

APPENDIX A

LIST OF TABLES

- Table 1: Miscellaneous Statistics on the Selected MSAs
- Table 2: Default Rates by Race/Ethnicity Within Tracts Classified by Racial Composition of Population
- Table 3: Default Rates for Loans Classified by Deciles of Borrower Income Relative to MSA Income and Deciles of Tract Income Relative to MSA Income
- Table 4: Default Rates by Race/Ethnicity Within Tracts Classified by Prepayment Rates and Percentage Distribution of Loans Across Tracts
- Table 5: Names and Definitions of Explanatory Variables in Hazard Models
- Table 6: Mean Values of Selected Variables by End-of-Month Loan Status and Race/Ethnic Group
- Table 7:
- Panel A Parameter Estimates for Monthly Hazard Model of Claim Default in 22 MSA's - Basic Specification
 - Panel B Parameter Estimates for Monthly Hazard Model of Other Prepayment in MSA's - Basic Specification
 - Panel C Parameter Estimates for Monthly Hazard Model of FHA Refinance in 22 MSA's - Basic Specification
- Table 8:
- Panel A Parameter Estimates for Monthly Hazard Model of Claim Default in 22 MSA's - Basic Specifications Plus Tract Characteristics
 - Panel B Parameter Estimated for Monthly Hazard Model of Other Prepayment in 22 MSA's - Basic Specifications Plus Tract Characteristics
 - Panel C Parameter Estimates for Monthly Hazard Model of FHA Refinance in 22 MSA's - Basic Specifications Plus Tract Characteristics
- Table 9:
- Panel A Parameter Estimates for Monthly Hazard Model of Claim Default in 22 MSA's - Basic Specification Plus More Detailed Tract Characteristics
 - Panel B Parameter Estimates for Monthly Hazard Model of Other Prepayment in 22 MSA's - Basic Specification Plus More Detailed Tract Characteristics
 - Panel C Parameter Estimates for Monthly Hazard Model of FHA Refinance in 22 MSA's - Basic Specification Plus More Detailed Tract Characteristics

Table 10:

- Panel A Parameter Estimates for Monthly Hazard Model of Claim Default 22 MSA's - Basic Specifications Plus Tract Characteristics and Race/Ethnicity of Borrower
- Panel B Parameter Estimates for Monthly Hazard Model of Other Prepayment in 22 MSA's - Basic Specifications Plus Tract Characteristics and Race/Ethnicity of Borrower
- Panel C Parameter Estimates for Monthly Hazard Model of FHA Refinance in 22 MSA's - Basic Specifications Plus Tract Characteristics and Race/Ethnicity of Borrower

Table 11:

- Panel A Parameter Estimates for Monthly Hazard Model of Claim Default in 22 MSA's - Basic Specifications Plus Tract Characteristics, Race/Ethnicity of Borrower and FICO Score
- Panel B Parameter Estimates for Monthly Hazard Model of Other Prepayment in 22 MSA's - Basic Specifications Plus Tract Characteristics, Race/Ethnicity of Borrower and FICO Score
- Panel C Parameter Estimates Monthly Hazard Model of FHA Refinance in 22 MSA's - Basic Specifications Plus Tract Characteristics, Race/Ethnicity of Borrower and FICO Score

Table 12:

- Panel A Parameter Estimates for Monthly Hazard Model of Claim Default in 22 MSA's - Tract Characteristics Plus Duration, Year, and MSA Indicators
- Panel B Parameter Estimates for Monthly Hazard Model of Other Prepayment in 22 MSA's - Tract Characteristics Plus Duration, Year, and MSA Indicators
- Panel C Parameter Estimates for Monthly Hazard Model of FHA Refinance in 22 MSA's - Tract Characteristics Plus Duration, Year, and MSA Indicators

Table 13: Names and Definitions of Explanatory Variable in Regression Models

Table 14:

- Panel A Least Squares Regression Estimates - Log of House Prices in Chicago MSA - Four Lags of Default and Prepayment Rates
- Panel B Least Squares Regression Estimates - Log of House Prices in Chicago MSA - Six Lags of Default and Prepayment Rates
- Panel C Least Squares Regression Estimates - Log of House Prices in Chicago MSA - Eight Lags of Default and Prepayment Rates

Table 15: Regression with Fixed Effects - Log of House Prices in Chicago MSA

Table 16:

- Panel A Least Squares Regression Estimates - Log of House Prices in Chicago MSA - Six Lags and Two Leads of Default and Prepayment Rates
- Panel B Regression with Fixed Effects - Log of House Prices in Chicago MSA - Six Lags and Two Leads of Default and Prepayment Rates

Table 17: Parameter Estimates for Claim Default Hazard in Selected Portions of Chicago MSA - Basic Specification Plus Tract Characteristics, FICO Score, and Individual Race/Ethnicity

Table 18:

- Panel A Parameter Estimates for Claim Default Hazard in Selected Portions of Chicago MSA - Includes Log of Actual Price Ratio
- Panel B Parameter Estimates for Claim Default Hazard in Selected Portions of Chicago MSA - Includes Log of Predicted Price Ratio Based on Table 14, Panel B
- Panel C Parameter Estimates for Claim Default Hazard in Selected Portions of Chicago MSA - Includes Log of Predicted Price Ratio Based on Table 15

Table 19: Parameter Estimates for Claim Default Hazard in Selected Portions of Chicago MSA - Includes Log of Predicted Price Ratio Based on Table 15 and Leads of Default and Prepayment Rates

TABLE 1

Miscellaneous Statistics on the Selected MSAs

MSA	Number of FHA Defaults ¹	FHA Loan Counts ¹			Population Percentages ²			% of National FHA Loans ³	FHA Loans as % of Total Loans ³
		Black	Hispanic	Total	Black	Hispanic	Total		
ATLANTA, GA MSA	750	9226	744	32938	25.09	1.97	2.75	23.1	
BALTIMORE, MD PMSA	601	3468	184	21694	25.69	1.27	2.06	30.11	
CHICAGO, IL PMSA	1293	9490	11619	48137	19.01	11.36	4.16	20.03	
DALLAS, TX PMSA	611	2491	2921	22711	15.47	13.98	2.08	24.83	
DENVER, CO PMSA	-	1081	2955	28989	5.69	13	2.88	30.86	
DETROIT, MI PMSA	454	3883	164	21240	21.99	1.97	1.93	15.62	
FORT LAUDERDALE, FL P	368	2451	1749	10977	14.87	8.64	0.97	18.13	
FORT WORTH-ARLINGTON, TX PMSA	417	977	1240	12315	10.39	11.12	1.14	29.3	
HOUSTON, TX PMSA	377	1532	2242	11687	18.04	21.33	1.04	13.03	
LOS ANGELES-LONP	1834	2025	11277	19734	10.55	37.81	1.99	13.95	
MEMPHIS, TN-AR-MS MSA	291	4407	53	13913	40.59	0.81	1.23	41.96	
MIAMI, FL PMSA	489	3226	7777	13361	19.08	49.22	1.09	21.4	
MINNEAPOLIS-ST PAUL, MN-WI MSA	371	451	235	35670	3.48	1.49	3.54	32.62	
NORFOLK-VIRGINIA BEACH-NEWPORT	389	2902	181	12823	28.05	2.26	1.11	25.55	
ORLANDO, FL MSA	425	1147	1484	10919	11.69	8.22	1.03	24.85	
PHILADELPHIA, PA-NJ PMSA	583	3726	801	21478	18.75	3.56	2.13	18.69	
PHOENIX-MESA, AZ MSA	685	556	4655	27802	3.32	16.96	2.85	28.7	
RIVERSIDE-SAN BERNARDINO, CA PMSA	2968	1458	12663	30351	6.53	26.5	2.85	41.86	
SACRAMENTO, CA PMSA	403	620	1163	9050	7.13	10.76	1.06	27.58	
ST. LOUIS, MO-IL MSA	374	2562	165	15691	16.96	1.06	1.62	21.41	
TAMPA-ST PETERSBURG-CLEARWATER	296	713	731	9727	8.77	6.73	0.96	14.65	
WASHINGTON, DC-MD-VA-WV, PMSA	913	10255	2305	35590	25.03	5.4	3.38	22.98	

¹ Source: FHA data from 1992 and 1994 applications and originations

² Source: 1990 Census of Population

³ Source: 1993 and 1994 HMDA data

TABLE 2

Default Rates by Race/Ethnicity Within Tracts Classified by Racial Composition of Population¹

Tract % Black	Default Rate in Tract				Percentage of Loans in Tract Category			
	All	Black	Hispanic	Other	All	Black	Hispanic	Other
≤ 10	2.51	3.79	4.31	2.08	69.03	19.36	71.05	79.81
>10, ≤20	4.11	4.54	6.93	3.19	12.55	14.27	14.94	11.63
>20, ≤40	4.00	4.62	5.47	3.03	7.84	18.11	8.46	5.38
>40, ≤60	4.97	4.90	8.05	3.60	3.53	13.05	3.17	1.46
>60, ≤80	5.99	6.12	8.91	4.35	2.67	11.60	1.66	0.87
> 80	5.91	6.10	3.92	5.07	4.38	23.61	0.72	0.85

Tract % Hispanic	Default Rate in Tract				Percentage of Loans in Tract Category			
	All	Black	Hispanic	Other	All	Black	Hispanic	Other
≤ 10	2.34	4.67	2.64	1.80	70.11	80.06	17.77	79.56
>10, ≤20	4.30	5.56	4.76	3.87	13.38	11.14	20.14	12.37
>20, ≤40	5.90	6.38	6.38	5.29	9.93	6.74	28.95	6.40
>40, ≤60	5.87	10.12	5.81	4.72	3.25	1.54	14.59	1.11
>60, ≤80	5.41	13.22	5.24	4.61	2.22	0.45	11.79	0.48
> 80	3.71	10.53	3.66	3.30	1.10	0.07	6.76	0.08

Tract % Other	Default Rate in Tract				Percentage of Loans in Tract Category			
	All	Black	Hispanic	Other	All	Black	Hispanic	Other
≤ 10	6.20	6.40	6.09	5.51	7.54	27.86	15.34	1.21
>10, ≤20	5.13	5.85	4.84	4.43	5.16	12.42	13.39	1.68
>20, ≤40	5.06	4.87	5.85	4.39	8.35	15.96	19.71	4.10
>40, ≤60	4.45	4.84	5.52	3.90	18.55	21.21	28.47	15.73
>60, ≤80	2.72	3.42	3.33	2.55	21.00	13.94	14.73	23.98
> 80	1.53	2.54	2.29	1.47	39.40	8.61	8.36	53.30

¹ Source: FHA data on 1992 and 1994 applications and originations in 22 MSAs. Defaults are restricted to those resulting in claims. See text for additional details.

TABLE 3

Default Rates for Loans Classified by Deciles of Borrower Income Relative to MSA Income and Deciles of Tract Income Relative to MSA Income ¹

Difference Between Borrower Income and MSA Income	Difference Between 1990 Tract Income and MSA Income									
	≤-12600	>-12600 ≤-8400	>-8400 ≤-5500	>-5500 ≤-2900	>-2900 ≤-600	>-600 ≤2000	>2000 ≤4700	>4700 ≤8100	>8100 ≤12800	>12800
≤ -23700	5.81	4.84	4.05	2.92	3.35	2.81	2.45	1.81	1.36	1.56
>-23700 ≤-18600	5.76	4.16	3.17	3.32	2.86	2.83	2.63	1.83	2.23	1.25
>-18600 ≤-14600	4.64	3.41	3.60	2.84	3.00	2.66	3.47	2.91	2.27	1.19
>14600 ≤-10900	5.28	4.41	3.85	3.47	3.66	2.93	3.31	2.43	2.36	1.59
>-10900 ≤-7200	5.06	4.79	3.29	3.48	3.48	2.91	3.02	2.10	1.97	1.44
>-7200 ≤-3300	4.96	4.05	3.45	3.34	2.99	2.71	3.01	2.35	2.31	2.18
>-3300 ≤1300	6.34	4.09	3.78	3.11	3.09	3.02	3.38	3.23	2.65	1.75
>1300 ≤7000	5.80	4.81	3.59	4.16	2.74	2.93	3.59	2.66	2.87	2.18
>7000 ≤16000	6.26	4.23	4.09	3.29	3.17	3.31	3.03	2.41	2.63	1.84
>16000	4.48	4.09	2.54	3.44	2.46	2.66	2.81	2.82	2.25	1.48

¹ Source: FHA data on 1992 and 1994 applications and originations in 22 MSAs. Defaults are restricted to those resulting in claims. See text for additional details.

TABLE 4

Default Rates by Race/Ethnicity Within Tracts Classified by Prepayment Rates, and Percentage Distribution of Loans Across Tracts ¹

Prepayment Rate	Default Rates				Percentage of Loans in Tract Prepayment Rate Category			
	All	Black	Hispanic	Other	All	Black	Hispanic	Other
0	5.09	6.94	5.95	3.72	4.92	9.66	6.80	3.56
>0, ≤5	4.72	5.54	5.87	3.82	5.80	12.43	6.91	4.20
>5, ≤8	4.33	5.08	6.17	3.48	9.26	14.61	11.54	7.69
>8, ≤10	4.10	5.46	5.74	3.19	8.59	11.21	11.10	7.53
>10, ≤12	4.27	4.99	5.86	3.56	9.64	11.04	13.77	8.51
>12, ≤14	3.65	4.53	6.46	2.83	9.97	9.04	11.38	9.87
>14, ≤17	3.44	4.17	5.25	2.89	12.34	12.13	13.26	12.20
>17, ≤20	2.77	4.59	4.64	2.20	10.70	9.00	8.06	11.60
>20, ≤23	2.13	5.39	3.25	1.59	7.69	4.32	7.17	8.50
>23, ≤30	1.73	3.89	2.86	1.49	10.50	4.08	5.82	12.78
>30	1.11	2.18	1.88	1.03	10.58	2.47	4.19	13.57

¹ Source: FHA data on 1992 and 1994 applications and originations in 22 MSAs. Defaults are restricted to those resulting in claims. See text for additional details.

Table 5

Names and Definitions of Explanatory Variables in Hazard Models

VARIABLE DESCRIPTION	CATEGORY (Note: Indicator variables are denoted by (I).)	NAME
Neighborhood Controls:		
Pct of tract population that is black (1990)		trtblk
Pct of tract population that is Hispanic (1990)		trthsp
Log of median tract income (1990)		lntrinc
Proportion of tract pop that has not moved in previous 5 yrs (1990)		propmove
Proportion of owner- and renter-occupied tract units that are in 1-unit structures (1990)		prop1unt
Proportion of tract owner-occupied units that are not mortgaged (1990)		propmort
MSA unemployment rate in month		unempmt
Demographic and Credit Characteristics:		
Age of borrower at loan origination		borage
Borrower is black		black
Borrower is Hispanic		hisp
Credit score of borrower/coborrower		fico
No credit score available	(I)	NOfico
Measures of Financial Resources and Costs:		
Assets after closing/mortgage payment (spline)	Any amount	RSVpmts
	Amount by which exceeds 4	RSVpmt4
Log of monthly income		loginc
Log of front-end ratio		logfront
Characteristics of the Property, Mortgage, and Interest Rate Environment:		
Log of contemporaneous principal balance		lnbal
Log of contemporaneous home value		lnhval
Structure is condominium	(I)	condo

Log of contemporaneous number of months remaining on mortgage		lnhorizn
Log of (average market mortgage rate at origination/ average contemporaneous mortgage rate in market)		lnintrat
Interaction of ARM and lnintrat		lnintarm
Contemporaneous slope of yield curve (30-year Treasury rate minus 1-year Treasury rate)		rtdiff
Interaction of ARM and rtdiff		armrtd
Log of (contemporaneous mortgage payment / mortgage payment at origination) (ARMs only)		logpirto
House price at origination relative to area median price	Price/PriceWaterhouse median price	HPrelPW
	Price/ (loan limit/0.95)	HPrelLL
	Loan limit at cont. max (I)	LLmax
	Loan limit at cont. min (I)	LLmin
Miscellaneous:		
Current loan duration (months)	Any duration	t
	Number of months over 6	t6
	Square of duration	tt
Indicator for 1994 data	(I)	year94
Indicators for MSA number xxxx	(I)	_xxxx

TABLE 6

Mean Values of Selected Variables by End-of-Month Loan Status and Race/Ethnic Group

