Conditional Claim Rate Model
Fixed Rate 30 Year Loans, High LTV category, across all census divisions, relative house price range categories, and LTV increments.

```
 Call: glm(formula = CCR.10K ~ AGE + AGE.SQR + INT.RT + R.GT1 + R.LT1 + CumDiff
+ LTV.0 + LTV.AGE3 + ANN.HPA + HPA + NEGEQ.RGT1 + NEGEQ.RLT1 + RHP + UNEMP.L0 +
PAY.INC.AGE4 + SR, family = poisson(link = log), data = F30.LTVH, na.action =
na.exclude, control = list(epsilon = 1e-005, maxit = 50, trace = F))
Deviance Residuals:
       Min        1Q    Median       3Q      Max
 -46.85598 -5.966622 -2.066611 2.825818 50.11592

Coefficients:
                    Value    Std. Error    t value
 (Intercept)  3.598629376 0.02803379061  128.36756
         AGE  0.105822392 0.00085139502  124.29294
     AGE.SQR -0.005184063 0.00004369031 -118.65474
      INT.RT  0.299669234 0.00057934181  517.25808
       R.GT1 -0.070103238 0.00608975768  -11.51166
       R.LT1 -0.120261463 0.00752075560  -15.99061
     CumDiff -0.732677825 0.01459518635  -50.19996
       LTV.0 -0.023288634 0.00021155186 -110.08475
    LTV.AGE3  0.010258613 0.00003891014  263.64886
     ANN.HPA  1.123567656 0.01734258872   64.78662
         HPA -0.811367951 0.00451808266 -179.58236
  NEGEQ.RGT1  1.259838186 0.00693704345  181.61025
  NEGEQ.RLT1  1.399740323 0.00894369084  156.50589
         RHP -0.412460794 0.00295354987 -139.64917
    UNEMP.L0 -0.084996247 0.00069814189 -121.74638
PAY.INC.AGE4  0.018610510 0.00013167865  141.33278
          SR  0.210833895 0.00239520394   88.02336

(Dispersion Parameter for Poisson family taken to be 1 )

    Null Deviance: 2768985 on 14830 degrees of freedom

Residual Deviance: 842723.4 on 14814 degrees of freedom

1 – RD/ND = 0.6957

Number of Fisher Scoring Iterations: 5
```

Analysis of Deviance Table

Poisson model

Response: CCR.10K

Terms added sequentially (first to last)

	Df	Deviance	Resid. Df	Resid. Dev
NULL			14830	2768985
AGE	1	298791.6	14829	2470194
AGE.SQR	1	255900.5	14828	2214293
INT.RT	1	672160.0	14827	1542133
R.GT1	1	83902.7	14826	1458230
R.LT1	1	3711.5	14825	1454519
CumDiff	1	4634.7	14824	1449884
LTV.0	1	1313.8	14823	1448570
LTV.AGE3	1	370176.5	14822	1078394
ANN.HPA	1	8249.8	14821	1070144
HPA	1	120623.9	14820	949520
NEGEQ.RGT1	1	14189.0	14819	935331
NEGEQ.RLT1	1	21328.8	14818	914002
RHP	1	17168.7	14817	896834
UNEMP.L0	1	25267.6	14816	871566
PAY.INC.AGE4	1	21058.1	14815	850508
SR	1	7784.8	14814	842723

Summary Statistics for Conditional Claim Rate and the Predictor Variables for the Fixed Rate 30 Year, High LTV Category Model.

*** Summary Statistics for data in: F30.LTVH ***

	CCR.10K	AGE	AGE.SQR	INT.RT	R.GT1
Min:	0.000000	2.0000000	4.000000	6.896100	0.0000000
1st Qu.:	23.300000	4.0000000	16.000000	8.436100	0.0000000
Mean:	147.284512	8.8259726	111.445890	9.489331	0.7377970
Median:	87.000000	7.0000000	49.000000	9.109000	1.0690037
3rd Qu.:	201.650000	12.0000000	144.000000	10.079850	1.2176849
Max:	2250.000000	26.0000000	676.000000	15.825000	2.3001019
Total N:	14831.000000	14831.0000000	14831.000000	14831.000000	14831.0000000
NA's :	0.000000	0.0000000	0.000000	0.000000	0.0000000
Std Dev.:	191.250089	5.7922672	135.821931	1.506696	0.6094141
Skewness:	3.073149	0.8575168	1.737137	1.191135	0.2806027

	R.LT1	CumDiff	LTV.0	LTV.AGE3	ANN.HPA
Min:	0.0000000	0.000000e+000	96.249800	0.0000000	6.920591e-001
1st Qu.:	0.0000000	0.000000e+000	96.982150	36.3550000	1.022413e+000
Mean:	0.3189903	5.223854e-002	99.124480	55.3288497	1.043323e+000
Median:	0.0000000	2.020300e-002	98.623200	60.8200000	1.040351e+000
3rd Qu.:	0.7812265	7.069250e-002	99.188600	77.7750000	1.055862e+000
Max:	1.0000000	8.222910e-001	117.638900	126.3600000	1.530417e+000
Total N:	14831.0000000	1.483100e+004	14831.000000	14831.0000000	1.483100e+004
NA's :	0.0000000	0.000000e+000	0.000000	0.0000000	0.000000e+000
Std Dev.:	0.4061727	8.214643e-002	3.312153	28.3827169	4.265506e-002
Skewness:	0.5778690	2.926150e+000	2.373840	0.5109705	1.477306e+000

	HPA	NEGEQ.RGT1	NEGEQ.RLT1	RHP	UNEMP.L0
Min:	0.7430573	0.000000e+000	0.0000000	0.3970000	4.0666667
1st Qu.:	1.1502640	0.000000e+000	0.0000000	0.5771000	4.5500000
Mean:	1.5792875	6.712243e-002	0.0488304	0.8104352	5.9124520
Median:	1.3717769	8.440000e-004	0.0000000	0.8414000	5.6166667
3rd Qu.:	1.7891740	8.278200e-002	0.0305665	0.8788000	7.0500000
Max:	6.1029513	8.243420e-001	0.8661000	1.6039000	10.1333333
Total N:	14831.0000000	1.483100e+004	14831.0000000	14831.0000000	14831.0000000
NA's :	0.0000000	0.000000e+000	0.0000000	0.0000000	0.0000000
Std Dev.:	0.6404113	1.202124e-001	0.1109308	0.2533153	1.4136121
Skewness:	2.2714725	2.333861e+000	3.0950878	0.5733831	0.7234094

	PAY.INC.AGE4	SR
Min:	0.000000	0.0000000
1st Qu.:	5.666750	0.0000000
Mean:	10.235646	0.7296878
Median:	10.935900	1.0000000
3rd Qu.:	15.739550	1.0000000
Max:	31.142600	1.0000000
Total N:	14831.000000	14831.0000000
NA's :	0.000000	0.0000000
Std Dev.:	6.602764	0.4441360
Skewness:	0.222452	1.0344524

Conditional Claim Rate Model
Fixed Rate 30 Year Loans, Mid LTV category, across all census divisions, relative house price range categories, and LTV increments.

```
 Call: glm(formula = CCR.10K ~ AGE + AGE.SQR + INT.RT + R.GT1 + R.LT1 + CumDiff
+ LTV.0 +
       LTV.AGE3 + ANN.HPA + HPA + NEGEQ.RGT1 + NEGEQ.RLT1 + RHP + UNEMP.L0 +
       PAY.INC.AGE4 + SR, family = poisson(link = log), data = F30.LTVM,
       na.action = na.exclude, control = list(epsilon = 1e-005, maxit = 50,
trace
        = F))
Deviance Residuals:
       Min        1Q    Median       3Q     Max
 -31.52264 -5.990242 -2.218599 2.943745 45.8001

Coefficients:
                    Value    Std. Error     t value
 (Intercept)  0.330983949 0.04506607147    7.344415
         AGE  0.236786970 0.00108139453  218.964460
     AGE.SQR -0.009692962 0.00006053199 -160.129558
      INT.RT  0.370294200 0.00062880772  588.883033
       R.GT1  0.113431461 0.00701072572   16.179703
       R.LT1  0.106913182 0.00882042407   12.121093
     CumDiff -1.975351207 0.01892470406 -104.379503
       LTV.0  0.031907078 0.00042218516   75.576030
    LTV.AGE3  0.012247250 0.00005977249  204.897781
     ANN.HPA -1.375859118 0.02198161279  -62.591364
         HPA -1.373884298 0.00518372648 -265.037961
  NEGEQ.RGT1  1.490201345 0.00824345131  180.773961
  NEGEQ.RLT1  0.793806249 0.01501770986   52.858009
         RHP -0.444294451 0.00304512529 -145.903504
    UNEMP.L0 -0.162019366 0.00084200740 -192.420358
PAY.INC.AGE4  0.016862608 0.00015971817  105.577267
          SR  0.328372391 0.00253858546  129.352506

(Dispersion Parameter for Poisson family taken to be 1 )

    Null Deviance: 2802433 on 14497 degrees of freedom

Residual Deviance: 809765.1 on 14481 degrees of freedom

1 - RD/ND = 0.7110

Number of Fisher Scoring Iterations: 5
```

Analysis of Deviance Table

Poisson model

Response: CCR.10K

Terms added sequentially (first to last)

	Df	Deviance	Resid. Df	Resid. Dev
NULL			14497	2802433
AGE	1	69850.2	14496	2732582
AGE.SQR	1	364253.0	14495	2368329
INT.RT	1	646428.9	14494	1721901
R.GT1	1	112853.3	14493	1609047
R.LT1	1	363.0	14492	1608684
CumDiff	1	5317.9	14491	1603366
LTV.0	1	19098.0	14490	1584268
LTV.AGE3	1	490355.0	14489	1093913
ANN.HPA	1	24644.7	14488	1069269
HPA	1	129551.1	14487	939717
NEGEQ.RGT1	1	25159.1	14486	914558
NEGEQ.RLT1	1	30.9	14485	914527
RHP	1	23517.9	14484	891010
UNEMP.L0	1	53470.9	14483	837539
PAY.INC.AGE4	1	10881.0	14482	826658
SR	1	16892.6	14481	809765

Summary Statistics for Conditional Claim Rate and the Predictor Variables for the Fixed Rate 30 Year, Mid LTV Category Model.

*** Summary Statistics for data in: F30.LTVM ***

	CCR.10K	AGE	AGE.SQR	INT.RT	R.GT1
Min:	0.000000	2.0000000	4.00000	6.8436000	0.0000000
1st Qu.:	0.000000	4.0000000	16.00000	8.5664750	0.0000000
Mean:	122.516478	8.0093806	89.47758	9.7559632	0.7480707
Median:	66.850000	7.0000000	49.00000	9.4935000	1.0838027
3rd Qu.:	162.900000	11.0000000	121.00000	10.4139000	1.2273923
Max:	2335.300000	26.0000000	676.00000	15.7149000	2.1474162
Total N:	14498.000000	14498.0000000	14498.00000	14498.0000000	14498.0000000
NA's :	0.000000	0.0000000	0.00000	0.0000000	0.0000000
Std Dev.:	185.189444	5.0328076	108.04856	1.5759752	0.6114373
Skewness:	3.637267	0.9128817	2.01105	0.9055023	0.3074962

	R.LT1	CumDiff	LTV.0	LTV.AGE3	ANN.HPA
Min:	0.0000000	0.000000e+000	88.3130000	0.0000000	0.8171990
1st Qu.:	0.0000000	0.000000e+000	88.8875250	39.2025000	1.0196431
Mean:	0.3124940	5.173511e-002	91.1405858	53.1212471	1.0427850
Median:	0.0000000	2.028050e-002	91.1369000	58.5500000	1.0390075
3rd Qu.:	0.7587601	7.441775e-002	93.0676750	72.6800000	1.0569381
Max:	1.0000000	8.480880e-001	93.4846000	106.4400000	1.3546713
Total N:	14498.0000000	1.449800e+004	14498.0000000	14498.0000000	14498.0000000
NA's :	0.0000000	0.000000e+000	0.0000000	0.0000000	0.0000000
Std Dev.:	0.4019055	7.826057e-002	1.8059645	25.7612760	0.0441862
Skewness:	0.6011969	2.833063e+000	0.2044099	0.7304735	1.0413633

	HPA	NEGEQ.RGT1	NEGEQ.RLT1	RHP	UNEMP.L0
Min:	0.8393057	0.000000e+000	0.000000e+000	0.4949000	4.0666667
1st Qu.:	1.1360882	0.000000e+000	0.000000e+000	0.6292000	5.1083333
Mean:	1.5083313	3.115449e-002	2.043381e-002	0.9603173	6.0837719
Median:	1.3255628	4.000000e-006	0.000000e+000	0.8790000	5.6166667
3rd Qu.:	1.6525511	3.307450e-002	1.302150e-002	1.2121000	7.0916667
Max:	6.1001900	6.194970e-001	5.985790e-001	1.8675000	10.1333333
Total N:	14498.0000000	1.449800e+004	1.449800e+004	14498.0000000	14498.0000000
NA's :	0.0000000	0.000000e+000	0.000000e+000	0.0000000	0.0000000
Std Dev.:	0.5842194	6.534620e-002	5.005533e-002	0.3052394	1.3932135
Skewness:	2.5919653	3.583327e+000	4.104038e+000	0.4356177	0.6762382

	PAY.INC.AGE4	SR
Min:	0.0000000	0.0000000
1st Qu.:	6.6216750	0.0000000
Mean:	11.0159347	0.6897503
Median:	12.3219000	1.0000000
3rd Qu.:	16.5203250	1.0000000
Max:	25.9939000	1.0000000
Total N:	14498.0000000	14498.0000000
NA's :	0.0000000	0.0000000
Std Dev.:	6.8656369	0.4626117
Skewness:	0.4289957	0.8204569

Conditional Claim Rate Model

Fixed Rate 30 Year Loans, Investor LTV category, across all census divisions, relative house price range categories, and LTV increments.

```
Call: glm(formula = CCR.10K ~ AGE + AGE.SQR + INT.RT + R.GT1 + R.LT1 + CumDiff
+ LTV.0 + LTV.AGE3 + ANN.HPA + HPA + NEGEQ.RGT1 + NEGEQ.RLT1 + RHP + UNEMP.L0 +
PAY.INC.AGE4 + SR, family = poisson(link = log), data = F30.LTVI, na.action =
na.exclude, control = list(epsilon = 1e-005, maxit = 50, trace = F))
Deviance Residuals:
       Min       1Q    Median       3Q      Max
 -32.53246 -7.16356 -2.837401 3.452723 73.01483

Coefficients:
                    Value    Std. Error      t value
 (Intercept)  0.956603078 0.03456834133   27.6728082
         AGE  0.160363841 0.00184686755   86.8301796
     AGE.SQR -0.007083118 0.00011829930  -59.8745587
      INT.RT  0.375184528 0.00090764712  413.3594631
       R.GT1  0.072427444 0.00925894782    7.8224270
       R.LT1  0.033168795 0.01166695898    2.8429684
     CumDiff -0.553007052 0.02567211071  -21.5411603
       LTV.0  0.010101514 0.00014679420   68.8141228
    LTV.AGE3  0.012886340 0.00006947175  185.4903498
     ANN.HPA  0.008392023 0.02830920170    0.2964415
         HPA -1.232192110 0.00709962789 -173.5572807
  NEGEQ.RGT1  1.556105862 0.01683981996   92.4063242
  NEGEQ.RLT1  2.376867340 0.02279286076  104.2812205
         RHP -0.134820308 0.00298252858  -45.2033583
    UNEMP.L0 -0.201848162 0.00114702408 -175.9755231
PAY.INC.AGE4  0.014822593 0.00019033095   77.8779949
          SR  0.431247026 0.00350176391  123.1513708

(Dispersion Parameter for Poisson family taken to be 1 )

    Null Deviance: 1473034 on 7231 degrees of freedom

Residual Deviance: 602203.9 on 7215 degrees of freedom

1 - RD/ND = 0.5912

Number of Fisher Scoring Iterations: 5
```

Analysis of Deviance Table

Poisson model

Response: CCR.10K

Terms added sequentially (first to last)

	Df	Deviance	Resid. Df	Resid. Dev
NULL			7231	1473034
AGE	1	8590.6	7230	1464443
AGE.SQR	1	145309.0	7229	1319134
INT.RT	1	213099.4	7228	1106035
R.GT1	1	60826.7	7227	1045208
R.LT1	1	1292.2	7226	1043916
CumDiff	1	281.1	7225	1043635
LTV.0	1	13310.0	7224	1030325
LTV.AGE3	1	248345.1	7223	781980
ANN.HPA	1	8239.7	7222	773740
HPA	1	83868.0	7221	689872
NEGEQ.RGT1	1	5718.5	7220	684154
NEGEQ.RLT1	1	15639.6	7219	668514
RHP	1	2727.8	7218	665786
UNEMP.L0	1	42323.4	7217	623463
PAY.INC.AGE4	1	5863.1	7216	617600
SR	1	15395.9	7215	602204

Summary Statistics for Conditional Claim Rate and the Predictor Variables for the Fixed Rate 30 Year, Investor LTV Category Model.

*** Summary Statistics for data in: F30.LTVI ***

	CCR.10K	AGE	AGE.SQR	INT.RT	R.GT1
Min:	0.000000	2.000000	4.00000	6.9728000	0.0000000
1st Qu.:	0.000000	3.000000	9.00000	9.0866750	0.0000000
Mean:	141.415127	6.676576	61.24931	10.1657026	0.8286619
Median:	81.150000	6.000000	36.00000	9.7780000	1.1169341
3rd Qu.:	184.550000	9.000000	81.00000	11.1273500	1.2511889
Max:	2317.100000	25.000000	625.00000	15.8670000	2.3004221
Total N:	7232.000000	7232.000000	7232.00000	7232.0000000	7232.0000000
NA's :	0.000000	0.000000	0.00000	0.0000000	0.0000000
Std Dev.:	200.281352	4.083496	74.50987	1.6156155	0.5963108
Skewness:	3.552819	1.001975	2.40991	0.8256012	0.5433433

	R.LT1	CumDiff	LTV.0	LTV.AGE3	ANN.HPA
Min:	0.0000000	0.00000000	72.238700	0.0000000	0.8232404
1st Qu.:	0.0000000	0.00000000	83.362525	40.3650000	1.0168361
Mean:	0.2681758	0.05541466	87.669762	52.1515058	1.0436219
Median:	0.0000000	0.02418350	86.092050	58.5300000	1.0371618
3rd Qu.:	0.6911570	0.07766850	93.277575	71.3800000	1.0577396
Max:	1.0000000	0.90879200	136.346300	133.2700000	1.3550929
Total N:	7232.0000000	7232.00000000	7232.000000	7232.0000000	7232.0000000
NA's :	0.0000000	0.00000000	0.000000	0.0000000	0.0000000
Std Dev.:	0.3923019	0.08294270	6.694290	26.9115314	0.0478912
Skewness:	0.8610926	3.08501394	2.154938	0.7367569	1.4481413

	HPA	NEGEQ.RGT1	NEGEQ.RLT1	RHP	UNEMP.L0
Min:	0.8456988	0.00000000	0.00000000	0.4944000	4.0666667
1st Qu.:	1.1103922	0.00000000	0.00000000	0.6306750	5.2500000
Mean:	1.4426402	0.02841100	0.01362927	1.0507181	6.1701616
Median:	1.2626890	0.00591650	0.00000000	0.8848000	6.3500000
3rd Qu.:	1.5287742	0.03674750	0.00673400	1.3311000	7.0916667
Max:	5.0730998	0.45454200	0.49136500	2.1790000	10.1333333
Total N:	7232.0000000	7232.00000000	7232.00000000	7232.0000000	7232.0000000
NA's :	0.0000000	0.00000000	0.00000000	0.0000000	0.0000000
Std Dev.:	0.5828434	0.05161107	0.03881209	0.3951713	1.3502590
Skewness:	2.9308353	3.39618464	5.36325193	0.4692791	0.6080137

	PAY.INC.AGE4	SR
Min:	0.0000000	0.0000000
1st Qu.:	0.0000000	0.0000000
Mean:	11.1024075	0.6977323
Median:	13.4678000	1.0000000
3rd Qu.:	16.9040500	1.0000000
Max:	35.1573000	1.0000000
Total N:	7232.0000000	7232.0000000
NA's :	0.0000000	0.0000000
Std Dev.:	7.4817606	0.4592724
Skewness:	0.4642351	0.8613059

Conditional Claim Rate Model
Fixed Rate 30 Year Loans, Low LTV category, across all census divisions, relative house price range categories, and LTV increments.

```
 Call: glm(formula = CCR.10K ~ AGE + AGE.SQR + INT.RT + R.GT1 + R.LT1 + CumDiff
+ LTV.0 + LTV.AGE3 + ANN.HPA + HPA + NEGEQ.RGT1 + NEGEQ.RLT1 + RHP + UNEMP.L0 +
PAY.INC.AGE4 + SR, family = poisson(link = log), data = F30.LTVL, na.action =
na.exclude, control = list(epsilon = 1e-005, maxit = 50, trace = F))
Deviance Residuals:
       Min        1Q    Median       3Q      Max
 -33.81284 -5.849465 -2.346231 2.318884 49.04644

Coefficients:
                   Value   Std. Error     t value
 (Intercept)  0.30241010 0.0423338929    7.143451
         AGE  0.23558778 0.0022656140  103.984076
     AGE.SQR -0.01230923 0.0001397484  -88.081360
      INT.RT  0.37891829 0.0010828161  349.937787
       R.GT1  0.03940676 0.0120425743    3.272287
       R.LT1 -0.22335939 0.0151825372  -14.711598
     CumDiff -1.21797776 0.0357086520  -34.108758
       LTV.0  0.04939116 0.0002496168  197.867937
    LTV.AGE3  0.01057109 0.0001014544  104.195422
     ANN.HPA -1.61433780 0.0355360165  -45.428215
         HPA -1.88543499 0.0101360571 -186.012666
  NEGEQ.RGT1  0.30034260 0.0278028825   10.802570
  NEGEQ.RLT1  2.19795181 0.0583348279   37.678209
         RHP -0.22307410 0.0039224063  -56.871747
    UNEMP.L0 -0.18733717 0.0014457208 -129.580462
PAY.INC.AGE4  0.01142902 0.0002608972   43.806593
          SR  0.39765649 0.0041580643   95.635001

(Dispersion Parameter for Poisson family taken to be 1 )

    Null Deviance: 1165604 on 6957 degrees of freedom

Residual Deviance: 390102.2 on 6941 degrees of freedom

1 - RD/ND = 0.6653

Number of Fisher Scoring Iterations: 5
```

Analysis of Deviance Table

Poisson model

Response: CCR.10K

Terms added sequentially (first to last)

	Df	Deviance	Resid. Df	Resid. Dev
NULL			6957	1165604
AGE	1	27592.7	6956	1138011
AGE.SQR	1	114850.4	6955	1023161
INT.RT	1	267760.5	6954	755400
R.GT1	1	26827.8	6953	728573
R.LT1	1	1031.5	6952	727541
CumDiff	1	3206.0	6951	724335
LTV.0	1	76371.3	6950	647964
LTV.AGE3	1	135247.0	6949	512717
ANN.HPA	1	15103.5	6948	497613
HPA	1	67063.6	6947	430550
NEGEQ.RGT1	1	969.6	6946	429580
NEGEQ.RLT1	1	3064.9	6945	426515
RHP	1	4114.6	6944	422401
UNEMP.L0	1	21449.5	6943	400951
PAY.INC.AGE4	1	1566.3	6942	399385
SR	1	9282.6	6941	390102

Summary Statistics for Conditional Claim Rate and the Predictor Variables for the Fixed Rate 30 Year, Low LTV Category Model.

