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Appendix A

QUESTIONNAIRE FOR THE SAMPLE OF LOANS FOR COMMERCIAL AND INDUSTRIAL PURPOSES

Sample of Loans for Commercial and Industrial Purposes

I. LOAN CHARACTERISTICS
1. Amount outstanding on 2/28/67
2. Original amount of current outstanding
3. Interest rate face of note
4. Repayment method (one from Group A)
5. Participation with another bank (Group B)
6. Maximum amount of loans outstanding to this borrower in last 12 months
7. Is loan collateralized? If yes, estimate current collateral value relative to maximum loan balance (Group C)
8. If (7) yes, is collateral easily marketable. Yes? No?
9. If (7) yes, is any explicit payment made for investigating or handling collateral. Yes? No?
10. Does borrower have outstanding loan(s) from other banks Yes? No?

II. BORROWER CHARACTERISTICS
11. Form of bus. organ. (I) Inc. (U) Uninc.
12. Business of borrower (Group D) Insert letter which best fits
13. Total assets fiscal or calendar year ending in 1966____ 1965____ 1964____ 1963____
15. Current liabilities fiscal or calendar year ending 1966____ 1965____ 1964____ 1963____
16. Net profits before taxes, fiscal or calendar year ending 1966____ 1965____ 1964____ 1963____
17. Net worth, fiscal or calendar year ending 1966____ 1965____ 1964____ 1963____

III. CUSTOMER CHARACTERISTICS
18. During the year the fluctuation (High to Low) in this customer's demand deposit balance is (Group E)
19. Average dep. balance last 12 months
20. Length of time this bank has had lending arrangement with this customer (Group F)
21. Length of time during last 12 months borrower was in debt to the bank (in months)
22. This customer's account activity, number of checks written & deposits made is: (Group G)

14. Current assets fiscal or calendar year ending
1966____
1965____
1964____
1963____

23. Does bank perform services other than lending and checking for borrower? Yes? No?
24. If (23) yes, does bank make separate charge for these services? Yes? No?
25. If (24) yes, would you estimate the net profit to the bank from providing other services to this customer, fees minus cost of providing services to be: (Group H)

Note: Space was provided in the original questionnaire for information on sixteen borrowers for each question. Groups A through H are listed below.

Group A: (a) Single payment; (b) Paid in installments with interest added on; (c) Paid in installments with interest charged on unpaid balance.

Group B: (a) No; (b) Originated with your bank; (c) Originated with another bank; (d) Pool type participation.

Group C: (a) No; (b) 50 per cent or less, (c) 51 to 75 per cent; (d) 76 to 99 per cent; (e) 100 per cent or more.

Group D: (a) Manufacturing and mining; (b) Wholesale trade and distributors, (c) Retail trade; (d) Commodity, bond, and stock dealers—members of recognized exchange; (e) Finance companies—Sales, small loan and commercial; (f) Real estate and construction—Does not include mortgage financing; (g) Service firms—Repair services, medical and dental, legal and other; (h) All others, specify.

Group E: (a) Very small; (b) Moderate; (c) Very wide.

Group F: (a) Less than 1 year; (b) 1 through 3 years; (c) More than 3 years.

Group G: (a) Small; (b) Moderate; (c) Large; (d) Very large.

Group H: (a) Losses; (b) Break even; (c) Some profit; (d) Highly profitable.

Appendix B

THE SAMPLE OF BANK CUSTOMER PROFILES

Appendix B

THIS APPENDIX describes the bank customer profile data used in the empirical sections of this study. A sample of banks were requested to supply data describing the characteristics of a number of their borrowing customers. A copy of the questionnaire and the instructions which accompanied the questionnaire are shown in Appendix A. Banks were chosen from among the population of all banks in the three asset sizes: \$40–\$60 million, \$80–\$120 million, and \$200–400 million. A small proportion of the banks in these size classes domiciled outside of SMSA's were sampled; almost all banks in these size classes domiciled in SMSA's were sent requests for data. The banks were chosen at random from the SMSA's that had a very large number of banks with assets between \$40–\$400 million. The goal was to have representation from as large a number of SMSA's as possible, with a distribution among the three types of branch restrictions. Responses were received from 160 banks domiciled in 107 SMSA's. Appendix Table B-1 shows the distribution of responding banks by type of bank organization, whether unit or branch, and by degree of branching restriction. The distribution of responding banks by asset size and SMSA designation is shown in Appendix Table B-2.

The largest banks were requested to supply 80 customer profiles, the middle size banks were asked to supply 60 customers,

Appendix Table B-1
Number of Branch and Unit Banks by State and Branching Regulation

State Code	Within SMSA		Outside SMSA	
	Branch	Unit	Branch	Unit
Unit	7	47	0	6
Restricted branching	73	5	4	0
Statewide branching	13	4	1	0

Appendix Table B-2
Location and Size Class of Responding Banks

SMSA	Total Number of Banks	Number of Banks With Assets of $40–$60 Million	$80–$120 Million	$200–$400 Million
000	11	5	5	1
002	1	0	1	0
005	1	1	0	0
008	1	0	0	1
010	1	0	1	0
012	1	0	0	1
013	1	0	1	0
015	1	0	1	0
017	1	0	0	1
018	4	3	1	0
019	1	0	0	1
022	1	0	1	0
023	1	1	0	0
024	1	0	0	1
025	2	0	2	0
027	1	0	0	1
028	8	3	3	2
030	2	1	1	0
033	2	0	0	2
034	1	1	0	0
037	1	0	0	1
040	2	0	1	1
042	1	1	0	0
043	1	0	1	0
046	2	1	1	0
047	2	0	2	0
048	1	1	0	0
052	1	0	0	1
057	1	1	0	0
059	1	1	0	0
060	1	1	0	0
062	1	1	0	0
065	1	1	0	0
069	2	0	0	2
070	1	1	0	0

Appendix Table B-2-(*Continued*)

