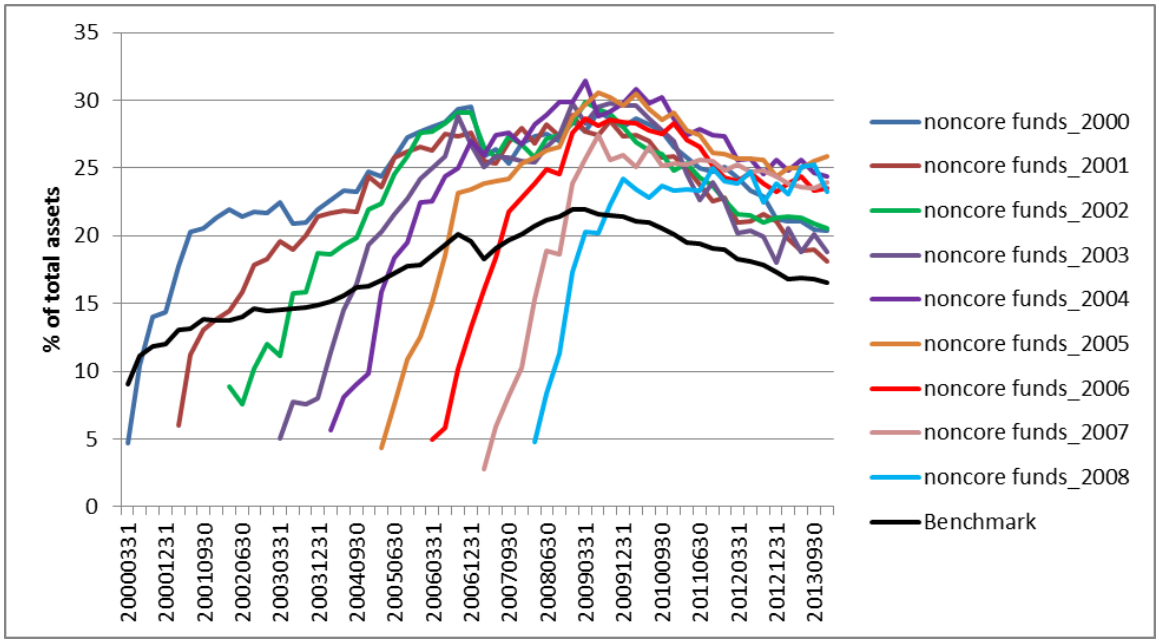


Figure 6. Median Income Before Taxes-to-Assets Ratio, by De Novo Charter Year

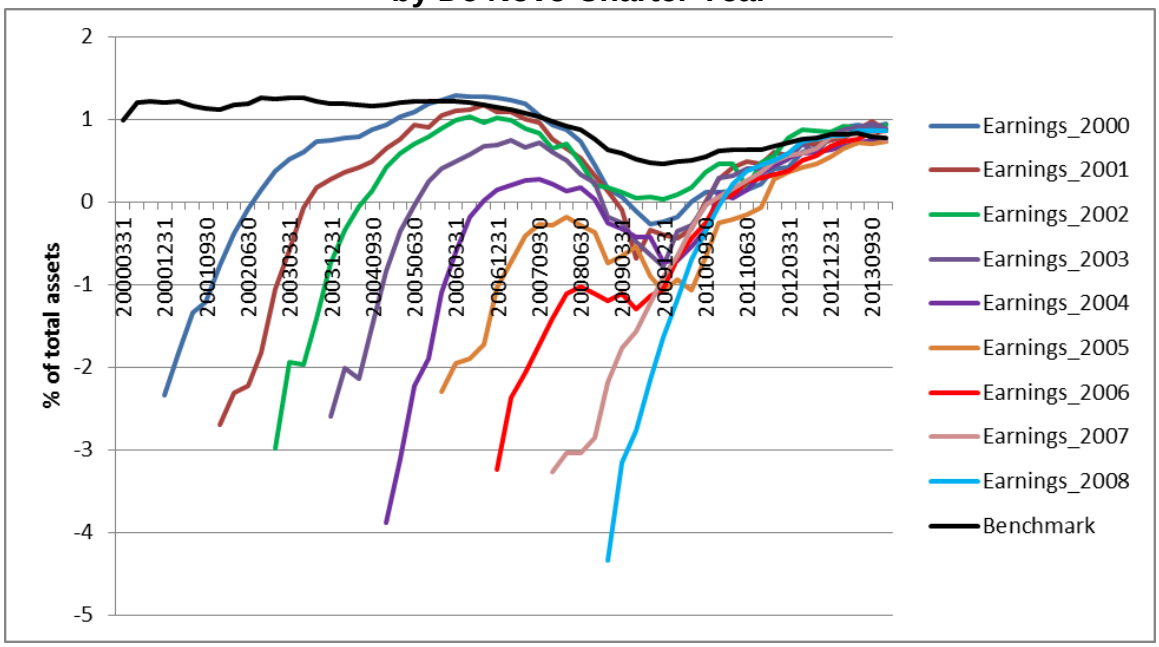


Figure 7. Median Equity-to-Assets Ratios, by De Novo Charter Year

