APPENDIX C

A SEQUEL

September 30, 2000

Introduction

The purpose of this document is to update some of the information presented in the body of this report, which was written much earlier. In the time since that report was completed, we have received credit history data for many of the FHA-insured loans that formed the basis for some of the tables and the discussion in the body of the report. The credit history data consist of FICO scores provided by Trans Union. Here we update and discuss four of the tables to account for the addition of credit history data.

Characteristics of Tracts with Relatively High Default Rates

Table 6 in the original report provided a variety of characteristics of tracts classified by the default rate within the tract. Table C-1 below updates Table 6 in the original report by adding a row to each of the three panels. Each of these new rows shows, for a particular default definition, the percentage of loans with borrower FICO scores below 620, by tract default rate category. All endorsed, purchase money loans with FICO scores supplied by Trans Union are included in the calculations.[1]

Note that as might be expected, the fraction of borrowers with scores below 620 increases as one moves rightward across each panel, *i.e.*, as one moves to tracts in higher default rate categories. The increase in the percentage appears more dramatic for the default definitions used in Panels B and C than for the definition used in Panel A.

Characteristics of Lenders with Relatively High Default Rates

Table 11 in the original report provided characteristics for lenders classified by the default rates on the loans they originated. Table C-2 below updates Table 11 in the original report by adding a row to each of the three panels. Each of the new rows shows, for a particular default definition, the fraction of loans with borrower FICO scores below 620, by lender default rate category. All endorsed, purchase money loans with FICO scores supplied by Trans Union are included in the calculation.

Not surprisingly, the fraction of borrowers with scores below 620 increases as one moves

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[1] Approximately 170,000 loans had FICO scores and are included in the FICO calculations in Tables C-1 and C-2.

to the right across each panel, *i.e.,* as one moves to tracts in higher default rate categories. The increase in the percentage appears more dramatic for the default definitions used in Panels B and C than for the definition used in Panel A, and the increase is especially impressive in Panel B.

Estimates of Default Logits Using Pooled Data

Table C-3 updates Table 25 from the original report. For each panel of Table C-3 (corresponding to a particular default definition), logits pooled across MSAs and across origination years have been rerun to incorporate FICO scores or the absence thereof.

Using the distinctions suggested by other work on mortgage scoring, the following eight variables have been added to the Table 25 specification:

Indicator for borrower configuration:
noco: indicator =1 for case with no coborrower (zero otherwise)

Indicators for presence of scores:
sentout: indicator =1 if case was sent out to TU for scoring (zero otherwise)
nocomiss: indicator =1 for case with no coborrrower and missing FICO (for any reason)
        (zero otherwise)
co1: indicator = 1 for case with coborrower but score for only one of the parties (zero otherwise)
co2: indicator = 1 for case with coborrower and scores for both parties (zero otherwise)

FICO scores for cases with at least one score from Trans Union (set to zero otherwise):
ficonoco: FICO score for cases with no coborrower
fico: FICO score for cases with a coborrower and only one score
ficoave: average of FICO scores for cases with both borrower and coborrower scores

Three aspects of Table C-3 are noteworthy. First, FICO scores work as might be anticipated with higher FICO score readings associated with lower default probabilities. Sensitivities to FICO scores appear to differ, however. Average FICO scores for borrower/coborrower pairs have a bigger effect on default than does the FICO score of a single borrower, which in turn has a larger effect on default than does the FICO score for a borrower/coborrower pair having one missing FICO score.

Second, a comparison of the coefficients in each panel of Table C-3 with the corresponding coefficients in Table 25 in the report shows that virtually all qualitative findings remain unchanged with the introduction of FICO scores.

Third, comparing the estimated impacts of high default tracts and lenders in Table C-3 to those in Table 25, we see that all effects are reduced slightly by controlling for FICO scores. The reduction is generally on the order of only one or two percentage points.

Adjusted Odds Ratios of Default for High-Default Tracts and Lenders

Table 26 in the body of the paper presents raw odds ratios of default for high-default

tracts and lenders, as well as odds ratios after adjusting for the explanatory variables used in Table 25 via an MSA-specific logit. For each panel (default definition), Table C-4 extends the analysis of Table 26 by recalculating the adjusted odds ratios using more complete MSA-specific logit specifications in which FICO scores are included among the explanatory variables, when possible (as in Table C-3). To demonstrate how the results are modified by the inclusion of FICO scores, two columns have been added to each of the old Table 26 subpanels. These new columns show the new adjusted differential and the new test statistic when the adjustment factors include the FICO and related variables. In each subpanel, the third and fourth columns of numbers are the adjusted differentials and test statistics calculated without FICO controls; these columns are denoted by "adjusted 1" and "z 1." The fifth and sixth columns of numbers give the adjusted differentials and test statistics that adjust for FICO scores; these columns are denoted by "adjusted 2" and "z 2."

Because the first four columns of each six-column subpanel of Table C-4 show the raw differential and test statistic, as well as the adjusted differential and test statistic presented in the earlier work (*i.e.*, the columns "adjusted 1" and "z 1" that do not incorporate FICOs and related variables), these first four columns of each subpanel should be identical to those in Table 26. We have discovered, however, that Panels A and B of Table 26 in the report contained an error because the wrong output was copied into the paper. As a result, the raw and adjusted figures in the first four columns in Table C-4 subpanels do not match those in the paper. They are generally not too different, however. In particular, in the vast majority of the cases --- especially in Panels B and C --- the adjusted differentials in the third column ("adjusted 1") of each subpanel are lower than the raw differentials in the first column.

The final two columns of Table C-4 show the adjusted odds ratios of default (and z-scores) after introducing FICO scores as additional adjustment factors. In the majority of the cases — especially for lenders in Panels B and C — the inclusion of FICO scores further reduces the adjusted odds ratios for high-default tracts and lenders. The differences occasioned by the inclusion of the FICO scores are not as large as one might have imagined however, and the newly adjusted differentials ("adjusted 2") often remain statistically significant.

One possible reason that the introduction of FICO scores has only modest impacts on adjusted differentials is that the FICO score may not be a perfect measure of relevant past credit performance for FHA borrowers. The FICO score is not tailored specifically to the FHA borrower population, and there may be other aspects of credit history that are predictive of default for this population. In addition, the FICO score may not overcome the omission of a host of other relevant borrower or loan characteristics, as well as the errors that are no doubt present in those measures that are included.

