

The selected companies for analysis are Reliance, HDFC, Infosys, Tata Steel, Bharti Airtel, Hindustan Unilever, Larsen & Toubro, and Maruti Suzuki India. Historical price data has been sourced from Investing.com, covering a five-year period with monthly data from January 31, 2020, to January 31, 2025.

DATE	STOCKS								MARKET INDEX
	Reliance	Infosys	HDFC	Tata Steel	Bharti Airtel	Hindustan Uniliver	Larsen & Toubro	Maruti Suzuki India	Nifty
1/1/2025	1,265.10	1,879.80	1,698.75	134.62	1,626.30	2,468.80	3,567.40	12,310.65	23,508.40
12/1/2024	1,215.45	1,880.00	1,772.85	138.05	1,587.75	2,326.85	3,607.65	10,858.40	23,644.80
11/1/2024	1,292.20	1,857.85	1,796.05	144.54	1,627.15	2,496.15	3,724.80	11,074.20	24,131.10
10/1/2024	1,332.05	1,757.25	1,735.70	148.56	1,612.60	2,518.22	3,622.30	11,076.45	24,205.35
9/1/2024	1,476.57	1,875.60	1,732.05	168.55	1,709.55	2,946.57	3,675.55	13,238.00	25,810.85
8/1/2024	1,509.63	1,943.70	1,636.90	152.76	1,589.05	2,766.98	3,704.65	12,403.00	25,235.90
7/1/2024	1,505.43	1,868.25	1,615.75	165.33	1,491.55	2,694.92	3,815.00	13,115.80	24,951.15
6/1/2024	1,565.40	1,566.75	1,683.80	174.01	1,444.05	2,463.24	3,548.45	12,033.85	24,010.60
5/1/2024	1,430.40	1,406.90	1,531.55	167.2	1,372.75	2,319.81	3,669.30	12,399.30	22,530.70
4/1/2024	1,467.00	1,412.59	1,520.10	165	1,322.30	2,221.60	3,594.30	12,817.50	22,604.85
3/1/2024	1,485.85	1,489.66	1,447.90	155.85	1,228.60	2,255.37	3,763.90	12,600.35	22,326.90
2/1/2024	1,460.80	1,664.52	1,403.40	140.85	1,123.35	2,402.73	3,477.55	11,288.35	21,982.80
1/1/2024	1,426.63	1,651.59	1,462.55	135.95	1,170.70	2,471.71	3,479.75	10,162.70	21,725.70
12/1/2023	1,292.47	1,534.25	1,709.25	139.6	1,032.20	2,653.39	3,526.00	10,302.35	21,731.40
11/1/2023	1,188.72	1,446.99	1,558.80	127.9	1,014.70	2,535.45	3,109.20	10,608.70	20,133.15
10/1/2023	1,143.95	1,360.73	1,476.50	118.75	914.4	2,474.15	2,929.05	10,392.30	19,079.60
9/1/2023	1,172.50	1,427.41	1,526.30	128.9	926.4	2,455.82	3,023.55	10,610.60	19,638.30
8/1/2023	1,203.50	1,427.41	1,571.45	122.9	856.4	2,495.11	2,702.70	10,003.80	19,253.80
7/1/2023	1,274.63	1,348.10	1,651.20	123.15	889.9	2,550.64	2,675.32	9,820.75	19,753.80
6/1/2023	1,157.63	1,328.02	1,701.40	112	878.75	2,667.53	2,469.98	9,789.05	19,189.05
5/1/2023	1,121.16	1,310.91	1,610.85	105.8	849.9	2,656.97	2,200.69	9,367.70	18,534.40
4/1/2023	1,098.74	1,245.73	1,687.60	107.95	799.3	2,447.55	2,359.08	8,589.55	18,065.00
3/1/2023	1,058.13	1,419.95	1,609.55	104.5	749	2,550.20	2,159.33	8,292.15	17,359.75
2/1/2023	1,054.27	1,479.21	1,599.60	103.95	742.25	2,450.89	2,104.40	8,624.35	17,303.95
1/1/2023	1,068.48	1,525.16	1,603.50	119.7	770.3	2,566.53	2,119.62	8,895.30	17,662.15
12/1/2022	1,156.25	1,499.75	1,628.15	112.65	806.1	2,550.89	2,081.11	8,394.60	18,105.30
11/1/2022	1,239.84	1,625.79	1,608.45	107.65	848.75	2,673.70	2,070.18	8,974.15	18,758.35
