INFORMATION FROM ASSIGNMENT-1

COVARIANCE MATRIX

	Reliance	Infosys	HDFC	Tata Steel	Bharti Airtel	Hindustan Uniliver	Larsen & Toubro	Maruti Suzuki India	Nifty
Reliance	0.00555	0.00218	0.00241	0.00290	0.00179	0.00010	0.00216	0.00311	0.00288
Infosys	0.00218	0.00582	0.00139	0.00278	0.00069	0.00118	0.00194	0.00179	0.00230
HDFC	0.00241	0.00139	0.00584	0.00538	0.00200	0.00036	0.00477	0.00351	0.00364
Tata Steel	0.00290	0.00278	0.00538	0.01379	0.00268	0.00076	0.00643	0.00434	0.00488
Bharti Airtel	0.00179	0.00069	0.00200	0.00268	0.00470	0.00017	0.00272	0.00223	0.00211
Hindustan Uniliver	0.00010	0.00118	0.00036	0.00076	0.00017	0.00391	-0.00005	0.00050	0.00071
Larsen & Toubro	0.00216	0.00194	0.00477	0.00643	0.00272	-0.00005	0.00721	0.00491	0.00402
Maruti Suzuki India	0.00311	0.00179	0.00351	0.00434	0.00223	0.00050	0.00491	0.00808	0.00356
Nifty	0.00288	0.00230	0.00364	0.00488	0.00211	0.00071	0.00402	0.00356	0.00330

CALCULATION PORTFOLIO RETURNS AND RISK

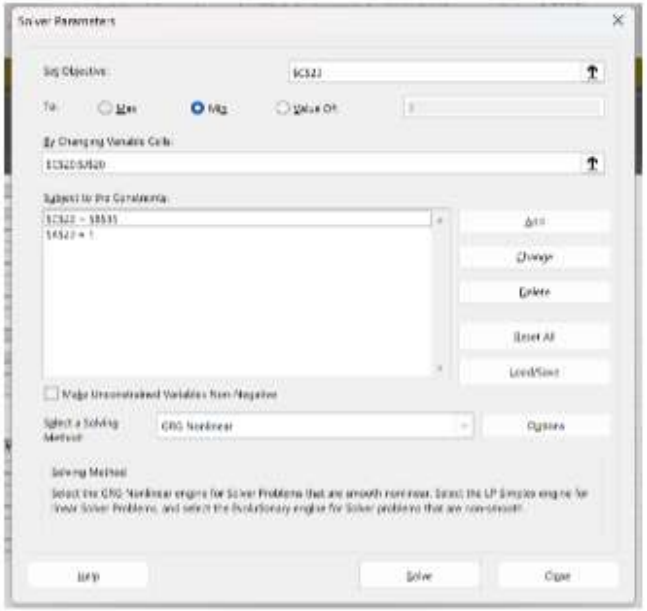
	Reliance	Infosys	HDFC	Tata Steel	Bharti Airtel	Hindustan Uniliver	Larsen & Toubro	Maruti Suzuki India	
Mean Return	-0.0098	-0.0130	-0.0034	-0.0144	-0.0170	-0.0003	-0.0156	-0.0077	
StDev of Return	0.0751	0.0769	0.0771	0.1184	0.0692	0.0631	0.0856	0.0907	
Fractions to Invest	0.12	0.08	0.15	0.10	0.18	0.07	0.14	0.16	1

Portfolio Returns	-0.0107
Portfolio Risk	0.0031

ASSIGNMENT 2 (PART-1) RISK VS RETURN USING SOLVER

Target Returns	Portfolio Risk	Reliance Weight	Infosys Weight	HDFC Weight	Tata Steel Weight	Bharti Airtel Weight	Hindustan Uniliver Weight	Larsen & Toubro Weight	Maruti Suzuki India Weight
0.005	**0.004**	0.112	-0.051	0.687	-0.139	-0.097	0.689	-0.353	0.154
0.010	**0.006**	0.097	-0.120	0.915	-0.165	-0.229	0.806	-0.525	0.222
0.015	**0.008**	0.082	-0.188	1.144	-0.192	-0.362	0.923	-0.698	0.290
0.020	**0.011**	0.067	-0.256	1.373	-0.218	-0.494	1.040	-0.870	0.358
0.025	**0.015**	0.051	-0.324	1.601	-0.244	-0.626	1.156	-1.042	0.427
0.030	**0.020**	0.036	-0.392	1.830	-0.271	-0.758	1.273	-1.214	0.495
0.035	**0.025**	0.036	-0.465	2.054	-0.298	-0.895	1.391	-1.382	0.559
0.040	**0.030**	0.036	-0.539	2.277	-0.324	-1.032	1.509	-1.550	0.623
0.045	**0.037**	-0.009	-0.596	2.516	-0.350	-1.155	1.624	-1.731	0.700
0.050	**0.044**	-0.009	-0.669	2.740	-0.377	-1.292	1.741	-1.899	0.764

