1 Sensitivity Analysis with Quasi-Newton
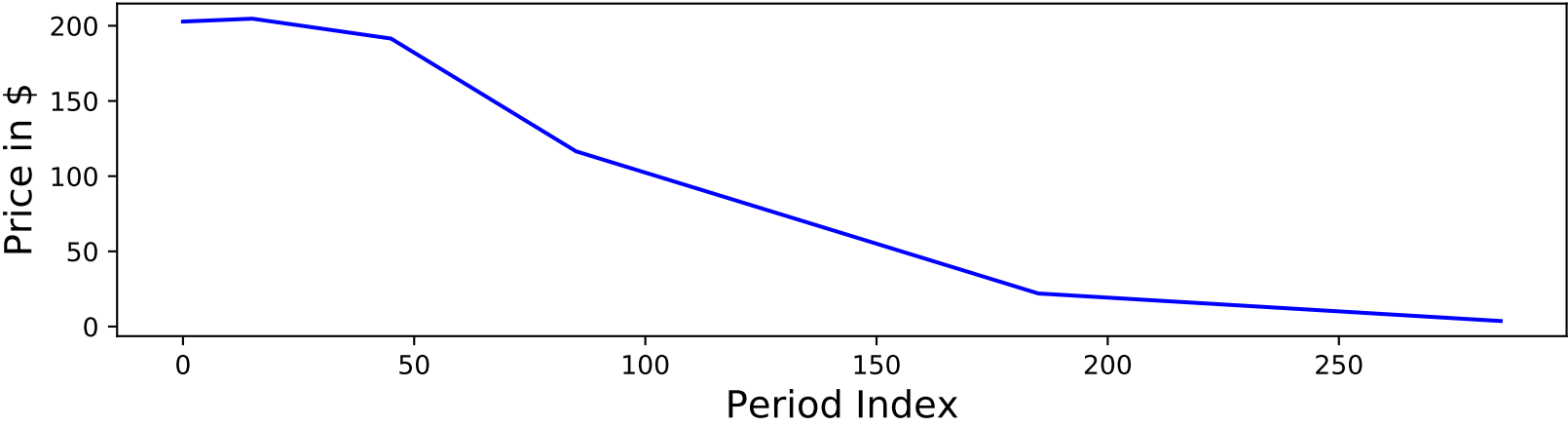
Table 1: Quasi-Newton Sensitivity Analysis

Final Utility	Final Norm of Gradient	Number of Iterations
-9.4942	8.6500×10^{-4}	214.6897
Number of Utility Iterations	Number of Gradient Evaluations	
549.4333	549.4333	
Standard Deviation of Final Utility	Number of Tests	Total Time Average
0.0011	29	1472.2

Sample No. 29	Mitigation	Price
0	0.83386205	202.722485
1	0.98677105	242.599122
2	0.84479126	166.759809
3	1.294526	296.794109
4	1.02337421	168.323649
5	1.03977842	174.908179
6	0.90926585	126.547354
7	1.10715414	111.187333
8	1.07129075	102.694607
9	1.17879429	129.348424
10	1.1349863	118.052057
11	1.20495671	136.384586
12	1.16330211	125.284466
13	1.21134083	138.134739
14	0.91664221	70.4968057
15	1.02588971	20.407517
16	0.98955226	18.7067315
17	1.02911934	20.562886
18	0.98968751	18.7129012
19	1.03469878	20.8329261
20	0.99731932	19.0629996
21	1.05050804	21.6093125
22	1.01424299	19.8529442
23	1.03965572	21.0745697
24	1.00313902	19.3325272
25	1.05301959	21.7341869
26	1.01704251	19.9854302
27	1.05809806	21.9879775
28	1.02357815	20.2967372
29	1.31483121	37.139629
30	1.21111505	30.4600503
31	0.94234706	3.66773661
32	0.92501905	3.50710585
33	0.96178297	3.85294042
34	0.93660732	3.61406244
35	0.96003359	3.83605159
36	0.93480702	3.59732268
37	0.97873362	4.01884025
38	0.9558521	3.7958588
39	0.95591161	3.79642909
40	0.93111874	3.56316978
41	0.97078741	3.94055891
42	0.95377506	3.77598619
43	0.96470561	3.88125296
44	0.94520225	3.69460914
45	0.98383658	4.06958766
46	0.88429683	3.14607032
47	0.95516624	3.78928985
48	0.93017515	3.55446292
49	0.96933203	3.92631904
50	0.95072778	3.7469411
51	0.96240369	3.85894342
52	0.94474675	3.69031439
53	0.98149193	4.0462245
54	0.88557163	3.15702529
55	0.96229539	3.8578956
56	0.94120836	3.65705147
57	0.97758812	4.00749981
58	0.83417022	2.73284399
59	1.00049399	4.2378428
60	0.97679377	3.99964682
61	1.08893287	5.19889402
62	0.14122728	0.03761671

Sensitivity Analysis Base Case

	In 0 Years	In 15 Years	In 45 Years	In 85 Years	In 185 Years	In 285 Years
Expected Price	201.06640218	202.539012054	187.112074321	118.084748049	21.880723169	3.69318614146

	Iteration Number	Utility at Start Point	Norm of Gradient
Test 1	213.0	9.49269658533	0.0007634950268
Test 2	174.0	9.49461016831	0.000874383316829
Test 3	199.0	9.49340451124	0.00071055865618
Test 4	230.0	9.49535567336	0.000910136908193
Test 5	231.0	9.49488360286	0.000858997716733
Test 6	202.0	9.49302622425	0.000802076739772
Test 7	231.0	9.49514268786	0.000947424812049
Test 8	165.0	9.49318217437	0.000993996238838
Test 9	199.0	9.49563492163	0.000704831398821
Test 10	231.0	9.49514420684	0.000970804158501
Test 11	227.0	9.4952641927	0.000985176611482
Test 12	224.0	9.49250033592	0.000779075627789
Test 13	225.0	9.49218026919	0.000817705435568
Test 14	242.0	9.49332388844	0.000871082346933
Test 15	162.0	9.49350528986	0.000805748687418
Test 16	202.0	9.49333713762	0.000700724968602
Test 17	187.0	9.49403461329	0.000758329361405
Test 18	202.0	9.49402000678	0.000908135766683
Test 19	207.0	9.49426270781	0.000794495822206
Test 20	217.0	9.49490041176	0.000863356636833
Test 21	200.0	9.49495663613	0.000970493335606
Test 22	245.0	9.49316128325	0.000899781771906
Test 23	202.0	9.49479246214	0.000810800493629
Test 24	243.0	9.49563985013	0.000933327804445
Test 25	247.0	9.49538874247	0.000942364929384
Test 26	254.0	9.49254162286	0.000946078218015
Test 27	223.0	9.49460838567	0.00087729434841
Test 28	227.0	9.49438373486	0.000914537915264
Test 29	215.0	9.49507857007	0.000969865327315
Average	214.689655172	9.49417106541	0.00086500277178