*** Summary Statistics for data in: F30.LTVL ***

	CCR.10K	AGE	AGE.SQR	INT.RT	R.GT1
Min:	0.000000	2.0000000	4.000000	6.7368000	0.0000000
1st Qu.:	0.000000	4.0000000	16.000000	9.1410500	0.0000000
Mean:	93.336663	7.4330267	74.930584	10.3063392	0.8513224
Median:	45.150000	7.0000000	49.000000	9.7998000	1.1289108
3rd Qu.:	114.500000	10.0000000	100.000000	11.8549250	1.2644706
Max:	2056.500000	24.0000000	576.000000	15.5978000	2.3185853
Total N:	6958.000000	6958.0000000	6958.000000	6958.0000000	6958.0000000
NA's :	0.000000	0.0000000	0.000000	0.0000000	0.0000000
Std Dev.:	157.300737	4.4366120	85.479097	1.7473483	0.6060264
Skewness:	4.145326	0.8206041	1.973438	0.7267612	0.5377726

	R.LT1	CumDiff	LTV.0	LTV.AGE3	ANN.HPA
Min:	0.0000000	0.00000000	58.1947000	0.0000000	0.82620365
1st Qu.:	0.0000000	0.00000000	70.3249000	35.6100000	1.01824359
Mean:	0.2614715	0.06736909	74.5492191	45.6387698	1.04149093
Median:	0.0000000	0.02911250	72.3558500	50.0200000	1.03780244
3rd Qu.:	0.6792539	0.09428225	81.5854750	61.1650000	1.05628651
Max:	0.9999423	1.09739800	82.1383000	91.5800000	1.30916450
Total N:	6958.0000000	6958.00000000	6958.0000000	6958.0000000	6958.00000000
NA's :	0.0000000	0.00000000	0.0000000	0.0000000	0.00000000
Std Dev.:	0.3888796	0.10048333	5.5070772	21.6445274	0.04376153
Skewness:	0.8967432	2.91008350	0.3027874	0.8048231	1.06820143

	HPA	NEGEQ.RGT1	NEGEQ.RLT1	RHP	UNEMP.L0
Min:	0.8532691	0.00000000	0.000000e+000	0.4914000	4.0666667
1st Qu.:	1.1175348	0.00000000	0.000000e+000	0.6308000	5.2500000
Mean:	1.4116169	0.01468582	4.712718e-003	1.0318134	6.1347801
Median:	1.2782626	0.00225000	0.000000e+000	0.8799000	6.2583333
3rd Qu.:	1.5600995	0.01356350	1.925250e-003	1.3670750	7.0916667
Max:	5.4094129	0.33774200	3.177950e-001	2.1092000	10.1333333
Total N:	6958.0000000	6958.00000000	6.958000e+003	6958.0000000	6958.0000000
NA's :	0.0000000	0.00000000	0.000000e+000	0.0000000	0.0000000
Std Dev.:	0.4561519	0.03402768	1.628430e-002	0.3746893	1.3511797
Skewness:	2.8298055	4.58071715	8.320226e+000	0.3787999	0.6244996

	PAY.INC.AGE4	SR
Min:	0.0000000	0.0000000
1st Qu.:	7.4462500	0.0000000
Mean:	11.3646954	0.6981891
Median:	13.2950000	1.0000000
3rd Qu.:	16.6752000	1.0000000
Max:	30.2410000	1.0000000
Total N:	6958.0000000	6958.0000000
NA's :	0.0000000	0.0000000
Std Dev.:	6.9480962	0.4590766
Skewness:	0.5962829	0.8636733

Conditional Claim Rate Model
Fixed Rate 15 Year Loans, High LTV category, across all census divisions, relative house price range categories, and LTV increments.

```
 Call: glm(formula = CCR.10K ~ AGE + AGE.SQR + INT.RT + R.GT1 + R.LT1 + CumDiff
+ LTV.0 + LTV.AGE3 + ANN.HPA + HPA + NEGEQ.RGT1 + NEGEQ.RLT1 + RHP + UNEMP.L0 +
PAY.INC.AGE4 + SR, family = poisson(link = log), data = F15.LTVH, na.action =
na.exclude, control = list(epsilon = 1e-005, maxit = 50, trace = F))
Deviance Residuals:
      Min        1Q     Median       3Q      Max
 -20.1348 -3.874462 -0.6037982 2.361749 17.23713

Coefficients:
                   Value   Std. Error    t value
 (Intercept)  4.92783611 0.3531224027  13.955037
         AGE  0.25068666 0.0136264132  18.397113
     AGE.SQR -0.01890966 0.0009853913 -19.189999
      INT.RT  0.45580712 0.0061698189  73.876904
       R.GT1 -0.30816851 0.0463347413  -6.650917
       R.LT1 -0.46028125 0.0547051777  -8.413852
     CumDiff  1.06354553 0.2140912577   4.967721
       LTV.0 -0.06635054 0.0013984117 -47.447076
    LTV.AGE3  0.01515556 0.0002757818  54.954897
     ANN.HPA  2.78394091 0.3555586661   7.829765
         HPA -1.68174707 0.1279579513 -13.142967
  NEGEQ.RGT1  0.84540765 0.1748928140   4.833862
  NEGEQ.RLT1  1.39903252 0.1655197874   8.452358
         RHP -0.70391921 0.0197941792 -35.561930
    UNEMP.L0 -0.08559885 0.0064662832 -13.237721
PAY.INC.AGE4  0.02363525 0.0009721345  24.312737
          SR  0.16656973 0.0163954855  10.159487

(Dispersion Parameter for Poisson family taken to be 1 )

    Null Deviance: 60672.3 on 769 degrees of freedom

Residual Deviance: 16792.98 on 753 degrees of freedom

1 - RD/ND = 0.7232

Number of Fisher Scoring Iterations: 5
```

Analysis of Deviance Table

Poisson model

Response: CCR.10K

Terms added sequentially (first to last)

	Df	Deviance	Resid. Df	Resid. Dev
NULL			769	60672.30
AGE	1	60.16	768	60612.15
AGE.SQR	1	8305.79	767	52306.36
INT.RT	1	25917.42	766	26388.93
R.GT1	1	14.56	765	26374.37
R.LT1	1	152.34	764	26222.03
CumDiff	1	257.04	763	25965.00
LTV.0	1	2347.85	762	23617.15
LTV.AGE3	1	4170.51	761	19446.64
ANN.HPA	1	0.50	760	19446.13
HPA	1	262.00	759	19184.13
NEGEQ.RGT1	1	68.55	758	19115.58
NEGEQ.RLT1	1	82.04	757	19033.54
RHP	1	1259.80	756	17773.73
UNEMP.L0	1	226.74	755	17546.99
PAY.INC.AGE4	1	649.87	754	16897.12
SR	1	104.14	753	16792.98

Summary Statistics for Conditional Claim Rate and the Predictor Variables for Fixed Rate 15 Year Loans, High LTV Category Model.

*** Summary Statistics for data in: F15.LTVH ***

	CCR.10K	AGE	AGE.SQR	INT.RT	R.GT1	R.LT1
Min:	0.000000	2.0000000	4.000000	6.732500	0.0000000	0.0000000
1st Qu.:	18.650000	3.0000000	9.000000	7.991400	1.0131185	0.0000000
Mean:	72.836623	5.5974026	40.490909	9.078308	0.9592355	0.2027717
Median:	46.500000	5.0000000	25.000000	9.106350	1.1476186	0.0000000
3rd Qu.:	99.800000	7.0000000	49.000000	9.932175	1.2882003	0.0000000
Max:	652.200000	15.0000000	225.000000	11.942100	1.8273594	0.9989433
Total N:	770.000000	770.0000000	770.000000	770.000000	770.0000000	770.0000000
NA's :	0.000000	0.0000000	0.000000	0.000000	0.0000000	0.0000000
Std Dev.:	84.261128	3.0285153	42.486691	1.360966	0.5255118	0.3860447
Skewness:	2.488884	0.7954405	1.698852	0.123659	1.0873545	1.3855960

	CumDiff	LTV.0	LTV.AGE3	ANN.HPA	HPA
Min:	0.00000000	96.763200	0.0000000	0.81617769	0.9729626
1st Qu.:	0.01028675	97.082225	37.5100000	1.02792739	1.1003011
Mean:	0.05811050	100.733958	52.5131169	1.03493515	1.1970547
Median:	0.03002450	99.012000	60.9250000	1.03497686	1.1701067
3rd Qu.:	0.08521075	103.556675	74.7550000	1.04318038	1.2675307
Max:	0.39349266	113.988400	94.6200000	1.12218226	1.6765476
Total N:	770.00000000	770.000000	770.0000000	770.00000000	770.0000000
NA's :	0.00000000	0.000000	0.0000000	0.00000000	0.0000000
Std Dev.:	0.06654712	5.032998	28.6144580	0.01737301	0.1247812
Skewness:	1.67284128	1.311634	0.7688719	5.21599201	0.9662781

	NEGEQ.RGT1	NEGEQ.RLT1	RHP	UNEMP.L0	PAY.INC.AGE4
Min:	0.00000000	0.00000000	0.4409000	4.0666667	0.0000000
1st Qu.:	0.00000000	0.00000000	0.5332000	4.3000000	0.0000000
Mean:	0.04642488	0.03551570	0.7615962	5.3878463	10.7716884
Median:	0.01282150	0.00000000	0.8377500	5.4250000	14.4118000
3rd Qu.:	0.07146025	0.00454300	0.8607000	6.3500000	16.4176500
Max:	0.39105900	0.46998000	1.2625000	7.4250000	20.6783000
Total N:	770.00000000	770.00000000	770.0000000	770.0000000	770.0000000
NA's :	0.00000000	0.00000000	0.0000000	0.0000000	0.0000000
Std Dev.:	0.06983578	0.07925918	0.2622409	1.0748832	7.4002498
Skewness:	2.18616850	2.53062633	0.5757294	0.3992838	0.6579708

	SR
Min:	0.0000000
1st Qu.:	1.0000000
Mean:	0.9298701
Median:	1.0000000
3rd Qu.:	1.0000000
Max:	1.0000000
Total N:	770.0000000
NA's :	0.0000000
Std Dev.:	0.2555317
Skewness:	3.3732763

Conditional Claim Rate Model
Fixed Rate 15 Year Loans, Mid and Investor LTV categories, across all census divisions, relative house price range categories, and LTV increments.

```
 Call: glm(formula = CCR.10K ~ AGE + AGE.SQR + INT.RT + R.GT1 + R.LT1 + CumDiff
+ LTV.0 + LTV.AGE3 + ANN.HPA + HPA + NEGEQ.RGT1 + NEGEQ.RLT1 + RHP + UNEMP.L0 +
PAY.INC.AGE4 + SR, family = poisson(link = log), data = F15.LTVM.I, na.action =
na.exclude, control = list(epsilon = 1e-005, maxit = 50, trace = F))
Deviance Residuals:
       Min        1Q    Median       3Q      Max
 -16.13543 -4.584935 -1.070306 2.557163 20.87275

Coefficients:
                    Value   Std. Error     t value
 (Intercept)  0.031382696 0.2239406523   0.1401385
         AGE  0.403542934 0.0080681260  50.0169339
     AGE.SQR -0.029190751 0.0005938907 -49.1517239
      INT.RT  0.359801220 0.0042971620  83.7299638
       R.GT1  0.008133824 0.0331673881   0.2452356
       R.LT1 -0.127069875 0.0409652608  -3.1018935
     CumDiff  1.592706245 0.1501709922  10.6059514
       LTV.0  0.007946249 0.0007274051  10.9241037
    LTV.AGE3  0.013791242 0.0002404276  57.3613171
     ANN.HPA  0.550272947 0.2162387627   2.5447470
         HPA -1.355651070 0.0551413088 -24.5850361
  NEGEQ.RGT1  3.268104292 0.1413209325  23.1254085
  NEGEQ.RLT1  3.518339470 0.1879609368  18.7184610
         RHP -0.503761229 0.0111032839 -45.3704718
    UNEMP.L0 -0.155639349 0.0050158381 -31.0295797
PAY.INC.AGE4  0.020379295 0.0007129514  28.5844098
          SR  0.146763321 0.0115083155  12.7528065

(Dispersion Parameter for Poisson family taken to be 1 )

    Null Deviance: 107874.3 on 1397 degrees of freedom

Residual Deviance: 43209.49 on 1381 degrees of freedom

1 - RD/ND = 0.5994

Number of Fisher Scoring Iterations: 5
```

Analysis of Deviance Table

Poisson model

Response: CCR.10K

Terms added sequentially (first to last)

	Df	Deviance	Resid. Df	Resid. Dev
NULL			1397	107874.3
AGE	1	1416.20	1396	106458.1
AGE.SQR	1	26337.02	1395	80121.1
INT.RT	1	13544.69	1394	66576.4
R.GT1	1	539.42	1393	66037.0
R.LT1	1	275.66	1392	65761.3
CumDiff	1	1592.07	1391	64169.2
LTV.0	1	3015.67	1390	61153.6
LTV.AGE3	1	8293.09	1389	52860.5
ANN.HPA	1	98.09	1388	52762.4
HPA	1	3468.50	1387	49293.9
NEGEQ.RGT1	1	1156.11	1386	48137.8
NEGEQ.RLT1	1	430.21	1385	47707.6
RHP	1	2137.40	1384	45570.2
UNEMP.L0	1	1329.49	1383	44240.7
PAY.INC.AGE4	1	867.60	1382	43373.1
SR	1	163.60	1381	43209.5

Summary Statistics for Conditional Claim Rate and the Predictor Variables for Fixed Rate 15 Year Loans, Mid and Investor LTV Categories Model.

*** Summary Statistics for data in: F15.LTVM.I ***

	CCR.10K	AGE	AGE.SQR	INT.RT	R.GT1
Min:	0.000000	2.000000	4.000000	6.9394000	0.0000000
1st Qu.:	24.225000	3.000000	9.000000	9.0472250	1.0693763
Mean:	80.570458	6.177396	49.715308	9.7816903	1.0536925
Median:	58.100000	5.000000	25.000000	9.6280000	1.1840303
3rd Qu.:	113.750000	8.000000	64.000000	10.7624500	1.3046391
Max:	795.100000	15.000000	225.000000	12.2695000	1.8474531
Total N:	1398.000000	1398.000000	1398.000000	1398.0000000	1398.0000000
NA's :	0.000000	0.000000	0.000000	0.0000000	0.0000000
Std Dev.:	83.837573	3.400493	51.344310	1.0481908	0.4680276
Skewness:	2.220873	0.684105	1.440994	0.2433727	1.5421397

	R.LT1	CumDiff	LTV.0	LTV.AGE3	ANN.HPA
Min:	0.0000000	0.00000000	76.9769000	0.0000000	0.78559856
1st Qu.:	0.0000000	0.01353275	86.1648500	28.7425000	1.01972083
Mean:	0.1422432	0.06436280	89.9209353	46.0122961	1.02973672
Median:	0.0000000	0.04555546	91.1173000	52.8500000	1.03009207
3rd Qu.:	0.0000000	0.09703560	95.1059000	66.4525000	1.04094088
Max:	0.9997568	0.45480317	102.3459000	90.2500000	1.13196388
Total N:	1398.0000000	1398.00000000	1398.0000000	1398.0000000	1398.00000000
NA's :	0.0000000	0.00000000	0.0000000	0.0000000	0.00000000
Std Dev.:	0.3371549	0.06552849	5.1394179	25.5136723	0.02794762
Skewness:	1.9586131	1.47688385	0.5911631	0.6122813	4.75363048

	HPA	NEGEQ.RGT1	NEGEQ.RLT1	RHP	UNEMP.L0
Min:	0.9759184	0.00000000	0.00000000	0.4670000	4.06666667
1st Qu.:	1.0998626	0.00000000	0.00000000	0.5718000	5.25000000
Mean:	1.2183873	0.01993253	0.01059834	0.8695340	5.84735932
Median:	1.1930589	0.00630500	0.00000000	0.8616500	5.61666667
3rd Qu.:	1.3132995	0.02761175	0.00000000	1.2069250	6.60833333
Max:	1.7427292	0.20523200	0.24750200	1.5998000	7.42500000
Total N:	1398.0000000	1398.00000000	1398.00000000	1398.0000000	1398.00000000
NA's :	0.0000000	0.00000000	0.00000000	0.0000000	0.00000000
Std Dev.:	0.1438265	0.03014868	0.02803867	0.3072716	1.02120256
Skewness:	0.7770381	2.29002007	3.50360636	0.4774598	0.06172572

	PAY.INC.AGE4	SR
Min:	0.0000000	0.0000000
1st Qu.:	0.0000000	1.0000000
Mean:	11.4211425	0.8791130
Median:	14.5428000	1.0000000
3rd Qu.:	16.8067000	1.0000000
Max:	21.6578000	1.0000000
Total N:	1398.0000000	1398.0000000
NA's :	0.0000000	0.0000000
Std Dev.:	7.2652652	0.3261125
Skewness:	0.7659052	2.3283751

Conditional Claim Rate Model
Fixed Rate 15 Year Loans, Low LTV category, across all census divisions, relative house price range categories, and LTV increments.

```
Call: glm(formula = CCR.10K ~ AGE + AGE.SQR + INT.RT + R.GT1 + R.LT1 + CumDiff
+ LTV.0 +
       LTV.AGE3 + ANN.HPA + HPA + NEGEQ.RGT1 + NEGEQ.RLT1 + RHP + UNEMP.L0 +
       PAY.INC.AGE4 + SR, family = poisson(link = log), data = F15.LTVL,
       na.action = na.exclude, control = list(epsilon = 1e-005, maxit = 50,
trace
        = F))
Deviance Residuals:
      Min        1Q   Median       3Q      Max
 -17.5217 -3.986641 -1.32941 1.911964 22.92416

Coefficients:
                    Value   Std. Error    t value
 (Intercept)  -4.76488835 0.3113178376 -15.305542
         AGE   0.52244734 0.0144925440  36.049388
     AGE.SQR  -0.02915314 0.0010346260 -28.177466
      INT.RT   0.37374863 0.0072140827  51.808199
       R.GT1  -0.70606849 0.0607709195 -11.618526
       R.LT1  -0.68972043 0.0784043632  -8.796965
     CumDiff   3.16266031 0.2534002919  12.480887
       LTV.0   0.05311559 0.0009801724  54.190049
    LTV.AGE3   0.01266184 0.0006776947  18.683699
     ANN.HPA   4.10509640 0.3163151955  12.977867
         HPA  -4.56052078 0.0928076741 -49.139479
  NEGEQ.RGT1  22.61727334 1.1177016268  20.235520
  NEGEQ.RLT1   8.80884267 2.5319265511   3.479107
         RHP  -0.24069729 0.0198838777 -12.105148
    UNEMP.L0  -0.07417984 0.0093476554  -7.935662
PAY.INC.AGE4   0.02514384 0.0016207263  15.513936
          SR   0.47353365 0.0247184391  19.157101

(Dispersion Parameter for Poisson family taken to be 1 )

    Null Deviance: 54447.4 on 722 degrees of freedom

Residual Deviance: 18190.96 on 706 degrees of freedom

1 - RD/ND = 0.6659

Number of Fisher Scoring Iterations: 5
```

Analysis of Deviance Table

Poisson model

Response: CCR.10K

Terms added sequentially (first to last)

	Df	Deviance	Resid. Df	Resid. Dev
NULL			722	54447.40
AGE	1	571.62	721	53875.77
AGE.SQR	1	8694.89	720	45180.88
INT.RT	1	5465.56	719	39715.32
R.GT1	1	194.15	718	39521.17
R.LT1	1	720.97	717	38800.19
CumDiff	1	206.36	716	38593.83
LTV.0	1	10408.36	715	28185.47
LTV.AGE3	1	3222.58	714	24962.89
ANN.HPA	1	141.75	713	24821.13
HPA	1	4728.67	712	20092.46
NEGEQ.RGT1	1	1048.99	711	19043.47
NEGEQ.RLT1	1	11.85	710	19031.62
RHP	1	136.77	709	18894.85
UNEMP.L0	1	69.81	708	18825.04
PAY.INC.AGE4	1	253.79	707	18571.25
SR	1	380.28	706	18190.96

Summary Statistics for Conditional Claim Rate and the Predictor Variables for Fixed Rate 15 Year Loans, Low LTV Category Model.

*** Summary Statistics for data in: F15.LTVL ***

	CCR.10K	AGE	AGE.SQR	INT.RT	R.GT1	R.LT1
Min:	0.000000	2.0000000	4.00000	6.9167000	0.0000000	0.0000000
1st Qu.:	0.000000	4.0000000	16.00000	8.9431000	1.0856096	0.0000000
Mean:	42.986722	6.9336100	61.54772	9.7289534	1.0967869	0.1338514
Median:	20.100000	6.0000000	36.00000	9.5064000	1.1999855	0.0000000
3rd Qu.:	54.550000	10.0000000	100.00000	11.0723500	1.3584032	0.0000000
Max:	574.700000	15.0000000	225.00000	15.5761000	1.8681406	0.9997586
Total N:	723.000000	723.0000000	723.00000	723.0000000	723.0000000	723.0000000
NA's :	0.000000	0.0000000	0.00000	0.0000000	0.0000000	0.0000000
Std Dev.:	71.166909	3.6730684	58.39927	1.3921607	0.4795351	0.3290977
Skewness:	3.770851	0.4423325	1.11834	0.3298597	1.4712989	2.0619697

	CumDiff	LTV.0	LTV.AGE3	ANN.HPA	HPA
Min:	0.00000000	56.9753000	0.000000	0.77727208	0.9568469
1st Qu.:	0.01894212	65.9883500	21.110000	1.02177549	1.1163120
Mean:	0.08917074	72.1558880	35.231328	1.02800771	1.2383376
Median:	0.06183600	68.7925000	38.200000	1.03308713	1.2138742
3rd Qu.:	0.13590683	81.6246500	50.930000	1.04334881	1.3445732
Max:	0.46382517	82.1668000	75.990000	1.09750574	1.7933017
Total N:	723.00000000	723.0000000	723.000000	723.00000000	723.0000000
NA's :	0.00000000	0.0000000	0.000000	0.00000000	0.0000000
Std Dev.:	0.09027672	7.8448149	20.225608	0.03631275	0.1516682
Skewness:	1.44222365	0.2165007	0.322203	4.66360427	0.6525590

	NEGEQ.RGT1	NEGEQ.RLT1	RHP	UNEMP.L0	PAY.INC.AGE4
Min:	0.000000000	0.000000000	0.5378000	4.0666667	0.000000
1st Qu.:	0.000000000	0.000000000	0.5916500	4.5500000	11.153200
Mean:	0.003677362	0.001085407	0.9434129	5.5476141	11.917954
Median:	0.000661000	0.000000000	0.8638000	5.4583333	14.441700
3rd Qu.:	0.004861500	0.000000000	1.3414500	6.4250000	16.374900
Max:	0.036618000	0.033398000	1.6295000	7.8166667	20.822000
Total N:	723.000000000	723.000000000	723.0000000	723.0000000	723.000000
NA's :	0.000000000	0.000000000	0.0000000	0.0000000	0.000000
Std Dev.:	0.006253477	0.003472909	0.3546326	1.0757880	6.660482
Skewness:	2.435332847	4.178216983	0.4954460	0.2204184	1.018616

	SR
Min:	0.0000000
1st Qu.:	1.0000000
Mean:	0.9114799
Median:	1.0000000
3rd Qu.:	1.0000000
Max:	1.0000000
Total N:	723.0000000
NA's :	0.0000000
Std Dev.:	0.2842464
Skewness:	2.9032655

Conditional Claim Rate Model
Adjustable Rate Loans, All LTV categories, across all census divisions, relative house price range categories, and LTV increments.

```
Call: glm(formula = CCR.10K ~ AGE + AGE.2 + AGE.4 + INT.RT.t + R.GT1 + R.LT1 +
       LTV.0 + LTV.AGE3 + ANN.HPA + NEGEQ.AGE6 + RHP + UNEMP.L0 +
       PAY.INC.AGE4 + SR, family = poisson(link = log), data = ARM,
       na.action = na.exclude, control = list(epsilon = 1e-005, maxit
        = 50, trace = F))
Deviance Residuals:
       Min        1Q     Median       3Q      Max
 -19.53447 -5.116945 -0.7384677 3.109532 33.45542

Coefficients:
                     Value   Std. Error     t value
 (Intercept) -12.291815519 0.2065285886  -59.516291
         AGE  -0.127907601 0.0015931381  -80.286574
       AGE.2  -1.886093407 0.0156353006 -120.630454
       AGE.4  -0.358678276 0.0072699213  -49.337298
    INT.RT.t   0.026149745 0.0022634389   11.553104
       R.GT1  -0.330505543 0.0221308931  -14.934126
       R.LT1  -0.400950550 0.0285019606  -14.067473
       LTV.0   0.040274536 0.0003911199  102.972351
    LTV.AGE3  -0.001971558 0.0001160279  -16.992108
     ANN.HPA  14.176436114 0.1812215992   78.227078
  NEGEQ.AGE6   0.139183874 0.0479163148    2.904728
         RHP  -0.167147393 0.0090086947  -18.554008
    UNEMP.L0   0.114145931 0.0026693348   42.761938
PAY.INC.AGE4   0.022406453 0.0003079837   72.752075
          SR  -0.707178656 0.0394412070  -17.929945

(Dispersion Parameter for Poisson family taken to be 1 )

    Null Deviance: 145410.1 on 1673 degrees of freedom

Residual Deviance: 60622.55 on 1659 degrees of freedom

1 – RD/ND = 0.5831

Number of Fisher Scoring Iterations: 4
```

Analysis of Deviance Table

Poisson model

Response: CCR.10K

Terms added sequentially (first to last)

	Df	Deviance	Resid. Df	Resid. Dev
NULL			1673	145410.1
AGE	1	3986.79	1672	141423.3
AGE.2	1	44217.20	1671	97206.1
AGE.4	1	6938.76	1670	90267.4
INT.RT.t	1	24.86	1669	90242.5
R.GT1	1	858.90	1668	89383.6
R.LT1	1	1337.26	1667	88046.3
LTV.0	1	16034.57	1666	72011.8
LTV.AGE3	1	183.06	1665	71828.7
ANN.HPA	1	5050.90	1664	66777.8
NEGEQ.AGE6	1	1.57	1663	66776.3
RHP	1	227.10	1662	66549.2
UNEMP.L0	1	321.65	1661	66227.5
PAY.INC.AGE4	1	5339.34	1660	60888.2
SR	1	265.62	1659	60622.6

Summary Statistics for Conditional Claim Rate and the Predictor Variables for Adjustable Rate Loans, All LTV Categories Model.

