

```
--2024-02-11 20:56:55-- https://raw.githubusercontent.com/MarkovMarkowitz/MarkovMarkowitz/main/XLS-CSV/Best_PF_For_bist30.csv
Resolving raw.githubusercontent.com (raw.githubusercontent.com)... 185.199.111.133, 185.199.108.133, 185.199.109.133, ...
Connecting to raw.githubusercontent.com (raw.githubusercontent.com)|185.199.111.133|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 924 [text/plain]
Failed to rename Best_PF_For_bist30.csv to Best_PF_For_bist30.csv.1: (2) No such file or directory
Saving to: 'Best_PF_For_bist30.csv'
```

```
Best_PF_For_bist30. 100%[=====>]          924  --.-KB/s    in 0s
```

```
2024-02-11 20:56:56 (24.0 MB/s) - 'Best_PF_For_bist30.csv' saved [924/924]
```

```
--2024-02-11 20:56:56-- https://raw.githubusercontent.com/MarkovMarkowitz/MarkovMarkowitz/main/CUSTOMERS/NEG_SHARPE.csv
Resolving raw.githubusercontent.com (raw.githubusercontent.com)... 185.199.109.133, 185.199.108.133, 185.199.110.133, ...
Connecting to raw.githubusercontent.com (raw.githubusercontent.com)|185.199.109.133|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 724 [text/plain]
Failed to rename NEG_SHARPE.csv to NEG_SHARPE.csv.1: (2) No such file or directory
Saving to: 'NEG_SHARPE.csv'
```

```
NEG_SHARPE.csv      100%[=====>]          724  --.-KB/s    in 0s
```

```
2024-02-11 20:56:57 (8.64 MB/s) - 'NEG_SHARPE.csv' saved [724/724]
```

```
Current Date: 2024-02-11
45 days before current date: 2023-12-28
0 days before current date: 2024-02-12
```

Requirement already satisfied: pyfolio in /usr/local/lib/python3.10/dist-packages (0.9.2)

Requirement already satisfied: ipython>=3.2.3 in /usr/local/lib/python3.10/dist-packages (from pyfolio) (7.34.0)

Requirement already satisfied: matplotlib>=1.4.0 in /usr/local/lib/python3.10/dist-packages (from pyfolio) (3.7.1)

Requirement already satisfied: numpy>=1.11.1 in /usr/local/lib/python3.10/dist-packages (from pyfolio) (1.23.5)

Requirement already satisfied: pandas>=0.18.1 in /usr/local/lib/python3.10/dist-packages (from pyfolio) (1.5.3)

Requirement already satisfied: pytz>=2014.10 in /usr/local/lib/python3.10/dist-packages (from pyfolio) (2023.4)

Requirement already satisfied: scipy>=0.14.0 in /usr/local/lib/python3.10/dist-packages (from pyfolio) (1.11.4)

Requirement already satisfied: scikit-learn>=0.16.1 in /usr/local/lib/python3.10/dist-packages (from pyfolio) (1.2.2)

Requirement already satisfied: seaborn>=0.7.1 in /usr/local/lib/python3.10/dist-packages (from pyfolio) (0.13.1)

Requirement already satisfied: empyrical>=0.5.0 in /usr/local/lib/python3.10/dist-packages (from pyfolio) (0.5.5)

Requirement already satisfied: pandas-datareader>=0.2 in /usr/local/lib/python3.10/dist-packages (from empyrical>=0.5.0->pyfolio) (0.10.0)

Requirement already satisfied: setuptools>=18.5 in /usr/local/lib/python3.10/dist-packages (from ipython>=3.2.3->pyfolio) (67.7.2)

Requirement already satisfied: jedi>=0.16 in /usr/local/lib/python3.10/dist-packages (from ipython>=3.2.3->pyfolio) (0.19.1)

Requirement already satisfied: decorator in /usr/local/lib/python3.10/dist-packages (from ipython>=3.2.3->pyfolio) (4.4.2)

Requirement already satisfied: pickleshare in /usr/local/lib/python3.10/dist-packages (from ipython>=3.2.3->pyfolio) (0.7.5)