Variable Name	Default Status				Prepaid Status				Active Status			
	Overall	Black	Hispanic	Other	Overall	Black	Hispanic	Other	Overall	Black	Hispanic	Other
fico	563.3237	517.546	531.3871	593.048	644.8634	591.375	604.6959	654.2828	612.8194	563.7572	571.7496	629.984
NOfico	0.122166	0.1676673	0.1808532	0.0821802	0.0671478	0.0962609	0.1051689	0.0605028	0.0983175	0.1326983	0.1497544	0.0824457
trtblk	0.1994733	0.5154667	0.1241437	0.1089135	0.0950278	0.4048896	0.0929111	0.0625218	0.1305864	0.4464355	0.0971643	0.0706079
trthsp	0.153834	0.0846606	0.3461589	0.1055191	0.0841837	0.0646171	0.3147629	0.0645854	0.0934299	0.0560783	0.324967	0.061915
Intrinc	0.48111	10.4142	10.39826	10.53857	10.62879	10.59715	10.48131	10.64599	10.57815	10.49332	10.44391	10.61855
black	0.2145321	1.000	0.000	0.000	0.0879923	1.000	0.000	0.000	0.1508884	1.000	0.000	0.000
hisp	0.2193722	0.000	1.000	0.000	0.0783268	0.000	1.000	0.000	0.1231529	0.000	1.000	0.000
propmort	0.2425927	0.2484056	0.2360014	0.2429441	0.2288371	0.2252768	0.2460777	0.2275931	0.2391734	0.251617	0.254627	0.2339654
propmove	0.4792932	0.5331035	0.4488608	0.4706939	0.4977744	0.5375671	0.4721541	0.4959815	0.499065	0.5380554	0.4803959	0.494128
prop1unt	0.7507315	0.7018938	0.7374865	0.7743722	0.7662992	0.7594423	0.6614377	0.776875	0.7609197	0.7359396	0.6870627	0.778641
unemprt	6.313282	5.678401	7.592085	6.058322	5.224471	5.396006	6.587691	5.078288	5.431748	5.498113	6.683049	5.205681
borage	34.31741	36.54051	33.22879	33.89879	32.79724	35.57628	34.1538	32.37647	34.19936	36.94962	34.81703	33.52295
loginc	8.019488	7.91715	8.121863	8.0186	8.162541	8.17405	8.183968	8.159314	8.05417	7.987623	8.062778	8.066541
RSVpmts	3.367813	2.560361	2.449902	4.029519	4.839978	3.609328	6.461393	4.817532	5.538293	4.427113	3.95646	6.037594
RSVpmt4	2.28349	1.626159	1.510269	2.832234	3.253919	2.249385	4.831716	3.211706	3.938221	3.041021	2.565426	4.357584
logfront	3.163884	3.157039	3.210901	3.148258	3.116001	3.096172	3.179609	3.112118	3.095494	3.088985	3.176866	3.083042
lnbal	11.2578	11.12996	11.42023	11.24329	11.32341	11.30494	11.4046	11.31773	11.22342	11.12569	11.31273	11.22858
lnhval	6.733842	6.623682	6.858699	6.727205	6.871773	6.841648	6.928683	6.869606	6.7367	6.633335	6.800641	6.747336
condo	0.0424561	0.0376864	0.0368583	0.0464329	0.0328597	0.030086	0.0393438	0.0325432	0.0319074	0.0229608	0.0180841	0.036112
HPrelPW	0.6052922	0.4808557	0.6041398	0.6528963	0.8444154	0.6608871	0.7597914	0.8717368	0.7059866	0.5169799	0.6761928	0.7503254
HPrelLL	0.0712591	0.0712772	0.0320601	0.0864425	0.0691031	0.0656334	0.0419774	0.0720178	0.092408	0.0969903	0.0566595	0.09752
LLmin	0.0003494	0.000	0.000	0.0006172	0.0001888	0.000	0.000	0.0002265	0.0001263	0.000	0.000	0.000174
LLmax	0.0668594	0.1592698	0.0261868	0.0476002	0.0617599	0.1772385	0.0203447	0.0534626	0.0669693	0.1383501	0.0379168	0.0570615
Inhorizn	5.818491	5.823867	5.815722	5.817527	5.808204	5.819868	5.802382	5.80752	5.816068	5.816642	5.820358	5.815221
lnintrat	0.0577242	0.0537858	0.0570123	0.0594926	0.1270162	0.138457	0.1184452	0.126614	0.042423	0.0438787	0.0398357	0.0425593
lnintarm	0.0190127	0.0158861	0.0233713	0.0185086	0.0310709	0.0304695	0.035705	0.030699	0.0123306	0.0088783	0.0128778	0.0129554
rtidiff	1.58764	1.632229	1.474498	1.614587	1.722017	1.600892	1.619014	1.744479	1.818112	1.792077	1.749314	1.835194
armrtd	0.4521101	0.3796361	0.5221443	0.4524359	0.3661999	0.2657277	0.3516836	0.3781683	0.488818	0.3410472	0.5220335	0.513897
logpirt0	0.0098488	0.0066086	0.0148259	0.009148	0.0100432	0.0051043	0.0066069	0.0108873	0.0060197	0.0043356	0.0062306	0.0063339
t	21.76047	20.1924	23.26604	21.77129	21.21137	20.0776	21.67519	21.28746	18.17757	17.87788	17.40954	18.37015
tt	600.6776	529.8595	683.753	595.322	567.6386	502.9862	593.1457	572.066	474.6648	462.7469	441.524	482.7639
t6	15.85329	14.32212	17.36842	15.84641	15.240	14.0776	15.67519	15.3218	12.65859	12.37202	11.91755	12.84386
year94	0.3388553	0.3734689	0.3596202	0.3176911	0.3456452	0.457483	0.3605624	0.3324396	0.3719942	0.3959791	0.4419223	0.3551463

TABLE 7

Panel A

Parameter Estimates for Monthly Hazard Model of Claim Default in 22 MSA's -
Basic Specification

Residual df = 500119
 Pearson X2 = 829557.5
 Dispersion = 1.65872

No. of obs = 500164
 Deviance = 7607.832
 Dispersion = 0.015212

Bernoulli distribution, cloglog link

	Coef.	Std. Err.	Z-Statistic	P> z	[95% Conf. Interval]	
unemprt	0.0591019	0.084556	0.699	0.485	-0.1066248	0.2248286
borage	0.0057668	0.0048542	1.188	0.235	-0.0037473	0.0152809
loginc	-0.3472763	0.4399647	-0.789	0.430	-1.209591	0.5150386
RSVpmts	-0.2010156	0.0318036	-6.321	0.000	-0.2633494	-0.1386817
RSVpmt4	0.2008899	0.0332461	6.043	0.000	0.1357287	0.2660512
logfront	0.1050169	0.4470464	0.235	0.814	-0.7711779	0.9812118
lnbal	2.991059	0.7690857	3.889	0.000	1.483679	4.498439
lnhval	-2.987206	0.6413611	-4.658	0.000	-4.244251	-1.730162
condo	-0.0894179	0.2410381	-0.371	0.711	-0.561844	0.3830081
HPreIPW	-0.8370439	0.4879447	-1.715	0.086	-1.793398	0.1193101
HPreILL	-1.648433	0.9688609	-1.701	0.089	-3.547366	0.250499
LLmin	1.711547	3.133114	0.546	0.585	-4.429244	7.852338
LLmax	1.145631	4.830778	0.237	0.813	-8.322519	10.61378
Inhorizn	1.226456	0.7753039	1.582	0.114	-0.2931115	2.746024
lnintrat	0.998226	0.5644252	1.769	0.077	-0.1080271	2.104479
lnintarm	0.647745	0.9226518	0.702	0.483	-1.160619	2.456109
rtdiff	-0.1774459	0.1202293	-1.476	0.140	-0.413091	0.0581991
armrtd	-0.0522602	0.0724147	-0.722	0.470	-0.1941904	0.0896699
logpirto	1.038163	1.379803	0.752	0.452	-1.6662	3.742526
t	0.3989617	0.0937257	4.257	0.000	0.2152627	0.5826607
tt	-0.0008864	0.000405	-2.189	0.029	-0.0016802	-0.0000927
t6	-0.3370648	0.1018896	-3.308	0.001	-0.5367648	-0.1373648
year94	-0.0334582	0.215392	-0.155	0.877	-0.4556188	0.3887025
_0520	0.0024459	0.3453959	0.007	0.994	-0.6745175	0.6794094
_0720	-0.0781617	0.2511145	-0.311	0.756	-0.5703371	0.4140137
_1920	-0.0251676	0.4014873	-0.063	0.950	-0.8120683	0.7617331
_2080	-0.6891227	0.4478024	-1.539	0.124	-1.566799	0.188554
_2160	-0.4470473	0.3212612	-1.392	0.164	-1.076708	0.182613
_2680	0.1988248	0.612647	0.325	0.746	-1.001941	1.399591
_2800	-0.0391844	0.6019227	-0.065	0.948	-1.218931	1.140562
_3360	0.0871688	0.4424015	0.197	0.844	-0.7799222	0.9542599
_4480	0.6057817	0.375706	1.612	0.107	-0.1305884	1.342152
_4920	-0.309283	0.5582927	-0.554	0.580	-1.403517	0.7849506
_5000	-0.2059751	0.4311955	-0.478	0.633	-1.051103	0.6391525
_5120	-0.8076248	0.3875145	-2.084	0.037	-1.567139	-0.0481102
_5960	0.6456242	0.6035294	1.070	0.285	-0.5372717	1.82852
_6160	-0.3807969	0.2467219	-1.543	0.123	-0.8643628	0.1027691
_6200	0.1674239	0.3905795	0.429	0.668	-0.5980979	0.9329458
_6780	0.7192805	0.3612321	1.991	0.046	0.0112786	1.427282
_6920	0.1658701	0.3690825	0.449	0.653	-0.5575183	0.8892585
_7040	-0.1306939	0.3874357	-0.337	0.736	-0.8900538	0.6286661
_8280	0.2265586	0.6333231	0.358	0.721	-1.014732	1.467849
_8840	-1.791066	4.817153	-0.372	0.710	-11.23251	7.650381
_5720	0.238133	0.5731152	0.416	0.678	-0.8851522	1.361418
_cons	-27.03373	6.133782	-4.407	0.000	-39.05573	-15.01174

TABLE 7

Panel B

Parameter Estimates for Monthly Hazard Model of Other Prepayment in 22 MSA's -
Basic Specification

Residual df = 500119	No. of obs = 500164
Pearson X2 = 493875.1	Deviance = 17426.4
Dispersion = 0.9875151	Dispersion = 0.0348445

Bernoulli distribution, cloglog link						
	Coef.	Std. Err.	Z-Statistic	P> z	[95% Conf. Interval]	
unemprr	0.0668958	0.0588976	1.136	0.256	-0.0485414	0.1823329
borage	-0.0173877	0.0032867	-5.290	0.000	-0.0238295	-0.0109458
loginc	2.478168	0.2670787	9.279	0.000	1.954704	3.001633
RSVpmts	-0.0082649	0.0173072	-0.478	0.633	-0.0421864	0.0256566
RSVpmt4	0.0094911	0.0179684	0.528	0.597	-0.0257264	0.0447085
logfront	2.135046	0.276365	7.725	0.000	1.593381	2.676712
lnbal	-2.922382	0.3211064	-9.101	0.000	-3.551738	-2.293025
lnhval	1.803017	0.1835367	9.824	0.000	1.443292	2.162742
condo	0.6041536	0.1295713	4.663	0.000	0.3501985	0.8581087
HPrelPW	-0.2557808	0.245624	-1.041	0.298	-0.7371949	0.2256334
HPrelLL	0.1723889	0.5207684	0.331	0.741	-0.8482984	1.193076
LLmin	3.085268	1.472609	2.095	0.036	0.199008	5.971529
LLmax	16.09562	1316.788	0.012	0.990	-2564.761	2596.953
lnhorizn	0.3881909	0.217431	1.785	0.074	-0.0379661	0.8143479
lnintrat	3.389289	0.388565	8.723	0.000	2.627716	4.150863
lnintarm	-0.0248933	0.61789	-0.040	0.968	-1.235935	1.186149
rtdiff	0.3368494	0.0774945	4.347	0.000	0.184963	0.4887358
armrtd	0.0192972	0.0481464	0.401	0.689	-0.075068	0.1136625
logpirto	4.662443	0.7313326	6.375	0.000	3.229058	6.095829
t	0.3521314	0.0752242	4.681	0.000	0.2046947	0.4995682
tt	-0.0022749	0.0002585	-8.800	0.000	-0.0027816	-0.0017683
t6	-0.1786418	0.0808715	-2.209	0.027	-0.337147	-0.0201367
year94	0.7066045	0.1323708	5.338	0.000	0.4471624	0.9660466
_0520	-0.0161987	0.1953336	-0.083	0.934	-0.3990455	0.366648
_0720	-0.8266647	0.1677865	-4.927	0.000	-1.15552	-0.4978092
_1920	-0.6699195	0.2592315	-2.584	0.010	-1.178004	-0.1618352
_2080	0.9623034	0.1876866	5.127	0.000	0.5944445	1.330162
_2160	0.3108937	0.1607676	1.934	0.053	-0.004205	0.6259924
_2680	-0.3885312	0.3743639	-1.038	0.299	-1.122271	0.3452085
_2800	-0.4439075	0.3723317	-1.192	0.233	-1.173664	0.2858491
_3360	-0.5248851	0.307207	-1.709	0.088	-1.127	0.0772297
_4480	-1.802461	0.3317254	-5.434	0.000	-2.452631	-1.152291
_4920	-0.294156	0.350093	-0.840	0.401	-0.9803257	0.3920138
_5000	-0.1627202	0.2573653	-0.632	0.527	-0.6671469	0.3417065
_5120	0.250804	0.2001145	1.253	0.210	-0.1414132	0.6430213
_5960	-1.225847	0.4756483	-2.577	0.010	-2.158101	-0.2935938
_6160	-1.028119	0.1751396	-5.870	0.000	-1.371387	-0.6848522
_6200	0.374684	0.2306672	1.624	0.104	-0.0774154	0.8267834
_6780	-1.210758	0.2879851	-4.204	0.000	-1.775198	-0.6463174
_6920	-1.415932	0.4423364	-3.201	0.001	-2.282896	-0.5489691
_7040	0.3159483	0.2085973	1.515	0.130	-0.0928949	0.7247914
_8280	-0.1695786	0.3992472	-0.425	0.671	-0.9520887	0.6129316
_8840	-16.80702	1316.788	-0.013	0.990	-2597.664	2564.05
_5720	-0.5155479	0.3581432	-1.440	0.150	-1.217496	0.1863997
_cons	-18.15404	2.736595	-6.634	0.000	-23.51766	-12.79041

TABLE 7

Panel C

Parameter Estimates for Monthly Hazard Model of FHA Refinance in 22 MSA's
Basic Specification

Residual df = 500120
 Pearson X2 = 434302.6
 Dispersion = 0.8683967

No. of obs = 500164
 Deviance = 13410.18
 Dispersion = 0.0268139

Bernoulli distribution, cloglog link

	Coef.	Std. Err.	Z-Statistic	P> z	[95% Conf. Interval]	
unemprt	-0.0342175	0.060086	-0.569	0.569	-0.1519839	0.0835489
borage	-0.0230464	0.0038051	-6.057	0.000	-0.0305043	-0.0155885
loginc	2.454291	0.3052535	8.040	0.000	1.856005	3.052576
RSVpmts	0.0644371	0.0188207	3.424	0.001	0.0275493	0.1013249
RSVpmt4	-0.0757678	0.0205115	-3.694	0.000	-0.1159696	-0.0355661
logfront	2.513634	0.3177161	7.912	0.000	1.890922	3.136346
Inbal	0.8608488	0.5793587	1.486	0.137	-0.2746734	1.996371
Inhval	-0.2857844	0.4849965	-0.589	0.556	-1.23636	0.6647912
condo	-18.51211	1370.631	-0.014	0.989	-2704.899	2667.875
HPrelPW	-0.5120917	0.2923435	-1.752	0.080	-1.085074	0.060891
HPrelLL	-1.39259	0.7104657	-1.960	0.050	-2.785077	-0.0001028
LLmin	-17.99153	19850.55	-0.001	0.999	-38924.35	38888.36
LLmax	-0.3861037	0.3364012	-1.148	0.251	-1.045438	0.2732305
Inhorizn	1.92765	0.5258373	3.666	0.000	0.8970277	2.958272
Inintrat	17.10791	0.5190253	32.962	0.000	16.09064	18.12518
Inintarm	-0.0896142	0.7158161	-0.125	0.900	-1.492588	1.31336
rdiff	-0.2181235	0.0943226	-2.313	0.021	-0.4029925	-0.0332545
armrtd	-0.3930938	0.0812368	-4.839	0.000	-0.552315	-0.2338727
logpirto	7.97494	1.330458	5.994	0.000	5.36729	10.58259
t	1.683653	0.4316599	3.900	0.000	0.8376149	2.529691
tt	-0.0015143	0.0003294	-4.597	0.000	-0.0021599	-0.0008686
t6	-1.648419	0.4335787	-3.802	0.000	-2.498218	-0.7986207
year94	-0.2202653	0.1770716	-1.244	0.214	-0.5673192	0.1267887
_0520	0.8269978	0.2408697	3.433	0.001	0.3549019	1.299094
_0720	0.8252058	0.1562278	5.282	0.000	0.519005	1.131407
_1920	0.4476243	0.3029898	1.477	0.140	-0.1462247	1.041473
_2080	1.461472	0.2411811	6.060	0.000	0.9887654	1.934178
_2160	1.426478	0.2119547	6.730	0.000	1.011055	1.841902
_2680	1.395507	0.5174497	2.697	0.007	0.3813245	2.40969
_2800	0.6094245	0.5361327	1.137	0.256	-0.4413764	1.660225
_3360	0.0599508	0.4180594	0.143	0.886	-0.7594305	0.8793321
_4480	-0.4595536	0.2729454	-1.684	0.092	-0.9945168	0.0754097
_4920	0.4691452	0.5323324	0.881	0.378	-0.5742071	1.512498
_5000	0.3907105	0.3339195	1.170	0.242	-0.2637597	1.045181
_5120	1.266735	0.2331055	5.434	0.000	0.8098566	1.723613
_5960	1.778734	0.5262526	3.380	0.001	0.7472981	2.81017
_6160	0.0015494	0.1849172	0.008	0.993	-0.3608816	0.3639805
_6200	1.361421	0.2857059	4.765	0.000	0.8014473	1.921394
_6780	0.5104079	0.2545547	2.005	0.045	0.0114899	1.009326
_6920	0.7494432	0.2368532	3.164	0.002	0.2852195	1.213667
_7040	2.015531	0.2483118	8.117	0.000	1.528849	2.502213
_8280	1.677538	0.5555154	3.020	0.003	0.5887477	2.766328
_8840			(dropped)			
_5720	-0.7838115	0.6643511	-1.180	0.238	-2.085916	0.5182928
_cons	-63.45219	5.263871	-12.054	0.000	-73.76919	-53.13519

TABLE 8

Panel A

Parameter Estimates for Monthly Hazard Model of Claim Default in 22 MSA's -
Basic Specification Plus Tract Characteristics

