Appendix G – Delta Analysis for Claim and Prepayment Models

Exhibits G.1 through G.20 provide a delta analysis for the conditional claim and prepayment rate models.

A review of the delta analysis indicates that, based on our models, interest rate levels are an important determinant of claim and prepayment rates. At a very basic level, the interest rate variable can be thought of as a proxy for origination year – it is the original loan contract rate that drives claim levels, not the level of interest rates that is experienced over the life of a loan cohort. Given the sensitivity of our models to interest rates, we suspected that our results might be skewed by the claim and prepayment experience of loans that originated during the high interest rate period 1981 through 1985. To evaluate this potential bias, we fit our claim models to a data set that excluded origination years 1981 through 1985. We observed no significant difference in the regression coefficients for the interest rate variable and, although there is a noticeable decrease in the t-statistic associated with this variable, it is highly significant for either data set. Table G.1 provides a summary of these results for the fixed rate, 30-year loan category.

Table G.1

	Coefficient on Interest Rate Variable	
Loan/LTV Category	**Including 1981 through 1985**	**Excluding 1981 through 1985**
Fixed Rate 30, High LTV	0.2997 (517.3)	0.2822 (224.4)
Fixed Rate 30, Mid LTV	0.3703 (588.9)	0.3643 (252.1)
Fixed Rate 30, Investor LTV	0.3752 (413.4)	0.3117 (157.9)
Fixed Rate 30, Low LTV	0.3789 (349.9)	0.3854 (135.7)

Note: t-statistics are shown in parentheses.

Another important determinant of claim and prepayment rates is the level of house price appreciation. House price appreciation indirectly affects a number of predictor variables including the probability of negative equity and the loan-to-value ratio.

The delta analysis we performed consists of calculating the median and standard deviation of the observations at policy year 5 in our sample set for each predictor variable in the claim and prepayment models. We calculate the conditional claim and prepayment rate assuming the median value of each covariate holds – this serves as our base rate level. We then increase the value of each predictor variable, one variable at a time, by one standard deviation and recalculate the claim and prepayment rates. The same process is repeated by decreasing each predictor variable, one variable at a time, by one standard deviation and recalculating the claim and prepayment rates. Exhibits G.1 through G.20 show the "new" rate levels that exist for each covariate and the percentage change relative to the base rate level.

As with any delta-style analysis, the numbers shown on the following exhibits need to be viewed with some degree of caution. If all of the predictor variables were orthogonal, then it would be possible to view the results in isolation. In reality there is some degree of interaction between the predictor variables and it is therefore not possible for a given variable to experience a significant move that is completely independent of a corresponding move in the other variables.

Index of Delta Analysis

		Exhibit	
Loan Type	LTV Category	CCR Model	CPR Model
Fixed Rate 30 Year	High	G.1	G.2
Fixed Rate 30 Year	Mid	G.3	G.4
Fixed Rate 30 Year	Investor	G.5	G.6
Fixed Rate 30 Year	Low	G.7	G.8
Fixed Rate 15 Year	High	G.9	G.10
Fixed Rate 15 Year	Mid & Investor	G.11	G.12
Fixed Rate 15 Year	Low	G.13	G.14
Adjustable Rate	All	G.15	G.16
Streamline Refinanced 30 Year	All	G.17	G.18
Streamline Refinanced 15 Year	All	G.19	G.20

Exhibit G.1

Fixed Rate 30-Year Loans, High LTV Category - Delta Analysis
Conditional Claim Rate Model

Median Predictor Variable Values at Policy Year 5 and Delta Adjustments

Predictor Variable	AGE 5	Delta (one std dev)	Value + Delta @ AGE	Value - Delta @ AGE 5
AGE	5	-	5	5
AGE.SQR	25	-	25	25
INT.RT	9.23445	1.6313	10.86572	7.60318
R.GT1	1.0408969	0.5567	1.59762	0.48417
R.LT1	0	0.3564	0.35638	-
CumDiff	0.0144615	0.0276	0.04206	-
LTV.0	98.6729	3.7680	102.44087	94.90493
LTV.AGE3	78.43	12.2418	90.67179	66.18821
ANN.HPA	1.039508	0.0490	1.08851	0.99050
HPA	1.2181117	0.2161	1.43421	1.00202
NEGEQ.RGT1	0.0621035	0.1395	0.20161	-
NEGEQ.RLT1	0	0.1001	0.10013	-
RHP	0.8443	0.2551	1.09938	0.58922
UNEMP.L0	6.35	1.5911	7.94113	4.75887
PAY.INC.AGE4	17.3686	2.7596	20.12820	14.60900
SR	1	-	1	1

Regression Coefficients Interacted with Medians and
Delta Adjusted Medians

Variable	Coefficient	AGE 5	AGE 5+Delta	AGE 5-Delta
Intercept	3.598629	3.59863	3.59863	3.59863
AGE	0.105822	0.52911	0.52911	0.52911
AGE.SQR	(0.005184)	(0.12960)	(0.12960)	(0.12960)
INT.RT	0.299669	2.76728	3.25612	2.27844
R.GT1	(0.070103)	(0.07297)	(0.11200)	(0.03394)
R.LT1	(0.120261)	-	(0.04286)	-
CumDiff	(0.732678)	(0.01060)	(0.03082)	-
LTV.0	(0.023289)	(2.29796)	(2.38571)	(2.21021)
LTV.AGE3	0.010259	0.80458	0.93017	0.67900
ANN.HPA	1.123568	1.16796	1.22302	1.11290
HPA	(0.811368)	(0.98834)	(1.16367)	(0.81300)
NEG.EQ.RGT1	1.259838	0.07824	0.25400	-
NEG.EQ.RLT1	1.399740	-	0.14015	-
RHP	(0.412461)	(0.34824)	(0.45345)	(0.24303)
UNEMP.L0	(0.084996)	(0.53973)	(0.67497)	(0.40449)
PAY.INC.AGE4	0.018611	0.32324	0.37460	0.27188
SR	0.210834	0.21083	0.21083	0.21083
Median Conditional Claim Rate		**1.6279%**		

Delta Adjusted Claim Rates and Relative Change in Claim Rates

	Variable	AGE 5+Delta	% Change for + Delta	AGE 5-Delta	% Change for - Delta
2	AGE	1.6279%	0.0000%	1.6279%	0.0000%
3	AGE.SQR	1.6279%	0.0000%	1.6279%	0.0000%
4	INT.RT	2.6541%	63.0428%	0.9984%	-38.6664%
5	R.GT1	1.5656%	-3.8276%	1.6927%	3.9800%
6	R.LT1	1.5596%	-4.1954%	1.6279%	0.0000%
7	CumDiff	1.5953%	-2.0018%	1.6452%	1.0652%
8	LTV.0	1.4911%	-8.4011%	1.7772%	9.1716%
9	LTV.AGE3	1.8457%	13.3810%	1.4358%	-11.8018%
10	ANN.HPA	1.7200%	5.6602%	1.5407%	-5.3570%
11	HPA	1.3661%	-16.0821%	1.9398%	19.1642%
12	NEGEQ.RGT1	1.9407%	19.2149%	1.5054%	-7.5258%
13	NEGEQ.RLT1	1.8728%	15.0450%	1.6279%	0.0000%
14	RHP	1.4653%	-9.9865%	1.8085%	11.0945%
15	UNEMP.L0	1.4220%	-12.6494%	1.8636%	14.4811%
16	PAY.INC.AGE4	1.7137%	5.2699%	1.5464%	-5.0061%
17	SR	1.6279%	0.0000%	1.6279%	0.0000%
18					
19					
20					

Fixed Rate 30-Year Loans, High LTV Category - Delta Analysis
Conditional Prepayment Rate Model

Median Predictor Variable Values at Policy Year 5 and Delta Adjustments

Predictor Variable	AGE 5	Delta (one std dev)	Value + Delta @ AGE 5	Value - Delta @ AGE 5
INT.RT	9.23445	1.63127	10.86572	7.60318
R.Prime	0.9996132	0.15565	1.15527	0.84396
Yield.Diff	1.094167	1.32576	2.41993	(0.23159)
FR30.PDIFF	0.2414833	0.89057	1.13205	-
FR30.NDIFF	0	2.53796	-	(2.53796)
Tbond.Vol	0.4196851	0.22456	0.64424	0.19513
NEGEQ.RGT1	0.0621035	0.13951	0.20161	-
NEGEQ.RLT1	0	0.10013	0.10013	-
CumDiff	0.0144615	0.02760	0.04206	-
RHP	0.8443	0.25508	1.09938	0.58922
ANN.HPA	1.039508	0.04900	1.08851	0.99050
LTV.0	98.6729	3.76797	102.44087	94.90493
LTV.AGE3	78.43	12.24179	90.67179	66.18821
PAY.INC.AGE4	17.3686	2.75960	20.12820	14.60900
UNEMP.L0	6.35	1.59113	7.94113	4.75887
AGE	5	-	5	5
AGE.2	0	-	0	0
SR	1	-	1	1

Regression Coefficients Interacted with Medians and Delta Adjusted Medians

Variable	Coefficient	AGE 5	AGE 5+Delta	AGE 5-Delta
Intercept	4.237159	4.23716	4.23716	4.23716
INT.RT	(0.213560)	(1.97211)	(2.32049)	(1.62374)
R.Prime	2.372844	2.37193	2.74127	2.00259
Yield.Diff	0.088380	0.09670	0.21387	(0.02047)
FR30.PDIFF	0.508144	0.12271	0.57524	-
FR30.NDIFF	0.177275	-	-	(0.44992)
Tbond.Vol	0.532775	0.22360	0.34323	0.10396
NEGEQ.RGT1	(0.522409)	(0.03244)	(0.10532)	-
NEGEQ.RLT1	(1.249947)	-	(0.12515)	-
CumDiff	(6.243752)	(0.09029)	(0.26262)	-
RHP	0.476857	0.40261	0.52425	0.28097
ANN.HPA	0.806425	0.83828	0.87780	0.79877
LTV.0	0.017529	1.72964	1.79569	1.66359
LTV.AGE3	(0.010152)	(0.79622)	(0.92049)	(0.67194)
PAY.INC.AGE4	0.011936	0.20731	0.24025	0.17437
UNEMP.L0	(0.054918)	(0.34873)	(0.43611)	(0.26135)
AGE	(0.011658)	(0.05829)	(0.05829)	(0.05829)
AGE.2	(1.484822)	-	-	-
SR	(0.255985)	(0.25599)	(0.25599)	(0.25599)
Median Conditional Prepayment Rate		**7.9303%**		

Delta Adjusted Claim Rates and Relative Change in Claim Rates

Variable	AGE 5+Delta	% Change for + Delta	AGE 5-Delta	% Change for - Delta
INT.RT	5.5975%	-29.4166%	11.2354%	41.6764%
R.Prime	11.4734%	44.6781%	5.4813%	-30.8810%
Yield.Diff	8.9161%	12.4310%	7.0535%	-11.0566%
FR30.PDIFF	12.4688%	57.2295%	7.0145%	-11.5478%
FR30.NDIFF	7.9303%	0.0000%	5.0570%	-36.2320%
Tbond.Vol	8.9382%	12.7088%	7.0361%	-11.2758%
NEGEQ.RGT1	7.3729%	-7.0288%	8.1918%	3.2975%
NEGEQ.RLT1	6.9974%	-11.7639%	7.9303%	0.0000%
CumDiff	6.6750%	-15.8293%	8.6797%	9.4496%
RHP	8.9561%	12.9344%	7.0221%	-11.4530%
ANN.HPA	8.2500%	4.0309%	7.6230%	-3.8747%
LTV.0	8.4718%	6.8279%	7.4234%	-6.3915%
LTV.AGE3	7.0035%	-11.6865%	8.9797%	13.2330%
PAY.INC.AGE4	8.1959%	3.3486%	7.6734%	-3.2401%
UNEMP.L0	7.2668%	-8.3673%	8.6545%	9.1314%
AGE	7.9303%	0.0000%	7.9303%	0.0000%
AGE.2	7.9303%	0.0000%	7.9303%	0.0000%
SR	7.9303%	0.0000%	7.9303%	0.0000%

