

OUT OF THE GOODNESS OF THEIR HEARTS? REGULATORY AND REGIONAL IMPACTS ON BANK INVESTMENT IN HOUSING AND COMMUNITY DEVELOPMENT IN THE UNITED STATES

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ABSTRACT: *Banks are considered key actors in affordable housing and community development in the United States. Their involvement in such activities may be due partly to their dependence on economic rents generated from development. In the United States, however, banks are encouraged to support such activities by the federal 1977 Community Reinvestment Act (CRA). I examine how different factors explain the CRA-qualified investments by banks. Qualified investments are essentially nondebt financial resources provided as an equity investment or grant with a community development purpose. I find that the identity of the regulator (the United States has four banking regulators) has a major impact on the level of qualified investments. Other things equal, a difference in regulators can cause a bank's qualified investments to more than double. Besides suggesting that some regulators may be enforcing a major portion of CRA regulations more vigorously than others, this also suggests that the CRA plays a major role in bank investment in community development. This has policy implications not just in the United States but also in other countries that might consider replicating the CRA.*

In many local communities in the United States, depository financial institutions, including commercial banks and thrifts, are generally considered important actors in local affordable housing and community and economic development circles. The involvement of banks and thrifts in such coalitions is seen as being largely due to their dependence on the health of the built environment and the increased economic rents generated from local economic and community development. Growth machine and urban regime theorists have viewed financial institutions as core members of urban growth coalitions or key partners in urban regimes (Logan & Molotch, 1987; Stone, 1989). The increased geographic scale of financial institutions may be undermining the commitment of some banks and thrifts to local development activities (Apgar, 2002), but for all but the largest institutions, a substantial portion of their business activity remains concentrated in specific metropolitan areas, states, or multistate regions.

Besides the provision of credit and basic financial services to consumers, homeowners, and small firms, banks and thrifts are often relied upon as leading corporate investors in, and funders

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of, community and economic development activities, including affordable housing and minority and small business development projects. Banks and thrifts may be involved in such activities due to their dependence on the condition of the local economy and the local building stock, but, in the United States, they are also explicitly encouraged to support local community and economic development activities by regulations implementing the federal 1977 Community Reinvestment Act (CRA). Nondepository financial institutions, including mortgage and finance companies, insurance companies, and securities firms, are not covered by the CRA and are generally considered less active in investing in or supporting community and economic development endeavors. Moreover, the 1995 changes to CRA, in which the Investment Test was adopted, increased the credit that banks received under CRA for investments.

The aim of this article is to determine the extent to which different factors explain variations in how much banks and thrifts invest in CRA-qualified investments in their communities. CRA-qualified investments are essentially nondebt financial resources usually provided as some form of unsecured equity investment (where a financial return of some sort is expected) or a grant. To be considered as qualified investments, the related activities must have a “community development purpose,” as defined in the CRA regulations. In general, community development purposes can include “affordable housing for low- or moderate-income (LMI) individuals; community services targeted to LMI individuals; activities that promote economic development by financing businesses or farms with gross annual revenues under \$1 million; and activities that revitalize or stabilize LMI geographies” (United States Office of the Comptroller of the Currency et al., 1995).

More specifically, I examine the influence of a bank’s size, the regulatory assessment of its other CRA activities including direct lending and basic financial services, the regulatory agency it reports to, and the region of the country that it is located in on the bank’s level of qualified investments. Data were gathered from the CRA performance evaluations of banks and thrifts over a two-year period as well as from the financial statements for these institutions, which are collected by the Federal Deposit Insurance Corporation (FDIC).

THE ROLE OF BANK AND THRIFT INVESTMENTS IN HOUSING AND COMMUNITY DEVELOPMENT IN THE UNITED STATES

It is widely recognized that depository financial institutions—both banks and thrifts—are major players in the development of affordable housing and community development more generally. Besides providing loans and basic financial services to consumers, homeowners, and developers, banks and thrifts are often relied upon as leading corporate investors in, and funders of, community development activities, including investing in low-income housing tax credits (LIHTCs), providing operating support for community development corporations (CDCs) and community development financial institutions (CDFIs), and making equity or equity-like investments in CDFIs. Banks can invest traditional forms of equity in for-profit CDFIs, such as community development banks. For nonprofit CDFIs, bank regulators have considered highly subordinated rolling maturity debt called “equity equivalent investments” to be investments and not debt for CRA purposes (McLenighan & Tholin, 1997).

Perhaps the single most significant vehicle through which banks and thrifts make investments in housing and community development is the purchase of federal low-income housing tax credits. Handelman & Smith (2004) estimate that “CRA-motivated” buyers of tax credits dominate demand for LIHTC, accounting for a “rough estimate” of 90% of the market. While this estimate may be somewhat high—given the participation of nonbank financial institutions in the program—it is clear that banks and thrifts are major investors in such credits. The LIHTC program is by far

the largest supply-side subsidy program for the production of affordable rental housing in the United States (Schwartz, 2006). LIHTC's qualify under CRA as "investments" and can be used to improve a financial institution's score on the Investment Test.

Another key way in which banks and thrifts invest in housing and community development is through their investments in CDFIs. CDFIs are a growing sector of alternative financial institutions that provide credit and capital for affordable housing and other forms of community development in lower-income and disadvantaged communities. While some forms of CDFIs—particularly community development credit unions—date back to the first half of the 20th century, the numbers and variety of CDFIs began to grow in the 1960s and 1970s. As of 2003, there were approximately 800 to 1,000 CDFIs in the United States (Corporation for Enterprise Development, 2003). Nieman and Bush (2002) analyzed one subsector of CDFIs—community development banks—and found that the subsector had grown considerably since the adoption of the Investment Test. From 1996 to 2001, the assets of CDFIs grew from \$2.84 billion to \$5.12 billion. Lending volume grew from \$1.43 billion annually to \$2.91 billion.

Banks and thrifts are an important source of equity capital for CDFIs. The 512 CDFIs surveyed by the Corporation for Enterprise Development (2003) reported more than \$850 million of their current equity capital came from banks in 2001. The bulk of this (\$745 million) went to community development loan funds. In fact, depository institutions accounted for more than one third of loan fund capital. CDFIs frequently depend on below-market and often-creative forms of investment from banks.

One measure of bank nondebt investment in housing and community development projects is available for nationally chartered banks, those regulated by the U.S. Office of the Comptroller of the Currency (OCC). The OCC has generally allowed banks to invest up to 10% of their equity capital in what are called "Part 24" community development investments, including investments in LIHTCs, CDFIs, and similar activities. Litan, Retsinas, Belsky, and Haag (2000) found that national banks invested seven times as much (in real dollars) in Part 24 investments from 1993 to 1998 (the latest year they examined) as they did in the previous 28 years (1965 to 1992).