SMSA	Total Number of Banks	Number of Banks With Assets of: $40–$60 Million	$80–$120 Million	$200–$400 Million
071	1	0	1	0
072	1	0	1	0
073	1	0	0	1
076	2	1	1	0
077	1	0	1	0
078	1	1	0	0
081	1	1	0	0
082	1	0	1	0
083	1	0	1	0
084	1	1	0	0
086	2	0	0	2
088	2	1	1	0
090	1	0	1	0
095	2	1	1	0
096	1	0	1	0
100	1	0	0	1
102	1	1	0	0
104	1	0	0	1
105	1	1	0	0
108	1	1	0	0
109	1	1	0	0
110	1	1	0	0
112	5	2	0	3
114	1	1	0	0
117	2	0	2	0
119	1	1	0	0
120	1	1	0	0
121	1	1	0	0
123	1	0	0	1
124	1	0	0	1
125	1	1	0	0
126	1	0	0	1
127	1	0	1	0
131	2	1	0	1
132	2	0	0	2
133	1	1	0	0

(*Continued*)

Appendix Table B-2-(*Concluded*)

SMSA	Total Number of Banks	Number of Banks With Assets of		
		$40–$60 Million	$80–$120 Million	$200–$400 Million
136	1	0	1	0
137	1	0	0	1
141	1	1	0	0
142	1	0	0	1
143	3	1	1	1
147	1	0	1	0
149	2	0	2	0
155	1	0	0	1
156	1	0	0	1
159	3	2	0	1
160	1	0	1	0
161	3	1	1	1
163	1	0	0	1
165	2	0	2	0
166	1	0	0	1
167	1	1	0	0
168	2	2	0	0
171	1	0	1	0
173	1	0	1	0
176	2	0	1	1
177	1	0	1	0
178	3	0	3	0
179	1	1	0	0
183	1	0	1	0
185	1	0	1	0
188	1	0	0	1
189	1	0	1	0
190	3	1	2	0
191	4	0	1	3
192	1	1	0	0
194	1	1	0	0
197	1	1	0	0
201	1	1	0	0
202	1	0	1	0
203	1	1	0	0
205	1	0	1	0
209	1	0	1	0
216	1	1	0	0
220	1	0	1	0
223	1	1	0	0

and the smallest banks were asked for 40 customers. The coded questionnaires produced 8,157 customer profiles which have been used in the estimates and statistical tests in this study. The number of customer profiles by SMSA is shown in Appendix Table B-3.

Appendix Table B-3
Number of Customer Profiles by SMSA

SMSA	Number of Customers	SMSA	Number of Customers
2	32	70	25
5	40	71	52
8	77	72	62
10	64	73	79
12	55	76	95
13	60	77	48
15	64	78	42
17	76	81	40
18	153	83	58
19	79	84	43
22	60	86	156
23	40	88	99
24	80	90	23
25	100	95	85
27	71	96	58
28	341	100	30
30	51	102	40
33	126	104	80
34	40	108	31
37	78	109	39
40	139	110	41
42	40	112	221
43	60	114	40
46	106	117	64
47	106	119	40
48	40	120	33
52	80	121	14
57	40	123	80
59	40	124	79
60	39	125	40
62	39	126	56
65	40	127	54
69	159	131	90

(Continued)

Appendix Table B-3-(*Concluded*)

SMSA	Number of Customers	SMSA	Number of Customers
132	120	173	11
133	40	176	142
136	56	177	30
137	76	178	115
141	40	183	41
142	29	185	60
143	132	188	63
147	59	189	46
149	113	190	116
155	80	191	293
156	80	192	46
159	160	194	40
160	60	197	35
161	182	201	40
163	80	202	60
165	119	203	16
166	85	205	51
167	16	209	64
168	40	216	40
171	64	223	16

Some requests for clarification of responses were sent to banks but generally when particular customer profiles were not complete in a number of key variables, e.g., when no loan data was provided, or the data were obviously inconsistent, the customer was dropped from the sample. This is the major reason for the odd number of customers in some SMSA's. In a number of instances, however, banks supplied more or less customers than were requested.

Bank files do not contain balance sheet or income statements for many customers. The lack of these data did not cause the customers to be dropped from the sample. Of the 8,157 customer profiles in the sample only 5,265 have business asset figures for 1965 (see Appendix Table B-4).

Thus, the sample of customer profiles contains different numbers of observations when the purpose for which it is used changes. If the focus is upon the supply of bank services to

Appendix Table B-4
Number of Customer Profiles by Data Partition

Customers		
Total		8,157
In SMSA's	7,614	
Outside of SMSA's	543	
With business assets		5,265
In SMSA's	4,957	
Outside of SMSA's	308	
With more than one bank		2,112
In SMSA's	1,987	
Outside of SMSA's	125	
With no collateral		4,213
With any collateral		2,714
With collateral greater than 100 per cent	1,861	
With collateral blank		1,230

business and only customer characteristics at the bank are considered, all observations, both in SMSA's and outside SMSA's, can be used. The sample size for this analysis would be the full 8,157 customers. If the analysis also considers bank market characteristics, only customers of banks domiciled in an SMSA can be used and the sample is 7,614. When business asset size is used the sample declines to 5,265, and if market variables and business assets are used in the same equation the sample is 4,957. Sample sizes by these and other partitions can be seen in the data contained in Appendix Table B-4.

To keep the customer profiles as homogenous as possible, banks were instructed to include only short-term borrowers. This request was aimed at reducing the price variability because of difference in the original maturity of the loan. Customers were to be chosen from those who had received their loan after the last prime rate change or who had their loan rate renegotiated after the last change. There is some indication that this request was heeded by bankers, since a number of respondents included fewer than the requested number of customers and noted that this number was 100 per cent of their business customers that fell into the above category. Moreover, this requirement brought a large number of requests for clarification from bankers. But most probably the sample is not completely homogenous in this dimension.

Some indication of the potential problem of heterogeneous rate, because of differences in the date the rate was negotiated during a period of changing rates, is given by the distribution of customer time in debt during the last twelve months (see Appendix Table B-5). Seventy-six per cent of the customers

Appendix Table B-5
Length of Time During Last Twelve Months Customer Was in Debt to Bank

Months	Number of Customers	Percentage
1	214	03
2	176	02
3	213	03
4	181	02
5	194	02
6	361	04
7	251	03
8	329	04
9	360	04
10	403	05
11	445	05
12	5,019	62
Blank	11	00

included in the sample were in debt to their bank for nine or more months in the twelve months preceding the survey date. It is possible that a substantial fraction of the customers in debt for a major part of the year renewed their notes periodically or that the rate was tied to the prime rate. But, there is certainly reason to believe that some error in variable exists in the loan rate data, if this rate is meant to depict the rate accorded to short-term loans granted at the time the survey was conducted. The survey was taken about a month after the prime bank rate had fallen from 6 per cent to 5.75 per cent. Thus, there is probably some upward bias in the interest rates in some of the customer profiles. It should be noted that this potential bias is most troublesome for direct comparisons of rates or distributions of rates. For the major purpose for which these data are used, in regressions with other customer profile variables, concern about this bias is reduced. There is no reason to believe the bias is not randomly distributed with regard to the structural variables.