Exhibit G.3

Fixed Rate 30-Year Loans, Mid LTV Category - Delta Analysis
Conditional Claim Rate Model

Median Predictor Variable Values at Policy Year 5 and Delta Adjustments

Predictor Variable	AGE 5	Delta (one std dev)	Value + Delta @ AGE	Value - Delta @ AGE 5
AGE	5	-	5	5
AGE.SQR	25	-	25	25
INT.RT	9.573	1.7035	11.27646	7.86954
R.GT1	1.0519277	0.5654	1.61736	0.48649
R.LT1	0	0.3537	0.35373	-
CumDiff	0.015036	0.0286	0.04366	-
LTV.0	91.1241	1.8110	92.93512	89.31308
LTV.AGE3	72.47	11.2485	83.71845	61.22155
ANN.HPA	1.03613718	0.0454	1.08157	0.99071
HPA	1.2125378	0.2190	1.43155	0.99353
NEGEQ.RGT1	0.011082	0.0910	0.10211	-
NEGEQ.RLT1	0	0.0565	0.05655	-
RHP	0.8771	0.2928	1.16994	0.58426
UNEMP.L0	6.608333	1.4444	8.05270	5.16396
PAY.INC.AGE4	18.0198	2.5552	20.57498	15.46462
SR	1	-	1	1

Regression Coefficients Interacted with Medians and Delta Adjusted Medians

Variable	Coefficient	AGE 5	AGE 5+Delta	AGE 5-Delta
Intercept	0.330984	0.33098	0.33098	0.33098
AGE	0.236787	1.18393	1.18393	1.18393
AGE.SQR	(0.009693)	(0.24232)	(0.24232)	(0.24232)
INT.RT	0.370294	3.54483	4.17561	2.91405
R.GT1	0.113431	0.11932	0.18346	0.05518
R.LT1	0.106913	-	0.03782	-
CumDiff	(1.975351)	(0.02970)	(0.08624)	-
LTV.0	0.031907	2.90750	2.96529	2.84972
LTV.AGE3	0.012247	0.88756	1.02532	0.74980
ANN.HPA	(1.375859)	(1.42558)	(1.48809)	(1.36307)
HPA	(1.373884)	(1.66589)	(1.96678)	(1.36499)
NEG.EQ.RGT1	1.490201	0.01651	0.15216	-
NEG.EQ.RLT1	0.793806	-	0.04489	-
RHP	(0.444294)	(0.38969)	(0.51980)	(0.25958)
UNEMP.L0	(0.162019)	(1.07068)	(1.30469)	(0.83666)
PAY.INC.AGE4	0.016863	0.30386	0.34695	0.26077
SR	0.328372	0.32837	0.32837	0.32837
Median Conditional Claim Rate		**1.2139%**		

Delta Adjusted Claim Rates and Relative Change in Claim Rates

Variable	AGE 5+Delta	% Change for + Delta	AGE 5-Delta	% Change for - Delta
AGE	1.2139%	0.0000%	1.2139%	0.0000%
AGE.SQR	1.2139%	0.0000%	1.2139%	0.0000%
INT.RT	2.2810%	87.9075%	0.6460%	-46.7823%
R.GT1	1.2943%	6.6239%	1.1385%	-6.2124%
R.LT1	1.2607%	3.8543%	1.2139%	0.0000%
CumDiff	1.1472%	-5.4971%	1.2505%	3.0147%
LTV.0	1.2861%	5.9487%	1.1458%	-5.6147%
LTV.AGE3	1.3932%	14.7703%	1.0577%	-12.8694%
ANN.HPA	1.1404%	-6.0595%	1.2922%	6.4503%
HPA	0.8985%	-25.9845%	1.6401%	35.1068%
NEGEQ.RGT1	1.3903%	14.5280%	1.1940%	-1.6379%
NEGEQ.RLT1	1.2696%	4.5912%	1.2139%	0.0000%
RHP	1.0658%	-12.1999%	1.3826%	13.8951%
UNEMP.L0	0.9606%	-20.8651%	1.5340%	26.3664%
PAY.INC.AGE4	1.2674%	4.4029%	1.1627%	-4.2172%
SR	1.2139%	0.0000%	1.2139%	0.0000%

Exhibit G.4

Fixed Rate 30-Year Loans, Mid LTV Category - Delta Analysis
Conditional Prepayment Rate Model

Median Predictor Variable Values at Policy Year 5 and Delta Adjustments

Predictor Variable	AGE 5	Delta (one std dev)	Value + Delta @ AGE 5	Value - Delta @ AGE 5
INT.RT	9.573	1.70346	11.27646	7.86954
R.Prime	0.9955328	0.15840	1.15393	0.83713
Yield.Diff	1.4475	1.35512	2.80262	0.09238
FR30.PDIFF	0.3430583	0.94805	1.29111	-
FR30.NDIFF	0	2.51750	-	(2.51750)
Tbond.Vol	0.4680488	0.22868	0.69672	0.23937
NEGEQ.RGT1	0.011082	0.09103	0.10211	-
NEGEQ.RLT1	0	0.05655	0.05655	-
CumDiff	0.015036	0.02862	0.04366	-
RHP	0.8771	0.29284	1.16994	0.58426
ANN.HPA	1.03613718	0.04543	1.08157	0.99071
LTV.0	91.1241	1.81102	92.93512	89.31308
LTV.AGE3	72.47	11.24845	83.71845	61.22155
PAY.INC.AGE4	18.0198	2.55518	20.57498	15.46462
UNEMP.L0	6.608333	1.44437	8.05270	5.16396
AGE	5	-	5	5
AGE.2	0	-	0	0
SR	1	-	1	1

Regression Coefficients Interacted with Medians and Delta Adjusted Medians

Variable	Coefficient	AGE 5	AGE 5+Delta	AGE 5-Delta
Intercept	6.315302	6.31530	6.31530	6.31530
INT.RT	(0.165209)	(1.58154)	(1.86297)	(1.30012)
R.Prime	1.918241	1.90967	2.21352	1.60582
Yield.Diff	0.112540	0.16290	0.31541	0.01040
FR30.PDIFF	0.569814	0.19548	0.73569	-
FR30.NDIFF	0.234041	-	-	(0.58920)
Tbond.Vol	0.533852	0.24987	0.37195	0.12779
NEGEQ.RGT1	0.682122	0.00756	0.06965	-
NEGEQ.RLT1	(1.317024)	-	(0.07448)	-
CumDiff	(7.741258)	(0.11640)	(0.33797)	-
RHP	0.323965	0.28415	0.37902	0.18928
ANN.HPA	0.865334	0.89660	0.93592	0.85729
LTV.0	(0.000588)	(0.05362)	(0.05469)	(0.05256)
LTV.AGE3	(0.013082)	(0.94805)	(1.09520)	(0.80090)
PAY.INC.AGE4	0.009202	0.16582	0.18933	0.14230
UNEMP.L0	(0.067300)	(0.44474)	(0.54195)	(0.34754)
AGE	(0.017934)	(0.08967)	(0.08967)	(0.08967)
AGE.2	(1.717540)	-	-	-
SR	(0.208261)	(0.20826)	(0.20826)	(0.20826)
Median Conditional Prepayment Rate		**8.4986%**		

Delta Adjusted Claim Rates and Relative Change in Claim Rates

Variable	AGE 5+Delta	% Change for + Delta	AGE 5-Delta	% Change for - Delta
INT.RT	6.4139%	-24.5293%	11.2608%	32.5017%
R.Prime	11.5162%	35.5070%	6.2717%	-26.2031%
Yield.Diff	9.8987%	16.4749%	7.2965%	-14.1446%
FR30.PDIFF	14.5867%	71.6372%	6.9896%	-17.7560%
FR30.NDIFF	8.4986%	0.0000%	4.7148%	-44.5228%
Tbond.Vol	9.6021%	12.9843%	7.5219%	-11.4921%
NEGEQ.RGT1	9.0430%	6.4060%	8.4346%	-0.7531%
NEGEQ.RLT1	7.8886%	-7.1772%	8.4986%	0.0000%
CumDiff	6.8095%	-19.8743%	9.5477%	12.3442%
RHP	9.3443%	9.9516%	7.7294%	-9.0509%
ANN.HPA	8.8393%	4.0097%	8.1709%	-3.8551%
LTV.0	8.4895%	-0.1065%	8.5076%	0.1066%
LTV.AGE3	7.3357%	-13.6837%	9.8458%	15.8530%
PAY.INC.AGE4	8.7008%	2.3791%	8.3011%	-2.3238%
UNEMP.L0	7.7113%	-9.2631%	9.3662%	10.2088%
AGE	8.4986%	0.0000%	8.4986%	0.0000%
AGE.2	8.4986%	0.0000%	8.4986%	0.0000%
SR	8.4986%	0.0000%	8.4986%	0.0000%

Exhibit G.5

Fixed Rate 30-Year Loans, Investor LTV Category - Delta Analysis
Conditional Claim Rate Model

Median Predictor Variable Values at Policy Year 5 and Delta Adjustments

Predictor Variable	AGE 5	Delta (one std dev)	Value + Delta @ AGE	Value - Delta @ AGE 5
AGE	5	-	5	5
AGE.SQR	25	-	25	25
INT.RT	9.9248	1.6172	11.54204	8.30756
R.GT1	1.0802686	0.5482	1.62843	0.53211
R.LT1	0	0.3476	0.34764	-
CumDiff	0.027972	0.0324	0.06039	-
LTV.0	86.1001	6.8696	92.96967	79.23053
LTV.AGE3	69.34	11.7613	81.10126	57.57874
ANN.HPA	1.03488361	0.0473	1.08222	0.98755
HPA	1.211833	0.2199	1.43175	0.99192
NEGEQ.RGT1	0.019794	0.0687	0.08849	-
NEGEQ.RLT1	0	0.0424	0.04238	-
RHP	0.8813	0.3685	1.24979	0.51281
UNEMP.L0	6.608333	1.2882	7.89657	5.32010
PAY.INC.AGE4	17.8762	2.3568	20.23296	15.51944
SR	1	-	1	1