*** Summary Statistics for data in: ARM ***

	CCR.10K	AGE	AGE.2	AGE.4
Min:	0.00000	2.0000000	0.0000000	0.00000000
1st Qu.:	43.97500	3.0000000	0.0000000	0.00000000
Mean:	129.60032	5.0238949	0.1947431	0.51612903
Median:	109.95000	4.0000000	0.0000000	1.00000000
3rd Qu.:	189.62500	7.0000000	0.0000000	1.00000000
Max:	728.50000	15.0000000	1.0000000	1.00000000
Total N:	1674.00000	1674.0000000	1674.0000000	1674.00000000
NA's :	0.00000	0.0000000	0.0000000	0.00000000
Std Dev.:	105.74993	2.7269705	0.3961212	0.49988912
Skewness:	1.24401	0.9765187	1.5430734	0.06460763

	INT.RT.t	R.GT1	R.LT1	LTV.0
Min:	4.7414000	0.0000000	0.0000000	69.6973000
1st Qu.:	6.3588167	1.0842565	0.0000000	91.1037000
Mean:	7.0663667	1.0541408	0.1336483	93.4948576
Median:	6.8987167	1.2026113	0.0000000	95.2448000
3rd Qu.:	7.7207083	1.2999434	0.0000000	97.1746250
Max:	10.4927667	1.5298487	0.9997257	112.1469000
Total N:	1674.0000000	1674.0000000	1674.0000000	1674.0000000
NA's :	0.0000000	0.0000000	0.0000000	0.0000000
Std Dev.:	1.0854960	0.4442324	0.3288199	7.1617894
Skewness:	0.7969323	1.7686604	2.0621272	0.9640241

	LTV.AGE3	ANN.HPA	NEGEQ.RGT1	NEGEQ.RLT1
Min:	0.0000000	0.99070778	0.00000000	0.00000000
1st Qu.:	20.0566310	1.02211845	0.02551650	0.00000000
Mean:	56.1548547	1.03394157	0.09945057	0.01491625
Median:	71.0088504	1.03454146	0.07690950	0.00000000
3rd Qu.:	79.9853509	1.04605047	0.14269150	0.00000000
Max:	104.4599047	1.07498153	0.67231900	0.41621900
Total N:	1674.0000000	1674.00000000	1674.00000000	1674.00000000
NA's :	0.0000000	0.00000000	0.00000000	0.00000000
Std Dev.:	32.6934330	0.01626703	0.09987649	0.04438083
Skewness:	0.8453579	0.17547058	1.76871444	3.96854143

	RHP	UNEMP.L0	PAY.INC.AGE4	SR
Min:	0.5308000	4.0666667	0.000000e+000	0.00000000
1st Qu.:	0.6302250	4.3000000	0.000000e+000	1.00000000
Mean:	0.9631146	5.1090104	1.188070e+001	0.99283154
Median:	0.8789000	5.1083333	1.334638e+001	1.00000000
3rd Qu.:	1.2229750	5.6166667	2.089116e+001	1.00000000
Max:	1.8677000	7.4250000	3.335348e+001	1.00000000
Total N:	1674.0000000	1674.0000000	1.674000e+003	1674.00000000
NA's :	0.0000000	0.0000000	0.000000e+000	0.00000000
Std Dev.:	0.2823744	1.0033718	1.004774e+001	0.08438795
Skewness:	0.1332722	0.7741093	6.254743e-003	11.69411164

	NEGEQ.AGE6
Min:	0.00000000
1st Qu.:	0.00000000
Mean:	0.02743697
Median:	0.00000000
3rd Qu.:	0.04565075
Max:	0.34118700
Total N:	1674.00000000
NA's :	0.00000000
Std Dev.:	0.04689955
Skewness:	2.06277781

Conditional Claim Rate Model
Streamline Refinance Fixed Rate 30 Year Loans, All LTV categories, across all census divisions, relative house price range categories, and LTV increments.

```
 Call: glm(formula = CCR.10K ~ AGE + AGE.SQR + INT.RT + R.GT1 + R.LT1 + CumDiff
+ LTV.0 + LTV.AGE3 + ANN.HPA + HPA + NEGEQ.RGT1 + NEGEQ.RLT1 + RHP + UNEMP.L0 +
PAY.INC.AGE4 + SR + REFI, family = poisson(link = log), data = SRF30.F30H,
na.action = na.exclude, control = list(epsilon = 1e-005, maxit = 50, trace =
F))
Deviance Residuals:
       Min        1Q    Median       3Q      Max
 -47.18429 -5.935258 -2.017764 2.882492 49.71639

Coefficients:
                    Value    Std. Error     t value
 (Intercept)  2.918969063 0.02529308150  115.405830
         AGE  0.103436003 0.00084405033  122.547199
     AGE.SQR -0.005058408 0.00004335135 -116.683969
      INT.RT  0.303000955 0.00057530693  526.677049
       R.GT1 -0.054551182 0.00601190217   -9.073864
       R.LT1 -0.105893575 0.00741078443  -14.289118
     CumDiff -0.690503015 0.01451729422  -47.564168
       LTV.0 -0.017263785 0.00017032829 -101.355942
    LTV.AGE3  0.010396512 0.00003772435  275.591578
     ANN.HPA  1.094859156 0.01727646870   63.372856
         HPA -0.821430659 0.00448995377 -182.948578
  NEGEQ.RGT1  1.227464601 0.00683651578  179.545348
  NEGEQ.RLT1  1.324259714 0.00872248267  151.821421
         RHP -0.323165187 0.00277666508 -116.386088
    UNEMP.L0 -0.081356341 0.00068958567 -117.978584
PAY.INC.AGE4  0.017462979 0.00012725414  137.229161
          SR  0.211662035 0.00238103559   88.894948
        REFI -0.506356294 0.00429840828 -117.800884

(Dispersion Parameter for Poisson family taken to be 1 )

    Null Deviance: 2851096 on 15599 degrees of freedom

Residual Deviance: 886806.9 on 15582 degrees of freedom

1 – RD/ND = 0.6890

Number of Fisher Scoring Iterations: 5
```

Analysis of Deviance Table

Poisson model

Response: CCR.10K

Terms added sequentially (first to last)

	Df	Deviance	Resid. Df	Resid. Dev
NULL			15599	2851096
AGE	1	263821.2	15598	2587275
AGE.SQR	1	279349.0	15597	2307926
INT.RT	1	713929.6	15596	1593996
R.GT1	1	74929.5	15595	1519066
R.LT1	1	2732.1	15594	1516334
CumDiff	1	5081.0	15593	1511253
LTV.0	1	8751.0	15592	1502502
LTV.AGE3	1	377083.9	15591	1125418
ANN.HPA	1	7884.1	15590	1117534
HPA	1	122236.6	15589	995298
NEGEQ.RGT1	1	14126.1	15588	981172
NEGEQ.RLT1	1	21544.7	15587	959627
RHP	1	8959.9	15586	950667
UNEMP.L0	1	22043.0	15585	928624
PAY.INC.AGE4	1	19191.3	15584	909433
SR	1	7038.3	15583	902394
REFI	1	15587.5	15582	886807

Summary Statistics for Conditional Claim Rate and the Predictor Variables for the Streamline Refinance Fixed Rate 30 Year, All LTV Categories Model.

*** Summary Statistics for data in: SRF30.F30H ***

	CCR.10K	AGE	AGE.SQR	INT.RT	R.GT1
Min:	0.000000	2.0000000	4.000000	6.896100	0.0000000
1st Qu.:	23.500000	4.0000000	16.000000	8.400775	0.0000000
Mean:	144.604207	8.5930128	106.986731	9.447496	0.7431577
Median:	85.300000	7.0000000	49.000000	9.027050	1.0704446
3rd Qu.:	196.700000	12.0000000	144.000000	10.061650	1.2183812
Max:	2250.000000	26.0000000	676.000000	15.825000	2.3001019
Total N:	15600.000000	15600.0000000	15600.000000	15600.000000	15600.0000000
NA's :	0.000000	0.0000000	0.000000	0.000000	0.0000000
Std Dev.:	187.984066	5.7575156	133.950494	1.502178	0.6067701
Skewness:	3.118184	0.9108159	1.804316	1.185522	0.3044568

	R.LT1	CumDiff	LTV.0	LTV.AGE3	ANN.HPA
Min:	0.0000000	0.000000e+000	58.213300	0.0000000	0.6920591
1st Qu.:	0.0000000	0.000000e+000	96.963875	36.1375000	1.0225855
Mean:	0.3164524	5.150550e-002	98.738785	55.2647442	1.0430063
Median:	0.0000000	2.088650e-002	98.593000	61.2400000	1.0401815
3rd Qu.:	0.7840710	6.899300e-002	99.197450	78.1700000	1.0551284
Max:	1.0000000	8.222910e-001	117.638900	126.3600000	1.5304170
Total N:	15600.0000000	1.560000e+004	15600.000000	15600.0000000	15600.0000000
NA's :	0.0000000	0.000000e+000	0.000000	0.0000000	0.0000000
Std Dev.:	0.4073133	8.063796e-002	4.578728	28.8122473	0.0417532
Skewness:	0.5974683	2.976047e+000	2.037623	0.5321882	1.5165733

	HPA	NEGEQ.RGT1	NEGEQ.RLT1	RHP	UNEMP.L0
Min:	0.7430573	0.000000e+000	0.000000e+000	0.0000000	4.0666667
1st Qu.:	1.1368470	0.000000e+000	0.000000e+000	0.5767000	4.5500000
Mean:	1.5570603	6.879316e-002	4.793328e-002	0.8064055	5.8731400
Median:	1.3434279	1.367500e-003	0.000000e+000	0.8418000	5.6166667
3rd Qu.:	1.7533734	8.816325e-002	2.921700e-002	0.8799000	7.0500000
Max:	6.1029513	8.243420e-001	8.661000e-001	1.6431000	10.1333333
Total N:	15600.0000000	1.560000e+004	1.560000e+004	15600.0000000	15600.0000000
NA's :	0.0000000	0.000000e+000	0.000000e+000	0.0000000	0.0000000
Std Dev.:	0.6322646	1.208780e-001	1.096280e-001	0.2667056	1.4103268
Skewness:	2.3300612	2.280842e+000	3.124681e+000	0.3004913	0.7352069

	PAY.INC.AGE4	SR	REFI
Min:	0.0000000	0.0000000	0.000000e+000
1st Qu.:	5.3570500	0.0000000	0.000000e+000
Mean:	10.2251203	0.7430128	4.929487e-002
Median:	10.9437000	1.0000000	0.000000e+000
3rd Qu.:	15.9375500	1.0000000	0.000000e+000
Max:	31.1426000	1.0000000	1.000000e+000
Total N:	15600.0000000	15600.0000000	1.560000e+004
NA's :	0.0000000	0.0000000	0.000000e+000
Std Dev.:	6.8103395	0.4369863	2.164899e-001
Skewness:	0.1927261	1.1123643	4.164285e+000

Conditional Claim Rate Model
Streamline Refinance Fixed Rate 15 Year Loans, All LTV categories, across all census divisions, relative house price range categories, and LTV increments.

```
 Call: glm(formula = CCR.10K ~ AGE + AGE.SQR + INT.RT + R.GT1 + R.LT1 + CumDiff
+ LTV.0 + LTV.AGE3 + ANN.HPA + HPA + NEGEQ.RGT1 + NEGEQ.RLT1 + RHP + UNEMP.L0 +
PAY.INC.AGE4 + SR + REFI, family = poisson(link = log), data = SRF15.F15H,
na.action = na.exclude, control = list(epsilon = 1e-005, maxit = 50, trace =
F))
Deviance Residuals:
       Min        1Q    Median       3Q      Max
 -20.51488 -3.953369 -0.998818 2.106886 19.52667

Coefficients:
                   Value   Std. Error     t value
 (Intercept)  2.85348804 0.3382424542   8.4362208
         AGE  0.21386199 0.0129989369  16.4522678
     AGE.SQR -0.01512229 0.0009405418 -16.0782746
      INT.RT  0.51049308 0.0058644529  87.0487139
       R.GT1 -0.14409519 0.0453625998  -3.1765196
       R.LT1 -0.26372639 0.0528878271  -4.9865235
     CumDiff  0.36866359 0.2080063351   1.7723671
       LTV.0 -0.03064578 0.0009562871 -32.0466304
    LTV.AGE3  0.01471819 0.0002666908  55.1882247
     ANN.HPA  2.42178286 0.3468945829   6.9813222
         HPA -2.85058825 0.1191234238 -23.9297038
  NEGEQ.RGT1 -0.86454841 0.1561143496  -5.5379176
  NEGEQ.RLT1  0.01901518 0.1475529112   0.1288702
         RHP -0.60661013 0.0169122310 -35.8681319
    UNEMP.L0 -0.13304898 0.0063371350 -20.9951316
PAY.INC.AGE4  0.02592815 0.0009237013  28.0698435
          SR  0.13964790 0.0162115843   8.6140812
        REFI -1.27213911 0.0210028474 -60.5698399

(Dispersion Parameter for Poisson family taken to be 1 )

    Null Deviance: 87672.59 on 1100 degrees of freedom

Residual Deviance: 23995.27 on 1083 degrees of freedom

1 - RD/ND = 0.7263

Number of Fisher Scoring Iterations: 5
```

Analysis of Deviance Table

Poisson model

Response: CCR.10K

Terms added sequentially (first to last)

	Df	Deviance	Resid. Df	Resid. Dev
NULL			1100	87672.59
AGE	1	387.62	1099	87284.97
AGE.SQR	1	8003.67	1098	79281.30
INT.RT	1	43915.06	1097	35366.24
R.GT1	1	19.98	1096	35346.27
R.LT1	1	73.27	1095	35273.00
CumDiff	1	152.84	1094	35120.16
LTV.0	1	67.54	1093	35052.61
LTV.AGE3	1	4569.04	1092	30483.58
ANN.HPA	1	44.30	1091	30439.28
HPA	1	641.51	1090	29797.77
NEGEQ.RGT1	1	0.26	1089	29797.51
NEGEQ.RLT1	1	2.49	1088	29795.02
RHP	1	250.97	1087	29544.05
UNEMP.L0	1	460.87	1086	29083.18
PAY.INC.AGE4	1	604.30	1085	28478.88
SR	1	114.64	1084	28364.24
REFI	1	4368.97	1083	23995.27

Summary Statistics for Conditional Claim Rate and the Predictor Variables for the Streamline Refinance Fixed Rate 15 Year, All LTV Categories Model.

*** Summary Statistics for data in: SRF15.F15H ***

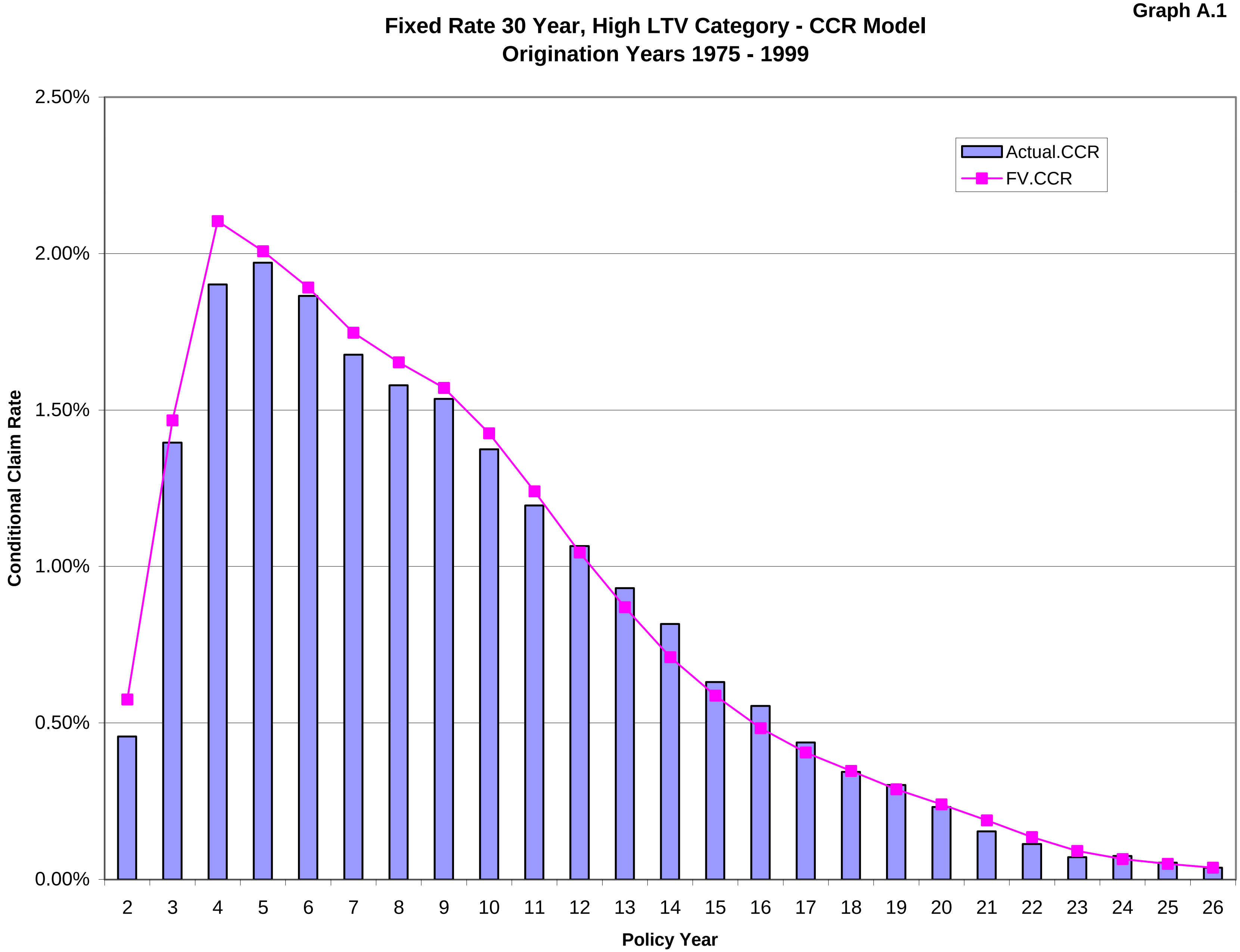
	CCR.10K	AGE	AGE.SQR	INT.RT	R.GT1
Min:	0.000000	2.000000	4.00000	6.5421000	0.0000000
1st Qu.:	3.300000	3.000000	9.00000	7.3431000	0.0000000
Mean:	54.895604	5.220708	35.20254	8.6083726	0.8531633
Median:	30.100000	5.000000	25.00000	8.2615000	1.0901254
3rd Qu.:	73.200000	7.000000	49.00000	9.7604000	1.2385286
Max:	652.200000	15.000000	225.00000	11.9421000	1.8273594
Total N:	1101.000000	1101.000000	1101.00000	1101.0000000	1101.0000000
NA's :	0.000000	0.000000	0.00000	0.0000000	0.0000000
Std Dev.:	76.375841	2.820278	38.03513	1.3772192	0.5618143
Skewness:	2.878285	0.919335	1.97808	0.5586795	0.7325638

	R.LT1	CumDiff	LTV.0	LTV.AGE3	ANN.HPA
Min:	0.0000000	0.00000000	60.450400	0.0000000	0.81617769
1st Qu.:	0.0000000	0.00876900	97.025200	37.4300000	1.02963859
Mean:	0.2719834	0.04744370	98.388075	51.1425431	1.03663008
Median:	0.0000000	0.02492600	98.855900	59.3500000	1.03682548
3rd Qu.:	0.8889433	0.06563400	99.584400	73.7000000	1.04459362
Max:	0.9989433	0.39349266	113.988400	94.6200000	1.12218226
Total N:	1101.0000000	1101.00000000	1101.000000	1101.0000000	1101.00000000
NA's :	0.0000000	0.00000000	0.000000	0.0000000	0.00000000
Std Dev.:	0.4256918	0.05915957	8.401402	28.8646225	0.01549845
Skewness:	0.9324434	2.09455960	1.734131	0.7468033	5.35240518

	HPA	NEGEQ.RGT1	NEGEQ.RLT1	RHP	UNEMP.L0
Min:	0.9729626	0.00000000	0.00000000	0.0000000	4.0666667
1st Qu.:	1.0982011	0.00000000	0.00000000	0.5073000	4.3000000
Mean:	1.1883246	0.04100203	0.03141794	0.6635870	5.1778383
Median:	1.1600431	0.00530800	0.00000000	0.5611000	5.1083333
3rd Qu.:	1.2565651	0.05669700	0.00867700	0.8594000	5.6166667
Max:	1.6765476	0.39105900	0.46998000	1.3908000	7.4250000
Total N:	1101.0000000	1101.00000000	1101.00000000	1101.0000000	1101.0000000
NA's :	0.0000000	0.00000000	0.00000000	0.0000000	0.0000000
Std Dev.:	0.1168386	0.06794461	0.07244986	0.3646426	1.0272049
Skewness:	1.0102460	2.40101793	2.79167716	0.2381734	0.6559929