The nature of the data requested reduced concern about bias being introduced by bankers purposefully choosing customers to include in the sample. Moreover, bankers were asked for a substantial body of data that was time consuming and difficult to supply. Thus, no complicated sampling procedures could be attempted. Nonetheless some simple rules were given for the sample of customers to be included from among the eligible customers (see the instructions in the questionnaire in Appendix A). The major bias in this regard is probably due to the desire of bankers to supply data for all boxes in the questionnaire for the customers included. Bankers, therefore, would be expected to choose customers for whom their files were most complete. The replies indicating that many small banks were hard put to supply the requested number of customers, even when all eligible customers were listed, precluded any sophisticated sampling design.

Banks were asked to give the interest rate on the face of the note and indicate the method of repayment in separate questions. The effective loan rate was then computed from the responses to these two questions. Considerable correspondence was required to clarify these data to assure that interest rates were properly stated.

The periodic Federal Reserve Business Loan Surveys and the Quarterly Survey of Interest Rates on Short & Intermediate Term Loans request data on loan rates and amount of loan outstanding on the survey data. Such data have serious shortcomings as estimates of the current interest price bank borrowers must pay for loans. The interest rates observed on loans in the banks portfolio at any moment of time depend on the date the notes were written and the recent movement in interest rates. The computed average rate depends on these two factors and the mix of the customer population that happens to be in debt to the bank at the time the survey is conducted. In addition to the problems of timing and mix, one of the major hypotheses of this study, that banks price their services on a package basis, implies that the current loan outstanding when the survey is taken is not the appropriate measure of the loan on which the price is based. The bank pricing model implies that the maximum loan which the bank expects to be called upon to grant the customer is an important determinant of the loan price; however, pretesting of the questionnaire with a number of banks demonstrated that a request for an estimate of the maximum loan which would be made could rarely be specified. Bankers demonstrated an aversion to estimating any number, especially one which was in dollars and essentially unconstrained. It was even difficult to get estimates where a choice of three or four possibilities was listed. In an attempt to develop data to represent the expected maximum loan, the questionnaire requested three loan size parameters, the current loan outstanding (question 1), the original amount of the currently outstanding loan (question 2), and the maximum amount of loans outstanding to this borrower in the last twelve months (question 6). The distribution of these three variables is shown in Appendix Table B-6. As can be seen there is no substantial difference between the three measures of loans outstanding, which suggests that any of the alternate loan measures will not prove a substantial improvement as a proxy for the theoretically correct loan variable.

The deposit size distribution of the customer profiles is shown in Appendix Table B-7. Of major interest is the fact that only 10 per cent of the customers with loans outstanding did not have deposits with the bank during the preceding twelve months. The presumption is, of course, that this is a good estimate of the proportion of business customers who do not have deposits with the bank from whom they borrow.

The distribution of the ratio of deposits to outstanding loans

Appendix Table B-6
Size of Loan, Number, and Percentage Distribution

Loan Size (dollars)	Current Loan Outstanding		Maximum Loan Outstanding		Original Loan Outstanding	
	Number	Percentage	Number	Percentage	Number	Percentage
1– 10,000	2,569	31	2,552	31	2,284	28
10,001– 20,000	1,154	14	898	11	1,111	14
20,001– 40,000	1,124	14	1,146	14	1,177	14
40,001– 80,000	1,029	13	1,263	15	1,090	13
80,001–120,000	516	06	481	06	551	07
120,001–200,000	618	08	556	07	683	08
200,001–400,000	602	07	627	08	640	08
400,001 <	545	07	634	08	621	08

Appendix Table B-7
Distribution of Customers by Deposit Size

Deposit Size (dollars)	Number of Customers	Percentage
0	801	10
1– 2,500	1,595	20
2,501– 5,000	980	12
5,001– 10,000	1,047	13
10,001– 20,000	1,126	14
20,001– 40,000	936	11
40,001– 60,000	497	06
60,001– 80,000	315	04
80,001–100,000	202	02
100,001 <	658	08

by asset size of business is shown in Appendix Table B-8. The ratios are partitioned into three groups, 30 per cent or less, greater than 30 per cent and less than 60 per cent, and greater than 60 per cent; collateralized and noncollateralized customers are shown separately. As size of firm increases, the ratios change very markedly. As expected, the changes are most pronounced for the noncollateralized customers. Among customers that collateralize their loan, the smallest sized firms are less than half as likely to be in 0–30 per cent deposit to loan category than the very largest firms and are three times more likely than the largest firms to be in the 60 per cent and over category. Although the differences are much less substantial for collateralized customers, the same pattern exists. It is interesting to note that the ratio of loans to deposits for all customers is not greatly different from this ratio for customers with asset size data.

As can be seen in Appendix Table B-4, 2,714 customers collateralized their loans. Of this number the collateral of 1,861 customers was considered to be greater than 100 per cent of the loan. Collateral can have many forms, with varying costs associated with handling and varying degrees of reduction in risk exposure. Collateral which is readily marketable affords the bank the maximum reduction in risk per dollar of collateral. Moreover, marketable collateral consists mainly of securities and

Appendix Table B-8

Distribution of the Ratio of Average Deposit Balance to Outstanding Loan, by Size of Firm and All Customers