Regression Coefficients Interacted with Medians and
Delta Adjusted Medians

Variable	Coefficient	AGE 5	AGE 5+Delta	AGE 5-Delta
Intercept	0.956603	0.95660	0.95660	0.95660
AGE	0.160364	0.80182	0.80182	0.80182
AGE.SQR	(0.007083)	(0.17708)	(0.17708)	(0.17708)
INT.RT	0.375185	3.72363	4.33039	3.11687
R.GT1	0.072427	0.07824	0.11794	0.03854
R.LT1	0.033169	-	0.01153	-
CumDiff	(0.553007)	(0.01547)	(0.03340)	-
LTV.0	0.010102	0.86974	0.93913	0.80035
LTV.AGE3	0.012886	0.89354	1.04510	0.74198
ANN.HPA	0.008392	0.00868	0.00908	0.00829
HPA	(1.232192)	(1.49321)	(1.76419)	(1.22223)
NEG.EQ.RGT1	1.556106	0.03080	0.13770	-
NEG.EQ.RLT1	2.376867	-	0.10074	-
RHP	(0.134820)	(0.11882)	(0.16850)	(0.06914)
UNEMP.L0	(0.201848)	(1.33388)	(1.59391)	(1.07385)
PAY.INC.AGE4	0.014823	0.26497	0.29990	0.23004
SR	0.431247	0.43125	0.43125	0.43125
Median Conditional Claim Rate		**1.3712%**		

Delta Adjusted Claim Rates and Relative Change in Claim Rates

Variable	AGE 5+Delta	% Change for + Delta	AGE 5-Delta	% Change for - Delta
AGE	1.3712%	0.0000%	1.3712%	0.0000%
AGE.SQR	1.3712%	0.0000%	1.3712%	0.0000%
INT.RT	2.5154%	83.4482%	0.7474%	-45.4887%
R.GT1	1.4267%	4.0500%	1.3178%	-3.8924%
R.LT1	1.3871%	1.1597%	1.3712%	0.0000%
CumDiff	1.3468%	-1.7768%	1.3925%	1.5589%
LTV.0	1.4697%	7.1857%	1.2792%	-6.7040%
LTV.AGE3	1.5955%	16.3648%	1.1783%	-14.0633%
ANN.HPA	1.3717%	0.0397%	1.3706%	-0.0397%
HPA	1.0457%	-23.7367%	1.7979%	31.1247%
NEGEQ.RGT1	1.5258%	11.2817%	1.3296%	-3.0332%
NEGEQ.RLT1	1.5165%	10.5990%	1.3712%	0.0000%
RHP	1.3047%	-4.8467%	1.4410%	5.0935%
UNEMP.L0	1.0572%	-22.8970%	1.7783%	29.6966%
PAY.INC.AGE4	1.4199%	3.5551%	1.3241%	-3.4330%
SR	1.3712%	0.0000%	1.3712%	0.0000%

Fixed Rate 30-Year Loans, Investor LTV Category - Delta Analysis
Conditional Prepayment Rate Model

Median Predictor Variable Values at Policy Year 5 and Delta Adjustments

Predictor Variable	AGE 5	Delta (one std dev)	Value + Delta @ AGE 5	Value - Delta @ AGE 5
INT.RT	9.9248	1.61724	11.54204	8.30756
R.Prime	1.0119001	0.15871	1.17061	0.85319
Yield.Diff	1.565	1.28651	2.85151	0.27849
FR30.PDIFF	0.7830417	1.04717	1.83021	-
FR30.NDIFF	0	2.16653	-	(2.16653)
Tbond.Vol	0.4196851	0.20977	0.62945	0.20992
NEGEQ.RGT1	0.019794	0.06869	0.08849	-
NEGEQ.RLT1	0	0.04238	0.04238	-
CumDiff	0.027972	0.03242	0.06039	-
RHP	0.8813	0.36849	1.24979	0.51281
ANN.HPA	1.03488361	0.04733	1.08222	0.98755
LTV.0	86.1001	6.86957	92.96967	79.23053
LTV.AGE3	69.34	11.76126	81.10126	57.57874
PAY.INC.AGE4	17.8762	2.35676	20.23296	15.51944
UNEMP.L0	6.608333	1.28823	7.89657	5.32010
AGE	5	-	5	5
AGE.2	0	-	0	0
SR	1		1	1

Regression Coefficients Interacted with Medians and Delta Adjusted Medians

Variable	Coefficient	AGE 5	AGE 5+Delta	AGE 5-Delta
Intercept	6.659290	6.65929	6.65929	6.65929
INT.RT	(0.103447)	(1.02669)	(1.19399)	(0.85940)
R.Prime	2.283632	2.31081	2.67324	1.94837
Yield.Diff	0.162423	0.25419	0.46315	0.04523
FR30.PDIFF	0.440938	0.34527	0.80701	-
FR30.NDIFF	0.180195	-	-	(0.39040)
Tbond.Vol	0.518081	0.21743	0.32611	0.10875
NEGEQ.RGT1	(1.964913)	(0.03889)	(0.17387)	-
NEGEQ.RLT1	(5.483487)	-	(0.23241)	-
CumDiff	(7.439990)	(0.20811)	(0.44931)	-
RHP	0.278588	0.24552	0.34818	0.14286
ANN.HPA	(0.189950)	(0.19658)	(0.20557)	(0.18759)
LTV.0	(0.009393)	(0.80873)	(0.87325)	(0.74420)
LTV.AGE3	(0.001423)	(0.09870)	(0.11544)	(0.08196)
PAY.INC.AGE4	0.010444	0.18670	0.21131	0.16208
UNEMP.L0	(0.124411)	(0.82215)	(0.98242)	(0.66188)
AGE	0.016700	0.08350	0.08350	0.08350
AGE.2	(0.666211)	-	-	-
SR	(0.288881)	(0.28888)	(0.28888)	(0.28888)
Median Conditional Prepayment Rate		**9.1049%**		

Delta Adjusted Claim Rates and Relative Change in Claim Rates

Variable	AGE 5+Delta	% Change for + Delta	AGE 5-Delta	% Change for - Delta
INT.RT	7.7023%	-15.4053%	10.7630%	18.2108%
R.Prime	13.0821%	43.6822%	6.3368%	-30.4020%
Yield.Diff	11.2208%	23.2394%	7.3880%	-18.8571%
FR30.PDIFF	14.4479%	58.6826%	6.4465%	-29.1973%
FR30.NDIFF	9.1049%	0.0000%	6.1621%	-32.3212%
Tbond.Vol	10.1502%	11.4802%	8.1673%	-10.2980%
NEGEQ.RGT1	7.9553%	-12.6264%	9.4660%	3.9660%
NEGEQ.RLT1	7.2167%	-20.7380%	9.1049%	0.0000%
CumDiff	7.1536%	-21.4313%	11.2113%	23.1350%
RHP	10.0892%	10.8112%	8.2166%	-9.7564%
ANN.HPA	9.0234%	-0.8951%	9.1871%	0.9031%
LTV.0	8.5360%	-6.2487%	9.7118%	6.6652%
LTV.AGE3	8.9537%	-1.6602%	9.2586%	1.6882%
PAY.INC.AGE4	9.3318%	2.4919%	8.8835%	-2.4313%
UNEMP.L0	7.7566%	-14.8086%	10.6876%	17.3828%
AGE	9.1049%	0.0000%	9.1049%	0.0000%
AGE.2	9.1049%	0.0000%	9.1049%	0.0000%
SR	9.1049%	0.0000%	9.1049%	0.0000%

Exhibit G.7

Fixed Rate 30-Year Loans, Low LTV Category - Delta Analysis
Conditional Claim Rate Model

Median Predictor Variable Values at Policy Year 5 and Delta Adjustments

Predictor Variable	AGE 5	Delta (one std dev)	Value + Delta @ AGE	Value - Delta @ AGE 5
AGE	5	-	5	5
AGE.SQR	25	-	25	25
INT.RT	9.9009	1.7958	11.69674	8.10507
R.GT1	1.0718725	0.5617	1.63357	0.51017
R.LT1	0	0.3576	0.35758	-
CumDiff	0.026014	0.0307	0.05673	-
LTV.0	72.5617	5.5040	78.06567	67.05773
LTV.AGE3	60.07	10.1028	70.17277	49.96723
ANN.HPA	1.03352437	0.0462	1.07976	0.98729
HPA	1.202099	0.2139	1.41599	0.98821
NEGEQ.RGT1	0.007655	0.0439	0.05155	-
NEGEQ.RLT1	0	0.0239	0.02389	-
RHP	0.8779	0.3647	1.24259	0.51321
UNEMP.L0	6.608333	1.2515	7.85983	5.35684
PAY.INC.AGE4	17.7673	2.3295	20.09677	15.43783
SR	1	-	1	1

Regression Coefficients Interacted with Medians and Delta Adjusted Medians

Variable	Coefficient	AGE 5	AGE 5+Delta	AGE 5-Delta
Intercept	0.302410	0.30241	0.30241	0.30241
AGE	0.235588	1.17794	1.17794	1.17794
AGE.SQR	(0.012309)	(0.30773)	(0.30773)	(0.30773)
INT.RT	0.378918	3.75163	4.43211	3.07116
R.GT1	0.039407	0.04224	0.06437	0.02010
R.LT1	(0.223359)	-	(0.07987)	-
CumDiff	(1.217978)	(0.03168)	(0.06910)	-
LTV.0	0.049391	3.58391	3.85575	3.31206
LTV.AGE3	0.010571	0.63501	0.74180	0.52821
ANN.HPA	(1.614338)	(1.66846)	(1.74310)	(1.59381)
HPA	(1.885435)	(2.26648)	(2.66976)	(1.86320)
NEG.EQ.RGT1	0.300343	0.00230	0.01548	-
NEG.EQ.RLT1	2.197952	-	0.05251	-
RHP	(0.223074)	(0.19584)	(0.27719)	(0.11448)
UNEMP.L0	(0.187337)	(1.23799)	(1.47244)	(1.00354)
PAY.INC.AGE4	0.011429	0.20306	0.22969	0.17644
SR	0.397656	0.39766	0.39766	0.39766
Median Conditional Claim Rate		**0.8048%**		

Delta Adjusted Claim Rates and Relative Change in Claim Rates

Variable	AGE 5+Delta	% Change for + Delta	AGE 5-Delta	% Change for - Delta
AGE	0.8048%	0.0000%	0.8048%	0.0000%
AGE.SQR	0.8048%	0.0000%	0.8048%	0.0000%
INT.RT	1.5893%	97.4815%	0.4075%	-49.3623%
R.GT1	0.8228%	2.2382%	0.7872%	-2.1892%
R.LT1	0.7430%	-7.6763%	0.8048%	0.0000%
CumDiff	0.7752%	-3.6722%	0.8307%	3.2192%
LTV.0	1.0562%	31.2387%	0.6132%	-23.8030%
LTV.AGE3	0.8955%	11.2709%	0.7233%	-10.1292%
ANN.HPA	0.7469%	-7.1927%	0.8671%	7.7501%
HPA	0.5377%	-33.1876%	1.2045%	49.6728%
NEGEQ.RGT1	0.8155%	1.3272%	0.8029%	-0.2296%
NEGEQ.RLT1	0.8482%	5.3915%	0.8048%	0.0000%
RHP	0.7419%	-7.8132%	0.8730%	8.4754%
UNEMP.L0	0.6366%	-20.8995%	1.0174%	26.4214%
PAY.INC.AGE4	0.8265%	2.6981%	0.7836%	-2.6272%
SR	0.8048%	0.0000%	0.8048%	0.0000%

Exhibit G.8

Fixed Rate 30-Year Loans, Low LTV Category - Delta Analysis
Conditional Prepayment Rate Model