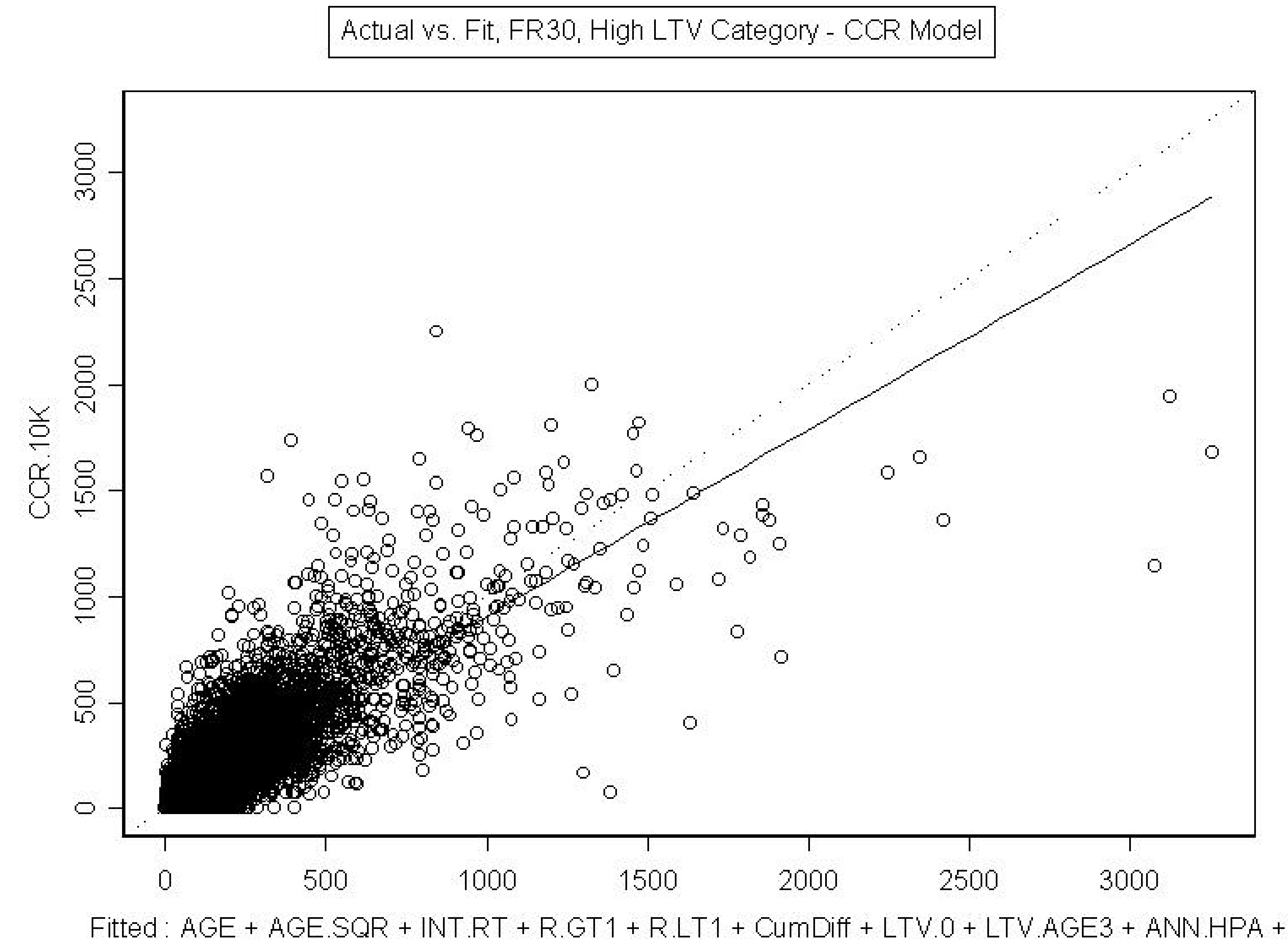
	PAY.INC.AGE4	SR	REFI
Min:	0.0000000	0.0000000	0.0000000
1st Qu.:	0.0000000	1.0000000	0.0000000
Mean:	10.5843946	0.9509537	0.3006358
Median:	14.7054000	1.0000000	0.0000000
3rd Qu.:	16.8227000	1.0000000	1.0000000
Max:	20.6783000	1.0000000	1.0000000
Total N:	1101.0000000	1101.0000000	1101.0000000
NA's :	0.0000000	0.0000000	0.0000000
Std Dev.:	7.8321578	0.2160629	0.4587429
Skewness:	0.5216003	4.1818778	0.8707580

Graph A.1

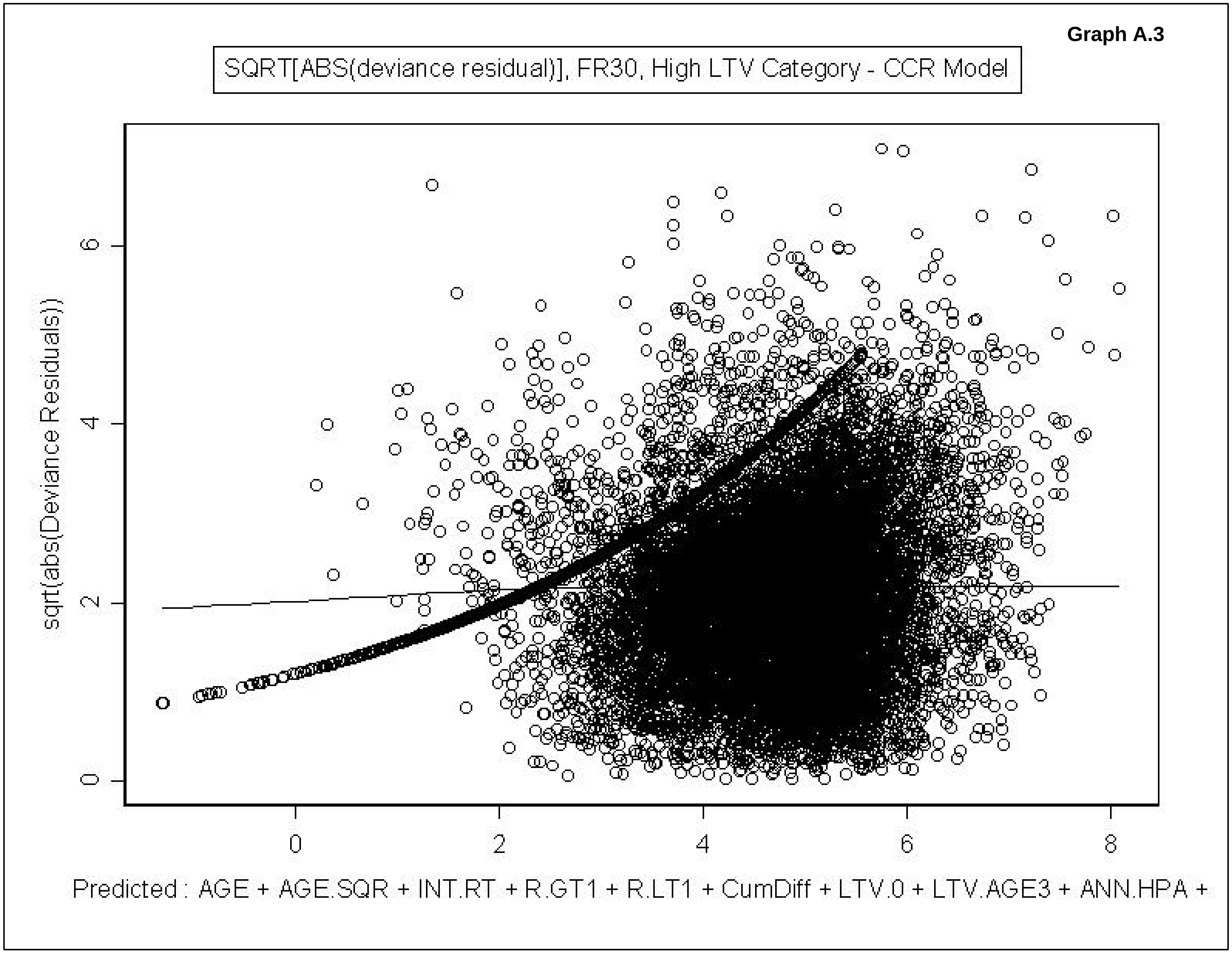


Fixed Rate 30 Year, High LTV Category - CCR Model
Origination Years 1975 - 1999
Conditional Claim Rate
2.50%
2.00%
1.50%
1.00%
0.50%
0.00%
Actual.CCR
FV.CCR
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
Policy Year

Graph A.2

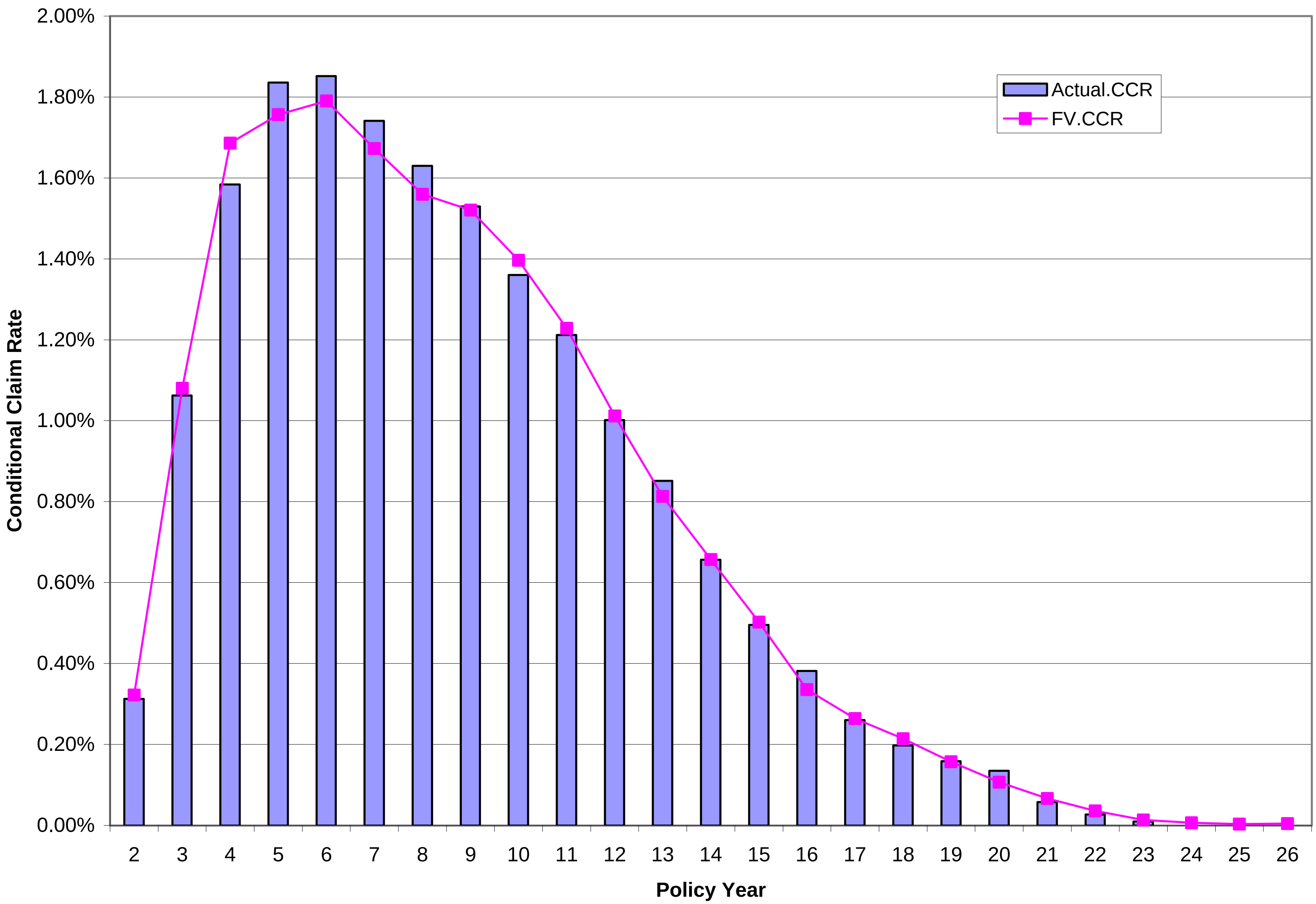


Actual vs. Fit, FR30, High LTV Category - CCR Model
CCR.10K
0
500
1000
1500
2000
2500
3000
Fitted : AGE + AGE.SQR + INT.RT + R.GT1 + R.LT1 + CumDiff + LTV.0 + LTV.AGE3 + ANN.HPA +

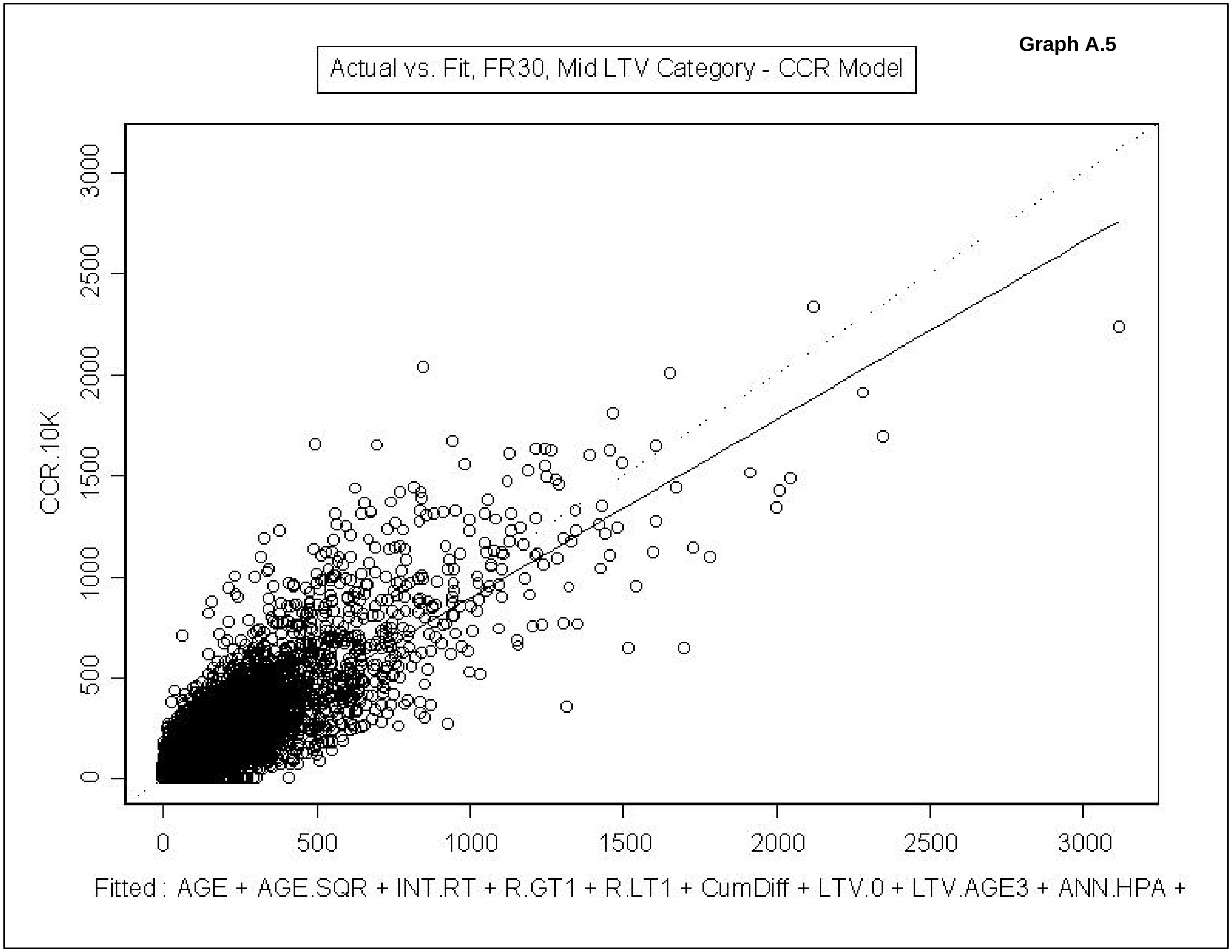

Graph A.3
SQRT[ABS(deviance residual)], FR30, High LTV Category - CCR Model
sqrt(abs(Deviance Residuals))
0
2
4
6
0
2
4
6
8
Predicted : AGE + AGE.SQR + INT.RT + R.GT1 + R.LT1 + CumDiff + LTV.0 + LTV.AGE3 + ANN.HPA +

Graph A.4

Fixed Rate 30Year, Mid LTV Category - CCR Model
Origination Years 1975 - 1999

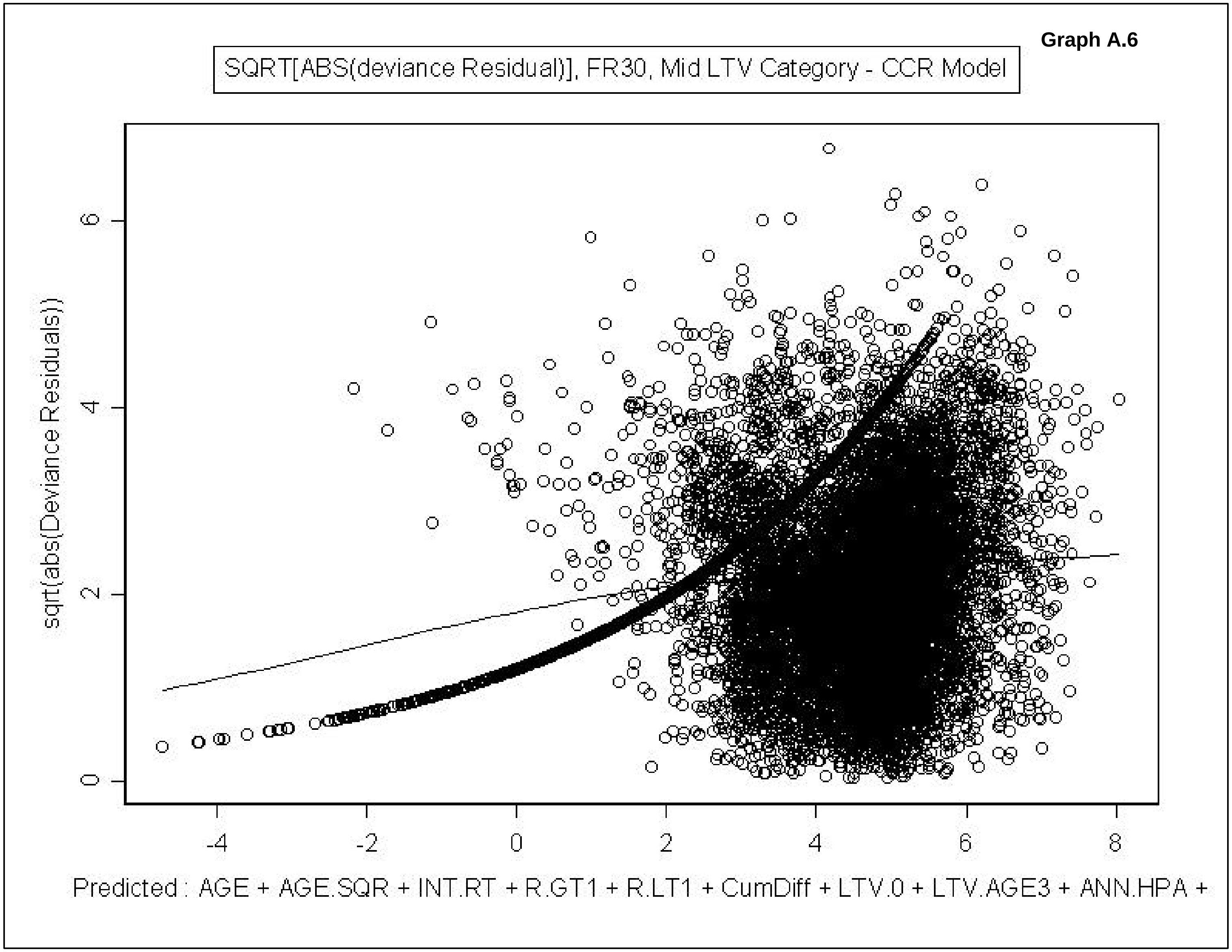


Graph A.5



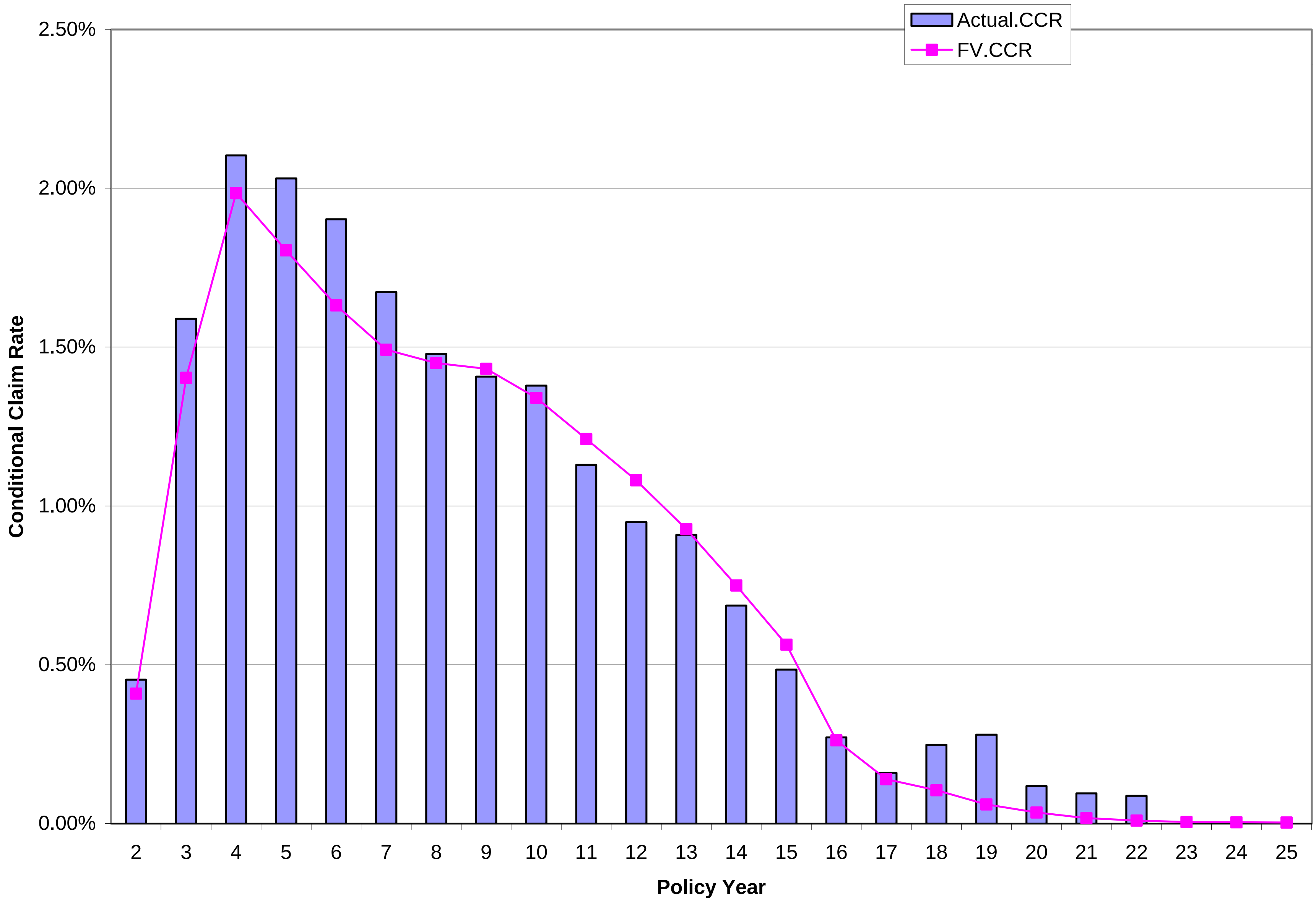
Graph A.5
Actual vs. Fit, FR30, Mid LTV Category - CCR Model
CCR.10K
0
500
1000
1500
2000
2500
3000
0
500
1000
1500
2000
2500
3000
Fitted : AGE + AGE.SQR + INT.RT + R.GT1 + R.LT1 + CumDiff + LTV.0 + LTV.AGE3 + ANN.HPA +