10/1/2022	1,157.34	1,529.03	1,496.70	101.55	832	2,540.58	2,018.55	9,527.60	18,012.20
9/1/2022	1,079.33	1,405.53	1,421.35	99.3	799.9	2,685.76	1,843.54	8,828.15	17,094.35
8/1/2022	1,197.44	1,484.58	1,486.10	108.3	726.6	2,649.30	1,918.17	9,082.25	17,759.30
7/1/2022	1,139.11	1,541.02	1,434.20	107.6	677.95	2,626.94	1,803.98	8,773.55	17,158.25
6/1/2022	1,178.24	1,453.71	1,348.00	86.71	684.95	2,221.75	1,554.74	8,470.75	15,780.25
5/1/2022	1,195.04	1,495.17	1,388.95	105.57	700.2	2,343.92	1,650.78	7,966.35	16,584.55
4/1/2022	1,266.58	1,558.77	1,384.60	127.11	739	2,225.99	1,690.54	7,717.80	17,102.55
3/1/2022	1,195.99	1,896.16	1,470.35	130.72	754.95	2,040.53	1,763.67	7,561.30	17,464.75
2/1/2022	1,071.07	1,705.99	1,426.25	122.07	686.5	2,163.49	1,812.66	8,314.15	16,793.90
1/1/2022	1,083.35	1,726.47	1,485.70	108.56	729.3	2,264.73	1,904.90	8,597.30	17,339.85
12/1/2021	1,074.97	1,877.17	1,479.40	111.14	683.8	2,350.79	1,891.63	7,426.45	17,354.05
11/1/2021	1,091.88	1,703.05	1,493.55	107.12	728.25	2,308.36	1,760.78	7,067.80	16,983.20
10/1/2021	1,151.28	1,658.40	1,582.85	131.6	685.35	2,383.66	1,762.68	7,482.40	17,671.65
9/1/2021	1,143.56	1,665.81	1,594.95	128.89	688.3	2,691.08	1,699.12	7,338.05	17,618.15
8/1/2021	1,025.04	1,696.89	1,581.40	145.02	651.81	2,713.30	1,668.44	6,846.10	17,132.20
7/1/2021	923.88	1,601.47	1,426.45	143.43	551.3	2,324.05	1,597.85	6,977.70	15,763.05
6/1/2021	958.09	1,571.94	1,497.90	116.66	515.96	2,461.50	1,497.17	7,515.90	15,721.50
5/1/2021	980.62	1,385.94	1,515.85	112.57	525.04	2,330.77	1,464.40	7,086.30	15,582.80
4/1/2021	905.36	1,346.76	1,412.30	103.4	526.86	2,344.42	1,337.43	6,455.65	14,631.10
3/1/2021	909.27	1,360.38	1,493.65	81.18	507.77	2,421.86	1,415.71	6,859.20	14,690.70
2/1/2021	946.81	1,246.28	1,534.40	71.51	546.05	2,123.59	1,439.25	6,866.15	14,529.15
1/1/2021	836.11	1,232.11	1,390.50	60.1	543.4	2,254.92	1,331.70	7,206.65	13,634.60
12/1/2020	901.19	1,248.76	1,436.30	64.36	500.31	2,385.90	1,284.70	7,649.60	13,981.75
11/1/2020	875.99	1,093.84	1,440.85	57.74	454.71	2,129.72	1,119.88	7,035.80	12,968.95
10/1/2020	932.6	1,054.66	1,183.55	41.06	425.76	2,063.08	909.79	6,965.15	11,642.40
9/1/2020	1,014.24	1,002.60	1,078.60	35.97	413.19	2,060.05	882.49	6,743.45	11,247.55
8/1/2020	944.49	923.4	1,115.85	41.3	503.64	2,108.95	924.92	6,839.95	11,387.50
7/1/2020	938.32	960.59	1,032.80	36.63	544.63	2,201.14	894.09	6,262.75	11,073.45
6/1/2020	773.54	731.83	1,065.85	32.67	549.53	2,162.11	923.65	5,838.30	10,302.10
5/1/2020	664.73	687.13	951.65	29.52	542.42	2,040.46	912.49	5,610.80	9,580.30
4/1/2020	659.21	711.49	1,001.80	29.83	504.82	2,176.99	878.52	5,358.80	9,859.90
3/1/2020	500.82	637.91	861.9	26.96	432.77	2,279.64	791.36	4,288.30	8,597.75
2/1/2020	597.45	727.6	1,177.65	38.17	513.85	2,156.90	1,162.38	6,283.10	11,201.75