Median Predictor Variable Values at Policy Year 5 and Delta Adjustments

Predictor Variable	AGE 5	Delta (one std dev)	Value + Delta @ AGE 5	Value - Delta @ AGE 5
INT.RT	9.9009	1.79584	11.69674	8.10507
R.Prime	1.0011338	0.15581	1.15694	0.84533
Yield.Diff	1.565	1.25901	2.82401	0.30599
FR30.PDIFF	0.6724583	1.09844	1.77090	-
FR30.NDIFF	0	2.24701	-	(2.24701)
Tbond.Vol	0.4680488	0.23326	0.70130	0.23479
NEGEQ.RGT1	0.007655	0.04390	0.05155	-
NEGEQ.RLT1	0	0.02389	0.02389	-
CumDiff	0.026014	0.03072	0.05673	-
RHP	0.8779	0.36469	1.24259	0.51321
ANN.HPA	1.03352437	0.04624	1.07976	0.98729
LTV.0	72.5617	5.50397	78.06567	67.05773
LTV.AGE3	60.07	10.10277	70.17277	49.96723
PAY.INC.AGE4	17.7673	2.32947	20.09677	15.43783
UNEMP.L0	6.608333	1.25149	7.85983	5.35684
AGE	5	-	5	5
AGE.2	0	-	0	0
SR	1	-	1	1

Regression Coefficients Interacted with Medians and Delta Adjusted Medians

Variable	Coefficient	AGE 5	AGE 5+Delta	AGE 5-Delta
Intercept	4.712432	4.71243	4.71243	4.71243
INT.RT	(0.089650)	(0.88761)	(1.04861)	(0.72662)
R.Prime	2.291778	2.29438	2.65145	1.93730
Yield.Diff	0.125469	0.19636	0.35433	0.03839
FR30.PDIFF	0.443198	0.29803	0.78486	-
FR30.NDIFF	0.199074	-	-	(0.44732)
Tbond.Vol	0.384208	0.17983	0.26945	0.09021
NEGEQ.RGT1	(2.378537)	(0.01821)	(0.12262)	-
NEGEQ.RLT1	(8.163890)	-	(0.19505)	-
CumDiff	(8.069918)	(0.20993)	(0.45782)	-
RHP	0.332708	0.29208	0.41342	0.17075
ANN.HPA	0.359858	0.37192	0.38856	0.35528
LTV.0	0.001157	0.08395	0.09032	0.07758
LTV.AGE3	(0.001307)	(0.07850)	(0.09170)	(0.06530)
PAY.INC.AGE4	0.007183	0.12763	0.14436	0.11089
UNEMP.L0	(0.045421)	(0.30016)	(0.35700)	(0.24332)
AGE	0.034719	0.17360	0.17360	0.17360
AGE.2	(0.466067)	-	-	-
SR	(0.380998)	(0.38100)	(0.38100)	(0.38100)
Median Conditional Prepayment Rate		**9.4842%**		

Delta Adjusted Claim Rates and Relative Change in Claim Rates

Variable	AGE 5+Delta	% Change for + Delta	AGE 5-Delta	% Change for - Delta
INT.RT	8.0738%	-14.8705%	11.1409%	17.4680%
R.Prime	13.5542%	42.9141%	6.6363%	-30.0279%
Yield.Diff	11.1072%	17.1127%	8.0983%	-14.6122%
FR30.PDIFF	15.4321%	62.7145%	7.0399%	-25.7722%
FR30.NDIFF	9.4842%	0.0000%	6.0636%	-36.0662%
Tbond.Vol	10.3734%	9.3757%	8.6712%	-8.5720%
NEGEQ.RGT1	8.5439%	-9.9146%	9.6584%	1.8374%
NEGEQ.RLT1	7.8035%	-17.7204%	9.4842%	0.0000%
CumDiff	7.4019%	-21.9553%	11.6996%	23.3593%
RHP	10.7077%	12.9004%	8.4005%	-11.4264%
ANN.HPA	9.6433%	1.6779%	9.3277%	-1.6502%
LTV.0	9.5448%	0.6388%	9.4240%	-0.6347%
LTV.AGE3	9.3598%	-1.3116%	9.6102%	1.3290%
PAY.INC.AGE4	9.6442%	1.6874%	9.3268%	-1.6594%
UNEMP.L0	8.9601%	-5.5259%	10.0389%	5.8491%
AGE	9.4842%	0.0000%	9.4842%	0.0000%
AGE.2	9.4842%	0.0000%	9.4842%	0.0000%
SR	9.4842%	0.0000%	9.4842%	0.0000%

Exhibit G.9

Fixed Rate 15-Year Loans, High LTV Category - Delta Analysis
Conditional Claim Rate Model

Median Predictor Variable Values at Policy Year 5 and Delta Adjustments

Predictor Variable	AGE 5	Delta (one std dev)	Value + Delta @ AGE	Value - Delta @ AGE 5
AGE	5	-	5	5
AGE.SQR	25	-	25	25
INT.RT	9.0391	1.3690	10.40814	7.67006
R.GT1	1.084585	0.3364	1.42103	0.74814
R.LT1	0	0.2581	0.25808	-
CumDiff	0.0209	0.0275	0.04840	-
LTV.0	98.9903	5.1116	104.10195	93.87865
LTV.AGE3	70.35	4.0765	74.42648	66.27352
ANN.HPA	1.03430853	0.0115	1.04580	1.02281
HPA	1.17570675	0.0337	1.20944	1.14198
NEGEQ.RGT1	0.047787	0.0406	0.08842	0.00715
NEGEQ.RLT1	0	0.0301	0.03009	-
RHP	0.8427	0.2705	1.11318	0.57222
UNEMP.L0	5.458333	1.1105	6.56879	4.34787
PAY.INC.AGE4	16.8073	1.2365	18.04381	15.57079
SR	1	-	1	1

Regression Coefficients Interacted with Medians and Delta Adjusted Medians

Variable	Coefficient	AGE 5	AGE 5+Delta	AGE 5-Delta
Intercept	4.927836	4.92784	4.92784	4.92784
AGE	0.250687	1.25343	1.25343	1.25343
AGE.SQR	(0.018910)	(0.47274)	(0.47274)	(0.47274)
INT.RT	0.455807	4.12009	4.74410	3.49607
R.GT1	(0.308169)	(0.33423)	(0.43792)	(0.23055)
R.LT1	(0.460281)	-	(0.11879)	-
CumDiff	1.063546	0.02223	0.05147	-
LTV.0	(0.066351)	(6.56806)	(6.90722)	(6.22890)
LTV.AGE3	0.015156	1.06619	1.12797	1.00441
ANN.HPA	2.783941	2.87945	2.91146	2.84745
HPA	(1.681747)	(1.97724)	(2.03397)	(1.92052)
NEG.EQ.RGT1	0.845408	0.04040	0.07475	0.00605
NEG.EQ.RLT1	1.399033	-	0.04209	-
RHP	(0.703919)	(0.59319)	(0.78359)	(0.40280)
UNEMP.L0	(0.085599)	(0.46723)	(0.56228)	(0.37217)
PAY.INC.AGE4	0.023635	0.39724	0.42647	0.36802
SR	0.166570	0.16657	0.16657	0.16657
Median Conditional Claim Rate		**0.8655%**		

Delta Adjusted Claim Rates and Relative Change in Claim Rates

Variable	AGE 5+Delta	% Change for + Delta	AGE 5-Delta	% Change for - Delta
AGE	0.8655%	0.0000%	0.8655%	0.0000%
AGE.SQR	0.8655%	0.0000%	0.8655%	0.0000%
INT.RT	1.6154%	86.6413%	0.4637%	-46.4213%
R.GT1	0.7803%	-9.8488%	0.9601%	10.9248%
R.LT1	0.7686%	-11.2004%	0.8655%	0.0000%
CumDiff	0.8912%	2.9677%	0.8465%	-2.1983%
LTV.0	0.6166%	-28.7632%	1.2150%	40.3769%
LTV.AGE3	0.9207%	6.3730%	0.8137%	-5.9912%
ANN.HPA	0.8937%	3.2519%	0.8383%	-3.1495%
HPA	0.8178%	-5.5146%	0.9160%	5.8364%
NEGEQ.RGT1	0.8958%	3.4948%	0.8363%	-3.3768%
NEGEQ.RLT1	0.9027%	4.2993%	0.8655%	0.0000%
RHP	0.7155%	-17.3368%	1.0470%	20.9728%
UNEMP.L0	0.7870%	-9.0676%	0.9518%	9.9718%
PAY.INC.AGE4	0.8912%	2.9656%	0.8406%	-2.8802%
SR	0.8655%	0.0000%	0.8655%	0.0000%

Exhibit G.10

Fixed Rate 15-Year Loans, High LTV Category - Delta Analysis
Conditional Prepayment Rate Model

Median Predictor Variable Values at Policy Year 5 and Delta Adjustments

Predictor Variable	AGE 5	Delta (one std dev)	Value + Delta @ AGE 5	Value - Delta @ AGE 5
INT.RT	9.0391	1.36904	10.40814	7.67006
R.Prime	1.05667881	0.09716	1.15384	0.95952
Yield.Diff	1.094167	1.05577	2.14993	0.03840
FR30.PDIFF	0.4296417	0.71103	1.14067	-
FR30.NDIFF	0	0.25013	-	(0.25013)
Tbond.Vol	0.374105	0.15289	0.52699	0.22122
NEGEQ.RGT1	0.047787	0.04063	0.08842	0.00715
NEGEQ.RLT1	0	0.03009	0.03009	-
CumDiff	0.0209	0.02750	0.04840	-
RHP	0.8427	0.27048	1.11318	0.57222
ANN.HPA	1.03430853	0.01150	1.04580	1.02281
LTV.0	98.9903	5.11165	104.10195	93.87865
LTV.AGE3	70.35	4.07648	74.42648	66.27352
PAY.INC.AGE4	16.8073	1.23651	18.04381	15.57079
UNEMP.L0	5.458333	1.11046	6.56879	4.34787
AGE	5	-	5	5
AGE.2	0	-	0	0
SR	1	-	1	1

Regression Coefficients Interacted with Medians and Delta Adjusted Medians

Variable	Coefficient	AGE 5	AGE 5+Delta	AGE 5-Delta
Intercept	8.208973	8.20897	8.20897	8.20897
INT.RT	(0.167774)	(1.51652)	(1.74621)	(1.28683)
R.Prime	1.645076	1.73832	1.89815	1.57848
Yield.Diff	0.100058	0.10948	0.21512	0.00384
FR30.PDIFF	0.478351	0.20552	0.54564	-
FR30.NDIFF	0.620459	-	-	(0.15519)
Tbond.Vol	0.544306	0.20363	0.28684	0.12041
NEGEQ.RGT1	0.118689	0.00567	0.01049	0.00085
NEGEQ.RLT1	0.143485	-	0.00432	-
CumDiff	(6.094671)	(0.12738)	(0.29497)	-
RHP	0.720352	0.60704	0.80188	0.41220
ANN.HPA	(2.616388)	(2.70615)	(2.73623)	(2.67608)
LTV.0	0.017882	1.77011	1.86152	1.67871
LTV.AGE3	(0.011334)	(0.79732)	(0.84353)	(0.75112)
PAY.INC.AGE4	0.008266	0.13893	0.14915	0.12871
UNEMP.L0	(0.094530)	(0.51597)	(0.62095)	(0.41100)
AGE	(0.008489)	(0.04245)	(0.04245)	(0.04245)
AGE.2	(1.657498)	-	-	-
SR	(0.334947)	(0.33495)	(0.33495)	(0.33495)
Median Conditional Prepayment Rate		**10.3995%**		