Firm Size (dollars)	Percentage of Noncollateralized Customers With a Deposit-Outstanding Ratio of			Percentage of Collateralized Customers With a Deposit-Outstanding Ratio of			Percentage of All Customers With a Deposit-Outstanding Ratio of		
	0–30 Per Cent	31–60 Per Cent	>60 Per Cent	0–30 Per Cent	31–60 Per Cent	>60 Per Cent	0–30 Per Cent	31–60 Per Cent	>60 Per Cent
0– 100,000	34.75	25.79	39.48	51.62	23.10	25.28	40.47	22.08	37.46
100,001– 250,000	37.86	21.10	41.04	62.43	15.61	21.95	47.51	18.37	34.12
250,001– 500,000	37.95	24.12	37.94	64.31	17.04	18.65	50.59	19.58	29.85
500,001– 1,000,000	45.09	18.85	36.07	62.97	17.17	19.84	52.98	18.15	28.86
1,000,001– 5,000,000	51.85	19.74	28.42	65.80	16.73	17.48	56.88	17.68	25.44
5,000,001–20,000,000	57.66	16.56	25.76	71.15	9.62	19.24	61.57	12.54	25.89
20,000,001<	71.95	15.84	12.22	73.68	15.78	10.53	71.48	15.63	12.89
Total with asset data	44.26	21.33	34.40	61.99	17.43	20.56	50.88	18.69	30.40
All customers	45.33	20.35	34.32	65.70	16.21	18.09	54.18	18.42	27.40

bonds, which are usually the least costly to handle. It is, therefore, significant that the collateral of only 19 per cent of the collateralized loan customers was considered easily marketable by their banks. Thus, the loans of four-fifths of the customers that maintained some collateral as backing of their loans still had some elements of risk to the bank. Of interest also is the fact that only 3 per cent of the customers that presented collateral were charged an investigating and handling fee. This suggests these costs are mainly recaptured through interest charges on loans and in other revenues from the relationship.

In general a balance that fluctuates is less valuable to the bank than one that is more stable. The distribution of replies to question 18, which requested a qualitative judgment about the fluctuation of the deposit balance, is shown in Appendix Table B-9. The deposit balance of 42 per cent of the customers

Appendix Table B-9
Fluctuation in Deposit Balance

Deposit Fluctuation	Number of Customers	Percentage
Very small	2,221	27
Moderate	3,438	42
Very wide	1,592	20
Blank	906	11

fluctuated moderately; something more than a quarter of the customers had a very small fluctuation; 20 per cent fluctuated very widely. The 11 per cent nonresponse is explained largely by the fact that approximately 10 per cent of the customers did not have deposits. Some customers, however, may have absolutely stable deposit balances; mainly customers whose deposit is the minimum required compensating balance. But the majority of the extra 1 per cent must be attributed to nonresponse to a qualitative question.

The expected stability of the bank-customer relationship is borne out by the replies to question 20, shown in Appendix Table B-10. Three-fourths of the customers had been with the

Appendix Table B-10
Distribution of Length of Customer Lending Arrangement

Length of Lending Arrangement	Number of Customers	Percentage
Less than one year	718	09
One through three years	1,296	16
More than three years	6,138	75
Blank	5	00

bank for more than three years. Less than 10 per cent were customers for less than a year.

Account activity of the customer is an important measure of the services performed by the bank. But activity has a number of components, such as deposits, checks, currency and coins supplied and/or counted, and returned items. Therefore, a qualitative measure was the only feasible method of describing this variable. The distribution of responses to question 22, which probed this element of the customer relationship, is shown in Appendix Table B-11. One-quarter of the customers had large

Appendix Table B-11
Distribution of Customer Account Activity

Account Activity	Number of Customers	Percentage
Small	2,215	27
Moderate	3,095	38
Large	1,469	18
Very large	549	07
Blank	829	10

or very large amounts of activity and, therefore, this element of the relationship must have been considered an important component of the revenue that the bank expected to receive from these customers. About a quarter of the customers were considered by the bank to have a small amount of activity and more than 40 per cent had moderate activity.

It is, of course, well understood by both bankers and customers that services are bartered for deposit balances. In large measure the services purchased are loans and deposit related activity. An unknown fraction of bank customers purchase additional services, which are paid for with deposits or explicit fees. Questions 23–25 developed information about this element of the business-customer–bank relationship. Twenty-four per cent of customers in the sample receive services other than borrowing and fund transfer from their banks. Approximately 80 per cent of these customers pay for these services by separate charges. Unfortunately, the questionnaire did not probe into the distribution of these charges between balances and fees.

The distribution of answers to question 25, which requested a qualitative evaluation of the profitability of charges made for these services, is shown in Appendix Table B-12. As can be

Appendix Table B-12
Estimate of Net Profit to Bank of Providing Other Service s

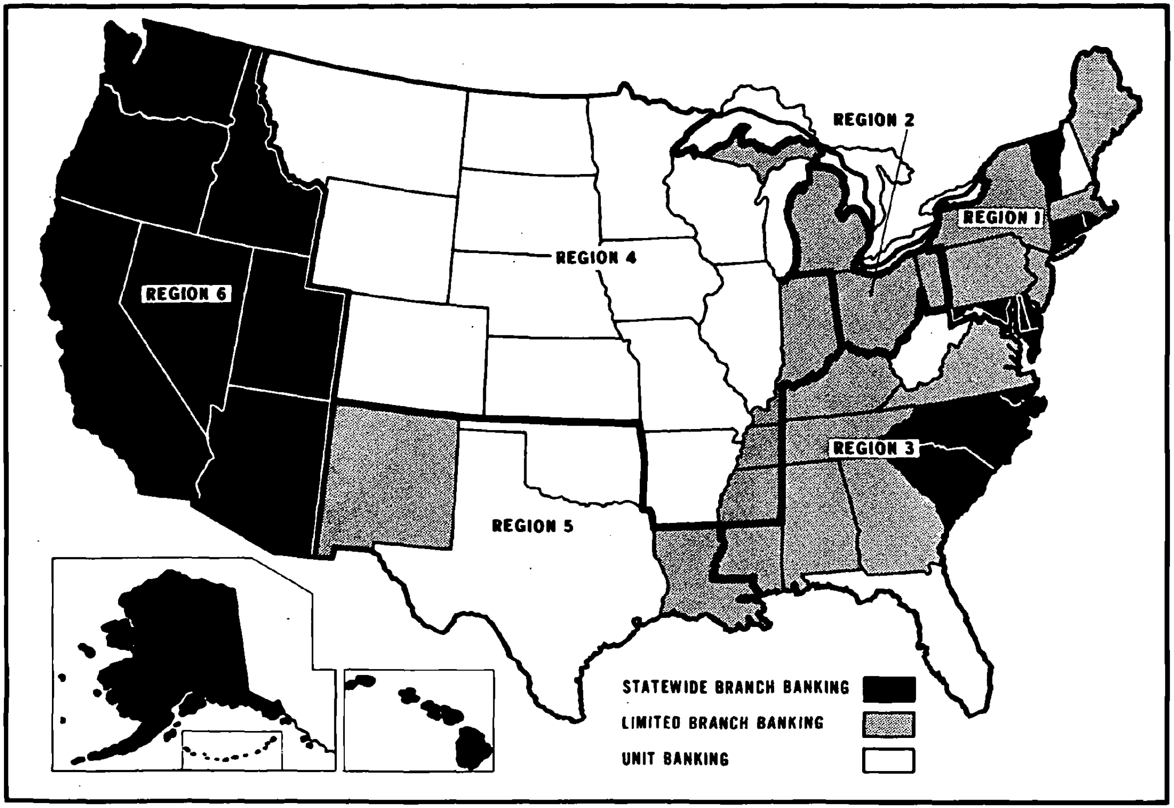
Profitability	Number of Customers	Percentage
Losses	122	07
Break even	476	29
Some profit	857	54
Highly profitable	160	10