Requirement already satisfied: traitlets>=4.2 in /usr/local/lib/python3.10/dist-packages (from ipython>=3.2.3->pyfolio) (5.7.1)

Requirement already satisfied: prompt-toolkit!=3.0.0,!3.0.1,<3.1.0,>=2.0.0 in /usr/local/lib/python3.10/dist-packages (from ipython>=3.2.3->pyfolio) (3.0.43)

Requirement already satisfied: pygments in /usr/local/lib/python3.10/dist-packages (from ipython>=3.2.3->pyfolio) (2.16.1)

Requirement already satisfied: backcall in /usr/local/lib/python3.10/dist-packages (from ipython>=3.2.3->pyfolio) (0.2.0)

Requirement already satisfied: matplotlib-inline in /usr/local/lib/python3.10/dist-packages (from ipython>=3.2.3->pyfolio) (0.1.6)

Requirement already satisfied: pexpect>4.3 in /usr/local/lib/python3.10/dist-packages (from ipython>=3.2.3->pyfolio) (4.9.0)

Requirement already satisfied: contourpy>=1.0.1 in /usr/local/lib/python3.10/dist-packages (from matplotlib>=1.4.0->pyfolio) (1.2.0)

Requirement already satisfied: cycycler>=0.10 in /usr/local/lib/python3.10/dist-packages (from matplotlib>=1.4.0->pyfolio) (0.12.1)

Requirement already satisfied: fonttools>=4.22.0 in /usr/local/lib/python3.10/dist-packages (from matplotlib>=1.4.0->pyfolio) (4.48.1)

Requirement already satisfied: kiwisolver>=1.0.1 in /usr/local/lib/python3.10/dist-packages (from matplotlib>=1.4.0->pyfolio) (1.4.5)

Requirement already satisfied: packaging>=20.0 in /usr/local/lib/python3.10/dist-packages (from matplotlib>=1.4.0->pyfolio) (23.2)

Requirement already satisfied: pillow>=6.2.0 in /usr/local/lib/python3.10/dist-packages (from matplotlib>=1.4.0->pyfolio) (9.4.0)

Requirement already satisfied: pyparsing>=2.3.1 in /usr/local/lib/python3.10/dist-packages (from matplotlib>=1.4.0->pyfolio) (3.1.1)

Requirement already satisfied: python-dateutil>=2.7 in /usr/local/lib/python3.10/dist-packages (from matplotlib>=1.4.0->pyfolio) (2.8.2)

Requirement already satisfied: joblib>=1.1.1 in /usr/local/lib/python3.10/dist-packages (from scikit-learn>=0.16.1->pyfolio) (1.3.2)

Requirement already satisfied: threadpoolctl>=2.0.0 in /usr/local/lib/python3.10/dist-packages (from scikit-learn>=0.16.1->pyfolio) (3.2.0)

Requirement already satisfied: parso<0.9.0,>=0.8.3 in /usr/local/lib/python3.10/dist-packages (from jedi>=0.16->ipython>=3.2.3->pyfolio) (0.8.3)

Requirement already satisfied: lxml in /usr/local/lib/python3.10/dist-packages (from pandas-datareader>=0.2->empyirical>=0.5.0->pyfolio) (4.9.4)

Requirement already satisfied: requests>=2.19.0 in /usr/local/lib/python3.10/dist-packages (from pandas-datareader>=0.2->empyirical>=0.5.0->pyfolio) (2.31.0)

Requirement already satisfied: ptyprocess>=0.5 in /usr/local/lib/python3.10/dist-packages (from pexpect>4.3->ipython>=3.2.3->pyfolio) (0.7.0)

Requirement already satisfied: wcwidth in /usr/local/lib/python3.10/dist-packages (from prompt-toolkit!=3.0.0,!3.0.1,<3.1.0,>=2.0.0->ipython>=3.2.3->pyfolio) (0.2.13)

Requirement already satisfied: six>=1.5 in /usr/local/lib/python3.10/dist-packages (from python-dateutil>=2.7->matplotlib>=1.4.0->pyfolio) (1.16.0)