Graph A.6

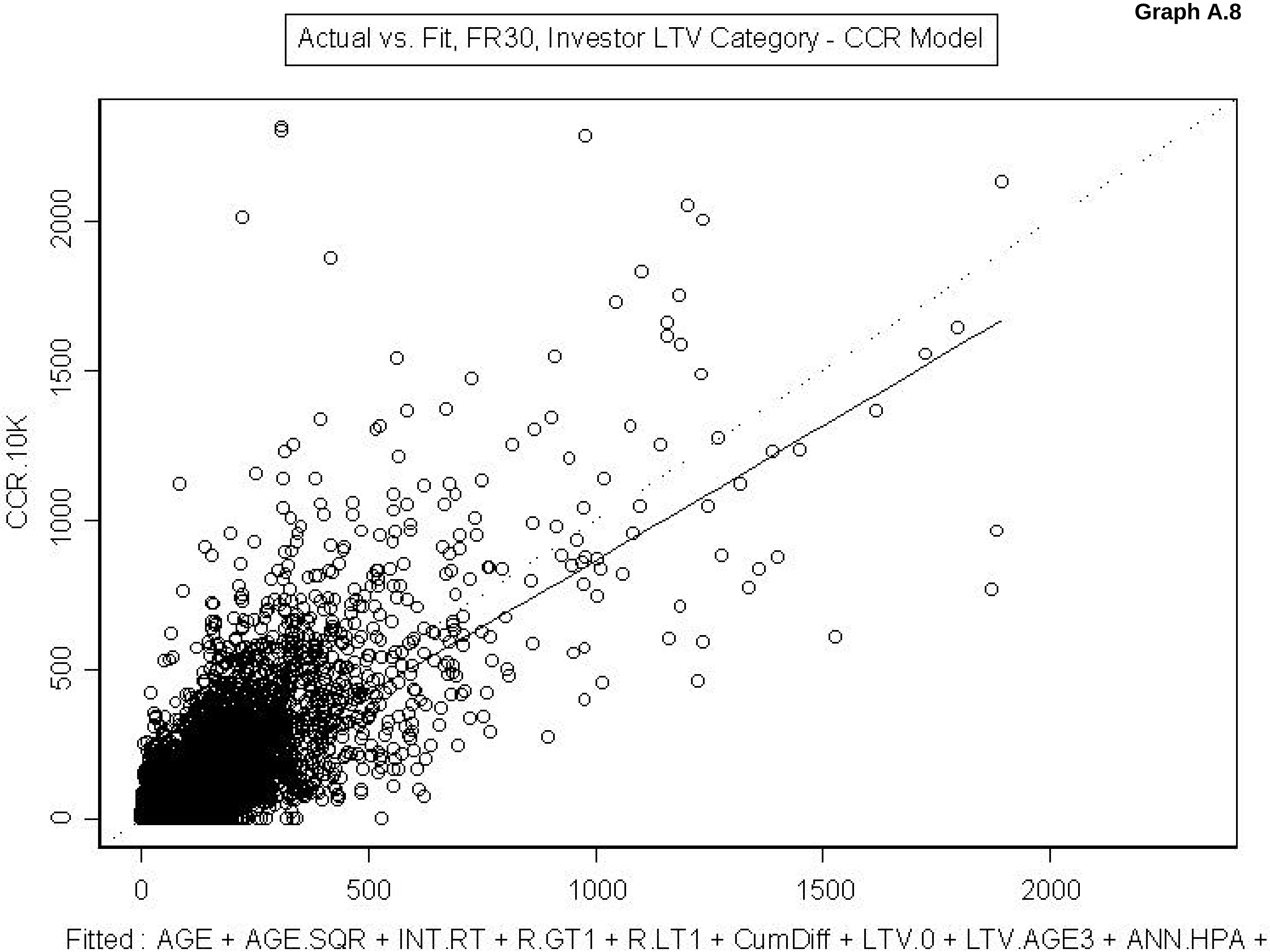

Graph A.6
SQRT[ABS(deviance Residual)], FR30, Mid LTV Category - CCR Model
sqrt(abs(Deviance Residuals))
0
2
4
6
-4
-2
0
2
4
6
8
Predicted : AGE + AGE.SQR + INT.RT + R.GT1 + R.LT1 + CumDiff + LTV.0 + LTV.AGE3 + ANN.HPA +

Graph A.7

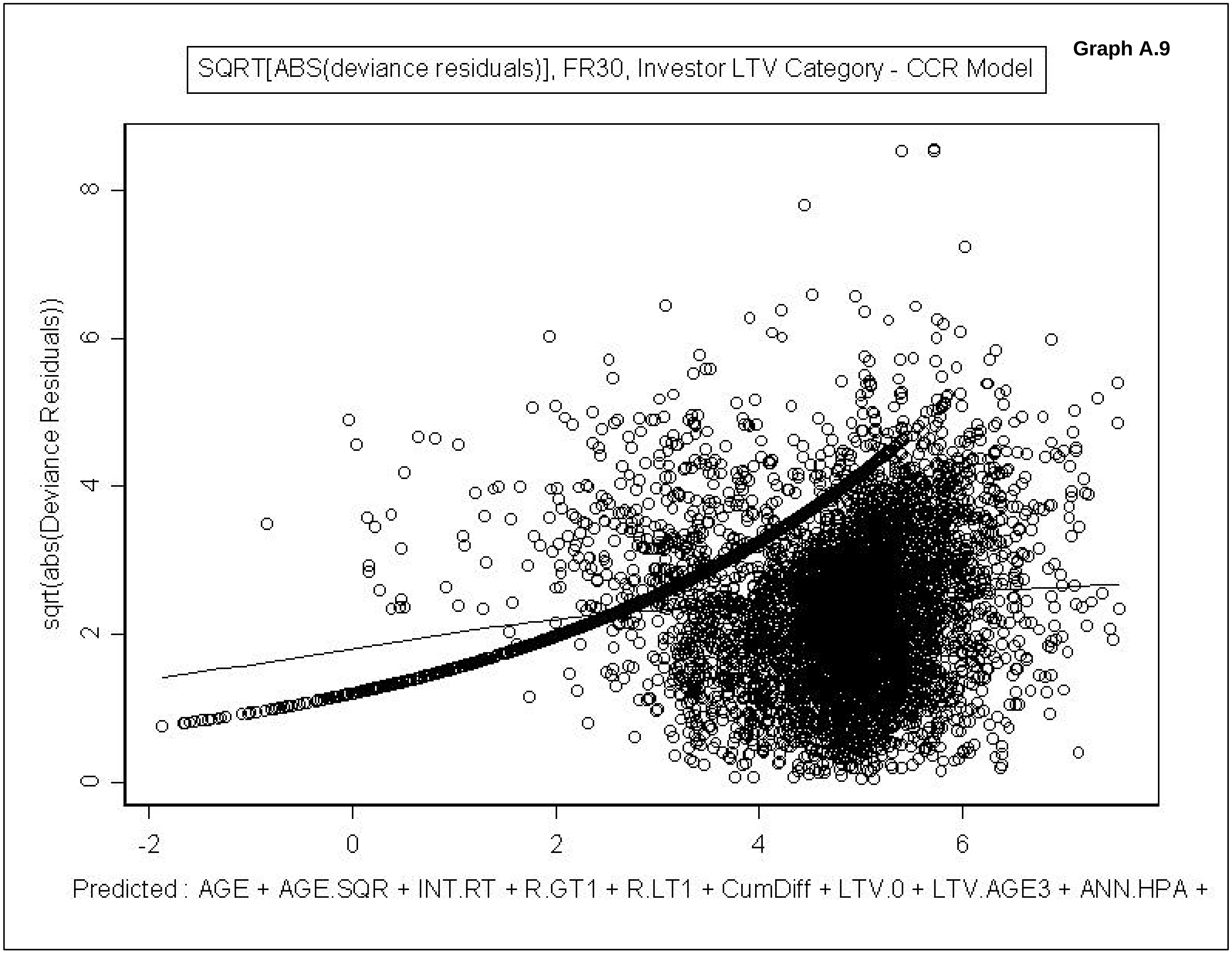
Fixed Rate 30 Year, Investor LTV Category - CCR Model
Origination Years 1975-1999



Graph A.8

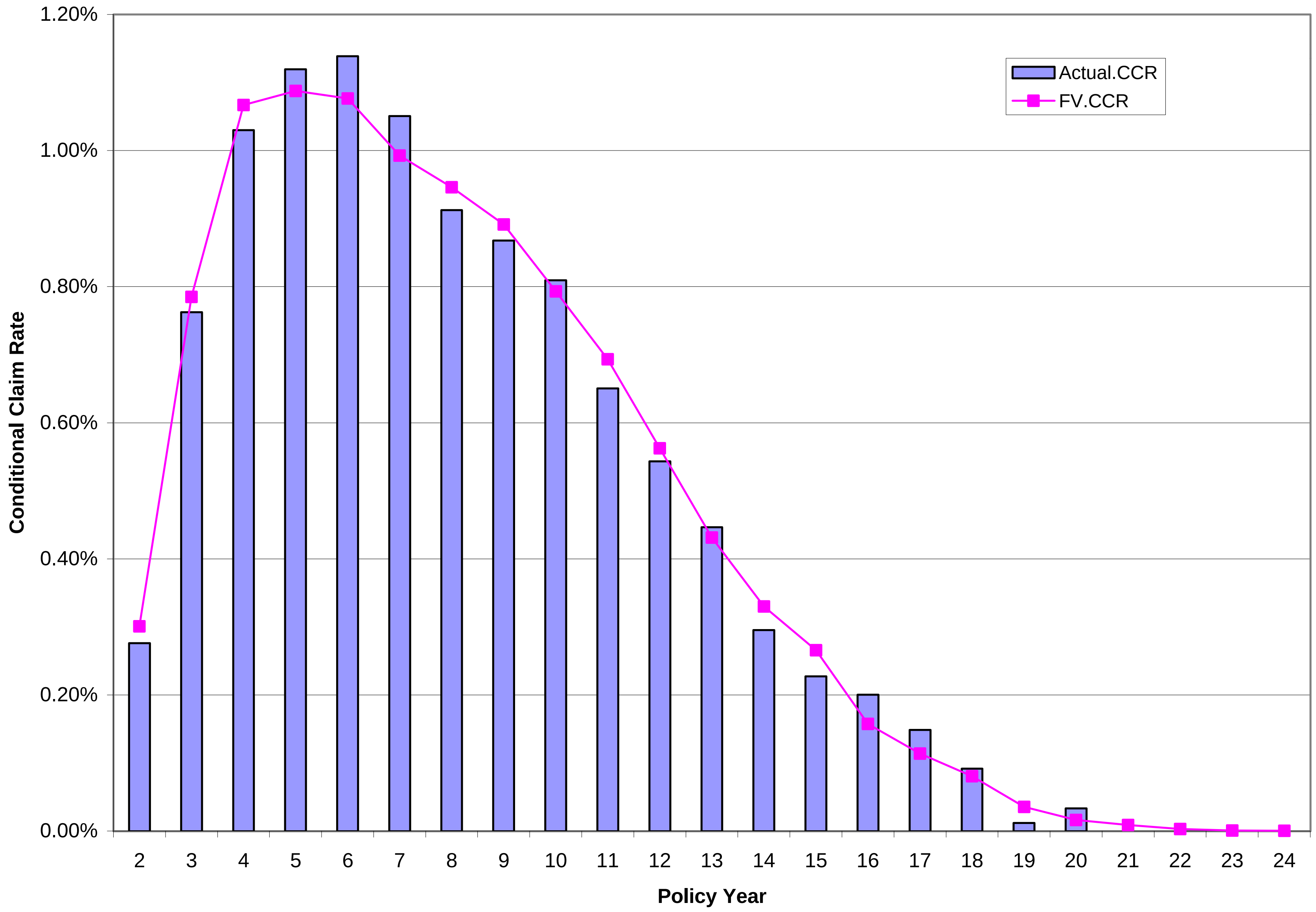


Actual vs. Fit, FR30, Investor LTV Category - CCR Model
CCR.10K
0
500
1000
1500
2000
Fitted : AGE + AGE.SQR + INT.RT + R.GT1 + R.LT1 + CumDiff + LTV.0 + LTV.AGE3 + ANN.HPA +

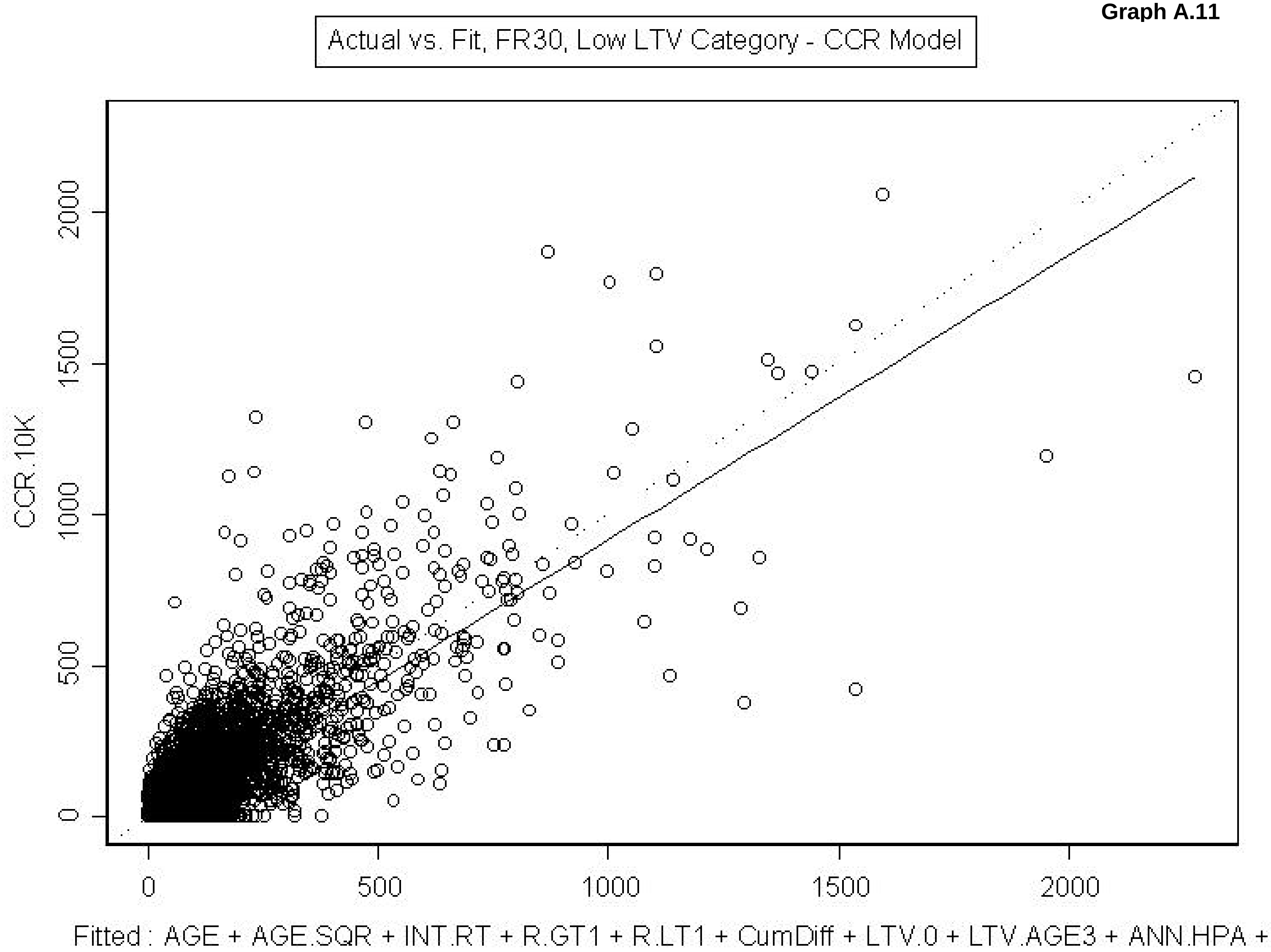

Graph A.9
SQRT[ABS(deviance residuals)], FR30, Investor LTV Category - CCR Model
sqrt(abs(Deviance Residuals))
0
2
4
6
8
-2
0
2
4
6
Predicted : AGE + AGE.SQR + INT.RT + R.GT1 + R.LT1 + CumDiff + LTV.0 + LTV.AGE3 + ANN.HPA +

Fixed Rate 30 Year, Low LTV Category - CCR Model
Origination Years 1975-1999

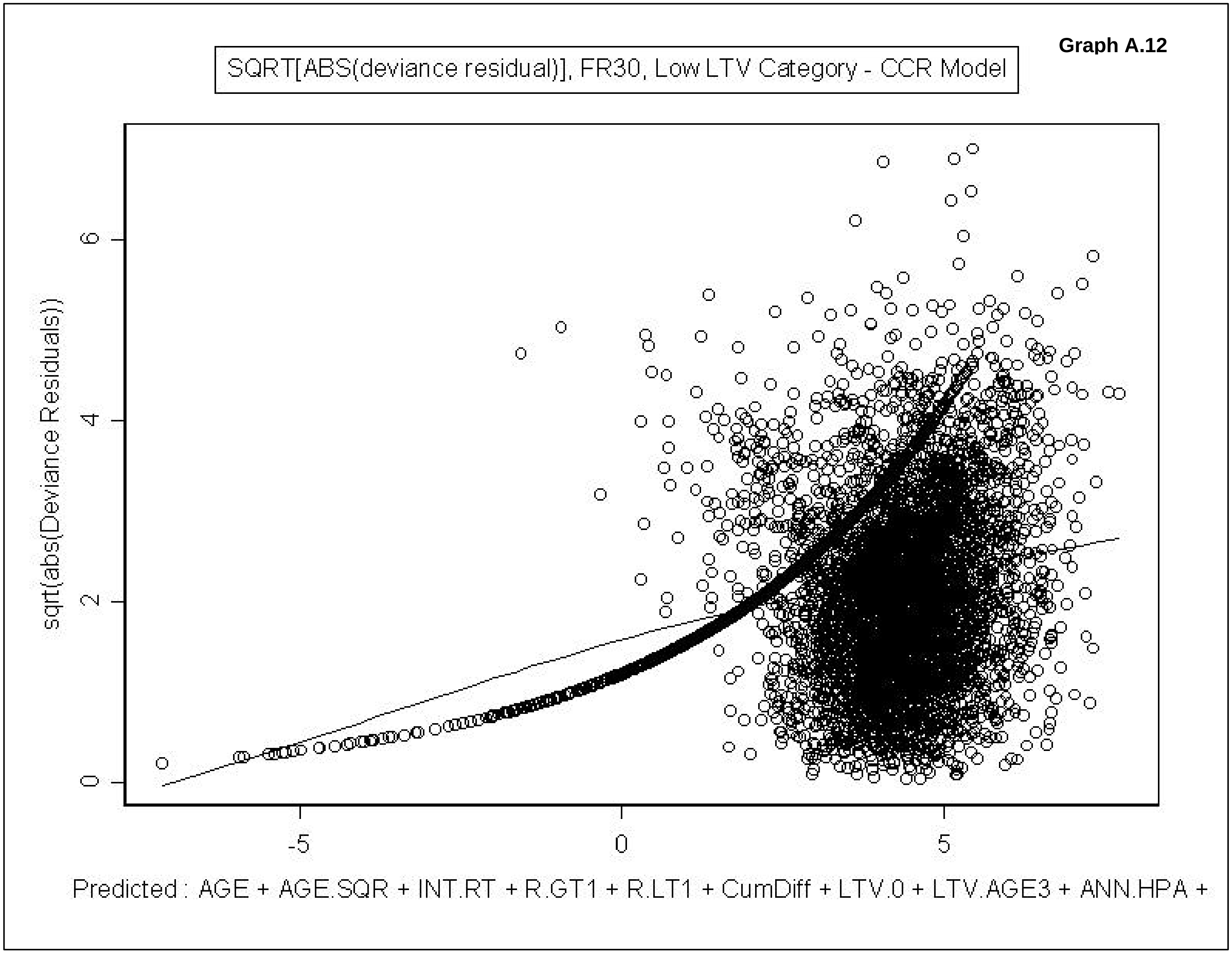
Graph A.10



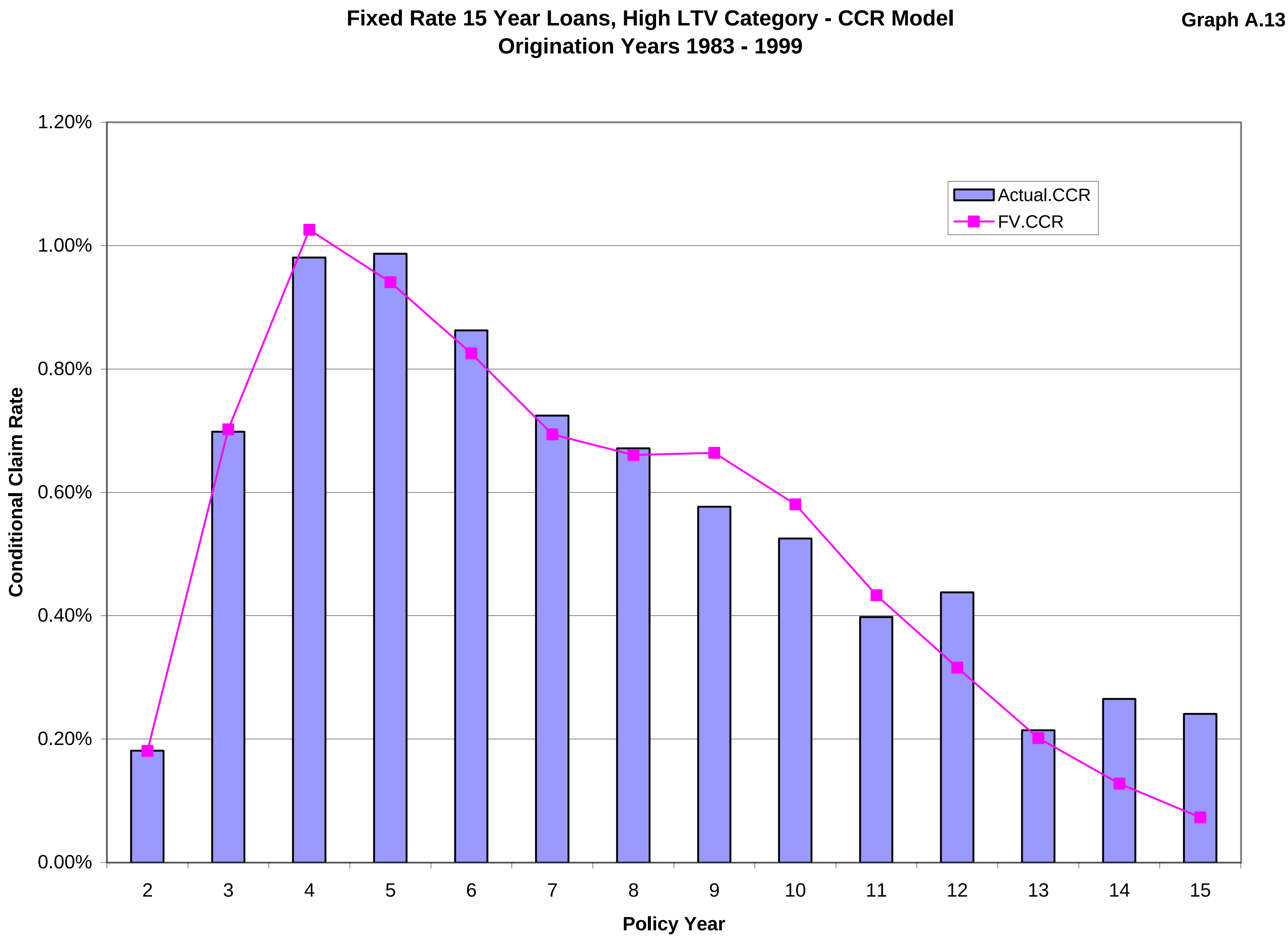
Graph A.11


Actual vs. Fit, FR30, Low LTV Category - CCR Model
CCR.10K
0
500
1000
1500
2000
0
500
1000
1500
2000
Fitted : AGE + AGE.SQR + INT.RT + R.GT1 + R.LT1 + CumDiff + LTV.0 + LTV.AGE3 + ANN.HPA +

