

End of Year t	Random number [0,1]	Up (1) or Down (0) movement in tree	Cum. # of ups	1-year forward rate $f(t,t+1)$	$1+f(t,t+1)$	Annualized spot EAR for compounding $z(t,T)$	Annualized spot EAR for discounting $z(0,t+1)$
0	0.3659027	-	-	0.30%	100.30%	6.40%	0.30%
1	0.7439641	0	0	1.26%	101.26%	6.62%	0.78%
2	0.4752891	1	1	2.33%	102.33%	6.81%	1.29%
3	0.4467173	1	2	3.73%	103.73%	6.98%	1.90%
4	0.2092022	1	3	5.99%	105.99%	7.11%	2.70%
5	0.1030599	1	4	5.71%	105.71%	7.15%	3.20%
6	0.0540681	1	5	6.08%	106.08%	7.21%	3.61%
7	0.2658744	1	6	9.36%	109.36%	7.26%	4.31%
8	0.1245803	1	7	12.53%	112.53%	7.17%	5.19%
9	0.5541323	0	7	12.45%	112.45%	6.92%	5.90%
10	0.9201906	0	7	6.41%	106.41%	6.65%	5.94%
11	0.9593782	0	7	5.92%	105.92%	6.66%	5.94%
12	0.8301627	0	7	5.49%	105.49%	6.70%	5.91%
13	0.4771391	1	8	6.20%	106.20%	6.78%	5.93%
14	0.8581564	0	8	5.80%	105.80%	6.81%	5.92%
15	0.9508362	0	8	5.46%	105.46%	6.88%	5.89%
16	0.7740245	0	8	5.17%	105.17%	6.98%	5.85%
17	0.705638	0	8	4.93%	104.93%	7.12%	5.80%
18	0.9846344	0	8	4.74%	104.74%	7.31%	5.74%
19	0.3486805	1	9	5.34%	105.34%	7.54%	5.72%
20	0.0059813	1	10	6.00%	106.00%	7.77%	5.73%
21	0.7910271	0	10	5.81%	105.81%	7.97%	5.74%
22	0.3200967	1	11	6.49%	106.49%	8.24%	5.77%
23	0.2353954	1	12	7.22%	107.22%	8.49%	5.83%
24	0.7852917	0	12	7.06%	107.06%	8.70%	5.88%
25	0.0051564	1	13	7.83%	107.83%	9.04%	5.95%
26	0.1114587	1	14	8.66%	108.66%	9.34%	6.05%
27	0.1560598	1	15	9.54%	109.54%	9.57%	6.17%
28	0.5393344	0	15	9.44%	109.44%	9.58%	6.29%
29	0.5104846	0	15	9.72%	109.72%	9.72%	6.40%

FV_T of \$1 received

at t

FV_T of \$1

$= (1+z(t,T))^{T-t}$

annuity due (t,T) R_{f,t,n}

642.74%	100.4	6.96%
640.82%	94.0	7.03%
632.83%	87.5	7.08%
618.44%	81.2	7.11%
596.19%	75.0	7.13%
562.49%	69.1	7.13%
532.09%	63.4	7.13%
501.59%	58.1	7.12%
458.67%	53.1	7.10%
407.59%	48.5	7.09%
362.45%	44.4	7.11%
340.60%	40.8	7.18%
321.57%	37.4	7.27%
304.83%	34.2	7.36%
287.03%	31.2	7.46%
271.31%	28.3	7.58%
257.27%	25.6	7.72%
244.62%	23.0	7.87%
233.12%	20.5	8.04%
222.57%	18.2	8.21%
211.28%	16.0	8.39%
199.33%	13.9	8.56%
188.39%	11.9	8.75%
176.91%	10.0	8.93%
164.99%	8.2	9.12%
154.11%	6.6	9.32%
142.92%	5.0	9.48%
131.53%	3.6	9.59%
120.08%	2.3	9.62%
109.72%	1.1	9.72%