**This sheet is just to illustrate how one can implement seasonality in Monte Carlo Simulation**
In practice one would naturally need a lot of simulations preferably in compiled programming language like C++
Implementation By Espen Gaarder Haug, Copyright 2006

			St	Seasonality	St + Seasonality
S	100	0	100.00	-3.27	103.27
X	100	1	98.30	-2.84	101.15
		2	98.51	-2.41	100.92
dt	0.0027397:	3	98.11	-1.97	100.08
v	15.0%	4	98.95	-1.54	100.48
Kappa	0.1	5	98.22	-1.11	99.32
Theta	100	6	98.28	-0.68	98.96
Beta	1	7	99.02	-0.25	99.27
		8	98.62	0.18	98.44
BetaA	2	9	98.09	0.60	97.49
BetaSA	3.5	10	97.72	1.02	96.70
tA	0.2	11	98.38	1.44	96.94
tSA	0.5	12	98.26	1.85	96.41
		13	99.82	2.26	97.56
		14	99.07	2.66	96.41
		15	97.59	3.06	94.53
		16	97.52	3.45	94.07
		17	99.32	3.83	95.49
		18	99.23	4.20	95.03
		19	100.69	4.57	96.11
		20	100.22	4.93	95.29
		21	100.25	5.29	94.96
		22	100.97	5.63	95.34
		23	101.84	5.96	95.87
		24	102.23	6.29	95.94
		25	102.25	6.61	95.64
		26	101.86	6.91	94.95
		27	102.33	7.21	95.13
		28	103.37	7.49	95.87
		29	101.91	7.76	94.15
		30	101.11	8.03	93.09
		31	101.55	8.28	93.27
		32	101.09	8.52	92.57
		33	102.17	8.74	93.43
		34	101.46	8.96	92.51
		35	102.05	9.16	92.89
		36	102.10	9.35	92.76
		37	101.12	9.52	91.60
		38	101.55	9.69	91.86
		39	99.51	9.84	89.67
		40	100.04	9.97	90.07
		41	99.09	10.10	89.00
		42	97.04	10.20	86.84
		43	97.67	10.30	87.36
		44	97.17	10.38	86.79
		45	96.92	10.45	86.47
		46	96.98	10.51	86.47
		47	96.85	10.55	86.30