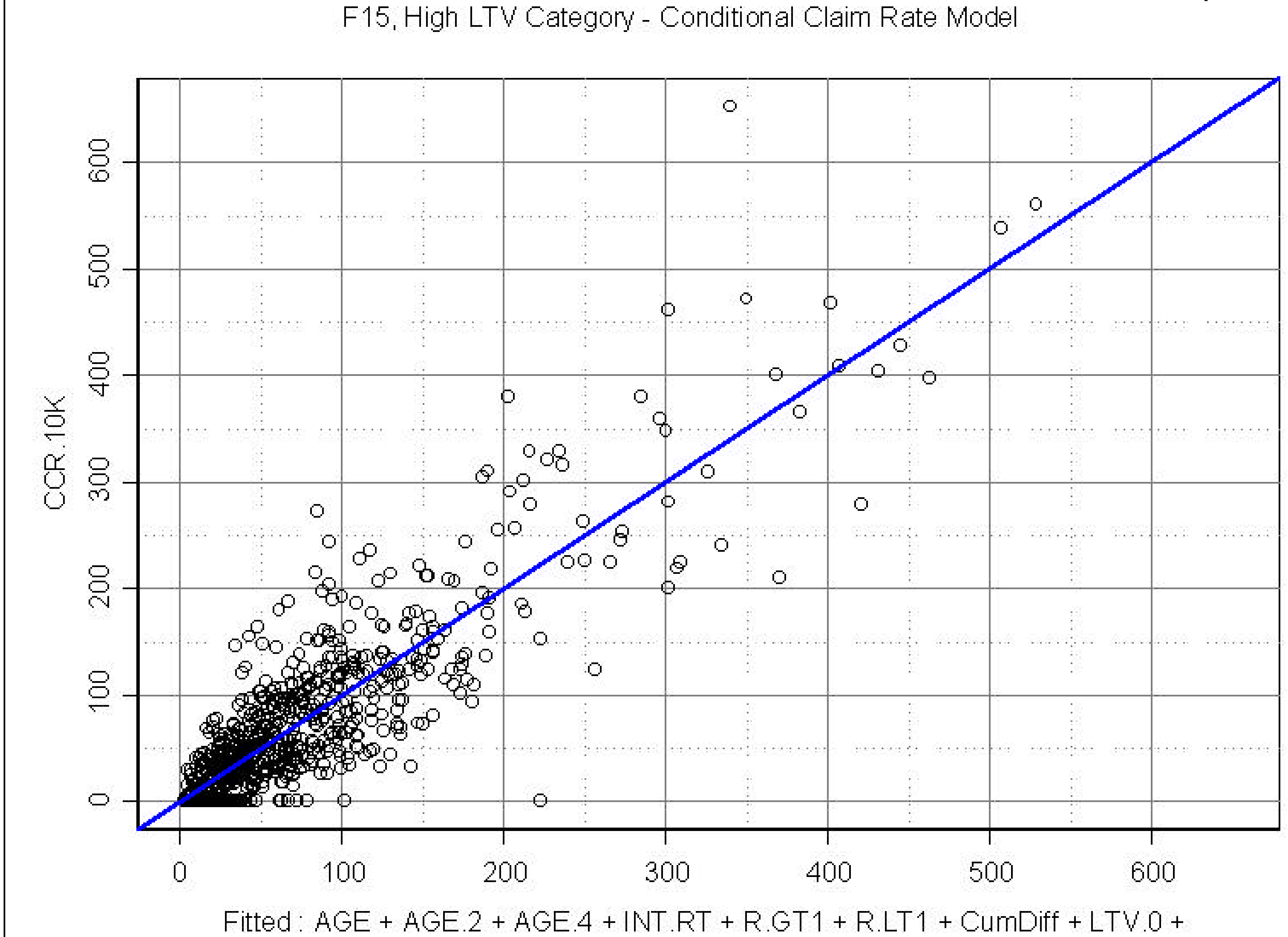
Graph A.12



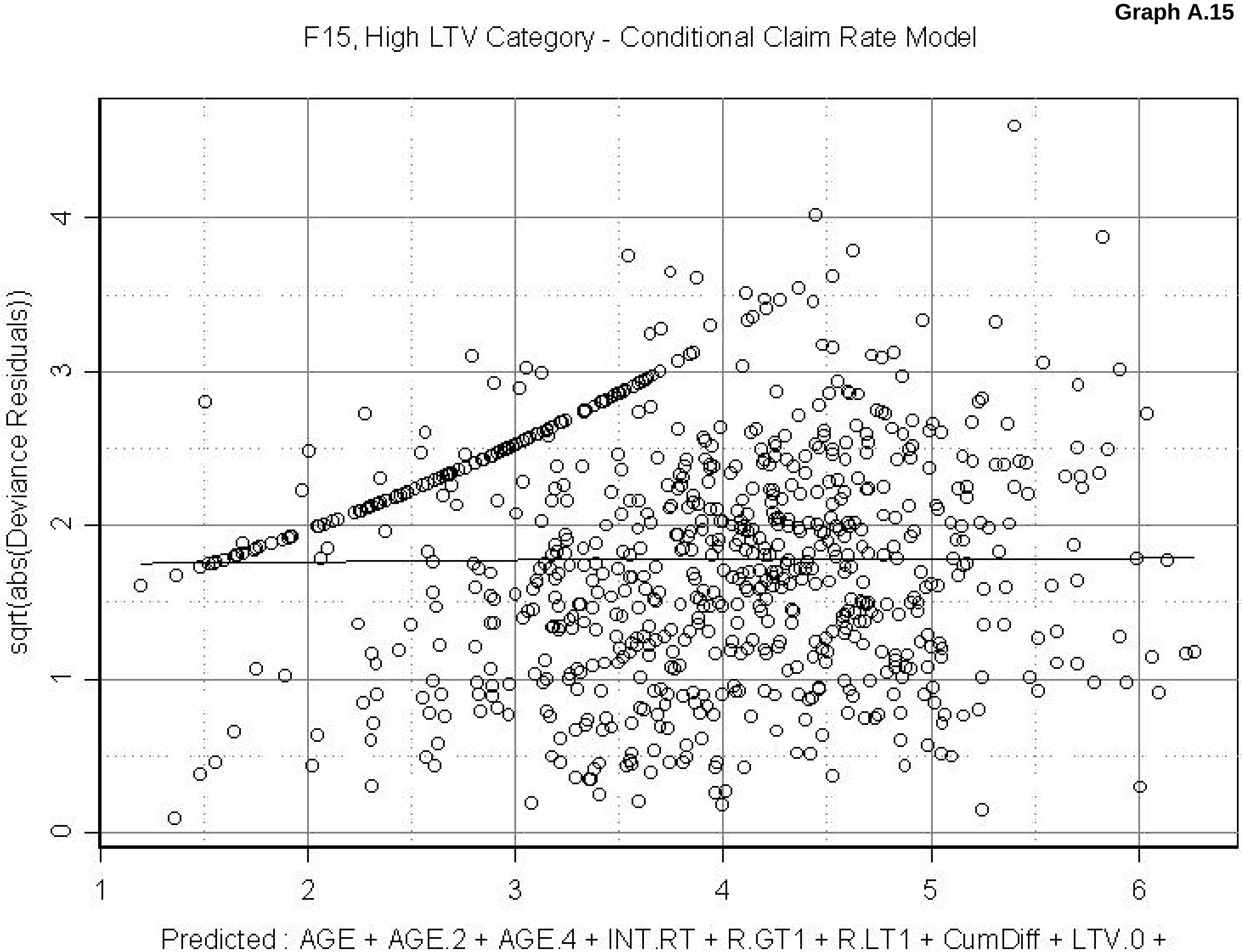
SQRT[ABS(deviance residual)], FR30, Low LTV Category - CCR Model
sqrt(abs(Deviance Residuals))
0
2
4
6
-5
0
5
Predicted : AGE + AGE.SQR + INT.RT + R.GT1 + R.LT1 + CumDiff + LTV.0 + LTV.AGE3 + ANN.HPA +


Fixed Rate 15 Year Loans, High LTV Category - CCR Model
Origination Years 1983 - 1999
Graph A.13
1.20%
1.00%
0.80%
0.60%
0.40%
0.20%
0.00%
Conditional Claim Rate
Actual.CCR
FV.CCR
2
3
4
5
6
7
8
9
10
11
12
13
14
15
Policy Year

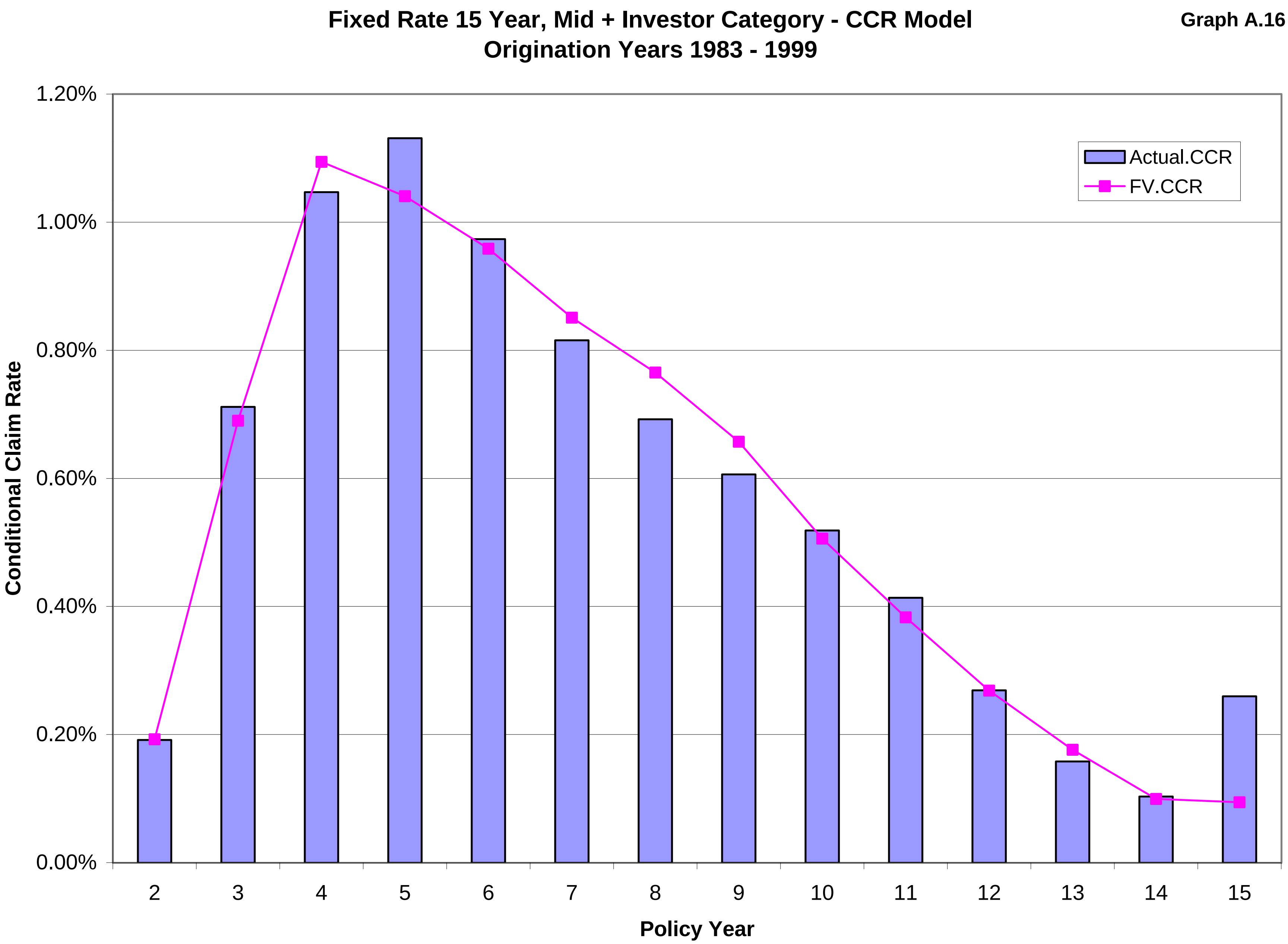
Graph A.14


F15, High LTV Category - Conditional Claim Rate Model
CCR.10K
0
100
200
300
400
500
600
0
100
200
300
400
500
600
Fitted : AGE + AGE.2 + AGE.4 + INT.RT + R.GT1 + R.LT1 + CumDiff + LTV.0 +

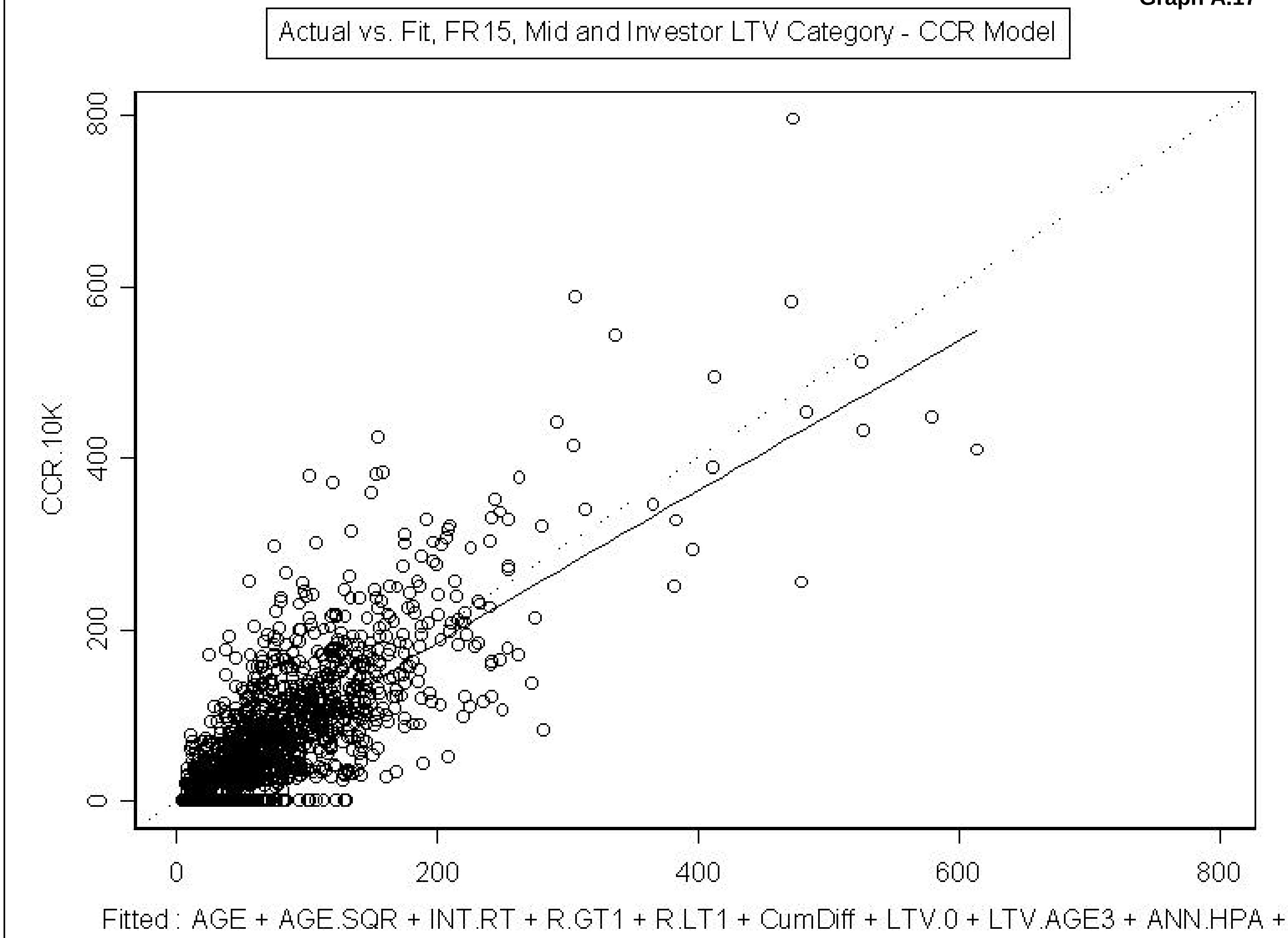
Graph A.15


F15, High LTV Category - Conditional Claim Rate Model
sqrt(abs(Deviance Residuals))
0
1
2
3
4
1
2
3
4
5
6
Predicted : AGE + AGE.2 + AGE.4 + INT.RT + R.GT1 + R.LT1 + CumDiff + LTV.0 +

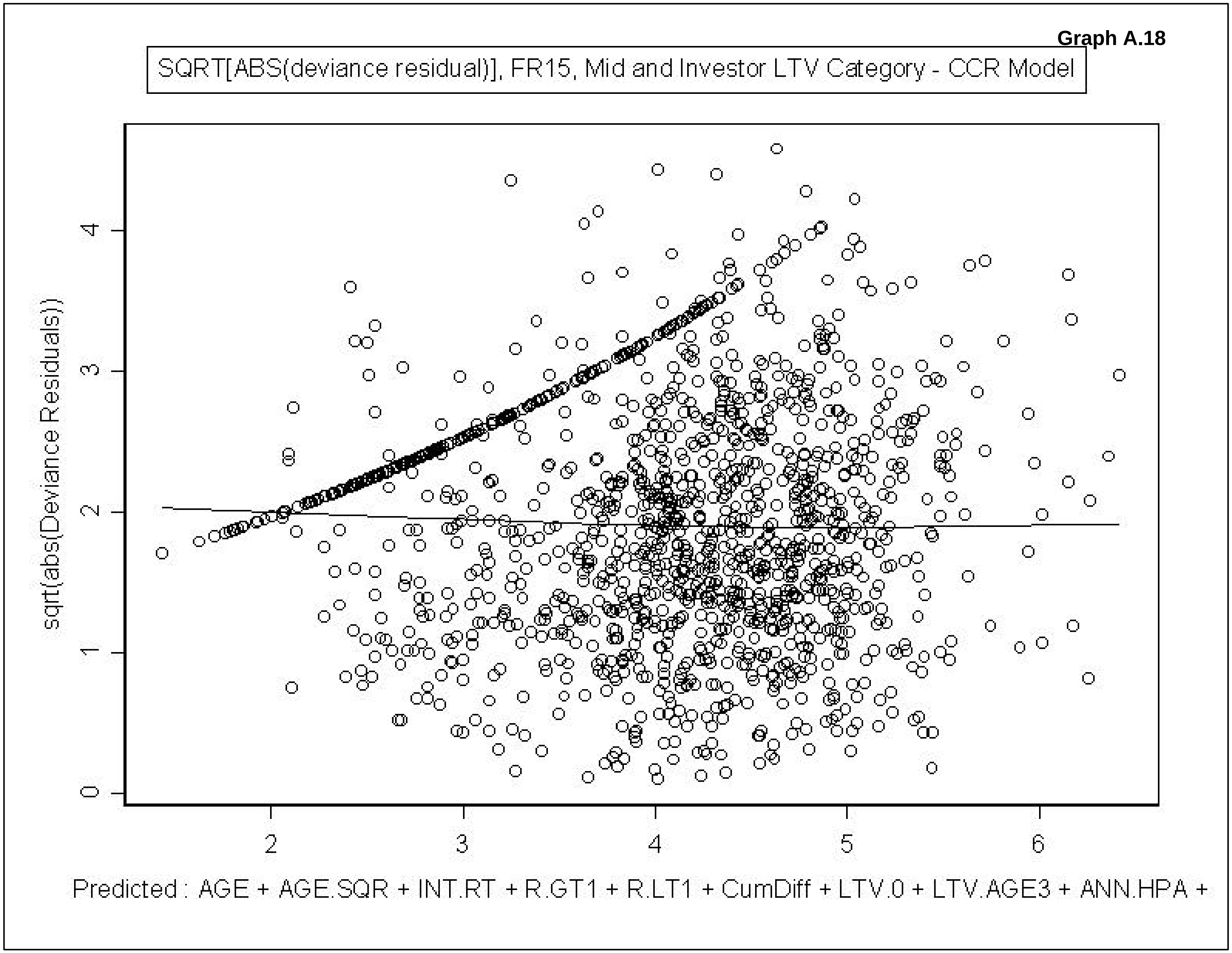
Graph A.16

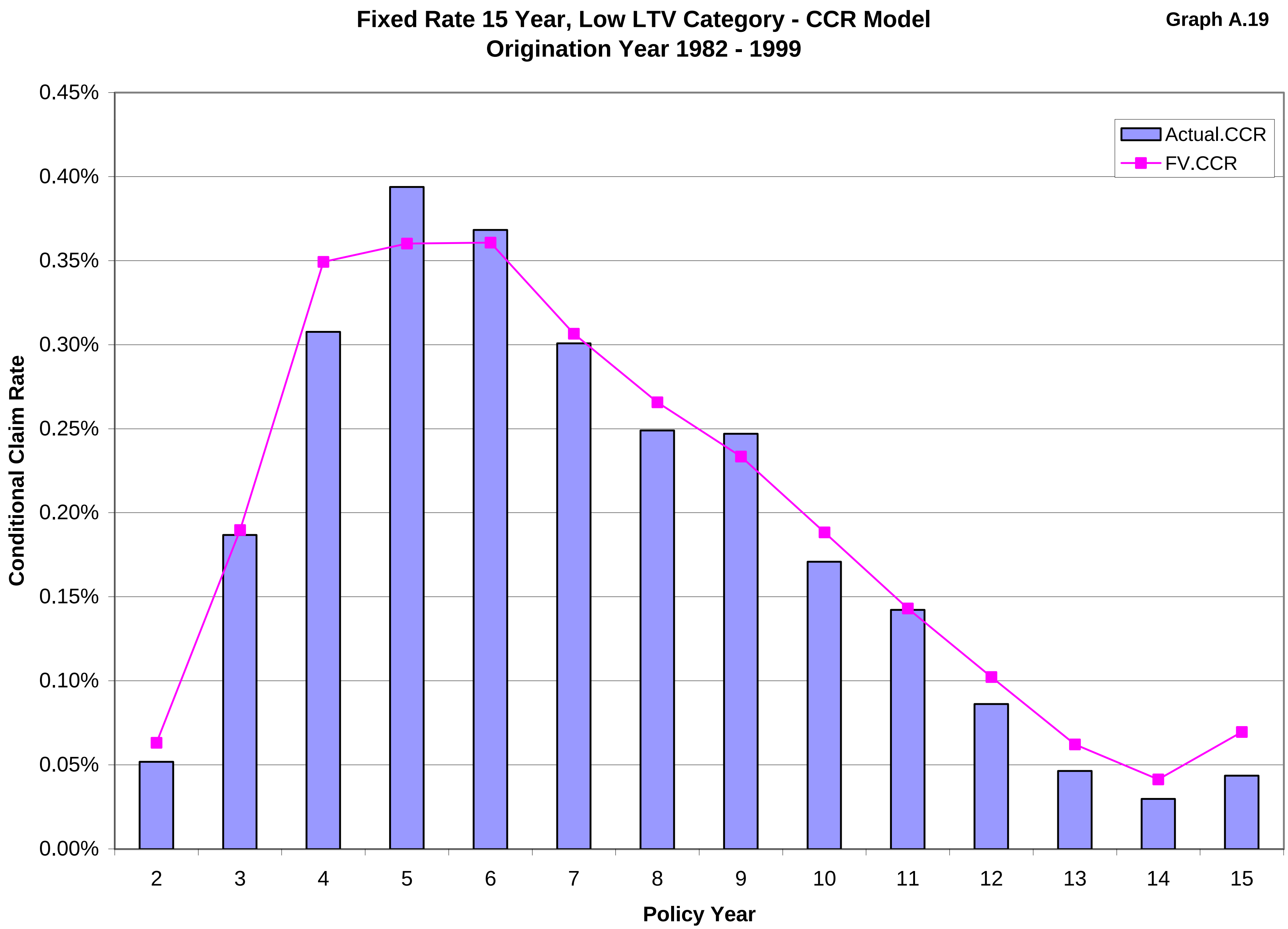

Fixed Rate 15 Year, Mid + Investor Category - CCR Model
Origination Years 1983 - 1999
Conditional Claim Rate
1.20%
1.00%
0.80%
0.60%
0.40%
0.20%
0.00%
Actual.CCR
FV.CCR
2
3
4
5
6
7
8
9
10
11
12
13
14
15
Policy Year