Delta Adjusted Claim Rates and Relative Change in Claim Rates

Variable	AGE 5+Delta	% Change for + Delta	AGE 5-Delta	% Change for - Delta
INT.RT	8.2653%	-20.5219%	13.0848%	25.8209%
R.Prime	12.2019%	17.3318%	8.8633%	-14.7716%
Yield.Diff	11.5582%	11.1420%	9.3570%	-10.0250%
FR30.PDIFF	14.6126%	40.5118%	8.4675%	-18.5776%
FR30.NDIFF	10.3995%	0.0000%	8.9046%	-14.3752%
Tbond.Vol	11.3020%	8.6777%	9.5691%	-7.9848%
NEGEQ.RGT1	10.4498%	0.4834%	10.3495%	-0.4811%
NEGEQ.RLT1	10.4445%	0.4327%	10.3995%	0.0000%
CumDiff	8.7949%	-15.4302%	11.8123%	13.5847%
RHP	12.6366%	21.5117%	8.5585%	-17.7034%
ANN.HPA	10.0914%	-2.9628%	10.7170%	3.0533%
LTV.0	11.3949%	9.5713%	9.4911%	-8.7352%
LTV.AGE3	9.9300%	-4.5150%	10.8913%	4.7285%
PAY.INC.AGE4	10.5064%	1.0274%	10.2938%	-1.0169%
UNEMP.L0	9.3632%	-9.9650%	11.5505%	11.0679%
AGE	10.3995%	0.0000%	10.3995%	0.0000%
AGE.2	10.3995%	0.0000%	10.3995%	0.0000%
SR	10.3995%	0.0000%	10.3995%	0.0000%

Exhibit G.11

Fixed Rate 15-Year Loans, Mid+Investor LTV Category - Delta Analysis
Conditional Claim Rate Model

Median Predictor Variable Values at Policy Year 5 and Delta Adjustments

Predictor Variable	AGE 5	Delta (one std dev)	Value + Delta @ AGE	Value - Delta @ AGE 5
AGE	5	-	5	5
AGE.SQR	25	-	25	25
INT.RT	9.6443	1.0984	10.74267	8.54593
R.GT1	1.1228056	0.2467	1.36952	0.87609
R.LT1	0	0.1777	0.17774	-
CumDiff	0.03312171	0.0256	0.05871	0.00753
LTV.0	91.1376	5.1617	96.29928	85.97593
LTV.AGE3	63.89	5.2292	69.11918	58.66082
ANN.HPA	1.02786138	0.0142	1.04205	1.01367
HPA	1.17558838	0.0762	1.25179	1.09939
NEGEQ.RGT1	0.025986	0.0320	0.05794	-
NEGEQ.RLT1	0	0.0129	0.01293	-
RHP	0.8617	0.3095	1.17122	0.55218
UNEMP.L0	5.6166667	0.8612	6.47784	4.75549
PAY.INC.AGE4	17.7182	1.2086	18.92682	16.50958
SR	1	-	1	1

Regression Coefficients Interacted with Medians and Delta Adjusted Medians

Variable	Coefficient	AGE 5	AGE 5+Delta	AGE 5-Delta
Intercept	0.031383	0.03138	0.03138	0.03138
AGE	0.403543	2.01771	2.01771	2.01771
AGE.SQR	(0.029191)	(0.72977)	(0.72977)	(0.72977)
INT.RT	0.359801	3.47003	3.86523	3.07484
R.GT1	0.008134	0.00913	0.01114	0.00713
R.LT1	(0.127070)	-	(0.02259)	-
CumDiff	1.592706	0.05275	0.09351	0.01199
LTV.0	0.007946	0.72420	0.76522	0.68319
LTV.AGE3	0.013791	0.88112	0.95324	0.80901
ANN.HPA	0.550273	0.56560	0.57341	0.55779
HPA	(1.355651)	(1.59369)	(1.69699)	(1.49038)
NEG.EQ.RGT1	3.268104	0.08492	0.18935	-
NEG.EQ.RLT1	3.518339	-	0.04551	-
RHP	(0.503761)	(0.43409)	(0.59002)	(0.27816)
UNEMP.L0	(0.155639)	(0.87417)	(1.00821)	(0.74014)
PAY.INC.AGE4	0.020379	0.36108	0.38572	0.33645
SR	0.146763	0.14676	0.14676	0.14676
Median Conditional Claim Rate		**1.1139%**		

Delta Adjusted Claim Rates and Relative Change in Claim Rates

Variable	AGE 5+Delta	% Change for + Delta	AGE 5-Delta	% Change for - Delta
AGE	1.1139%	0.0000%	1.1139%	0.0000%
AGE.SQR	1.1139%	0.0000%	1.1139%	0.0000%
INT.RT	1.6537%	48.4673%	0.7502%	-32.6451%
R.GT1	1.1161%	0.2009%	1.1116%	-0.2005%
R.LT1	1.0890%	-2.2333%	1.1139%	0.0000%
CumDiff	1.1602%	4.1602%	1.0694%	-3.9940%
LTV.0	1.1605%	4.1869%	1.0691%	-4.0186%
LTV.AGE3	1.1971%	7.4781%	1.0364%	-6.9578%
ANN.HPA	1.1226%	0.7840%	1.1052%	-0.7779%
HPA	1.0045%	-9.8147%	1.2351%	10.8829%
NEGEQ.RGT1	1.2365%	11.0073%	1.0232%	-8.1419%
NEGEQ.RLT1	1.1657%	4.6560%	1.1139%	0.0000%
RHP	0.9530%	-14.4378%	1.3018%	16.8740%
UNEMP.L0	0.9741%	-12.5439%	1.2736%	14.3430%
PAY.INC.AGE4	1.1416%	2.4937%	1.0868%	-2.4330%
SR	1.1139%	0.0000%	1.1139%	0.0000%

Exhibit G.12

Fixed Rate 15-Year Loans, Mid+Investor LTV Category - Delta Analysis
Conditional Prepayment Rate Model

Median Predictor Variable Values at Policy Year 5 and Delta Adjustments

Predictor Variable	AGE 5	Delta (one std dev)	Value + Delta @ AGE 5	Value - Delta @ AGE 5
INT.RT	9.6443	1.09837	10.74267	8.54593
R.Prime	1.0559633	0.09351	1.14947	0.96245
Yield.Diff	1.7525	1.16581	2.91831	0.58669
FR30.PDIFF	0.888025	0.61616	1.50418	0.27187
FR30.NDIFF	0	0.20010	-	(0.20010)
Tbond.Vol	0.374105	0.16789	0.54199	0.20622
NEGEQ.RGT1	0.025986	0.03195	0.05794	-
NEGEQ.RLT1	0	0.01293	0.01293	-
CumDiff	0.03312171	0.02559	0.05871	0.00753
RHP	0.8617	0.30952	1.17122	0.55218
ANN.HPA	1.02786138	0.01419	1.04205	1.01367
LTV.0	91.1376	5.16168	96.29928	85.97593
LTV.AGE3	63.89	5.22918	69.11918	58.66082
PAY.INC.AGE4	17.7182	1.20862	18.92682	16.50958
UNEMP.L0	5.6166667	0.86118	6.47784	4.75549
AGE	5	-	5	5
AGE.2	0	-	0	0
SR	1	-	1	1

Regression Coefficients Interacted with Medians and Delta Adjusted Medians

Variable	Coefficient	AGE 5	AGE 5+Delta	AGE 5-Delta
Intercept	6.289346	6.28935	6.28935	6.28935
INT.RT	(0.113599)	(1.09558)	(1.22036)	(0.97081)
R.Prime	1.978416	2.08914	2.27414	1.90413
Yield.Diff	0.134940	0.23648	0.39380	0.07917
FR30.PDIFF	0.408898	0.36311	0.61506	0.11117
FR30.NDIFF	0.458484	-	-	(0.09174)
Tbond.Vol	0.489434	0.18310	0.26527	0.10093
NEGEQ.RGT1	(1.304424)	(0.03390)	(0.07558)	-
NEGEQ.RLT1	(2.492452)	-	(0.03224)	-
CumDiff	(6.635695)	(0.21979)	(0.38960)	(0.04997)
RHP	0.574162	0.49476	0.67247	0.31704
ANN.HPA	(1.378731)	(1.41714)	(1.43671)	(1.39758)
LTV.0	0.007533	0.68651	0.72539	0.64762
LTV.AGE3	0.001900	0.12142	0.13136	0.11148
PAY.INC.AGE4	0.009950	0.17630	0.18832	0.16427
UNEMP.L0	(0.131112)	(0.73641)	(0.84932)	(0.62350)
AGE	0.060631	0.30316	0.30316	0.30316
AGE.2	(0.539532)	-	-	-
SR	(0.349942)	(0.34994)	(0.34994)	(0.34994)
Median Conditional Prepayment Rate		**12.0056%**		

Delta Adjusted Claim Rates and Relative Change in Claim Rates

Variable	AGE 5+Delta	% Change for + Delta	AGE 5-Delta	% Change for - Delta
INT.RT	10.5973%	-11.7304%	13.6011%	13.2892%
R.Prime	14.4454%	20.3220%	9.9779%	-16.8897%
Yield.Diff	14.0509%	17.0364%	10.2580%	-14.5565%
FR30.PDIFF	15.4455%	28.6525%	9.3318%	-22.2713%
FR30.NDIFF	12.0056%	0.0000%	10.9532%	-8.7658%
Tbond.Vol	13.0338%	8.5640%	11.0586%	-7.8884%
NEGEQ.RGT1	11.5155%	-4.0824%	12.4195%	3.4478%
NEGEQ.RLT1	11.6247%	-3.1725%	12.0056%	0.0000%
CumDiff	10.1306%	-15.6182%	14.2277%	18.5089%
RHP	14.3405%	19.4487%	10.0508%	-16.2821%
ANN.HPA	11.7730%	-1.9377%	12.2428%	1.9760%
LTV.0	12.4816%	3.9647%	11.5478%	-3.8135%
LTV.AGE3	12.1255%	0.9987%	11.8869%	-0.9889%
PAY.INC.AGE4	12.1509%	1.2098%	11.8621%	-1.1954%
UNEMP.L0	10.7238%	-10.6769%	13.4407%	11.9531%
AGE	12.0056%	0.0000%	12.0056%	0.0000%
AGE.2	12.0056%	0.0000%	12.0056%	0.0000%
SR	12.0056%	0.0000%	12.0056%	0.0000%

Exhibit G.13

Fixed Rate 15-Year Loans, Low LTV Category - Delta Analysis
Conditional Claim Rate Model

Median Predictor Variable Values at Policy Year 5 and Delta Adjustments

Predictor Variable	AGE 5	Delta (one std dev)	Value + Delta @ AGE	Value - Delta @ AGE 5
AGE	5	-	5	5
AGE.SQR	25	-	25	25
INT.RT	9.289	1.5377	10.82672	7.75128
R.GT1	1.1133018	0.3567	1.47000	0.75660
R.LT1	0	0.2761	0.27608	-
CumDiff	0.04144587	0.0277	0.06915	0.01374
LTV.0	68.9486	8.0959	77.04450	60.85270
LTV.AGE3	49.605	7.3466	56.95155	42.25845
ANN.HPA	1.03287918	0.0163	1.04922	1.01654
HPA	1.18062015	0.0606	1.24122	1.12002
NEGEQ.RGT1	0.005391	0.0089	0.01427	-
NEGEQ.RLT1	0	0.0032	0.00320	-
RHP	0.86405	0.3546	1.21861	0.50949
UNEMP.L0	5.6166667	0.9809	6.59753	4.63581
PAY.INC.AGE4	17.68345	1.2933	18.97672	16.39018
SR	1	-	1	1