Seasonality

Asset Price With and Without Seasonality
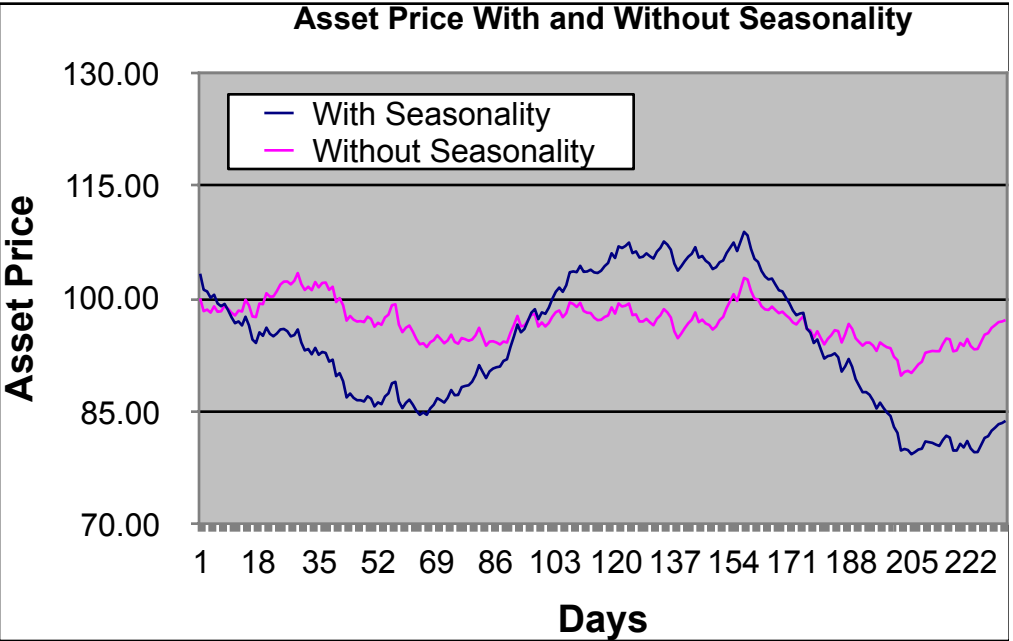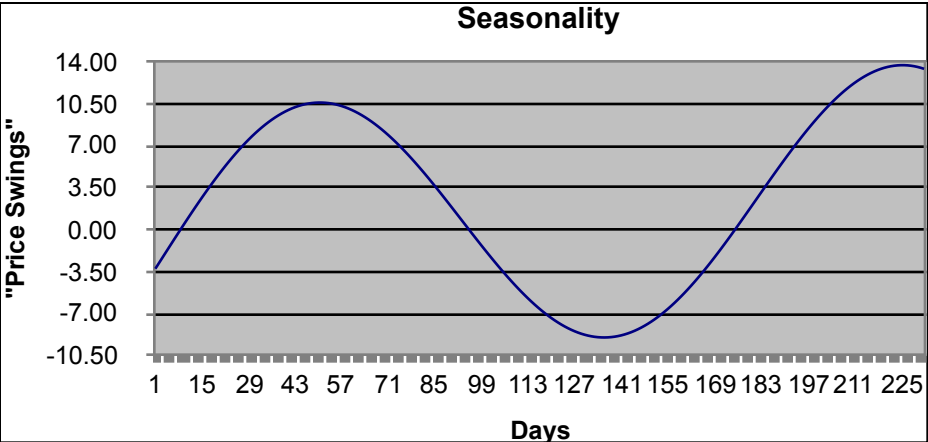
48	97.57	10.57	87.00
49	97.28	10.59	86.69
50	96.23	10.59	85.65
51	96.76	10.57	86.19
52	96.49	10.54	85.95
53	97.47	10.50	86.96
54	97.83	10.45	87.38
55	99.10	10.38	88.72
56	99.21	10.30	88.92
57	96.52	10.20	86.31
58	95.51	10.09	85.42
59	96.09	9.97	86.12
60	96.39	9.84	86.55
61	95.58	9.69	85.88
62	94.61	9.54	85.07
63	93.90	9.37	84.53
64	94.04	9.19	84.85
65	93.53	8.99	84.54
66	94.18	8.79	85.39
67	94.45	8.58	85.88
68	95.10	8.35	86.75
69	94.59	8.12	86.48
70	94.03	7.87	86.16
71	94.42	7.62	86.80
72	95.18	7.35	87.83
73	94.22	7.08	87.14
74	93.98	6.80	87.18
75	94.73	6.51	88.22
76	94.58	6.22	88.37
77	94.37	5.91	88.46
78	94.54	5.60	88.93
79	95.10	5.29	89.82
80	96.10	4.97	91.13
81	94.89	4.64	90.25
82	93.71	4.30	89.41
83	94.27	3.97	90.30
84	94.30	3.62	90.68
85	94.14	3.28	90.86
86	93.87	2.93	90.94
87	94.27	2.58	91.70
88	94.13	2.22	91.91
89	95.42	1.87	93.55
90	96.47	1.51	94.96
91	97.67	1.15	96.52
92	96.29	0.79	95.49
93	96.37	0.44	95.93
94	97.10	0.08	97.02
95	97.82	-0.28	98.10
96	97.93	-0.63	98.57
97	96.25	-0.99	97.24
98	96.80	-1.34	98.14
99	96.27	-1.69	97.95
100	96.74	-2.03	98.77