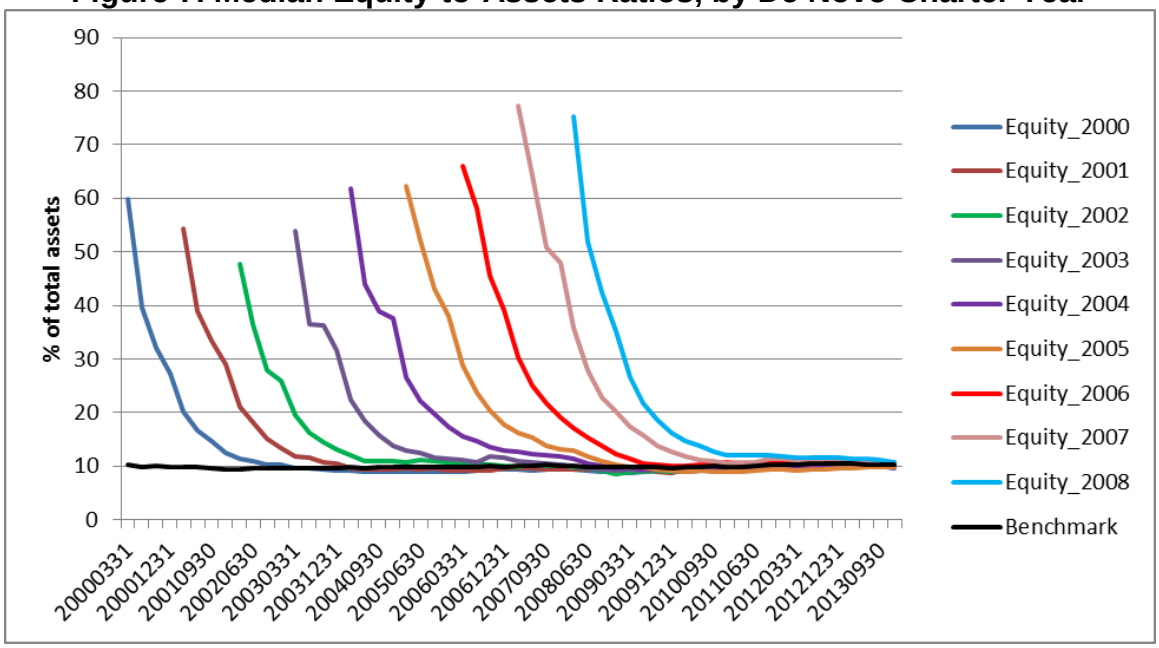


Figure 8. Median Non-performing Loans-to-assets Ratios, by De Novo Charter Year

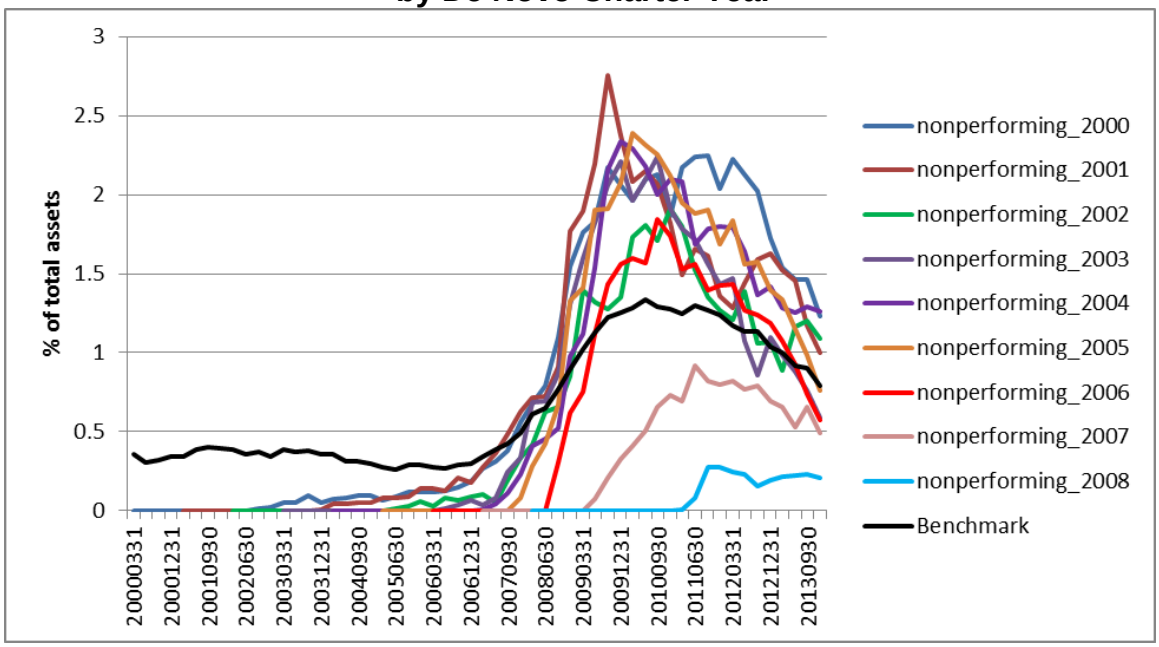
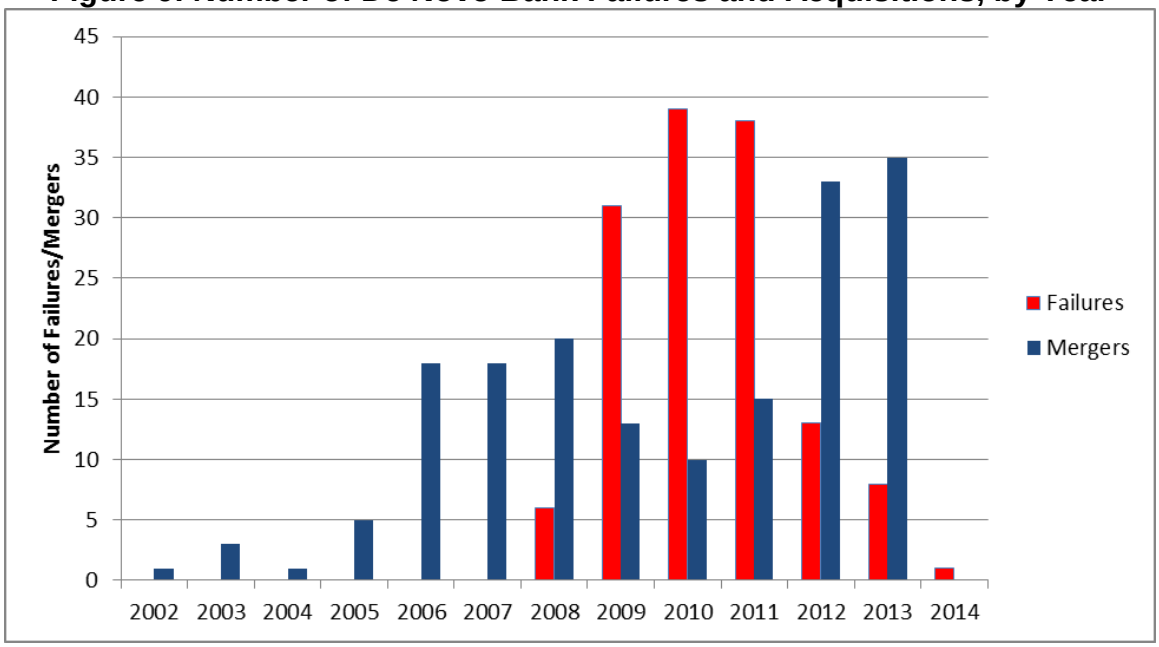