MONTHLY RETURNS									
Reliance	Infosys	HDFC	Tata Steel	Bharti Airtel	Hindustan Uniliver	Larsen & Toubro	Maruti Suzuki India	Nifty	
FORMULA USED = (Current Month Price-Last Month Price)/Last Month Price									Formula for Cell U5
-0.0392	0.0001	0.0436	0.0255	-0.0237	-0.0575	0.0113	-0.1180	0.0058	= (K5-K4)/K4
0.0631	-0.0118	0.0131	0.0470	0.0248	0.0728	0.0325	0.0199	0.0206	
0.0308	-0.0541	-0.0336	0.0278	-0.0089	0.0088	-0.0275	0.0002	0.0031	
0.1085	0.0673	-0.0021	0.1346	0.0601	0.1701	0.0147	0.1951	0.0663	
0.0224	0.0363	-0.0549	-0.0937	-0.0705	-0.0609	0.0079	-0.0631	-0.0223	
-0.0028	-0.0388	-0.0129	0.0823	-0.0614	-0.0260	0.0298	0.0575	-0.0113	
0.0398	-0.1614	0.0421	0.0525	-0.0318	-0.0860	-0.0699	-0.0825	-0.0377	
-0.0862	-0.1020	-0.0904	-0.0391	-0.0494	-0.0582	0.0341	0.0304	-0.0616	
0.0256	0.0040	-0.0075	-0.0132	-0.0368	-0.0423	-0.0204	0.0337	0.0033	
0.0128	0.0546	-0.0475	-0.0555	-0.0709	0.0152	0.0472	-0.0169	-0.0123	
-0.0169	0.1174	-0.0307	-0.0962	-0.0857	0.0653	-0.0761	-0.1041	-0.0154	
-0.0234	-0.0078	0.0421	-0.0348	0.0422	0.0287	0.0006	-0.0997	-0.0117	
-0.0940	-0.0710	0.1687	0.0268	-0.1183	0.0735	0.0133	0.0137	0.0003	
-0.0803	-0.0569	-0.0880	-0.0838	-0.0170	-0.0444	-0.1182	0.0297	-0.0735	
-0.0377	-0.0596	-0.0528	-0.0715	-0.0988	-0.0242	-0.0579	-0.0204	-0.0523	
0.0250	0.0490	0.0337	0.0855	0.0131	-0.0074	0.0323	0.0210	0.0293	
0.0264	0.0000	0.0296	-0.0465	-0.0756	0.0160	-0.1061	-0.0572	-0.0196	
0.0591	-0.0556	0.0507	0.0020	0.0391	0.0223	-0.0101	-0.0183	0.0260	
-0.0918	-0.0149	0.0304	-0.0905	-0.0125	0.0458	-0.0768	-0.0032	-0.0286	
-0.0315	-0.0129	-0.0532	-0.0554	-0.0328	-0.0040	-0.1090	-0.0430	-0.0341	
-0.0200	-0.0497	0.0476	0.0203	-0.0595	-0.0788	0.0720	-0.0831	-0.0253	
-0.0370	0.1399	-0.0462	-0.0320	-0.0629	0.0419	-0.0847	-0.0346	-0.0390	
-0.0036	0.0417	-0.0062	-0.0053	-0.0090	-0.0389	-0.0254	0.0401	-0.0032	
0.0135	0.0311	0.0024	0.1515	0.0378	0.0472	0.0072	0.0314	0.0207	
0.0821	-0.0167	0.0154	-0.0589	0.0465	-0.0061	-0.0182	-0.0563	0.0251	
0.0723	0.0840	-0.0121	-0.0444	0.0529	0.0481	-0.0053	0.0690	0.0361	
-0.0665	-0.0595	-0.0695	-0.0567	-0.0197	-0.0498	-0.0249	0.0617	-0.0398	
-0.0674	-0.0808	-0.0503	-0.0222	-0.0386	0.0571	-0.0867	-0.0734	-0.0510	