Requirement already satisfied: charset-normalizer<4,>=2 in /usr/local/lib/python3.10/dist-packages (from requests>=2.19.0->pandas-datareader>=0.2->empyirical>=0.5.0->pyfolio) (3.3.2)

Requirement already satisfied: idna<4,>=2.5 in /usr/local/lib/python3.10/dist-packages (from requests>=2.19.0->pandas-datareader>=0.2->empyirical>=0.5.0->pyfolio) (3.6)

Requirement already satisfied: urllib3<3,>=1.21.1 in /usr/local/lib/python3.10/dist-packages (from requests>=2.19.0->pandas-datareader>=0.2->empyirical>=0.5.0->pyfolio) (2.0.7)

Requirement already satisfied: certifi>=2017.4.17 in /usr/local/lib/python3.10/dist-packages (from requests>=2.19.0->pandas-datareader>=0.2->empyirical>=0.5.0->pyfolio) (2024.2.2)

Special Eyes-Only Report on

## Individual Portfolio Analysis and Further Suggestions

Report written by **Markov Markowitz Company**

Report issued on **27.08.2023**

Any comments should be sent to: [info@markovmarkowitz.com](mailto:info@markovmarkowitz.com)

## Step 1: Analysis of present portfolio

Dear Customer,

Per your request, we analysed your present portfolio, as of **27.08.2023** as follows:

	Symbol	Current Price	Date	Time	Change	Open	High	Low	Volume	Trade Date	Purchase Price	Quantity	Commission	PnL
Symbol														
IPEKE.IS	IPEKE.IS	39.02	2024/02/09	17:09 TRT	0.820000	38.40	39.44	38.34	8593095	20231226	29.82	623.0		NaN
GUBRF.IS	GUBRF.IS	163.60	2024/02/09	17:09 TRT	5.600006	161.40	170.20	161.40	32624059	20231226	172.60	232.0		NaN
AKFGY.IS	AKFGY.IS	2.32	2024/02/09	17:09 TRT	0.010000	2.32	2.34	2.28	122356431	20231226	1.75	21828.0		NaN
KOZAL.IS	KOZAL.IS	22.14	2024/02/09	17:09 TRT	0.920000	21.36	22.44	21.34	198577157	20231226	18.99	8588.0		NaN
AHGAZ.IS	AHGAZ.IS	13.51	2024/02/09	17:09 TRT	0.200000	13.34	13.70	13.26	14325825	20231226	9.62	48279.0		NaN
TUKAS.IS	TUKAS.IS	8.84	2024/02/09	17:09 TRT	0.090000	8.75	9.04	8.71	27887920	20231226	6.30	42190.0		0.0

