

# PORTFOLIO RISK & RETURN ANALYSIS

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# INTRODU CTION & OBJECTI VES



- Analyze 5 selected companies alongside SPY and a Risk-Free asset



- Construct Market-Weighted and Equal-Weighted portfolios



- Evaluate key risk-return metrics: Mean Return, Standard Deviation, Beta, Sharpe Ratio



- Visualize risk vs return across all assets

# OUR 5 CHOSEN STOCKS



# PORTFOLIO CONSTRUCTION & METHODOLOGY



- Market-Weighted: Based on individual market capitalizations



- Equal-Weighted: Each asset carries equal weight



- Monthly returns calculated from April 2019 to April 2025



- SPY used as benchmark to determine beta

BQL						
DATES	MMM Equity	TMUS Equity	TSLA Equity	CVS Equity	BLK Equity	SPY Equity
	CUR_MKT_CAP	CUR_MKT_CAP	CUR_MKT_CAP	CUR_MKT_CAP	CUR_MKT_CAP	CUR_MKT_CAP
4/30/19	\$109,238,625,054	\$62,355,576,773	\$41,465,179,993	\$70,607,273,253	\$74,969,732,851	\$282,401,000,000
5/31/19	\$192,084,166,284	\$62,740,013,128	\$32,978,248,874	\$68,033,453,277	\$64,213,064,663	\$248,426,000,000
6/28/19	\$99,917,805,218	\$63,338,025,236	\$39,801,640,022	\$70,787,528,829	\$72,517,064,315	\$268,353,000,000
7/31/19	\$100,512,755,616	\$68,125,860,437	\$43,278,932,215	\$72,580,275,627	\$72,266,739,059	\$76,426,000,000
8/30/19	\$93,034,127,966	\$66,690,372,596	\$40,418,286,391	\$79,226,260,304	\$65,316,697,744	\$261,767,000,000
9/30/19	\$94,575,875,820	\$67,305,581,671	\$43,146,378,058	\$82,022,328,257	\$68,884,260,656	\$274,210,000,000
10/31/19	\$94,877,607,568	\$70,721,812,803	\$56,762,710,681	\$86,339,977,374	\$71,366,715,611	\$274,675,000,000
11/29/19	\$97,626,349,699	\$67,205,400,383	\$59,469,888,449	\$79,723,560,807	\$76,399,606,106	\$291,265,000,000
12/31/19	\$101,450,436,553	\$67,094,175,659	\$70,181,341,447	\$96,648,616,980	\$77,602,533,906	\$311,996,000,000
1/31/20	\$91,237,536,922	\$67,752,968,254	\$117,261,897,269	\$88,231,379,955	\$81,407,391,809	\$308,710,000,000
2/28/20	\$85,602,544,000	\$77,261,065,305	\$122,983,62,352	\$77,180,169,862	\$71,686,696,517	\$257,845,000,000
3/31/20	\$78,528,840,264	\$71,896,665,696	\$96,473,23,064	\$77,735,793,814	\$68,119,470,696	\$235,386,000,000
4/30/20	\$87,183,832,682	\$108,388,198,557	\$144,937,959,577	\$80,359,166,858	\$77,446,004,741	\$60,033,000,000
5/29/20	\$89,983,720,730	\$123,625,779,340	\$154,901,363,570	\$85,705,945,723	\$70,583,211,629	\$270,733,000,000
6/30/20	\$89,724,881,912	\$129,228,995,589	\$200,315,70,281	\$84,921,691,125	\$82,938,331,403	\$273,541,000,000
7/31/20	\$86,677,643,543	\$133,022,196,997	\$266,638,03,092	\$82,268,296,840	\$87,651,620,752	\$286,826,000,000
8/31/20	\$93,902,689,435	\$144,427,545,486	\$44,338,876,502	\$81,296,658,314	\$90,604,205,922	\$305,395,000,000
9/30/20	\$92,666,794,220	\$141,555,828,777	\$399,755,20,356	\$76,428,281,480	\$85,932,109,674	\$293,767,000,000
10/30/20	\$92,668,427,603	\$135,625,724,022	\$367,823,00,433	\$73,405,176,511	\$91,369,673,388	\$278,337,000,000
11/30/20	\$96,934,442,987	\$165,003,370,001	\$53,082,084,561	\$88,731,246,029	\$106,505,852,233	\$234,345,000,000