Residual df = 500066
Pearson X2 = 659011.8
Dispersion = 1.31785

No. of obs = 500114
Deviance = 7577.071
Dispersion = 0.0151521

Bernoulli distribution, cloglog link

	Coef.	Std. Err.	Z-Statistic	P> z	[95% Conf. Interval]	
trtblk	0.7620121	0.2058525	3.702	0.000	0.3585486	1.165476
trthsp	-0.3111604	0.3696578	-0.842	0.400	-1.035676	0.4133557
Intrinc	-0.4437449	0.1970811	-2.252	0.024	-0.8300167	-0.0574731
unemprr	0.0566993	0.0846374	0.670	0.503	-0.1091869	0.2225856
borage	0.0021166	0.0049518	0.427	0.669	-0.0075889	0.011822
loginc	-0.2516583	0.4461181	-0.564	0.573	-1.126034	0.622717
RSVpmts	-0.190307	0.031956	-5.955	0.000	-0.2529396	-0.1276744
RSVpmt4	0.1906135	0.0334077	5.706	0.000	0.1251356	0.2560914
logfront	0.1994779	0.453413	0.440	0.660	-0.6891952	1.088151
Inbal	2.979072	0.7725116	3.856	0.000	1.464977	4.493167
Inhval	-2.720874	0.6406225	-4.247	0.000	-3.976471	-1.465277
condo	0.1003394	0.2443416	0.411	0.681	-0.3785614	0.5792401
HPreIPW	-0.8441095	0.4928076	-1.713	0.087	-1.809995	0.1217758
HPreILL	-1.619279	0.9754065	-1.660	0.097	-3.53104	0.292483
LLmin	1.724142	3.13297	0.550	0.582	-4.416365	7.86465
LLmax	0.9024074	4.830786	0.187	0.852	-8.565759	10.37057
Inhorizn	1.225626	0.7756132	1.580	0.114	-0.2945481	2.7458
Inintrat	0.925822	0.5642974	1.641	0.101	-0.1801807	2.031825
Inintarm	0.6520115	0.9213931	0.708	0.479	-1.153886	2.457909
rtdiff	-0.1798489	0.1200912	-1.498	0.134	-0.4152234	0.0555256
armrtd	-0.0496185	0.0724622	-0.685	0.494	-0.1916418	0.0924048
logpirto	1.074016	1.379414	0.779	0.436	-1.629586	3.777618
t	0.3996183	0.0937328	4.263	0.000	0.2159054	0.5833312
tt	-0.0009	0.000405	-2.222	0.026	-0.0016938	-0.0001061
t6	-0.3375401	0.1019162	-3.312	0.001	-0.5372922	-0.1377881
year94	-0.0305336	0.2157412	-0.142	0.887	-0.4533786	0.3923113
_0520	0.024216	0.3475015	0.070	0.944	-0.6568745	0.7053065
_0720	-0.0661708	0.2535324	-0.261	0.794	-0.5630852	0.4307435
_1920	0.2048058	0.4079087	0.502	0.616	-0.5946806	1.004292
_2080	-0.5313581	0.4512848	-1.177	0.239	-1.41586	0.3531439
_2160	-0.3463012	0.3290489	-1.052	0.293	-0.9912252	0.2986228
_2680	0.3224784	0.6196011	0.520	0.603	-0.8919175	1.536874
_2800	0.1769283	0.6069835	0.291	0.771	-1.012738	1.366594
_3360	0.3566091	0.448507	0.795	0.427	-0.5224485	1.235667
_4480	0.5983702	0.3871258	1.546	0.122	-0.1603825	1.357123
_4920	-0.3887871	0.5548243	-0.701	0.483	-1.476223	0.6986485
_5000	-0.0341584	0.4467758	-0.076	0.939	-0.9098228	0.8415061
_5120	-0.6006082	0.3945792	-1.522	0.128	-1.373969	0.1727527
_5960	0.7415785	0.6105955	1.215	0.225	-0.4551667	1.938324
_6160	-0.3151732	0.2510519	-1.255	0.209	-0.8072258	0.1768794
_6200	0.4074404	0.3994946	1.020	0.308	-0.3755546	1.190435
_6780	0.8521025	0.3668303	2.323	0.020	0.1331282	1.571077
_6920	0.2027549	0.3724434	0.544	0.586	-0.5272207	0.9327305
_7040	0.0082232	0.3933601	0.021	0.983	-0.7627485	0.7791949
_8280	0.3618834	0.6406521	0.565	0.572	-0.8937716	1.617538
_8840	-1.590138	4.81672	-0.330	0.741	-11.03074	7.850459
_5720	0.1999895	0.5755103	0.347	0.728	-0.9279899	1.327969
_cons	-25.12767	6.409818	-3.920	0.000	-37.69068	-12.56466

TABLE 8

Panel B

Parameter Estimates for Monthly Hazard Model of Other Prepayment in 22 MSA's -
Basic Specification Plus Tract Characteristics

Residual df = 500066
 Pearson X2 = 492987.3
 Dispersion = 0.9858445

No. of obs = 500114
 Deviance = 17411.82
 Dispersion = 0.034819

Bernoulli distribution, cloglog link

	Coef.	Std. Err.	Z-Statistic	P> z	[95% Conf. Interval]	
trblk	-0.4138964	0.1820647	-2.273	0.023	-0.7707367	-0.0570561
trthsp	0.1757122	0.2979508	0.590	0.555	-0.4082607	0.7596851
Intrtinc	0.2499639	0.1391734	1.796	0.072	-0.0228109	0.5227386
unemprrt	0.0672464	0.0588951	1.142	0.254	-0.0481859	0.1826788
borage	-0.0162593	0.0033068	-4.917	0.000	-0.0227404	-0.0097782
loginc	2.395738	0.2702406	8.865	0.000	1.866076	2.9254
RSVpmts	-0.0117905	0.0173458	-0.680	0.497	-0.0457876	0.0222065
RSVpmt4	0.0128373	0.0180024	0.713	0.476	-0.0224468	0.0481214
logfront	2.048771	0.2793414	7.334	0.000	1.501272	2.59627
Inbal	-2.96348	0.3220489	-9.202	0.000	-3.594685	-2.332276
Inhval	1.753478	0.1878946	9.332	0.000	1.385212	2.121745
condo	0.543377	0.1310362	4.147	0.000	0.2865507	0.8002032
HPreIPW	-0.2272082	0.2461823	-0.923	0.356	-0.7097166	0.2553002
HPreILL	0.1631629	0.5250104	0.311	0.756	-0.8658387	1.192164
LLmin	3.172462	1.473998	2.152	0.031	0.2834781	6.061446
LLmax	16.3069	1316.2	0.012	0.990	-2563.398	2596.012
Inhorizn	0.3898347	0.2183245	1.786	0.074	-0.0380736	0.8177429
Inintrat	3.415267	0.3889817	8.780	0.000	2.652877	4.177658
Inintarm	-0.0246468	0.6181625	-0.040	0.968	-1.236223	1.186929
rtdiff	0.3379316	0.0775307	4.359	0.000	0.1859743	0.4898889
armrtd	0.011172	0.048277	0.231	0.817	-0.0834492	0.1057932
logpirto	4.569307	0.732035	6.242	0.000	3.134544	6.004069
t	0.3521016	0.0752279	4.680	0.000	0.2046577	0.4995455
tt	-0.002266	0.0002586	-8.764	0.000	-0.0027728	-0.0017592
t6	-0.178953	0.0808699	-2.213	0.027	-0.3374551	-0.0204509
year94	0.7131483	0.1323171	5.390	0.000	0.4538114	0.9724851
_0520	-0.0229498	0.1973417	-0.116	0.907	-0.4097325	0.3638328
_0720	-0.8101609	0.1707165	-4.746	0.000	-1.144759	-0.4755627
_1920	-0.7481186	0.2601593	-2.876	0.004	-1.258021	-0.2382157
_2080	0.8962606	0.1894484	4.731	0.000	0.5249487	1.267573
_2160	0.2677569	0.1643374	1.629	0.103	-0.0543385	0.5898523
_2680	-0.3987123	0.37667	-1.059	0.290	-1.136972	0.3395474
_2800	-0.4919556	0.3748892	-1.312	0.189	-1.226725	0.2428137
_3360	-0.6278544	0.3083917	-2.036	0.042	-1.232291	-0.0234178
_4480	-1.764603	0.3365357	-5.243	0.000	-2.4242	-1.105005
_4920	-0.2651726	0.356772	-0.743	0.457	-0.9644328	0.4340877
_5000	-0.2606788	0.2832172	-0.920	0.357	-0.8157743	0.2944166
_5120	0.1781809	0.2043212	0.872	0.383	-0.2222814	0.5786431
_5960	-1.223957	0.4792636	-2.554	0.011	-2.163297	-0.284618
_6160	-1.041359	0.1783789	-5.838	0.000	-1.390975	-0.6917425
_6200	0.2874933	0.2331778	1.233	0.218	-0.1695268	0.7445135
_6780	-1.225404	0.2895587	-4.232	0.000	-1.792929	-0.6578794
_6920	-1.390322	0.4428527	-3.139	0.002	-2.258297	-0.5223463
_7040	0.2558975	0.2131501	1.201	0.230	-0.161869	0.673664
_8280	-0.1847408	0.405301	-0.456	0.649	-0.9791162	0.6096345
_8840	-16.97399	1316.2	-0.013	0.990	-2596.679	2562.731
_5720	-0.464894	0.3625833	-1.282	0.200	-1.175544	0.2457563
_cons	-19.07672	3.019734	-6.317	0.000	-24.99529	-13.15815

TABLE 8

Panel C

Parameter Estimates for Monthly Hazard Model of FHA Refinance in 22 MSA's -
Basic Specification Plus Tract Characteristics

Residual df = 500067
 Pearson X = 433618.1
 Dispersion = 0.8671199
 No. of obs = 500114
 Deviance = 13407.07
 Dispersion = 0.0268105

Bernoulli distribution, cloglog link

	Coef.	Std. Err.	Z-Statistic	P> z	[95% Conf. Interval]	
trtblk	0.1779254	0.1802455	0.987	0.324	-0.1753493	0.5312
trthsp	-0.3159586	0.3486165	-0.906	0.365	-0.9992343	0.3673171
lntrtinc	0.0112024	0.1414763	0.079	0.937	-0.266086	0.2884908
unemprrt	-0.0330327	0.0601346	-0.549	0.583	-0.1508943	0.084829
borage	-0.0234852	0.0038364	-6.122	0.000	-0.0310044	-0.0159659
loginc	2.438951	0.3059689	7.971	0.000	1.839263	3.038639
RSVpmts	0.0643427	0.0188435	3.415	0.001	0.0274102	0.1012752
RSVpmt4	-0.0757558	0.0205364	-3.689	0.000	-0.1160065	-0.0355051
logfront	2.505438	0.3182439	7.873	0.000	1.881691	3.129185
lnbal	0.8957403	0.5799894	1.544	0.122	-0.241018	2.032499
lnhval	-0.2834753	0.4857147	-0.584	0.559	-1.235459	0.668508
condo	-18.50873	1370.078	-0.014	0.989	-2703.812	2666.794
HPreIPW	-0.5268451	0.2923317	-1.802	0.072	-1.099805	0.0461144
HPreILL	-1.400175	0.7098028	-1.973	0.049	-2.791363	-0.0089874
LLmin	-18.02228	19852.35	-0.001	0.999	-38927.9	38891.86
LLmax	-0.4581442	0.3417762	-1.340	0.180	-1.128013	0.2117249
lnhorizn	1.908209	0.5261166	3.627	0.000	0.8770391	2.939378
lnintrat	17.08589	0.5194907	32.890	0.000	16.0677	18.10407
lnintarm	-0.0611242	0.7159474	-0.085	0.932	-1.464355	1.342107
rtdiff	-0.2165957	0.0943069	-2.297	0.022	-0.4014339	-0.0317575
armrtd	-0.3949698	0.0812735	-4.860	0.000	-0.5542629	-0.2356766
logpirto	7.951175	1.330011	5.978	0.000	5.344402	10.55795
t	1.68377	0.4316587	3.901	0.000	0.8377343	2.529805
tt	-0.0015215	0.0003295	-4.617	0.000	-0.0021673	-0.0008756
t6	-1.648009	0.433578	-3.801	0.000	-2.497806	-0.7982119
year94	-0.2206277	0.1770576	-1.246	0.213	-0.5676542	0.1263988
_0520	0.7871002	0.242838	3.241	0.001	0.3111464	1.263054
_0720	0.7788515	0.1609062	4.840	0.000	0.4634811	1.094222
_1920	0.4551303	0.3035082	1.500	0.134	-0.1397348	1.049995
_2080	1.474616	0.2420612	6.092	0.000	1.000184	1.949047
_2160	1.406431	0.2163548	6.501	0.000	0.9823838	1.830479
_2680	1.387829	0.5174664	2.682	0.007	0.3736136	2.402045
_2800	0.6024871	0.5369776	1.122	0.262	-0.4499697	1.654944
_3360	0.0731339	0.4188214	0.175	0.861	-0.747741	0.8940087
_4480	-0.4093511	0.2818569	-1.452	0.146	-0.9617804	0.1430783
_4920	0.4176672	0.5331677	0.783	0.433	-0.6273222	1.462657
_5000	0.5150557	0.3558665	1.447	0.148	-0.1824297	1.212541
_5120	1.253383	0.2372624	5.283	0.000	0.7883571	1.718409
_5960	1.772741	0.5272797	3.362	0.001	0.7392917	2.80619
_6160	-0.0300593	0.1890393	-0.159	0.874	-0.4005696	0.3404509
_6200	1.386291	0.2869033	4.832	0.000	0.8239708	1.948611
_6780	0.5524505	0.2572091	2.148	0.032	0.04833	1.056571
_6920	0.7444858	0.2380438	3.128	0.002	0.2779286	1.211043
_7040	1.99395	0.2518965	7.916	0.000	1.500242	2.487659
_8280	1.67352	0.557283	3.003	0.003	0.5812658	2.765775
_8840			(dropped)			
_5720	-0.8360466	0.6651757	-1.257	0.209	-2.139767	0.4676738
_cons	-63.68369	5.409528	-11.773	0.000	-74.28617	-53.08121

TABLE 9

Panel A

Parameter Estimates for Monthly Hazard Model of Claim Default in 22 MSA's -
Basic Specification Plus More Detailed Tract Characteristics

Residual df = 499623
Pearson X2 = 625370
Dispersion = 1.251684

No. of obs = 499674
Deviance = 7569.43
Dispersion = 0.0151503

Bernoulli distribution, cloglog link

	Coef.	Std. Err.	Z-Statistic	P> z	[95% Conf. Interval]	
trtbk	0.8417292	0.2320262	3.628	0.000	0.3869663	1.296492
trthsp	-0.2243842	0.3856411	-0.582	0.561	-0.9802268	0.5314584
Intrtinc	-0.658503	0.251712	-2.616	0.009	-1.15185	-0.1651565
propmort	-0.2824701	0.4387301	-0.644	0.520	-1.142365	0.5774252
propmove	-0.9469927	0.4733983	-2.000	0.045	-1.874836	-0.0191491
prop1unt	0.3941863	0.273072	1.444	0.149	-0.141025	0.9293976
unemprr	0.0559956	0.0846478	0.662	0.508	-0.1099111	0.2219023
borage	0.0026953	0.0049494	0.545	0.586	-0.0070054	0.012396
loginc	-0.251805	0.4486391	-0.561	0.575	-1.131122	0.6275115
RSVpmts	-0.1894783	0.0320296	-5.916	0.000	-0.2522552	-0.1267015
RSVpmt4	0.189619	0.0334801	5.664	0.000	0.1239992	0.2552388
logfront	0.2031084	0.4560037	0.445	0.656	-0.6906423	1.096859
Inbal	2.956205	0.7738257	3.820	0.000	1.439534	4.472875
Inhval	-2.632727	0.6409025	-4.108	0.000	-3.888873	-1.376582
condo	0.1226864	0.2485975	0.494	0.622	-0.3645557	0.6099285
HPrelPW	-0.8899662	0.4923762	-1.807	0.071	-1.855006	0.0750735
HPrelLL	-1.739693	0.9773885	-1.780	0.075	-3.655339	0.1759535
LLmin	1.764333	3.132392	0.563	0.573	-4.375043	7.903709
LLmax	0.8244035	4.830009	0.171	0.864	-8.642241	10.29105
Inhorizn	1.22417	0.7763164	1.577	0.115	-0.2973826	2.745722
Inintrat	0.9163092	0.5645021	1.623	0.105	-0.1900945	2.022713
Inintarm	0.6332772	0.9213763	0.687	0.492	-1.172587	2.439142
rtidiff	-0.1707538	0.1201399	-1.421	0.155	-0.4062236	0.0647161
armrtd	-0.0534397	0.072479	-0.737	0.461	-0.195496	0.0886166
logpirto	1.018639	1.380368	0.738	0.461	-1.686833	3.724111
t	0.4003432	0.0937435	4.271	0.000	0.2166093	0.584077
tt	-0.0008921	0.000405	-2.203	0.028	-0.0016859	-0.0000984
t6	-0.3379941	0.1019201	-3.316	0.001	-0.5377538	-0.1382343
year94	-0.0255428	0.2154761	-0.119	0.906	-0.4478681	0.3967825
0520	-0.1330363	0.353063	-0.377	0.706	-0.825027	0.5589544
0720	-0.1138729	0.2553264	-0.446	0.656	-0.6143035	0.3865577
1920	0.0627852	0.4123652	0.152	0.879	-0.7454357	0.8710061
2080	-0.6940926	0.4568896	-1.519	0.129	-1.58958	0.2013946
2160	-0.3778821	0.3354225	-1.127	0.260	-1.035298	0.279534
2680	0.2366357	0.6208306	0.381	0.703	-0.9801699	1.453441
2800	0.048343	0.6106507	0.079	0.937	-1.14851	1.245196
3360	0.1970994	0.4537347	0.434	0.664	-0.6922043	1.086403
4480	0.3865769	0.3954307	0.978	0.328	-0.388453	1.161607
4920	-0.5090243	0.5577886	-0.913	0.361	-1.60227	0.5842213
5000	-0.2336557	0.4552221	-0.513	0.608	-1.125875	0.6585632
5120	-0.6416311	0.3978924	-1.613	0.107	-1.421486	0.1382236
5960	0.5876067	0.6138404	0.957	0.338	-0.6154984	1.790712
6160	-0.2555528	0.2550862	-1.002	0.316	-0.7555125	0.244407
6200	0.1957274	0.4098826	0.478	0.633	-0.6076278	0.9990826
6780	0.5847	0.3809359	1.535	0.125	-0.1619208	1.331321
6920	-0.0450331	0.3842624	-0.117	0.907	-0.7981737	0.7081074
7040	0.0260415	0.3946237	0.066	0.947	-0.7474067	0.7994897
8280	0.2914544	0.6406428	0.455	0.649	-0.9641825	1.547091
8840	-1.666988	4.815855	-0.346	0.729	-11.10589	7.771914
5720	0.0694308	0.5782957	0.120	0.904	-1.064008	1.20287
_cons	-22.88198	6.622061	-3.455	0.001	-35.86098	-9.902981