1328252.8299999998

```
<ipython-input-108-ed49d056d309>:4: SettingWithCopyWarning:
A value is trying to be set on a copy of a slice from a DataFrame.
Try using .loc[row_indexer,col_indexer] = value instead

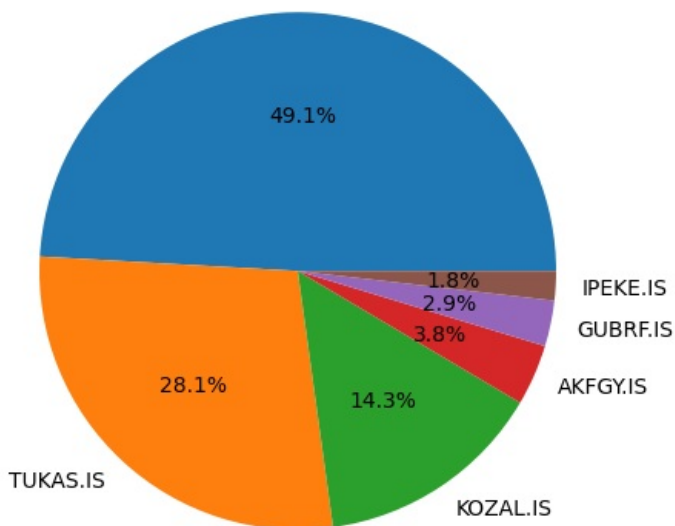
See the caveats in the documentation: https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy
MYPF['Purchase Amount'] = np.trunc(MYPF['End PF %']*CURRENT_T2/100)
<ipython-input-108-ed49d056d309>:5: SettingWithCopyWarning:
A value is trying to be set on a copy of a slice from a DataFrame.
Try using .loc[row_indexer,col_indexer] = value instead

See the caveats in the documentation: https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy
MYPF['End Quantity'] = np.trunc(MYPF['Purchase Amount'] / MYPF['Current Price'])
<ipython-input-108-ed49d056d309>:7: SettingWithCopyWarning:
A value is trying to be set on a copy of a slice from a DataFrame

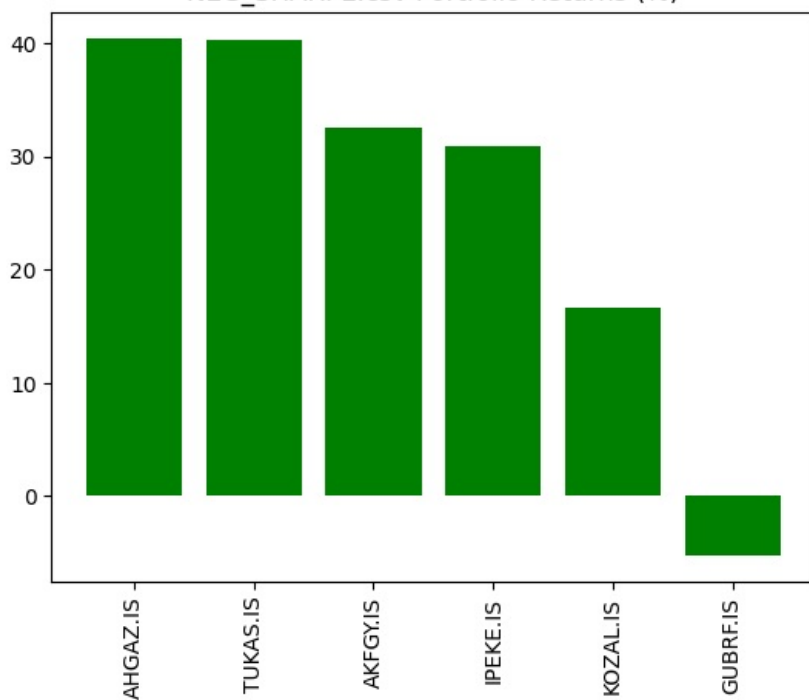
See the caveats in the documentation: https://pandas.pydata.org/pandas-docs/stable/user_guide/indexing.html#returning-a-view-versus-a-copy
MYPF.dropna(inplace=True)
```

	Quantity	Purchase Price	Purchased Value	Current Price	Market Value	Start PF %	End PF %	PnL %	Purchase Amount	End Quantity
Symbol										
AHGAZ.IS	48279.0	9.62	464443.98	13.51	652249.29	46.90656	49.10581	40.436590	652249.0	48278.0
TUKAS.IS	42190.0	6.30	265797.00	8.84	372959.60	26.84419	28.07896	40.317460	372959.0	42189.0
KOZAL.IS	8588.0	18.99	163086.12	22.14	190138.32	16.47090	14.31492	16.587678	190138.0	8587.0
GUBRF.IS	232.0	172.60	40043.20	163.60	37955.20	4.04417	2.85753	-5.214368	37955.0	231.0
AKFGY.IS	21828.0	1.75	38199.00	2.32	50640.96	3.85791	3.81260	32.571429	50640.0	21827.0
IPEKE.IS	623.0	29.82	18577.86	39.02	24309.46	1.87627	1.83018	30.851777	24309.0	622.0

NEG\_SHARPE.csv Portfolio  
AHGAZ.IS



NEG\_SHARPE.csv Portfolio Returns (%)