12/31/20	\$100,822,696,056	\$167,374,036,744	\$668,905,110,256	\$89,398,791,193	\$110,042,575,529	\$322,074,000,000
1/29/21	\$101,324,531,089	\$156,488,828,718	\$752,187,686,57	\$93,783,651,132	\$106,949,658,391	\$317,217,000,000
2/26/21	\$101,377,246,041	\$49,099,206,077	\$48,381,041,952	\$89,342,611,108	\$106,004,211,603	\$328,662,000,000
3/31/21	\$111,642,106,280	\$155,710,923,810	\$641,114,590,527	\$98,653,231,083	\$115,079,202,562	\$49,340,000,000
4/30/21	\$111,477,221,898	\$164,740,868,810	\$683,425,53,029	\$100,76,448,238	\$125,054,617,449	\$367,883,000,000
5/31/21	\$117,697,212,404	\$176,368,033,122	\$602,293,62,699	\$113,804,126,769	\$133,771,574,733	\$539,043,000,000
6/30/21	\$115,140,845,647	\$180,582,412,422	\$64,755,786,506	\$109,854,423,156	\$133,456,025,083	\$376,537,000,000
7/30/21	\$114,453,655,799	\$179,725,515,595	\$680,338,14,578	\$108,432,529,856	\$132,266,319,159	\$84,434,000,000
8/31/21	\$112,684,043,341	\$170,996,344,892	\$73,020,62,235	\$113,998,062,134	\$143,564,70,522	\$403,596,000,000
9/30/21	\$101,504,722,341	\$159,440,176,788	\$776,850,31,395	\$111,79,112,776	\$127,640,052,4596	\$84,781,000,000
10/29/21	\$10,296,654,850	\$144,335,655,560	\$118,715,104,528	\$117,811,633,144	\$143,590,643,807	\$419,402,000,000
11/30/21	\$97,986,026,622	\$135,905,514,490	\$149,624,231,976	\$117,564,423,392	\$137,425,797,486	\$417,376,000,000
12/31/21	\$101,156,719,121,27	\$144,865,228,293	\$1,061,287,010,297	\$136,177,251,056	\$139,089,290,570	\$460,964,000,000
1/31/22	\$94,937,786,258	\$135,110,120,232	\$940,719,72,165	\$140,599,447,557	\$125,018,721,640	\$46,283,000,000
2/28/22	\$84,894,055,150	\$155,925,015,232	\$89,596,29,843	\$136,041,705,655	\$113,102,821,680	\$397,762,000,000
3/31/22	\$84,738,213,216	\$160,346,365,596	\$1,113,701,801,614	\$123,839,180,215	\$116,186,241,572	\$420,740,000,000
4/29/22	\$82,069,667,203	\$154,365,043,622	\$902,116,02,293	\$126,237,308,843	\$94,779,971,546	\$373,821,000,000
5/31/22	\$84,954,795,177	\$67,096,322,391	\$785,564,853,731	\$26,266,9,157,910	\$101,367,397,855	\$379,702,000,000
6/30/22	\$73,641,905,646	\$168,657,703,432	\$97,926,16,36,976	\$121,005,896,797	\$92,271,514,422	\$46,339,000,000
7/29/22	\$81,190,066,674	\$179,403,319,222	\$93,110,23,872	\$125,466,052,200	\$101,382,948,181	\$745,375,000,000
8/31/22	\$70,890,248,447	\$180,531,776,335	\$63,615,659,792	\$128,854,147,407	\$100,470,79,798	\$580,480,469,601
9/30/22	\$66,174,390,312	\$168,524,712,334	\$83,151,29,436	\$125,204,483,234	\$82,965,021,697	\$303,467,000,000
10/31/22	\$66,929,259,001	\$188,564,000,549	\$718,514,92,245	\$124,324,888,023	\$97,383,036,207	\$722,229,01,20
11/30/22	\$66,409,259,001	\$189,436,595,136	\$14,814,181,021,820	\$133,866,948,995	\$107,540,033,132	\$80,296,997,051
12/30/22	\$66,284,930,367	\$174,181,578,760	\$89,371,94,66,688	\$122,448,576,529	\$106,433,91,730	\$56,640,299,622
1/31/23	\$63,009,654,658	\$185,764,653,748	\$48,085,68,697	\$151,181,160,977	\$114,029,984,014	\$379,380,883,512