THE CRA AND THE THREE-COMPONENT CRA EXAM

The U.S. Community Reinvestment Act of 1977 established a regulatory requirement of banks and savings institutions in the United States to serve the credit needs of their local communities. The law was a response to concerns and activism over redlining and lending discrimination and followed the 1975 Home Mortgage Disclosure Act, which required banks to report the number and dollar amount of their mortgages by census tract. CRA is a fairly brief and general piece of legislation that relies upon an extensive set of administrative regulations specifying how bank regulators evaluate and rate the community reinvestment performance of banks. The statute is implemented by the four federal regulators of depository institutions—the Office of the Comptroller of the Currency (OCC), the Federal Reserve Board (FRB), the Federal Deposit Insurance Corporation (FDIC), and the Office of Thrift Supervision (OTS). Each of these agencies regulates a different type of bank or thrift. Two of these agencies, the OCC and the OTS, are executive agencies and are located within the Treasury Department, although they are more insulated from political pressures than many other executive agencies. The FDIC is a government-chartered corporation, with leadership that is appointed by the executive branch. The Federal Reserve is generally considered the most independent of the bank regulatory agencies. While FRB governors are appointed by the president, the chairman of the FRB serves a fixed seven-year term and is stronger politically than other agency heads. While these four agencies do work

together to attempt to arrive at regulations that are uniform across regulators, each has the ability—and sometimes exercises this ability—to develop regulations that are different from those of the other three agencies.

The main enforcement tool in the CRA is the ability of regulators to block a number of different kinds of changes in operating structure (e.g., mergers, acquisitions, new branches) based on poor CRA performance. The Act also provides for the ability of community groups to file formal challenges with regulatory agencies asking them to withhold approval of mergers by asserting that the CRA performance of one or both of the merging banks is poor. While regulators rarely block mergers based on challenges, such protests can certainly slow down the approval of an application, and this delay can be costly to a bank.

Following the original passage of CRA in 1977, regulators were charged with developing regulations to implement the statute. The regulators developed a list of 12 factors that they would consider to assess a bank's CRA performance. The 12 factors included the extent of the bank's marketing programs, the participation by board members in formulating the bank's policies and reviewing its performance, and efforts to ascertain the credit needs of its community, as well as factors involving the volumes of the bank's lending and investment activities.

Throughout the 1980s, community reinvestment advocates argued that CRA regulations were not being meaningfully enforced and that examiners focused too much on the processes banks engaged in rather than on actual lending and investment outcomes (Squires, 2003). The Federal Reserve released data in late 1981 revealing that it had rated only 3% of banks as less than satisfactory in 1980 (Fishbein, 1993). In Congressional hearings in the late 1980s, it was revealed that the number of examiner hours devoted to consumer compliance responsibilities, including CRA, dropped by approximately 75% in the early 1980s (Fishbein, 1992).

Community groups increasingly responded to lax federal regulation by recognizing that they had to "carry the burden of CRA and fair housing enforcement in the absence of responsible intervention by the financial regulatory agencies" (Bradford & Cincotta, 1992). As a result, they began using activism and their analyses of Home Mortgage Disclosure Act (HMDA) data to bring financial institutions to the negotiating table. Community organizations and banks entered into an increasing number of CRA agreements during the late 1980s. The number of CRA agreements increased from three per year in 1982 and 1983, to 11 and 12 in 1984 and 1985, and then to 32 and 31 in 1986 and 1987, respectively (Immergluck, 2004).

In the early 1990s, improvements to HMDA data and new public access to CRA exams, both provided by the Federal Institutions Reform, Recovery and Enforcement Act of 1989, helped create a revived interest in CRA among community groups, the media, and policymakers. Bill Clinton made increasing CRA's impact a significant part of his urban policy campaign platform in the 1992 presidential election. In 1993, the four federal banking regulatory agencies together proposed a uniform set of major revisions to regulations implementing the CRA, although it was clear that some agencies supported the initial version of these revisions more than others. The Clinton Administration's point person on, and chief advocate for, "CRA Reform" was Comptroller of the Currency Eugene Ludwig. In this proposal, regulators argued that the new regulations would be an attempt to focus more on actual lending results and less on processes like demonstrating community contacts and advertising efforts, which had been the focus of CRA regulations up until that time. Consistent with the Administration's more general "reinventing government" efforts, regulators also argued that the revised regulations would leave bankers with less paperwork requirements. Thus, CRA reform was promoted as an attempt to make both reinvestment advocates and bankers happy.

In April 1995, after 18 months of repeated public comments and debate, and publicly aired disagreements among the regulatory agencies over various provisions in the proposal, the four

regulators released a uniform set of revised CRA regulations. The rules replaced the 12 assessment factors in the previous regulations with an outcome-based evaluation system. This system was intended to assess how well institutions served their communities on lending, investments, and financial services, rather than on how well they conducted needs assessments and documented community outreach.

While a shift from process to outcomes was a primary objective of the final regulatory changes, there was also some attention given to “easing the regulatory burden” of banks, especially for smaller institutions (Immergluck, 2004). As a part of this, a two-tier evaluation system was established, with banks classified as “small” (less than \$250 million in assets) having more limited evaluation procedures than “large” institutions.

Under the regulations that came out of CRA Reform, CRA performance evaluations (commonly called “CRA exams”) generally consist of three component tests: the Lending, Investment, and Service Tests.¹ The Lending Test is the most heavily weighted of the three tests, accounting for 50% of a bank’s overall CRA rating. It measures a bank’s performance in direct lending, including mortgages, multifamily loans, and small business loans. It focuses primarily on direct lending to households and small businesses. Consumer lending is also considered if a bank chooses to include it or if consumer lending constitutes a substantial majority of a bank’s business. Examiners evaluate the extent to which an institution makes loans in its “assessment area”—an area typically composed of counties or metropolitan areas—versus other locations, and the extent to which the institution provides credit to low- and moderate-income neighborhoods and households within its assessment area.

The Service Test accounts for the 25% of the overall score and is the test in which banks are evaluated for the distribution of their branch locations and the provision of basic deposit services. Examiners are supposed to consider the distribution of branches among low-, moderate-, middle-, and upper-income areas, as well as the institution’s branch openings and closings, especially those affecting low- to moderate-income areas or individuals. Also taken into account are alternative systems of service delivery (automated teller machines, bank-by-phone, loan production offices) and the range of services offered. The regulations also call for an examination of an institution’s community development services. These are services that promote credit availability, small business development, or affordable housing, or, which provide technical assistance in the financial services field to organizations, working to meet the credit needs of low- to moderate-income communities or individuals. Community development services include seminars and bank-at-school programs aimed at providing financial literacy and education to lower-income households.