Figure 9. Number of De Novo Bank Failures and Acquisitions, by Year



*Includes five voluntary liquidations with CAMELS 4 or 5 in the number of failures.

Figure 10. De Novo Failures in Each Region, as Percent of Total De Novo Failures

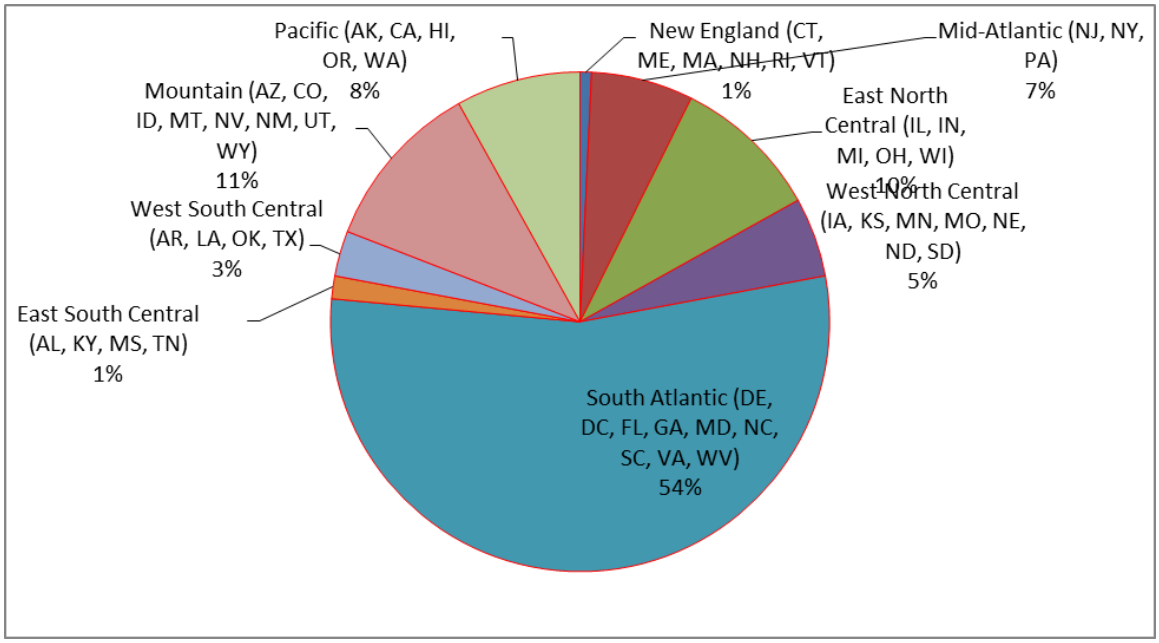


Figure 11. De Novo Failures as Percent of Total De Novos, by Region

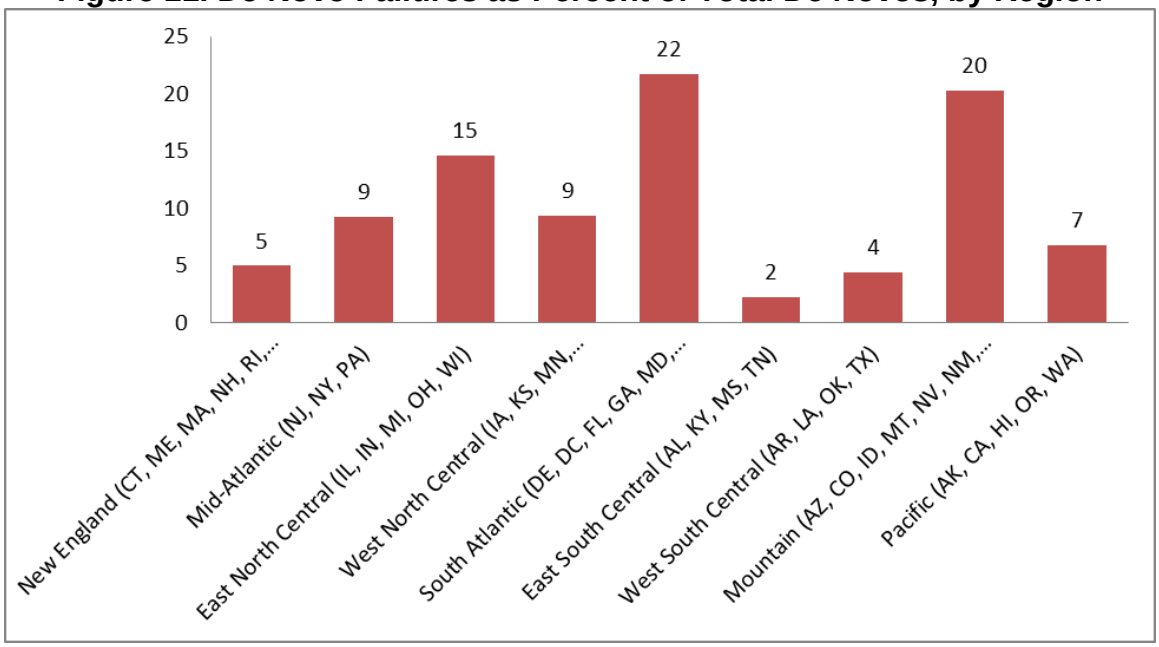


Figure 12. De Novo Acquisitions in Each Region, as Percent of Total De Novo Acquisitions