Symbol	Quantity	Purchase Price	Purchased Value	Current Price	Market Value	Start PF %	End PF %	PnL %	Purchase Amount	End Quantity
AHGAZ.IS	48279.0	9.62	464443.98	13.51	652249.29	46.90656	49.10581	40.436590	652249.0	48278.0
TUKAS.IS	42190.0	6.30	265797.00	8.84	372959.60	26.84419	28.07896	40.317460	372959.0	42189.0
KOZAL.IS	8588.0	18.99	163086.12	22.14	190138.32	16.47090	14.31492	16.587678	190138.0	8587.0
AKFGY.IS	21828.0	1.75	38199.00	2.32	50640.96	3.85791	3.81260	32.571429	50640.0	21827.0
GUBRF.IS	232.0	172.60	40043.20	163.60	37955.20	4.04417	2.85753	-5.214368	37955.0	231.0
IPEKE.IS	623.0	29.82	18577.86	39.02	24309.46	1.87627	1.83018	30.851777	24309.0	622.0

Dear Customer, now starting to analyze your current portfolio performance...

-----  
 \*\*\*\*\*  
 Starting Download ...  
 \*\*\*\*\*  
 Downloading AHGAZ.IS  
 Downloading TUKAS.IS  
 Downloading KOZAL.IS  
 Downloading AKFGY.IS  
 Downloading GUBRF.IS

Downloading IPEKE.IS  
\*\*\*\*\*  
\*\*\*\*\*

[ Date	Open	High	Low	Close	Volume	Dividends	\
2023-12-28 00:00:00+03:00	8.91	9.73	8.83	9.73	32468930	0.0	
2023-12-29 00:00:00+03:00	9.71	10.65	9.57	10.24	22037878	0.0	
2024-01-02 00:00:00+03:00	10.25	10.55	10.25	10.31	9060918	0.0	
2024-01-03 00:00:00+03:00	10.39	10.39	9.85	9.90	9493398	0.0	
2024-01-04 00:00:00+03:00	10.01	10.15	9.85	10.15	4933550	0.0	
2024-01-05 00:00:00+03:00	10.15	10.26	10.05	10.21	5347975	0.0	
2024-01-08 00:00:00+03:00	10.25	10.41	10.19	10.32	7256524	0.0	
2024-01-09 00:00:00+03:00	10.32	10.40	9.98	10.04	7813816	0.0	
2024-01-10 00:00:00+03:00	10.05	10.14	9.98	10.10	6712042	0.0	
2024-01-11 00:00:00+03:00	10.11	10.31	10.10	10.22	8071099	0.0	
2024-01-12 00:00:00+03:00	10.22	10.45	10.14	10.36	11237474	0.0	
2024-01-15 00:00:00+03:00	10.37	10.87	10.36	10.64	10525957	0.0	
2024-01-16 00:00:00+03:00	10.64	10.73	10.51	10.56	7262699	0.0	
2024-01-17 00:00:00+03:00	10.56	10.73	10.54	10.72	6850278	0.0	
2024-01-18 00:00:00+03:00	10.82	11.06	10.73	11.00	9525878	0.0	
2024-01-19 00:00:00+03:00	11.02	12.10	11.02	12.10	32301809	0.0	
2024-01-22 00:00:00+03:00	12.23	12.96	12.13	12.18	36515079	0.0	
2024-01-23 00:00:00+03:00	12.21	12.38	12.05	12.09	16786431	0.0	
2024-01-24 00:00:00+03:00	12.15	12.24	12.06	12.12	9671255	0.0	
2024-01-25 00:00:00+03:00	12.14	12.49	12.04	12.29	13525207	0.0	
2024-01-26 00:00:00+03:00	12.40	12.62	12.32	12.58	11627541	0.0	
2024-01-29 00:00:00+03:00	12.79	12.79	12.47	12.70	11994428	0.0	
2024-01-30 00:00:00+03:00	12.83	12.90	12.64	12.79	8928096	0.0	
2024-01-31 00:00:00+03:00	12.80	12.86	12.60	12.68	8893723	0.0	
2024-02-01 00:00:00+03:00	12.71	12.82	12.66	12.73	10164800	0.0	
2024-02-02 00:00:00+03:00	12.76	13.83	12.67	13.30	32678979	0.0	
2024-02-05 00:00:00+03:00	13.29	13.36	13.06	13.11	11631889	0.0	
2024-02-06 00:00:00+03:00	13.14	13.39	13.06	13.24	12457518	0.0	
2024-02-07 00:00:00+03:00	13.28	13.60	13.25	13.31	14795491	0.0	
2024-02-08 00:00:00+03:00	13.35	13.47	13.24	13.31	9137159	0.0	
2024-02-09 00:00:00+03:00	13.34	13.70	13.26	13.51	14325825	0.0	