TABLE C-1

CHARACTERISTICS OF TRACTS IN VARIOUS RELATIVE DEFAULT RATE CLASSES
ALL MSAs

1992 AND 1994 ORIGINATIONS

PANEL A: CLAIMS AT TWO YEARS

Characteristic	Tracts With <31 Loans	Default Rate of Tract Relative to MSA Rate (> 30 Loans Per Tract)				
		0 to < 0.5	0.5 to < 1.0	1.0 to <1.5	1.5 to <3.0	3.0+
% of All Tracts in Default Rate Class	46.71%	32.54%	3.51%	3.79%	7.46%	5.99%
% of All Loans in Default Rate Class	9.54	44.79	12.18	10.86	14.97	7.65
% of All Defaults in Default Rate Class	9.50	1.35	12.03	18.08	32.93	26.11
Default Rate (%) in Class	0.83	0.03	0.82	1.38	1.83	2.84
FHA % Black	14.01	9.98	11.54	13.27	17.51	25.71
FHA % Hispanic	14.35	9.92	16.59	17.36	13.34	11.27
First Time (%)	52.80	43.59	42.46	43.76	45.06	49.51
% LTV .97 +	22.27	24.59	22.02	23.72	27.58	34.30
% Front end .29+	20.30	18.05	21.17	21.85	19.01	16.97
% Back end .41+	16.71	16.30	17.76	18.00	16.23	14.41
% FICO score below 620	15.10	13.16	13.34	14.73	15.60	18.94
Income-MSA average	132.10	65.36	98.76	-9.01	-156.73	-378.23
Mortgage-MSA average	3452.04	1328.26	4028.98	876.91	-4526.29	-10637.42
Assets-MSA average	815.92	388.81	356.88	-0.69	-830.41	-2195.38
FHA/Tot originations (%)	11.36	25.26	33.62	36.85	34.42	35.24
Black FHA/Blk originations (%)	30.72	43.71	45.67	51.21	51.04	52.76
Hispanic FHA/Hisp originations (%)	23.03	40.13	42.46	52.92	49.51	48.42
Conventional denials/applications (%)	15.55	11.76	14.92	16.73	16.73	16.42
Census % Black	15.14	11.24	10.74	18.38	21.88	40.17
Census % Hispanic	16.08	9.68	24.96	18.06	15.15	9.38
Census Unemp Rate (%)	7.71	6.24	6.99	7.70	8.34	11.55
Census Income Ratio	1.02	1.07	1.10	1.03	0.99	0.90
Census Poverty Rate (%)	13.33	8.24	10.59	12.60	12.73	18.13
Census Home Ownership Rate (%)	57.49	66.29	65.94	61.44	59.83	57.55

TABLE C-1

CHARACTERISTICS OF TRACTS IN VARIOUS RELATIVE DEFAULT RATE CLASSES
ALL MSAs

1992 AND 1994 ORIGINATIONS

PANEL B: UNCURED DELINQUENCIES AT TWO YEARS

Characteristic	Tracts With <31 Loans	Default Rate of Tract Relative to MSA Rate (> 30 Loans Per Tract)				
		0 to < 0.5	0.5 to < 1.0	1.0 to <1.5	1.5 to <3.0	3.0+
% of All Tracts in Default Rate Class	46.71%	21.21%	10.75%	8.98%	9.18%	3.17%
% of All Loans in Default Rate Class	9.54	30.54	21.34	18.36	16.29	3.94
% of All Defaults in Default Rate Class	9.88	3.82	17.94	26.39	30.41	11.57
Default Rate (%) in Class	2.50	0.30	2.03	3.47	4.50	7.09
FHA % Black	14.01	5.64	10.16	14.68	24.37	34.40
FHA % Hispanic	14.35	9.07	14.14	15.79	12.97	10.51
First Time (%)	52.80	41.63	43.58	44.63	47.50	51.91
% LTV .97 +	22.27	22.87	22.61	24.86	31.10	39.27
% Front end .29+	20.30	17.36	20.68	20.79	18.62	15.28
% Back end .41+	16.71	16.04	17.56	17.26	16.10	12.97
% FICO score below 620	15.10	11.43	13.33	15.50	17.94	22.31
Income-MSA average	132.10	122.76	90.46	-9.74	-237.47	-657.26
Mortgage-MSA average	3452.04	2102.14	3616.56	988.76	-6694.90	-19306.42
Assets-MSA average	815.92	881.43	507.72	-253.44	-1496.62	-3632.94
FHA/Tot originations (%)	11.36	23.17	29.16	34.50	37.20	44.48
Black FHA/Blk originations (%)	30.72	39.75	43.64	47.45	52.39	56.56
Hispanic FHA/Hisp originations (%)	23.03	37.46	42.32	49.78	51.64	53.14
Conventional denials/applications (%)	15.55	11.00	13.42	15.58	17.57	22.42
Census % Hispanic	16.08	10.32	15.22	14.21	13.51	8.86
Census % Black	15.14	7.01	11.22	18.58	29.86	50.28
Census % Unemp Rate (%)	7.71	5.74	6.46	7.54	9.36	14.50
Census Income Ratio	1.02	1.12	1.06	1.03	0.93	0.79
Census Poverty Rate (%)	13.33	7.37	9.15	10.98	14.99	21.73
Census Home Ownership Rate (%)	57.49	66.76	65.16	63.11	60.34	54.13

TABLE C-1

CHARACTERISTICS OF TRACTS IN VARIOUS RELATIVE DEFAULT RATE CLASSES
ALL MSAs

1992 AND 1994 ORIGINATIONS

PANEL C: UNCURED DELINQUENCIES AT 12/95

Characteristic	Tracts With <31 Loans	Default Rate of Tract Relative to MSA Rate (> 30 Loans Per Tract)				
		0 to < 0.5	0.5 to < 1.0	1.0 to <1.5	1.5 to <3.0	3.0+
% of All Tracts in Default Rate Class	46.71%	20.50%	10.85%	8.91%	9.70%	3.33%
% of All Loans in Default Rate Class	9.54	31.17	22.65	16.52	16.02	4.11
% of All Defaults in Default Rate Class	9.94	4.55	18.75	22.04	32.31	12.41
Default Rate (%) in Class	2.56	0.36	2.03	3.28	4.96	7.43
FHA % Black	14.01	6.10	10.67	13.10	24.43	36.75
FHA % Hispanic	14.35	9.54	14.50	14.39	13.26	10.98
First Time (%)	52.80	41.95	44.44	44.38	46.23	51.43
% LTV .97 +	22.27	23.12	25.59	24.23	28.36	36.01
% Front end .29+	20.30	18.38	20.01	20.05	18.35	16.01
% Back end .41+	16.71	16.74	17.43	16.88	15.49	12.60
% FICO score below 620	15.10	11.91	13.71	14.40	17.84	21.52
Income-MSA average	132.10	169.52	43.60	-17.73	-267.75	-664.21
Mortgage-MSA average	3452.04	4118.75	1572.44	106.83	-7181.44	-18986.32
Assets-MSA average	815.92	920.97	96.19	-183.78	-1362.55	-3200.99
FHA/Tot originations (%)	11.36	23.39	29.93	33.53	38.71	47.41
Black FHA/Blk originations (%)	30.72	39.56	44.62	47.16	52.57	57.74
Hispanic FHA/Hisp originations (%)	23.03	37.33	43.20	50.01	50.81	55.56
Conventional denials/applications (%)	15.55	10.94	13.78	15.55	18.48	23.16
Census % Black	15.14	6.68	11.85	16.10	31.27	55.84
Census % Hispanic	16.08	10.78	14.02	15.29	13.39	8.70
Census Unemp Rate (%)	7.71	5.63	6.48	7.37	9.98	14.56
Census Income Ratio	1.02	1.13	1.06	1.02	0.92	0.75
Census Poverty Rate (%)	13.33	7.04	8.84	11.33	15.80	22.44
Census Home Ownership Rate (%)	57.49	66.90	66.05	63.33	58.73	53.32