seen, 64 per cent of these customers are considered to provide net profit from these services, whereas only 7 per cent are considered to cause a loss.

Appendix C

FORMS OF BANKING ORGANIZATION

FORMS OF BANKING ORGANIZATION



NOTE– HEAVY LINES INDICATE STATISTICAL REGIONS, AS REFERRED TO ON P. 46

Appendix D

REGRESSIONS ON MODEL 3

Appendix Table D-1

Regressions on Model 3, All Customers With Asset Data, Three Size Classes, With A Six Partition Regional Variable, Interest Rate Dependent

	Asset Size (millions of dollars)				
	$0 \leq .5$		$.5 \leq 1$		$1 \leq 5$
Interest rate (mean)	6.527		6.383		6.275
1. Region 6	1.0018	(2)	.5418	(1)	.7586
	.05		.07		.07
	14.04[a]		3.68[a]		6.22[a]
	.25		.14		.21
2. Population increase	.0148	(1)	.0156	(4)	.0105
	7.36		7.26		7.02
	8.06[a]		4.16[a]		3.85[a]
	.15		.16		.13
3. Concentration	.4813	(4)	.4107	(8)	.4752
	.67		.68		.67
	5.62[a]		2.27[b]		3.37[a]
	.10		.09		.12
4. Log total deposits (SMSA)	.1362	(6)	.1024	(3)	.1718
	1.9893		1.9990		2.0124
	5.35[a]		1.88		3.97[a]
	.10		.07		.14
5. Unit bank dummy	.3397	(13)	.0987	(14)	.1236
	.34		.35		.36
	4.80[a]		.67		1.03
	.09		.03		.04
6. Log original amount	−.0933	(16)	−.0196	(11)	−.0703
	2.2420		2.8376		3.1857
	4.21[a]		.42		1.92
	.08		.02		.07
7. Average deposit	−2.2204	(3)	−1.1701	(9)	− .5081
	.0118		.0374		.0773
	4.04[a]		2.56[b]		3.00[a]
	.08		.10		.11
8. Deposit fluctuation	.0403	(7)	.0470	(19)	.0030
	1.73		1.85		1.87
	3.08[a]		1.82		.15
	.06		.07		.01
9. Region 5	.1500	(18)	.0186	(6)	.2790
	.12		.12		.10
	2.98[a]		.19		3.50[a]
	.06		.01		.12
10. Region 4	.1411	(5)	.1706	(2)	.3952
	.23		.26		.29
	2.93[a]		1.97[b]		5.97[a]
	.05		.07		.21

Appendix Table D-1—(*Concluded*)

	Asset Size (millions of dollars)				
	0 ≤ .5		.5 ≤ 1		1 ≤ 5
11. Other services	−.0699	(14)	−.0243	(16)	−.0150
	.23		.28		.30
	2.67[a]		.51		.40
	.05		.02		.01
12. Length of lending arrangement	−.0429	(12)	−.0309	(7)	−.1126
	2.65		2.79		2.77
	2.40[b]		.67		3.41[a]
	.04		.03		.12
13. Limited branch dummy	.1285	(19)	.0020	(12)	.1680
	.56		.55		.55
	2.23[b]		.02		1.58
	.04		.01		.06
14. Region 2	.0706	(17)	−.0289	(13)	.0798
	.17		.12		.11
	2.07[b]		.38		1.31
	.04		.01		.05
15. Region 3	−.0354	(10)	−.0974	(10)	.1348
	.14		.16		.19
	.95		1.35		2.50[b]
	.02		.05		.09
16. Other bank	−.0157	(11)	.0420	(15)	.0234
	.14		.27		.42
	.50		.83		.66
	.01		.03		.02
17. Time in debt	−.0018	(9)	.0130	(5)	.0210
	9.95		10.56		10.29
	.49		1.53		3.50[a]
	.01		.06		.12
18. Log bank size	−.0114	(8)	−.1195	(18)	−.0103
	2.0649		2.1143		2.1664
	.36		1.81		.19
	.01		.07		.01
19. Account activity	.0041	(15)	−.0105	(17)	.0032
	1.79		2.07		2.20
	.32		.44		.19
	.01		.02		.01
Intercept	5.854		5.915		5.537
R^2	.21		.14		.20
F	40.27[a]		6.09[a]		10.91[a]
N	2868		712		827

NOTE: See the notes to Table 2.
[a] Significant at the .01 level.
[b] Significant at the .05 level.