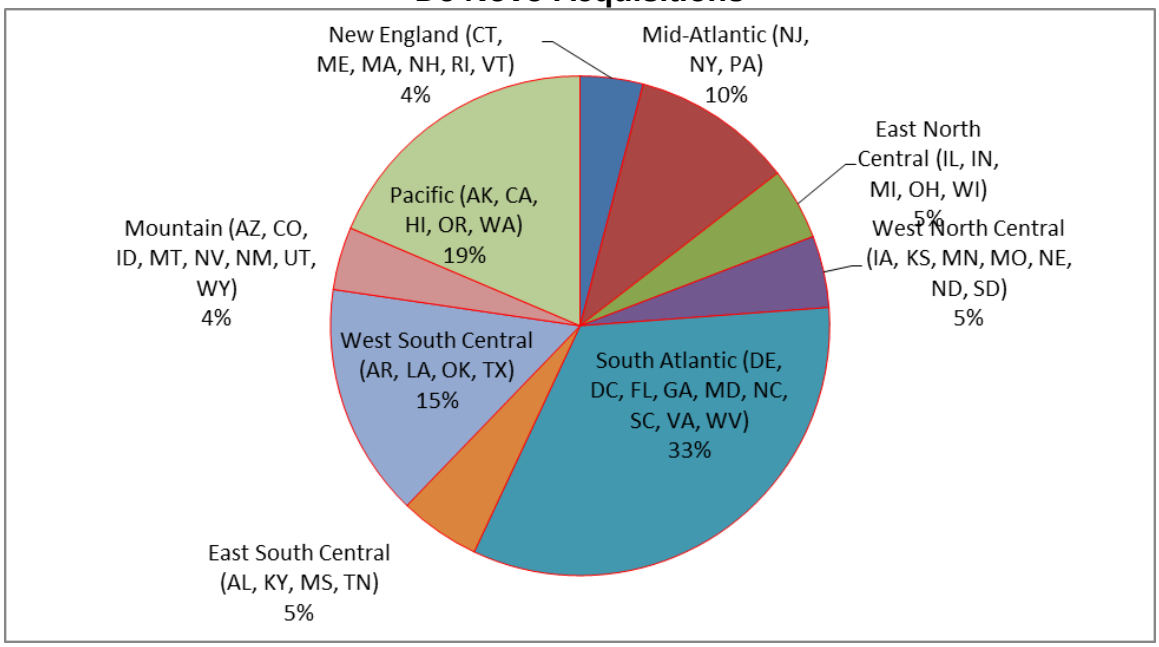


Figure 13. De Novo Acquisitions, as Percent of Total De Novos, By Region

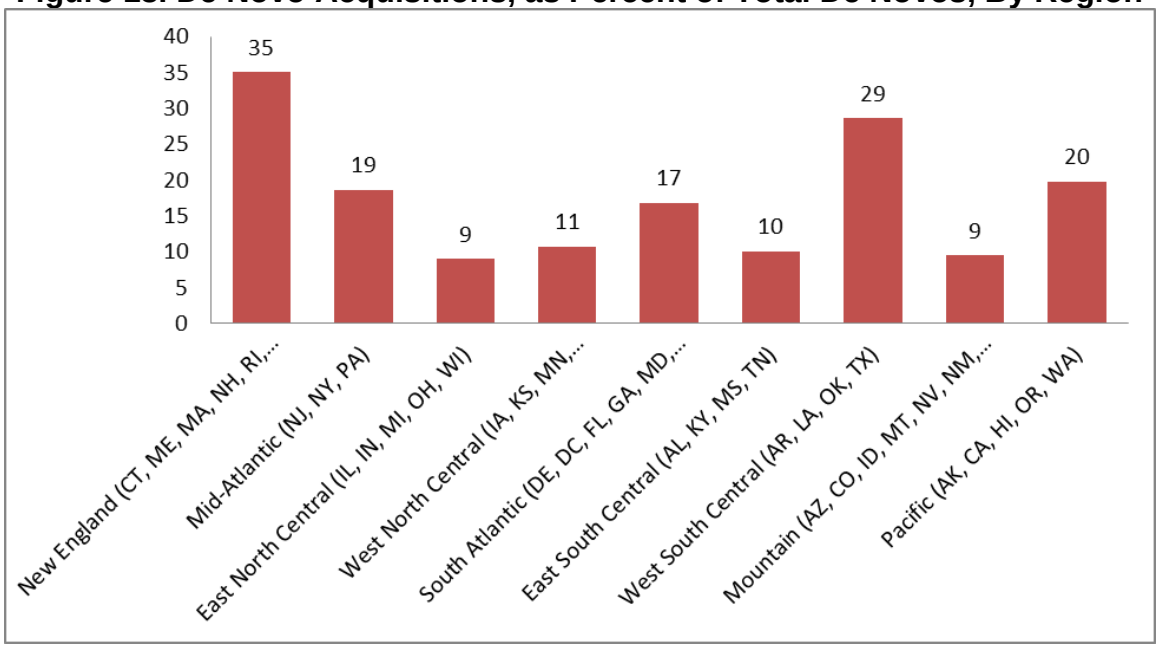


Figure 14: Median Equity Ratio for Failed, Merged, and Survived De Novos