TABLE C-2

CHARACTERISTICS OF LENDERS IN VARIOUS RELATIVE DEFAULT RATE CLASSES
ALL MSAs

1992 AND 1994 ORIGINATIONS

PANEL A: CLAIMS AT TWO YEARS

Characteristic	Lenders With <31 Loans	Default Rate of Lender Relative to MSA Rate (> 30 Loans Per Lender)				
		0 to < 0.5	0.5 to < 1.0	1.0 to <1.5	1.5 to <3.0	3.0+
% of All Lenders in Default Rate Class	60.84%	18.32%	6.03%	5.71%	6.34%	2.76%
% of All Loans in Default Rate Class	4.32	25.59	28.40	23.81	15.31	2.56
% of All Defaults in Default Rate Class	4.62	3.75	22.03	30.37	29.38	9.85
Default Rate (%) in Class	0.89	0.12	0.64	1.06	1.59	3.20
FHA % Black	14.36	11.49	11.13	13.50	17.30	25.68
FHA % Hispanic	18.23	10.09	12.45	13.18	14.58	11.76
First Time (%)	39.98	44.01	45.78	43.20	48.25	53.01
% LTV .97 +	25.35	23.73	24.57	24.73	27.29	35.67
% Front end .29+	23.61	18.29	19.49	19.23	18.99	16.26
% Back end .41+	17.86	16.92	16.74	16.17	16.18	14.17
% FICO score below 620	16.62	13.28	12.92	13.87	17.32	23.83
Income-MSA average	173.48	54.51	30.34	-19.72	-117.22	-213.65
Mortgage-MSA average	5083.77	-252.70	1551.38	258.79	-2697.53	-7792.57
Assets-MSA average	813.15	309.79	377.85	-103.32	-999.44	-1265.98
FHA/Tot originations (%)	35.50	34.51	37.60	38.15	37.09	41.11
Black FHA/Blk originations (%)	39.64	38.45	40.64	41.29	41.28	45.05
Hispanic FHA/Hisp originations (%)	41.33	39.32	42.91	42.90	41.37	43.28
Conventional denials/applications (%)	17.93	14.77	15.87	16.55	16.68	17.48
Census % Black	14.91	9.25	10.55	10.77	11.18	10.01
Census % Hispanic	13.60	11.82	11.51	13.17	15.59	22.13
Census Unemp Rate (%)	7.89	7.06	6.83	7.09	7.84	9.58
Census Income Ratio	1.03	1.04	1.04	1.03	1.01	0.96
Census Poverty Rate (%)	9.67	8.05	8.40	8.79	9.22	10.58
Census Home Ownership Rate (%)	67.11	69.37	68.20	68.26	67.67	67.30

TABLE C-2

CHARACTERISTICS OF LENDERS IN VARIOUS RELATIVE DEFAULT RATE CLASSES
ALL MSAs

1992 AND 1994 ORIGINATIONS

PANEL B: UNCURED DELINQUENCIES AT TWO YEARS

Characteristic	Lenders With <31 Loans	Default Rate of Lender Relative to MSA Rate (> 30 Loans Per Lender)				
		0 to < 0.5	0.5 to < 1.0	1.0 to <1.5	1.5 to <3.0	3.0+
% of All Lenders in Default Rate Class	60.84%	11.81%	10.92%	8.33%	6.69%	1.41%
% of All Loans in Default Rate Class	4.32	17.63	37.64	26.78	12.33	1.30
% of All Defaults in Default Rate Class	5.38	4.31	29.00	35.08	21.84	4.40
Default Rate (%) in Class	3.00	0.59	1.86	3.16	4.27	8.15
FHA % Black	14.36	10.00	11.29	14.09	19.53	32.94
FHA % Hispanic	18.23	9.37	11.44	15.19	13.08	11.68
First Time (%)	39.98	39.69	43.35	48.30	50.88	59.81
% LTV .97 +	25.35	21.64	24.50	24.66	30.53	39.28
% Front end .29+	23.61	16.77	19.40	20.12	18.26	13.57
% Back end .41+	17.86	16.40	16.38	17.10	16.00	12.28
% FICO score below 620	16.62	11.73	13.13	15.13	17.09	29.76
Income-MSA average	173.48	53.16	53.73	-18.56	-163.25	-450.65
Mortgage-MSA average	5083.77	-1383.87	1709.29	1162.72	-5244.91	-14422.89
Assets-MSA average	813.15	561.81	341.68	-144.99	-1090.71	-3286.62
FHA/Tot originations (%)	35.50	33.70	36.74	38.52	37.71	45.29
Black FHA/Blk originations (%)	39.64	37.68	40.12	41.84	41.44	48.28
Hispanic FHA/Hisp originations (%)	41.33	38.77	41.56	63.94	41.36	43.44
Conventional denials/applications (%)	17.93	14.97	15.47	16.40	17.19	19.62
Census % Black	13.60	11.06	11.87	13.16	16.95	25.85
Census % Hispanic	14.91	9.43	9.85	11.64	10.43	9.43
Census Unemp Rate (%)	7.89	6.71	7.05	7.41	7.44	10.83
Census Income Ratio	1.03	1.05	1.04	1.03	1.00	0.92
Census Poverty Rate (%)	9.67	7.90	8.30	9.01	9.20	12.13
Census Home Ownership Rate (%)	67.11	69.17	68.78	67.76	67.81	67.17

TABLE C-2

CHARACTERISTICS OF LENDERS IN VARIOUS RELATIVE DEFAULT RATE CLASSES
ALL MSAs

1992 AND 1994 ORIGINATIONS

PANEL C: UNCURED DELINQUENCIES AT 12/95

Characteristic	Lenders With <31 Loans	Default Rate of Lender Relative to MSA Rate (> 30 Loans Per Lender)				
		0 to < 0.5	0.5 to < 1.0	1.0 to <1.5	1.5 to <3.0	3.0+
% of All Lenders in Default Rate Class	60.84%	12.63%	10.57%	7.88%	6.82%	1.26%
% of All Loans in Default Rate Class	4.32	16.94	35	28.41	13.98	1.35
% of All Defaults in Default Rate Class	4.19	3.91	27.65	34.59	24.89	4.77
Default Rate (%) in Class	2.38	0.57	1.94	2.99	4.38	8.71
FHA % Black	14.36	9.87	11.37	13.88	18.49	33.16
FHA % Hispanic	18.23	10.24	11.14	14.57	13.43	10.68
First Time (%)	39.98	39.54	42.65	48.67	49.61	67.44
% LTV .97 +	25.35	24.13	24.51	24.36	27.61	38.35
% Front end .29+	23.61	18.46	18.98	19.85	18.11	13.67
% Back end .41+	17.86	17.11	17.25	16.25	15.29	10.9
% FICO score below 620	16.62	12.47	12.74	15.31	16.35	25.33
Income-MSA average	173.48	104.9	19.78	-2.45	-123.2	-500.88
Mortgage-MSA average	5083.77	857.69	356.08	1305.63	-3413.99	-17272.76
Assets-MSA average	813.15	646.24	162.85	-178.44	-531.5	-2595.1
FHA/Tot originations (%)	35.5	34.84	36.57	37.68	37.96	46.1
Black FHA/Blk originations (%)	39.64	38.58	40.25	41.04	41.15	49.06
Hispanic FHA/Hisp originations (%)	41.33	40.06	41.65	42.71	42.04	40.33
Conventional denials/applications (%)	17.93	14.93	15.86	15.85	17.03	19.73
Census % Black	14.91	9.63	9.89	11.17	10.85	9.04
Census % Hispanic	13.6	10.66	11.53	13.55	16.58	28.91
Census Unemp Rate (%)	7.89	6.7	6.69	7.76	7.44	12.14
Census Income Ratio	1.03	1.06	1.05	1.01	1	0.88
Census Poverty Rate (%)	9.67	7.8	8.25	9.01	9.13	13.62
Census Home Ownership Rate (%)	67.11	69.2	68.85	67.88	67.63	66.61