TABLE 9

Panel B

Parameter Estimates for Monthly Hazard Model of Other Prepayment in 22 MSA's -
Basic Specification Plus More Detailed Tract Characteristics

Residual df = 499623
Pearson X2 = 489300.1
Dispersion = 0.9793387

No. of obs = 499674
Deviance = 17369.37
Dispersion = 0.0347649

Bernoulli distribution, cloglog link

	Coef.	Std. Err.	Z-Statistic	P> z	[95% Conf. Interval]	
trtbik	-0.3418401	0.1911876	-1.788	0.074	-0.716561	0.0328808
trthsp	0.1641164	0.3019692	0.543	0.587	-0.4277323	0.7559652
lntrtinc	0.3971578	0.1636283	2.427	0.015	0.0764524	0.7178633
propmort	0.3220089	0.2660129	1.211	0.226	-0.1993669	0.8433847
propmove	-0.5498077	0.2875003	-1.912	0.056	-1.113298	0.0136825
prop1unt	-0.1516227	0.1613939	-0.939	0.347	-0.467949	0.1647036
unemprrt	0.0602665	0.0589533	1.022	0.307	-0.0552798	0.1758129
borage	-0.0163528	0.0033216	-4.923	0.000	-0.0228631	-0.0098425
loginc	2.30334	0.27644	8.332	0.000	1.761527	2.845152
RSVpmts	-0.0116063	0.0173842	-0.668	0.504	-0.0456788	0.0224662
RSVpmt4	0.0125812	0.0180381	0.697	0.486	-0.0227728	0.0479351
logfront	1.946187	0.2857772	6.810	0.000	1.386074	2.5063
lnbal	-2.868696	0.3251895	-8.822	0.000	-3.506056	-2.231337
lnhval	1.759425	0.18667	9.425	0.000	1.393558	2.125291
condo	0.4872666	0.1344912	3.623	0.000	0.2236686	0.7508645
HPreIPW	-0.2494	0.2461354	-1.013	0.311	-0.7318165	0.2330165
HPreILL	0.0896925	0.5263099	0.170	0.865	-0.9418559	1.121241
LLmin	3.189574	1.474422	2.163	0.031	0.2997596	6.079389
LLmax	16.32127	1315.838	0.012	0.990	-2562.674	2595.316
Inhorizn	0.3544684	0.2190667	1.618	0.106	-0.0748944	0.7838312
lnintrat	3.424147	0.3891796	8.798	0.000	2.661369	4.186925
lnintarm	-0.0128468	0.6193952	-0.021	0.983	-1.226839	1.201146
rtidiff	0.3452485	0.0776365	4.447	0.000	0.1930838	0.4974132
armrtd	0.0045969	0.0484861	0.095	0.924	-0.0904341	0.099628
logpirto	4.410572	0.7346276	6.004	0.000	2.970728	5.850415
t	0.3528594	0.0752485	4.689	0.000	0.2053751	0.5003437
tt	-0.0022413	0.0002585	-8.670	0.000	-0.0027479	-0.0017346
t6	-0.1807603	0.0808849	-2.235	0.025	-0.3392917	-0.0222289
year94	0.7125535	0.1324346	5.380	0.000	0.4529864	0.9721206
_0520	-0.0373952	0.2009812	-0.186	0.852	-0.4313111	0.3565206
_0720	-0.8059623	0.1718714	-4.689	0.000	-1.142824	-0.4691007
_1920	-0.7641438	0.2631604	-2.904	0.004	-1.279929	-0.2483589
_2080	0.9078922	0.1936462	4.688	0.000	0.5283527	1.287432
_2160	0.3317782	0.1674479	1.981	0.048	0.0035863	0.6599701
_2680	-0.373158	0.3785292	-0.986	0.324	-1.115062	0.3687456
_2800	-0.4841951	0.3769559	-1.284	0.199	-1.223015	0.254625
_3360	-0.6178351	0.3113398	-1.984	0.047	-1.22805	-0.0076202
_4480	-1.737509	0.3383849	-5.135	0.000	-2.400731	-1.074287
_4920	-0.2607971	0.3589779	-0.726	0.468	-0.9643809	0.4427868
_5000	-0.2272356	0.2869425	-0.792	0.428	-0.7896326	0.3351614
_5120	0.1772744	0.2066803	0.858	0.391	-0.2278115	0.5823603
_5960	-1.202397	0.4811437	-2.499	0.012	-2.145422	-0.2593731
_6160	-0.998741	0.1798666	-5.553	0.000	-1.351273	-0.6462089
_6200	0.2685634	0.2399925	1.119	0.263	-0.2018133	0.73894
_6780	-1.227844	0.2957823	-4.151	0.000	-1.807566	-0.6481211
_6920	-1.388832	0.4457837	-3.115	0.002	-2.262552	-0.5151116
_7040	0.2766099	0.2140917	1.292	0.196	-0.1430022	0.6962219
_8280	-0.1420395	0.4071158	-0.349	0.727	-0.9399718	0.6558928
_8840	-17.06416	1315.838	-0.013	0.990	-2596.059	2561.931
_5720	-0.4427421	0.3643699	-1.215	0.224	-1.156894	0.2714098
_cons	-20.12045	3.14758	-6.392	0.000	-26.28959	-13.9513

TABLE 9

Panel C

Parameter Estimates for Monthly Hazard Model of FHA Refinance in 22 MSA's -
Basic Specification Plus More Detailed Tract Characteristics

Residual df = 499624
Pearson X2 = 443833.4
Dispersion = 0.8883349

No. of obs = 499674
Deviance = 13392.38
Dispersion = 0.0268049

Bernoulli distribution, cloglog link

	Coef.	Std. Err.	Z-Statistic	P> z	[95% Conf. Interval]	
trtblk	0.1753126	0.187339	0.936	0.349	-0.191865	0.5424902
trthsp	-0.2679471	0.3504349	-0.765	0.445	-0.9547868	0.4188927
lntrtinc	-0.2212225	0.1771316	-1.249	0.212	-0.568394	0.1259491
propmort	0.0552142	0.2983632	0.185	0.853	-0.529567	0.6399954
propmove	0.0243026	0.3041881	0.080	0.936	-0.5718951	0.6205003
prop1unt	0.6173082	0.188844	3.269	0.001	0.2471808	0.9874355
unemprrt	-0.0293425	0.0601491	-0.488	0.626	-0.1472326	0.0885475
borage	-0.0230126	0.003841	-5.991	0.000	-0.030541	-0.0154843
loginc	2.553864	0.3057849	8.352	0.000	1.954536	3.153191
RSVpmts	0.0681351	0.0188517	3.614	0.000	0.0311864	0.1050838
RSVpmt4	-0.0793528	0.0205178	-3.868	0.000	-0.119567	-0.0391387
logfront	2.623254	0.3182511	8.243	0.000	1.999494	3.247015
lnbal	0.8087711	0.5805017	1.393	0.164	-0.3289914	1.946534
lnhval	-0.2773648	0.4844183	-0.573	0.567	-1.226807	0.6720776
condo	-18.39379	1370.526	-0.013	0.989	-2704.575	2667.787
HPreIPW	-0.4825179	0.2967719	-1.626	0.104	-1.06418	0.0991442
HPreILL	-1.357097	0.7176555	-1.891	0.059	-2.763676	0.0494821
LLmin	-17.99197	20038.57	-0.001	0.999	-39292.86	39256.88
LLmax	-0.4303748	0.3481791	-1.236	0.216	-1.112793	0.2520437
lnhorizn	1.96616	0.5264226	3.735	0.000	0.934391	2.99793
lninrat	17.07531	0.519452	32.872	0.000	16.0572	18.09342
lnintarm	-0.1360532	0.7157139	-0.190	0.849	-1.538827	1.26672
rtdiff	-0.2154421	0.0943232	-2.284	0.022	-0.4003122	-0.0305719
armrtd	-0.387369	0.0811973	-4.771	0.000	-0.5465128	-0.2282253
logpirto	8.017487	1.330688	6.025	0.000	5.409387	10.62559
t	1.68325	0.4315526	3.900	0.000	0.837422	2.529077
tt	-0.0015414	0.0003297	-4.676	0.000	-0.0021876	-0.0008953
t6	-1.64595	0.4334736	-3.797	0.000	-2.495542	-0.7963572
year94	-0.2174146	0.1770172	-1.228	0.219	-0.564362	0.1295328
0520	0.6936342	0.2480679	2.796	0.005	0.20743	1.179838
0720	0.7155753	0.1618994	4.420	0.000	0.3982583	1.032892
1920	0.3609579	0.30932	1.167	0.243	-0.2452981	0.9672139
2080	1.390273	0.2486193	5.592	0.000	0.9029884	1.877558
2160	1.283652	0.2199356	5.836	0.000	0.8525858	1.714717
2680	1.370878	0.523243	2.620	0.009	0.3453405	2.396415
2800	0.5341656	0.5404228	0.988	0.323	-0.5250436	1.593375
3360	-0.016969	0.4235183	-0.040	0.968	-0.8470496	0.8131117
4480	-0.5017584	0.2867328	-1.750	0.080	-1.063744	0.0602275
4920	0.359664	0.5363248	0.671	0.502	-0.6915133	1.410841
5000	0.4222484	0.360256	1.172	0.241	-0.2838404	1.128337
5120	1.201586	0.2399834	5.007	0.000	0.7312272	1.671945
5960	1.663333	0.5336148	3.117	0.002	0.6174672	2.709199
6160	-0.11353	0.1904788	-0.596	0.551	-0.4868615	0.2598015
6200	1.312242	0.2952215	4.445	0.000	0.7336183	1.890865
6780	0.4300238	0.2652481	1.621	0.105	-0.089853	0.9499005
6920	0.6442895	0.2436781	2.644	0.008	0.1666892	1.12189
7040	1.909352	0.2541476	7.513	0.000	1.411232	2.407472
8280	1.574099	0.5616462	2.803	0.005	0.4732924	2.674905
8840			(dropped)			
5720	-0.9168939	0.67007	-1.368	0.171	-2.230207	0.3964192
cons	-62.44931	5.520568	-11.312	0.000	-73.26943	-51.6292

TABLE 10

Panel A

Parameter Estimates for Monthly Hazard Model of Claim Default in 22 MSA's -
Basic Specification Plus Tract Characteristics and Race/Ethnicity of Borrower

Residual df = 500064
 Pearson X2 = 650272.1
 Dispersion = 1.300378

No. of obs = 500114
 Deviance = 7575.075
 Dispersion = 0.0151482

Bernoulli distribution, cloglog link

	Coef.	Std. Err.	Z-Statistic	P> z	[95% Conf. Interval]	
trtbik	0.5955557	0.243765	2.443	0.015	0.117785	1.073326
trthsp	-0.271588	0.3987784	-0.681	0.496	-1.053179	0.5100033
Intrtrinc	-0.4671757	0.1979362	-2.360	0.018	-0.8551236	-0.0792278
black	0.1896849	0.1478877	1.283	0.200	-0.1001696	0.4795394
hispanic	-0.0381071	0.1423371	-0.268	0.789	-0.3170827	0.2408684
unemp	0.0569734	0.084632	0.673	0.501	-0.1089022	0.222849
borage	0.0017497	0.0049662	0.352	0.725	-0.0079839	0.0114832
loginc	-0.2379341	0.4461293	-0.533	0.594	-1.112331	0.6364632
RSVpmts	-0.1902868	0.0320071	-5.945	0.000	-0.2530196	-0.1275539
RSVpmt4	0.1905835	0.0334743	5.693	0.000	0.1249751	0.2561919
logfront	0.216413	0.4536393	0.477	0.633	-0.6727036	1.10553
Inbal	2.972926	0.7742163	3.840	0.000	1.45549	4.490362
Inhval	-2.709952	0.6426071	-4.217	0.000	-3.969439	-1.450466
condo	0.0913267	0.2459428	0.371	0.710	-0.3907124	0.5733658
HPrelPW	-0.8546971	0.4935022	-1.732	0.083	-1.821944	0.1125493
HPrelLL	-1.615782	0.9772055	-1.653	0.098	-3.531069	0.2995059
LLmin	1.821016	3.133741	0.581	0.561	-4.321004	7.963035
LLmax	0.955838	4.830897	0.198	0.843	-8.512547	10.42422
Inhorizn	1.220845	0.7753753	1.575	0.115	-0.2988628	2.740553
Inintrat	0.91694	0.5643182	1.625	0.104	-0.1891034	2.022983
Inintarm	0.6540723	0.9211372	0.710	0.478	-1.151323	2.459468
rdiff	-0.1783983	0.1200939	-1.485	0.137	-0.4137781	0.0569815
armrtd	-0.0471334	0.0724807	-0.650	0.516	-0.189193	0.0949262
logpirto	1.093852	1.379453	0.793	0.428	-1.609827	3.79753
t	0.3999858	0.0937371	4.267	0.000	0.2162644	0.5837072
tt	-0.0009012	0.0004051	-2.225	0.026	-0.0016951	-0.0001073
16	-0.3377113	0.1019235	-3.313	0.001	-0.5374777	-0.137945
year94	-0.0324385	0.2158246	-0.150	0.881	-0.4554468	0.3905699
_0520	0.0212374	0.347807	0.061	0.951	-0.6604519	0.7029267
_0720	-0.0517167	0.2543022	-0.203	0.839	-0.5501398	0.4467064
_1920	0.2249939	0.4086517	0.551	0.582	-0.5759487	1.025937
_2080	-0.5068536	0.4525264	-1.120	0.263	-1.393789	0.3800818
_2160	-0.3327873	0.330346	-1.007	0.314	-0.9802536	0.314679
_2680	0.301645	0.6212023	0.486	0.627	-0.9158893	1.519179
_2800	0.1847465	0.6078403	0.304	0.761	-1.006599	1.376092
_3360	0.3734532	0.4489584	0.832	0.406	-0.5064892	1.253396
_4480	0.6254592	0.3878219	1.613	0.107	-0.1346579	1.385576
_4920	-0.4127382	0.5545711	-0.744	0.457	-1.499677	0.6742011
_5000	-0.0278808	0.4467982	-0.062	0.950	-0.9035893	0.8478276
_5120	-0.574388	0.3958061	-1.451	0.147	-1.350154	0.2013777
_5960	0.7569511	0.6117988	1.237	0.216	-0.4421524	1.956055
_6160	-0.3102372	0.2515999	-1.233	0.218	-0.803364	0.1828897
_6200	0.4346705	0.4008558	1.084	0.278	-0.3509925	1.220333
_6780	0.8733491	0.3672407	2.378	0.017	0.1535706	1.593128
_6920	0.2058472	0.3732388	0.552	0.581	-0.5256874	0.9373818
_7040	0.014858	0.3937021	0.038	0.970	-0.756784	0.7865
_8280	0.3659893	0.6415666	0.570	0.568	-0.8914581	1.623437
_8840	-1.651233	4.816698	-0.343	0.732	-11.09179	7.789321
_5720	0.2007969	0.5763436	0.348	0.728	-0.9288158	1.33041
_cons	-25.02706	6.417012	-3.900	0.000	-37.60417	-12.44995

TABLE 10

Panel B

Parameter Estimates for Monthly Hazard Model of Other Prepayment in 22 MSA's -
Basic Specification Plus Tract Characteristics and Race/Ethnicity of Borrower

Residual df = 500064
 Pearson X2 = 480794.8
 Dispersion = 0.9614665
 No. of obs = 500114
 Deviance = 17359.42
 Dispersion = 0.0347144