The Investment Test, which accounts for the remaining 25% of the overall CRA rating, is an assessment of a bank’s record of helping to meet the credit needs of its community through what are called “qualified investments.” Qualified investments are essentially nondebt financial resources provided usually as some form of unsecured equity investment (where a financial return of some sort is expected) or a grant, although the latter type generally accounts for a small portion of banks’ qualified investments. Deposits in certain types of alternative, CDFIs and certain in-kind donations also qualify as investments under the regulations.

The CRA regulations proscribe in some detail what sorts of investments and grants may count as qualified investments, although examiners retain some discretion to determine whether an activity is considered as a qualified investment. Qualified investments must benefit the institution’s assessment area or a broader area including its assessment area, and they must be for the purpose of community development, as defined in the regulations. CRA-qualified investments include investments, deposits, membership shares, grants, and in-kind contributions in or to:

1. Financial intermediaries such as community development financial institutions or minority-owned banks;
2. Nonprofits serving community development needs, such as homeownership counseling or commercial development in low-income areas;
3. Other nonprofit organizations serving low- and moderate-income individuals in the bank's assessment area; and
4. Municipal revenue bonds targeted to lower-income areas; small business investment companies (not necessarily geographically targeted); low-income housing tax credits; and other qualified projects.

CRA reform boosted the importance of bank investments, in part, by making investment activity a more explicit expectation for banks with more than \$250 million in assets. The Investment Test is frequently credited as a primary factor in the expansion of bank involvement and partnerships with CDCs, CDFIs, low-income credit unions, and other community-based development organizations throughout the United States (Jacob & Bush, 2003).

CDFIs, in particular, have been key beneficiaries of the Investment Test. As of 2003, there were approximately 800 to 1,000 CDFIs in the United States (Corporation for Enterprise Development, 2003). The 512 CDFIs surveyed by the Corporation for Enterprise Development reported more than \$850 million of their current equity capital came from banks in 2001. The bulk of this (\$745 million) went to community development loan funds. In fact, banks, thrifts, and credit unions accounted for more than one third of loan fund capital. CDFIs, in particular, depend on below-market and often-creative forms of investment from banks. They typically cannot offer the levels of financial return that a bank would receive from alternative investments. CDFI investments often involve more risk—or more perceived risk—and require more customized structuring than conventional investment vehicles. Thus, CRA incentives may be particularly important in their ability to attract affordable capital.

Beginning with CRA reform, small banks have been examined according to a less rigorous procedure that focuses on loan-to-deposit ratios and other very simple measures. Small banks—those with assets under \$250 million—are not evaluated for community development lending or investments, although they may choose to have such activities considered in order to improve their ratings. Wholesale or limited purpose banks, such as banks specializing in offering credit cards, are evaluated based on a special “community development” test.

All institutions receive an overall rating of one of four possible levels: “Outstanding,” “Satisfactory,” “Needs to Improve,” or “Substantial Noncompliance.” For overall ratings, a four-level rating system is required by the original legislation. A bank examiner substantiates the rating in a written report. A public portion of the exam is published after the bank is informed of its rating. An institution may receive any of five possible scores on each component test: Outstanding, High Satisfactory, Low Satisfactory, Needs to Improve, or Substantial Noncompliance.

Table 1 indicates how points are assigned for the different component ratings. These numerical equivalents of the ratings on the component tests are then summed to arrive at a composite score that corresponds to an overall rating. A composite score of 20 or more yields an Outstanding rating; 11–19 yields a Satisfactory; 5–10 yields a Needs to Improve; and 0–4 yields a Substantial Noncompliance. However, the algorithm used to calculate the overall rating is not entirely a linear one. To give additional emphasis to the Lending Test, an institution must receive at least a Low Satisfactory on the Lending Test to attain an overall Satisfactory rating. However, very few banks or thrifts—especially those classified as “large” institutions—do not receive at least a Low Satisfactory on the Lending Test.

TABLE 1

The CRA Large Bank Performance Rating System

	Lending	Investment	Service
Component Test Ratings Matrix			
Outstanding	12	6	6
High Satisfactory	9	4	4
Low Satisfactory	6	3	3
Needs to Improve	3	1	1
Substantial Noncompliance	0	0	0
Points Required for Overall CRA Rating Levels			
20 +	Outstanding		
11–19	Satisfactory*		
5–10	Needs to Improve		
0–4	Substantial Noncompliance		

*Must receive at least a Low Satisfactory rating on the Lending Test to receive an overall Satisfactory rating.

DATA AND METHODS

CRA exams for 194 banks and thrifts with more than \$1 billion but less than \$100 billion in assets were collected. Banks with less than \$1 billion in assets are much less likely to engage in substantial investment activities. Moreover, newer CRA regulations have created an “intermediate” small bank exam format in which investment activity is evaluated under a new “community development test,” which looks at both investment and service activities. Banks with assets of over \$100 billion in assets are relatively rare and are often called “megabanks.” During the 26-month period of time for which these exams were collected, only 8 of the 954 large bank exams were for banks with more than \$100 billion in assets. While these banks are major actors in community development investments, and account for more than 40% of the assets of institutions receiving large bank exams, their regulation is likely to differ from that of most banks. In order to economize on examination costs, the exams for these banks typically involve a sampling of data in several subsets of their national CRA “assessment area.” Moreover, these banks rarely receive anything but Outstanding CRA ratings. The focus here is on what most would consider medium-sized and relatively large banks, but not the “megabanks.” This set of large—but not “mega”—banks accounts for more than half of the assets subject to the CRA large-bank exam and the Investment Test.

The sample used for the multivariate analysis below was developed as follows. Initially, the 100 most recent performance evaluations from any regulator beginning with exams from August 2004; this yielded exams dating back as far as January 2004. In order to address a broader set of research questions, many of which are not addressed here, in which various details about the exam would be required, I identified those exams for which a full set of required variables could be identified. In this analysis it was found that a much higher percentage of FDIC examinations had complete information on this larger set of variables than was the case for the other agencies. Sixty percent of FDIC exams contained all desired variables for the larger research project, while overall, only 39% of exams contained the full set of desired variables.