Estimates of a Logit Model of Default

1992 and 1994 Originations

Panel A: Claims at Two Years

Number of obs = 354133
chi2(70)   =4496.51
Prob > chi2   = 0.0000
Log Likelihood = -14875.738   Pseudo R2   = 0.1313

Variable	Coefficient Estimate	Std. Err.	z	P>|z|	[95% Conf. Interval]	
_94	0.2355733	0.1135048	2.075	0.038	0.013108	0.4580386
cin92	0.9867724	0.0797816	12.368	0.000	0.8304033	1.143141
cin94	0.9360322	0.0617645	15.155	0.000	0.8149759	1.057088
ctin92	1.355797	0.0916683	14.79	0.000	1.176131	1.535464
ctin94	1.328984	0.0695354	19.112	0.000	1.192697	1.465271
ltv95_	0.0306073	0.005484	5.581	0.000	0.0198588	0.0413558
ltv95	0.0276651	0.0168488	1.642	0.101	-0.005358	0.0606881
age_	-0.0651351	0.008575	-7.596	0.000	-0.0819419	-0.0483283
age30	0.0953901	0.0133339	7.154	0.000	0.0692561	0.121524
age40	-0.026653	0.0095213	-2.799	0.005	-0.0453144	-0.0079916
incdiff	-0.0000352	0.0000375	-0.937	0.349	-0.0001087	0.0000384
less15	-0.095611	0.1827544	-0.523	0.601	-0.4538029	0.262581
back_	-0.0146618	0.0042788	-3.427	0.001	-0.023048	-0.0062755
back36	0.0146963	0.0052621	2.793	0.005	0.0043828	0.0250098
front_	0.0296828	0.0082129	3.614	0.000	0.0135858	0.0457798
front27	-0.0301463	0.009096	-3.314	0.001	-0.0479742	-0.0123184
asst	-0.0001717	0.0000127	-13.483	0.000	-0.0001967	-0.0001467
asst6k	0.0000869	0.0000259	3.350	0.001	0.0000361	0.0001378
asst10k	0.0000846	0.0000177	4.796	0.000	0.0000501	0.0001192
mtgdiff	0.00000461	0.00000164	2.813	0.005	0.0000014	0.00000782
intdiff	0.2263071	0.0258703	8.748	0.000	0.1756022	0.277012
sepmale	0.0531569	0.2316604	0.229	0.819	-0.4008892	0.507203
sepfmle	-0.2538628	0.1861259	-1.364	0.173	-0.6186628	0.1109372
sglmale	0.0453961	0.0504839	0.899	0.369	-0.0535505	0.1443428
sglfmle	-0.1768739	0.0570595	-3.100	0.002	-0.2887084	-0.0650394
armflag	0.4203208	0.061568	6.827	0.000	0.2996496	0.5409919
condo	-0.2022116	0.123789	-1.634	0.102	-0.4448335	0.0404103
firstime	0.046462	0.0459588	1.011	0.312	-0.0436155	0.1365396
black	0.2434443	0.0570984	4.264	0.000	0.1315335	0.3553551
hispan	-0.1964774	0.061891	-3.175	0.002	-0.3177816	-0.0751733
avgrate	0.2352368	0.1540175	1.527	0.127	-0.0666319	0.5371054
house	-0.0031696	0.0042807	-0.740	0.459	-0.0115597	0.0052204
cnincdif	-0.000011	0.00000309	-3.543	0.000	-0.000017	-0.0000049
blkcen	0.0016765	0.0012011	1.396	0.163	-0.0006776	0.0040306
hspcen	-0.0026887	0.0017521	-1.535	0.125	-0.0061228	0.0007454
unempcen	0.0132886	0.0082046	1.620	0.105	-0.0027922	0.0293693
fhaorig	0.0003092	0.0013516	0.229	0.819	-0.0023399	0.0029584
cnvadeny	0.0059551	0.0021241	2.804	0.005	0.001792	0.0101183
hasasset	0.545895	0.1496223	3.648	0.000	0.2526406	0.8391494
hashum	-0.0317412	0.1401059	-0.227	0.821	-0.3063437	0.2428614
hascen	-0.1767317	0.1356302	-1.303	0.193	-0.442562	0.0890986
ficonoco	-0.0094766	0.0008092	-11.710	0.000	-0.0110626	-0.0078905
noco	5.692456	0.5211235	10.923	0.000	4.671072	6.713839
nocomiss	-5.367816	0.5202959	-10.317	0.000	-6.387577	-4.348054
fico	-0.008338	0.0008876	-9.394	0.000	-0.0100776	-0.0065984
co1	5.003401	0.5793671	8.636	0.000	3.867862	6.13894
co2	6.725935	0.8592723	7.827	0.000	5.041792	8.410077
ficoavg	-0.0116843	0.0013154	-8.883	0.000	-0.0142624	-0.0091061
sentout	0.5239541	0.0635089	8.250	0.000	0.399479	0.6484293
_cons	-7.815003	0.9664884	-8.086	0.000	-9.709285	-5.920721

Estimates of a Logit Model of Default

1992 and 1994 Originations

Panel B: Uncured Delinquencies at Two Years

					Number of obs	= 354133
					chi2(50)	=12355.51
					Prob > chi2	= 0.0000
Log Likelihood = -36732.193					Pseudo R2	= 0.1440