Bernoulli distribution, cloglog link

	Coef.	Std. Err.	Z-Statistic	P> z	[95% Conf. Interval]	
trtblk	0.2374829	0.2094331	1.134	0.257	-0.1729984	0.6479642
trthsp	0.7458497	0.3250017	2.295	0.022	0.1088581	1.382841
Intrinc	0.3036913	0.1379485	2.201	0.028	0.0333172	0.5740654
black	-0.7636718	0.1341875	-5.691	0.000	-1.026674	-0.5006691
hisp	-0.5486226	0.1249237	-4.392	0.000	-0.7934684	-0.3037767
unemprr	0.0671718	0.0588646	1.141	0.254	-0.0482007	0.1825444
borage	-0.0146116	0.0032984	-4.430	0.000	-0.0210763	-0.0081469
loginc	2.34982	0.2697495	8.711	0.000	1.82112	2.878519
RSVpmts	-0.0163978	0.0173691	-0.944	0.345	-0.0504405	0.017645
RSVpmt4	0.0172626	0.0180292	0.957	0.338	-0.018074	0.0525992
logfront	2.023438	0.2786598	7.261	0.000	1.477275	2.569601
Inbal	-2.874489	0.3213474	-8.945	0.000	-3.504319	-2.24466
Inhval	1.704817	0.1936154	8.805	0.000	1.325338	2.084297
condo	0.4986071	0.1311629	3.801	0.000	0.2415325	0.7556817
HPrelPW	-0.2300744	0.2444708	-0.941	0.347	-0.7092283	0.2490795
HPrelLL	0.1102491	0.5251745	0.210	0.834	-0.919074	1.139572
LLmin	2.911749	1.474847	1.974	0.048	0.0211025	5.802396
LLmax	16.14687	1317.37	0.012	0.990	-2565.851	2598.144
Inhorizn	0.4059724	0.2183264	1.859	0.063	-0.0219395	0.8338844
Inintrat	3.429235	0.3892863	8.809	0.000	2.666248	4.192222
Inintarm	-0.0557232	0.6182527	-0.090	0.928	-1.267476	1.15603
rtdiff	0.3340583	0.077528	4.309	0.000	0.1821063	0.4860103
armrtd	0.0048162	0.0482886	0.100	0.921	-0.0898277	0.0994601
logpirt0	4.553604	0.7332197	6.210	0.000	3.11652	5.990688
t	0.3522864	0.0752323	4.683	0.000	0.2048339	0.4997389
tt	-0.0022611	0.0002584	-8.750	0.000	-0.0027677	-0.0017546
t6	-0.1794138	0.0808675	-2.219	0.027	-0.3379113	-0.0209164
year94	0.7304665	0.1323359	5.520	0.000	0.4710929	0.9898401
_0520	-0.0566677	0.1970241	-0.288	0.774	-0.4428279	0.3294925
_0720	-0.8951301	0.1710224	-5.234	0.000	-1.230328	-0.5599324
_1920	-0.8235096	0.2603886	-3.163	0.002	-1.333862	-0.3131572
_2080	0.7870606	0.1895005	4.153	0.000	0.4156464	1.158475
_2160	0.2043439	0.1631845	1.252	0.210	-0.1154919	0.5241796
_2680	-0.3507803	0.3771644	-0.930	0.352	-1.090009	0.3884485
_2800	-0.5406417	0.3761632	-1.437	0.151	-1.277908	0.1966246
_3360	-0.6836164	0.3081603	-2.218	0.027	-1.2876	-0.0796333
_4480	-1.803446	0.3364591	-5.360	0.000	-2.462893	-1.143998
_4920	-0.2903188	0.3585861	-0.810	0.418	-0.9931346	0.412497
_5000	-0.3329724	0.2842679	-1.171	0.241	-0.8901273	0.2241824
_5120	0.0973529	0.2043302	0.476	0.634	-0.3031269	0.4978327
_5960	-1.274122	0.4795217	-2.657	0.008	-2.213967	-0.3342762
_6160	-1.094876	0.1785931	-6.131	0.000	-1.444913	-0.7448403
_6200	0.194886	0.233328	0.835	0.404	-0.2624285	0.6522005
_6780	-1.266727	0.289755	-4.372	0.000	-1.834636	-0.6988178
_6920	-1.490569	0.4432014	-3.363	0.001	-2.359228	-0.6219102
_7040	0.1972339	0.2128775	0.927	0.354	-0.2199984	0.6144663
_8280	-0.2212028	0.4070037	-0.543	0.587	-1.018915	0.5765097
_8840	-16.86284	1317.37	-0.013	0.990	-2598.86	2565.135
_5720	-0.5317838	0.3643002	-1.460	0.144	-1.245799	0.1822315
_cons	-19.9292	3.00344	-6.635	0.000	-25.81583	-14.04256

TABLE 10

Panel C

Parameter Estimates for Monthly Hazard Model of FHA Refinance in 22 MSA's -
Basic Specification Plus Tract Characteristics and Race/Ethnicity of Borrower

Residual df = 500065
 Pearson X2 = 421479.9
 Dispersion = 0.8428502
 No. of obs = 500114
 Deviance = 13388.48
 Dispersion = 0.0267735

Bernoulli distribution, cloglog link

	Coef.	Std. Err.	Z-Statistic	P> z	[95% Conf. Interval]	
trtbk	0.2398149	0.2052965	1.168	0.243	-0.1625588	0.6421886
trthsp	0.2709845	0.3736948	0.725	0.468	-0.4614439	1.003413
Intrinc	0.0281573	0.1418439	0.199	0.843	-0.2498516	0.3061663
black	-0.0684499	0.1107585	-0.618	0.537	-0.2855326	0.1486327
hisp	-0.5380828	0.1303006	-4.130	0.000	-0.7934672	-0.2826983
unemprr	-0.0299483	0.0601468	-0.498	0.619	-0.1478339	0.0879373
borage	-0.0233136	0.0038542	-6.049	0.000	-0.0308676	-0.0157595
loginc	2.424832	0.3054209	7.939	0.000	1.826218	3.023446
RSVpmts	0.0613372	0.0188685	3.251	0.001	0.0243557	0.0983188
RSVpmt4	-0.0730546	0.0205664	-3.552	0.000	-0.113364	-0.0327451
logfront	2.505006	0.3177205	7.884	0.000	1.882285	3.127726
lnbal	1.009377	0.5873929	1.718	0.086	-0.141892	2.160646
lnhval	-0.3646197	0.4937714	-0.738	0.460	-1.332394	0.6031545
condo	-18.55467	1368.454	-0.014	0.989	-2700.675	2663.565
HPrelPW	-0.5517105	0.2934265	-1.880	0.060	-1.126816	0.0233949
HPrell	-1.396364	0.7109336	-1.964	0.050	-2.789768	-0.0029593
LLmin	-18.10051	19729.97	-0.001	0.999	-38688.12	38651.92
LLmax	-0.5374196	0.3431633	-1.566	0.117	-1.210007	0.1351681
Inhorizn	1.906158	0.5261183	3.623	0.000	0.874985	2.937331
Inintrat	17.04473	0.518867	32.850	0.000	16.02777	18.06169
Inintarm	0.0034833	0.7164741	0.005	0.996	-1.40078	1.407747
rtldiff	-0.2185087	0.0943132	-2.317	0.021	-0.4033592	-0.0336582
armrtd	-0.3994383	0.0813488	-4.910	0.000	-0.558879	-0.2399975
logpirt0	7.930677	1.329951	5.963	0.000	5.324021	10.53733
t	1.684493	0.43169	3.902	0.000	0.8383964	2.53059
tt	-0.00154	0.0003297	-4.670	0.000	-0.0021863	-0.0008937
t6	-1.647443	0.4336112	-3.799	0.000	-2.497305	-0.7975805
year94	-0.2165548	0.1771212	-1.223	0.221	-0.563706	0.1305963
0520	0.7479188	0.2428061	3.080	0.002	0.2720276	1.22381
0720	0.7110855	0.1615109	4.403	0.000	0.3945298	1.027641
1920	0.397672	0.3043642	1.307	0.191	-0.1988708	0.9942148
2080	1.411776	0.2432869	5.803	0.000	0.9349421	1.888609
2160	1.350505	0.216592	6.235	0.000	0.9259928	1.775018
2680	1.334881	0.5164564	2.585	0.010	0.3226448	2.347117
2800	0.5270759	0.5382504	0.979	0.327	-0.5278756	1.582027
3360	0.0369309	0.4192358	0.088	0.930	-0.7847562	0.858618
4480	-0.4197089	0.2829142	-1.484	0.138	-0.9742105	0.1347927
4920	0.3451971	0.5340361	0.646	0.518	-0.7014944	1.391889
5000	0.4665935	0.3574499	1.305	0.192	-0.2339955	1.167182
5120	1.201887	0.2379517	5.051	0.000	0.7355107	1.668264
5960	1.703393	0.5278744	3.227	0.001	0.6687783	2.738008
6160	-0.0952356	0.1892531	-0.503	0.615	-0.4661649	0.2756938
6200	1.318433	0.2882286	4.574	0.000	0.7535153	1.88335
6780	0.4878517	0.2575658	1.894	0.058	-0.016968	0.9926715
6920	0.6370845	0.2395469	2.660	0.008	0.1675813	1.106588
7040	1.950756	0.2524322	7.728	0.000	1.455998	2.445514
8280	1.588438	0.55903	2.841	0.004	0.4927594	2.684117
8840			(dropped)			
5720	-0.9177455	0.6656882	-1.379	0.168	-2.22247	0.3869795
_cons	-64.41133	5.430633	-11.861	0.000	-75.05518	-53.76749

TABLE 11

Panel A

Parameter Estimates for Monthly Hazard Model of Claim Default in 22 MSA's -
Basic Specification Plus Tract Characteristics, Race/Ethnicity of Borrower, and FICO Score

Residual df = 500062
 Pearson X2 = 650641.2
 Dispersion = 1.301121

No. of obs = 500114
 Deviance = 7434.683
 Dispersion = 0.0148675

Bernoulli distribution, cloglog link

	Coef.	Std. Err.	Z-Statistic	P> z	[95% Conf. Interval]	
fico	-0.0093664	0.0007866	-11.907	0.000	-0.0109082	-0.0078246
NOfico	-6.039591	0.5281089	-11.436	0.000	-7.074666	-5.004517
trtblk	0.4438229	0.2423336	1.831	0.067	-0.0311422	0.918788
trthsp	-0.2611412	0.3982575	-0.656	0.512	-1.041712	0.5194291
intrinc	-0.4836739	0.1985074	-2.437	0.015	-0.8727414	-0.0946065
unemprt	0.0577455	0.0848629	0.680	0.496	-0.1085827	0.2240738
black	-0.0036598	0.146678	-0.025	0.980	-0.2911435	0.2838239
hisp	-0.1106789	0.1425163	-0.777	0.437	-0.3900057	0.1686478
borage	0.0049081	0.0050206	0.978	0.328	-0.0049321	0.0147484
loginc	-0.2192924	0.4467723	-0.491	0.624	-1.09495	0.6563652
RSVpmts	-0.1499388	0.0321112	-4.669	0.000	-0.2128756	-0.087002
RSVpmt4	0.1510139	0.0336482	4.488	0.000	0.0850647	0.2169632
logfront	0.3133854	0.4547425	0.689	0.491	-0.5778935	1.204664
lnbal	2.999894	0.7799195	3.846	0.000	1.47128	4.528508
lnhval	-2.717988	0.6445697	-4.217	0.000	-3.981321	-1.454654
condo	0.0872096	0.2464577	0.354	0.723	-0.3958386	0.5702578
HPreIPW	-0.7829595	0.4939199	-1.585	0.113	-1.751025	0.1851057
HPreILL	-1.542308	0.9858488	-1.564	0.118	-3.474536	0.3899202
LLmin	1.850002	3.135374	0.590	0.555	-4.295218	7.995221
LLmax	0.8260135	4.830061	0.171	0.864	-8.640732	10.29276
lnhorizn	1.125933	0.7756762	1.452	0.147	-0.3943647	2.64623
lninrat	0.8616751	0.5796384	1.487	0.137	-0.2743953	1.997745
lnintarm	0.6694889	0.9158931	0.731	0.465	-1.125628	2.464606
rtdiff	-0.1621532	0.1249481	-1.298	0.194	-0.4070469	0.0827406
armrtd	-0.0509729	0.0726861	-0.701	0.483	-0.1934351	0.0914893
logpirt0	1.037376	1.380409	0.751	0.452	-1.668176	3.742927
t	0.4015552	0.0939577	4.274	0.000	0.2174014	0.585709
tt	-0.0009346	0.0004047	-2.309	0.021	-0.0017279	-0.0001413
t6	-0.3361084	0.1020529	-3.293	0.001	-0.5361283	-0.1360884
year94	-0.1110722	0.2303603	-0.482	0.630	-0.5625701	0.3404257
_0520	0.0150285	0.3499372	0.043	0.966	-0.6708358	0.7008928
_0720	-0.0058125	0.2544555	-0.023	0.982	-0.5045362	0.4929111
_1920	0.3277827	0.4090263	0.801	0.423	-0.473894	1.129459
_2080	-0.3838246	0.4524784	-0.848	0.396	-1.270666	0.5030168
_2160	-0.3348094	0.3329866	-1.005	0.315	-0.9874512	0.3178323
_2680	0.3163191	0.6260984	0.505	0.613	-0.9108111	1.543449
_2800	0.3041969	0.6090437	0.499	0.617	-0.8895068	1.497901
_3360	0.3639054	0.4497783	0.809	0.418	-0.5176438	1.245455
_4480	0.7310723	0.3898225	1.875	0.061	-0.0329657	1.49511
_4920	-0.3550503	0.5589514	-0.635	0.525	-1.450575	0.7404743
_5000	0.0467941	0.4459714	0.105	0.916	-0.8272938	0.9208821
_5120	-0.4544982	0.3960139	-1.148	0.251	-1.230671	0.3216748
_5960	0.6794434	0.6161609	1.103	0.270	-0.5282098	1.887097
_6160	-0.3155553	0.2526275	-1.249	0.212	-0.810696	0.1795854
_6200	0.6296479	0.4035708	1.560	0.119	-0.1613364	1.420632
_6780	0.9767619	0.3672452	2.660	0.008	0.2569745	1.696549
_6920	0.4396953	0.3747168	1.173	0.241	-0.2947361	1.174127
_7040	0.0560153	0.3945806	0.142	0.887	-0.7173485	0.829379
_8280	0.3786382	0.6524971	0.580	0.562	-0.9002326	1.657509
_8840	-1.349826	4.814802	-0.280	0.779	-10.78666	8.087012
_5720	0.3125274	0.5752203	0.543	0.587	-0.8148836	1.439938
cons	-19.08584	6.425608	-2.970	0.003	-31.6798	-6.491875

TABLE 11

Panel B

Parameter Estimates for Monthly Hazard Model of Other Prepayment in 22 MSA's -
Basic Specification Plus Tract Characteristics, Race/Ethnicity of Borrower, and FICO Score

Residual df = 500062
Pearson X2 = 481859.1
Dispersion = 0.9635988

No. of obs = 500114
Deviance = 17313.6
Dispersion = 0.0346229

Bernoulli distribution, cloglog link

	Coef.	Std. Err.	Z-Statistic	P> z	[95% Conf. Interval]	
fico	0.0034788	0.0005237	6.643	0.000	0.0024525	0.0045052
NOfico	2.452235	0.3766707	6.510	0.000	1.713974	3.190496
trtblk	0.2991414	0.2110535	1.417	0.156	-0.1145159	0.7127986
trthsp	0.7525682	0.3243081	2.321	0.020	0.116936	1.388201
lntrtinc	0.2848318	0.1374184	2.073	0.038	0.0154967	0.5541669
unemprt	0.0644469	0.0589381	1.093	0.274	-0.0510695	0.1799634
black	-0.6868089	0.1359292	-5.053	0.000	-0.9532252	-0.4203925
hisp	-0.5046386	0.1253913	-4.025	0.000	-0.7504011	-0.2588762
borage	-0.0150722	0.0032921	-4.578	0.000	-0.0215245	-0.0086198
loginc	2.364927	0.271524	8.710	0.000	1.83275	2.897104
RSVpmts	-0.0350405	0.017621	-1.989	0.047	-0.0695771	-0.0005039
RSVpmt4	0.035511	0.0182794	1.943	0.052	-0.000316	0.071338
logfront	2.001866	0.2806217	7.134	0.000	1.451857	2.551874
lnbal	-2.810864	0.3233836	-8.692	0.000	-3.444684	-2.177044
lnhval	1.678834	0.197468	8.502	0.000	1.291804	2.065865
condo	0.4713743	0.1313046	3.590	0.000	0.214022	0.7287266
HPreIPW	-0.2933825	0.2461113	-1.192	0.233	-0.7757519	0.1889868
HPreLL	0.0762983	0.529948	0.144	0.886	-0.9623807	1.114977
LLmin	2.843813	1.475897	1.927	0.054	-0.0488917	5.736518
LLmax	16.03377	1318.824	0.012	0.990	-2568.813	2600.881
lnhorizn	0.4494441	0.2189168	2.053	0.040	0.020375	0.8785132
lnintrat	3.485342	0.3937893	8.851	0.000	2.713529	4.257154
lnintarm	-0.0260295	0.6183337	-0.042	0.966	-1.237941	1.185882
rtldiff	0.3108356	0.0795305	3.908	0.000	0.1549587	0.4667125
armrtd	0.006174	0.048325	0.128	0.898	-0.0885413	0.1008893
logpirto	4.60217	0.7334979	6.274	0.000	3.164541	6.0398
t	0.3494272	0.0752532	4.643	0.000	0.2019337	0.4969207
tt	-0.0022529	0.0002583	-8.724	0.000	-0.0027591	-0.0017468
t6	-0.1785113	0.0808335	-2.208	0.027	-0.336942	-0.0200806
year94	0.7225418	0.1378865	5.240	0.000	0.4522891	0.9927944
_0520	-0.0126223	0.1974268	-0.064	0.949	-0.3995717	0.374327
_0720	-0.9129647	0.1711639	-5.334	0.000	-1.24844	-0.5774896
_1920	-0.8131204	0.261007	-3.115	0.002	-1.324685	-0.301556
_2080	0.7735709	0.1903842	4.063	0.000	0.4004247	1.146717
_2160	0.211496	0.1635606	1.293	0.196	-0.109077	0.5320689
_2680	-0.3527683	0.3783412	-0.932	0.351	-1.094303	0.3887669
_2800	-0.5637531	0.378345	-1.490	0.136	-1.305296	0.1777893
_3360	-0.616245	0.3088433	-1.995	0.046	-1.221567	-0.0109233
_4480	-1.850855	0.3368988	-5.494	0.000	-2.511164	-1.190545
_4920	-0.3058779	0.3601454	-0.849	0.396	-1.01175	0.399994
_5000	-0.344445	0.2840031	-1.213	0.225	-0.9010808	0.2121909
_5120	0.0719278	0.204936	0.351	0.726	-0.3297393	0.4735949
_5960	-1.296823	0.4819568	-2.691	0.007	-2.241441	-0.352205
_6160	-1.089923	0.1785534	-6.104	0.000	-1.439881	-0.7399648
_6200	0.1755668	0.2338048	0.751	0.453	-0.2826821	0.6338158
_6780	-1.30038	0.2899423	-4.485	0.000	-1.868657	-0.7321038
_6920	-1.563557	0.4433314	-3.527	0.000	-2.43247	-0.6946429
_7040	0.2370426	0.2136332	1.110	0.267	-0.1816707	0.6557559
_8280	-0.211525	0.4084704	-0.518	0.605	-1.012112	0.5890622
_8840	-16.85192	1318.824	-0.013	0.990	-2601.699	2567.995
_5720	-0.58105	0.3668755	-1.584	0.113	-1.300113	0.1380127
_cons	-22.79246	3.049917	-7.473	0.000	-28.77019	-16.81473

TABLE 11

Panel C

Parameter Estimates for Monthly Hazard Model of FHA Refinance in 22 MSA's -
Basic Specification Plus Tract Characteristics, Race/Ethnicity of Borrower, and FICO Score

Residual df	= 500063	No. of obs	= 500114
Pearson X2	= 428595.1	Deviance	= 13382.39
Dispersion	= 0.8570822	Dispersion	= 0.0267614

