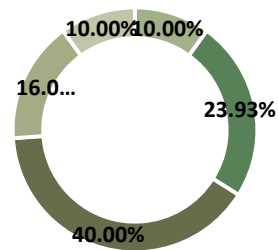


Portfolio Optimization

Security	Reliance Industries	Tata Consultancy Services	HDFC Bank	Infosys	ICICI Bank
Annual Return	19.00%	23.85%	20.63%	15.88%	17.70%
Standard Deviation	54.75%	43.36%	28.72%	29.68%	37.46%
Minimum Weight	10.00%	10.00%	10.00%	10.00%	10.00%
Maximum Weight	40.00%	40.00%	40.00%	40.00%	40.00%
Optimal Weight	10.00%	23.93%	40.00%	16.07%	10.00%

Portfolio Summary	
Expected Return	20.18%
Standard Deviation	0.25
Risk Free Rate	6.68%
Total Weight	100.00%
Sharpe Ratio	0.53



- Reliance Industries

■ HDFC Bank

■ ICICI Bank
- Tata Consultancy Services

■ Infosys

Covariance Matrix					
	Reliance Industries	Tata Consultancy Services	HDFC Bank	Infosys	ICICI Bank
Reliance Industries	0.30	0.13	0.04	0.03	0.07
Tata Consultancy Services	0.13	0.19	0.03	0.05	0.04
HDFC Bank	0.04	0.03	0.08	0.03	0.06
Infosys	0.03	0.05	0.03	0.09	0.04
ICICI Bank	0.07	0.04	0.06	0.04	0.14

Efficient Frontier & Capital Allocation Line

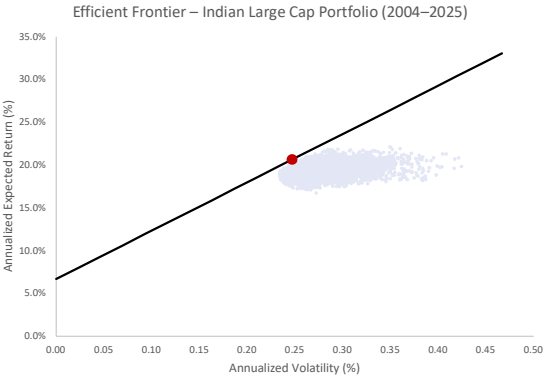
Security	Reliance Industries	Tata Consultancy Services	HDFC Bank	Infosys	ICICI Bank	Total
Annual Return	18.97%	23.83%	20.66%	15.95%	17.68%	
Standard Deviation	54.75%	43.36%	28.72%	29.68%	37.47%	
Weight	0.00%	27.83%	61.71%	10.46%	0.00%	
Random Array	57.52%	18.63%	96.41%	36.45%	63.55%	272.56%

Portfolio Summary	
Expected Return	21.05%
Standard Deviation	25.28%
Risk Free Rate	6.68%
Total Weight	100.00%
Sharpe Ratio	0.57

Optimal Risky Portfolio	
Max Sharpe	56.46%
Simulation Row	4603.00
Std. Deviation	24.73%
Expected Return	20.64%

Covariance Matrix					
	Reliance Industries	Tata Consultancy Services	HDFC Bank	Infosys	ICICI Bank
Reliance Industries	0.30	0.13	0.04	0.03	0.07
Tata Consultancy Services	0.13	0.19	0.03	0.05	0.04
HDFC Bank	0.04	0.03	0.08	0.03	0.06
Infosys	0.03	0.05	0.03	0.09	0.04
ICICI Bank	0.07	0.04	0.06	0.04	0.14

