I have fitted both Nelson Siegel model as well as the the Svensson function.

The input given for a random date to R was -

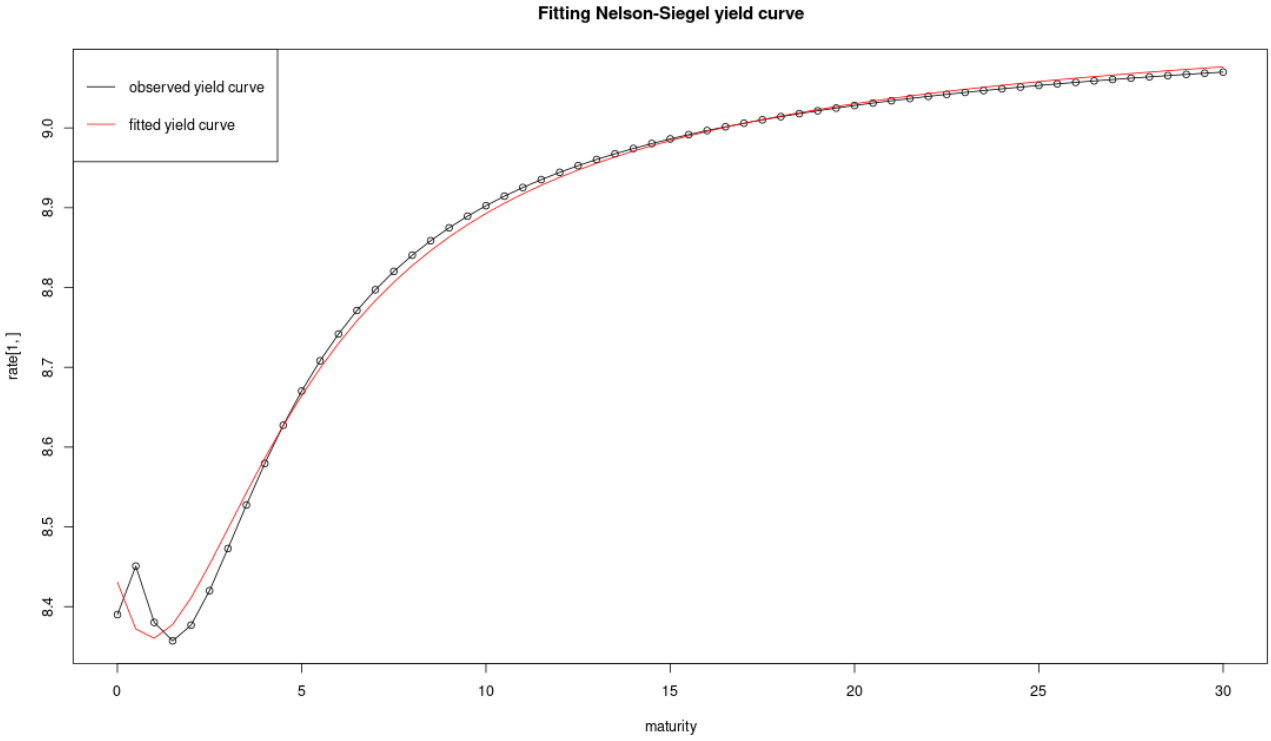
Maturity(Years)	Yield
0.0	8.39000005674711
0.5	8.450811463997
1	8.38019492402002
1.5	8.35712924636928
2	8.37684307237919
2.5	8.419999492788
3	8.47284811350606
3.5	8.52740496460772
4	8.57951998729607
4.5	8.62731859513528
5	8.67019332831743
5.5	8.70819836988704
6	8.74170135897293
6.5	8.77119083366029
7	8.79717481596881
7.5	8.8201313367722
8	8.84048767485978
8.5	8.85861483226249
9	8.87482958940671
9.5	8.88939990253555
10	8.90255138157642
10.5	8.91447370764626
11	8.9253264706706
11.5	8.9352442407204
12	8.94434085637948
12.5	8.95271299248593
13	8.96044309982922
13.5	8.9676018145832
14	8.9742499286035
14.5	8.9804400003339
15	8.98621767362106
15.5	8.99162275999091
16	8.99669012961469
16.5	9.00145044747797
17	9.00593078408855
17.5	9.01015512424056
18	9.01414479268018
18.5	9.01791881178901
19	9.02149420343399
19.5	9.02488624477427
20	9.02810868593969
20.5	9.03117393600315
21	9.03409322247672
21.5	9.03687672860874
22	9.03953371199279
22.5	9.04207260738319