0.1094	0.0562	0.0456	0.0906	-0.0916	-0.0136	0.0405	0.0288	0.0389	
-0.0487	0.0380	-0.0349	-0.0065	-0.0670	-0.0084	-0.0595	-0.0340	-0.0338	
0.0344	-0.0567	-0.0601	-0.1941	0.0103	-0.1542	-0.1382	-0.0345	-0.0803	
0.0143	0.0285	0.0304	0.2175	0.0223	0.0550	0.0618	-0.0595	0.0510	
0.0599	0.0425	-0.0031	0.2040	0.0554	-0.0503	0.0241	-0.0312	0.0312	
-0.0557	0.2164	0.0619	0.0284	0.0216	-0.0833	0.0433	-0.0203	0.0212	
-0.1044	-0.1003	-0.0300	-0.0662	-0.0907	0.0603	0.0278	0.0996	-0.0384	
0.0115	0.0120	0.0417	-0.1107	0.0623	0.0468	0.0509	0.0341	0.0325	
-0.0077	0.0873	-0.0042	0.0238	-0.0624	0.0380	-0.0070	-0.1362	0.0008	
0.0157	-0.0928	0.0096	-0.0362	0.0650	-0.0180	-0.0692	-0.0483	-0.0214	
0.0544	-0.0262	0.0598	0.2285	-0.0589	0.0326	0.0011	0.0587	0.0405	
-0.0067	0.0045	0.0076	-0.0206	0.0043	0.1290	-0.0361	-0.0193	-0.0030	
-0.1036	0.0187	-0.0085	0.1251	-0.0530	0.0083	-0.0181	-0.0670	-0.0276	
-0.0987	-0.0562	-0.0980	-0.0110	-0.1542	-0.1435	-0.0423	0.0192	-0.0799	
0.0370	-0.0184	0.0501	-0.1866	-0.0641	0.0591	-0.0630	0.0771	-0.0026	
0.0235	-0.1183	0.0120	-0.0351	0.0176	-0.0531	-0.0219	-0.0572	-0.0088	
-0.0767	-0.0283	-0.0683	-0.0815	0.0035	0.0059	-0.0867	-0.0890	-0.0611	
0.0043	0.0101	0.0576	-0.2149	-0.0362	0.0330	0.0585	0.0625	0.0041	
0.0413	-0.0839	0.0273	-0.1191	0.0754	-0.1232	0.0166	0.0010	-0.0110	
-0.1169	-0.0114	-0.0938	-0.1596	-0.0049	0.0618	-0.0747	0.0496	-0.0616	
0.0778	0.0135	0.0329	0.0709	-0.0793	0.0581	-0.0353	0.0615	0.0255	
-0.0280	-0.1241	0.0032	-0.1029	-0.0911	-0.1074	-0.1283	-0.0802	-0.0724	
0.0646	-0.0358	-0.1786	-0.2889	-0.0637	-0.0313	-0.1876	-0.0100	-0.1023	
0.0875	-0.0494	-0.0887	-0.1240	-0.0295	-0.0015	-0.0300	-0.0318	-0.0339	
-0.0688	-0.0790	0.0345	0.1482	0.2189	0.0237	0.0481	0.0143	0.0124	
-0.0065	0.0403	-0.0744	-0.1131	0.0814	0.0437	-0.0333	-0.0844	-0.0276	
-0.1756	-0.2381	0.0320	-0.1081	0.0090	-0.0177	0.0331	-0.0678	-0.0697	
-0.1407	-0.0611	-0.1071	-0.0964	-0.0129	-0.0563	-0.0121	-0.0390	-0.0701	
-0.0083	0.0355	0.0527	0.0105	-0.0693	0.0669	-0.0372	-0.0449	0.0292	
-0.2403	-0.1034	-0.1396	-0.0962	-0.1427	0.0472	-0.0992	-0.1998	-0.1280	
0.1929	0.1406	0.3663	0.4158	0.1874	-0.0538	0.4688	0.4652	0.3029	