Bernoulli distribution, cloglog link

	Coef.	Std. Err.	Z-Statistic	P> z	[95% Conf. Interval]	
fico	0.0011496	0.0005237	2.195	0.028	0.0001231	0.0021761
NOfico	0.6304651	0.3883335	1.624	0.104	-0.1306547	1.391585
trtblk	0.2500806	0.2054654	1.217	0.224	-0.1526243	0.6527855
trthsp	0.2946126	0.3740229	0.788	0.431	-0.4384589	1.027684
intrinc	0.0291703	0.1416515	0.206	0.837	-0.2484617	0.3068022
unemprr	-0.0271489	0.0601874	-0.451	0.652	-0.145114	0.0908163
black	-0.0303591	0.1120751	-0.271	0.786	-0.2500222	0.1893041
hisp	-0.5242221	0.1304756	-4.018	0.000	-0.7799496	-0.2684945
borage	-0.0232442	0.0038494	-6.038	0.000	-0.0307888	-0.0156996
loginc	2.438111	0.3059654	7.969	0.000	1.83843	3.037792
RSVpmts	0.0547877	0.0191018	2.868	0.004	0.0173488	0.0922265
RSVpmt4	-0.0667029	0.0207772	-3.210	0.001	-0.1074254	-0.0259804
logfront	2.509406	0.3182843	7.884	0.000	1.88558	3.133232
lnbal	0.9827744	0.5897598	1.666	0.096	-0.1731336	2.138682
lnhval	-0.3423566	0.4961017	-0.690	0.490	-1.314698	0.6299849
condo	-18.57097	1367.189	-0.014	0.989	-2698.213	2661.071
HPreIPW	-0.5729159	0.2941518	-1.948	0.051	-1.149443	0.003611
HPreILL	-1.439625	0.7111122	-2.024	0.043	-2.83338	-0.0458711
LLmin	-18.13981	19564.32	-0.001	0.999	-38363.51	38327.23
LLmax	-0.5626698	0.3436377	-1.637	0.102	-1.236187	0.1108477
Inhorizn	1.927572	0.5265017	3.661	0.000	0.8956479	2.959496
lnintrat	17.04264	0.5199396	32.778	0.000	16.02358	18.06171
lnintarm	0.0398024	0.7176877	0.055	0.956	-1.36684	1.446444
rtdiff	-0.2133046	0.0948829	-2.248	0.025	-0.3992717	-0.0273375
armrtd	-0.4006534	0.0814249	-4.921	0.000	-0.5602433	-0.2410634
logpirto	7.901943	1.330476	5.939	0.000	5.294258	10.50963
t	1.682951	0.4314709	3.900	0.000	0.8372837	2.528619
tt	-0.0015414	0.0003305	-4.664	0.000	-0.0021892	-0.0008937
t6	-1.645206	0.4333976	-3.796	0.000	-2.49465	-0.7957622
year94	-0.1942334	0.1777304	-1.093	0.274	-0.5425785	0.1541118
0520	0.7634083	0.243105	3.140	0.002	0.2869313	1.239885
0720	0.7148972	0.16194	4.415	0.000	0.3975006	1.032294
1920	0.4054092	0.3047349	1.330	0.183	-0.1918602	1.002679
2080	1.413806	0.2437695	5.800	0.000	0.9360266	1.891586
2160	1.359884	0.2169684	6.268	0.000	0.9346332	1.785134
2680	1.353797	0.5157155	2.625	0.009	0.3430129	2.364581
2800	0.5359077	0.5378464	0.996	0.319	-0.5182519	1.590067
3360	0.0733927	0.4197162	0.175	0.861	-0.749236	0.8960214
4480	-0.4441263	0.2833776	-1.567	0.117	-0.9995361	0.1112836
4920	0.3635464	0.5340425	0.681	0.496	-0.6831576	1.41025
5000	0.4656795	0.3582149	1.300	0.194	-0.2364089	1.167768
5120	1.196487	0.2384238	5.018	0.000	0.7291851	1.663789
5960	1.72478	0.5280768	3.266	0.001	0.6897688	2.759792
6160	-0.0896149	0.1893225	-0.473	0.636	-0.4606802	0.2814504
6200	1.321194	0.2887967	4.575	0.000	0.7551625	1.887225
6780	0.472351	0.2576489	1.833	0.067	-0.0326315	0.9773335
6920	0.6051587	0.2399874	2.522	0.012	0.1347921	1.075525
7040	1.961621	0.2528367	7.758	0.000	1.46607	2.457171
8280	1.617666	0.559278	2.892	0.004	0.5215014	2.713831
8840			(dropped)			
5720	-0.9120996	0.6658038	-1.370	0.171	-2.217051	0.3928518
cons	-65.31051	5.45418	-11.974	0.000	-76.00051	-54.62051

TABLE 12

Panel A

Parameter Estimates for Monthly Hazard Model of Claim Default in 22 MSA's -
Tract Characteristics Plus Duration, Year, and MSA Indicators

Residual df = 500085
 Pearson X2 = 489652.8
 Dispersion = 0.9791391

No. of obs = 500114
 Deviance = 7680.458
 Dispersion = 0.0153583

Bernoulli distribution, cloglog link

	Coef.	Std. Err.	Z-Statistic	P> z	[95% Conf. Interval]	
trtblk	0.9180811	0.202655	4.530	0.000	0.5208846	1.315277
trthsp	-0.1386288	0.365008	-0.380	0.704	-0.8540315	0.5767738
Intrtinc	-0.6234497	0.1802162	-3.459	0.001	-0.976667	-0.2702325
t	0.4311828	0.0925656	4.658	0.000	0.2497575	0.6126081
tt	-0.0007938	0.0003857	-2.058	0.040	-0.0015499	-0.0000378
t6	-0.3704001	0.100671	-3.679	0.000	-0.5677117	-0.1730885
year94	0.1847877	0.1090435	1.695	0.090	-0.0289337	0.398509
_0520	-0.3602348	0.2713947	-1.327	0.184	-0.8921586	0.171689
_0720	0.0146645	0.2388196	0.061	0.951	-0.4534133	0.4827423
_1920	-0.1888958	0.2834174	-0.666	0.505	-0.7443837	0.3665921
_2080	-1.098055	0.3754197	-2.925	0.003	-1.833864	-0.3622461
_2160	-0.3521706	0.2678623	-1.315	0.189	-0.8771712	0.1728299
_2680	-0.0046219	0.3433989	-0.013	0.989	-0.6776713	0.6684275
_2800	-0.1418488	0.4024561	-0.352	0.724	-0.9306484	0.6469507
_3360	0.1037819	0.3283942	0.316	0.752	-0.539859	0.7474228
_4480	1.345964	0.2056845	6.544	0.000	0.9428303	1.749099
_4920	-0.7063882	0.3540994	-1.995	0.046	-1.40041	-0.0123662
_5000	-0.0164581	0.3814562	-0.043	0.966	-0.7640985	0.7311822
_5120	-0.9002294	0.2871132	-3.135	0.002	-1.462961	-0.3374979
_5960	0.3933426	0.3005091	1.309	0.191	-0.1956444	0.9823297
_6160	-0.0014475	0.2322325	-0.006	0.995	-0.4566148	0.4537198
_6200	-0.0470049	0.2509865	-0.187	0.851	-0.5389295	0.4449196
_6780	1.44256	0.1871251	7.709	0.000	1.075802	1.809319
_6920	0.5825189	0.3346366	1.741	0.082	-0.0733567	1.238395
_7040	-0.3079015	0.2998868	-1.027	0.305	-0.8956689	0.2798659
_8280	-0.0878459	0.337871	-0.260	0.795	-0.750061	0.5743691
_8840	0.1089989	0.2273964	0.479	0.632	-0.3366899	0.5546878
_5720	-0.1224637	0.3394723	-0.361	0.718	-0.7878172	0.5428898
_cons	-3.52626	2.017719	-1.748	0.081	-7.480916	0.4283965

TABLE 12

Panel B

Parameter Estimates for Monthly Hazard Model of Other Prepayment in 22 MSA's -
Tract Characteristics Plus Duration, Year, and MSA Indicators

Residual df	= 500085	No. of obs	= 500114
Pearson X2	= 523673.8	Deviance	= 17865.79
Dispersion	= 1.04717	Dispersion	= 0.0357255

Bernoulli distribution, cloglog link

	Coef.	Std. Err.	Z-Statistic	P> z	[95% Conf. Interval]	
trtblk	-0.6478197	0.1761797	-3.677	0.000	-0.9931255	-0.3025139
trthsp	0.1392481	0.2924752	0.476	0.634	-0.4339928	0.712489
lntrinc	0.658798	0.1321731	4.984	0.000	0.3997435	0.9178526
t	0.4950145	0.0765442	6.467	0.000	0.3449906	0.6450384
tt	-0.0007767	0.0002311	-3.361	0.001	-0.0012296	-0.0003238
t6	-0.4120987	0.0811485	-5.078	0.000	-0.5711467	-0.2530506
year94	0.1572061	0.0732921	2.145	0.032	0.0135563	0.3008559
_0520	-0.5817029	0.1432058	-4.062	0.000	-0.8623812	-0.3010247
_0720	-1.063479	0.1642752	-6.474	0.000	-1.385452	-0.7415052
_1920	-1.333231	0.1948386	-6.843	0.000	-1.715107	-0.9513544
_2080	0.462878	0.0984959	4.699	0.000	0.2698297	0.6559263
_2160	-0.0426046	0.1236096	-0.345	0.730	-0.284875	0.1996657
_2680	-0.4516201	0.1917453	-2.355	0.019	-0.827434	-0.0758062
_2800	-0.7008556	0.2257831	-3.104	0.002	-1.143382	-0.2583289
_3360	-1.276109	0.2562045	-4.981	0.000	-1.778261	-0.7739572
_4480	-1.51474	0.2647636	-5.721	0.000	-2.033667	-0.9958129
_4920	-0.5178016	0.1758555	-2.944	0.003	-0.862472	-0.1731312
_5000	-0.3997876	0.235676	-1.696	0.090	-0.8617041	0.0621289
_5120	-0.432196	0.1081468	-3.996	0.000	-0.6441598	-0.2202321
_5960	-1.576747	0.346545	-4.550	0.000	-2.255963	-0.8975312
_6160	-1.257878	0.1717124	-7.325	0.000	-1.594428	-0.9213281
_6200	-0.4864342	0.1292449	-3.764	0.000	-0.7397495	-0.2331189
_6780	-1.255032	0.2004573	-6.261	0.000	-1.647921	-0.8621426
_6920	-1.661895	0.4318653	-3.848	0.000	-2.508335	-0.8154542
_7040	-0.421887	0.1466748	-2.876	0.004	-0.7093643	-0.1344096
_8280	-0.5540287	0.2019504	-2.743	0.006	-0.9498443	-0.1582131
_8840	-0.7651056	0.1397157	-5.476	0.000	-1.038943	-0.4912678
_5720	-0.5534437	0.2031061	-2.725	0.006	-0.9515243	-0.1553632
_cons	-16.09036	1.500194	-10.726	0.000	-19.03068	-13.15003

TABLE 12

Panel C

Parameter Estimates for Monthly Hazard Model of FHA Refinance in 22 MSA's -
Tract Characteristics Plus Duration, Year, and MSA Indicators

Residual df	= 500085	No. of obs	= 500114
Pearson X2	= 539307.8	Deviance	= 16113.03
Dispersion	= 1.078432	Dispersion	= 0.0322206

Bernoulli distribution, cloglog link

	Coef.	Std. Err.	Z-Statistic	P> z	[95% Conf. Interval]	
trtblk	-0.1256242	0.1740538	-0.722	0.470	-0.4667634	0.2155149
trthsp	-0.0795101	0.3401618	-0.234	0.815	-0.746215	0.5871948
Intrtinc	0.6413137	0.1367345	4.690	0.000	0.3733189	0.9093084
t	2.765458	0.467544	5.915	0.000	1.849088	3.681827
tt	-0.0022547	0.0003371	-6.688	0.000	-0.0029154	-0.001594
t6	-2.698894	0.469115	-5.753	0.000	-3.618342	-1.779445
year94	0.2627704	0.0626833	4.192	0.000	0.1399133	0.3856274
_0520	0.1554179	0.1711321	0.908	0.364	-0.1799949	0.4908307
_0720	0.6714588	0.1477767	4.544	0.000	0.3818218	0.9610957
_1920	-0.3181148	0.2066294	-1.540	0.124	-0.723101	0.0868715
_2080	0.6366888	0.1469566	4.332	0.000	0.3486593	0.9247184
_2160	0.4349011	0.1641654	2.649	0.008	0.1131427	0.7566594
_2680	0.2966132	0.2201455	1.347	0.178	-0.134864	0.7280904
_2800	-0.4888771	0.3140368	-1.557	0.120	-1.104378	0.1266237
_3360	-0.9264244	0.3541535	-2.616	0.009	-1.620552	-0.2322963
_4480	0.3896063	0.1935067	2.013	0.044	0.0103401	0.7688725
_4920	-0.8626715	0.3155194	-2.734	0.006	-1.481078	-0.244265
_5000	-0.2148872	0.3194681	-0.673	0.501	-0.8410331	0.4112587
_5120	0.6024621	0.1357437	4.438	0.000	0.3364094	0.8685149
_5960	0.5447473	0.2194952	2.482	0.013	0.1145446	0.9749499
_6160	-0.0885852	0.1794124	-0.494	0.621	-0.440227	0.2630566
_6200	0.272757	0.1612719	1.691	0.091	-0.04333	0.5888441
_6780	0.7796764	0.1555473	5.012	0.000	0.4748093	1.084544
_6920	0.7430452	0.2187513	3.397	0.001	0.3143006	1.17179
_7040	0.899531	0.1534082	5.864	0.000	0.5988564	1.200206
_8280	0.0039265	0.2553567	0.015	0.988	-0.4965634	0.5044163
_8840	0.2612099	0.154689	1.689	0.091	-0.0419749	0.5643948
_5720	-1.55259	0.5073134	-3.060	0.002	-2.546906	-0.5582744
_cons	-29.48169	3.168101	-9.306	0.000	-35.69105	-23.27232

Table 13

Names and Definitions of Explanatory Variables in Regression Models

VARIABLE DESCRIPTION	NAME
Neighborhood Controls:	
Pct of tract population that is black (1990)	blkpct
Pct of tract population that is Hispanic (1990)	hspcct
Median tract income (1990)	medinc
Contemporaneous Chicago MSA unemployment rate	unemmsa unemsa
Tract unemployment rate (1990)	tractune
Characteristics of Borrowers in Quarter:	
Log of average income of borrowers	loginc
Log of average assets among borrowers having positive assets	logass
Fraction of borrowers with no assets	ass0rt
Market Characteristics:	
Contemporaneous market rate on 30-year fixed-rate mortgages	FRM30
Log of contemporaneous house price index in Chicago MSA	loghindx lghind
Quarterly tract default rate (%) on homes originated in previous six years	defrt
With lag of x quarters	ldefx
Quarterly tract prepayment rate (%) on homes originated in previous six years	preprt
With lag of x quarters	lprepx
Log of average price of homes sold in tract for the quarter	logpric2 logpr2
Miscellaneous:	
Proportional change from last quarter in home sales in tract	sampchg
Time trend (number of quarters since arbitrary date in past)	amtq

NOTE: The abbreviation "S4" appearing before or after a variable name denotes the difference between the current value of the variable and the value 4 quarters earlier. The abbreviation "Lx," where x is an integer, appearing before or after a variable name denotes a lag of x quarters.

