

Date	K	L	M	Index	K	L	M	Index
2/22/2016	176.4	82.39	15.86121	112.48	-0.03131	-0.00133	-0.45711	0.01785
2/19/2016	182.01	82.5	25.05275	110.49	-0.02281	0.000606	0.976115	-0.00766
2/18/2016	186.21	82.45	9.439176	111.34	0.019522	0.005473	-1.12085	0.021424
2/17/2016	182.61	82	28.95428	108.98	0.039771	0.009558	0.430191	0.027442
2/16/2016	175.49	81.22	18.83143	106.03	-0.0128	0.002342	1.823425	-0.01219
2/12/2016	177.75	81.03	3.040745	107.33	-0.01286	0.017805	-1.05806	0.000932
2/11/2016	180.05	79.6	8.759708	107.23	-0.01598	0.003146	-1.23644	-0.01279
2/10/2016	182.95	79.35	30.16247	108.61	0.002627	-0.00916	2.286754	0.005355
2/9/2016	182.47	80.08	3.064378	108.03	0.004669	-0.0134	-1.40065	0.011264
2/8/2016	181.62	81.16	12.43475	106.82	-0.01046	0.013396	-0.82864	-0.01781
2/5/2016	183.53	80.08	28.47809	108.74	0.008317	0.003127	0.391723	0.013145
2/4/2016	182.01	79.83	19.2481	107.32	0.009828	0.017056	-0.47992	0.019382
2/3/2016	180.23	78.48	31.10395	105.26	0.017293	0.050837	0.051236	-0.00085
2/2/2016	177.14	74.59	29.55045	105.35	0.017368	-0.02254	0.1586	0.025379
2/1/2016	174.09	76.29	25.21651	102.71	0.024716	-0.02024	-0.14571	0.019764
1/29/2016	169.84	77.85	29.17203	100.7	0.031217	0.011108	0.859134	0.043121
1/28/2016	164.62	76.99	12.35519	96.45	0.004139	0.022328	1.421392	-0.00527
1/27/2016	163.94	75.29	2.982268	96.96	-0.01086	-0.01855	-2.35965	-0.01606
1/26/2016	165.73	76.7	31.57403	98.53	0.000121	0.036107	0.959343	-0.01441
1/25/2016	165.71	73.98	12.09742	99.96	0.041398	-0.03441	-0.62132	0.026047
1/22/2016	158.99	76.57	22.51798	97.39	-0.01498	0.03279	0.414464	-0.02164
1/21/2016	161.39	74.1	14.8775	99.52	0.036471	0.012493	-0.18702	0.024308
1/20/2016	155.61	73.18	17.93703	97.13	-0.00775	-0.04306	-0.55314	0.004851
1/19/2016	156.82	76.4	31.18719	96.66	0.019771	-0.01533	1.196224	-0.00134
1/15/2016	153.75	77.58	9.428935	96.79	0.013753	-0.01966	-0.34188	0.005075
1/14/2016	151.65	79.12	13.27212	96.3	-0.03378	0.044848	-0.50556	-0.0518
1/13/2016	156.86	75.65	22.00399	101.42	0.037279	0.005966	-0.17585	0.019716
1/12/2016	151.12	75.2	26.23458	99.44	-0.0218	0.020284	2.101191	-0.00552
1/11/2016	154.45	73.69	3.208768	99.99	0.004738	-0.01348	0.009006	0.067965
1/8/2016	153.72	74.69	3.180001	93.42	-0.0215	-0.02041	-1.39974	-0.00715
1/7/2016	157.06	76.23	12.89221	94.09	-0.02825	-0.01614	-0.61915	-0.03396
1/6/2016	161.56	77.47	23.94523	97.34	0.011893	-0.00836	0.118363	0.009393
1/5/2016	159.65	78.12	21.27231	96.43	0.051079	0.008484	0.159414	0.020429
1/4/2016	151.7	77.46	18.1377	94.48	-0.00644	-0.00631	-0.3531	-0.0196
12/31/2015	152.68	77.95	25.8186	96.35	-0.02465	-0.00205	0.315985	-0.00259
12/30/2015	156.49	78.11	18.82358	96.6	0.000128	-0.01335	0.200395	0.027071
12/29/2015	156.47	79.16	15.40536	94.02	0.047242	0.00532	0.715258	-0.01047
12/28/2015	149.25	78.74	7.53424	95.01	0.006723	-0.00747	-0.42057	0.000211
12/24/2015	148.25	79.33	11.47335	94.99	0.006904	-0.01078	0.393358	0.007609
12/23/2015	147.23	80.19	7.742066	94.27	0.045437	0.032187	-0.65283	0.006065
12/22/2015	140.69	77.65	14.87221	93.7	-0.03794	0.005035	-0.54728	-0.00309
12/21/2015	146.13	77.26	25.70735	93.99	-0.01958	-0.00026	0.353399	-0.0278
12/18/2015	149.02	77.28	18.05419	96.64	-0.0128	-0.00876	-0.74553	-0.0152
12/17/2015	150.94	77.96	38.05016	98.12	0.021496	-0.01515	-0.03747	0.019138
12/16/2015	147.73	79.15	39.50302	96.26	0.005566	-0.00353	0.242882	0.002288
12/15/2015	146.91	79.43	30.98474	96.04	-0.01272	0.043748	2.119011	-0.00871
12/14/2015	148.79	76.03	3.72283	96.88				
				E(ri)	0.0037	0.001746	0.031509	0.003246