Due to the extensive time and labor required to gather the data from these exams (the exams are frequently very large and the data is not uniformly or consistently displayed across exams) and the need to build up a large sample size, data collection was extended to a somewhat broader period of time both before and after the January to August, 2004 period. The final period ran from March, 2003 to April, 2005. Moreover, because of the much greater propensity of FDIC exams to contain complete data, only FDIC exams were included in this second phase of data collection. Thus,

TABLE 2

Comparison of Large Bank CRA Exams in Study to All Large Bank Exams*

Regulator	Large Bank Exams in Study	Percent	All Large Bank Exams from March 2003 to April, 2005	Percent
OCC	18	9.28%	51	15.00%
FRB	14	7.22%	63	18.53%
FDIC	148	76.29%	151	44.41%
OTS	14	7.22%	75	22.06%
Total	194		340	

*Includes banks with \$1 billion to \$100 billion in assets; and only "large bank" performance evaluations.

in the final data set, FDIC exams are relatively overrepresented compared to the other agencies. However, the addition of the FDIC institutions to this analysis adds substantial statistical power for the multivariate analysis to follow. Thus, while the data is not perfectly representative of the distribution of exams by regulator, it does contain substantial variability in regulatory agency. Table 2 compares the number of exams in the data set analyzed here to the overall distribution of exams over this same period.

Geographically, the 194 exams were conducted on banks with main offices in 43 states. Table 3 shows that California led all states for main office locations with 25. New York was second with 15 institutions in the data set. In order to determine whether there are regional effects on qualified investment levels, the 194 exams were allocated into one of six regions (see Table 4). The regions were generated by employing the multistate regions used by the FDIC and aggregating regions together in cases where at least one of them contained relatively few of the exams. Given the large number of exams from banks in California, the state is classified as a separate region. New York and New Jersey were combined to constitute a single region. Four additional regions were constructed from the FDIC regions: (1) Other West (not including California); (2) Other Northeast (not including New York or New Jersey); (3) South-Southwest; and (4) Midwest. Table 4 describes these regions and the number of banks and thrifts in each region.

The far-right column in Table 5 shows that the 194 banks and thrifts range in size from just over \$1 billion to over \$62 billion in assets. However, while all of the banks were evaluated as "large banks" for CRA purposes, most of these institutions would not be considered very large by conventional U.S. banking standards. The median institution had just over \$2 billion in assets, with a mean of just over \$5 billion. Again, the overall paucity of "megabanks," those with assets over \$100 billion, makes statistical analysis of their patterns infeasible. Thus, this analysis is not readily generalizable to these very large institutions.

TABLE 3

Locations of Main Offices for Banks and Thrifts in Study

State	Number of Banks & Thrifts
California	25
New York	15
Massachusetts	14
Illinois	14
Pennsylvania	13
New Jersey	11
Remaining 37 States	102

TABLE 4**Geographic Regions**

Region	States in Region	Number of Examined Banks in Region
New York–New Jersey	New York and New Jersey	26
Other Northeast	Delaware, Maryland, Pennsylvania, Puerto Rico, Connecticut, Maine, Massachusetts, Rhode Island	52
California	California	25
Other West	Alaska, Arizona, Hawaii, Nevada, Oregon, Utah, Washington	18
South-Southwest	Alabama, Florida, Georgia, North Carolina, South Carolina, Virginia, West Virginia, Colorado, Texas, Arkansas, Louisiana, Mississippi, Tennessee	32
Midwest	Illinois, Indiana, Kentucky, Michigan, Ohio, Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota	41

Table 5 also shows that the banks and thrifts had an average of just over \$23 million in qualified investments, with a median of \$7.8 million, and that qualified investments varied widely, with a standard deviation of over \$45 million. The relative dispersion of qualified investments was considerably wider than the dispersion of bank size (standard deviation of \$7.9 billion compared to a mean of \$5.1 billion).

Both asset size and qualified investment levels varied across the four regulatory agencies. The OCC-regulated and OTS-regulated institutions were typically larger. The OCC institutions had the highest mean asset size at over \$11.4 billion, while the OTS institutions had the largest median size at \$4.3 billion. The FDIC institutions were the smallest when measured either by mean or median asset size. In terms of qualified investments, the OCC institutions tended to have higher raw levels of qualified investments, measured either by mean or medians. The mean levels of investments for the other three regulators were quite similar, although the medians varied more.

TABLE 5**Descriptive Statistics for all Banks and Thrifts in Study, By Regulator (in thousands of dollars)**

	FRB	OCC	FDIC	OTS	All Regulators
Total Assets					
Mean	6,341,443	11,408,303	4,046,301	6,833,442	5,096,136
Median	2,950,946	3,436,615	1,882,775	4,248,044	2,164,833
Std. Deviation	8,668,653	17,301,646	5,268,013	8,114,874	7,867,313
Minimum	1,184,702	1,093,268	1,003,213	1,032,268	1,003,213
Maximum	32,042,103	62,764,854	29,300,245	26,362,725	62,764,854
Qualified Investments (QI)					
Mean	19,282	42,153	21,363	19,645	23,018
Median	13,606	17,547	7,223	8,020	7,827
Std. Deviation	22,310	49,984	46,507	39,633	45,220
Minimum	173	1,533	18	15	15
Maximum	81,188	158,369	398,152	153,400	398,152
Number of Exams	14	18	148	14	194
Median QI/Median Total Assets	0.0046	0.0051	0.0038	0.0019	0.0036

TABLE 6

Descriptive Statistics for Banks and Thrifts in Study with Less than \$10 Billion in Assets

	FRB	OCC	FDIC	OTS	All Regulators
Total Assets					
Mean	2,552,042	2,434,029	2,640,638	3,851,351	2,705,783
Median	2,179,264	2,256,774	1,737,894	2,479,383	1,743,397
Std. Deviation	1,423,309	1,129,591	2,014,496	3,070,485	2,034,125
Minimum	1,184,702	1,093,268	1,003,213	1,032,268	1,003,213
Maximum	4,584,732	4,118,722	9,333,614	8,480,133	9,333,614
Qualified Investments (QI)					
Mean	15,549	16,453	16,143	7,794	15,537
Median	11,988	7,392	6,619	6,830	6,920
Std. Deviation	22,758	18,650	33,722	8,383	31,050
Minimum	173	1,533	18	15	15
Maximum	81,188	61,003	319,448	30,220	319,448
Number of Exams	11	12	135	12	170
Median QI/Median Total Assets	0.0055	0.0033	0.0038	0.0028	0.0040

The bottom row of Table 5 gives a ratio of median qualified investments to median bank size. For all 194 institutions, this ratio is 0.0036. However, the ratio is considerably higher for the OCC and FRB institutions than the other two agencies. Moreover, the OTS ratio is considerably lower than all three of the other agencies. However, because these are simple ratios of medians and because other factors vary across regulatory agencies, more analysis is required to determine whether some regulators appear to be more effective at encouraging investment activity than others.

