	r(0,0)	0.05	short rate lat	tice								
	u	1.1	SHOTE TULE TULE	cicc								0.12968712
	d	0.9									0.11789738	0.10610765
	p	0.5								0.10717944	0.0964615	0.08681535
	q	0.5							0.09743586	0.08769227	0.07892304	0.07103074
								0.08857805	0.07972025	0.07174822	0.0645734	0.05811606
							0.0805255	0.07247295	0.06522566	0.05870309	0.05283278	0.0475495
						0.073205	0.0658845	0.05929605	0.05336645	0.0480298	0.04322682	0.03890414
					0.06655	0.059895	0.0539055	0.04851495	0.04366346	0.03929711	0.0353674	0.03183066
				0.0605	0.05445	0.049005	0.0441045	0.03969405	0.03572465	0.03215218	0.02893696	0.02604327
			0.055	0.0495	0.04455	0.040095	0.0360855	0.03247695	0.02922926	0.02630633	0.0236757	0.02130813
		0.05	0.045	0.0405	0.03645	0.032805			0.02391485			0.01743392
		0	1	2	3	4	5	6	7	8	9	10
			zcb lattice based on short rate interest lattice								100	
										04 5020200	89.4536488	100
									75 6022220	81.5839398		100
								74 2505202		84.5310271		100
							67.0005644		79.4622898			100
						CE EEE000			82.7447347		94.981845	100
					C2 0204445							100
				ca cac toas					87.9729243			100
					69.0985381							100
		64 6340504			73.7802273		83.7775923		91.7228776		97.6871878	100
			67.4410296									100
		0	1	2	3	4	5	6	7	8	9	10
	option strike	80										
	option strike	80										
	price of american cal	loption	2.35721516									
	p							0				
							0	0				
						0	0	0				
					0.28906847	0.61661196	1.30708787	2.75509419				
				0.83945526	1.49141612	2.5286355		5.59359608				
			1.55665175	2.44507995	3.64080669	5.07737375	6.5638874	8.00790104				
		2.35721516	3.39350009	4.64733524	6.03029794	7.42283086	8.76878625	10.0474595				
		0	1	2	3	4	5	6	7	8	9	10
						1						
					0.93760255	1						
				0.88918635	0.94836171	1						
			0.85170639	0.90791413	0.95735006	1						
			0.87636171		0.96483188	1						
		0	1	2	3	4	5	6	7	8	9	10
				74.0040440								
		forward contract i		74.8848449								100
	price of	futures contract is	i	74.8245806		0	0	0	0		00.4536400	
						0	0	0	0	01 5020200	89.4536488 91.202473	100
						0	0	0	75 6022220	81.5839398 84.5310271		100 100
						0	U	71 2606202	79.4622898			
						0	67 0695611		79.4622898 82.7447347		93.9343404	100 100
						65 555002		79.4450793		91.046207		100
		0	0		68 0865275				87.9729243			100
		0	U	70 4737455	72.8609535							100
		· ·	72.7188952		77.0671365				91.7228776	94.939915		100
		74.8245806			80.7258376							100
		74.8243808		76.690467	3	4	5	90.0474595	75.1575526	95.6506461	90.0997002	100
		U	1	2	3	4	,	0	,		,	10

incu rucc	0.015				Siloi tilatti lat	tice iniodinica	ioi siraps			
strike	0									0.08468712
notional	1000000								0.07289738	0.06110765
								0.06217944	0.0514615	0.04181535
							0.05243586	0.04269227	0.03392304	0.02603074
						0.04357805	0.03472025	0.02674822	0.0195734	0.01311606
					0.0355255	0.02747295	0.02022566	0.01370309	0.00783278	0.0025495
				0.028205	0.0208845	0.01429605	0.00836645	0.0030298	-0.0017732	-0.0060959
			0.02155	0.014895	0.0089055	0.00351495	-0.0013365	-0.0057029	-0.0096326	-0.0131693
		0.0155	0.00945	0.004005	-0.0008955	-0.0053059	-0.0092754	-0.0128478	-0.016063	-0.0189567
	0.01	0.0045	-0.00045	-0.004905	-0.0089145	-0.0125231	-0.0157707	-0.0186937	-0.0213243	-0.0236919
0.005	0	-0.0045	-0.00855	-0.012195	-0.0154755	-0.018428	-0.0210852	-0.0234766	-0.025629	-0.0275661
0	1	2	3	4	5	6	7	8	9	10
					pricing swaps	5				
										0.07496511
									0.12344851	0.05524566
								0.15240501	0.08967199	0.03847512
							0.16655898	0.10829888	0.06053517	0.02430438
						0.16919076	0.11463961	0.06981804	0.03562312	0.01239567
					0.16262731	0.11120415	0.06894138	0.03660689	0.01448236	0.00243378
				0.14855504	0.09982271	0.0598258	0.029213	0.0082042	-0.0033455	-0.0058676
			0.12822312	0.0818577	0.04390843	0.01491387	-0.0049681	-0.0159011	-0.0183007	-0.0127631
		0.1025781	0.05834504	0.02228614	-0.0051619	-0.0239019	-0.0341214	-0.036229	-0.0307914	-0.0184756
	0.07235442	0.03008972	-0.0041867	-0.0301326	-0.0477097	-0.0571316	-0.0588067	-0.0532806	-0.0411858	-0.0231976
0.03813615	-0.0022685	-0.0348309	-0.0592964	-0.0756829	-0.0842317	-0.0853546	-0.0795828	-0.0675211	-0.0498098	-0.0270937
0	1	2	3	4	5	6	7	8	9	10
					pricing swapt	tion				
					0.16262731					
				0.12227394	0.09982271					
			0.08910898	0.06780442	0.04390843					
		0.0618503	0.0420755	0.02092861	0					
	0.04107514	0.02481825	0.010018	0	0					
0.02631108	0.01417813	0.00481403	0	0	0					
0	1	2	3	4	5					
swaption price		26311.0795								

short rate lattice modified for swaps

fixed rate

0.045