

Simple BDT

y	p	sigma		
1	95	15.00%		
2	90			
3	85			
4	80			
Interest Tree				
t0-1	t1-2	t2-3	t3-4	
0.05263158	0.06390158	0.07792818	9.551%	
	0.04733946	0.05773062	0.07075349	
		0.04276789	0.05241547	
			0.03883034	
y=	2			
r1	6.390%	obj	-8.1002E-13	
90	93.9936567	100		
	95.4800275	100		
		100		
y=	3			
r1	7.793%	obj	-2.1549E-07	
84.9999998	88.0309762	92.7705591	100	
	90.9163918	94.5420303	100	
		95.8986182	100	
			100	
y=	4			
r1	9.551%	obj	-1.9385E-07	
79.9999998	82.1155429	85.6615955	91.2819179	100

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	86.3055093	89.0641163	93.3921777	100
		91.718214	95.0195076	100
			96.2621098	100
				100

BDT

y	p	vol				
1	95	0.15				
2	90	0.13				
3	85	0.1				
4	80					
Interest Tree						
t0-1	t1-2	t2-3	t3-4			
0.05263158	0.06390158	7.274%	7.146%			
	0.04733946	0.05823154	0.06527545			
		0.04661718	0.05962708			
			0.05446747			
y=	2					
r1	6.390%	--guess	ru	0.06390158	vol	0.15
sigma 1	15%		rd	0.04733946	obj	9.723204E-28
90	93.9936567	100				
	95.4800275	100				
		100				
y=	3					
r2	7.274%	--guess	ru	0.06466859	vol	0.1299997561
sigma2	11%		rd	0.04986285	obj	3.073467E-09
85.0000498	88.2208249	93.2192723	100			
	90.7266483	94.4972779	100			
		95.545919	100			
			100			
y=	4					
r3	7.146%	--guess	ru	0.06490323	vol	0.099999757
sigma3	5%		rd	0.05313852	obj	6.590708E-08
80.0000828	82.8074809	87.2546969	93.3306935	100		

BDT

	85.6137461	88.9433227	93.8724348	100		
		90.3899857	94.3728241	100		
			94.8345991	100		
				100		

state price

t	1	2	3
	0.04	0.05	0.06
		0.02	0.03
			0.01
1 yr bond	96.1538462		
2 yr bond			
	92.9217841	95.2380952	100
		98.0392157	100
3 yr bond	90.0393425	91.1557149	94.3396226
		96.1261175	97.0873786
			99.009901
sdf method			
	0	1	2
			3
	1	0.48076923	0.22893773
		0.48076923	0.46460892
			0.23567119
			0.34220722
			0.11666891
Z(0,t)=	96.1538462	92.9217841	90.0393425

In this example the numbers need to be calculated are the same, but if add t=4, the top method need additional 10 entries to calculate, but the bottom panel need 4 more entries. Save significant time when t is large.