Because larger “large” banks may be expected to behave differently than smaller “large” banks in terms of qualified investment activity, the descriptive statistics are recalculated for 170 banks and thrifts with assets of less than \$10 billion. Table 6 gives the same descriptive statistics as Table 5 but for the reduced set of banks and thrifts. The largest banks in the data set (those with assets from \$10 to \$62 billion) are omitted from the calculation of the median qualified investment to median asset ratios. This trimming of the data set, reduces the difference between OCC and OTS investment-to-income ratios and boosts the ratio for the FRB banks. The volatility of the invest-to-income ratio is somewhat expected for all but the FDIC group, given the relatively small numbers of institutions in those groups.

MULTIVARIATE ANALYSIS OF THE DETERMINANTS OF QUALIFIED INVESTMENT LEVELS

In order to identify the degree to which different factors affect a bank’s level of qualified investment activity, I begin with the following specification of a multivariate estimation of qualified investments:

$$\text{Ln}(Q_i) = \alpha + \gamma \text{Ln}(m_i) + \delta g_i + \phi_{r_i} + \beta f(\ell_i, s_i) + \varepsilon_i \tag{1}$$

where Q_i is the amount of qualified investments in thousands for each bank, i , m_i is the asset size of the bank measured in thousands of dollars, g_i is the government regulator that regulates the bank or thrift, r_i is the region of the country in which the bank is based, ℓ_i is the lending

test performance as assessed on the CRA exam, and s_i is the service test performance on the CRA exam. The function, $f(\ell_i, s_i)$, represents the effect of different combinations of results on the Lending and Service Tests on the proclivity for an institution to increase its investment activity in order to improve its overall CRA rating. Due to the contingent summation approach used in aggregating CRA component test scores (as described in Table 1), such an approach is necessary.

In order to specify $f(\ell_i, s_i)$, it is necessary to consider the implications of different Lending and Service Test scores in terms of providing initial conditions for banks considering their investment levels. Table 7 shows that, for all of the cases represented in the data here, there are four cases in which a rating above a Needs to Improve on the Investment Test would be expected to improve the overall CRA rating of an institution. (Not all potential Lending and Service Test score scenarios are represented in the data set, but certainly all of the more common scenarios are.)

Table 7 shows that there are three scenarios in which an Investment Test rating above a Needs to Improve would be expected to improve a bank's overall CRA rating from Satisfactory to Outstanding. The first is when the Lending Test and Service Test scores are both Outstanding. In this case, a Needs to Improve on the Investment Test would yield the bank only an overall CRA rating of Satisfactory, but any higher score would yield an Outstanding rating.

The second scenario is when the Lending Test result is an Outstanding and the Service Test is a High Satisfactory. In this case, a High Satisfactory rating on the Investment Test would yield the overall Outstanding rating. The third case is when a bank has a High Satisfactory on the Lending Test but an Outstanding on the Service Test. In this case, an Outstanding rating on the Investment Test would be required to improve the bank's overall CRA rating.

There are also two situations in which an improved rating on the Investment Test would raise a bank's overall CRA rating from Needs to Improve to Satisfactory. The first is when the Lending Test score is a Low Satisfactory and the Service Test is a Low Satisfactory. In this case, a Low Satisfactory is needed to achieve the overall Satisfactory rating. In the two cases where the bank received a Low Satisfactory on the Lending Test and only a Needs to Improve on the Service Test, the bank needed a High Satisfactory on the Investment Test to achieve an overall Satisfactory CRA rating. (Note that in these data there are no cases in which the Lending Test score was below a Low Satisfactory.)

Based on Table 7, five dummy variables were constructed to describe the cases in which a bank has a clear incentive to achieve a certain Investment Test score in order to achieve a certain overall CRA rating. These dummies constitute the specification of the contingency function, $f(\ell_i, s_i)$.

All independent variables except for bank size, m , are implemented as dummy variables. The dependent variable is specified in log form because ordinary least squares regression requires that the error term be normally distributed, and the positively skewed nature of the qualified investments causes problems here. Figure 1 illustrates the distribution of qualified investments. A log transform of the dependent variable creates a normally distributed dependent variable and mitigates the problem of the nonnormally distributed error term. Because I initially assume that investments will be proportional to bank size, the bank size variable is also log-transformed in equation (1). A specification in which the assets variable was not transformed was also estimated, but the log-log specification provided a better fit.

In order to more carefully check for whether particularly large banks (those over \$10 billion in assets) invest more or less in qualified investments than the model would predict based on dollars in assets alone, an additional variable indicating whether the bank is over \$10 billion in assets was also added to the right hand side of equation (1). This was done because it may be that very large banks may have substantially greater capacity to make investments from which smaller banks may shy away. Or there may be some diminishing returns to asset size, so that

TABLE 7

Scenarios for Lending and Service Test Scores and Corresponding Required Investment Test Scores Needed to Achieve Overall CRA Ratings of Outstanding or Satisfactory

Lending Test	Service Test	Total Points Awarded for Lending and Service Tests	Investment Test Score Needed to get Overall Outstanding (20 points)	Investment Test Score Needed to Get Overall Satisfactory (11 points)	Number of Exams
Outstanding (12 points)	Outstanding (6 points)	18	Low Satisfactory	Not needed	32
Outstanding (12 points)	High Satisfactory (4 points)	16	High Satisfactory	Not needed	13
Outstanding (12 points)	Needs to Improve (1 point)	13	Not possible	Not needed	1
High Satisfactory (9 points)	Outstanding (6 points)	15	Outstanding	Not needed	35
High Satisfactory (9 points)	High Satisfactory (4 points)	13	Not possible	Not needed	47
High Satisfactory (9 points)	Low Satisfactory (3 points)	12	Not possible	Not needed	20
High Satisfactory (9 points)	Needs to Improve (1 point)	10	Not possible	Needs to Improve	2
Low Satisfactory (6 points)	Outstanding (6 points)	12	Not possible	Not needed	3
Low Satisfactory (6 points)	High Satisfactory (4 points)	10	Not possible	Needs to Improve	28
Low Satisfactory (6 points)	Low Satisfactory (3 points)	9	Not possible	Low Satisfactory	11
Low Satisfactory (6 points)	Needs to Improve (1 point)	7	Not possible	High Satisfactory	2

Light shading = cases in which a Low Satisfactory score will achieve a higher overall CRA rating. Darker shading = cases in which a High Satisfactory or Outstanding score will achieve a higher overall CRA rating.

