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Initial stocks: TAVHL, ARCLK, ALBRK, BJKAS, TRKCM, HURGZ, PETKM, JANTS, BIMAS, ENKAI, TTKOM, YATAS.

Report

* Initially, the allocation of the chosen portfolio and the forecasts were as follows:

Members	Money	Total
4	300 000 TL	1 200 000 TL

Portfolio	Return	σ	Weight of TAVHL	Weight of PETKM	Weight of BIMAS	Weight of YATAS
3	3%	6,525%	0,203	0,161	0,305	0,330
Money allocation:			244 139,634 TL	193 640,662 TL	366 119,577 TL	396 100,126 TL
Close price on 16.04.2019:			24,00 TL	4,57 TL	79,45 TL	4,74 TL
# of shares (approximately):			10172,48	42372,14	4608,18	83565,43

* This portfolio composition was virtually bought on Bloomberg (TMSG) as the market opened on Thursday, April 18th, 2019 and was sold back after four weeks, when the market opened on Thursday, May 16th, 2019:

	# of shares	18.04.2019 (open price)	Total (0)	Weight (realized)	16.05.2019 (open price)	Total (end)		
TAVHL	10063	24,26	244128,4	0,203450	22,98	231247,7		
PETKM	41025	4,72	193638	0,161372	4,74	194458,5		
BIMAS	4576	80	366080	0,305081	74,2	339539,2		
YATAS	82349	4,81	396098,7	0,330097	3,99	328572,5		
			1199945			1093818		Total return
								-8,84%

* To analyze and compare the portfolio performance, the weekly data of security prices, market index (BIST-100) and assumed index of risk-free rate (TRGOV01) were obtained:

		Values (open prices)						
Week	Date	TAVHL	PETKM	BIMAS	YATAS	BIST100	TRGOV01	
0	18.04.2019	24,26	4,72	80	4,81	97911,9	176,64	
1	25.04.2019	23,54	4,57	79,7	4,72	96351,05	173,48	
2	02.05.2019	25,28	4,48	82,95	4,43	95729,8	167,81	
3	09.05.2019	24,36	4,54	78,5	4,2	90312,49	163,67	
4	16.05.2019	22,98	4,74	74,2	3,99	87664,5	168,42	(portfolio)
Period return (4 weeks):		-5,28%	0,42%	-7,25%	-17,05%	-10,47%	-4,65%	-8,84%

Although the previous assignments were summarized on Wednesdays, since the portfolio securities were both bought and sold on Bloomberg (TMSG) on Thursday morning as the market opened, the open prices of each week's Thursday were utilized in the analysis.

Moreover, given that the data of one Wednesday in a row, the 1st of May, was absent because the market was closed on this national holiday, using Thursday open prices would be more relevant and consistent. Therefore, Thursday open prices, ensuring equal distribution of weekly periods from the purchase towards the sale of securities, were used.

* For comparison purposes, the weekly data of a friends' portfolio (Group 6) were also obtained:

Group 6		CEMAS	ICBCT	HEKTS	IDEAS	KCHOL	
Weights		0,034	0,139	0,511	0,152	0,164	
		Values (open prices)					
Week	Date	CEMAS	ICBCT	HEKTS	IDEAS	KCHOL	
0	18.04.2019	0,73	3,69	12,05	25,3	17,02	
1	25.04.2019	0,73	3,6	12,64	19,99	16,57	
2	02.05.2019	0,72	3,44	12,1	19,16	16,24	
3	09.05.2019	0,72	3,19	11,31	13,04	15,3	
4	16.05.2019	0,71	2,92	11,67	13,61	15,34	(portfolio)
Period return (4 weeks):		-2,74%	-20,87%	-3,15%	-46,21%	-9,87%	-13,25%

The data of Group 6 used in this report and all the related calculations may slightly differ from theirs due to different calculation methods (e.g., close prices vs. open prices); the adjusted ones were deployed for the sake of consistency.

* Using the data above, the weekly returns and some relevant statistics were calculated:

		Weekly returns							
Week	Date	TAVHL	PETKM	BIMAS	YATAS	BIST100	TRGOV01	Portfolio	Friends' portfolio
0	18.04.2019	-	-	-	-	-	-	-	-
1	25.04.2019	-2,97%	-3,18%	-0,37%	-1,87%	-1,59%	-1,79%	-1,85%	-1,46%
2	02.05.2019	7,39%	-1,97%	4,08%	-6,14%	-0,64%	-3,27%	0,40%	-3,81%
3	09.05.2019	-3,64%	1,34%	-5,36%	-5,19%	-5,66%	-2,47%	-3,87%	-10,15%
4	16.05.2019	-5,67%	4,41%	-5,48%	-5,00%	-2,93%	2,90%	-3,76%	1,11%
(weekly)							(ar _m)	(ar _f)	(ar _p)
Mean		-1,22%	0,15%	-1,78%	-4,55%	-2,71%	-1,16%	-2,27%	-3,58%
StDev		5,85%	3,42%	4,58%	1,86%	2,18%	2,77%	2,01%	4,82%
							(σ _m)	(σ _f)	(σ _p)

Portfolio β	0,78756
Friends' β	0,43161

(The portfolio beta was calculated in the second part of the project)

* Utilizing the weekly returns, risk adjusted performance measures and the holding period returns were calculated in order to evaluate and compare the performance of the portfolio:

	Portfolio	Market	Friends' portfolio
Holding Period Return	-8,84%	-10,47%	-13,25%
Jensen's alpha	0,44%	0%	-0,87%
Treynor's measure	-1,42%	-1,55%	-5,61%
Sharpe ratio	-0,555	-0,712	-0,502
M²	0,34%	0%	0,46%
Information ratio	0,417	0	-0,184

If to compare the portfolio measures with the market, all of them, holding period return, excess returns and volatility measures, appear to be greater, i. e. superior to the market.

On the other hand, while comparing with the portfolio of Group 6 (Friends' portfolio), it can be observed that our portfolio is superior according to holding period return and all risk adjusted performance measures, except for the Sharpe ratio and M² measure, which are slightly greater in the friends' portfolio. It means that the risk is more rewarded (or has less loss per each unit of risk in this case) in the friends' portfolio.

Therefore, despite the fact that the portfolio has absolute loss due to considerable decline in the Turkish market, it is not doing as bad as the market on average and possibly a random (friends') portfolio.

References

- Bloomberg databases were used to obtain the financial data on the securities.