Graph A.17



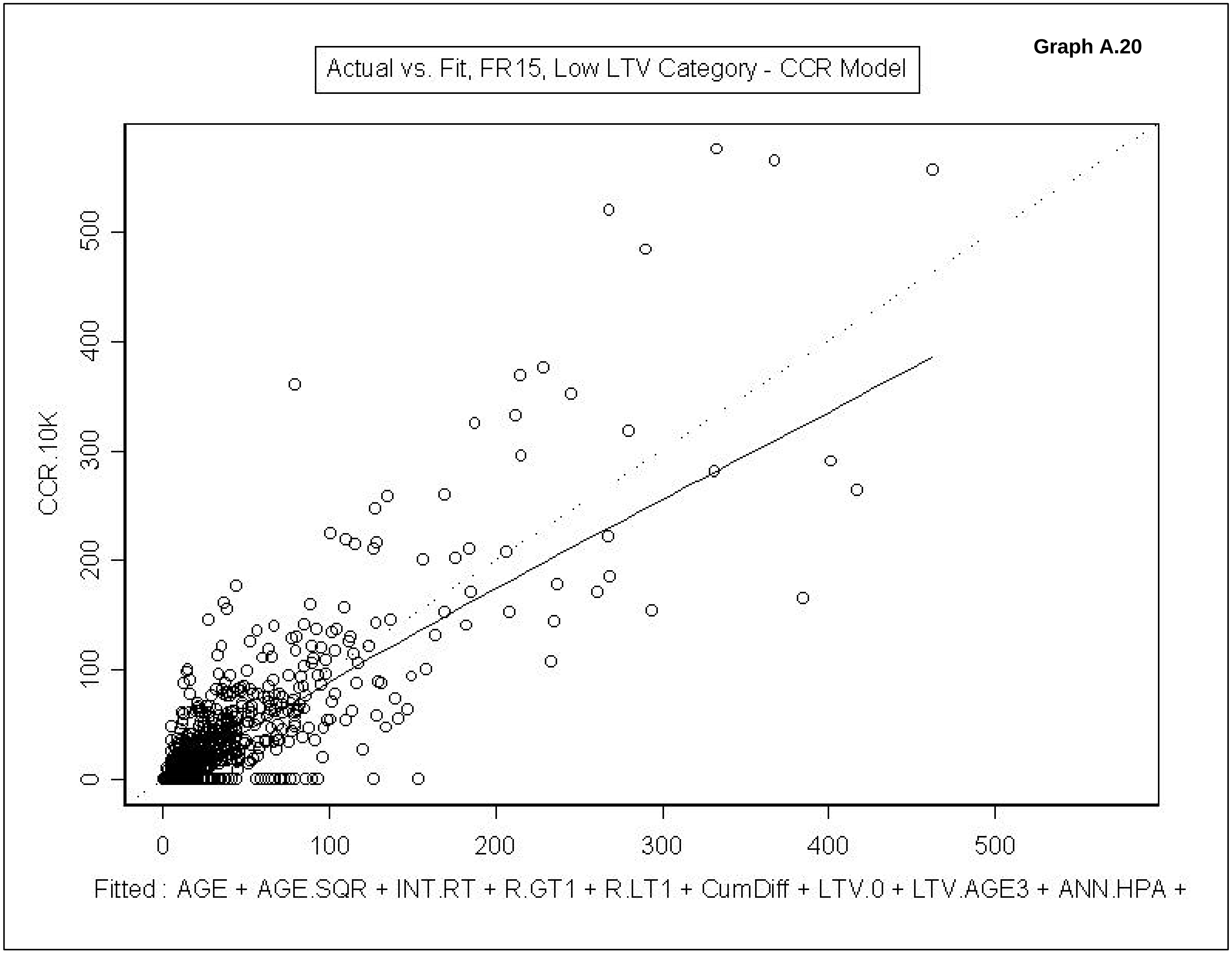
Actual vs. Fit, FR15, Mid and Investor LTV Category - CCR Model
CCR.10K
0
200
400
600
800
0
200
400
600
800
Fitted : AGE + AGE.SQR + INT.RT + R.GT1 + R.LT1 + CumDiff + LTV.0 + LTV.AGE3 + ANN.HPA +


Graph A.18
SQRT[ABS(deviance residual)], FR15, Mid and Investor LTV Category - CCR Model
sqrt(abs(Deviance Residuals))
0
1
2
3
4
2
3
4
5
6
Predicted : AGE + AGE.SQR + INT.RT + R.GT1 + R.LT1 + CumDiff + LTV.0 + LTV.AGE3 + ANN.HPA +



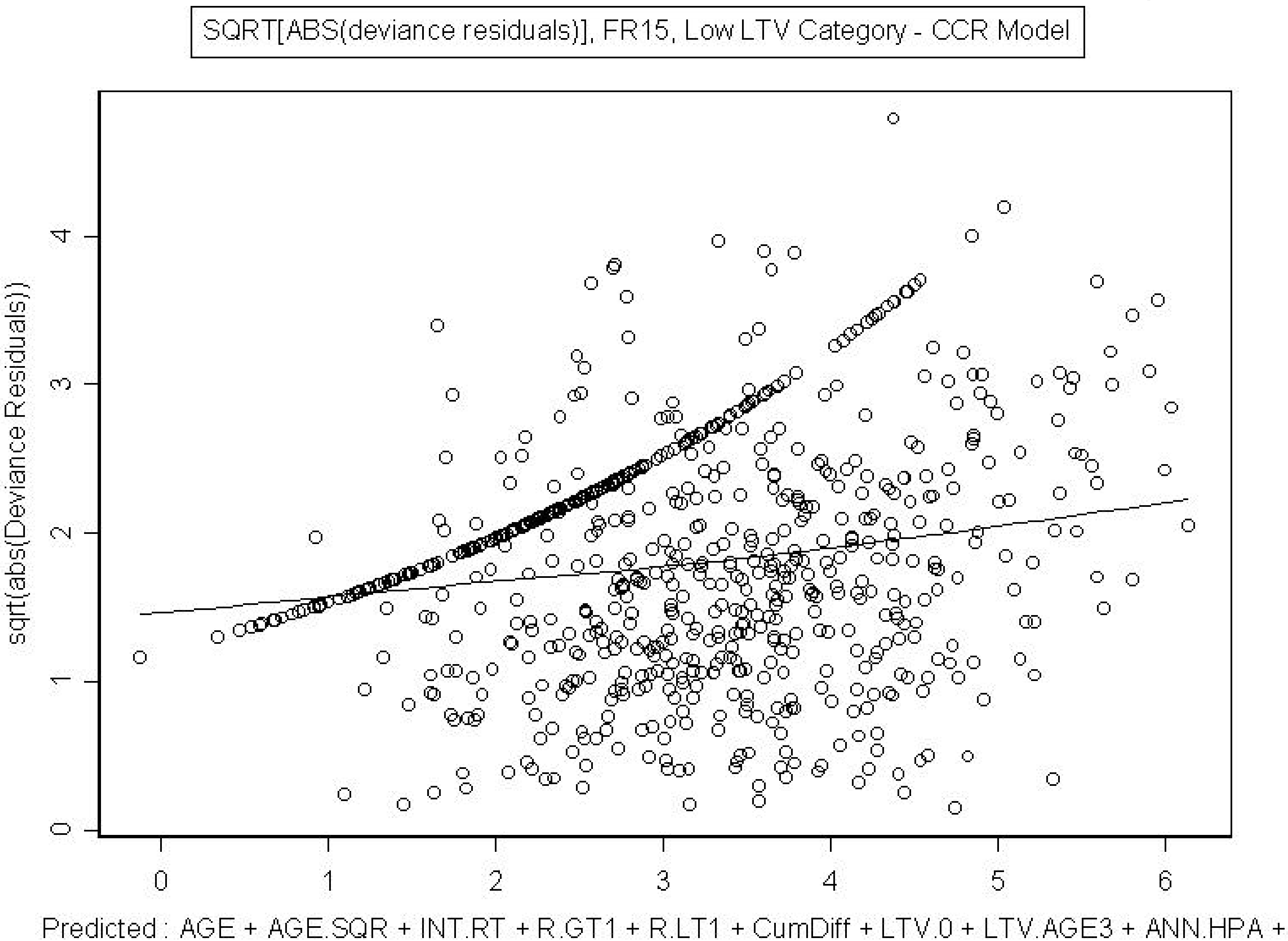
Fixed Rate 15 Year, Low LTV Category - CCR Model
Origination Year 1982 - 1999
Graph A.19
0.45%
0.40%
0.35%
0.30%
0.25%
0.20%
0.15%
0.10%
0.05%
0.00%
Conditional Claim Rate
Actual.CCR
FV.CCR
2
3
4
5
6
7
8
9
10
11
12
13
14
15
Policy Year

Graph A.20

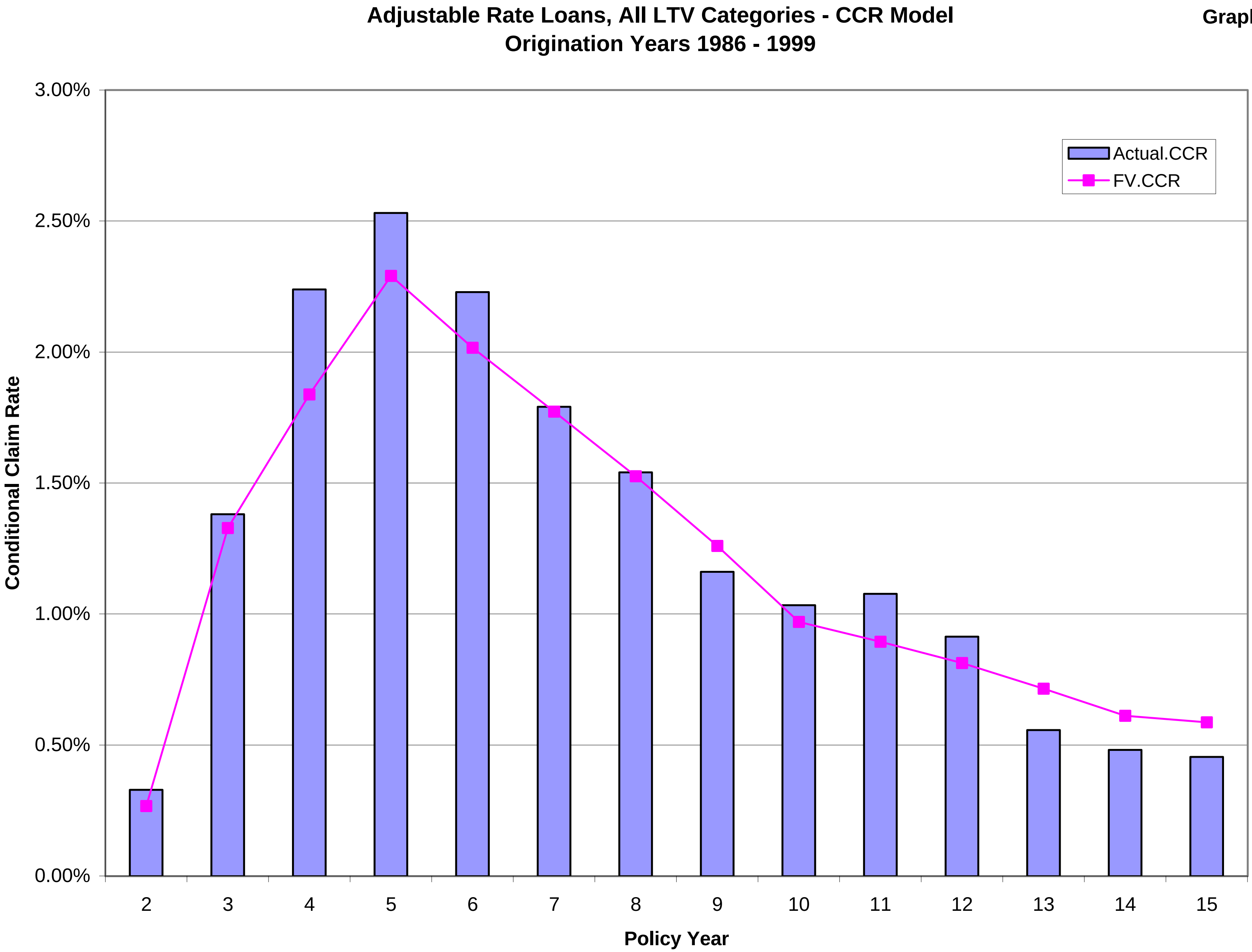


Actual vs. Fit, FR15, Low LTV Category - CCR Model
CCR.10K
0
100
200
300
400
500
0
100
200
300
400
500
Fitted : AGE + AGE.SQR + INT.RT + R.GT1 + R.LT1 + CumDiff + LTV.0 + LTV.AGE3 + ANN.HPA +

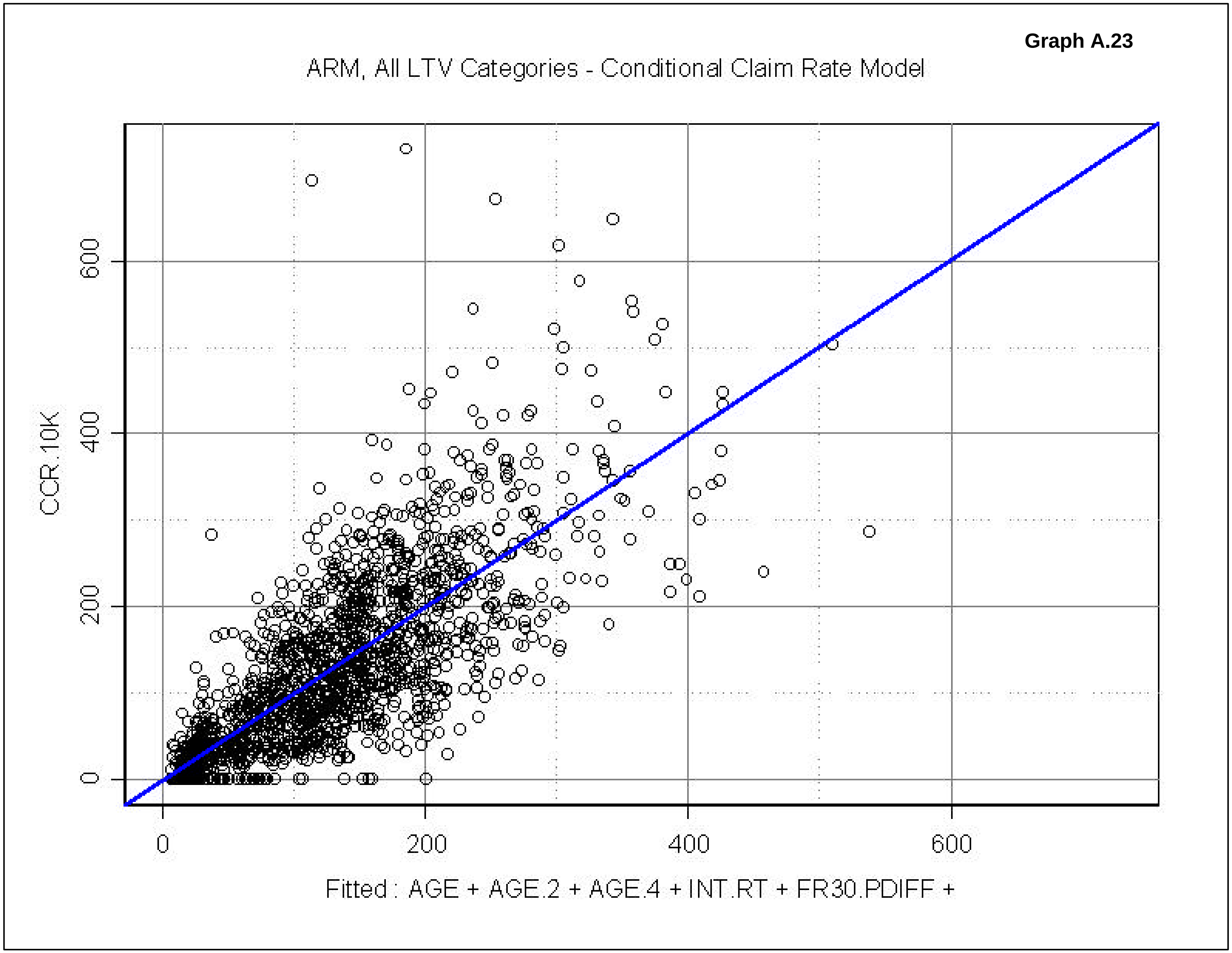
Graph A.21


SQRT[ABS(deviance residuals)], FR15, Low LTV Category - CCR Model
sqrt(abs(Deviance Residuals))
0
1
2
3
4
5
6
Predicted : AGE + AGE.SQR + INT.RT + R.GT1 + R.LT1 + CumDiff + LTV.0 + LTV.AGE3 + ANN.HPA +

Graph A.22

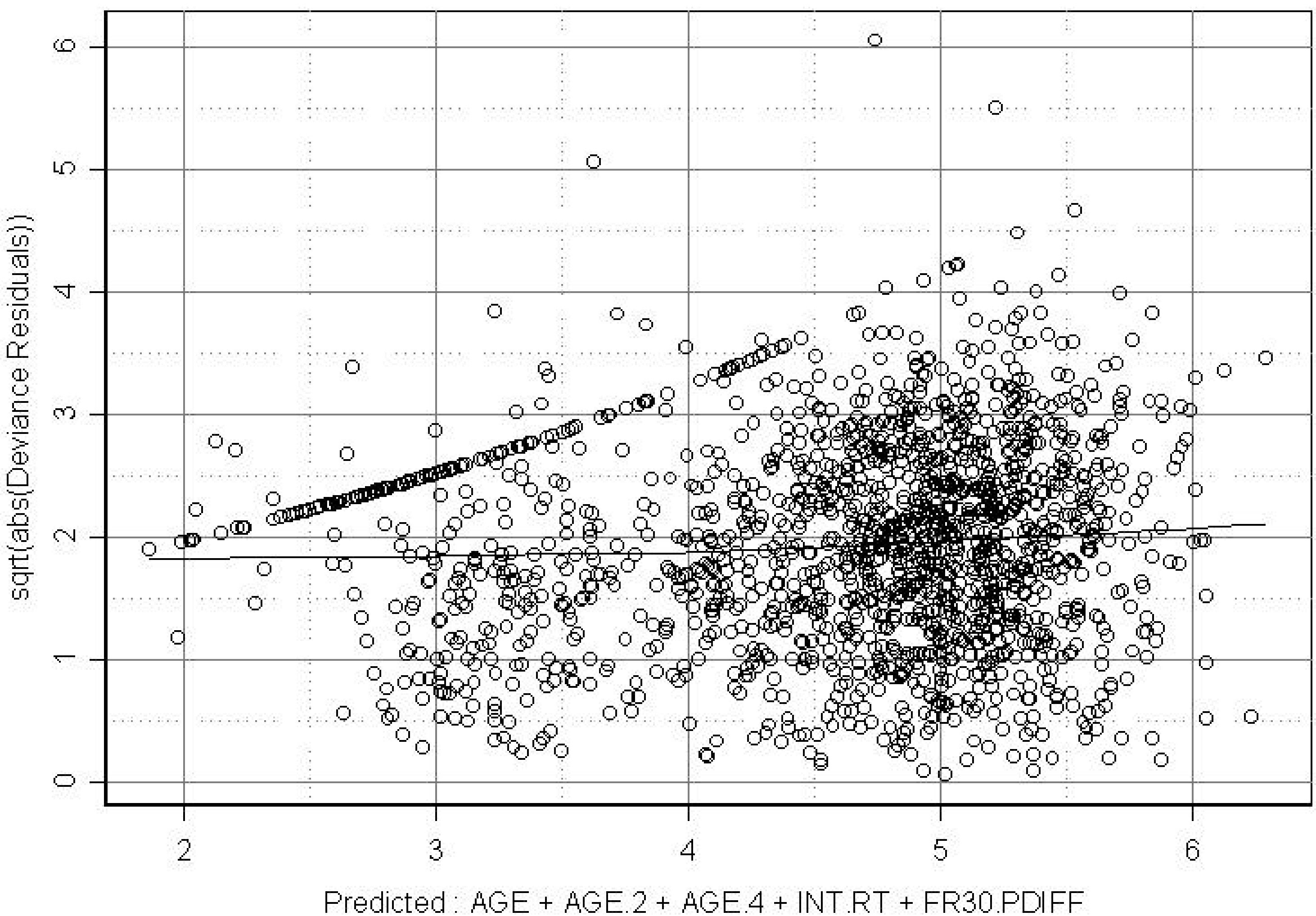


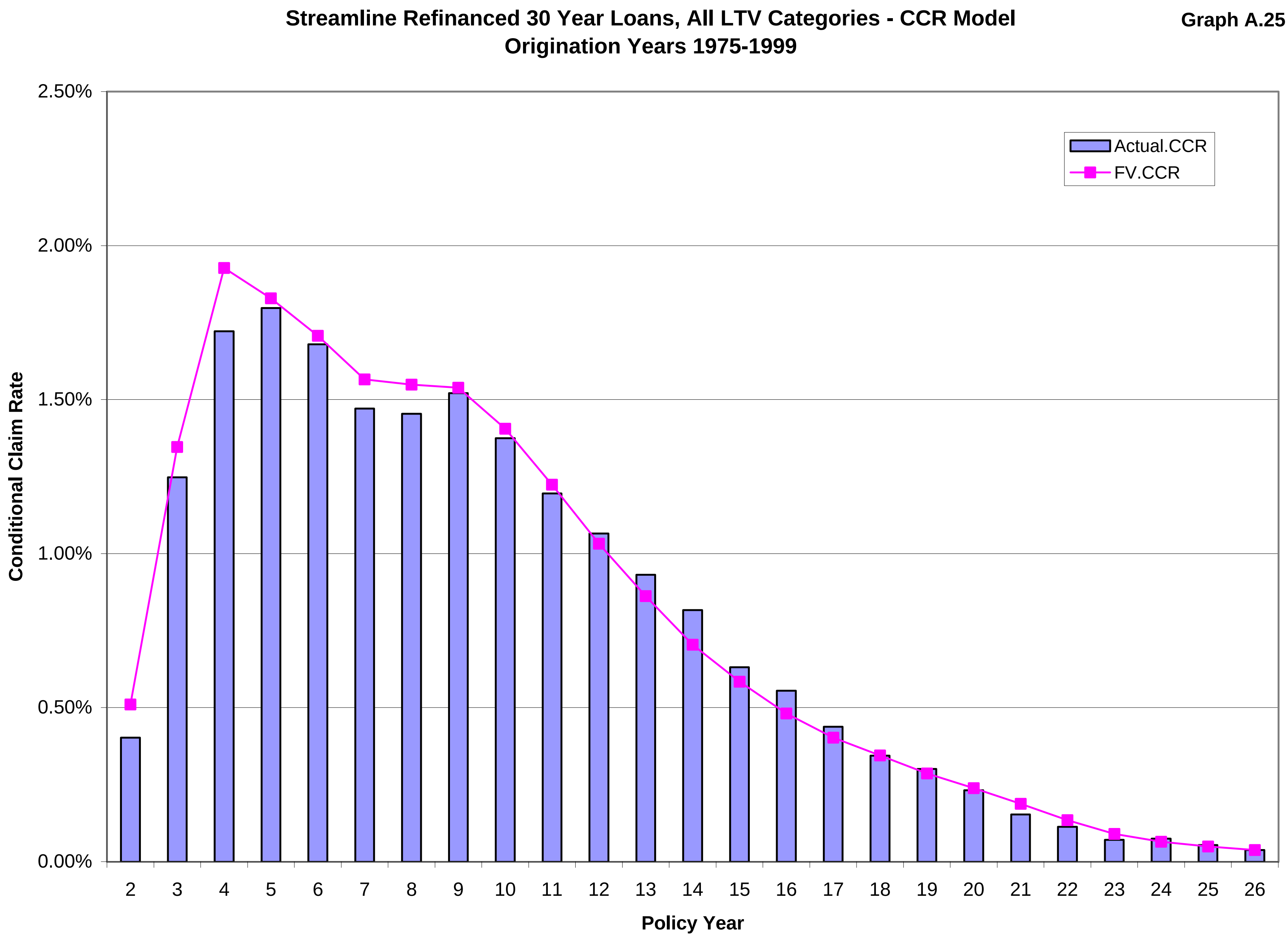
Adjustable Rate Loans, All LTV Categories - CCR Model
Origination Years 1986 - 1999
Conditional Claim Rate
3.00%
2.50%
2.00%
1.50%
1.00%
0.50%
0.00%
Actual.CCR
FV.CCR
2
3
4
5
6
7
8
9
10
11
12
13
14
15
Policy Year