Variable	Coefficient Estimate	Std. Err.	z	P>|z|	[95% Conf. Interval]	
_94	0.6214661	0.0691575	8.986	0.000	0.4859198	0.7570123
nin92	0.6290199	0.0473337	13.289	0.000	0.5362475	0.7217922
nin94	0.5120388	0.0298322	17.164	0.000	0.4535688	0.5705089
ntin92	0.9496638	0.0589749	16.103	0.000	0.834075	1.065253
ntin94	0.7388285	0.0365529	20.213	0.000	0.6671863	0.8104708
ltv95_	0.0206562	0.0028782	7.177	0.000	0.015015	0.0262974
ltv95	0.0233602	0.0099838	2.34	0.019	0.0037924	0.0429281
age_	-0.0566948	0.0050136	-11.308	0.000	-0.0665212	-0.0468684
age30	0.0802648	0.0076785	10.453	0.000	0.0652152	0.0953145
age40	-0.0242518	0.0055231	-4.391	0.000	-0.0350769	-0.0134267
incdiff	-0.0000179	0.0000213	-0.841	0.400	-0.0000597	0.0000238
less15	-0.4721426	0.1272025	-3.712	0.000	-0.721455	-0.2228302
back_	-0.0033564	0.0025488	-1.317	0.188	-0.008352	0.0016392
back36	0.0036453	0.0031411	1.161	0.246	-0.002511	0.0098017
front_	0.0303373	0.0048024	6.317	0.000	0.0209248	0.0397498
front27	-0.0309015	0.0053182	-5.811	0.000	-0.0413249	-0.0204781
asst	-0.000149	0.00000739	-20.179	0.000	-0.0001635	-0.0001346
asst6k	0.0000497	0.0000145	3.425	0.001	0.0000213	0.0000782
asst10k	0.0000994	0.00000969	10.259	0.000	0.0000804	0.0001184
mtgdiff	0.00000426	0.000000925	4.603	0.000	0.00000245	0.00000607
intdiff	0.2185247	0.0143619	15.216	0.000	0.1903759	0.2466736
sepmale	0.1198118	0.1267489	0.945	0.345	-0.1286114	0.368235
sepfmle	-0.2497399	0.1010777	-2.471	0.013	-0.4478486	-0.0516312
sglmale	-0.0440161	0.0288834	-1.524	0.128	-0.1006264	0.0125943
sglfmle	-0.2582634	0.0322465	-8.009	0.000	-0.3214653	-0.1950615
armflag	0.4571806	0.0338921	13.489	0.000	0.3907534	0.5236078
condo	-0.0894656	0.0646124	-1.385	0.166	-0.2161036	0.0371724
firstime	0.1097841	0.0262947	4.175	0.000	0.0582474	0.1613209
black	0.4307539	0.0317325	13.575	0.000	0.3685594	0.4929484
hispan	-0.1738297	0.0358251	-4.852	0.000	-0.2440456	-0.1036137
avgrate	0.2902304	0.0937327	3.096	0.002	0.1065177	0.4739431
house	-0.0113102	0.0026633	-4.247	0.000	-0.0165302	-0.0060902
cnincdif	-0.00000918	0.00000174	-5.268	0.000	-0.0000126	-0.00000577
blkcen	0.0010535	0.00067	1.572	0.116	-0.0002597	0.0023667
hspcen	-0.0036138	0.001021	-3.539	0.000	-0.0056149	-0.0016126
unempcen	0.0040183	0.0047525	0.846	0.398	-0.0052965	0.0133331
fhaorig	0.0026842	0.0008126	3.303	0.001	0.0010916	0.0042768
cnvadeny	0.0044085	0.0014059	3.136	0.002	0.001653	0.007164
hasasset	0.6657481	0.0917039	7.26	0.000	0.4860118	0.8454844
hashum	-0.1212824	0.0885652	-1.369	0.171	-0.294867	0.0523023
hascen	-0.0403564	0.0861539	-0.468	0.639	-0.2092151	0.1285022
ficonoco	-0.0102509	0.0004479	-22.886	0.000	-0.0111288	-0.009373
noco	6.297695	0.2873814	21.914	0.000	5.734438	6.860952
nocomiss	-6.004385	0.2869264	-20.927	0.000	-6.56675	-5.442019
fico	-0.0094154	0.0004791	-19.654	0.000	-0.0103543	-0.0084764
co1	5.827262	0.3111194	18.73	0.000	5.21748	6.437045
co2	8.534707	0.4501814	18.958	0.000	7.652367	9.417046
ficoavg	-0.0142745	0.0006972	-20.474	0.000	-0.015641	-0.012908
sentout	0.4205894	0.0351915	11.951	0.000	0.3516153	0.4895634
_cons	-6.832515	0.5688963	-12.01	0.000	-7.947532	-5.717499

Estimates of a Logit Model of Default

1992 and 1994 Originations

Panel C: Uncured Delinquencies at 12/95

Number of obs = 354133
chi2(50)   =12355.51
Prob > chi2   = 0.0000
Pseudo R2   = 0.1440

Log Likelihood = -36732.193

Variable	Coefficient Estimate	Std. Err.	z	P>|z|	[95% Conf. Interval]	
_94	0.4994999	0.0940738	5.310	0.000	0.3151187	0.6838812
n95in92	0.48567	0.0322466	15.061	0.000	0.4224678	0.5488723
n95in94	0.6920928	0.0412879	16.763	0.000	0.6111699	0.7730157
n95tin92	0.789085	0.0392628	20.098	0.000	0.7121314	0.8660385
n95tin94	0.9252378	0.0483766	19.126	0.000	0.8304214	1.020054
months	0.0653473	0.0038575	16.940	0.000	0.0577867	0.072908
ltv95_	0.0186514	0.0026725	6.979	0.000	0.0134133	0.0238895
ltv95	0.031973	0.0099959	3.199	0.001	0.0123814	0.0515646
age_	-0.0411561	0.0051393	-8.008	0.000	-0.0512289	-0.0310833
age30	0.0671114	0.0078293	8.572	0.000	0.0517663	0.0824566
age40	-0.0301417	0.0056599	-5.326	0.000	-0.0412349	-0.0190486
incdiff	-0.000038	0.0000204	-1.861	0.063	-0.000078	0.00000202
less15	-0.6077362	0.1234854	-4.922	0.000	-0.849763	-0.3657093
back_	-0.0059422	0.0025242	-2.354	0.019	-0.0108894	-0.0009949
back36	0.0058756	0.0031313	1.876	0.061	-0.0002616	0.0120129
front_	0.0273434	0.0044168	6.191	0.000	0.0186866	0.0360001
front27	-0.0276103	0.0050198	-5.500	0.000	-0.0374489	-0.0177716
asst	-0.0001523	0.00000758	-20.088	0.000	-0.0001671	-0.0001374
asst6k	0.0000626	0.0000147	4.253	0.000	0.0000337	0.0000914
asst10k	0.0000894	0.0000096	9.317	0.000	0.0000706	0.0001083
mtgdiff	0.00000348	0.000000914	3.804	0.000	0.00000169	0.00000527
intdiff	0.1385994	0.0150745	9.194	0.000	0.1090539	0.1681448
sepmale	-0.020946	0.1252068	-0.167	0.867	-0.2663468	0.2244548
sepfmle	-0.1046269	0.0967484	-1.081	0.280	-0.2942504	0.0849966
sglmale	-0.0429279	0.0298892	-1.436	0.151	-0.1015097	0.0156538
sglfmle	-0.2415423	0.0335958	-7.190	0.000	-0.3073889	-0.1756957
armflag	0.3370807	0.0349552	9.643	0.000	0.2685698	0.4055917
condo	-0.1635513	0.0676704	-2.417	0.016	-0.2961829	-0.0309198
firstime	0.0975988	0.0261434	3.733	0.000	0.0463588	0.1488389
black	0.4104146	0.0326006	12.589	0.000	0.3465185	0.4743106
hispan	-0.1985766	0.036833	-5.391	0.000	-0.270768	-0.1263852
avgrate	0.1528386	0.0117014	13.062	0.000	0.1299043	0.1757728
house	-0.0307227	0.0013685	-22.449	0.000	-0.033405	-0.0280404
cnincdif	-0.00000944	0.0000017	-5.547	0.000	-0.0000128	-0.0000061
blkcen	0.00144	0.0006353	2.267	0.023	0.0001948	0.0026852
hspcen	-0.0028624	0.0009567	-2.992	0.003	-0.0047375	-0.0009873
unempcen	-0.0020537	0.004503	-0.456	0.648	-0.0108794	0.006772
fhaorig	0.002525	0.0007005	3.605	0.000	0.001152	0.0038979
cnvadeny	0.0061272	0.0010845	5.650	0.000	0.0040017	0.0082527
hasasset	0.8360587	0.0787144	10.621	0.000	0.6817813	0.9903361
hashum	-0.2259576	0.0692452	-3.263	0.001	-0.3616757	-0.0902395
hascen	0.1052037	0.0664434	1.583	0.113	-0.0250229	0.2354304
ficonoco	-0.0100672	0.0004539	-22.179	0.000	-0.0109568	-0.0091775
noco	6.138485	0.2937233	20.899	0.000	5.562798	6.714172
nocomiss	-5.920231	0.2932779	-20.186	0.000	-6.495045	-5.345417
fico	-0.0087052	0.0004741	-18.362	0.000	-0.0096344	-0.007776
co1	5.401941	0.3115378	17.340	0.000	4.791338	6.012544
co2	7.696231	0.4515744	17.043	0.000	6.811161	8.5813
ficoavg	-0.0129273	0.0006908	-18.715	0.000	-0.0142812	-0.0115735
sentout	0.3826259	0.0364334	10.502	0.000	0.3112178	0.454034
_cons	-8.077748	0.3626182	-22.276	0.000	-8.788467	-7.36703