Stock Splits

Date	Open	High	Low	Close	Volume	Dividends	\
2023-12-28 00:00:00+03:00							
2023-12-29 00:00:00+03:00							
2024-01-02 00:00:00+03:00							
2024-01-03 00:00:00+03:00							
2024-01-04 00:00:00+03:00							
2024-01-05 00:00:00+03:00							
2024-01-08 00:00:00+03:00							
2024-01-09 00:00:00+03:00							
2024-01-10 00:00:00+03:00							
2024-01-11 00:00:00+03:00							
2024-01-12 00:00:00+03:00							
2024-01-15 00:00:00+03:00							
2024-01-16 00:00:00+03:00							
2024-01-17 00:00:00+03:00							
2024-01-18 00:00:00+03:00							
2024-01-19 00:00:00+03:00							
2024-01-22 00:00:00+03:00							
2024-01-23 00:00:00+03:00							
2024-01-24 00:00:00+03:00							
2024-01-25 00:00:00+03:00							
2024-01-26 00:00:00+03:00							
2024-01-29 00:00:00+03:00							
2024-01-30 00:00:00+03:00							
2024-01-31 00:00:00+03:00							
2024-02-01 00:00:00+03:00							
2024-02-02 00:00:00+03:00							
2024-02-05 00:00:00+03:00							
2024-02-06 00:00:00+03:00							
2024-02-07 00:00:00+03:00							
2024-02-08 00:00:00+03:00							
2024-02-09 00:00:00+03:00							
Date	Open	High	Low	Close	Volume	Dividends	\
2023-12-28 00:00:00+03:00	6.40	7.04	6.40	6.63	13385860	0.0	
2023-12-29 00:00:00+03:00	6.65	6.86	6.52	6.83	9575663	0.0	
2024-01-02 00:00:00+03:00	6.86	7.10	6.86	7.10	12066222	0.0	
2024-01-03 00:00:00+03:00	7.10	7.11	6.76	6.76	11569759	0.0	
2024-01-04 00:00:00+03:00	6.76	6.87	6.68	6.84	8574842	0.0	
2024-01-05 00:00:00+03:00	6.83	6.98	6.82	6.94	7187678	0.0	
2024-01-08 00:00:00+03:00	6.94	7.19	6.94	7.11	12716049	0.0	
2024-01-09 00:00:00+03:00	7.18	7.20	6.88	6.94	10043692	0.0	
2024-01-10 00:00:00+03:00	6.94	7.00	6.85	6.94	7681363	0.0	
2024-01-11 00:00:00+03:00	6.96	7.08	6.89	6.93	9260303	0.0	
2024-01-12 00:00:00+03:00	6.92	7.23	6.81	7.15	24809529	0.0	
2024-01-15 00:00:00+03:00	7.15	7.25	7.06	7.09	15619836	0.0	
2024-01-16 00:00:00+03:00	7.10	7.21	7.04	7.15	14340047	0.0	
2024-01-17 00:00:00+03:00	7.13	7.31	7.11	7.25	14691358	0.0	
2024-01-18 00:00:00+03:00	7.28	7.79	7.28	7.41	28027187	0.0	
2024-01-19 00:00:00+03:00	7.42	7.52	7.33	7.38	11088326	0.0	
2024-01-22 00:00:00+03:00	7.38	7.51	7.32	7.38	10403833	0.0	
2024-01-23 00:00:00+03:00	7.48	7.56	7.27	7.31	14133935	0.0	