2/28/23	\$59,310,870,000	\$173,371,180,580	\$50,058,877,662	\$103,577,426,637	\$93,271,678,115	\$22,863,000,000
3/31/23	\$75,964,893,177	\$176,615,449,652	\$656,424,237,449	\$95,222,337,975	\$100,526,161,902	\$371,903,023,969
4/28/23	\$58,958,622,890	\$172,664,525,714	\$50,782,151,697	\$93,824,263,110	\$100,615,931,275	\$777,636,205,008
5/31/23	\$14,763,546,684	\$168,484,204,821	\$64,357,12,103	\$87,216,180,002	\$98,476,643,795	\$397,702,157,717
6/30/23	\$55,126,172,200	\$166,665,033,389	\$29,681,610,407	\$88,626,07,814	\$103,506,961,377	\$234,336,466,380
7/31/23	\$61,547,155,945	\$162,080,512,439	\$848,821,340,310	\$95,754,468,387	\$110,652,137,647	\$434,205,627,884
8/31/23	\$58,881,033,204	\$160,292,179,451	\$91,149,444,92,043	\$87,04,280,745	\$104,592,466,522	\$383,250,435,941
9/29/23	\$51,677,731,297	\$164,762,834,921	\$79,196,95,533	\$89,676,73,946	\$96,522,659,208	\$404,311,946,948
10/31/23	\$50,333,234,608	\$166,370,502,132	\$38,654,745,172	\$88,636,372,782	\$91,415,601,133	\$393,706,910,911
11/30/23	\$54,178,104,985	\$173,991,663,750	\$76,195,47,551	\$78,444,622,747	\$111,754,831,089	\$405,187,997,742
12/29/23	\$59,379,258,599	\$187,415,763,367	\$789,898,387,236	\$101,613,354,115	\$120,765,373,958	\$493,719,620,556
1/31/24	\$52,111,112,535	\$192,799,621,610	\$56,476,939,96,825	\$95,706,498,803	\$115,188,628,760	\$485,358,16,174
2/29/24	\$50,914,724,000	\$193,815,474,998	\$64,945,488,980	\$93,590,893,257	\$120,843,000,648	\$502,533,397,497
3/29/24	\$58,695,028,530	\$193,720,525,592	\$55,895,843,07,053	\$100,733,96,347	\$124,173,354,747	\$53,816,386,616
4/30/24	\$53,404,894,913	\$192,383,13,700	\$58,515,783,478	\$85,347,109,399	\$112,259,876,626	\$500,188,993,950
5/31/24	\$55,413,596,276	\$205,027,621,155	\$56,793,203,513	\$74,820,229,131	\$114,723,643,331	\$534,374,589,515
6/28/24	\$55,647,986,853	\$206,457,283,351	\$631,078,137,526	\$74,142,327,726	\$116,995,737,041	\$546,278,303,170
7/31/24	\$70,070,054,359	\$212,681,139,335	\$741,380,201,109	\$75,736,651,401	\$130,247,883,347	\$557,464,950,314
8/30/24	\$73,992,439,212	\$231,863,233,038	\$684,004,459,256	\$72,006,733,415	\$133,583,742,745	\$563,247,159,147
9/30/24	\$75,096,639,991	\$240,777,553,050	\$835,813,77,776	\$79,101,736,498	\$140,649,471,146	\$589,356,010,876
10/31/24	\$69,959,444,241	\$258,974,200,368	\$802,033,405,801	\$71,025,509,584	\$145,318,480,772	\$588,134,182,442
11/29/24	\$72,714,219,910	\$286,570,257,857	\$1,301,402,793,170	\$71,074,863,790	\$166,572,289,170	\$424,106,668,051
12/31/24	\$70,927,070,570	\$256,154,217,813	\$1,296,350,92,691	\$66,849,319,184	\$158,767,939,932	\$26,655,586,545
1/31/25	\$82,881,898,153	\$265,992,321,467	\$1,301,402,793,170	\$71,074,863,790	\$166,572,289,170	\$424,106,668,051
2/28/25	\$84,214,648,000	\$307,917,196,105	\$942,375,161,500	\$82,859,451,540	\$151,803,711,497	\$624,485,770,685
3/1/25	\$79,204,291,266	\$304,514,796,148	\$833,592,553,309	\$85,418,865,518	\$146,942,278,731	\$569,404,588,869
4/2/25	\$79,689,746,808	\$302,060,041,714	\$909,502,388,793	\$85,822,319,554	\$149,328,975,785	\$576,760,015,365