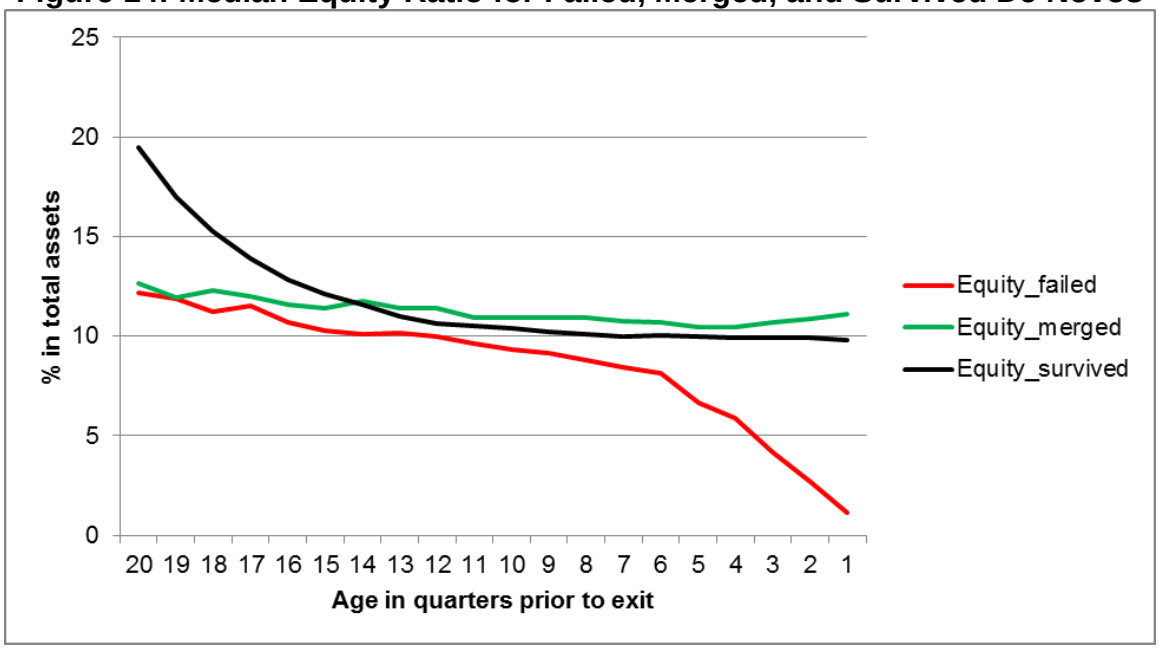


Figure 15: Median Earnings Ratio for Failed, Merged, and Survived De Novos

Figure 16: Median Non-performing Loans Ratio for Failed, Merged, and Survived De Novos