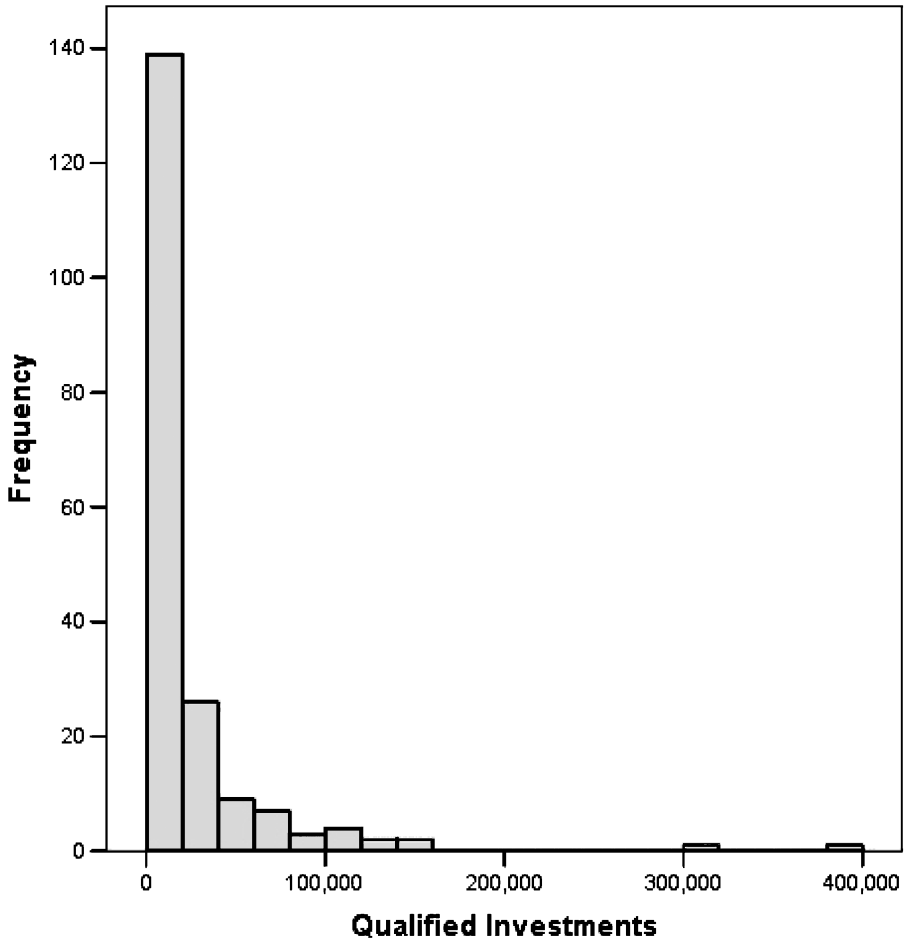


FIGURE 1

Distribution of Banks and Thrifts in Study by Qualified Investment Amounts

once banks reach a very large size, they do not increase their investments as much. This might occur if regulators' expectations regarding the amount of qualified investments hit some threshold, greater than which any further investments would be unlikely result in a higher Investment Test score.

RESULTS FOR REGIONAL AND REGULATORY EFFECTS

The results in Table 8 for the estimation of equation (1) are presented in three different specifications. The first specification includes only region, bank size, and regulator variables. The second specification includes the dummies that indicate the situations in which performance on the Investment Test above the level of Needs to Improve (all but 11 exams had Investment Test scores above this level) will improve a bank's overall CRA rating. The regression coefficients on the bank size, region, and regulator are quite robust to the addition of the Lending-Investment Test dummies. Because some of these Lending-Service Test categories are not very large, and

TABLE 8

The Effect of Region, Regulator, and Lending and Service Test Scores on Qualified Investments

	Dependent Variable = Natural Log of Total Qualified Investments (in Thousands of Dollars)														
	b	St Err	Beta	Effect [†]	Sig	b	St Err	Beta	Effect [†]	Sig	b	St Err	Beta	Effect [†]	Sig
Constant	-9.351	2.207			0.000***	-9.307	2.223			0.000***	-9.239	2.197			0.000***
Log of Total Assets	1.152	0.148	0.677		0.000***	1.143	0.149	0.672		0.000***	1.138	0.148	0.669		0.000***
Bank over \$10 Billion	-0.444	0.422	-0.091	-0.413	0.294	-0.447	0.423	-0.092	-0.415	0.292	-0.428	0.419	-0.088	-0.403	0.309
California	0.794	0.309	0.166	1.109	0.011**	0.690	0.313	0.144	0.898	0.029**	0.711	0.310	0.149	0.941	0.023**
New York-New Jersey	0.830	0.311	0.177	1.185	0.008***	0.738	0.315	0.157	0.991	0.020**	0.753	0.311	0.160	1.022	0.017**
Other West	1.255	0.343	0.227	2.308	0.000***	1.184	0.347	0.215	2.077	0.001***	1.181	0.343	0.214	2.073	0.001***
Northeast Less NY-NJ	0.391	0.262	0.108	0.429	0.137	0.235	0.273	0.065	0.219	0.390	0.240	0.269	0.066	0.226	0.374
South/Southwest	0.261	0.288	0.061	0.246	0.366	0.193	0.290	0.045	0.163	0.505	0.190	0.288	0.044	0.161	0.509
FRB	0.814	0.482	0.132	1.028	0.080	0.677	0.471	0.109	0.761	0.153	0.708	0.466	0.115	0.822	0.130
OCC	1.165	0.498	0.211	1.913	0.009***	1.126	0.498	0.204	1.802	0.011**	1.136	0.435	0.206	1.833	0.010**
FDIC	0.814	0.346	0.216	1.126	0.020**	0.814	0.346	0.216	1.126	0.020**	0.809	0.343	0.215	1.118	0.020**
<i>High Satisfactory/Outstanding Yields Higher CRA Rating</i>															
Lending = Outstanding; Service = High Sat.						0.631	0.363	0.099	0.760	0.084*					
Lending = High Sat.; Service = Outstanding						0.340	0.246	0.082	0.363	0.169					
Lending = Low Sat.; Service = NTI						1.008	0.890	0.064	0.844	0.259					
<i>High Satisfactory/Outstanding Yields Higher CRA Rating Combined/Pairsimonious</i>											0.438	0.218	0.120	0.513	0.046**
<i>Low Satisfactory Yields Higher CRA Rating</i>															
Lending = Outstanding; Service = Outstanding						0.338	0.253	0.078	0.358	0.183					
Lending = Low Sat.; Service = Low Sat.						0.248	0.388	0.036	0.189	0.523					
<i>Low Satisfactory Yields Higher CRA Rating Combined/Pairsimonious</i>											0.317	0.223	0.082	0.339	0.158
N	194					194					194				
R-square	0.463					0.479					0.476				

***significant below 0.01; **significant below 0.05; *significant below 0.10.

[†] The proportional effect of a unit change in the independent variable on Total Qualified Investments, equal to $\exp(b - 1/2se_b^2) - 1$.

due to the limited sample size, a third regression is presented using more parsimonious dummies that combine the five Lending-Investment dummies into two groups: those cases in which achieving a High Satisfactory or Outstanding Investment Test score would improve the overall CRA rating, and those in which achieving a Low Satisfactory score would improve the overall CRA rating.