2	3	MMM Equity	TMUS Equity	TSLA Equity	CVS Equity	BLK Equity	SPY Equity	GBM Govt
DATES	DATES	PX_LAST	PX_LAST	PX_LAST	PX_LAST	PX_LAST	PX_LAST	PX_LAST
4	4/30/19	158.4	72.9	15.9	54.4	485.2	294.0	2.42
5	5/31/19	133.6	73.3	12.3	52.4	415.6	275.3	2.32
6	6/28/19	144.9	74.0	14.9	54.5	469.3	293.0	2.13
7	7/31/19	146.1	79.6	16.1	55.9	467.7	297.4	1.99
8	8/30/19	135.2	77.9	15.0	60.9	422.6	292.5	2.09
9	9/30/19	137.5	78.6	16.1	63.1	445.6	296.8	1.87
10	10/31/19	137.9	82.5	21.0	66.4	461.7	303.3	1.55
11	11/29/19	141.9	78.4	22.0	75.3	494.9	314.3	1.62
12	12/31/19	147.5	78.3	27.9	74.3	502.7	321.9	1.45
13	1/31/20	132.7	79.0	43.4	67.8	527.4	321.7	1.54
14	2/28/20	124.8	90.0	44.5	59.2	463.0	296.3	1.45
15	3/31/20	114.1	83.7	34.9	59.3	440.0	257.8	0.02
16	4/30/20	127.0	87.6	52.1	61.6	502.0	290.5	0.08
17	5/29/20	130.8	99.9	55.7	65.6	528.6	304.3	0.12
18	6/30/20	130.4	104.2	72.0	65.0	544.1	308.4	0.12
19	7/31/20	125.8	107.4	95.4	62.9	575.0	326.5	0.09