	Portfolio Standard Deviation	Portfolio Return	Sharpe Ratio
Simulation	25.28%	21.05%	0.57
1	0.26	20.53%	0.531800605
2	0.31	20.03%	0.4246699
3	0.27	19.77%	0.487729132
4	0.25	18.89%	0.497933338
5	0.28	18.17%	0.403757379
6	0.27	18.79%	0.453501902
7	0.31	19.57%	0.419244416
8	0.27	19.98%	0.491075884
9	0.29	20.05%	0.464730039
10	0.27	19.33%	0.462291818
11	0.30	19.12%	0.412528456
12	0.26	19.80%	0.51295714
13	0.29	17.98%	0.3945949
14	0.26	20.26%	0.517310608
15	0.29	19.81%	0.45783925
16	0.27	19.33%	0.474953819
17	0.27	20.13%	0.50036755
18	0.28	20.49%	0.494556705
19	0.26	19.72%	0.494286364
20	0.26	17.95%	0.432797942
21	0.28	19.41%	0.461387135
22	0.32	19.46%	0.398997507
23	0.27	20.37%	0.502977388
24	0.28	19.61%	0.46821164
25	0.29	19.43%	0.435139099
26	0.28	19.41%	0.450219419
27	0.33	20.11%	0.41113203
28	0.30	19.39%	0.419826811
29	0.30	19.56%	0.424699035
30	0.27	20.44%	0.518120956
31	0.31	18.81%	0.396419569
32	0.28	18.23%	0.413594053
33	0.26	18.24%	0.437019323
34	0.29	20.37%	0.467501032
35	0.28	18.45%	0.420597851
36	0.26	19.21%	0.475218011
37	0.27	20.58%	0.516132439
38	0.30	19.37%	0.417902827
39	0.29	19.35%	0.441865356
40	0.33	19.11%	0.376986813
41	0.31	19.06%	0.397040516
42	0.30	17.69%	0.370354781
43	0.25	19.59%	0.51884689
44	0.31	20.29%	0.444071902
45	0.25	19.70%	0.528585872
46	0.25	18.74%	0.481619542
47	0.28	20.76%	0.507985556



CAL Volatility (σ)	CAL Return
0.00%	6.68%
2.34%	8.00%
4.67%	9.32%
7.01%	10.64%
9.34%	11.95%
11.68%	13.27%
14.01%	14.59%
16.35%	15.91%
18.68%	17.23%
21.02%	18.55%
23.35%	19.86%
25.69%	21.18%
28.02%	22.50%
30.36%	23.82%
32.69%	25.14%
35.03%	26.46%
37.36%	27.77%
39.70%	29.09%
42.04%	30.41%
44.37%	31.73%
46.71%	33.05%

Efficient Frontier & Capital Allocation Line

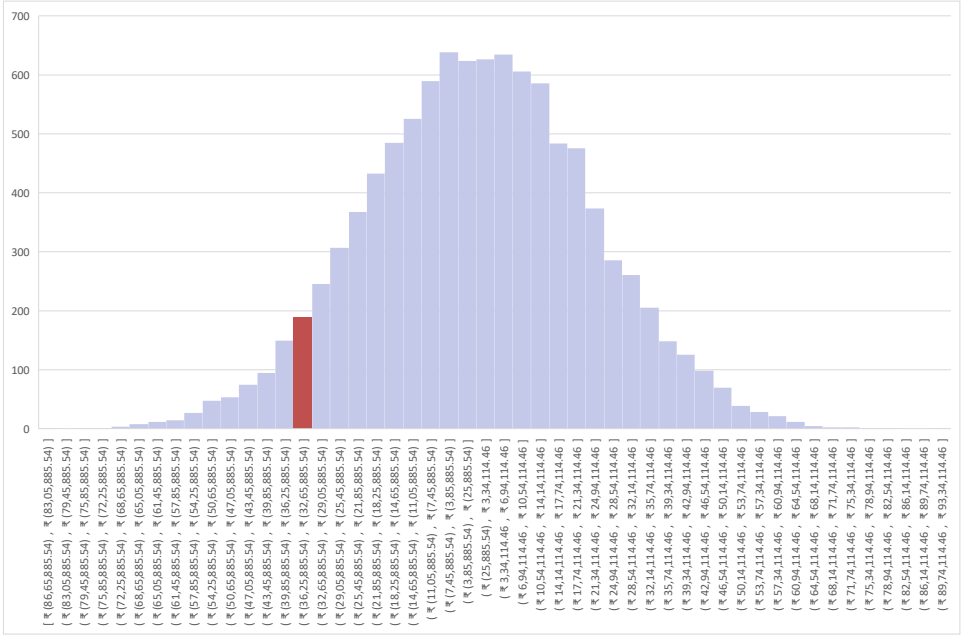
Security	Expected Return	Standard Deviation
Reliance Industries	0.18969359	0.54752539
Tata Consultancy Services	0.238336677	0.433595911
HDFC Bank	0.206575551	0.287234772
Infosys	0.159467317	0.296823941
ICICI Bank	0.17682651	0.374652951