Raw and Adjusted Odds Ratios for High-Default Tracts and High-Default Lenders from MSA-Specific Logits
Panel A: Calims at Two Years

	Tracts											
	1992						1994					
MSA Name	raw	z	adjusted 1	z1	adjusted 2	z2	raw	z	adjusted 1	z1	adjusted 2	z2
ATLANTA, GA MSA	7.049	5.548	5.089	4.105	5.070	4.019	12.070	6.066	6.845	4.175	7.640	4.359
BALTIMORE, MD PMSA	10.852	4.762	5.249	3.068	5.417	3.114	6.301	5.751	6.164	5.315	6.767	5.445
CHICAGO, IL PMSA	8.967	7.809	5.081	5.383	4.903	5.201	8.133	9.407	6.130	7.617	5.802	7.351
DALLAS, TX PMSA	2.154	2.103	1.593	1.163	1.481	0.978	8.866	3.550	6.018	2.803	5.976	2.736
DENVER, CO PMSA	18.613	7.035	10.783	5.287	11.101	5.286	8.176	6.601	5.636	4.921	5.789	4.966
DETROIT, MI PMSA	7.215	6.308	4.960	4.799	5.067	4.848	3.061	4.757	2.348	3.192	2.228	2.996
FORT LAUDERDALE, FL P	6.563	1.786	3.260	1.070	3.326	1.061	2.155	0.744	0.762	-0.241	0.699	-0.313
FORT WORTH-ARLINGTON, TX PMSA	6.330	3.346	3.621	2.118	3.287	1.939	1.957	0.650	2.042	0.559	2.136	0.564
HOUSTON, TX PMSA	2.675	1.615	3.066	1.626	3.344	1.726	3.448	3.313	5.678	3.232	6.145	3.334
LOS ANGELES-LONP	2.059	1.992	2.589	2.494	2.486	2.367	3.605	7.928	2.653	5.476	2.587	5.306
MEMPHIS, TN-AR-MS MSA	7.395	3.990	5.453	3.112	4.791	2.831	6.255	4.345	3.154	2.505	3.475	2.697
MIAMI, FL PMSA	3.015	1.044	1.597	0.419	1.493	0.348	6.996	4.955	7.204	4.513	6.703	4.256
MINNEAPOLIS-ST PAUL, MN-WI MSA	13.941	5.846	16.992	6.044	15.196	5.703	9.967	7.421	8.186	6.326	8.731	6.384
ORLANDO, FL MSA	5.546	2.283	1.339	0.345	1.377	0.373	6.578	4.609	5.717	3.883	5.362	3.634
PHILADELPHIA, PA-NJ PMSA	9.223	2.952	7.029	2.383	7.844	2.464	3.653	3.892	8.565	2.681	7.793	2.575
PHOENIX-MESA, AZ MSA	6.997	7.129	5.618	5.812	5.400	5.610	10.679	8.923	6.408	6.102	6.130	5.890
RIVERSIDE-SAN BERNARDINO, CA PMSA	3.549	6.379	3.803	6.256	3.570	5.909	3.276	5.329	3.089	4.840	3.110	4.819
SACRAMENTO, CA PMSA			.	.			9.184	5.983	9.380	5.509	9.553	5.486
ST. LOUIS, MO-IL MSA	7.150	3.178	3.996	2.176	3.898	2.109	3.150	4.066	3.055	1.542	3.912	2.033
TAMPA-ST PETERSBURG-CLEARWATER	5.640	2.297	4.823	2.049	4.117	1.803	3.032	1.829	5.368	2.503	5.039	2.385
WASHINGTON, DC-MD-VA-WV, PMSA	5.942	2.421	5.253	2.165	5.687	2.257	8.966	8.156	6.038	6.084	6.122	6.099

	Lenders											
	1992						1994					
MSA Name	raw	z	adjusted 1	z1	adjusted 2	z2	raw	z	adjusted 1	z1	adjusted 2	z2
ATLANTA, GA MSA	2.663	3.298	2.064	2.347	1.977	2.189	2.871	2.629	2.999	2.676	3.018	2.677
BALTIMORE, MD PMSA	4.098	3.084	2.443	1.863	2.624	2.022	2.744	3.979	2.495	3.322	2.467	3.221
CHICAGO, IL PMSA	3.503	5.439	3.026	4.726	2.975	4.636	3.370	6.743	2.304	4.422	2.226	4.222
DALLAS, TX PMSA	5.723	5.969	5.070	5.421	5.156	5.435	3.575	3.976	2.576	2.800	2.647	2.869
DENVER, CO PMSA	6.032	2.407	5.276	2.160	5.481	2.218	2.729	3.418	2.515	2.976	2.581	3.038
DETROIT, MI PMSA	8.339	7.714	2.925	3.529	2.978	3.562	6.259	10.038	2.051	3.394	2.060	3.407
FORT LAUDERDALE, FL P			.	.			6.430	5.598	6.129	5.119	5.957	4.962
FORT WORTH-ARLINGTON, TX PMSA	3.131	1.499	1.570	0.580	1.694	0.668	9.122	6.416	2.978	2.693	2.823	2.525
HOUSTON, TX PMSA	2.405	2.263	1.879	1.540	1.870	1.522	3.300	3.114	2.676	2.434	2.611	2.349
LOS ANGELES-LONP	4.797	4.463	4.196	3.958	4.176	3.901	2.051	3.536	1.883	3.018	1.772	2.715
MEMPHIS, TN-AR-MS MSA	3.994	3.800	2.929	2.789	2.779	2.631			.	.		
MIAMI, FL PMSA	10.072	4.623	10.630	4.430	10.487	4.376	3.956	5.080	2.927	3.604	2.769	3.352
MINNEAPOLIS-ST PAUL, MN-WI MSA	5.986	2.434	4.294	1.916	4.287	1.915	3.695	3.387	4.267	3.520	4.343	3.465
ORLANDO, FL MSA	2.180	1.051	2.323	1.100	2.436	1.144	3.834	2.135	5.342	2.532	5.624	2.524
PHILADELPHIA, PA-NJ PMSA	3.329	2.346	3.181	2.216	3.429	2.346	3.114	3.413	3.764	3.841	3.704	3.752
PHOENIX-MESA, AZ MSA	2.170	2.948	1.852	2.296	1.739	2.041	3.559	3.220	2.928	2.567	2.724	2.351
RIVERSIDE-SAN BERNARDINO, CA PMSA	2.181	3.517	2.416	3.892	2.381	3.809	4.149	8.157	2.568	5.116	2.584	5.125
SACRAMENTO, CA PMSA	2.420	0.852	2.599	0.901	3.087	1.056			.	.		
ST. LOUIS, MO-IL MSA	3.053	2.461	3.202	2.494	3.516	2.673	2.594	3.568	1.974	2.445	1.865	2.212
TAMPA-ST PETERSBURG-CLEARWATER	6.808	4.130	6.646	3.850	6.133	3.629			.	.		
WASHINGTON, DC-MD-VA-WV, PMSA	3.390	2.742	3.025	2.445	2.901	2.338	2.429	4.259	2.155	3.616	2.227	3.752