DESCRIPTIVE STATISTICS

	Reliance	Infosys	HDFC	Tata Steel	Bharti Airtel	Hindustan Uniliver	Larsen & Toubro	Maruti Suzuki India	Nifty
Average	-0.0098	-0.0130	-0.0034	-0.0144	-0.0170	-0.0003	-0.0156	-0.0077	-0.0109
Stddev	0.0751	0.0769	0.0771	0.1184	0.0692	0.0631	0.0856	0.0907	0.0579
Max	0.1929	0.2164	0.3663	0.4158	0.2189	0.1701	0.4688	0.4652	0.3029
Min	-0.2403	-0.2381	-0.1786	-0.2889	-0.1542	-0.1542	-0.1876	-0.1998	-0.1280
Ann.Avg	-0.1171	-0.1560	-0.0412	-0.1732	-0.2043	-0.0037	-0.1870	-0.0922	-0.1313
Ann.Std	0.2602	0.2665	0.2670	0.4103	0.2395	0.2186	0.2967	0.3140	0.2007
CV	-2.2224	-1.7079	-6.4755	-2.3684	-1.1724	-59.7610	-1.5861	-3.4059	-1.5286
Beta	0.8712	0.6964	1.1030	1.4773	0.6387	0.2159	1.2177	1.0778	1.0000

CORRELATION MATRIX

	Reliance	Infosys	HDFC	Tata Steel	Bharti Airtel	Hindustan Uniliver	Larsen & Toubro	Maruti Suzuki India	Nifty
Reliance	1	0.38418	0.42287	0.33156	0.35059	0.02102	0.34146	0.46389	0.67210
Infosys	0.38418	1	0.23855	0.30990	0.13174	0.24681	0.29989	0.26088	0.52458
HDFC	0.42287	0.23855	1	0.59911	0.38098	0.07626	0.73547	0.51063	0.82913
Tata Steel	0.33156	0.30990	0.59911	1	0.33233	0.10372	0.64449	0.41151	0.72271
Bharti Airtel	0.35059	0.13174	0.38098	0.33233	1	0.03984	0.46724	0.36141	0.53521
Hindustan Uniliver	0.02102	0.24681	0.07626	0.10372	0.03984	1	-0.00922	0.08911	0.19828
Larsen & Toubro	0.34146	0.29989	0.73547	0.64449	0.46724	-0.00922	1	0.64360	0.82396
Maruti Suzuki India	0.46389	0.26088	0.51063	0.41151	0.36141	0.08911	0.64360	1	0.68894
Nifty	0.67210	0.52458	0.82913	0.72271	0.53521	0.19828	0.82396	0.68894	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	0.1	0.18	0.07	0.14	0.16	1

Postfolio Returns	-0.0107	=SUMPRODUCT(X48:AE48,X46:AE46)
Postfolio Risk	0.0031	=MMULT(X48:AE48,MMULT(X33:AE40,TRANSPOSE(X48:AE48)))

=AVERAGE(U5:U63)	Formula for Cell AF8
=STDEV(U5:U63)	Formula for Cell AF9
=MAX(U5:U63)	Formula for Cell AF10
=MIN(U5:U63)	Formula for Cell AF11
=AF8*12	Formula for Cell AF12
=AF9*SQRT(12)	Formula for Cell AF13
=AF13/AF12	Formula for Cell AF14
=SLOPE(U5:U63,\$U\$5:\$U\$63)	Formula for Cell AF15

Correlation

Input Range: \$M\$5:\$U\$63

Grouped By: ☒ Columns ☐ Rows

☐ Labels in first row

Output options: ☒ Output Range: \$W\$19:\$AF\$28 ☐ New Worksheet Ply: ☐ New Workbook

OK Cancel Help

Covariance

Input Range: \$M\$5:\$U\$63

Grouped By: ☒ Columns ☐ Rows

☐ Labels in first row

Output options: ☒ Output Range: \$W\$32:\$AF\$41 ☐ New Worksheet Ply: ☐ New Workbook

OK Cancel Help

Information for these two rows was copied from the descriptive statistics table

=SUM(X48:AE48)