Total Portfolio	
Portfolio Value	₹ 1,00,00,000.00
Weight of Reliance Industries	10.00%
Weight of Tata Consultancy Services	23.93%
Weight of HDFC Bank	40.00%
Weight of Infosys	16.07%
Weight of ICICI Bank	10.00%
Portfolio Expected Return	20.18%
Portfolio Variance	25.41%
Portfolio Standard Deviation	50.40%

Value at Risk (VaR)	
Days	50
Expected Return	4.10%
Z-Score	(0.47)
Scenario VaR	₹ 10,57,678.90
Confidence Interval	0.95
Monte Carlo VaR	(3601876.71)

Covariance Matrix					
	Reliance Industries	Tata Consultancy Services	HDFC Bank	Infosys	ICICI Bank
Reliance Industries	0.30	0.13	0.04	0.03	0.07
Tata Consultancy Services	0.13	0.19	0.03	0.05	0.04
HDFC Bank	0.04	0.03	0.08	0.03	0.06
Infosys	0.03	0.05	0.03	0.09	0.04
ICICI Bank	0.07	0.04	0.06	0.04	0.14

Simulation	₹	10,57,678.90
1	₹ (6,01,287.65)	
2	₹ (28,78,322.14)	
3	₹ (29,98,341.23)	
4	₹ (20,08,384.68)	
5	₹ (28,88,729.07)	
6	₹ (44,72,790.94)	
7	₹ (14,71,059.35)	
8	₹ 3,21,430.85	
9	₹ 12,97,243.23	
10	₹ (26,74,061.10)	
11	₹ 8,74,572.50	
12	₹ (10,48,043.94)	
13	₹ 16,22,588.19	
14	₹ (18,69,039.64)	
15	₹ 29,33,995.61	
16	₹ 45,589.26	
17	₹ 26,579.41	
18	₹ (62,757.80)	
19	₹ 3,75,134.98	
20	₹ 16,79,425.69	
21	₹ 6,93,620.52	
22	₹ (37,61,131.65)	
23	₹ (12,25,521.22)	
24	₹ (4,67,044.56)	
25	₹ 1,08,748.49	
26	₹ 94,631.99	
27	₹ 18,07,208.21	
28	₹ 13,02,639.22	
29	₹ (3,22,230.97)	
30	₹ (26,15,252.59)	
31	₹ (31,16,519.97)	
32	₹ 14,03,179.14	
33	₹ (12,01,412.78)	
34	₹ 33,28,661.76	
35	₹ (23,38,374.25)	
36	₹ (4,15,086.69)	
37	₹ 12,74,370.68	
38	₹ 35,67,335.26	
39	₹ 32,85,437.86	
40	₹ (11,23,608.69)	
41	₹ (2,36,898.21)	