Raw and Adjusted Odds Ratios for High-Default Tracts and High-Default Lenders from MSA-Specific Logits
Panel B: Uncured Delinquencies at Two Years

| | Tracts | | | | | | | | | | | |
| | 1992 | | | | | | 1994 | | | | | |
MSA Name	raw	z	adjusted 1	z1	adjusted 2	z2	raw	z	adjusted 1	z1	adjusted 2	z2
ATLANTA, GA MSA	5.418	6.705	3.18	4.287	3.166	4.224	3.031	5.587	1.987	3.155	2.112	3.41
BALTIMORE, MD PMSA	7.602	7.123	4.171	4.784	4.353	4.892	3.622	6.881	2.091	3.636	2.061	3.480
CHICAGO, IL PMSA	4.838	10.872	2.543	6.090	2.534	6.042	3.769	13.879	2.013	6.549	2.000	6.453
DALLAS, TX PMSA	4.140	6.514	2.642	4.110	2.410	3.694	5.470	8.634	2.952	4.877	2.907	4.754
DENVER, CO PMSA	14.881	8.901	10.158	7.260	10.195	7.180	4.945	6.882	3.785	5.299	3.941	5.369
DETROIT, MI PMSA	4.667	6.097	2.587	3.523	2.509	3.395	3.443	8.294	1.687	3.104	1.679	3.059
FORT LAUDERDALE, FL P	3.279	1.573	2.380	1.120	2.468	1.154	1.902	2.152	1.944	2.104	1.834	1.905
FORT WORTH-ARLINGTON, TX PMSA	4.068	2.796	2.517	1.726	2.302	1.553	2.187	2.828	1.889	1.705	2.056	1.848
HOUSTON, TX PMSA	0.898	-0.148	0.872	-0.177	0.831	-0.238	2.260	3.452	2.886	2.981	3.068	3.177
LOS ANGELES-LONP	1.652	2.160	1.560	1.835	1.532	1.751	2.337	8.502	1.999	5.828	1.968	5.656
MEMPHIS, TN-AR-MS MSA	3.512	4.855	1.735	2.008	1.815	2.161	3.959	8.689	2.117	4.240	2.150	4.279
MIAMI, FL PMSA	3.376	3.118	2.479	2.246	2.448	2.209	2.962	7.394	2.895	5.558	2.934	5.564
MINNEAPOLIS-ST PAUL, MN-WI MSA	11.864	9.460	7.188	7.034	6.461	6.525	4.393	6.329	3.775	5.370	4.179	5.722
ORLANDO, FL MSA	1.341	0.287	1.645	0.479	1.743	0.531	4.270	6.879	2.297	3.312	2.179	3.058
PHILADELPHIA, PA-NJ PMSA							2.062	5.669	1.456	1.751	1.428	1.637
PHOENIX-MESA, AZ MSA	4.677	6.379	3.635	4.975	3.456	4.738	3.850	7.448	3.213	6.086	3.157	5.940
RIVERSIDE-SAN BERNARDINO, CA PMSA	2.613	7.831	2.488	6.877	2.443	6.688	2.186	7.063	1.996	5.861	1.942	5.575
SACRAMENTO, CA PMSA							4.065	4.870	2.702	2.946	2.468	2.657
ST. LOUIS, MO-IL MSA	6.695	4.313	3.219	2.488	3.008	2.317	2.412	4.842	2.400	2.825	2.453	2.886
TAMPA-ST PETERSBURG-CLEARWATER							1.792	2.649	2.234	2.737	2.424	2.978
WASHINGTON, DC-MD-VA-WV, PMSA	5.730	6.480	3.390	4.322	3.568	4.459	2.502	9.139	2.402	6.334	2.459	6.446

| | Lenders | | | | | | | | | | | |
| | 1992 | | | | | | 1994 | | | | | |
MSA Name	raw	z	adjusted 1	z1	adjusted 2	z2	raw	z	adjusted 1	z1	adjusted 2	z2
ATLANTA, GA MSA	2.484	5.208	1.574	2.495	1.468	2.099	2.242	6.736	1.664	4.069	1.617	3.806
BALTIMORE, MD PMSA	3.047	3.763	1.970	2.207	1.850	1.993	2.068	6.077	1.514	3.308	1.395	2.611
CHICAGO, IL PMSA	1.982	5.654	1.430	2.887	1.377	2.569	2.056	9.932	1.552	5.818	1.498	5.320
DALLAS, TX PMSA	3.611	7.505	2.882	5.908	2.755	5.615	2.520	5.283	1.599	2.528	1.581	2.447
DENVER, CO PMSA	5.847	2.858	6.024	2.790	6.526	2.803	2.174	4.267	1.967	3.618	1.934	3.494
DETROIT, MI PMSA	3.880	6.155	1.306	1.120	1.295	1.084	5.011	12.041	2.097	4.981	2.032	4.756
FORT LAUDERDALE, FL P	2.397	2.071	1.889	1.456	1.865	1.417	2.366	3.894	2.309	3.622	2.301	3.569
FORT WORTH-ARLINGTON, TX PMSA	4.131	4.612	2.237	2.429	2.285	2.469	5.818	7.259	2.663	3.611	2.470	3.286
HOUSTON, TX PMSA	2.392	3.331	1.880	2.293	1.830	2.187	1.576	1.956	1.231	0.849	1.197	0.728
LOS ANGELES-LONP	3.028	6.668	3.148	6.740	3.185	6.749	2.167	6.294	2.031	5.555	1.905	5.000
MEMPHIS, TN-AR-MS MSA	2.502	3.826	1.743	2.256	1.657	2.043	1.518	1.867	1.549	1.877	1.569	1.912
MIAMI, FL PMSA	5.161	6.488	3.552	4.805	3.292	4.488	2.882	8.141	2.044	5.106	1.948	4.713
MINNEAPOLIS-ST PAUL, MN-WI MSA	3.521	4.766	3.390	4.542	3.385	4.502	1.869	3.425	1.838	3.259	1.905	3.415
ORLANDO, FL MSA	2.769	2.485	2.705	2.341	2.821	2.398	1.808	3.675	1.386	1.858	1.425	2.004
PHILADELPHIA, PA-NJ PMSA	5.107	4.034	3.555	2.999	3.611	2.999	1.670	4.374	1.421	2.897	1.362	2.531
PHOENIX-MESA, AZ MSA	1.728	2.883	1.505	2.099	1.431	1.832	1.703	3.365	1.413	2.125	1.442	2.240
RIVERSIDE-SAN BERNARDINO, CA PMSA	1.948	5.060	1.848	4.599	1.766	4.233	1.523	4.817	1.358	3.394	1.395	3.656
SACRAMENTO, CA PMSA	3.680	1.744	3.729	1.669	4.500	1.823	3.925	3.556	4.423	3.704	4.148	3.456
ST. LOUIS, MO-IL MSA	2.929	2.048	2.139	1.402	2.056	1.324	2.654	4.138	1.683	2.053	1.732	2.141
TAMPA-ST PETERSBURG-CLEARWATER	3.364	4.688	2.868	3.952	2.704	3.703	2.332	5.135	1.978	3.937	1.942	3.775
WASHINGTON, DC-MD-VA-WV, PMSA	2.249	4.740	1.737	3.139	1.674	2.908	2.260	9.072	1.722	5.827	1.710	5.709