Monthly Returns					Equal-Weighted Returns					Market Weights					Market Weighted Value Portfolio				
	MMM Equity	TMUS Equity	TSLA Equity	CVS Equity	BLK Equity	SPY Equity	GBM Govt			MMM Equity	TMUS Equity	TSLA Equity	CVS Equity	BLK Equity		TotalMarket CAP	Market Weighted Value Portfolio		
5/31/19	-0.1570	0.0062	-0.2243	-0.0370	-0.1436	-0.0638	0.2018	-0.11	-0.11	0.30	0.17	0.12	0.20	0.21		\$358,636,255,921.60	-0.1100		
6/28/19	0.0851	0.0095	0.2068	0.0405	0.1293	0.0644	0.1936	0.07	0.26	0.17	0.09	0.19	0.18		\$320,052,222,226.22	0.0734			
7/31/19	0.0080	0.0754	0.0812	0.0253	-0.0035	0.0151	0.1776	0.03	0.28	0.18	0.11	0.20	0.20		\$346,362,063,318.96	0.0288			
8/30/19	-0.0744	-0.0211	-0.0662	0.0904	-0.0965	-0.0167	0.1660	-0.03	0.28	0.19	0.12	0.20	0.20		\$356,764,562,950.03	-0.0340			
9/30/19	0.0166	0.0092	0.0676	0.0353	0.0545	0.0148	0.1742	0.03	0.26	0.19	0.11	0.22	0.18		\$344,680,355,001.91	0.0314			
10/31/19	0.0036	0.0494	0.3074	0.0526	0.0360	0.0221	0.1556	0.07	0.26	0.19	0.12	0.23	0.19		\$355,934,424,461.55	0.0662			
11/29/19	0.0290	-0.0497	0.0477	0.1338	0.0719	0.0362	0.1288	0.05	0.26	0.20	0.16	0.24	0.20		\$380,068,824,037.17	0.0519			
12/31/19	0.0392	-0.0017	0.2679	-0.0130	0.0157	0.0240	0.1348	0.05	0.27	0.19	0.17	0.27	0.21		\$398,624,905,444.12	0.0546			
1/31/20	-0.1007	0.0098	0.5552	-0.0871	0.0490	-0.0004	0.1211	0.08	0.28	0.19	0.21	0.27	0.22		\$418,197,213,647.63	0.0772			
2/28/20	-0.0594	0.1385	0.0268	-0.1274	-0.1220	-0.0792	0.1286	-0.04	0.25	0.19	0.33	0.25	0.23		\$445,891,173,208.82	-0.0392			
3/31/20	-0.0853	-0.0694	-0.2156	0.0025	-0.0498	-0.1300	0.1209	-0.12	0.24	0.22	0.34	0.22	0.20		\$435,013,838,037.08	-0.1187			
4/30/20	0.1129	0.0465	0.4921	0.0374	0.1411	0.1270	0.0019	0.20	0.22	0.20	0.27	0.22	0.19		\$392,394,193,185.55	0.2013			
5/29/20	0.0298	0.1394	0.0679	0.0653	0.0530	0.0476	0.0063	0.10	0.24	0.30	0.40	0.22		\$498,515,162,415.49	0.1029				
6/30/20	-0.0029	0.0430	0.2932	-0.0092	0.0292	0.0133	0.0099	0.15	0.25	0.34	0.43	0.24	0.22		\$534,800,393,351.22	0.1451			
7/31/20	-0.0354	0.0310	0.3250	-0.0312	0.0568	0.0589	0.0100	0.19	0.25	0.36	0.56	0.24	0.23		\$587,130,470,408.48	0.1896			
8/31/20	0.0834	0.0866	0.7415	-0.0130	0.0334	0.0698	0.0073	0.61	0.24	0.37	0.74	0.23	0.24		\$656,254,662,390.97	0.6087			
9/30/20	-0.0174	-0.0199	-0.1391	-0.0599	-0.0516	-0.0413	0.0072	-0.22	0.26	0.40	1.29	0.23	0.25		\$874,569,975,658.33	-0.2193			
10/30/20	-0.0014	0.0419	-0.0955	-0.0396	0.0633	-0.0249	0.0062	-0.12	0.26	0.39	1.11	0.21	0.24		\$795,938,234,507.67	-0.1166			
11/30/20	0.0798	0.2133	0.4627	0.2086	0.1655	0.1088	0.0067	0.66	0.26	0.38	1.03	0.20	0.25		\$760,493,401,958.91	0.6606			