23	9.04450111611271
23.5	9.04682628410309
24	9.04905457012901
24.5	9.05119190572623
25	9.05324374791252
25.5	9.05521512570722
26	9.05711068128384
26.5	9.05893470646423
27	9.06069117515823
27.5	9.06238377226442
28	9.06401591947462
28.5	9.06559079836204
29	9.06711137108118
29.5	9.06858039896252
30	9.0700004592479

Results -

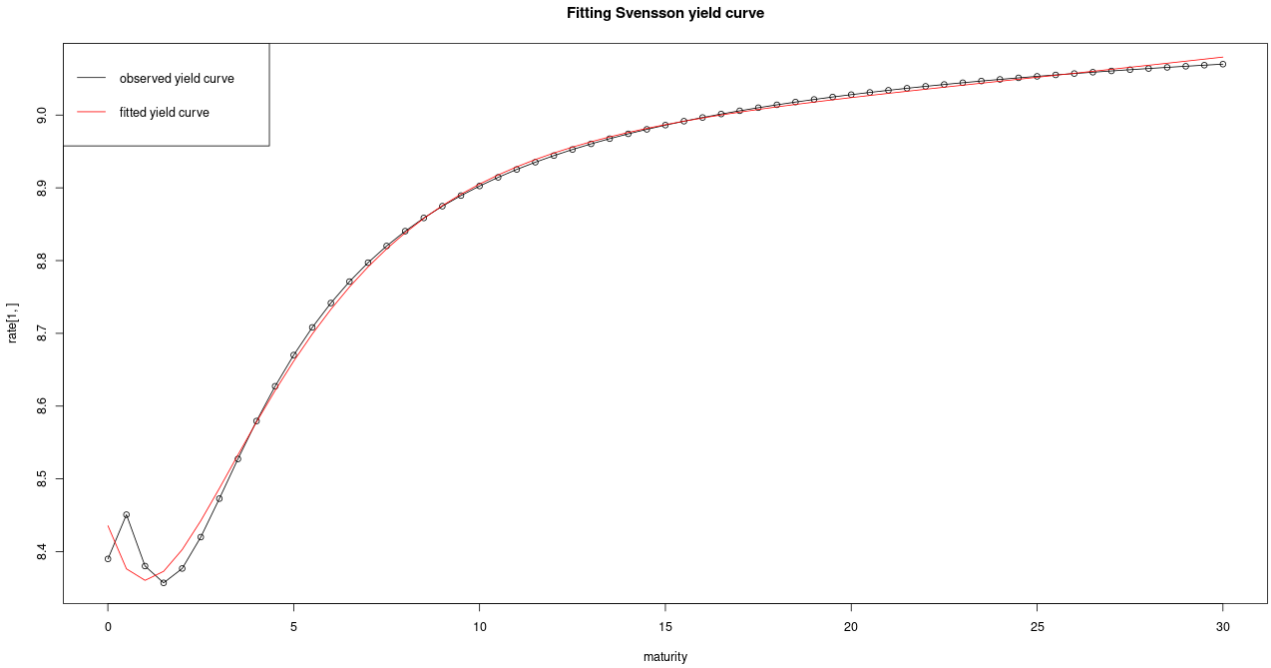
Nelson Siegel Model -

beta_0	beta_1	beta_2	lambda
9.16902	-0.737892	-1.24970	0.716537



Nelson Siegel Svensson Model -

beta_0	beta_1	beta_2	beta_3	tau1	tau2
9.75087	-1.31486	-1.73824	-1.67789	1.67444	16.7291



Note – For comparison purpose, I am attaching the estimated parameters as given by CCIL on this particular data. Please refer the same -

Date	28/03/14	
CCIL_Beta.0		9.15378401609412
CCIL_Beta.1		-0.765886002610963
CCIL_Beta.2		-0.001670369407331
CCIL_Beta.3		-2.3635603575221
CCIL_Tau.1		0.195355485717624
CCIL_Tau.2		1