Adj. Close Price						
Date	Reliance Industries	Tata Consultancy Services	HDFC Bank	Infosys	ICICI Bank	
2004-01-01	₹ 33.55	₹ 24.97	₹ 15.44	₹ 54.92	₹ 41.31	
2004-01-02	₹ 34.41	₹ 24.97	₹ 15.28	₹ 55.22	₹ 41.83	
2004-01-05	₹ 34.11	₹ 24.97	₹ 15.38	₹ 57.36	₹ 42.73	
2004-01-06	₹ 33.66	₹ 24.97	₹ 15.22	₹ 55.40	₹ 42.62	
2004-01-07	₹ 34.11	₹ 24.97	₹ 15.19	₹ 55.48	₹ 41.48	
2004-01-08	₹ 34.70	₹ 24.97	₹ 15.23	₹ 56.99	₹ 41.26	
2004-01-09	₹ 34.02	₹ 24.97	₹ 15.51	₹ 56.72	₹ 41.49	
2004-01-12	₹ 33.59	₹ 24.97	₹ 15.36	₹ 55.74	₹ 41.62	
2004-01-13	₹ 34.54	₹ 24.97	₹ 15.36	₹ 56.46	₹ 42.21	
2004-01-14	₹ 35.10	₹ 24.97	₹ 15.48	₹ 55.60	₹ 42.03	
2004-01-15	₹ 33.99	₹ 24.97	₹ 16.21	₹ 54.19	₹ 40.90	
2004-01-16	₹ 34.17	₹ 24.97	₹ 16.07	₹ 53.83	₹ 38.65	
2004-01-19	₹ 34.38	₹ 24.97	₹ 15.57	₹ 53.62	₹ 40.95	
2004-01-20	₹ 33.78	₹ 24.97	₹ 15.57	₹ 52.72	₹ 40.39	
2004-01-21	₹ 32.51	₹ 24.97	₹ 15.54	₹ 52.58	₹ 40.22	
2004-01-22	₹ 31.47	₹ 24.97	₹ 15.44	₹ 50.42	₹ 39.55	
2004-01-23	₹ 32.80	₹ 24.97	₹ 15.36	₹ 53.22	₹ 40.07	
2004-01-26	₹ 32.80	₹ 24.97	₹ 15.36	₹ 53.22	₹ 40.07	
2004-01-27	₹ 34.14	₹ 24.97	₹ 15.39	₹ 54.19	₹ 41.68	
2004-01-28	₹ 33.85	₹ 24.97	₹ 15.16	₹ 52.79	₹ 40.07	
2004-01-29	₹ 33.60	₹ 24.97	₹ 14.99	₹ 51.19	₹ 39.25	
2004-01-30	₹ 32.96	₹ 24.97	₹ 14.52	₹ 50.80	₹ 40.26	
2004-02-02	₹ 32.96	₹ 24.97	₹ 14.52	₹ 50.80	₹ 40.26	
2004-02-03	₹ 32.56	₹ 24.97	₹ 14.18	₹ 50.65	₹ 40.29	
2004-02-04	₹ 33.60	₹ 24.97	₹ 14.73	₹ 52.23	₹ 41.26	
2004-02-05	₹ 33.20	₹ 24.97	₹ 15.02	₹ 53.01	₹ 41.83	
2004-02-06	₹ 33.83	₹ 24.97	₹ 14.94	₹ 54.17	₹ 43.84	
2004-02-09	₹ 34.61	₹ 24.97	₹ 15.34	₹ 55.06	₹ 45.30	
2004-02-10	₹ 34.88	₹ 24.97	₹ 15.70	₹ 53.67	₹ 47.51	
2004-02-11	₹ 34.53	₹ 24.97	₹ 15.77	₹ 53.32	₹ 43.40	
2004-02-12	₹ 34.55	₹ 24.97	₹ 15.77	₹ 52.16	₹ 43.50	
2004-02-13	₹ 35.01	₹ 24.97	₹ 15.78	₹ 52.39	₹ 42.49	
2004-02-16	₹ 34.86	₹ 24.97	₹ 15.92	₹ 52.19	₹ 42.23	
2004-02-17	₹ 35.20	₹ 24.97	₹ 16.03	₹ 52.60	₹ 43.09	
2004-02-18	₹ 35.56	₹ 24.97	₹ 15.97	₹ 52.15	₹ 43.30	
2004-02-19	₹ 34.24	₹ 24.97	₹ 15.78	₹ 49.76	₹ 42.40	
2004-02-20	₹ 34.54	₹ 24.97	₹ 15.36	₹ 49.36	₹ 40.48	
2004-02-23	₹ 33.24	₹ 24.97	₹ 15.46	₹ 49.53	₹ 38.48	
2004-02-24	₹ 33.26	₹ 24.97	₹ 15.64	₹ 49.15	₹ 37.49	
2004-02-25	₹ 32.64	₹ 24.97	₹ 15.38	₹ 48.41	₹ 37.45	
2004-02-26	₹ 31.89	₹ 24.97	₹ 15.54	₹ 47.60	₹ 36.53	
2004-02-27	₹ 32.61	₹ 24.97	₹ 15.77	₹ 49.33	₹ 36.97	
2004-03-01	₹ 33.36	₹ 24.97	₹ 15.94	₹ 51.84	₹ 38.43	
2004-03-02	₹ 33.36	₹ 24.97	₹ 15.94	₹ 51.84	₹ 38.43	
2004-03-03	₹ 34.15	₹ 24.97	₹ 16.50	₹ 50.53	₹ 37.83	
2004-03-04	₹ 33.73	₹ 24.97	₹ 16.13	₹ 51.50	₹ 39.42	
2004-03-05	₹ 34.46	₹ 24.97	₹ 16.10	₹ 51.15	₹ 39.87	
2004-03-08	₹ 35.03	₹ 24.97	₹ 15.99	₹ 49.80	₹ 41.52	
2004-03-09	₹ 34.35	₹ 24.97	₹ 15.79	₹ 48.58	₹ 41.23	
2004-03-10	₹ 33.73	₹ 24.97	₹ 15.93	₹ 47.77	₹ 39.46	