I focus here on the results in the third specification in Table 8, but the results do not vary substantially across specifications. Due to the use of the log-transformed dependent variable, interpreting the impacts of the dummy variables in these results is relatively straightforward. For the log of bank assets variable, the coefficient is easily interpreted as an elasticity. That is, the coefficient represents the percentage change in qualified investments expected from a 1% change in bank assets. Therefore, the coefficient of 1.138 for log of total assets in the third specification in Table 8 means that a 1% increase in bank assets is associated with a 1.14% increase in qualified investments.

For the dummy variables, VanGarderen and Shah (2002) have shown that Kennedy's (1981) approximation used to interpret dummy variable coefficients in the case of log-transformed dependent variables is highly accurate, even when the coefficients have substantial magnitudes. Kennedy's estimate of the proportional impact of a unit change in a dummy variable on the untransformed dependent variable is equal to $\exp(b - 1/2se_b^2) - 1$, where b is the regression coefficient for the independent variable and se_b is the standard error of the coefficient. Thus, the regression results in Table 8 give the $\exp(b - 1/2se_b^2) - 1$ value for each dummy variable coefficient.

The first key finding from these estimations is that regulatory agency has a sizeable impact on the level of qualified investments that a bank has made. Compared to a thrift (regulated by the OTS), a bank regulated by the OCC had almost triple (183% more) the dollar amount of qualified investments, other things equal. A bank regulated by the FDIC had a 112% higher level of qualified investments than a similar, OTS-regulated thrift. The coefficient on the FRB dummy suggests an 82% greater level of investments than a similar OTS institution, but the result is not statistically significant.

The region of the country in which the bank is based also affects qualified investment levels. This could reflect both demand and supply side issues. For example, some parts of the country may have been experiencing stronger economic growth in this period and thus the demand for equity investment in real estate or small business ventures may have been stronger than in other areas. There may also be a larger or more established infrastructure of nonprofit CDFIs, CDCs, and other organizations that are well poised to receive qualified investments in different parts of the country. Finally, regulators in different parts of the country may implement CRA regulations more vigorously than in other places. Whatever the precise mechanism, the results suggest that there are regional differences in the amount of qualified investments that banks make. Compared to the Midwest (the omitted region), banks in California, New York–New Jersey, and the “Other West” states had more qualified investments, while banks in the South–Southwest and Northeast (other than New York–New Jersey) did not significantly exceed the activity of their Midwestern counterparts.

The regional effect is substantial. Other things equal, banks and thrifts in the “Other West” states had 207% more qualified investments than banks in the Midwest; banks in New York–New Jersey had 102% more investments than banks in the Midwest; and banks in California had 94% more investments than banks in the Midwest.

The very large bank dummy is not statistically significant, supporting the notion of a log–log functional form for the assets-to-qualified investments relationship. At the same time, the asset elasticity of investments (the 1.14 coefficient) suggests that, other things equal, the ratio of bank qualified investments to bank asset size increases as bank size gets larger.

FINDINGS ON THE EFFECT OF LENDING AND SERVICE TEST SCORES

The third key finding from the results in Table 8 concerns the effects of Lending and Service Test scores on investment levels. Again, given the aggregation scheme outlined in the regulations and described in Table 1, given a set of scores, or anticipated scores, on the Lending and Investment Tests, a bank will often not have any clear regulatory incentive to achieve a certain Investment Test Score, and thus strive for a higher level of investment activity than it would otherwise. The coefficients in the fully expanded and parsimonious specifications in Table 8 are all positive as expected, suggesting that some banks may be increasing investments in a fashion consistent with the logic of the aggregation scheme and as outlined in Table 7. However, the parsimonious regression results (third set of columns) suggest only in cases when a High Satisfactory or Outstanding score on the Investment Test is required to achieve a higher overall rating is the Lending-Service Test status statistically significant.

Moreover, the second specification (fully expanded) suggests that one particular Lending-Service Test situation—when the Lending Test is Outstanding and the Service Test is High Satisfactory—has a statistically significant effect on investment level. In particular, banks in this situation are expected to have a 76% higher level of investments, other things being equal. This result is consistent with the notion that banks that expect to achieve an Outstanding Lending Test score and a High Satisfactory Service Test score will increase their investment activity to higher levels than other banks, other things equal. In such cases, their High Satisfactory (or better) score on the Investment Test will allow them to achieve an Outstanding rating. (It is important to note that the coefficient on the Lending = Low Satisfactory; Service = Needs to Improve variable is quite large; however, because only two exams fall into this category the result is not statistically significant.)

When a mere Low Satisfactory is required on the Investment Test to improve a score, the expected increase in investment activity is not statistically significant, regardless of whether the prospects are for moving from an overall Satisfactory rating to an Outstanding rating (when the other two component scores are Outstandings) or for moving from an overall Needs to Improve to a Satisfactory.

In general, the findings offer some significant support to the notion that banks increase investment levels to achieve a High Satisfactory or better Investment Test score when they have an Outstanding score on the Lending Test and a High Satisfactory on the Service Test. This is consistent with intuition. If banks expect that they will receive an Outstanding score on the Lending Test and a High Satisfactory on the Service Test, they may be more likely to “shoot for” the Outstanding rating by increasing their investments and aim for an Outstanding Investment Test score. As it stands, however, these findings do not provide strong support for the notion that banks use the Investment Test to prop up poor Lending and Service Test performance to achieve an overall Satisfactory rating, even though the structure of the component tests weights provide for this ability.

CONCLUSIONS AND POLICY IMPLICATIONS

Despite the growth of large megabanks and their increasing dominance of mainstream mortgage markets, middle sized banks, those with assets in the \$1 billion to \$100 billion range, remain important corporate actors, both in terms of providing consumer and small business credit and in terms of providing substantial sources of investment in and support for community and economic development projects. Based on the analysis above, banks and thrifts invest in community and economic development activities (measured here by CRA-qualified investments) at widely different rates.

The first factor that affects bank investment activity is bank size. This certainly is anticipated, but what has not been well understood is the functional form of the relationship between bank size and qualified investments. The findings in Table 8 suggest that the asset elasticity of qualified CRA investments is 1.14, so that a 1% increase in assets is associated with a 1.14% increase in qualified investment activity, other things equal. Moreover, this relationship generally holds, even for the largest banks in this study.