TABLE 14

Panel A

Least Squares Regression Estimates - Log of House Prices in Chicago MSA - Four Lags of Default and Prepayment Rates

Source	SS	df	MS			
Model	96.621537	22	4.39188804	Number of obs	= 2774	
Residual	31.5778532	2751	0.011478682	F(22, 2751)	= 382.61	
Total	128.19939	2773	0.046231298	Prob > F	= 0	
				R-squared	= 0.7537	
				Adj R-squared	= 0.7517	
				Root MSE	= .10714	

	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
sampchg	-0.0014323	0.0016161	-0.886	0.376	-0.0046011	0.0017365
logpric2						
L4	0.734203	0.0116399	63.076	0.000	0.7113792	0.7570268
defrt						
L1	-0.0171955	0.0046457	-3.701	0.000	-0.0263049	-0.008086
L2	-0.0051137	0.0047073	-1.086	0.277	-0.014344	0.0041165
L3	-0.0107336	0.0044494	-2.412	0.016	-0.019458	-0.0020091
L4	-0.0044706	0.0045165	-0.990	0.322	-0.0133268	0.0043856
preprt						
--	0.0028565	0.0013986	2.042	0.041	0.0001141	0.005599
L1	0.0015129	0.0011428	1.324	0.186	-0.0007279	0.0037537
L2	-0.0003772	0.0011783	-0.320	0.749	-0.0026875	0.0019332
L3	0.0014639	0.001172	1.249	0.212	-0.0008341	0.003762
L4	0.0000442	0.0012153	0.036	0.971	-0.0023387	0.0024271
FRM30						
S4	0.0061169	0.0031378	1.949	0.051	-0.0000359	0.0122696
unemmsa						
S4	0.0342218	0.0056302	6.078	0.000	0.023182	0.0452616
tractune	-0.2917828	0.1135503	-2.570	0.010	-0.5144353	-0.0691303
amtq	0.0037612	0.0007008	5.367	0.000	0.002387	0.0051355
loginc						
S4	0.1207035	0.0106253	11.360	0.000	0.0998692	0.1415379
logass						
S4	0.0151886	0.0040053	3.792	0.000	0.0073348	0.0230423
ass0rt						
S4	-0.1379532	0.0145478	-9.483	0.000	-0.1664788	-0.1094275
loghindx						
S4	1.93764	0.4623898	4.190	0.000	1.030973	2.844306
blkpct	-0.0690825	0.0143621	-4.810	0.000	-0.097244	-0.040921
hsppct	0.0285718	0.0192403	1.485	0.138	-0.0091551	0.0662986
medinc	-0.0160881	0.0147011	-1.094	0.274	-0.0449144	0.0127382
_cons	2.518672	0.1529202	16.470	0.000	2.218822	2.818522

TABLE 14

Panel B

Least Squares Regression Estimates - Log of House Prices in Chicago MSA - Six Lags of Default and Prepayment Rates

Source	SS	df	MS			
Model	96.749563	26	3.72113704	Number of obs	= 2774	
Residual	31.4498272	2747	0.01144879	F(26, 2747)	= 325.02	
Total	128.19939	2773	0.046231298	Prob > F	= 0	
				R-squared	= 0.7547	
				Adj R-squared	= 0.7524	
				Root MSE	= .107	

	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
sampchg	-0.0010381	0.001626	-0.638	0.523	-0.0042264	0.0021501
logpric2						
L4	0.7303189	0.0116842	62.505	0.000	0.7074081	0.7532297
deft						
L1	-0.016402	0.0046471	-3.530	0.000	-0.0255142	-0.0072899
L2	-0.004111	0.0047218	-0.871	0.384	-0.0133697	0.0051476
L3	-0.0098683	0.0044578	-2.214	0.027	-0.0186092	-0.0011273
L4	-0.0037149	0.0045167	-0.822	0.411	-0.0125713	0.0051416
L5	-0.0039091	0.0046035	-0.849	0.396	-0.0129357	0.0051176
L6	-0.0084956	0.0046295	-1.835	0.067	-0.0175732	0.000582
preprt						
--	0.0027141	0.0013985	1.941	0.052	-0.0000281	0.0054563
L1	0.0014545	0.0011514	1.263	0.207	-0.0008033	0.0037122
L2	-0.0001002	0.0011896	-0.084	0.933	-0.0024329	0.0022324
L3	0.0010178	0.0011987	0.849	0.396	-0.0013326	0.0033682
L4	-0.0008517	0.0012637	-0.674	0.500	-0.0033295	0.0016261
L5	0.0016325	0.0010792	1.513	0.130	-0.0004835	0.0037486
L6	0.0018848	0.0010589	1.780	0.075	-0.0001915	0.003961
FRM30						
S4	0.0091466	0.0034109	2.682	0.007	0.0024583	0.0158348
unemmsa						
S4	0.0368844	0.0058012	6.358	0.000	0.0255092	0.0482597
tractune	-0.2696	0.113751	-2.370	0.018	-0.4926461	-0.0465538
amtq	0.0046636	0.0007708	6.051	0.000	0.0031523	0.0061749
loginc						
S4	0.1214331	0.0106234	11.431	0.000	0.1006023	0.1422638
logass						
S4	0.0150363	0.0040128	3.747	0.000	0.0071678	0.0229048
ass0rt						
S4	-0.1274365	0.0150543	-8.465	0.000	-0.1569553	-0.0979177
loghindx						
S4	2.177436	0.4771148	4.564	0.000	1.241896	3.112976
blkpct	-0.0630873	0.014475	-4.358	0.000	-0.0914703	-0.0347044
hsppct	0.0275816	0.0192983	1.429	0.153	-0.010259	0.0654222
medinc	-0.0225406	0.0148196	-1.521	0.128	-0.0515993	0.006518
_cons	2.425001	0.1586043	15.290	0.000	2.114005	2.735996

TABLE 14

Panel C

Least Squares Regression Estimates - Log of House Prices in Chicago MSA - Eight Lags of Default and Prepayment Rates

Number of obs = 2774
 F(30, 2743) = 282.78
 Prob > F = 0
 R-squared = 0.7557
 Adj R-squared = 0.753
 Root MSE = .10686

Source	SS	df	MS				
Model	96.8761583	30	3.22920528				
Residual	31.3232318	2743	0.011419334				
Total	128.19939	2773	0.046231298				

	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
sampchg	-0.0009049	0.0016251	-0.557	0.578	-0.0040915	0.0022818
logpric2						
L4	0.7260969	0.0117832	61.621	0.000	0.7029919	0.7492018
defrt						
L1	-0.0158533	0.004645	-3.413	0.001	-0.0249613	-0.0067454
L2	-0.0038696	0.004732	-0.818	0.414	-0.0131482	0.005409
L3	-0.0095382	0.0044628	-2.137	0.033	-0.0182889	-0.0007874
L4	-0.0039396	0.0045232	-0.871	0.384	-0.0128089	0.0049297
L5	-0.0037373	0.0046102	-0.811	0.418	-0.0127771	0.0053025
L6	-0.0077205	0.0046321	-1.667	0.096	-0.0168033	0.0013622
L7	-0.0023676	0.0046466	-0.510	0.610	-0.0114788	0.0067436
L8	0.0017248	0.0045531	0.379	0.705	-0.007203	0.0106525
preprt						
--	0.0030655	0.0014016	2.187	0.029	0.0003172	0.0058139
L1	0.0018415	0.0011561	1.593	0.111	-0.0004255	0.0041085
L2	0.0004885	0.0012018	0.406	0.684	-0.0018681	0.0028451
L3	0.0007493	0.0012018	0.623	0.533	-0.0016072	0.0031058
L4	-0.0011263	0.0012715	-0.886	0.376	-0.0036195	0.0013668
L5	0.0009321	0.0011007	0.847	0.397	-0.0012261	0.0030902
L6	0.0008491	0.0011124	0.763	0.445	-0.0013321	0.0030302
L7	0.0027901	0.0010318	2.704	0.007	0.0007669	0.0048133
L8	0.0011024	0.001034	1.066	0.286	-0.0009252	0.00313
FRM30						
S4	0.0134926	0.0036631	3.683	0.000	0.00631	0.0206752
unemmsa						
S4	0.0342333	0.0061659	5.552	0.000	0.0221429	0.0463236
tractune	-0.2630858	0.1144026	-2.300	0.022	-0.4874097	-0.0387619
amtq	0.005906	0.0008731	6.764	0.000	0.0041939	0.007618
loginc						
S4	0.1225708	0.0106173	11.544	0.000	0.101752	0.1433895
logass						
S4	0.0148685	0.0040115	3.707	0.000	0.0070027	0.0227343
ass0rt						
S4	-0.1247682	0.0150741	-8.277	0.000	-0.154326	-0.0952104
loghindx						
S4	1.911989	0.5054475	3.783	0.000	0.9208932	2.903086
blkpct	-0.0575322	0.0145971	-3.941	0.000	-0.0861545	-0.0289098
hsppct	0.0314775	0.0194037	1.622	0.105	-0.0065698	0.0695248
medinc	-0.0276772	0.0149082	-1.857	0.063	-0.0569095	0.0015552
_cons	2.294887	0.1636719	14.021	0.000	1.973954	2.61582

Table 15

Regression with Fixed Effects - Log of House Prices in Chicago MSA

Fixed-effects (within) regression
Group variable (i) : panel

Number of obs = 2774
Number of groups = 384

R-sq: within = 0.3497
 between = 0.2316
 overall = 0.1454

Obs per group: min = 1
 avg = 7.2
 max = 15

corr(u_i, Xb) = 0.1361

F(22,2368) = 57.89
Prob > F = 0.0000

	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
sampchg	-0.0013523	0.001352	-1	0.317	-0.0040035	0.001299
l4logpr2	0.022028	0.0186485	1.181	0.238	-0.0145412	0.0585971
ldef1	-0.0124811	0.003953	-3.157	0.002	-0.0202327	-0.0047295
ldef2	0.001335	0.0039433	0.339	0.735	-0.0063977	0.0090677
ldef3	-0.0035567	0.0039063	-0.911	0.363	-0.0112168	0.0041033
ldef4	-0.0007159	0.0038416	-0.186	0.852	-0.0082491	0.0068174
ldef5	-0.0030421	0.0038454	-0.791	0.429	-0.0105828	0.0044987
ldef6	-0.0027076	0.0038791	-0.698	0.485	-0.0103145	0.0048992
preprt	0.0010586	0.0011463	0.923	0.356	-0.0011893	0.0033065
lprep1	-0.0015861	0.0009317	-1.702	0.089	-0.0034131	0.0002409
lprep2	-0.0008535	0.0009367	-0.911	0.362	-0.0026904	0.0009834
lprep3	0.0003708	0.0009489	0.391	0.696	-0.0014899	0.0022315
lprep4	-0.0010335	0.0010016	-1.032	0.302	-0.0029976	0.0009306
lprep5	-0.0002009	0.0008576	-0.234	0.815	-0.0018826	0.0014808
lprep6	-0.0009648	0.0008468	-1.139	0.255	-0.0026254	0.0006958
s4FRM30	0.0037277	0.0026273	1.419	0.156	-0.0014243	0.0088797
s4unemsa	0.0152075	0.0046802	3.249	0.001	0.0060298	0.0243853
tractune	(dropped)					
amtq	0.0097528	0.0006322	15.426	0.00	0.008513	0.0109926
s4loginc	0.0504035	0.0085366	5.904	0.00	0.0336635	0.0671435
s4logass	0.0037088	0.0032229	1.151	0.25	-0.0026112	0.0100289
s4ass0rt	-0.0696236	0.0119896	-5.807	0.00	-0.0931347	-0.0461124
s4lghind	1.131011	0.3657636	3.092	0.002	0.4137609	1.848261
blkpct	(dropped)					
hsppct	(dropped)					
medinc	(dropped)					
_cons	9.821508	0.2110921	46.527	0.00	9.407563	10.23545

sigma_u	0.21533433
sigma_e	0.07814989
rho	0.88361589 (fraction of variance due to u_i)

F test that all u_i=0: F(383,2368) = 7.26 Prob > F = 0.0000

TABLE 16

Panel A

Least Squares Regression Estimates - Log of House Prices in Chicago MSA - Six Lags and Two Leads of Default and Prepayment Rates

Source	SS	df	MS	Number of obs = 2518		
Model	87.6194505	30	2.92064835	F(30, 2487)	= 253.49	
Residual	28.6547913	2487	0.01152183	Prob > F	= 0	
Total	116.274242	2517	0.046195567	R-squared	= 0.7536	
				Adj R-squared	= 0.7506	
				Root MSE	= .10734	

	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
sampchg	-0.0000483	0.001667	-0.029	0.977	-0.0033171	0.0032206
defrt						
F1	-0.0076274	0.0049799	-1.532	0.126	-0.0173926	0.0021378
F2	-0.0041968	0.0051219	-0.819	0.413	-0.0142404	0.0058468
preprt						
F1	0.0026368	0.0017911	1.472	0.141	-0.0008753	0.0061489
F2	0.0044635	0.001811	2.465	0.014	0.0009123	0.0080147
logpric2						
L4	0.727116	0.0123212	59.014	0.000	0.7029552	0.7512768
defrt						
L1	-0.015237	0.0049685	-3.067	0.002	-0.0249799	-0.0054942
L2	-0.0057928	0.0049461	-1.171	0.242	-0.0154916	0.003906
L3	-0.0090551	0.0047455	-1.908	0.056	-0.0183607	0.0002504
L4	-0.0020521	0.0047895	-0.428	0.668	-0.011444	0.0073398
L5	-0.0038078	0.0048383	-0.787	0.431	-0.0132954	0.0056797
L6	-0.0087513	0.0050772	-1.724	0.085	-0.0187073	0.0012048
preprt						
--	0.0011374	0.0015071	0.755	0.451	-0.0018179	0.0040926
L1	0.0008651	0.0012194	0.709	0.478	-0.001526	0.0032563
L2	-0.0000593	0.0012388	-0.048	0.962	-0.0024885	0.0023699
L3	0.000637	0.0012396	0.514	0.607	-0.0017937	0.0030677
L4	-0.0007083	0.0013117	-0.540	0.589	-0.0032804	0.0018639
L5	0.0012643	0.0011418	1.107	0.268	-0.0009747	0.0035033
L6	0.0014317	0.0011204	1.278	0.201	-0.0007653	0.0036287
FRM30						
S4	0.0110963	0.0036199	3.065	0.002	0.003998	0.0181945
unemmsa						
S4	0.0345645	0.0063111	5.477	0.000	0.0221889	0.04694
tractune	-0.2979213	0.1204337	-2.474	0.013	-0.5340819	-0.0617607
amtq	0.0038984	0.0011602	3.360	0.001	0.0016233	0.0061734
loginc						
S4	0.110214	0.0109309	10.083	0.000	0.0887795	0.1316486
logass						
S4	0.0156316	0.0042147	3.709	0.000	0.0073669	0.0238963
ass0rt						
S4	-0.1299464	0.0155353	-8.365	0.000	-0.1604099	-0.0994829
loghindx						
S4	2.120461	0.5541851	3.826	0.000	1.033749	3.207172
blkpct	-0.0640244	0.0154206	-4.152	0.000	-0.0942628	-0.0337859
hspcct	0.0163849	0.0205309	0.798	0.425	-0.0238745	0.0566443
medinc	-0.0361314	0.0159762	-2.262	0.024	-0.0674594	-0.0048035
_cons	2.584455	0.2099371	12.311	0.000	2.172785	2.996125

TABLE 16

Panel B

Regression with Fixed Effects - Log of House Prices in Chicago MSA - Six Lags and Two Leads of Default and Prepayment Rates

Fixed-effects (within) regression
Group variable (i) : panel

Number of obs = 2518
Number of groups = 371

R-sq: within = 0.3269
 between = 0.1266
 overall = 0.0925

Obs per group: min = 1
 avg = 6.8
 max = 14

corr(u_i, Xb) = 0.0631

F(26,2121) = 39.61
Prob > F = 0.0000

	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
sampchg	-0.000609	0.0013779	-0.442	0.659	-0.0033112	0.0020933
def1F	0.002537	0.0043347	0.585	0.558	-0.0059637	0.0110376
def2F	0.0012608	0.0042839	0.294	0.769	-0.0071403	0.0096618
prep1F	-0.0007084	0.0003953	-1.792	0.073	-0.0014836	0.0000667
prep2F	0.0000366	0.0003766	0.097	0.922	-0.0007018	0.0007751
l4logpr2	0.0114898	0.0195048	0.589	0.556	-0.0267607	0.0497402
ldef1	-0.0118713	0.0041764	-2.842	0.005	-0.0200616	-0.0036811
ldef2	0.0007424	0.0042196	0.176	0.860	-0.0075326	0.0090174
ldef3	-0.0055336	0.0041807	-1.324	0.186	-0.0137323	0.0026651
ldef4	-0.0029845	0.0041104	-0.726	0.468	-0.0110454	0.0050764
ldef5	-0.0024917	0.0040653	-0.613	0.540	-0.010464	0.0054807
ldef6	-0.0023825	0.0042019	-0.567	0.571	-0.0106227	0.0058578
preprt	0.0000216	0.0012325	0.018	0.986	-0.0023954	0.0024386
lprep1	-0.0019993	0.0009814	-2.037	0.042	-0.0039238	-0.0000748
lprep2	-0.000567	0.0009661	-0.587	0.557	-0.0024616	0.0013275
lprep3	0.0003776	0.0009738	0.388	0.698	-0.0015321	0.0022872
lprep4	-0.0011001	0.0010288	-1.069	0.285	-0.0031176	0.0009175
lprep5	-0.0008128	0.0009076	-0.896	0.371	-0.0025926	0.000967
lprep6	-0.0013662	0.0008992	-1.519	0.129	-0.0031297	0.0003973
s4FRM30	0.0019906	0.0027784	0.716	0.474	-0.003458	0.0074393
s4unemsa	0.0140845	0.0049528	2.844	0.005	0.0043716	0.0237974
amtq	0.0087795	0.0009434	9.307	0.000	0.0069295	0.0106295
s4loginc	0.0418364	0.0087124	4.802	0.000	0.0247506	0.0589222
s4logass	0.004432	0.0033861	1.309	0.191	-0.0022084	0.0110724
s4ass0rt	-0.062275	0.0123702	-5.034	0.000	-0.086534	-0.038016
s4lghind	0.607343	0.4279347	1.419	0.156	-0.2318724	1.446558
_cons	10.11136	0.2462527	41.061	0.000	9.628435	10.59428
sigma_u	0.22246933					
sigma_e	0.07744164					
rho	0.89192236	(fraction of variance due to u_i)				

F test that all u_i=0:

F(370,2121) = 7.22

Prob > F = 0.0000

TABLE 17

Parameter Estimates for Claim Default Hazard in Selected Portions of Chicago MSA -
Basic Specification Plus Tract Characteristics, FICO Score, and Individual Race/Ethnicity

Residual df	= 342902	No. of obs	= 342929
Pearson X2	= 393628.9	Deviance	= 5091.674
Dispersion	= 1.147934	Dispersion	= 0.0148488

Bernoulli distribution, cloglog link

Default	Coef.	Std. Err.	Z-Statistic	P> z	[95% Conf. Interval]	
black	0.2826148	0.173531	1.629	0.103	-0.0574996	0.6227293
hispanic	-0.4907002	0.1855105	-2.645	0.008	-0.8542941	-0.1271063
fico	-0.0113165	0.0013451	-8.413	0.000	-0.0139528	-0.0086803
NOfico	-6.802543	0.8350468	-8.146	0.000	-8.439205	-5.165882
trtblk	0.4460382	0.2573407	1.733	0.083	-0.0583402	0.9504167
trthsp	-0.2484711	0.5050061	-0.492	0.623	-1.238265	0.7413227
Intrinc	-1.213294	0.3303348	-3.673	0.000	-1.860738	-0.5658497
unemprt	-0.2765826	0.1934618	-1.430	0.153	-0.6557607	0.1025955
borage	0.0008147	0.0059178	0.138	0.890	-0.0107839	0.0124134
loginc	0.0549189	0.6551159	0.084	0.933	-1.229085	1.338923
RSVpmts	-0.1527707	0.0413401	-3.695	0.000	-0.2337959	-0.0717455
RSVpmt4	0.1550327	0.0439569	3.527	0.000	0.0688787	0.2411868
logfront	0.3318877	0.6764462	0.491	0.624	-0.9939225	1.657698
Inbal	3.191184	1.2905	2.473	0.013	0.6618517	5.720517
Inhval	-2.968659	1.11062	-2.673	0.008	-5.145434	-0.7918842
condo	-0.1182407	0.2629411	-0.450	0.653	-0.6335957	0.3971143
HPrelPW	-0.9778401	0.7607872	-1.285	0.199	-2.468955	0.5132754
Inhorizn	0.302945	0.8375947	0.362	0.718	-1.338711	1.9446
Inintrat	0.9592056	0.7583262	1.265	0.206	-0.5270864	2.445498
Inintarm	0.5271444	0.8765586	0.601	0.548	-1.190879	2.245168
rtdiff	-0.1040687	0.2295108	-0.453	0.650	-0.5539017	0.3457642
armrtd	0.2812895	0.1300295	2.163	0.031	0.0264363	0.5361427
logpirto	1.829201	2.390261	0.765	0.444	-2.855624	6.514026
t	0.3611917	0.0851565	4.242	0.000	0.194288	0.5280954
tt	-0.0062449	0.0026093	-2.393	0.017	-0.0113589	-0.0011308
t6	-0.163966	0.1167636	-1.404	0.160	-0.3928185	0.0648865
_cons	-6.28501	8.891653	-0.707	0.480	-23.71233	11.14231