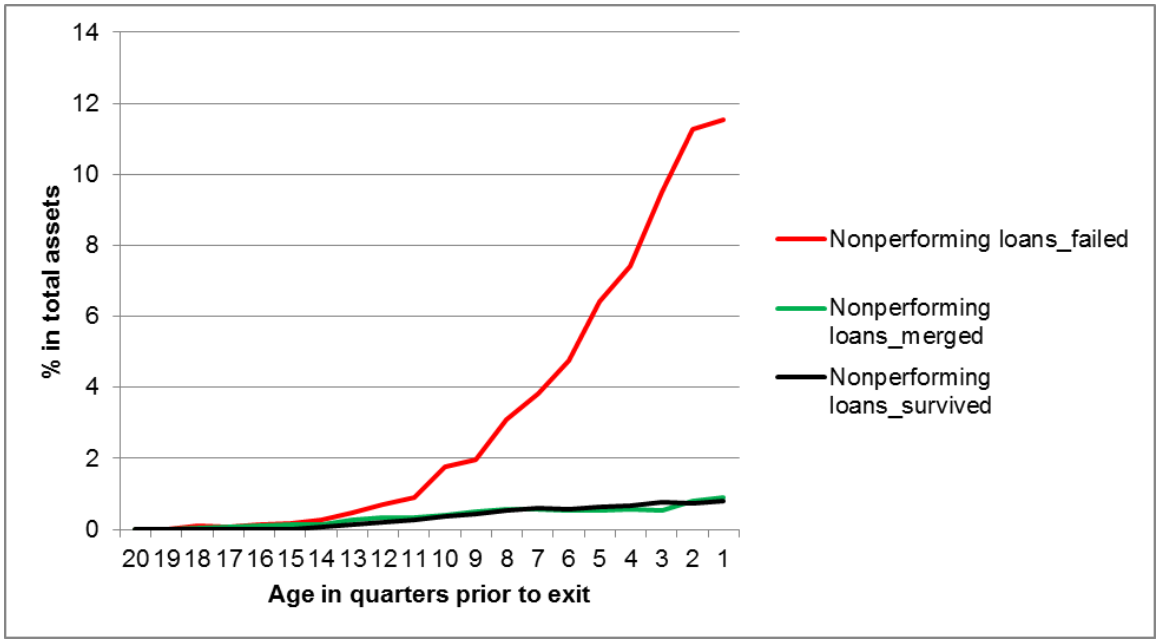


Figure 17: Median Noncore Funds for Failed, Merged, and Survived De Novos

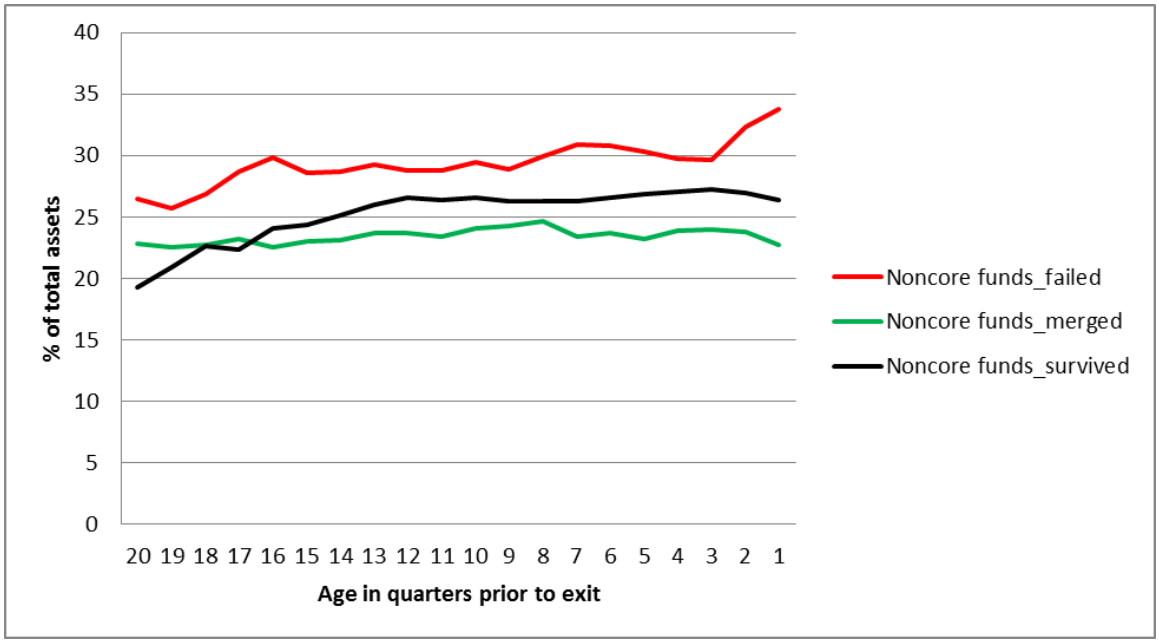


Figure 18: Median Brokered Deposits for Failed, Merged, and Survived De Novos