This Solver method is used to analyze how portfolio weights and risk adjust in response to changes in target returns. I have selected ten different target return values, and the below optimization corresponds to the final target return.



ASSUMPTION FOR COMPANY VALUATION	
Category	**Assumption**
Base Year Sales (2024) (in millions)	500
Next Year Sales (2025) (in millions)	560
Tax Rate	25%
Cost of Capital	15%
Sales Growth Rate (2024-2029)	12%
Sales Growth Rate (2030-2034)	6%
Working Capital as % of Sales (2024)	30%
Working Capital as % of Sales (2025 and onwards)	25%
COGS as % of Sales (2025 and onwards)	55%
SGA as % of Sales (2025)	15%
SGA as % of Sales (2026)	20%
SGA as % of Sales (2027 and onwards)	18%
Depreciation & Other Deductions (Constant at 2024 levels)	2.5
Other Deductions	0.5
Capital Expenditure	2.5
Post-2034 Assumption	Operating Cash Flows & Investments Constant, No Working Capital
Value of Debt (in millions)	200
Number of Shares (in millions)	50

Year	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	Formulas for Last Cell
Sales	**500.00**	**560.00**	**627.20**	**702.46**	**786.76**	**881.17**	**934.04**	**990.08**	**1049.49**	**1112.46**	**1179.21**	**=L24*(1+$C$9)**
COGS	-	308.00	344.96	386.36	432.72	484.64	513.72	544.55	577.22	611.85	648.56	**=M24*$C$12**
SGA	-	84.00	125.44	126.44	141.62	158.61	168.13	178.22	188.91	200.24	212.26	**=M24*$C$15**
Depreciation	-	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	**=$C$16**
Other Deductions	-	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	**=$C$17**
Taxable Income	-	**165.00**	**153.80**	**186.67**	**209.43**	**234.92**	**249.19**	**264.32**	**280.36**	**297.36**	**315.39**	**=M24-SUM(M25:M28)**
Tax	-	**41.25**	**38.45**	**46.67**	**52.36**	**58.73**	**62.30**	**66.08**	**70.09**	**74.34**	**78.85**	**=M29*$C$6**
Operating Profit After Tax (NOPAT)	-	**123.75**	**115.35**	**140.00**	**157.07**	**176.19**	**186.89**	**198.24**	**210.27**	**223.02**	**236.54**	**=M29-M30**
Operating CF	-	126.25	117.85	142.50	159.57	178.69	189.39	200.74	212.77	225.52	239.04	**=M31+M27**
Working Capital	150.00	140.00	156.80	175.62	196.69	220.29	233.51	247.52	262.37	278.11	294.80	**=M24*$C$11**
Change in Working Capital	-	10.00	-16.80	-18.82	-21.07	-23.60	-13.22	-14.01	-14.85	-15.74	-16.69	**=L33-M33**
Capital Expenditure	-	**2.50**	**2.50**	**2.50**	**2.50**	**2.50**	**2.50**	**2.50**	**2.50**	**2.50**	**2.50**	**=$C$16**
Free Cash Flows (Operating Cash Flows-Capex-Incremental Working Capital)	-	**133.75**	**98.55**	**121.18**	**135.99**	**152.58**	**173.68**	**184.23**	**195.42**	**207.28**	**219.85**	**=M32+M34-M35**
Continuing Value or Terminal Value	-	-	-	-	-	-	-	-	-	-	236.54	**=M32-M35**
									Terminal Value		**1576.93**	**=M37/C7**

Present value of free cash flows	745.61	**=NPV(C7,D36:M36)**
Present Value of terminal value	389.79	**=M38/(1+C7)^10**
Total value (Value of the Firm)	**1,135.40**	**=C39+C40**
Less Debt	200.00	**=C20**
Value of Equity shares	**935.40**	**=C41-C42**
Value Per Share	**18.71**	**=C43/C21**