Regression Coefficients Interacted with Medians and Delta Adjusted Medians

Variable	Coefficient	AGE 5	AGE 5+Delta	AGE 5-Delta
Intercept	(4.764888)	(4.76489)	(4.76489)	(4.76489)
AGE	0.522447	2.61224	2.61224	2.61224
AGE.SQR	(0.029153)	(0.72883)	(0.72883)	(0.72883)
INT.RT	0.373749	3.47175	4.04647	2.89703
R.GT1	(0.706068)	(0.78607)	(1.03792)	(0.53421)
R.LT1	(0.689720)	-	(0.19042)	-
CumDiff	3.162660	0.13108	0.21869	0.04347
LTV.0	0.053116	3.66225	4.09226	3.23223
LTV.AGE3	0.012662	0.62809	0.72111	0.53507
ANN.HPA	4.105096	4.24007	4.30715	4.17298
HPA	(4.560521)	(5.38424)	(5.66062)	(5.10786)
NEG.EQ.RGT1	22.617273	0.12193	0.32271	-
NEG.EQ.RLT1	8.808843	-	0.02815	-
RHP	(0.240697)	(0.20797)	(0.29332)	(0.12263)
UNEMP.L0	(0.074180)	(0.41664)	(0.48940)	(0.34388)
PAY.INC.AGE4	0.025144	0.44463	0.47715	0.41211
SR	0.473534	0.47353	0.47353	0.47353
Median Conditional Claim Rate		**0.3301%**		

Delta Adjusted Claim Rates and Relative Change in Claim Rates

Variable	AGE 5+Delta	% Change for + Delta	AGE 5-Delta	% Change for - Delta
AGE	0.3301%	0.0000%	0.3301%	0.0000%
AGE.SQR	0.3301%	0.0000%	0.3301%	0.0000%
INT.RT	0.5865%	77.6635%	0.1858%	-43.7138%
R.GT1	0.2566%	-22.2643%	0.4247%	28.6410%
R.LT1	0.2729%	-17.3387%	0.3301%	0.0000%
CumDiff	0.3604%	9.1564%	0.3024%	-8.3883%
LTV.0	0.5075%	53.7286%	0.2148%	-34.9503%
LTV.AGE3	0.3623%	9.7485%	0.3008%	-8.8826%
ANN.HPA	0.3530%	6.9388%	0.3087%	-6.4885%
HPA	0.2504%	-24.1477%	0.4352%	31.8351%
NEGEQ.RGT1	0.4035%	22.2354%	0.2922%	-11.4789%
NEGEQ.RLT1	0.3396%	2.8554%	0.3301%	0.0000%
RHP	0.3031%	-8.1802%	0.3595%	8.9090%
UNEMP.L0	0.3070%	-7.0176%	0.3551%	7.5472%
PAY.INC.AGE4	0.3410%	3.3052%	0.3196%	-3.1995%
SR	0.3301%	0.0000%	0.3301%	0.0000%

Exhibit G.14

Fixed Rate 15-Year Loans, Low LTV Category - Delta Analysis
Conditional Prepayment Rate Model

Median Predictor Variable Values at Policy Year 5 and Delta Adjustments

Predictor Variable	AGE 5	Delta (one std dev)	Value + Delta @ AGE 5	Value - Delta @ AGE 5
INT.RT	9.289	1.53772	10.82672	7.75128
R.Prime	1.06278129	0.09112	1.15390	0.97166
Yield.Diff	1.691667	1.10928	2.80095	0.58239
FR30.PDIFF	0.8273	0.76893	1.59623	0.05837
FR30.NDIFF	0	0.21598	-	(0.21598)
Tbond.Vol	0.3903262	0.18996	0.58028	0.20037
NEGEQ.RGT1	0.005391	0.00888	0.01427	-
NEGEQ.RLT1	0	0.00320	0.00320	-
CumDiff	0.04144587	0.02770	0.06915	0.01374
RHP	0.86405	0.35456	1.21861	0.50949
ANN.HPA	1.03287918	0.01634	1.04922	1.01654
LTV.0	68.9486	8.09590	77.04450	60.85270
LTV.AGE3	49.605	7.34655	56.95155	42.25845
PAY.INC.AGE4	17.68345	1.29327	18.97672	16.39018
UNEMP.L0	5.6166667	0.98086	6.59753	4.63581
AGE	5	-	5	5
AGE.2	0	-	0	0
SR	1	-	1	1

Regression Coefficients Interacted with Medians and Delta Adjusted Medians

Variable	Coefficient	AGE 5	AGE 5+Delta	AGE 5-Delta
Intercept	8.851385	8.85139	8.85139	8.85139
INT.RT	(0.087614)	(0.81384)	(0.94857)	(0.67912)
R.Prime	1.024413	1.08873	1.18207	0.99538
Yield.Diff	0.150849	0.25519	0.42252	0.08785
FR30.PDIFF	0.405722	0.33565	0.64762	0.02368
FR30.NDIFF	0.536755	-	-	(0.11593)
Tbond.Vol	0.385345	0.15041	0.22361	0.07721
NEGEQ.RGT1	(4.471279)	(0.02410)	(0.06380)	-
NEGEQ.RLT1	(5.910374)	-	(0.01889)	-
CumDiff	(5.386572)	(0.22325)	(0.37247)	(0.07403)
RHP	0.378529	0.32707	0.46128	0.19286
ANN.HPA	(2.324162)	(2.40058)	(2.43856)	(2.36260)
LTV.0	0.008754	0.60357	0.67444	0.53270
LTV.AGE3	(0.006274)	(0.31121)	(0.35730)	(0.26512)
PAY.INC.AGE4	0.007514	0.13287	0.14259	0.12315
UNEMP.L0	(0.122190)	(0.68630)	(0.80615)	(0.56645)
AGE	0.010626	0.05313	0.05313	0.05313
AGE.2	(0.924779)	-	-	-
SR	(0.360260)	(0.36026)	(0.36026)	(0.36026)
Median Conditional Prepayment Rate		**10.7325%**		

Delta Adjusted Claim Rates and Relative Change in Claim Rates

Variable	AGE 5+Delta	% Change for + Delta	AGE 5-Delta	% Change for - Delta
INT.RT	9.3797%	-12.6044%	12.2804%	14.4223%
R.Prime	11.7825%	9.7838%	9.7760%	-8.9119%
Yield.Diff	12.6874%	18.2148%	9.0788%	-15.4082%
FR30.PDIFF	14.6618%	36.6115%	7.8562%	-26.7997%
FR30.NDIFF	10.7325%	0.0000%	9.5577%	-10.9460%
Tbond.Vol	11.5475%	7.5944%	9.9749%	-7.0583%
NEGEQ.RGT1	10.3148%	-3.8915%	10.9943%	2.4398%
NEGEQ.RLT1	10.5316%	-1.8713%	10.7325%	0.0000%
CumDiff	9.2448%	-13.8619%	12.4596%	16.0926%
RHP	12.2741%	14.3636%	9.3845%	-12.5596%
ANN.HPA	10.3325%	-3.7270%	11.1480%	3.8712%
LTV.0	11.5207%	7.3442%	9.9982%	-6.8418%
LTV.AGE3	10.2490%	-4.5045%	11.2387%	4.7170%
PAY.INC.AGE4	10.8373%	0.9765%	10.6287%	-0.9670%
UNEMP.L0	9.5203%	-11.2948%	12.0990%	12.7330%
AGE	10.7325%	0.0000%	10.7325%	0.0000%
AGE.2	10.7325%	0.0000%	10.7325%	0.0000%
SR	10.7325%	0.0000%	10.7325%	0.0000%

Exhibit G.15

Adjustable Rate Loans, All LTV Categories - Delta Analysis
Conditional Claim Rate Model

Median Predictor Variable Values at Policy Year 5 and Delta Adjustments

Predictor Variable	AGE 5	Delta (one std dev)	Value + Delta @ AGE 5	Value - Delta @ AGE 5
AGE	5	-	5	5
AGE.2	0	-	-	-
AGE.4	0	-	-	-
INT.RT.t	7.4542	1.1140	8.56816	6.34025
R.GT1	1.1962673	0.4682	1.66446	0.72807
R.LT1	0	0.3476	0.34762	-
LTV.0	95.2938	6.8641	102.15793	88.42967
LTV.AGE3	77.45066	18.8282	96.27889	58.62243
ANN.HPA	1.0302273	0.0169	1.04709	1.01337
NEGEQ.AGE6	0	-	-	-
RHP	0.8773	0.2849	1.16220	0.59240
UNEMP.L0	5.108333	1.1546	6.26298	3.95369
PAY.INC.AGE4	19.9658	4.7643	24.73013	15.20147
SR	1	-	1	1

Regression Coefficients Interacted with Medians and Delta Adjusted Medians

Variable	Coefficient	AGE 5	AGE 5+Delta	AGE 5-Delta
Intercept	(12.291816)	(12.29182)	(12.29182)	(12.29182)
AGE	(0.127908)	(0.63954)	(0.63954)	(0.63954)
AGE.2	(1.886093)	-	-	-
AGE.4	(0.358678)	-	-	-
INT.RT.t	0.026150	0.19493	0.22406	0.16580
R.GT1	(0.330506)	(0.39537)	(0.55011)	(0.24063)
R.LT1	(0.400951)	-	(0.13938)	-
LTV.0	0.040275	3.83791	4.11436	3.56146
LTV.AGE3	(0.001972)	(0.15270)	(0.18982)	(0.11558)
ANN.HPA	14.176436	14.60495	14.84394	14.36596
NEGEQ.AGE6	0.139184	-	-	-
RHP	(0.167147)	(0.14664)	(0.19426)	(0.09902)
UNEMP.L0	0.114146	0.58310	0.71489	0.45130
PAY.INC.AGE4	0.022406	0.44736	0.55411	0.34061
SR	(0.707179)	(0.70718)	(0.70718)	(0.70718)
Median Conditional Claim Rate		**2.0747%**		

Delta Adjusted Claim Rates and Relative Change in Claim Rates

Variable	AGE 5+Delta	% Change for + Delta	AGE 5-Delta	% Change for - Delta
AGE	2.0747%	0.0000%	2.0747%	0.0000%
AGE.2	2.0747%	0.0000%	2.0747%	0.0000%
AGE.4	2.0747%	0.0000%	2.0747%	0.0000%
INT.RT.t	2.1361%	2.9558%	2.0152%	-2.8709%
R.GT1	1.7773%	-14.3363%	2.4220%	16.7356%
R.LT1	1.8048%	-13.0102%	2.0747%	0.0000%
LTV.0	2.7354%	31.8440%	1.5736%	-24.1528%
LTV.AGE3	1.9991%	-3.6440%	2.1532%	3.7819%
ANN.HPA	2.6349%	26.9970%	1.6337%	-21.2580%
NEGEQ.AGE6	2.0747%	0.0000%	2.0747%	0.0000%
RHP	1.9783%	-4.6504%	2.1759%	4.8773%
UNEMP.L0	2.3670%	14.0878%	1.8185%	-12.3482%
PAY.INC.AGE4	2.3085%	11.2658%	1.8647%	-10.1251%
SR	2.0747%	0.0000%	2.0747%	0.0000%