Appendix Table D-2

Regressions on Model 3, All Noncollateralized Customers With Asset Data, Three Size Classes, With a Six Partition Regional Variable, Interest Rate Dependent

	Asset Size (millions of dollars)				
	$0 \leq .5$		$.5 \leq 1$		$1 \leq 5$
Interest rate (mean)	6.484		6.272		6.217
1. Region 6	1.0272	(1)	.6875	(1)	.7645
	.06		.06		.07
	14.18[a]		5.00[a]		6.48[a]
	.34		.26		.30
2. Log original amount	−.1946	(4)	−.1284	(4)	−.1459
	2.1471		2.7556		3.1305
	7.22[a]		2.50[b]		3.5001[a]
	.18		.13		−.17
3. Population increase	.0110	(3)	.0170	(19)	−.0001
	8.06		7.83		7.30
	4.86[a]		3.72		.04
	.12		.20		.01
4. Unit bank dummy	.3423	(11)	.2407	(17)	.0481
	.25		.28		.30
	4.36[a]		1.70		.38
	.11		.09		.02
5. Region 2	.1334	(18)	.0215	(8)	.1251
	.15		.14		.12
	3.42[a]		.29		1.96
	.09		.02		.09
6. Log total deposits (SMSA)	.0945	(10)	.0934	(3)	.1808
	2.0856		2.0855		2.0842
	3.30[a]		1.72		3.96[a]
	.08		.09		.19
7. Concentration	.3228	(6)	.4046	(5)	.4503
	.66		.67		.66
	3.17[a]		2.10[b]		2.93[a]
	.08		.11		.14
8. Average deposit	−1.8760	(8)	−1.0076	(10)	−.2742
	.0126		.0409		.0812
	2.78[a]		1.85		1.54
	.07		.16		.07
9. Deposit fluctuation	.0397	(9)	.0459	(18)	.0023
	1.74		1.89		1.86
	2.55[b]		1.73		.10
	.07		.09		.01
10. Other services	−.0577	(15)	−.0328	(12)	−.0630
	.20		.28		.33
	1.83		.65		1.48
	.05		.04		.07

Appendix Table D-2—(*Concluded*)

	Asset Size (millions of dollars)				
	$0 \leq .5$		$.5 \leq 1$		$1 \leq 5$
11. Limited branch dummy	.0948	(14)	.0976	(16)	.0910
	.62		.61		.59
	1.62		.84		.89
	.04		.05		.04
12. Region 5	.0947	(19)	.0174	(6)	.2965
	.08		.08		.08
	1.47		.16		2.90[a]
	.04		.01		.14
13. Region 4	.0720	(16)	.0377	(2)	.3399
	.20		.24		.26
	1.24		.41		4.63[a]
	.03		.02		.22
14. Time in debt	−.0036	(12)	.0085	(7)	.0130
	9.62		10.18		9.96
	.90		1.08		2.08[b]
	.02		.06		.10
15. Log bank size	.3414	(17)	.0281	(15)	−.0711
	2.1135		2.1854		2.1950
	.85		.40		1.16
	.02		.02		.06
16. Other bank	.0229	(2)	.2225	(9)	.0710
	.11		.24		.42
	.59		3.99[a]		1.82
	.02		.21		.09
17. Account activity	.0078	(7)	−.0491	(11)	−.0279
	1.82		2.14		2.21
	.54		2.00[b]		1.52
	.01		.11		.07
18. Length of lending arrangement	−.0033	(13)	.0480	(13)	−.0488
	2.67		2.82		2.77
	.16		.93		1.37
	.01		.05		.07
19. Region 3	.0005	(5)	−.1762	(6)	.2965
	.12		.14		.08
	.01		2.36[b]		2.90[a]
	.01		.13		.14
Intercept	6.078		5.601		5.973
R^2	.28		.30		.30
F	31.46[a]		7.62[a]		9.50[a]
N	1530		360		449

NOTE: See the notes to Table 2.

[a] Significant at the .01 level.

[b] Significant at the .05 level.

Appendix Table D-3

Regressions on Model 3, All Fully Collateralized Customers With Assets Less Than or Equal to $½ Million, With a Six Partition Regional Variable, Interest Rate Dependent.

Interest rate (mean)	6.702	11. Unit bank dummy	.5574
1. Log total deposits (SMSA)	.3057		.52
	1.8949		1.22
	3.84[a]		.05
	.16	12. Account activity	.0396
2. Other services	−.2496		1.69
	.28		1.02
	3.29[a]		.04
	.14	13. Average deposit	−1.1145
3. Population increase	.0191		.0114
	6.60		.94
	3.16[a]		.04
	.13	14. Region 4	.1511
4. Concentration	.6835		.34
	.70		.93
	2.40[b]		.04
	.10	15. Region 5	.1464
5. Region 6	1.0482		.18
	.07		.90
	2.28[b]		.04
	.10	16. Log bank size	−.1006
6. Deposit fluctuation	.0790		2.0169
	1.76		.90
	1.98[b]		.04
	.08	17. Limited branch	
7. Other bank	−.1197	dummy	.3478
	.19		.41
	1.39		.79
	.06		.03
8. Region 3	−.1687	18. Time in debt	.0083
	.15		10.48
	1.35		.69
	.06		.03
9. Length of lending arrangement	−.0683	19. Region 2	−.0318
	2.59		.12
	1.35		.25
	.06		.01
10. Log original amount	−.0858	Intercept	5.372
	2.4583	R^2	.208
	1.29	F	7.75[a]
	.05	N	580

NOTE: See the notes to Table 2.

[a] Significant at the .01 level.

[b] Significant at the .05 level.

Appendix E

DISTRIBUTION OF CUSTOMERS

Appendix Table E-1
Customers Distributed by Region and Branching Restriction

	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Total
All customers, branching law:							
Unit	0	46	226	1583	739	0	2594
Limited	1861	1121	868	165	191	0	4206
Statewide	190	0	120	0	0	504	814
Total	2051	1167	1214	1748	930	504	7614
No collateral, branching law:							
Unit	0	0	95	745	264	0	1104
Limited	1232	578	412	104	61	0	2387
Statewide	136	0	77	0	0	296	509
Total	1368	578	584	849	325	296	4000
100 per cent collateral, branching law:							
Unit	0	0	73	514	248	0	835
Limited	285	207	198	19	51	0	760
Statewide	8	0	2	0	0	124	134
Total	293	207	273	533	299	124	1729

Appendix Table E-2
Customers With Asset Data, Distributed by Region and Branching Restriction