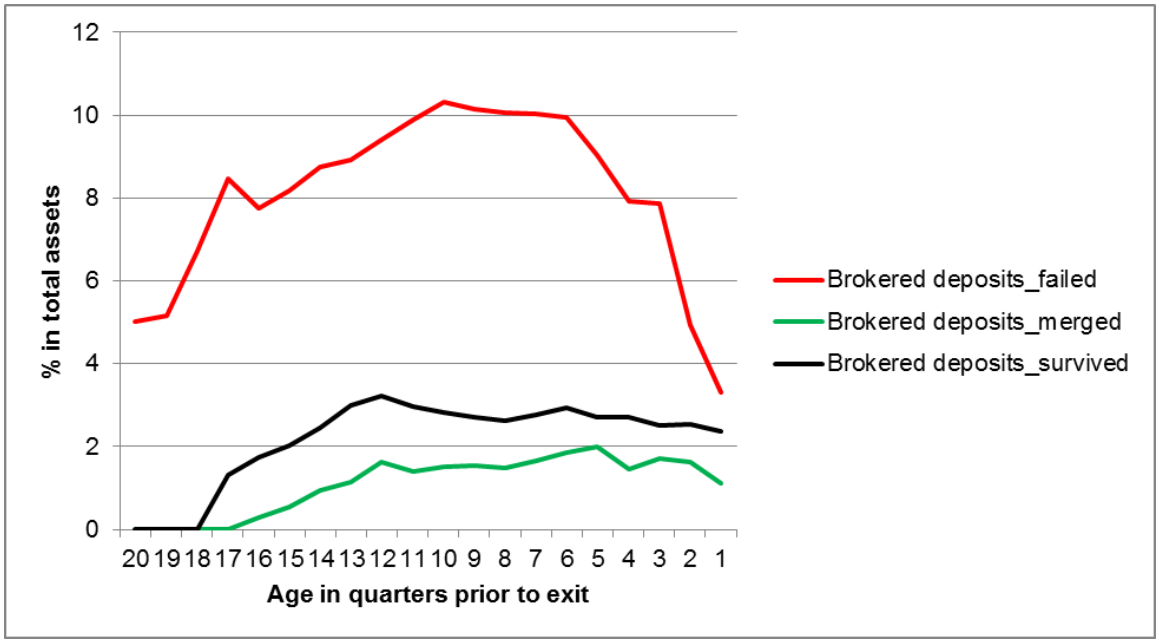


Figure 19: Median C&D Loans for Failed, Merged, and Survived De Novos

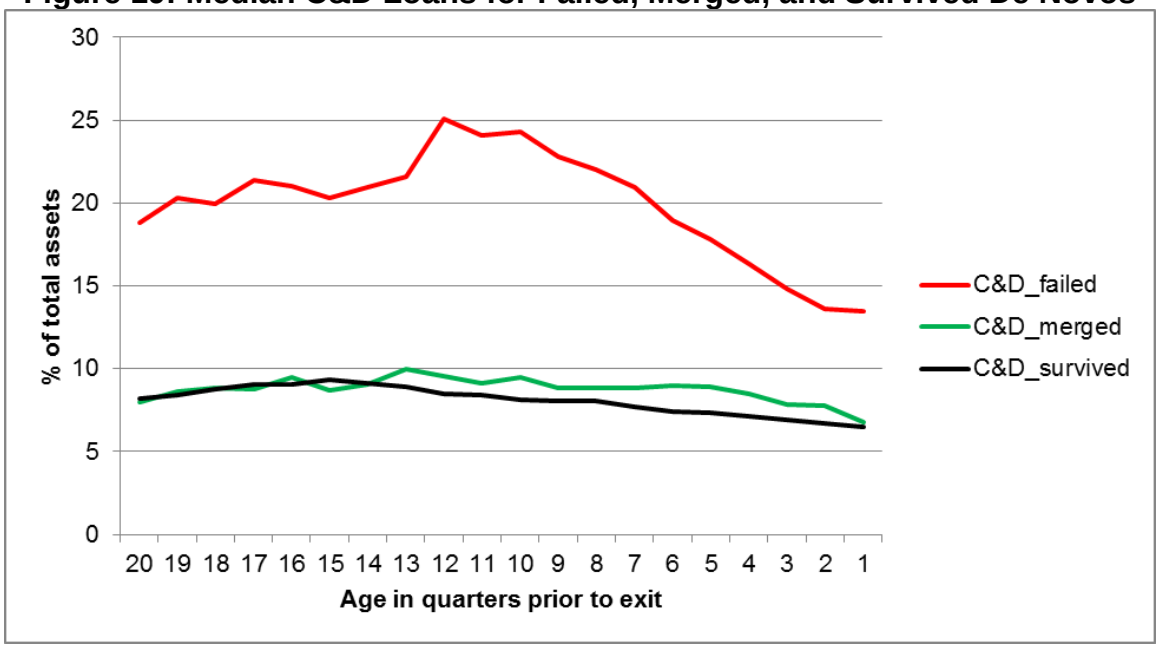


