Homework 3

FIN580 Practical Asset Allocation

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Problem 1

Momentum model with a window of 3 months and a reversal of 1 month.
Long: top decile (equal dollars) and short bottom decile (equal dollars). Equal dollars means that each of the stocks in the decile is long or short the same amount. Since you have 50 stocks, the top decile will be 5 stocks and the bottom decile will be 5 stocks.

Mean Realized Return	Standard Deviation of Returns	Skewness	Kurtosis	Best Month Return		Worst Month Return	
0.27%	2.8%	0.61	5.73	02-2013	12.4%	04-2014	-6.8%

Additional Statistics

| Annualized Volatility	Sharp Ratio	VaR (5%)	CVaR(5%)
9.7%	0.29	-4.2%	-5%

Histogram of Returns
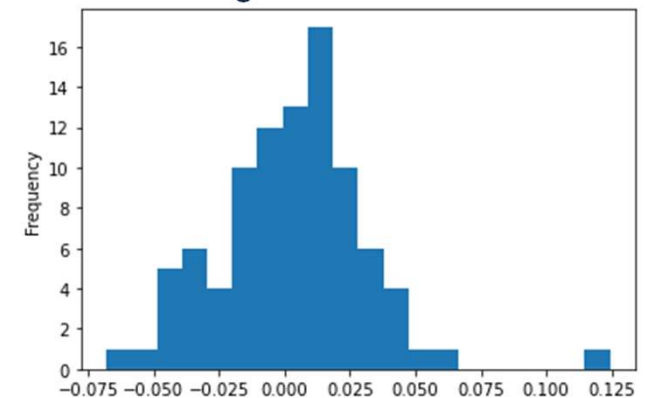
Problem 2

Add diversification. Instead of being long the top decile, be long the top half. 25 stocks long and 25 short.

Mean Realized Return	Standard Deviation of Returns	Skewness	Kurtosis	Best Month Return		Worst Month Return	
-0.02%	0.94%	-0.55	3.04	02-2013	2.1%	01-2019	-2.4%

Additional Statistics

Annualized Volatility	Sharp Ratio	VaR (5%)	CVaR(5%)
3.3%	-0.08	-1.8%	-2.2%

Histogram of Returns
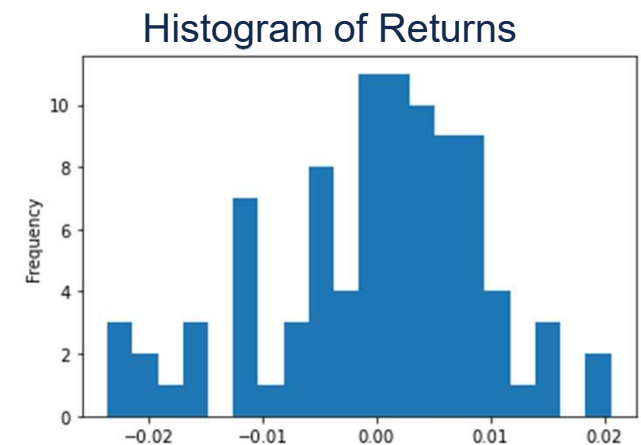
Problem 3

Back to top and bottom deciles. However, instead of weighting equal dollars, weight each stock in the long and the short by their volatility over the previous 50 days, so that the long and the short have the same volatility (you choose some arbitrary number like 5% if you need).

Mean Realized Return	Standard Deviation of Returns	Skewness	Kurtosis	Best Month Return		Worst Month Return	
0.15%	2.3%	0.15	3.63	02-2013	7.3%	01-2019	-6.2%

Additional Statistics

Annualized Volatility	Sharp Ratio	VaR (5%)	CVaR(5%)
7.9%	0.20	-3.5%	-4.3%

Histogram of Returns