	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Total
All customers, branching law:							
Unit	0	19	158	1105	445	0	1727
Limited	1243	711	540	146	122	0	2762
Statewide	108	0	70	0	0	290	468
Total	1351	730	768	1251	567	290	4957
Nonsecured customers with data on assets, branching law:							
Unit	0	0	64	541	173	0	778
Limited	865	377	258	93	40	0	1633
Statewide	89	0	43	0	0	164	296
Total	954	377	365	634	213	164	2707
Fully secured customers with data on assets, branching law:							
Unit	0	0	41	332	141	0	514
Limited	137	98	108	15	34	0	392
Statewide	4	0	1	0	0	73	78
Total	141	98	150	347	175	73	984

Appendix Table E-3

Customers With Assets Less Than or Equal to $500,000, Distributed by Region and Branching Restriction

	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Total
All customers, branching law:							
Unit	0	10	95	587	277	0	969
Limited	756	472	254	65	76	0	1623
Statewide	78	0	41	0	0	157	276
Total	834	482	390	652	353	157	2868
Nonsecured customers, assets $\leq$ $500,000, branching law:							
Unit	0	0	23	189	91	0	389
Limited	530	231	120	42	29	0	952
Statewide	63	0	32	0	0	94	189
Total	593	231	187	299	126	94	1530
Fully secured customers, assets $\leq$ $500,000, branching law:							
Unit	0	0	23	189	91	0	303
Limited	81	72	61	6	16	0	236
Statewide	2	0	1	0	0	38	41
Total	83	72	85	195	107	38	580

Appendix Table E-4

Customers With Assets Greater Than $500,000 and Less Than or Equal to $1 Million, Distributed by Region and Branching Restriction

	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Total
All customers, branching laws:							
Unit	0	4	22	159	63	0	248
Limited	165	83	87	29	25	0	389
Statewide	14	0	8	0	0	53	75
Total	179	87	117	188	88	53	712
Nonsecured customers, assets $500,000 $\leq$ $1 million, branching laws:							
Unit	0	0	9	70	21	0	100
Limited	114	49	36	15	7	0	221
Statewide	11	0	5	0	0	23	39
Total	125	49	50	85	28	23	360
Fully secured customers, assets $500,000 $\leq$ $1 million, branching laws:							
Unit	0	0	9	63	22	0	94
Limited	17	13	18	3	9	0	60
Statewide	2	0	0	0	0	14	16
Total	19	13	27	66	31	14	170

Appendix Table E-5

Customers With Assets Greater Than $1 Million and Less Than or Equal to $5 Million, Distributed by Region and Branching Restriction

	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Total
All customers, branching laws:							
Unit	0	5	29	198	65	0	297
Limited	190	89	117	39	18	0	453
Statewide	15	0	7	0	0	55	77
Total	205	94	153	237	83	55	827
Nonsecured customers, assets $1 million ≤ $5 million, branching law:							
Unit	0	0	15	89	32	0	136
Limited	124	56	54	27	3	0	264
Statewide	14	0	3	0	0	32	49
Total	138	56	72	116	35	32	449
Fully secured customers, assets $1 million ≤ $5 million, branching law:							
Unit	0	0	6	60	20	0	86
Limited	29	10	25	4	9	0	77
Statewide	0	0	0	0	0	17	17
Total	29	10	31	64	29	17	180

Appendix F

REGRESSIONS ON MODEL 4

Appendix Table F-1

Regressions on Model 4, All Customers With Asset Data, Three Size Classes, With a Six Partition Regional Variable, Mean Deposits Dependent

	Asset Size (millions of dollars)				
	0 ≤ .5		.5 ≤ 1		1 ≤ 5
Average deposit (mean)	118.29		373.94		773.15
1. Original amount	.0863	(3)	.0436	(1)	.1064
	346.51		1149.96		2579.41
	12.51[a]		3.04[a]		8.22[a]
	.23		.11		.28
2. Account activity	43.50	(1)	122.86	(2)	181.86
	1.79		2.07		2.20
	10.25[a]		6.45[a]		5.40[a]
	.19		.24		.19
3. Interest rate	−.3046	(4)	−.8447	(3)	−2.4596
	652.74		638.30		627.52
	4.77[a]		2.69[a]		3.43[a]
	.09		.10		.12
4. Log bank size	51.55	(2)	198.43	(4)	229.54
	6.0649		6.1443		6.1664
	4.75[a]		3.66[a]		2.07
	.09		.14		.07[b]
5. Length of lending arrangement	21.48	(18)	−3.69	(9)	88.88
	2.65		2.79		2.77
	3.50[a]		.10		1.30
	.07		.01		.05
6. Other services	30.66	(12)	19.54	(19)	2.28
	.23		.28		.30
	3.42[a]		.49		.03
	.06		.02		.01
7. Time in debt	−4.03	(17)	−1.52	(7)	−21.08
	9.95		10.56		10.29
	3.33[a]		.22		1.71
	.06		.01		.06
8. Unit bank dummy	−70.26	(10)	−67.16	(12)	−211.90
	.34		.35		.36
	2.90[a]		.55		.86
	.05		.02		.03
9. Region 4	43.09	(11)	−35.79	(8)	219.78
	.23		.26		.29
	2.61[a]		.50		1.58
	.05		.02		.06
10. Region 6	−65.10	(5)	−237.64	(13)	−214.20
	.05		.07		.07
	2.59[a]		1.93		.84
	.05		.07		.03

Appendix Table F-1—(*Concluded*)

	Asset Size (millions of dollars)				
	$0 \leq .5$		$.5 \leq 1$		$1 \leq 5$
11. Deposit fluctuation	10.72	(14)	6.61	(11)	46.14
	1.73		1.85		1.87
	2.39[b]		.31		1.10
	.04		.01		.04
12. Limited branch dummy	−42.68	(19)	−2.29	(16)	−38.00
	.57		.55		.55
	2.17[b]		.02		.17
	.04		.01		.01
13. Log total deposits (SMSA)	11.27	(15)	11.21	(10)	99.63
	5.9893		5.9990		6.0124
	1.29		.25		1.11
	.02		.01		.04
14. Region 5	−18.01	(9)	−51.98	(14)	−135.24
	.12		.12		.10
	1.04		.65		.82
	.02		.02		.03
15. Concentration	−28.97	(7)	−145.08	(6)	521.25
	.68		.68		.67
	.98		.96		1.79
	.02		.04		.06
16. Region 2	−10.66	(16)	−14.27	(17)	15.35
	.17		.12		.11
	.91		.22		.12
	.02		.01		.01
17. Population increase	.26	(13)	1.01	(5)	11.49
	7.36		7.26		7.02
	.40		.32		2.03[b]
	.01		.01		.07
18. Region 3	4.84	(6)	−60.62	(15)	34.49
	.14		.16		.19
	.38		1.01		.31
	.01		.04		.01
19. Other bank	2.27	(8)	−31.50	(18)	−7.31
	.14		.27		.42
	.21		.75		.10
	.01		.03		.01
Intercept	−149.98		−499.24		−863.44
R^2	.15		.16		.20
F	26.32[a]		6.92[a]		10.50[a]
N	2868		712		827

NOTE: See the notes to Table 2.