Figure 20: Median C&I (<$1 million) for Failed, Merged, and Survived De Novos

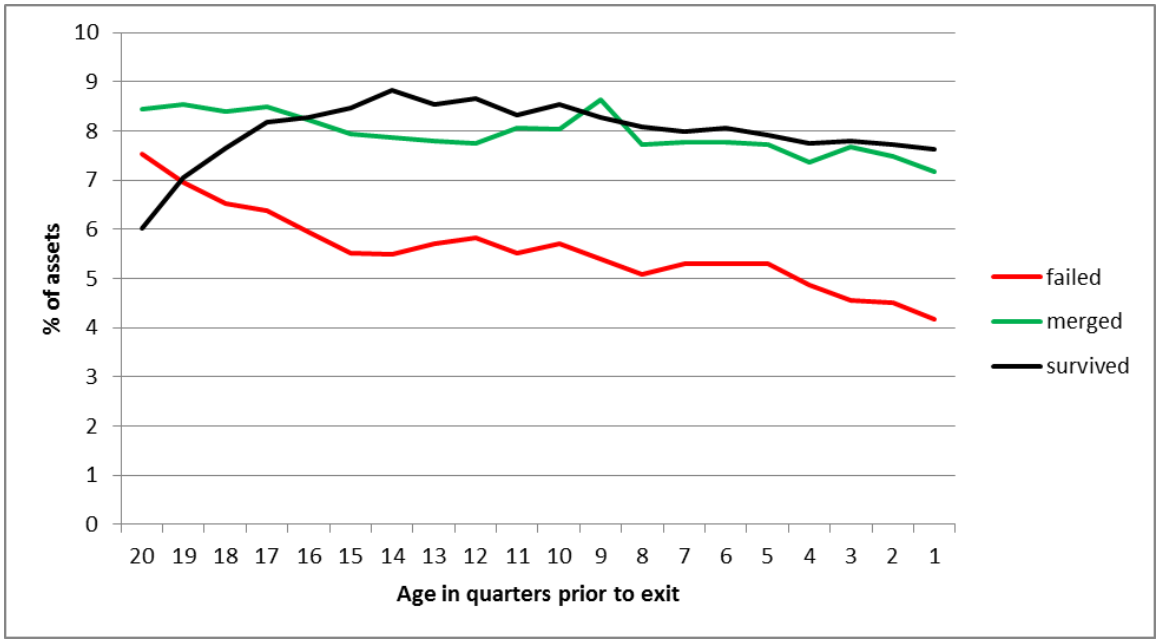
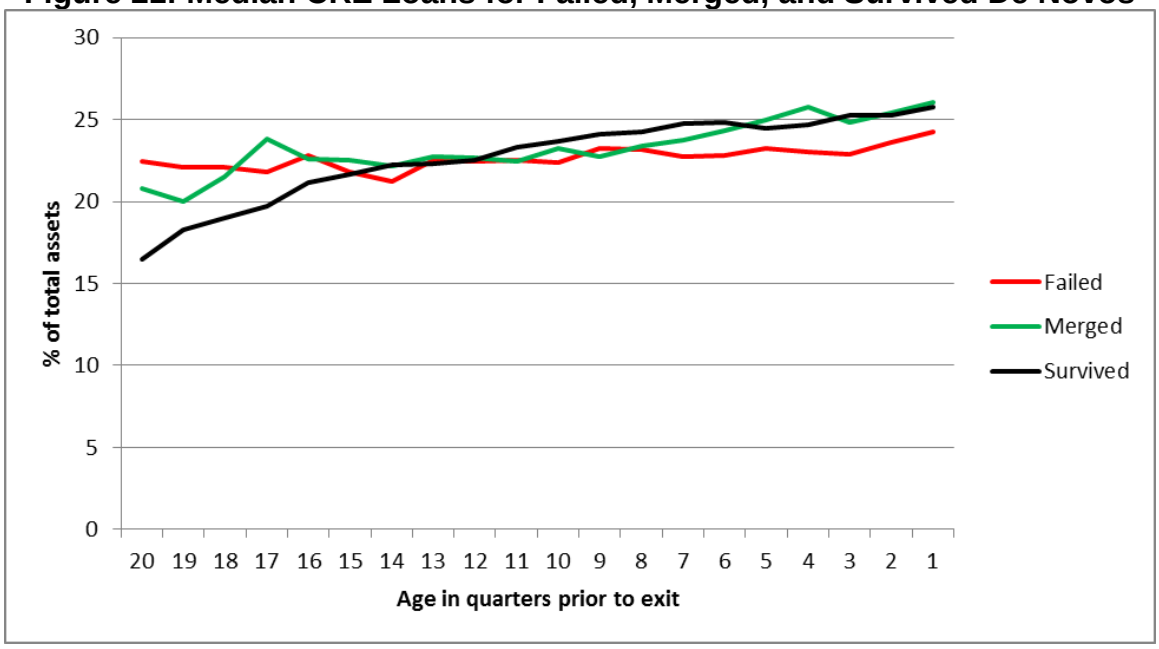



Figure 21: Median CRE Loans for Failed, Merged, and Survived De Novos