12/31/20	0.0119	0.0144	0.2433	0.0075	0.0332	0.0326	0.0065	0.39	0.28	0.46	1.50	0.25	0.30		\$997,903,367,032.05	0.3866			
1/29/21	0.0050	-0.0650	0.1245	0.0490	-0.0281	-0.0102	0.0036	0.21	0.28	0.47	1.87	0.25	0.31		\$116,543,104,971.51	0.2069			
2/26/21	-0.0034	-0.0485	-0.1487	-0.0491	-0.0096	0.0278	0.0040	-0.35	0.28	0.44	2.10	0.26	0.30		\$121,734,338,987.57	-0.3498			
3/31/21	0.1007	0.0443	-0.0112	0.1042	0.0856	0.0420	0.0023	0.08	0.28	0.42	1.81	0.25	0.30		\$104,204,316,740.83	0.0779			
4/30/21	0.0231	0.0546	0.0621	0.0156	0.0867	0.0529	0.0003	0.17	0.31	0.43	1.79	0.28	0.32		\$112,201,032,668.87	0.1741			
5/31/21	0.0299	0.0705	-0.1187	0.1314	0.0705	0.0066	0.0003	-0.12	0.32	0.46	1.91	0.28	0.35		\$187,774,217,420.51	-0.1230			
6/30/21	-0.0217	0.0239	0.0871	-0.0347	-0.0024	0.0191	0.0000	0.14	0.33	0.49	1.68	0.32	0.37		\$143,934,589,723.37	0.1391			
7/30/21	-0.0035	0.0056	0.0110	-0.0129	-0.0089	0.0244	0.0036	0.01	0.32	0.50	1.83	0.31	0.37		\$119,809,411,814.30	0.0089			
8/31/21	-0.0162	-0.0486	0.0706	0.0489	0.0878	0.0298	0.0033	0.15	0.32	0.50	1.90	0.30	0.37		\$125,298,436,981.87	0.1516			
9/30/21	-0.0092	-0.0676	0.0540	-0.0177	-0.1109	-0.0497	0.0025	0.00	0.31	0.48	2.06	0.32	0.40		\$127,263,453,172.75	-0.0024			
10/29/21	0.0186	-0.0996	0.4365	0.0521	0.1250	0.0702	0.0044	0.97	0.28	0.44	2.17	0.31	0.36		\$127,415,067,895.66	0.9673			
11/30/21	-0.0484	-0.0541	0.0276	-0.0025	-0.0412	-0.0080	0.0043	0.03	0.29	0.40	3.12	0.33	0.40		\$126,671,713,749.14	0.0333			
12/31/21	0.0446	0.0659	-0.0769	0.1583	0.0121	0.0426	0.0091	-0.15	0.27	0.38	3.21	0.33	0.38		\$163,527,994,566.52	-0.1527			
1/31/22	-0.0654	-0.0673	-0.1136	0.0325	-0.1012	-0.0527	0.0023	-0.41	0.28	0.40	2.96	0.38	0.39		\$158,995,692,477.36	-0.4088			
2/28/22	-0.1046	0.1390	-0.0708	-0.0269	-0.0961	-0.0295	0.0029	-0.20	0.26	0.38	2.62	0.39	0.35		\$146,381,047,852.38	-0.2050			
3/31/22	0.0015	0.0417	0.2380	-0.0235	0.0273	0.0344	0.0048	0.62	0.24	0.43	2.51	0.38	0.32		\$187,559,587,049.86	0.6150			
4/29/22	-0.0313	-0.0406	-0.1919	-0.0502	-0.1825	-0.0878	0.0109	-0.70	0.24	0.45	3.11	0.37	0.32		\$160,817,902,213.53	-0.6993			
5/31/22	0.0352	0.0824	-0.1292	0.0664	0.0711	0.0203	0.0273	-0.26	0.23	0.43	2.52	0.35	0.26		\$159,567,993,506.76	-0.2604			
6/30/22	-0.1332	0.0095	-0.1119	-0.0423	-0.0897	-0.0864	0.0600	-0.31	0.24	0.47	2.19	0.35	0.28		\$126,846,954,453.18	-0.3126			
7/29/22	0.1069	0.0633	0.3238	0.0326	0.0987	0.0921	0.0850	0.72	0.21	0.47	1.95	0.34	0.26		\$154,002,787,278.93	0.7182			
8/31/22	-0.1319	0.0063	-0.0725	0.0258	-0.0042	-0.0409	0.1793	-0.21	0.23	0.50	2.60	0.35	0.28		\$141,895,283,121.85	-0.2072			
9/30/22	-0.1114	0.0680	-0.0376	-0.0283	-0.1742	-0.0962	0.1882	-0.21	0.20	0.50	2.41	0.36	0.28		\$134,302,631,273.07	-0.2057			