2024-01-24	00:00:00+03:00	7.32	7.48	7.25	7.47	11583644	0.0
2024-01-25	00:00:00+03:00	7.49	7.64	7.47	7.55	12806122	0.0
2024-01-26	00:00:00+03:00	7.55	7.68	7.50	7.66	15597975	0.0
2024-01-29	00:00:00+03:00	7.70	7.86	7.66	7.71	17259990	0.0
2024-01-30	00:00:00+03:00	7.80	7.83	7.63	7.63	13820766	0.0
2024-01-31	00:00:00+03:00	7.63	8.39	7.59	8.39	60425320	0.0
2024-02-01	00:00:00+03:00	8.39	9.03	8.23	8.59	85787413	0.0
2024-02-02	00:00:00+03:00	8.61	8.78	8.40	8.43	29833301	0.0
2024-02-05	00:00:00+03:00	8.42	8.54	8.37	8.52	17218886	0.0
2024-02-06	00:00:00+03:00	8.55	8.79	8.39	8.53	26530320	0.0
2024-02-07	00:00:00+03:00	8.54	8.69	8.42	8.42	21308758	0.0
2024-02-08	00:00:00+03:00	8.42	8.86	8.42	8.75	38149758	0.0
2024-02-09	00:00:00+03:00	8.75	9.04	8.71	8.84	27887920	0.0

Stock Splits							
Date							
2023-12-28	00:00:00+03:00		0.0				
2023-12-29	00:00:00+03:00		0.0				
2024-01-02	00:00:00+03:00		0.0				
2024-01-03	00:00:00+03:00		0.0				
2024-01-04	00:00:00+03:00		0.0				
2024-01-05	00:00:00+03:00		0.0				
2024-01-08	00:00:00+03:00		0.0				
2024-01-09	00:00:00+03:00		0.0				
2024-01-10	00:00:00+03:00		0.0				
2024-01-11	00:00:00+03:00		0.0				
2024-01-12	00:00:00+03:00		0.0				
2024-01-15	00:00:00+03:00		0.0				
2024-01-16	00:00:00+03:00		0.0				
2024-01-17	00:00:00+03:00		0.0				
2024-01-18	00:00:00+03:00		0.0				
2024-01-19	00:00:00+03:00		0.0				
2024-01-22	00:00:00+03:00		0.0				
2024-01-23	00:00:00+03:00		0.0				
2024-01-24	00:00:00+03:00		0.0				
2024-01-25	00:00:00+03:00		0.0				
2024-01-26	00:00:00+03:00		0.0				
2024-01-29	00:00:00+03:00		0.0				
2024-01-30	00:00:00+03:00		0.0				
2024-01-31	00:00:00+03:00		0.0				
2024-02-01	00:00:00+03:00		0.0				
2024-02-02	00:00:00+03:00		0.0				
2024-02-05	00:00:00+03:00		0.0				
2024-02-06	00:00:00+03:00		0.0				
2024-02-07	00:00:00+03:00		0.0				
2024-02-08	00:00:00+03:00		0.0				
2024-02-09	00:00:00+03:00		0.0	,	Open	High	Low Close Volume Dividends \
Date							
2023-12-28	00:00:00+03:00	19.27	19.87	19.27	19.57	53545992	0.0
2023-12-29	00:00:00+03:00	19.57	19.80	19.16	19.53	54120248	0.0
2024-01-02	00:00:00+03:00	19.64	19.96	19.60	19.91	59312280	0.0
2024-01-03	00:00:00+03:00	19.89	20.46	19.18	19.22	76622403	0.0
2024-01-04	00:00:00+03:00	19.18	19.69	19.06	19.67	54422489	0.0
2024-01-05	00:00:00+03:00	19.65	19.68	19.33	19.65	42220960	0.0
2024-01-08	00:00:00+03:00	19.75	19.99	19.69	19.78	59592076	0.0
2024-01-09	00:00:00+03:00	19.86	20.36	19.45	19.45	100762759	0.0
2024-01-10	00:00:00+03:00	19.45	19.77	19.39	19.60	76421569	0.0
2024-01-11	00:00:00+03:00	19.69	20.24	19.68	19.91	99894500	0.0
2024-01-12	00:00:00+03:00	19.75	21.52	19.61	20.40	104541215	0.0
2024-01-15	00:00:00+03:00	20.62	20.68	20.24	20.40	78625843	0.0
2024-01-16	00:00:00+03:00	20.50	20.60	20.28	20.34	97909181	0.0
2024-01-17	00:00:00+03:00	20.20	20.68	20.18	20.36	86451182	0.0
2024-01-18	00:00:00+03:00	20.54	20.58	20.10	20.12	61984547	0.0
2024-01-19	00:00:00+03:00	20.20	20.36	20.04	20.20	57472001	0.0
2024-01-22	00:00:00+03:00	20.14	20.54	20.04	20.10	63079803	0.0
2024-01-23	00:00:00+03:00	20.32	20.42	19.67	19.71	62179637	0.0
2024-01-24	00:00:00+03:00	19.78	20.10	19.53	19.93	65172606	0.0
2024-01-25	00:00:00+03:00	20.06	20.56	20.04	20.48	79808812	0.0
2024-01-26	00:00:00+03:00	20.54	20.92	20.34	20.88	90080307	0.0
2024-01-29	00:00:00+03:00	21.00	21.14	20.76	20.94	83930939	0.0
2024-01-30	00:00:00+03:00	21.00	21.20	20.64	20.74	77453129	0.0
2024-01-31	00:00:00+03:00	20.68	21.04	20.54	20.76	74256285	0.0
2024-02-01	00:00:00+03:00	20.78	21.42	20.78	21.20	107342912	0.0
2024-02-02	00:00:00+03:00	21.32	21.84	20.96	21.08	84025048	0.0
2024-02-05	00:00:00+03:00	21.24	21.38	21.10	21.36	68558234	0.0
2024-02-06	00:00:00+03:00	21.42	21.46	21.08	21.24	93998050	0.0
2024-02-07	00:00:00+03:00	21.30	21.60	21.08	21.12	103487365	0.0
2024-02-08	00:00:00+03:00	21.18	21.44	21.12	21.22	73679521	0.0
2024-02-09	00:00:00+03:00	21.36	22.44	21.34	22.14	198577157	0.0