[a] Significant at the .01 level.

[b] Significant at the .05 level.

Appendix Table F-2

Regressions on Model 4, All Noncollateralized Customers With Asset Data, Three Size Classes, With a Six Partition Regional Variable, Mean Deposits Dependent

	Asset Size (millions of dollars)				
	0 ≤ .5		.5 ≤ 1		1 ≤ 5
Average deposit (mean)	125.56		409.37		811.60
1. Original amount	.1312	(2)	.0631	(1)	.1598
	260.39		924.55		2285.81
	9.58[a]		2.92[a]		7.76[a]
	.24		.16		.35
2. Account activity	31.69	(1)	130.68	(2)	144.04
	1.82		2.14		2.21
	5.78[a]		5.58[a]		2.99[a]
	.15		.29		.14
3. Interest rate	−.4077	(5)	−1.0784	(5)	−2.1911
	648.44		627.15		621.68
	4.19[a]		2.02[b]		1.74
	.11		.11		.08
4. Log bank size	55.49	(4)	170.92	(18)	99.00
	6.1135		6.1854		6.1950
	3.91[a]		2.47[b]		.61
	.10		.13		.03
5. Deposit fluctuation	22.80	(19)	−.10	(16)	47.13
	1.74		1.89		1.86
	3.80[a]		.01		.76
	.10		.01		.04
6. Other services	33.60	(3)	126.44	(8)	118.99
	.20		.28		.33
	2.76[a]		2.57[b]		1.05
	.07		.14		.05
7. Length of lending arrangement	21.35	(18)	5.04	(11)	89.17
	2.67		2.82		2.77
	2.61		.10		.95
	.07		.01		.05
8. Time in debt	−3.39	(17)	.97	(12)	−15.23
	9.62		10.18		9.96
	2.26[b]		.13		.92
	.06		.01		.04
9. Region 6	−66.50	(14)	−35.85	(13)	297.80
	.06		.06		.07
	2.25[b]		.25		.92
	.06		.01		.04
10. Region 5	−46.58	(7)	−182.37	(9)	−266.36
	.08		.08		.08
	1.88		1.65		.98
	.05		.09		.05

Appendix Table F-2—(*Concluded*)

	Asset Size (millions of dollars)				
	0 ≤ .5		.5 ≤ 1		1 ≤ 5
11. Limited branch dummy	−31.28	(9)	150.00	(6)	418.24
	.62		.61		.59
	1.39		1.31		1.56
	.04		.07		.07
12. Other bank	−20.21	(8)	−76.36	(19)	33.16
	.11		.24		.42
	1.34		1.35		.32
	.03		.07		.02
13. Unit bank dummy	−26.65	(11)	134.32	(10)	311.96
	.25		.28		.30
	.88		.95		.95
	.02		.05		.05
14. Region 2	−12.46	(13)	−25.24	(17)	116.71
	.15		.14		.12
	.83		.34		.69
	.02		.02		.03
15. Log total deposits (SMSA)	8.04	(10)	56.22	(7)	159.51
	6.0856		6.0855		6.0842
	.73		1.04		1.30
	.02		.06		.06
16. Concentration	−26.50	(6)	330.46	(4)	728.41
	.66		.67		.66
	.67		1.72		1.79
	.02		.09		.09
17. Region 4	−13.88	(16)	16.12	(14)	163.63
	.20		.24		.26
	.62		.18		.82
	.02		.01		.04
18. Region 3	−9.32	(12)	−70.76	(15)	−128.85
	.12		.14		.16
	.56		.95		.79
	.01		.05		.04
19. Population increase	−.35	(15)	1.12	(3)	18.05
	8.06		7.83		7.30
	.40		.24		2.44[b]
	.01		.01		.12
Intercept	−98.55		−1026.07		−1316.03
R^2	.17		.25		.23
F	15.87[a]		6.07[a]		6.57[a]
N	1530		360		449

NOTE: See the notes to Table 6.
[a] Significant at the .01 level.
[b] Significant at the .05 level.

Appendix Table F-3

Regressions on Model 4, All Fully Collateralized Customers With Assets Less Than or Equal to $½ Million, With a Six Partition Regional Variable, Mean Deposits Dependent

Average deposit (mean)	113.52	11. Region 5	68.22
1. Account activity	75.03		.18
	1.69		1.19
	5.60[a]		.05
	.23	12. Interest rate	−.1254
2. Original amount	.0657		670.15
	551.84		.84
	4.82[a]		.04
	.20	13. Region 2	34.43
3. Region 4	160.01		.12
	.34		.77
	2.80[a]		.03
	.12	14. Population increase	− 1.40
4. Log bank size	103.43		6.60
	6.0169		.65
	2.63[a]		.03
	.11	15. Log total deposits	
5. Other services	69.70	(SMSA)	−18.20
	.28		5.89
	2.58[a]		.64
	.11		.03
6. Other bank	67.06	16. Unit bank dummy	−73.10
	.19		.52
	2.22[b]		.45
	.09		.02
7. Region 3	68.43	17. Deposit fluctuation	−2.96
	.15		1.76
	1.55		.21
	.07		.01
8. Length of lending	24.30	18. Region 6	23.50
arrangement	2.59		.07
	1.36		.14
	.06		.01
9. Concentration	−135.83	19. Limited branch dummy	2.03
	.70		.41
	1.34		.01
	.06		.01
10. Time in debt	−5.14	Intercept	−457.40
	10.48	R^2	.16[a]
	1.22	F	5.55
	.05	N	580

NOTE: See the notes to Table 6.

[a] Significant at the .01 level.

[b] Significant at the .05 level.

Index