10/21/22	0.1384	0.1296	-0.1422	-0.0070	0.1738	0.0813	0.2323	-0.21	0.17	0.47	2.32	0.35	0.23		\$126,751,537,406.88	-0.2073			
11/20/22	0.0014	-0.0007	-0.1443	0.0758	0.1085	0.0556	0.3019	-0.23	0.19	0.53	2.00	0.35	0.27		\$119,316,448,302.74	-0.2335			
12/30/22	-0.0480	0.0757	-0.3673	-0.0853	-0.1030	-0.0619	0.3290	-0.71	0.19	0.53	1.71	0.37	0.30		\$114,289,994,085.05	-0.7137			
1/31/23	-0.0404	0.0665	0.4062	-0.0533	0.0714	0.0629	0.3333	0.47	0.18	0.49	1.08	0.34	0.30		\$85,320,124,053.41	0.4684			
2/28/23	-0.0638	-0.0478	0.1876	-0.0530	-0.0919	-0.0251	0.3769	0.20	0.18	0.52	1.53	0.32	0.27		\$102,408,512,263.77	0.2042			
3/31/23	-0.0244	0.0187	0.0085	-0.1105	-0.0295	0.0331	0.3831	-0.02	0.17	0.48	1.81	0.30	0.29		\$109,422,478,501.08	-0.0211			
4/28/23	0.0106	-0.0065	-0.2080	-0.0135	0.0031	0.0160	0.3777	-0.38	0.16	0.49	1.83	0.27	0.28		\$108,953,889,664.97	0.3849			
5/31/23	-0.1215	-0.0462	0.2411	-0.0720	-0.0203	0.0046	0.3483	0.28	0.16	0.48	1.45	0.26	0.28		\$94,684,594,686.03	0.2835			
6/30/23	0.0727	0.0120	0.2836	0.0162	0.0511	0.0609	0.4298	0.55	0.14	0.46	1.80	0.24	0.27		\$104,211,401,290.19	0.5451			
7/31/23	0.1140	-0.0081	0.0216	0.0804	0.0690	0.0327	0.4285	0.10	0.15	0.46	2.31	0.25	0.29		\$124,696,445,651.29	0.1036			
8/31/23	-0.0433	-0.0110	-0.350	-0.1275	-0.0519	-0.0163	0.4469	-0.15	0.17	0.45	2.37	0.27	0.31		\$127,856,514,728.16	-0.1452			
9/29/23	-0.1223	0.0279	-0.0305	0.0714	-0.0772	-0.050	0.4484	-0.08	0.16	0.45	2.28	0.23	0.29		\$126,614,569,269.09	-0.0830			
10/31/23	-0.0285	0.0272	-0.1973	-0.0116	-0.0529	-0.0217	0.4469	-0.45	0.14	0.46	2.21	0.25	0.27		\$196,836,556,094.72	-0.4458			
11/30/23	0.0893	0.0458	0.1954	-0.0154	0.2269	0.0913	0.4495	0.44	0.14	0.46	1.78	0.25	0.25		\$103,109,697,821.06	0.4356			
12/29/23	0.1035	0.0657	0.0350	0.1620	0.0806	0.0414	0.4482	0.19	0.15	0.49	2.13	0.24	0.31		\$191,104,614,092.17	0.1867			
1/31/24	-0.1369	0.0056	-0.2463	-0.0581	-0.0462	0.0159	0.4502	-0.59	0.17	0.54	2.20	0.28	0.34		\$125,074,070,502,652.36	-0.5946			
2/29/24	-0.0236	0.0128	0.0779	0.0000	0.0478	0.0522	0.4477	0.15	0.16	0.54	1.66	0.27	0.32		\$105,285,339,694.00	0.1484			
3/29/24	0.1514	-0.0005	-0.1292	0.0725	0.0276	0.0295	0.4497	-0.18	0.14	0.54	1.79	0.26	0.34		\$102,109,581,882.25	-0.1823			
4/30/24	0.0883	0.0058	0.0426	-0.1511	-0.0948	-0.0403	0.4464	0.01	0.16	0.54	1.56	0.28	0.35		\$106,817,152,268.32	0.0090			
5/31/24	0.0376	0.0657	-0.0284	-0.1198	0.0230	0.0506	0.4483	-0.03	0.15	0.54	1.63	0.24	0.31		\$107,911,668,126.43	-0.0267			
6/28/24	0.0205	0.0070	0.1112	-0.0091	0.0198	0.0320	0.4467	0.19	0.15	0.57	1.58	0.21	0.32		\$107,917,143,312.61				