Another factor that determines the expected level of qualified investments made by a bank or thrift is the region of the country in which its main office is located. Among the six regions delineated in this study, the “Other West” states experienced the highest level of qualified investments, followed by New York–New Jersey and California. These differentials were large. Banks in the Other West region, other things equal, are expected to have investments that were 207% more than those of banks in the Midwest. What explains these differentials is not entirely clear. The size of the data set here does not permit for more precise measurement of local impact or for interacting regional and regulator dummies to discern potential differences between different regional offices of the same regulatory agency, but such differences are entirely possible.

The regional impacts may be due to both demand- and supply-side factors as well as regional-regulatory effects. Western states have generally experienced higher rates of growth than many other parts of the country in recent decades. However, regional economic trends are unlikely to explain all of the regional impacts. (For example, despite the region being a generally high-growth one, the South-Southwest coefficient is much smaller—and not statistically significant—compared to the Other West, California, or New York–New Jersey results.) Moreover, stronger economic growth may actually forestall demand for CRA investments if private non-CRA investments crowd them out.

Other regional factors that may be at work include differing demand for investments based on the community development capacity in the region. The New York–New Jersey and California regions are certainly well known for substantial community development and affordable housing sectors. Supply factors may be at work as well. For example, the culture of banking organizations may be different in different regions.

In addition, it is possible that regulatory rigor varies by region, since all regulators have regional office structures and examiners oversight and operations is somewhat regional in nature. For example, Immergluck (2007) found that the completeness of the evaluative information contained in CRA exams varied quite widely across regional offices of the FDIC, suggesting differential standards and procedures in the implementation of CRA exams within the agency. Therefore, the regional dummies may be representing differences in regulatory “toughness” in different parts of the country.

The results in Table 8 on the effects of Lending and Service Test scores suggest that banks may be using investments as a tool to achieve an Outstanding CRA rating when their Lending Test rating is Outstanding and their Service Test is a High Satisfactory. However, less support is provided for a notion that banks use the Investment Test to achieve a Satisfactory rating when its scores are poor on the Lending and/or Service Tests. Overall, there is not strong, consistent support for a notion that banks are making higher levels of investments only when a higher Investment Test is expected to lead directly to a higher overall CRA rating. The CRA effect, as represented more in the regulator variables, appears to be more diffuse and less algorithmically deterministic than this. Many banks may be unlikely or unable to anticipate scores on the other component tests and invest accordingly to improve their overall ratings.

The variance in qualified investments is only partially explained by bank size, region, and scores on the other two component tests, however. The regulatory agency supervising the bank also has a large impact on its level of qualified investments. Banks regulated by the OCC achieve a substantially higher level of investments, other things held equal, than other institutions, and

the premium over the omitted category (OTS) is statistically significant. FDIC regulated banks also make higher levels of investments than OTS institutions. The coefficient on FRB banks is also positive and not trivial, but the results are not statistically significant. This finding is highly relevant to policy making. While there have been anecdotal stories of one regulator being “tougher” in terms of CRA enforcement than others, these have rarely if ever been backed up by systematic quantitative analysis, especially involving multivariate statistical techniques. It is important to point out that these results do not argue that the OCC or the FDIC are more rigorous CRA regulators overall but, rather, that they may be applying the Investment Test more rigorously.

Some might argue that OTS institutions are less active CRA investors because they are somehow constrained from making qualified investments due to their traditional focus on mortgage lending activity or due to regulatory barriers. There are at least two problems with this explanation, however. First, the restrictions on thrift investment and lending activities have generally been relaxed to the point where thrifts are able to be involved in essentially all of the activities that banks use to achieve their Investment Test ratings. They can (and many do) invest in Low-Income Housing Tax Credits and CDFIs, make grants to CDCs, and purchase targeted mortgage-backed securities. Some may be more reluctant than banks to involve themselves in nonhousing related investments due to their historical involvement in the housing market, although thrifts are increasingly active in business and consumer sectors, but there are ample investment opportunities for housing-related investments.

Moreover, the regulations limiting thrift community development investment activity appear to be actually less restrictive than those of national banks, the institutions regulated by the OCC. At the time these exams were conducted, national banks were limited to making no more than 10% of their “capital and surplus” in what are called Part 24 community development investments, many of which overlap with CRA-qualified investments (United States Office of the Comptroller of the Currency, 2003). The OTS regulations explicitly permit thrifts to invest up to 3% of their assets in community development investment activities, including CDFIs, CDCs, small business investment companies, and the like (United States Office of Thrift Supervision, 1998). Because a financial institution’s assets exceed its capital (plus surplus) by a ratio of much greater than 10 to 3, the OCC regulations actually appear to be more restrictive than the OTS rules.

The finding that regulator matters is a critical one. First, large differences in the rigor of enforcement by different regulators could result in banks “shopping around” for a new, easier regulator. For example, as regulations limiting the activities of thrifts have been reduced, lenders may find it advantageous to change their charters from a state bank (FDIC or FRB) or national bank (OCC) to a thrift. Numerous commentators, including former Federal Reserve chairman Arthur Burns, have warned about the potential of a competition in laxity among bank regulators, in which regulators strive to outdo one another in relaxing regulatory oversight (Matasar & Pavelka, 1998; Scott, 1977).

The finding that regulatory agency is a significant and nontrivial determinant of qualified investment activity is also powerful evidence that the CRA plays a substantial role in promoting investment in community and economic development activity. If the law had little impact, differences in regulators on qualified investment activity should not be significant or substantial. This is clearly not the case. CRA, and the way in which it is enforced, appears to play a sizeable role in determining bank and thrift investment in community and economic development activity.

Recently, policymakers have weakened the Investment and Service Tests in CRA regulations by formulating a new “community development test” for banks between \$250 million and \$1 billion in assets. This move essentially means that these banks no longer have to perform adequately in both services and investments, but can pick and choose their nonlending activities to bolster their CRA rating in the way that works to their greatest regulatory advantage. For many banks in this size range, this is likely to mean giving short shrift to investment activity.

CRA can and does have an important role in promoting bank involvement and investment in community development activities. While this study focuses on a certain range of bank sizes, and does not directly address the very large megabanks, it provides a strong warning that reducing regulatory attention to investment activity is likely to have a sizeable, negative impact on flows of resources to community and economic development from the financial sector. Moreover, since many public sector community and economic development programs require substantial involvement by private sector investors, reducing bank and thrift investments are likely to make public sector support for community and economic development scarcer, at least in the short run.

ENDNOTE

1 This study only covers banks with more than \$1 billion in assets, and so recent changes to CRA regulations that change the evaluation procedures for “intermediate” banks (those between \$250 million and \$1 billion in assets) are not relevant here. Moreover, the examinations in this study predate these regulatory changes.

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