Portfolio Efficient Frontier – Group 15

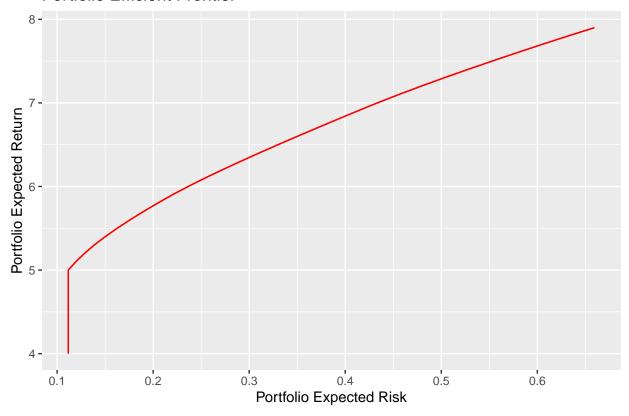
Garrett Stephens, Sabrina Rodriguez, Mikayla Williams, Jeffri Behrens

12/10/2022

Portfolio Efficient Frontier

Below is the Efficient Frontier based on the returns of Nasdaq listed stocks from January 2000 to December 2009. The graph depicts the frontier from a 4% to a 7.9% expected portfolio return.

Portfolio Efficient Frontier



^{**} The Expected Return is in percentage (%) units; The Expected Risk is the Portfolio Standard Deviation.

Commentary

The Efficient Frontier visualizes the potential return someone can expect given their risk tolerance. As one's risk tolerance increases, so does their expected return – greater risk exposes you to greater reward (or loss) as these stock are much more volatile. A portfolio above this line is impossible because the efficient frontier and the area below it represents the feasible region of stock compositions. An investor would desire to be along the efficient line because a portfolio that experiences the same risk but is far from the line can be achieving greater returns.

Data Points of the Efficient Frontier

The Points of the above graph is available below.

##		expReturn	expRisk
##	1	4.0	0.1116
##	2	4.1	0.1116
##	3	4.2	0.1116
##	4	4.3	0.1116
##	5	4.4	0.1116
##	6	4.5	0.1116
##	7	4.6	0.1116
##	8	4.7	0.1116
##	9	4.8	0.1116
##	10	4.9	0.1116
##	11	5.0	0.1116
##	12	5.1	0.1195
##	13	5.2	0.1285
##	14	5.3	0.1387
##	15	5.4	0.1501
##	16	5.5	0.1625
##	17	5.6	0.1758
##	18	5.7	0.1899
##	19	5.8	0.2046
##	20	5.9	0.2199
##	21	6.0	0.2364
##	22	6.1	0.2538
##	23	6.2	0.2721
##	24	6.3	0.2909
##	25	6.4	0.3102
##	26	6.5	0.3300
##	27	6.6	0.3501
##	28	6.7	0.3706
##	29	6.8	0.3912
##	30	6.9	0.4121
##	31	7.0	0.4334
##	32	7.1	0.4557
##	33	7.2	0.4789
##	34	7.3	0.5029
##	35	7.4	0.5276
##	36	7.5	0.5529
##	37	7.6	0.5787
##	38	7.7	0.6049
##	39	7.8	0.6318
##	40	7.9	0.6594