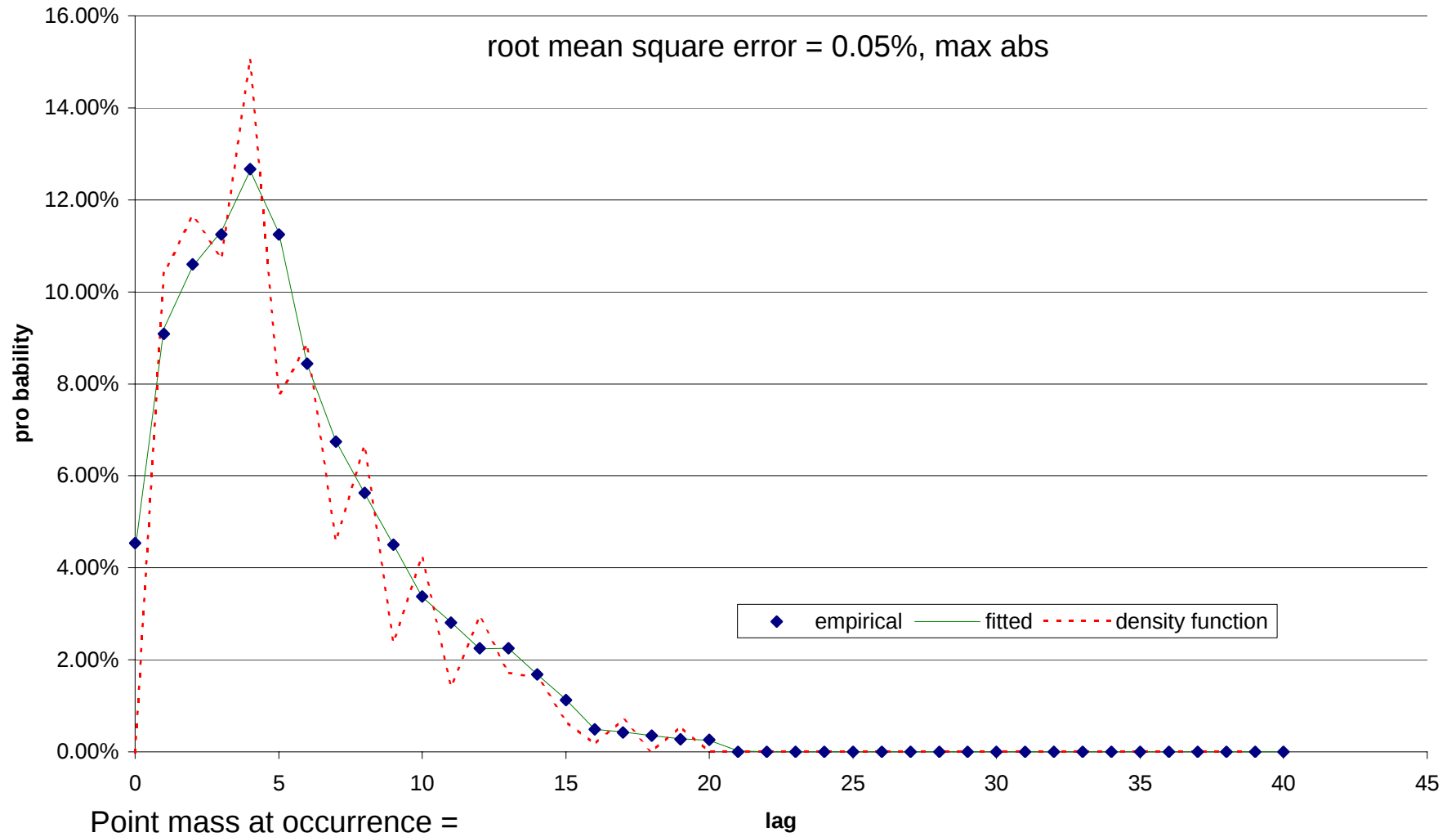


Policy Year probabilities for continuous density

Data is AY Excess Med-Mal pretending

root mean square error = 0.05%, max abs



Density function of payment for accident year data. This is continuous piecewise linear with a mass point at zero.

Data is **AY Excess Med-Mal pretending to be PY**

[piecewise linear density.doc](#)

[Payout densities.doc](#)

only insert rows between **red** double lines (the middle of the ranges), then copy formulas down

										point mass					payout CDF	
										7.881%						
										7.881%						
												weight				
												0.0000				
</																

36	0.00%	1	0.00%	1	0.00000	0.00000	0.00000	0.000%	0	0	100.00%	36
37	0.00%	1	0.00%	1	0.00000	0.00000	0.00000	0.000%	0	0	100.00%	37
38	0.00%	1	0.00%	1	0.00000	0.00000	0.00000	0.000%	0	0	100.00%	38
39	0.00%	1	0.00%	1	0.00000	0.00000	0.00000	0.000%	0	0	100.00%	39
40	0.00%	1	0.00%	1				0.000%	0	0	100.00%	40
41	0.00%	1	0.00%	1				0.000%	0			

graph text

mass at occurrence = 7.