101	97.56	-2.37	99.93
102	98.17	-2.71	100.88
103	98.40	-3.04	101.44
104	97.50	-3.37	100.87
105	98.05	-3.69	101.74
106	99.46	-4.01	103.47
107	99.26	-4.32	103.58
108	98.87	-4.62	103.49
109	99.41	-4.91	104.33
110	98.32	-5.20	103.53
111	98.09	-5.48	103.57
112	98.06	-5.75	103.81
113	97.44	-6.02	103.45
114	97.10	-6.27	103.37
115	97.16	-6.51	103.67
116	97.53	-6.75	104.28
117	97.73	-6.97	104.70
118	98.81	-7.19	105.99
119	97.98	-7.39	105.37
120	99.33	-7.58	106.91
121	98.92	-7.76	106.68
122	99.04	-7.93	106.97
123	99.32	-8.09	107.42
124	97.77	-8.24	106.01
125	97.87	-8.37	106.24
126	96.93	-8.49	105.42
127	96.93	-8.60	105.53
128	97.28	-8.70	105.98
129	96.81	-8.78	105.59
130	96.43	-8.85	105.28
131	97.29	-8.91	106.20
132	97.75	-8.95	106.71
133	98.58	-8.99	107.56
134	98.14	-9.00	107.14
135	97.45	-9.01	106.46
136	95.62	-9.00	104.62
137	94.70	-8.98	103.68
138	95.33	-8.94	104.27
139	96.06	-8.90	104.96
140	96.70	-8.83	105.53
141	97.17	-8.76	105.92
142	98.13	-8.67	106.80
143	96.84	-8.57	105.41
144	97.18	-8.45	105.63
145	96.67	-8.33	104.99
146	96.46	-8.19	104.65
147	95.86	-8.03	103.89
148	96.27	-7.87	104.14
149	97.11	-7.69	104.80
150	97.53	-7.50	105.03
151	98.73	-7.30	106.03
152	99.64	-7.09	106.72
153	100.56	-6.86	107.42

154	99.66	-6.63	106.28
155	101.18	-6.38	107.56
156	102.72	-6.12	108.84
157	102.51	-5.86	108.37
158	100.99	-5.58	106.56
159	99.95	-5.29	105.24
160	99.85	-4.99	104.85
161	98.96	-4.69	103.65
162	98.54	-4.38	102.92
163	98.46	-4.05	102.51
164	98.91	-3.72	102.63
165	98.45	-3.39	101.83
166	98.03	-3.04	101.07
167	98.24	-2.69	100.93
168	97.77	-2.33	100.11
169	97.39	-1.97	99.36
170	96.80	-1.60	98.40
171	96.54	-1.23	97.76
172	97.13	-0.85	97.98
173	97.61	-0.47	98.08
174	95.91	-0.08	95.99
175	95.77	0.31	95.47
176	94.77	0.70	94.07
177	95.64	1.09	94.54
178	94.73	1.49	93.25
179	93.88	1.88	92.00
180	94.61	2.28	92.33
181	95.11	2.68	92.43
182	95.78	3.08	92.70
183	95.66	3.47	92.18
184	94.14	3.87	90.27
185	95.23	4.26	90.97
186	96.61	4.65	91.96
187	95.96	5.04	90.91
188	94.70	5.43	89.28
189	94.20	5.81	88.39
190	93.72	6.19	87.53
191	94.12	6.56	87.56
192	94.12	6.93	87.19
193	93.73	7.29	86.44
194	93.02	7.65	85.37
195	94.15	8.00	86.15
196	93.79	8.34	85.45
197	93.50	8.68	84.83
198	93.39	9.01	84.38
199	92.25	9.33	82.92
200	91.78	9.64	82.14
201	89.73	9.94	79.79
202	90.24	10.24	80.00
203	90.38	10.52	79.86
204	90.10	10.79	79.30
205	90.64	11.06	79.59
206	91.24	11.31	79.92

207	91.58	11.55	80.03
208	92.78	11.78	81.00
209	92.91	12.00	80.91
210	93.02	12.21	80.81
211	92.99	12.40	80.58
212	92.98	12.58	80.40
213	93.93	12.75	81.18
214	94.67	12.91	81.76
215	94.57	13.05	81.52
216	92.97	13.18	79.79
217	93.09	13.30	79.79
218	94.08	13.40	80.69
219	93.68	13.48	80.20
220	94.62	13.56	81.06
221	93.68	13.62	80.06
222	93.23	13.66	79.57
223	93.28	13.69	79.59
224	94.24	13.71	80.53
225	95.18	13.71	81.47
226	95.38	13.69	81.69
227	96.09	13.66	82.42
228	96.45	13.62	82.83
229	96.85	13.56	83.29
230	96.93	13.49	83.45
231	97.12	13.40	83.72