Exhibit G.16

Adjustable Rate Loans, All LTV Categories - Delta Analysis
Conditional Prepayment Rate Model

Median Predictor Variable Values at Policy Year 5 and Delta Adjustments

Predictor Variable	AGE 5	Delta (one std dev)	Value + Delta @ AGE	Value - Delta @ AGE 5
INT.RT	7.4542	1.11396	8.56816	6.34025
R.Prime	1.1690388	0.13275	1.30179	1.03629
Yield.Diff	1.094167	1.00827	2.10244	0.08589
FR30.PDIFF	0	0.13262	0.13262	-
FR30.NDIFF	-0.9850417	0.79881	(0.18624)	(1.78385)
Tbond.Vol	0.287659	0.12680	0.41446	0.16086
NEGEQ.RGT1	0.104259	0.08190	0.18616	0.02236
NEGEQ.RLT1	0	0.04029	0.04029	-
RHP	0.8773	0.28490	1.16220	0.59240
LTV.0	95.2938	6.86413	102.15793	88.42967
LTV.AGE3	77.45066	18.82823	96.27889	58.62243
PAY.INC.AGE4	19.9658	4.76433	24.73013	15.20147
UNEMP.L0	5.108333	1.15465	6.26298	3.95369
AGE	5	-	5	5
AGE.2	0	-	-	-
SR	1	-	1	1

Regression Coefficients Interacted with Medians and Delta Adjusted Medians

Variable	Coefficient	AGE 5	AGE 5+Delta	AGE 5-Delta
Intercept	14.548152	14.54815	14.54815	14.54815
INT.RT	(0.817518)	(6.09394)	(7.00462)	(5.18326)
R.Prime	(1.125934)	(1.31626)	(1.46572)	(1.16680)
Yield.Diff	(0.199932)	(0.21876)	(0.42034)	(0.01717)
FR30.PDIFF	0.668661	-	0.08868	-
FR30.NDIFF	0.882424	(0.86922)	(0.16434)	(1.57411)
Tbond.Vol	(0.022166)	(0.00638)	(0.00919)	(0.00357)
NEGEQ.RGT1	(0.588860)	(0.06139)	(0.10962)	(0.01317)
NEGEQ.RLT1	(1.284770)	-	(0.05177)	-
RHP	0.306630	0.26901	0.35637	0.18165
LTV.0	(0.000447)	(0.04260)	(0.04567)	(0.03953)
LTV.AGE3	(0.000856)	(0.06626)	(0.08237)	(0.05015)
PAY.INC.AGE4	0.005467	0.10915	0.13520	0.08311
UNEMP.L0	0.175192	0.89494	1.09722	0.69265
AGE	(0.070349)	(0.35174)	(0.35174)	(0.35174)
AGE.2	(0.718970)	-	-	-
SR	(0.064667)	(0.06467)	(0.06467)	(0.06467)
Median Conditional Prepayment Rate		**8.3717%**		

Delta Adjusted Claim Rates and Relative Change in Claim Rates

Variable	AGE 5+Delta	% Change for + Delta	AGE 5-Delta	% Change for - Delta
INT.RT	3.3675%	-59.7749%	20.8120%	148.6007%
R.Prime	7.2094%	-13.8831%	9.7213%	16.1212%
Yield.Diff	6.8433%	-18.2567%	10.2414%	22.3341%
FR30.PDIFF	9.1479%	9.2726%	8.3717%	0.0000%
FR30.NDIFF	16.9410%	102.3614%	4.1370%	-50.5835%
Tbond.Vol	8.3482%	-0.2807%	8.3952%	0.2815%
NEGEQ.RGT1	7.9775%	-4.7083%	8.7853%	4.9410%
NEGEQ.RLT1	7.9493%	-5.0449%	8.3717%	0.0000%
CumDiff	9.1359%	9.1289%	7.6714%	-8.3652%
RHP	8.3460%	-0.3064%	8.3974%	0.3073%
ANN.HPA	8.2379%	-1.5979%	8.5076%	1.6238%
LTV.0	8.5926%	2.6388%	8.1564%	-2.5710%
LTV.AGE3	10.2486%	22.4197%	6.8385%	-18.3138%
PAY.INC.AGE4	8.3717%	0.0000%	8.3717%	0.0000%
UNEMP.L0	8.3717%	0.0000%	8.3717%	0.0000%
AGE	8.3717%	0.0000%	8.3717%	0.0000%

Exhibit G.17

Streamline Refinance 30-Year Loans, All LTV Categories - Delta Analysis
Conditional Claim Rate Model

Median Predictor Variable Values at Policy Year 5 and Delta Adjustments

Predictor Variable	AGE 5	Delta (one std dev)	Value + Delta @ AGE	Value - Delta @ AGE 5
AGE	5	-	5	5
AGE.SQR	25	-	25	25
INT.RT	9.13455	1.6178	10.75234	7.51677
R.GT1	1.0446865	0.5508	1.59551	0.49386
R.LT1	0	0.3564	0.35641	-
CumDiff	0.01591	0.0281	0.04404	-
LTV.0	98.6466	5.3749	104.02149	93.27171
LTV.AGE3	78.375	12.1344	90.50935	66.24065
ANN.HPA	1.03800458	0.0476	1.08556	0.99045
HPA	1.2116509	0.2108	1.42245	1.00085
NEGEQ.RGT1	0.063115	0.1372	0.20027	-
NEGEQ.RLT1	0	0.0974	0.09739	-
RHP	0.8441	0.2781	1.12224	0.56596
UNEMP.L0	6.35	1.5934	7.94338	4.75662
PAY.INC.AGE4	17.5394	2.8115	20.35093	14.72787
SR	1	-	1	1
REFI	0	-	0	0

Regression Coefficients Interacted with Medians and Delta Adjusted Medians

Variable	Coefficient	AGE 5	AGE 5+Delta	AGE 5-Delta
Intercept	2.918969	2.91897	2.91897	2.91897
AGE	0.103436	0.51718	0.51718	0.51718
AGE.SQR	(0.005058)	(0.12646)	(0.12646)	(0.12646)
INT.RT	0.303001	2.76778	3.25797	2.27759
R.GT1	(0.054551)	(0.05699)	(0.08704)	(0.02694)
R.LT1	(0.105894)	-	(0.03774)	-
CumDiff	(0.690503)	(0.01099)	(0.03041)	-
LTV.0	(0.017264)	(1.70301)	(1.79580)	(1.61022)
LTV.AGE3	0.010397	0.81483	0.94098	0.68867
ANN.HPA	1.094859	1.13647	1.18853	1.08440
HPA	(0.821431)	(0.99529)	(1.16844)	(0.82213)
NEG.EQ.RGT1	1.227465	0.07747	0.24582	-
NEG.EQ.RLT1	1.324260	-	0.12897	-
RHP	(0.323165)	(0.27278)	(0.36267)	(0.18290)
UNEMP.L0	(0.081356)	(0.51661)	(0.64624)	(0.38698)
PAY.INC.AGE4	0.017463	0.30629	0.35539	0.25719
SR	0.211662	0.21166	0.21166	0.21166
REFI	(0.506356)	-	-	-
Median Conditional Claim Rate		**1.5894%**		

Delta Adjusted Claim Rates and Relative Change in Claim Rates

Variable	AGE 5+Delta	% Change for + Delta	AGE 5-Delta	% Change for - Delta
AGE	1.5894%	0.0000%	1.5894%	0.0000%
AGE.SQR	1.5894%	0.0000%	1.5894%	0.0000%
INT.RT	2.5949%	63.2627%	0.9735%	-38.7490%
R.GT1	1.5423%	-2.9601%	1.6379%	3.0504%
R.LT1	1.5305%	-3.7038%	1.5894%	0.0000%
CumDiff	1.5588%	-1.9236%	1.6069%	1.1046%
LTV.0	1.4485%	-8.8616%	1.7439%	9.7232%
LTV.AGE3	1.8031%	13.4458%	1.4010%	-11.8522%
ANN.HPA	1.6743%	5.3444%	1.5087%	-5.0732%
HPA	1.3367%	-15.8995%	1.8899%	18.9053%
NEGEQ.RGT1	1.8808%	18.3349%	1.4709%	-7.4547%
NEGEQ.RLT1	1.8082%	13.7651%	1.5894%	0.0000%
RHP	1.4527%	-8.5964%	1.7389%	9.4048%
UNEMP.L0	1.3961%	-12.1581%	1.8094%	13.8409%
PAY.INC.AGE4	1.6694%	5.0323%	1.5132%	-4.7912%
SR	1.5894%	0.0000%	1.5894%	0.0000%
REFI	1.5894%	0.0000%	1.5894%	0.0000%

Streamline Refinance 30-Year Loans, All LTV Categories - Delta Analysis
Conditional Prepayment Rate Model

Median Predictor Variable Values at Policy Year 5 and Delta Adjustments

Predictor Variable	AGE 5	Delta (one std dev)	Value + Delta @ AGE	Value - Delta @ AGE 5
INT.RT	9.13455	1.61779	10.75234	7.51677
R.Prime	1.008412	0.15508	1.16349	0.85333
Yield.Diff	1.094167	1.29200	2.38617	(0.19783)
FR30.PDIFF	0.2979083	0.88902	1.18693	-
FR30.NDIFF	0	2.47374	-	(2.47374)
Tbond.Vol	0.4079095	0.22117	0.62908	0.18674
NEGEQ.RGT1	0.063115	0.13715	0.20027	-
NEGEQ.RLT1	0	0.09739	0.09739	-
CumDiff	0.01591	0.02813	0.04404	-
RHP	0.8441	0.27814	1.12224	0.56596
ANN.HPA	1.03800458	0.04755	1.08556	0.99045
LTV.0	98.6466	5.37489	104.02149	93.27171
LTV.AGE3	78.375	12.13435	90.50935	66.24065
PAY.INC.AGE4	17.5394	2.81153	20.35093	14.72787
UNEMP.L0	6.35	1.59338	7.94338	4.75662
AGE	5	-	5	5
AGE.2	0	-	0	0
SR	1	-	1	1
REFI	0	-	0	0

Regression Coefficients Interacted with Medians and Delta Adjusted Medians

Variable	Coefficient	AGE 5	AGE 5+Delta	AGE 5-Delta
Intercept	3.504166	3.50417	3.50417	3.50417
INT.RT	(0.198918)	(1.81702)	(2.13883)	(1.49522)
R.Prime	2.778257	2.80163	3.23248	2.37078
Yield.Diff	0.099292	0.10864	0.23693	(0.01964)
FR30.PDIFF	0.508618	0.15152	0.60369	-
FR30.NDIFF	0.156354	-	-	(0.38678)
Tbond.Vol	0.517241	0.21099	0.32539	0.09659
NEGEQ.RGT1	(0.906665)	(0.05722)	(0.18157)	-
NEGEQ.RLT1	(1.632672)	-	(0.15900)	-
CumDiff	(6.945060)	(0.11050)	(0.30586)	-
RHP	0.470922	0.39751	0.52849	0.26652
ANN.HPA	0.848277	0.88052	0.92085	0.84018
LTV.0	0.014725	1.45255	1.53169	1.37340
LTV.AGE3	(0.006460)	(0.50628)	(0.58466)	(0.42789)
PAY.INC.AGE4	0.006072	0.10650	0.12357	0.08943
UNEMP.L0	(0.029543)	(0.18760)	(0.23467)	(0.14052)
AGE	0.004048	0.02024	0.02024	0.02024
AGE.2	(0.924867)	-	-	-
SR	(0.225448)	(0.22545)	(0.22545)	(0.22545)
REFI	0.431097	-	-	-
Median Conditional Prepayment Rate		**8.3730%**		