# CALCULATING BETA

## SUMMARY OUTPUT EQUAL WEIGHTED BETA

### Regression Statistics

Multiple R 0.81279509

R Square 0.66063586

Adjusted R Sq 0.6557878

Standard Erro 0.04205327

Observations 72

### ANOVA

	df	SS	MS	F	Significance F
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Regression	1	0.24098705	0.24098705	5/15/00	0
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Residual	70	0.12379341	0.00176848		
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Total	71	0.36478046			
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Coefficients	Standard Erro	t Stat	P-value	Lower 95%	Upper 95%	Lower 95%	Upper 95%
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Intercept	0.00859359	0.00506066	1.69811534	1/0/00	-0.0014996	0.01868675	-0.0014996	0.01868675
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SPY Equity	1.1527257	0.09874812	11.6733934	1/0/00	0.95577878	1.34967262	0.95577878	1.34967262
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## SUMMARY OUTPUT MARKET WEIGHTED

### Regression Statistics

Multiple R 0.64868639

R Square 0.42079403

Adjusted R Sq 0.41251966

Standard Erro 0.09228445

Observations 72

### ANOVA

	df	SS	MS	F	Significance F
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Regression	1	0.43310342	0.43310342	50.8551073	7.1947E-10
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Residual	70	0.59614936	0.00851642		
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Total	71	1.02925279			
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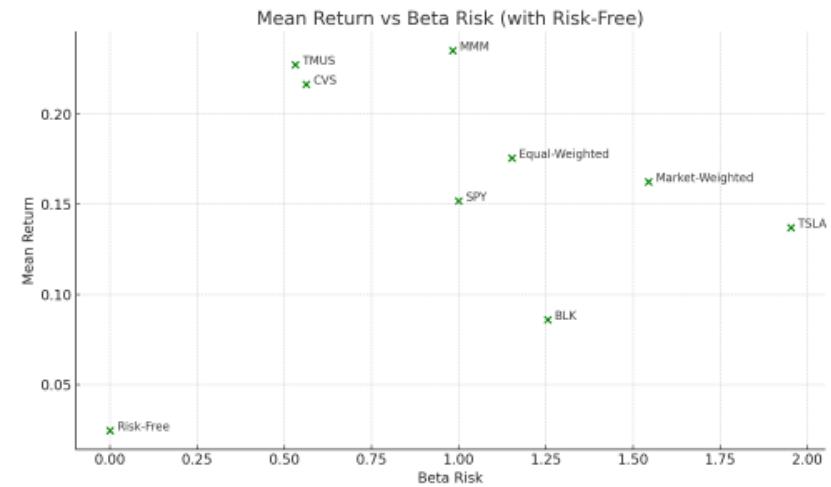
Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
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Intercept	0.01822962	0.01110545	1.64150237	0.10517893	-0.0039195	0.04037873	-0.0039195	0.04037873
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X Variable 1	1.54534315	0.21669937	7.1312767	7.1947E-10	1.11314989	1.97753641	1.11314989	1.97753641
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# BETA RISK

KEY STATS				
Asset	Mean Return	STD Risk	Sharpe Ratio	BETA
MMM	0.2353774	0.171755972	1.227183014	0.983
TMUS	0.227469517	0.203868565	0.995092734	0.532
TSLA	0.137035679	0.356031702	0.315798536	1.953
CVS	0.21679954	0.163820171	1.173226408	0.563
BLK	0.086084052	0.191993261	0.320233445	1.255
SPY	0.152025195	0.115354437	1.104628563	1
Market-Weighted	0.162564603	0.122531475	1.125941016	1.5453
Equal-Weighted	0.175798564	0.083796242	1.804343148	1.1527
Risk-Free Rate	0.024601	0.006341	0	0



KEY STATS					
Asset	Mean Return	STD Risk	Sharpe Ratio	BETA	
MMM	0.2353774	0.171755972	1.227183014	0.983	
TMUS	0.227469517	0.203868565	0.995092734	0.532	
TSLA	0.137035679	0.356031702	0.315798536	1.953	
CVS	0.21679954	0.163820171	1.173226408	0.563	
BLK	0.086084052	0.191993261	0.320233445	1.255	
SPY	0.152025195	0.115354437	1.104628563	1	
Market-Weighted	0.162564603	0.122531475	1.125941016	1.5453	
Equal-Weighted	0.175798564	0.083796242	1.804343148	1.1527	
Risk-Free Rate	0.024601	0.006341	0	0	



# STANDARD DEVIATION RISK |

# CONCLUSION & RECOMMENDATIONS

- Equal-Weighted portfolio had the best Sharpe Ratio (1.80)
- TSLA carried the highest risk, but not the highest Sharpe
- Market-Weighted portfolio offered better risk-adjusted return than SPY
- Recommendation: Diversify with Equal-Weighted strategy for optimal performance