Data is AY Excess Med-Mal pretending to be PY

root mean square error

	1,000 simulations		1 seconds		Output too		0 seconds													
lag	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
address	\$C\$7	\$C\$8	\$C\$9	\$C\$10	\$C\$11	\$C\$12	\$C\$13	\$C\$14	\$C\$15	\$C\$16	\$C\$17	\$C\$18	\$C\$19	\$C\$20	\$C\$21	\$C\$22	\$C\$23	\$C\$24	\$C\$25	
mean	5.10%	8.20%	11.30%	11.70%	12.90%	10.40%	7.50%	7.40%	5.60%	4.30%	2.60%	2.90%	3.20%	2.40%	1.50%	1.00%	0.40%	0.30%	0.70%	
predicted	4.15%	9.50%	10.05%	11.81%	12.34%	11.12%	8.72%	6.77%	5.56%	4.48%	3.47%	2.75%	2.38%	2.15%	1.73%	1.10%	0.59%	0.39%	0.36%	
error	0.950%	-1.295%	1.245%	-0.112%	0.562%	-0.725%	-1.219%	0.632%	0.045%	-0.178%	-0.866%	0.150%	0.824%	0.253%	-0.228%	-0.097%	-0.186%	-0.090%	0.343%	
uncertainty	0.696%	0.868%	1.001%	1.016%	1.060%	0.965%	0.833%	0.828%	0.727%	0.641%	0.503%	0.531%	0.557%	0.484%	0.384%	0.315%	0.200%	0.173%	0.264%	
std error	1.37	-1.49	1.24	-0.11	0.53	-0.75	-1.46	0.76	0.06	-0.28	-1.72	0.28	1.48	0.52	-0.59	-0.31	-0.93	-0.52	1.30	
stdev	22.00%	27.44%	31.66%	32.14%	33.52%	30.53%	26.34%	26.18%	22.99%	20.29%	15.91%	16.78%	17.60%	15.30%	12.16%	9.95%	6.31%	5.47%	8.34%	
skewness	4.08	3.05	2.44	2.38	2.21	2.59	3.23	3.25	3.86	4.51	5.96	5.61	5.32	6.22	7.98	9.85	15.72	18.18	11.83	

Payout used in this simulation

CDF	time	pdf	point mass o	6.195%
0.061951	0	0.054267		
0.133999	1	0.08983		
0.235538	2	0.113249		
0.354637	3	0.124947		
0.479551	4	0.124883		
0.59189	5	0.099794		
0.67858	6	0.073586		
0.745578	7	0.06041		
0.801067	8	0.050569		
0.845818	9	0.038932		
0.880214	10	0.029861		
0.907411	11	0.024532		
0.93104	12	0.022727		
0.952698	13	0.020589		
0.97018	14	0.014375		
0.981041	15	0.007345		
0.986609	16	0.003792		
0.990368	17	0.003726		
0.993957	18	0.003451		
0.997171	19	0.002977		
0.99933	20	0.001341		
1	21	0		
1	22	0		
1	23	0		
1	24	0		
1	25	0		
1	26	0		
1	27	0		
1	28	0		
1	29	0		
1	30	0		
1	31	0		
1	32	0		
1	33	0		
1	34	0		
1	35	0		
1	36	0		
1	37	0		
1	38	0		
1	39	0		
1	40			

[illegible]

	39	40
\$C\$46	\$C\$47	
0.00%	0.00%	
0.00%	0.00%	0.00%
0.000%	0.000%	0.000%
0.000%	0.000%	
#DIV/0!	#DIV/0!	#DIV/0!
0.00%	0.00%	
#N/A	#N/A	

This sheet is to do simulation to check that the probabilities are in fact generated as stated in the column "probability from fit"

lags currently available here 111; lags used 40.

lag	current event
0	0
1	0
2	1
3	0
4	0
5	0
6	0
7	0
8	0
9	0
10	0
11	0
12	0
13	0
14	0
15	0
16	0
17	0
18	0
19	0
20	0
21	0
22	0
23	0
24	0
25	0
26	0
27	0
28	0
29	0
30	0
31	0
32	0
33	0
34	0
35	0
36	0
37	0
38	0
39	0
40	0

policy inception	0.795417
occurrence after policy inception	0.281306
occurrence time	1.076723
lag time	1.350516
payment time	2.427239
period	2

CDF draw:		
F	index	2
	K	1
	F(K)	13.09%
	f(K)	10.42%
	f(K+1)	11.63%
	x-K	0.3505

16.82%