Delta Adjusted Claim Rates and Relative Change in Claim Rates

Variable	AGE 5+Delta	% Change for + Delta	AGE 5-Delta	% Change for - Delta
INT.RT	6.0691%	-27.5161%	11.5516%	37.9617%
R.Prime	12.8825%	53.8564%	5.4421%	-35.0043%
Yield.Diff	9.5191%	13.6877%	7.3650%	-12.0397%
FR30.PDIFF	13.1601%	57.1723%	7.1958%	-14.0601%
FR30.NDIFF	8.3730%	0.0000%	5.6873%	-32.0759%
Tbond.Vol	9.3879%	12.1200%	7.4679%	-10.8098%
NEGEQ.RGT1	7.3940%	-11.6930%	8.8662%	5.8893%
NEGEQ.RLT1	7.1422%	-14.7005%	8.3730%	0.0000%
CumDiff	6.8872%	-17.7462%	9.3513%	11.6832%
RHP	9.5448%	13.9947%	7.3451%	-12.2766%
ANN.HPA	8.7177%	4.1163%	8.0420%	-3.9536%
LTV.0	9.0627%	8.2360%	7.7359%	-7.6093%
LTV.AGE3	7.7418%	-7.5391%	9.0558%	8.1538%
PAY.INC.AGE4	8.5172%	1.7218%	8.2313%	-1.6927%
UNEMP.L0	7.9880%	-4.5982%	8.7766%	4.8198%
AGE	8.3730%	0.0000%	8.3730%	0.0000%
AGE.2	8.3730%	0.0000%	8.3730%	0.0000%
SR	8.3730%	0.0000%	8.3730%	0.0000%
REFI	8.3730%	0.0000%	8.3730%	0.0000%

Exhibit G.19

Streamline Refinance 15-Year Loans, All LTV Categories - Delta Analysis
Conditional Claim Rate Model

Median Predictor Variable Values at Policy Year 5 and Delta Adjustments

Predictor Variable	AGE 5	Delta (one std dev)	Value + Delta @	Value - Delta @ AGE 5
AGE	5	-	5	5
AGE.SQR	25	-	25	25
INT.RT	8.14435	1.3367	9.48108	6.80762
R.GT1	1.074515	0.3519	1.42637	0.72266
R.LT1	0	0.2814	0.28138	-
CumDiff	0.01901762	0.0249	0.04396	-
LTV.0	98.69415	8.0255	106.71967	90.66863
LTV.AGE3	68.575	6.4594	75.03439	62.11561
ANN.HPA	1.03499393	0.0114	1.04637	1.02362
HPA	1.17982829	0.0316	1.21145	1.14821
NEGEQ.RGT1	0.0309445	0.0392	0.07015	-
NEGEQ.RLT1	0	0.0252	0.02517	-
RHP	0.56655	0.3880	0.95452	0.17858
UNEMP.L0	5.108333	1.0445	6.15280	4.06387
PAY.INC.AGE4	17.3571	1.2196	18.57666	16.13754
SR	1	-	1	1
REFI	0	-	0	0

Regression Coefficients Interacted with Medians and Delta Adjusted Medians

Variable	Coefficient	AGE 5	AGE 5+Delta	AGE 5-Delta
Intercept	2.853488	2.85349	2.85349	2.85349
AGE	0.213862	1.06931	1.06931	1.06931
AGE.SQR	(0.015122)	(0.37806)	(0.37806)	(0.37806)
INT.RT	0.510493	4.15763	4.84002	3.47524
R.GT1	(0.144095)	(0.15483)	(0.20553)	(0.10413)
R.LT1	(0.263726)	-	(0.07421)	-
CumDiff	0.368664	0.00701	0.01621	-
LTV.0	(0.030646)	(3.02456)	(3.27051)	(2.77861)
LTV.AGE3	0.014718	1.00930	1.10437	0.91423
ANN.HPA	2.421783	2.50653	2.53408	2.47898
HPA	(2.850588)	(3.36320)	(3.45334)	(3.27307)
NEG.EQ.RGT1	(0.864548)	(0.02675)	(0.06065)	-
NEG.EQ.RLT1	0.019015	-	0.00048	-
RHP	(0.606610)	(0.34367)	(0.57902)	(0.10833)
UNEMP.L0	(0.133049)	(0.67966)	(0.81862)	(0.54069)
PAY.INC.AGE4	0.025928	0.45004	0.48166	0.41842
SR	0.139648	0.13965	0.13965	0.13965
REFI	(1.272139)	-	-	-
Median Conditional Claim Rate		**0.6818%**		

Delta Adjusted Claim Rates and Relative Change in Claim Rates

Variable	AGE 5+Delta	% Change for + Delta	AGE 5-Delta	% Change for - Delta
AGE	0.6818%	0.0000%	0.6818%	0.0000%
AGE.SQR	0.6818%	0.0000%	0.6818%	0.0000%
INT.RT	1.3491%	97.8600%	0.3446%	-49.4592%
R.GT1	0.6481%	-4.9437%	0.7173%	5.2008%
R.LT1	0.6331%	-7.1521%	0.6818%	0.0000%
CumDiff	0.6881%	0.9239%	0.6771%	-0.6987%
LTV.0	0.5332%	-21.8037%	0.8720%	27.8834%
LTV.AGE3	0.7499%	9.9736%	0.6200%	-9.0691%
ANN.HPA	0.7009%	2.7934%	0.6633%	-2.7175%
HPA	0.6231%	-8.6195%	0.7462%	9.4326%
NEGEQ.RGT1	0.6591%	-3.3331%	0.7003%	2.7114%
NEGEQ.RLT1	0.6822%	0.0479%	0.6818%	0.0000%
RHP	0.5389%	-20.9705%	0.8628%	26.5351%
UNEMP.L0	0.5934%	-12.9742%	0.7835%	14.9084%
PAY.INC.AGE4	0.7038%	3.2126%	0.6606%	-3.1126%
SR	0.6818%	0.0000%	0.6818%	0.0000%
REFI	0.6818%	0.0000%	0.6818%	0.0000%

Streamline Refinance 15-Year Loans, All LTV Categories - Delta Analysis
Conditional Prepayment Rate Model

Median Predictor Variable Values at Policy Year 5 and Delta Adjustments

Predictor Variable	AGE 5	Delta (one std dev)	Value + Delta @	Value - Delta @ AGE 5
INT.RT	8.14435	1.33673	9.48108	6.80762
R.Prime	1.0387909	0.08917	1.12796	0.94962
Yield.Diff	1.0941667	0.91661	2.01078	0.17755
FR30.PDIFF	0.06795833	0.63980	0.70775	-
FR30.NDIFF	0	0.25257	-	(0.25257)
Tbond.Vol	0.287659	0.13912	0.42678	0.14854
NEGEQ.RGT1	0.0309445	0.03921	0.07015	-
NEGEQ.RLT1	0	0.02517	0.02517	-
CumDiff	0.01901762	0.02495	0.04396	-
RHP	0.56655	0.38797	0.95452	0.17858
ANN.HPA	1.03499393	0.01138	1.04637	1.02362
LTV.0	98.69415	8.02552	106.71967	90.66863
LTV.AGE3	68.575	6.45939	75.03439	62.11561
PAY.INC.AGE4	17.3571	1.21956	18.57666	16.13754
UNEMP.L0	5.108333	1.04447	6.15280	4.06387
AGE	5	-	5	5
AGE.2	0	-	0	0
SR	1	-	1	1
REFI	0	-	0	0

Regression Coefficients Interacted with Medians and Delta Adjusted Medians

Variable	Coefficient	AGE 5	AGE 5+Delta	AGE 5-Delta
Intercept	9.226252	9.22625	9.22625	9.22625
INT.RT	(0.213316)	(1.73732)	(2.02247)	(1.45218)
R.Prime	1.024185	1.06391	1.15524	0.97259
Yield.Diff	0.108029	0.11820	0.21722	0.01918
FR30.PDIFF	0.505837	0.03438	0.35801	-
FR30.NDIFF	0.600928	-	-	(0.15178)
Tbond.Vol	0.609576	0.17535	0.26015	0.09055
NEGEQ.RGT1	(0.195130)	(0.00604)	(0.01369)	-
NEGEQ.RLT1	(0.119029)	-	(0.00300)	-
CumDiff	(5.981018)	(0.11374)	(0.26294)	-
RHP	0.341907	0.19371	0.32636	0.06106
ANN.HPA	(1.864598)	(1.92985)	(1.95106)	(1.90863)
LTV.0	0.000945	0.09331	0.10090	0.08572
LTV.AGE3	0.000408	0.02798	0.03062	0.02534
PAY.INC.AGE4	0.004508	0.07825	0.08374	0.07275
UNEMP.L0	(0.082527)	(0.42158)	(0.50777)	(0.33538)
AGE	0.065383	0.32692	0.32692	0.32692
AGE.2	(0.501811)	-	-	-
SR	(0.317106)	(0.31711)	(0.31711)	(0.31711)
REFI	0.113985	-	-	-
Median Conditional Prepayment Rate		**9.0925%**		

Delta Adjusted Claim Rates and Relative Change in Claim Rates

Variable	AGE 5+Delta	% Change for + Delta	AGE 5-Delta	% Change for - Delta
INT.RT	6.8367%	-24.8095%	12.0926%	32.9955%
R.Prime	9.9619%	9.5626%	8.2989%	-8.7280%
Yield.Diff	10.0389%	10.4090%	8.2353%	-9.4276%
FR30.PDIFF	12.5670%	38.2139%	8.7852%	-3.3792%
FR30.NDIFF	9.0925%	0.0000%	7.8121%	-14.0819%
Tbond.Vol	9.8972%	8.8502%	8.3532%	-8.1306%
NEGEQ.RGT1	9.0232%	-0.7622%	9.1475%	0.6056%
NEGEQ.RLT1	9.0653%	-0.2992%	9.0925%	0.0000%
CumDiff	7.8322%	-13.8602%	10.1878%	12.0466%
RHP	10.3822%	14.1852%	7.9629%	-12.4230%
ANN.HPA	8.9016%	-2.0989%	9.2874%	2.1439%
LTV.0	9.1617%	0.7616%	9.0237%	-0.7559%
LTV.AGE3	9.1165%	0.2639%	9.0685%	-0.2632%
PAY.INC.AGE4	9.1426%	0.5513%	9.0426%	-0.5483%
UNEMP.L0	8.3415%	-8.2586%	9.9110%	9.0021%
AGE	9.0925%	0.0000%	9.0925%	0.0000%
AGE.2	9.0925%	0.0000%	9.0925%	0.0000%
SR	9.0925%	0.0000%	9.0925%	0.0000%
REFI	9.0925%	0.0000%	9.0925%	0.0000%