rf=2,5% p.a.

250day/year
0.0001

K	46	0.149302	VRS	0.170218
	0.149302	0.020321		0.013347
	InvM			
	0.02227	-0.16362	alfa	0.001607
	-0.16362	50.41204	beta	0.645013
L			VRS	0.080336
				-0.00541
			alfa	0.002674
			beta	-0.28589
M			VRS	1.449392
				0.025544
			alfa	0.028099
			beta	1.050567

CovarM

0.000536299	-2.3E-05	0.001282
-2.30182E-05	0.000411	0.005627
0.001282236	0.005627	0.927891

VRS

0.001072598	-4.6E-05	0.002564	1	0
-4.60364E-05	0.000822	0.011255	1	0
0.002564472	0.011255	1.855781	1	0
1	1	1	0	1

Inversion

512.0529641	-514.237	2.183957	0.421499	0.421499
-514.2369216	516.9754	-2.7385	0.582392	0.582392
2.183957441	-2.7385	0.554543	-0.00389	-0.00389
0.421498598	0.582392	-0.00389	-0.00042	-0.00042

wi

Tang_port

1879.665002	153.6673	-3.52942	0.0036
153.6673103	2667.336	-16.3889	0.001646
-3.529419451	-16.3889	1.181984	0.031409

VRS

Zi	wi
1 6.909689	0.609469
2 4.430112	0.390758
3 -0.00257	-0.00023

sum(Zi) 11.33723 1

E(Rp)=13% p.a.

System of Eq

0.001072598	-4.6E-05	0.002564	1	0.0037	VRS	0
-4.60364E-05	0.000822	0.011255	1	0.001746		0
0.002564472	0.011255	1.855781	1	0.031509		0
1	1	1	0	0		1
0.003700396	0.001746	0.031509	0	0		0.0032
91.58454766	-85.5718	-6.01277	-0.54697	394.6096	wi	1 0.715786
-85.57177988	79.95377	5.618014	1.569735	-402.302		2 0.282368
-6.012767776	5.618014	0.394754	-0.02277	7.692626		3 0.001846
-0.546965089	1.569735	-0.02277	-0.00265	0.908903	lambda1	0.000263
394.6095592	-402.302	7.692626	0.908903	-370.341	lambda2	-0.27619

1.050567	0.0280987
6.99128	0.146943921
0.000513	0.984667406
0.022581	44
0.021893	42.66107563

				0.421499	0.582392	-0.00389
				9.53E-05	-5.7E-06	-2.1E-06
				-5.7E-06	0.000139	-1.3E-05
				-2.1E-06	-1.3E-05	1.4E-05
E(ri)	Rp	Var(P)	Sigma(P)			
0.0037	0.002454	0.000208	0.014410237			
0.001746						
0.031509						

rf	0.00016			0.609469	0.390758	-0.00023
				0.000199	-5.5E-06	-1.8E-07
				-5.5E-06	6.27E-05	-5E-07
				-1.8E-07	-5E-07	4.75E-08
	Rp	Var(P)	Sigma(P)			
	0.002931	0.00025	0.015800977			

0.732644

			0.715785501	0.282368	0.001846
			0.000274772	-4.7E-06	1.69E-06
			-4.6523E-06	3.28E-05	2.93E-06
			1.69447E-06	2.93E-06	3.16E-06

	Rp	Var(P)	Sigma(P)
	0.0032	0.000311	0.017625011