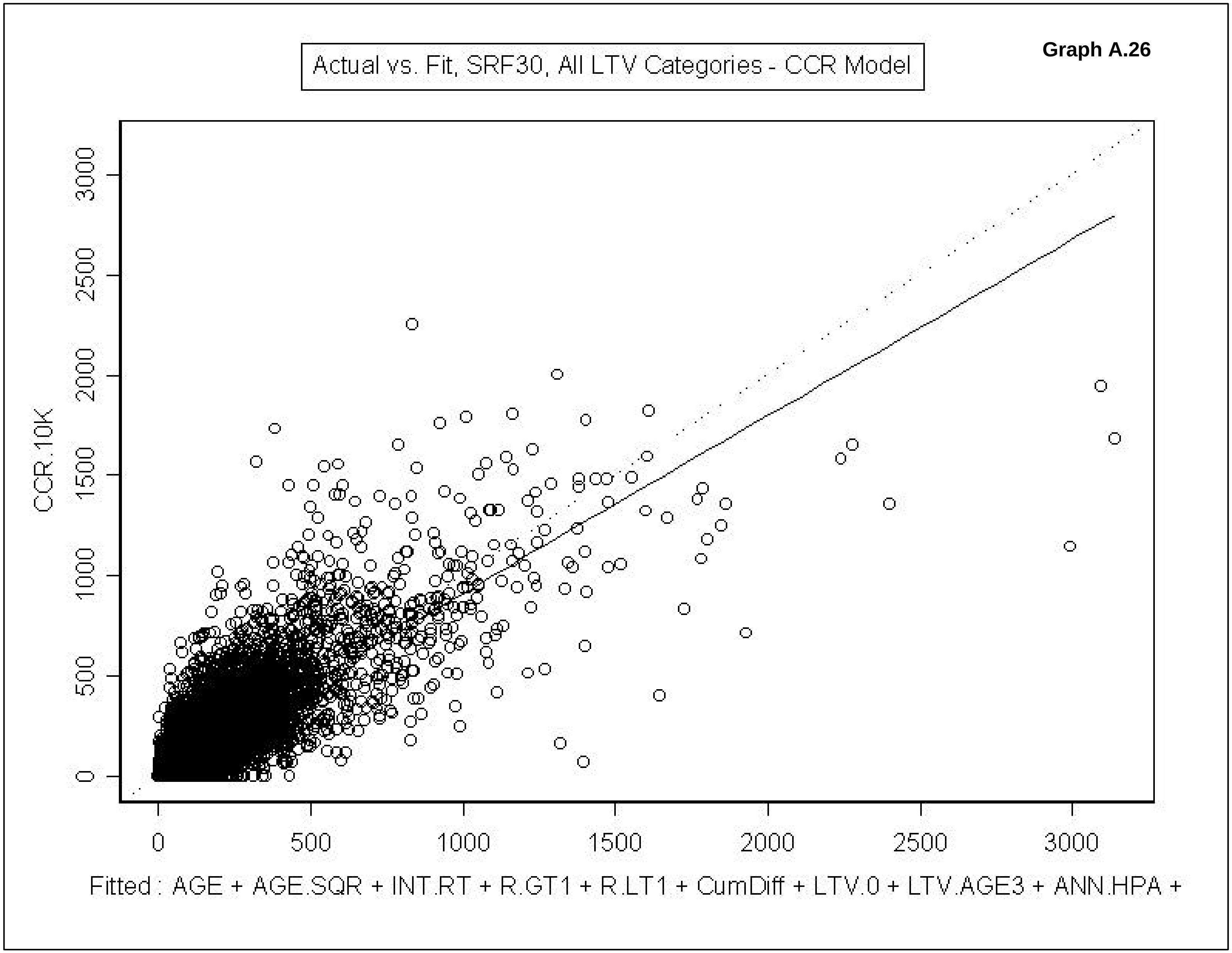

Graph A.23
ARM, All LTV Categories - Conditional Claim Rate Model
CCR.10K
0
200
400
600
0
200
400
600
Fitted : AGE + AGE.2 + AGE.4 + INT.RT + FR30.PDIFF +

Graph A.24

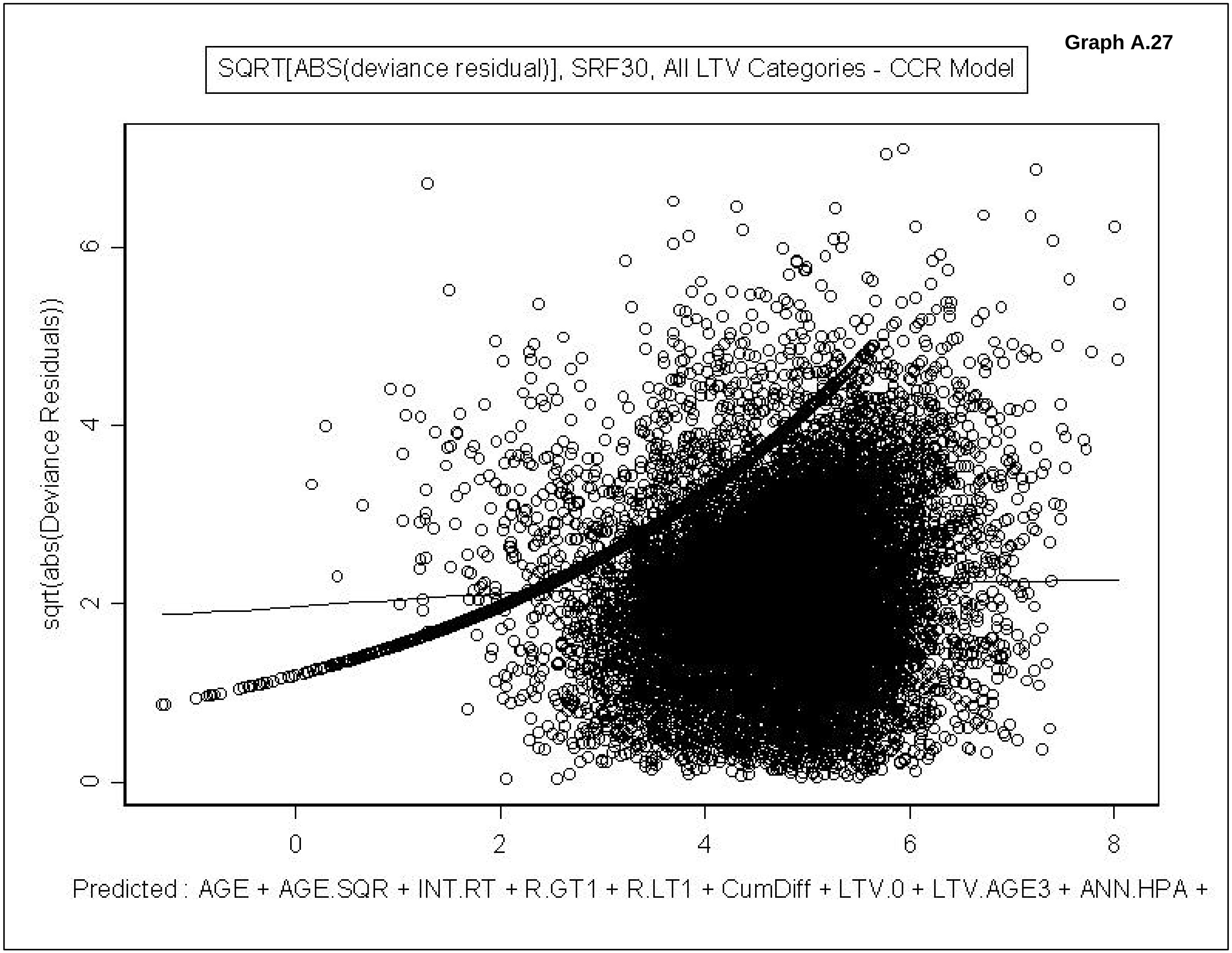
ARM, All LTV Categories - Conditional Claim Rate Model




Streamline Refinanced 30 Year Loans, All LTV Categories - CCR Model
Origination Years 1975-1999
Graph A.25
Conditional Claim Rate
2.50%
2.00%
1.50%
1.00%
0.50%
0.00%
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
Policy Year
Actual.CCR
FV.CCR

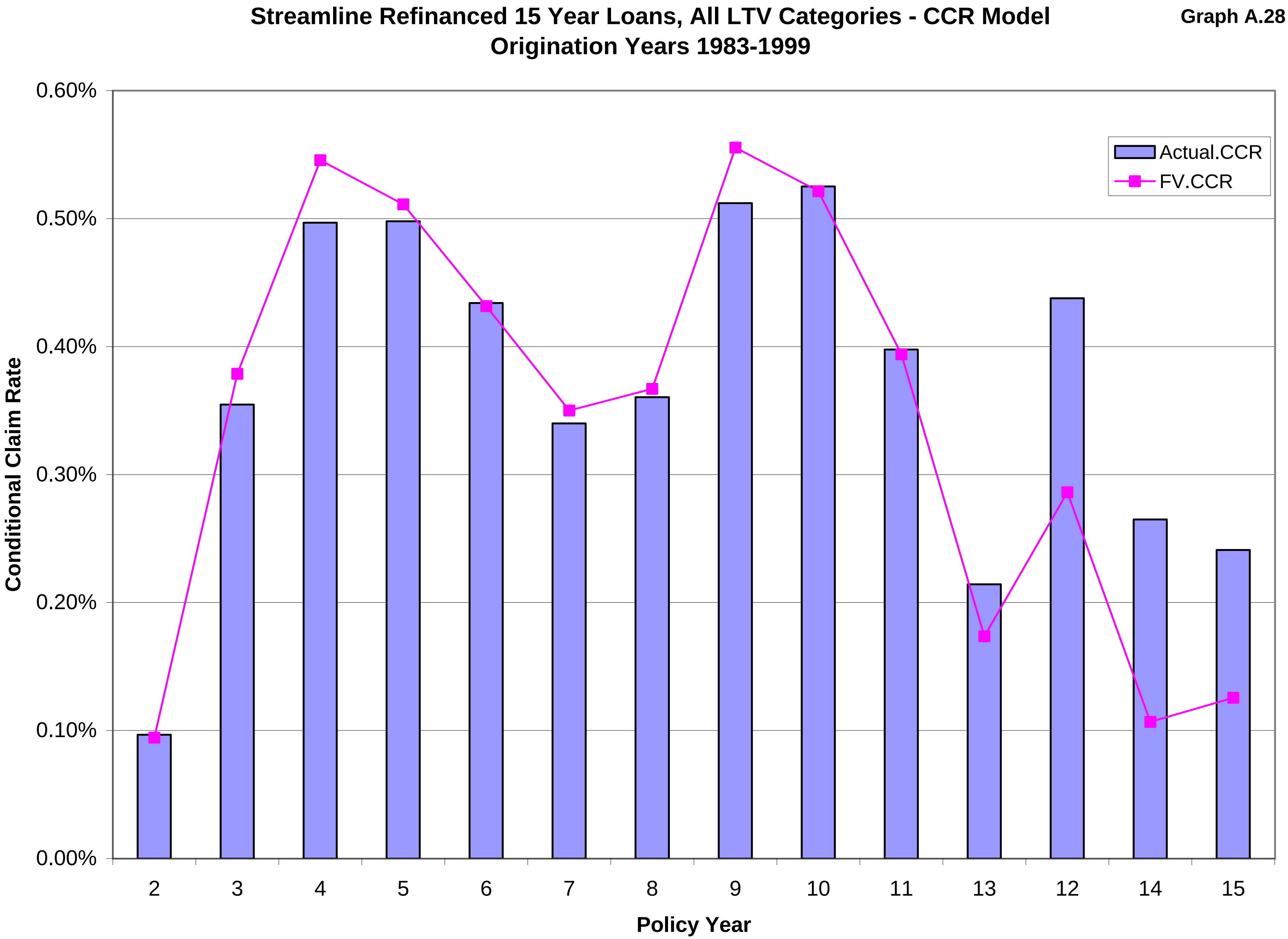


Graph A.26
Actual vs. Fit, SRF30, All LTV Categories - CCR Model
CCR.10K
0
500
1000
1500
2000
2500
3000
0
500
1000
1500
2000
2500
3000
Fitted : AGE + AGE.SQR + INT.RT + R.GT1 + R.LT1 + CumDiff + LTV.0 + LTV.AGE3 + ANN.HPA +

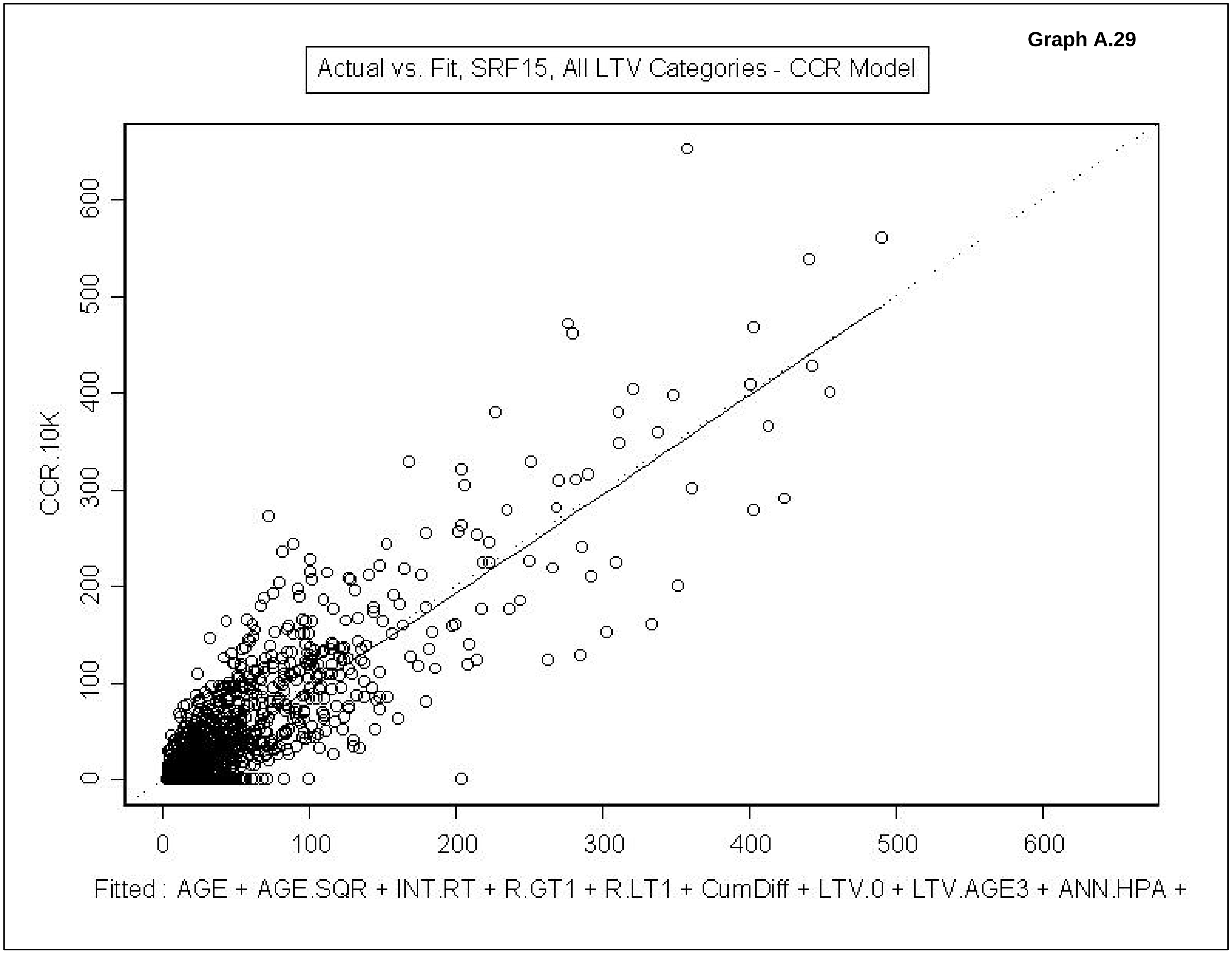


Graph A.27
SQRT[ABS(deviance residual)], SRF30, All LTV Categories - CCR Model
sqrt(abs(Deviance Residuals))
0
2
4
6
0
2
4
6
8
Predicted : AGE + AGE.SQR + INT.RT + R.GT1 + R.LT1 + CumDiff + LTV.0 + LTV.AGE3 + ANN.HPA +

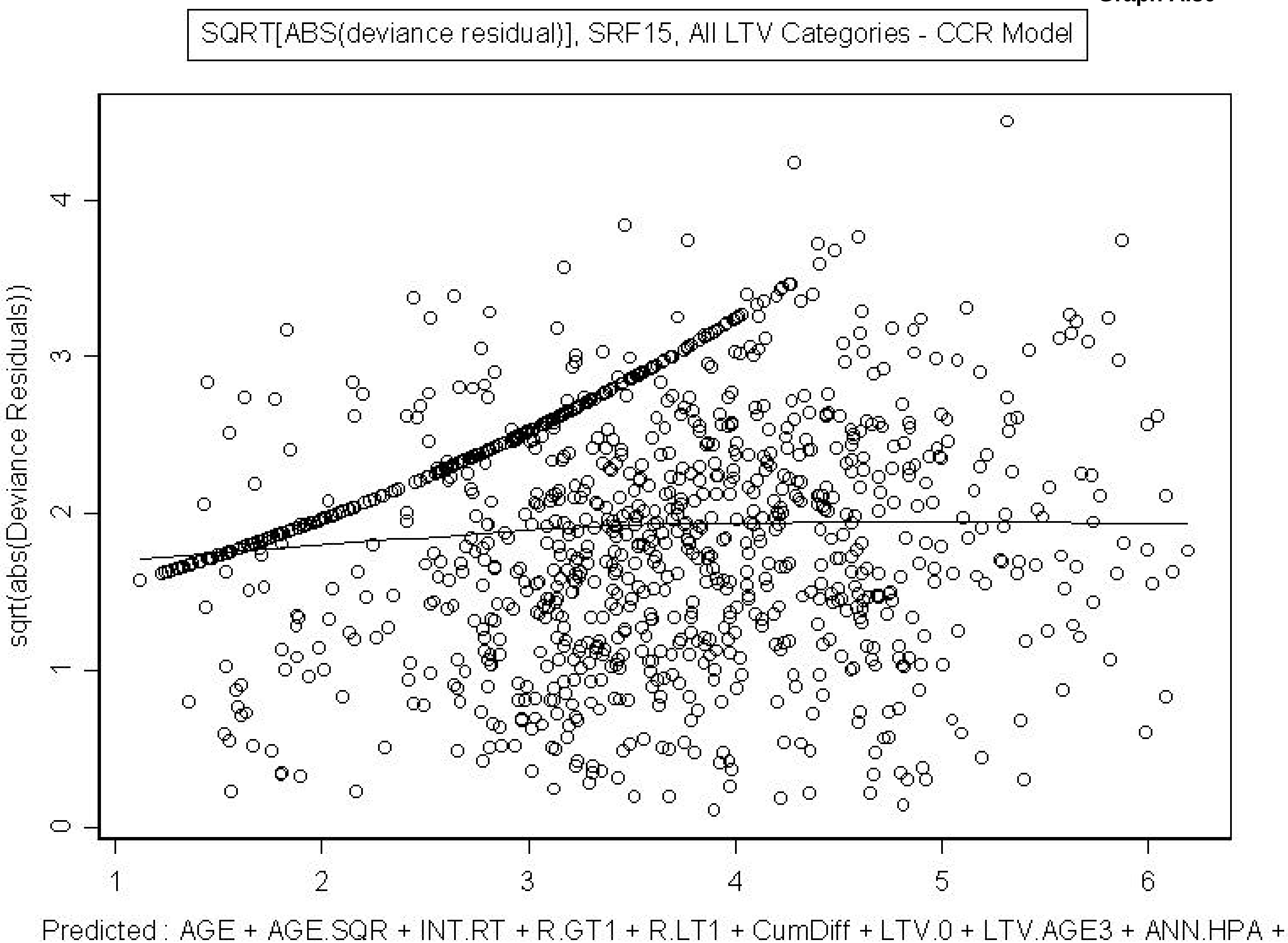
Graph A.28



Streamline Refinanced 15 Year Loans, All LTV Categories - CCR Model
Origination Years 1983-1999
Conditional Claim Rate
0.60%
0.50%
0.40%
0.30%
0.20%
0.10%
0.00%
Actual.CCR
FV.CCR
2
3
4
5
6
7
8
9
10
11
13
12
14
15
Policy Year


Graph A.29
Actual vs. Fit, SRF15, All LTV Categories - CCR Model
CCR.10K
0
100
200
300
400
500
600
0
100
200
300
400
500
600
Fitted : AGE + AGE.SQR + INT.RT + R.GT1 + R.LT1 + CumDiff + LTV.0 + LTV.AGE3 + ANN.HPA +

Graph A.30


SQRT[ABS(deviance residual)], SRF15, All LTV Categories - CCR Model
sqrt(abs(Deviance Residuals))
0
1
2
3
4
1
2
3
4
5
6
Predicted : AGE + AGE.SQR + INT.RT + R.GT1 + R.LT1 + CumDiff + LTV.0 + LTV.AGE3 + ANN.HPA +