TABLE 18

Panel A

Parameter Estimates for Claim Default Hazard in Selected Portions of Chicago MSA -
Includes Log of Actual Price Ratio

Residual df = 342888
Pearson X2 = 370331.7
Dispersion = 1.080037

No. of obs = 342929
Deviance = 5070.996
Dispersion = 0.0147891

Bernoulli distribution, cloglog link

Default	Coef.	Std. Err.	Z-Statistic	P> z	[95% Conf. Interval]	
preprt	-0.0280012	0.045188	-0.620	0.535	-0.1165681	0.0605656
pric2CHG	-0.1509369	0.2847924	-0.530	0.596	-0.7091198	0.4072461
def1	0.0449572	0.0792709	0.567	0.571	-0.1104109	0.2003254
def2	0.0150595	0.0871864	0.173	0.863	-0.1558227	0.1859418
def3	0.0550287	0.085002	0.647	0.517	-0.1115721	0.2216295
def4	0.1704715	0.0776148	2.196	0.028	0.0183493	0.3225937
def5	0.0518766	0.082532	0.629	0.530	-0.1098832	0.2136364
def6	0.0859414	0.0802594	1.071	0.284	-0.0713641	0.2432468
prep1	0.024969	0.0109088	2.289	0.022	0.0035882	0.0463499
prep2	-0.0285131	0.013795	-2.067	0.039	-0.0555508	-0.0014755
prep3	0.0132167	0.012007	1.101	0.271	-0.0103166	0.0367501
prep4	-0.0209668	0.0110268	-1.901	0.057	-0.0425789	0.0006453
prep5	0.0169164	0.0087514	1.933	0.053	-0.000236	0.0340688
prep6	-0.0056804	0.0061335	-0.926	0.354	-0.0177019	0.0063412
fico	-0.0112585	0.0013453	-8.369	0.000	-0.0138953	-0.0086217
NOfico	-6.768811	0.8351323	-8.105	0.000	-8.405641	-5.131982
trtblk	0.2915076	0.2690528	1.083	0.279	-0.2358262	0.8188414
trthsp	-0.152017	0.5101638	-0.298	0.766	-1.15192	0.8478857
Intrtinc	-1.023778	0.3675803	-2.785	0.005	-1.744222	-0.3033338
unemprrt	-0.3343941	0.2018011	-1.657	0.098	-0.7299171	0.0611289
black	0.2711551	0.1744211	1.555	0.120	-0.0707039	0.6130141
hisp	-0.4747344	0.1861688	-2.550	0.011	-0.8396185	-0.1098504
borage	0.0006431	0.0059143	0.109	0.913	-0.0109487	0.0122349
loginc	0.0221019	0.6618512	0.033	0.973	-1.275103	1.319306
RSVpmts	-0.1516113	0.0413611	-3.666	0.000	-0.2326776	-0.0705449
RSVpmt4	0.1541268	0.0439473	3.507	0.000	0.0679916	0.240262
logfront	0.2984019	0.6832655	0.437	0.662	-1.040774	1.637578
Inbal	3.295214	1.295924	2.543	0.011	0.7552498	5.835179
Inhval	-2.959917	1.116137	-2.652	0.008	-5.147506	-0.7723287
condo	-0.0911494	0.2629732	-0.347	0.729	-0.6065674	0.4242686
HPrelPW	-1.036767	0.7542111	-1.375	0.169	-2.514994	0.4414592
Inhorizn	0.2824004	0.8385405	0.337	0.736	-1.361109	1.92591
Inintrat	0.8165244	0.7902101	1.033	0.301	-0.7322589	2.365308
Inintarm	0.476671	0.8894992	0.536	0.592	-1.266715	2.220057
rtdiff	-0.0668674	0.2456762	-0.272	0.785	-0.548384	0.4146491
armrtd	0.2759079	0.1311175	2.104	0.035	0.0189223	0.5328935
logpirto	1.347691	2.40374	0.561	0.575	-3.363552	6.058934
t	0.3520034	0.085914	4.097	0.000	0.183615	0.5203918
tt	-0.0055358	0.0026505	-2.089	0.037	-0.0107307	-0.000341
t6	-0.1747328	0.1173041	-1.490	0.136	-0.4046445	0.055179
_cons	-8.635458	9.142896	-0.944	0.345	-26.55521	9.284288

TABLE 18

Panel B

Parameter Estimates for Claim Default Hazard in Selected Portions of Chicago MSA -
Includes Log of Predicted Price Ratio Based on Table 14, Panel B

Residual df = 342888
Pearson X2 = 370459
Dispersion = 1.080408

No. of obs = 342929
Deviance = 5069.828
Dispersion = 0.0147857

Bernoulli distribution, cloglog link

Default	Coef.	Std. Err.	Z-Statistic	P> z	[95% Conf. Interval]	
preprt	-0.0271884	0.0451484	-0.602	0.547	-0.1156775	0.0613008
pred6	-0.3276386	0.2965398	-1.105	0.269	-0.9088459	0.2535688
def1	0.0425815	0.0795521	0.535	0.592	-0.1133377	0.1985006
def2	0.0148743	0.0872063	0.171	0.865	-0.156047	0.1857955
def3	0.0534413	0.0849246	0.629	0.529	-0.1130078	0.2198903
def4	0.1681508	0.0771904	2.178	0.029	0.0168604	0.3194412
def5	0.049977	0.082515	0.606	0.545	-0.1117493	0.2117033
def6	0.0876074	0.0798883	1.097	0.273	-0.0689707	0.2441855
prep1	0.0249591	0.0109001	2.290	0.022	0.0035954	0.0463229
prep2	-0.0282097	0.0137847	-2.046	0.041	-0.0552272	-0.0011921
prep3	0.0132935	0.0120011	1.108	0.268	-0.0102283	0.0368153
prep4	-0.0211418	0.0110286	-1.917	0.055	-0.0427575	0.0004739
prep5	0.0169582	0.008751	1.938	0.053	-0.0001935	0.0341098
prep6	-0.005567	0.0061242	-0.909	0.363	-0.0175702	0.0064362
fico	-0.011214	0.001345	-8.338	0.000	-0.0138501	-0.0085779
NOfico	-6.742986	0.8348864	-8.077	0.000	-8.379334	-5.106639
trtblk	0.2915567	0.2692657	1.083	0.279	-0.2361944	0.8193078
trthsp	-0.1586797	0.5103044	-0.311	0.756	-1.158858	0.8414986
Intrtrinc	-1.036776	0.3682575	-2.815	0.005	-1.758548	-0.3150049
unemprt	-0.3353601	0.2018717	-1.661	0.097	-0.7310214	0.0603013
black	0.2779035	0.1743607	1.594	0.111	-0.0638373	0.6196443
hisp	-0.4740369	0.1859376	-2.549	0.011	-0.8384678	-0.1096059
borage	0.0008361	0.0059107	0.141	0.888	-0.0107486	0.0124208
loginc	0.0179909	0.6615952	0.027	0.978	-1.278712	1.314694
RSVpmts	-0.1514426	0.041362	-3.661	0.000	-0.2325106	-0.0703746
RSVpmt4	0.1539423	0.0439439	3.503	0.000	0.0678138	0.2400708
logfront	0.2989561	0.682982	0.438	0.662	-1.039664	1.637576
Inbal	3.287849	1.294975	2.539	0.011	0.7497445	5.825953
Inhval	-2.959369	1.116093	-2.652	0.008	-5.146872	-0.7718668
condo	-0.0988837	0.2631095	-0.376	0.707	-0.6145689	0.4168015
HPrelPW	-1.012307	0.7533262	-1.344	0.179	-2.488799	0.4641852
Inhorizn	0.3053165	0.8383952	0.364	0.716	-1.337908	1.948541
Inintrat	0.7933567	0.7904775	1.004	0.316	-0.7559507	2.342664
Inintarm	0.4781322	0.8896723	0.537	0.591	-1.265593	2.221858
rtdiff	-0.0665009	0.2457649	-0.271	0.787	-0.5481913	0.4151895
armrtd	0.2758067	0.1310376	2.105	0.035	0.0189776	0.5326358
logpirto	1.319811	2.402457	0.549	0.583	-3.388917	6.02854
t	0.3531328	0.0859165	4.110	0.000	0.1847395	0.5215261
tt	-0.0054887	0.0026487	-2.072	0.038	-0.0106801	-0.0002974
t6	-0.1758824	0.1172896	-1.500	0.134	-0.4057658	0.054001
_cons	-8.396947	9.119659	-0.921	0.357	-26.27115	9.477257

TABLE 18

Panel C

Parameter Estimates for Claim Default Hazard in Selected Portions of Chicago MSA -
Includes Log of Predicted Price Ratio Based on Table 15

Residual df = 342888
Pearson X2 = 369995.9
Dispersion = 1.079058

No. of obs = 342929
Deviance = 5068.475
Dispersion = 0.0147817

Bernoulli distribution, cloglog link

Default	Coef.	Std. Err.	Z-Statistic	P> z	[95% Conf. Interval]	
preprt	-0.0279961	0.0450729	-0.621	0.535	-0.1163374	0.0603452
pred6x	-1.323275	0.7977266	-1.659	0.097	-2.886791	0.2402402
def1	0.032199	0.0799036	0.403	0.687	-0.1244092	0.1888071
def2	0.0214006	0.0873499	0.245	0.806	-0.1498021	0.1926034
def3	0.0535351	0.0848456	0.631	0.528	-0.1127592	0.2198293
def4	0.1689439	0.0771588	2.190	0.029	0.0177155	0.3201723
def5	0.0505674	0.0823224	0.614	0.539	-0.1107815	0.2119163
def6	0.083046	0.0801168	1.037	0.300	-0.07398	0.240072
prep1	0.0245775	0.0109043	2.254	0.024	0.0032055	0.0459495
prep2	-0.0282523	0.0137854	-2.049	0.040	-0.0552711	-0.0012334
prep3	0.0134407	0.0120004	1.120	0.263	-0.0100797	0.036961
prep4	-0.0210508	0.0110328	-1.908	0.056	-0.0426747	0.0005731
prep5	0.0170718	0.0087407	1.953	0.051	-0.0000597	0.0342032
prep6	-0.0055502	0.0061252	-0.906	0.365	-0.0175554	0.006455
fico	-0.0112263	0.0013454	-8.344	0.000	-0.0138633	-0.0085892
NOfico	-6.748764	0.8352453	-8.080	0.000	-8.385815	-5.111713
trtblk	0.2883112	0.268797	1.073	0.283	-0.2385211	0.8151436
trthsp	-0.1593026	0.5097495	-0.313	0.755	-1.158393	0.839788
Intrtinc	-1.028762	0.367683	-2.798	0.005	-1.749407	-0.3081165
unemprrt	-0.3329492	0.2020061	-1.648	0.099	-0.7288739	0.0629755
black	0.2770379	0.1742185	1.590	0.112	-0.0644241	0.6184999
hisp	-0.4741594	0.1857367	-2.553	0.011	-0.8381967	-0.1101222
borage	0.0008819	0.0059077	0.149	0.881	-0.0106969	0.0124607
loginc	0.0178718	0.6623874	0.027	0.978	-1.280384	1.316127
RSVpmts	-0.1506425	0.0413739	-3.641	0.000	-0.2317339	-0.0695512
RSVpmt4	0.1530703	0.0439606	3.482	0.000	0.0669091	0.2392315
logfront	0.2984965	0.6837411	0.437	0.662	-1.041611	1.638604
Inbal	3.280163	1.293589	2.536	0.011	0.744775	5.815551
Inhval	-2.958588	1.11592	-2.651	0.008	-5.145751	-0.7714249
condo	-0.0953837	0.263058	-0.363	0.717	-0.6109678	0.4202004
HPrelPW	-1.015733	0.7493673	-1.355	0.175	-2.484466	0.453
Inhorizn	0.2994916	0.8386599	0.357	0.721	-1.344252	1.943235
Inintrat	0.7018414	0.792449	0.886	0.376	-0.8513302	2.255013
Inintarm	0.4945457	0.8893003	0.556	0.578	-1.248451	2.237542
rtdiff	-0.0697031	0.2455035	-0.284	0.776	-0.550881	0.4114749
armrtd	0.2768564	0.131135	2.111	0.035	0.0198365	0.5338762
logpirto	1.352143	2.400423	0.563	0.573	-3.352599	6.056886
t	0.3577989	0.0859867	4.161	0.000	0.189268	0.5263297
tt	-0.0055126	0.0026471	-2.082	0.037	-0.0107008	-0.0003243
t6	-0.1748069	0.1173	-1.490	0.136	-0.4047106	0.0550969
_cons	-7.372121	9.143053	-0.806	0.420	-25.29218	10.54793

TABLE 19

Parameter Estimates for Claim Default Hazard in Selected Portions of Chicago MSA - Includes Log of Predicted Price Ratio Based on Table 15 and Leads of Default and Prepayment Rates

Residual df = 342884
 Pearson X2 = 350586.5
 Dispersion = 1.022464

No. of obs = 342929
 Deviance = 5034.586
 Dispersion = 0.0146831

Bernoulli distribution, cloglog link

Default	Coef.	Std. Err.	Z-Statistic	P> z	[95% Conf. Interval]	
preprt	-0.034211	0.0452764	-0.756	0.450	-0.1229511	0.0545291
def1F	0.3505703	0.0614938	5.701	0.000	0.2300447	0.4710958
def2F	0.0848829	0.0735338	1.154	0.248	-0.0592406	0.2290064
prep1F	0.0258278	0.0126249	2.046	0.041	0.0010833	0.0505722
prep2F	-0.0169338	0.0126848	-1.335	0.182	-0.0417957	0.007928
pred6x	-1.343646	0.7942414	-1.692	0.091	-2.900331	0.2130384
def1	0.0337537	0.0797934	0.423	0.672	-0.1226386	0.1901459
def2	-0.0183876	0.0853615	-0.215	0.829	-0.185693	0.1489179
def3	0.0289821	0.0823799	0.352	0.725	-0.1324795	0.1904437
def4	0.1603503	0.0788165	2.034	0.042	0.0058728	0.3148278
def5	0.0259895	0.0844079	0.308	0.758	-0.1394468	0.1914259
def6	0.0606053	0.079958	0.758	0.448	-0.0961094	0.21732
prep1	0.0241166	0.0144309	1.671	0.095	-0.0041674	0.0524007
prep2	-0.0394668	0.0151166	-2.611	0.009	-0.0690949	-0.0098387
prep3	0.0136393	0.0123289	1.106	0.269	-0.0105249	0.0378034
prep4	-0.0151692	0.0112688	-1.346	0.178	-0.0372557	0.0069172
prep5	0.0173591	0.0088246	1.967	0.049	0.0000633	0.0346549
prep6	-0.0086045	0.0070099	-1.227	0.220	-0.0223435	0.0051346
fico	-0.0112368	0.0013474	-8.339	0.000	-0.0138777	-0.0085959
NOfico	-6.75536	0.8364628	-8.076	0.000	-8.394797	-5.115923
trtblk	0.1131345	0.2747742	0.412	0.681	-0.425413	0.651682
trthsp	-0.0825145	0.5088564	-0.162	0.871	-1.079855	0.9148257
Intrtinc	-0.7667646	0.3724601	-2.059	0.040	-1.496773	-0.0367562
unemprr	-0.3546606	0.2053536	-1.727	0.084	-0.7571464	0.0478252
black	0.2740908	0.1741123	1.574	0.115	-0.0671631	0.6153447
hisp	-0.4547265	0.1851393	-2.456	0.014	-0.8175929	-0.0918601
borage	0.000192	0.0058932	0.033	0.974	-0.0113584	0.0117424
loginc	0.0681852	0.663088	0.103	0.918	-1.231443	1.367814
RSVpmts	-0.1515717	0.0414004	-3.661	0.000	-0.2327149	-0.0704285
RSVpmt4	0.1539475	0.0440264	3.497	0.000	0.0676574	0.2402375
logfront	0.3630442	0.6843497	0.530	0.596	-0.9782565	1.704345
Inbal	3.310785	1.286734	2.573	0.010	0.7888326	5.832738
Inhval	-3.017199	1.1136	-2.709	0.007	-5.199815	-0.8345821
condo	-0.0692377	0.2630333	-0.263	0.792	-0.5847734	0.446298
HPrelPW	-1.039382	0.7527322	-1.381	0.167	-2.51471	0.4359462
Inhorizn	0.2917416	0.8372696	0.348	0.728	-1.349277	1.93276
Inintrat	0.6591212	0.7999359	0.824	0.410	-0.9087244	2.226967
Inintarm	0.3815263	0.9008083	0.424	0.672	-1.384026	2.147078
rtdiff	-0.0236818	0.2512162	-0.094	0.925	-0.5160566	0.4686929
armrtd	0.2715232	0.1317549	2.061	0.039	0.0132883	0.529758
logpirto	1.148191	2.407605	0.477	0.633	-3.570629	5.86701
t	0.3439647	0.0862838	3.986	0.000	0.1748516	0.5130779
tt	-0.0050796	0.0026391	-1.925	0.054	-0.0102521	0.000093
t6	-0.1716964	0.1171615	-1.465	0.143	-0.4013287	0.0579359
_cons	-10.58673	9.163138	-1.155	0.248	-28.54615	7.372693