Raw and Adjusted Odds Ratios for High-Default Tracts and High-Default Lenders from MSA-Specific Logits
Panel C: Uncured Delinquencies at 12/95

MSA Name	Tracts											
	1992						1994					
	raw	z	adjusted 1	z1	adjusted 2	z2	raw	z	adjusted 1	z1	adjusted 2	z2
ATLANTA, GA MSA	2.972	7.043	1.800	3.602	1.770	3.460	4.037	7.146	2.233	3.842	2.370	4.090
BALTIMORE, MD PMSA	3.108	6.155	1.905	3.229	1.850	3.060	5.112	7.495	3.648	5.605	3.470	5.300
CHICAGO, IL PMSA	3.793	13.580	2.125	7.135	2.110	7.030	4.598	11.649	2.389	6.184	2.330	5.990
DALLAS, TX PMSA	3.903	8.744	2.416	5.129	2.320	4.850	6.722	7.936	4.693	6.159	4.640	6.040
DENVER, CO PMSA	7.831	7.054	5.422	5.373	5.460	5.330	6.296	6.982	4.878	5.702	4.820	5.600
DETROIT, MI PMSA	4.604	8.678	2.200	4.053	2.100	3.800	3.884	7.081	2.038	3.583	2.100	3.720
FORT LAUDERDALE, FL P	1.310	0.261	0.623	-0.446	0.650	-0.400	2.516	1.256	1.293	0.332	1.300	0.340
FORT WORTH-ARLINGTON, TX PMSA	3.069	3.312	1.503	1.102	1.470	1.020	3.166	2.253	1.247	0.376	1.130	0.210
HOUSTON, TX PMSA	2.563	4.289	2.084	2.978	2.050	2.880	2.840	3.153	3.032	2.718	3.400	2.940
LOS ANGELES-LONP	1.932	4.950	2.196	4.737	2.190	4.670	3.128	8.205	2.589	5.970	2.590	5.940
MEMPHIS, TN-AR-MS MSA	3.815	6.992	1.840	2.782	1.980	3.050	4.692	7.522	2.627	4.347	2.670	4.370
MIAMI, FL PMSA	3.735	3.155	2.335	1.911	2.210	1.800	3.546	4.383	1.657	1.537	1.680	1.580
MINNEAPOLIS-ST PAUL, MN-WI MSA	6.232	9.396	3.216	5.503	3.120	5.220	7.561	6.622	4.502	4.647	4.430	4.580
ORLANDO, FL MSA	2.568	3.774	1.865	2.304	2.000	2.520	4.714	5.384	3.337	3.864	3.070	3.530
PHILADELPHIA, PA-NJ PMSA	3.067	4.623	2.282	3.283	2.550	3.660	1.846	2.746	1.730	1.356	1.690	1.250
PHOENIX-MESA, AZ MSA	4.893	10.604	4.071	8.373	3.940	8.100	5.007	5.360	2.922	3.356	2.720	3.120
RIVERSIDE-SAN BERNARDINO, CA PMSA	1.968	7.893	1.945	7.327	1.890	6.940	2.556	6.635	2.318	5.726	2.270	5.550
SACRAMENTO, CA PMSA	1.628	1.184	3.786	1.008	5.230	1.190	6.936	4.313	5.840	3.703	5.470	3.510
ST. LOUIS, MO-IL MSA	4.618	7.092	1.271	0.933	1.280	0.940	3.287	5.401	3.967	4.556	4.020	4.630
TAMPA-ST PETERSBURG-CLEARWATER	2.669	2.678	2.122	1.895	2.340	2.120	2.338	1.613	4.221	2.546	3.960	2.400
WASHINGTON, DC-MD-VA-WV, PMSA	3.606	7.606	2.596	5.371	2.650	5.400	2.424	6.160	2.181	4.607	2.240	4.650

MSA Name	Lenders											
	1992						1994					
	raw	z	adjusted 1	z1	adjusted 2	z2	raw	z	adjusted 1	z1	adjusted 2	z2
ATLANTA, GA MSA	2.344	6.896	1.534	3.287	1.440	2.760	3.458	8.016	2.465	5.659	2.380	5.410
BALTIMORE, MD PMSA	2.122	5.227	1.733	3.695	1.690	3.510	2.517	5.536	1.925	3.816	1.800	3.380
CHICAGO, IL PMSA	2.179	7.873	1.382	3.115	1.340	2.790	2.178	7.320	1.651	4.588	1.570	4.130
DALLAS, TX PMSA	2.224	5.936	1.693	3.676	1.670	3.530	3.213	4.822	2.077	2.915	1.990	2.710
DENVER, CO PMSA	3.177	4.537	2.727	3.867	2.710	3.810	4.078	3.454	4.436	3.587	4.220	3.450
DETROIT, MI PMSA	2.726	7.179	1.125	0.739	1.090	0.570	5.939	11.098	1.961	3.887	1.930	3.810
FORT LAUDERDALE, FL P	2.278	2.720	1.686	1.619	1.620	1.470	3.701	4.352	3.663	4.136	3.710	4.150
FORT WORTH-ARLINGTON, TX PMSA	2.386	3.452	1.459	1.382	1.430	1.320	7.680	7.139	3.435	3.919	3.340	3.800
HOUSTON, TX PMSA	2.272	3.884	2.135	3.372	2.180	3.450	2.025	2.047	1.598	1.324	1.540	1.220
LOS ANGELES-LONP	1.757	5.088	1.713	4.744	1.720	4.710	2.070	4.309	1.930	3.833	1.850	3.550
MEMPHIS, TN-AR-MS MSA	2.459	5.159	1.615	2.602	1.530	2.290	1.522	2.047	1.239	1.024	1.250	1.070
MIAMI, FL PMSA	3.792	6.377	2.375	3.837	2.170	3.420	2.828	5.302	1.867	2.996	1.850	2.940
MINNEAPOLIS-ST PAUL, MN-WI MSA	2.008	3.578	1.860	3.095	1.730	2.690	1.977	2.898	1.978	2.827	2.020	2.900
ORLANDO, FL MSA	1.752	2.955	1.528	2.133	1.490	1.980	3.116	4.186	2.475	3.174	2.410	3.030
PHILADELPHIA, PA-NJ PMSA	2.171	6.201	1.917	4.957	1.860	4.650	1.929	3.856	1.764	3.295	1.720	3.120
PHOENIX-MESA, AZ MSA	1.609	3.709	1.480	2.970	1.410	2.560	1.961	3.339	1.581	2.222	1.590	2.250
RIVERSIDE-SAN BERNARDINO, CA PMSA	1.727	6.326	1.609	5.357	1.530	4.740	2.204	3.737	1.755	2.618	1.830	2.790
SACRAMENTO, CA PMSA	3.042	1.994	2.935	1.812	3.790	2.120	4.612	2.068	4.083	1.877	4.570	1.990
ST. LOUIS, MO-IL MSA	1.520	2.312	1.247	1.176	1.190	0.930	2.698	3.387	1.586	1.466	1.610	1.510
TAMPA-ST PETERSBURG-CLEARWATER	2.873	5.537	2.445	4.420	2.340	4.170	3.720	5.136	3.064	4.181	3.060	4.140
WASHINGTON, DC-MD-VA-WV, PMSA	2.039	6.215	1.664	4.249	1.640	4.050	2.743	8.071	2.105	5.834	2.100	5.780