Log Normal Returns					
Reliance Industries	Tata Consultancy Services	HDFC Bank	Infosys	ICICI Bank	
2.52%	0.00%	-1.04%	0.54%	1.25%	
-0.88%	0.00%	0.65%	3.81%	2.15%	
-1.33%	0.00%	-1.02%	-3.49%	-0.26%	
1.34%	0.00%	-0.17%	0.14%	-2.71%	
1.70%	0.00%	0.21%	2.68%	-0.54%	
-1.96%	0.00%	1.86%	-0.47%	0.56%	
-1.29%	0.00%	-0.97%	-1.74%	0.31%	
2.79%	0.00%	0.00%	1.28%	1.42%	
1.62%	0.00%	0.78%	-1.53%	-0.44%	
-3.22%	0.00%	4.60%	-2.56%	-2.73%	
0.52%	0.00%	-0.89%	-0.68%	-5.64%	
0.63%	0.00%	-3.14%	-0.39%	5.76%	
-1.78%	0.00%	0.00%	-1.69%	-1.38%	
-3.81%	0.00%	-0.19%	-0.27%	-0.41%	
-3.25%	0.00%	-0.64%	-4.20%	-1.68%	
4.14%	0.00%	-0.53%	5.40%	1.30%	
0.00%	0.00%	0.00%	0.00%	0.00%	
4.01%	0.00%	0.21%	1.82%	3.94%	
-0.86%	0.00%	-1.49%	-2.62%	-3.96%	
-0.73%	0.00%	-1.17%	-3.08%	-2.06%	
-1.93%	0.00%	-3.15%	-0.77%	2.54%	
0.00%	0.00%	0.00%	0.00%	0.00%	
-1.23%	0.00%	-2.42%	-0.29%	0.08%	
3.15%	0.00%	3.86%	3.07%	2.38%	
-1.20%	0.00%	1.92%	1.47%	1.36%	
1.89%	0.00%	-0.56%	2.17%	4.70%	
2.29%	0.00%	2.64%	1.64%	3.28%	
0.77%	0.00%	2.33%	-2.55%	4.78%	
-1.01%	0.00%	0.45%	-0.67%	-9.06%	
0.07%	0.00%	0.00%	-2.18%	0.24%	
1.30%	0.00%	0.07%	0.43%	-2.36%	
-0.41%	0.00%	0.90%	-0.38%	-0.60%	
0.97%	0.00%	0.66%	0.78%	2.00%	
1.01%	0.00%	-0.36%	-0.87%	0.49%	
-3.79%	0.00%	-1.21%	-4.69%	-2.10%	
0.87%	0.00%	-2.68%	-0.81%	-4.63%	
-3.83%	0.00%	0.63%	0.35%	-5.08%	
0.07%	0.00%	1.18%	-0.77%	-2.59%	
-1.88%	0.00%	-1.72%	-1.53%	-0.13%	
-2.35%	0.00%	1.05%	-1.67%	-2.47%	
2.26%	0.00%	1.51%	3.57%	1.19%	
2.25%	0.00%	1.04%	4.95%	3.89%	
0.00%	0.00%	0.00%	0.00%	0.00%	
2.36%	0.00%	3.49%	-2.56%	-1.59%	
-1.25%	0.00%	-2.27%	1.91%	4.12%	
2.16%	0.00%	-0.20%	-0.69%	1.14%	
1.62%	0.00%	-0.67%	-2.67%	4.06%	
-1.94%	0.00%	-1.28%	-2.49%	-0.69%	
-1.83%	0.00%	0.86%	-1.67%	-4.38%	
-1.38%	0.00%	-0.61%	-0.96%	-3.21%	