Stock Splits		
Date		
2023-12-28	00:00:00+03:00	0.0
2023-12-29	00:00:00+03:00	0.0
2024-01-02	00:00:00+03:00	0.0
2024-01-03	00:00:00+03:00	0.0
2024-01-04	00:00:00+03:00	0.0
2024-01-05	00:00:00+03:00	0.0
2024-01-08	00:00:00+03:00	0.0

[illegible]

Date	
2023-12-28 00:00:00+03:00	0.0
2023-12-29 00:00:00+03:00	0.0
2024-01-02 00:00:00+03:00	0.0
2024-01-03 00:00:00+03:00	0.0
2024-01-04 00:00:00+03:00	0.0
2024-01-05 00:00:00+03:00	0.0
2024-01-08 00:00:00+03:00	0.0
2024-01-09 00:00:00+03:00	0.0
2024-01-10 00:00:00+03:00	0.0
2024-01-11 00:00:00+03:00	0.0
2024-01-12 00:00:00+03:00	0.0
2024-01-15 00:00:00+03:00	0.0
2024-01-16 00:00:00+03:00	0.0
2024-01-17 00:00:00+03:00	0.0
2024-01-18 00:00:00+03:00	0.0
2024-01-19 00:00:00+03:00	0.0
2024-01-22 00:00:00+03:00	0.0
2024-01-23 00:00:00+03:00	0.0
2024-01-24 00:00:00+03:00	0.0
2024-01-25 00:00:00+03:00	0.0
2024-01-26 00:00:00+03:00	0.0
2024-01-29 00:00:00+03:00	0.0
2024-01-30 00:00:00+03:00	0.0
2024-01-31 00:00:00+03:00	0.0
2024-02-01 00:00:00+03:00	0.0
2024-02-02 00:00:00+03:00	0.0
2024-02-05 00:00:00+03:00	0.0
2024-02-06 00:00:00+03:00	0.0
2024-02-07 00:00:00+03:00	0.0
2024-02-08 00:00:00+03:00	0.0

2024-02-09	00:00:00+03:00		0.0	,				Open	High	Low	Close	Volume	Dividends	\
Date														
2023-12-28	00:00:00+03:00	139.9	141.0	139.9	139.9	15850960	0.0							
2023-12-29	00:00:00+03:00	139.9	153.8	135.0	153.8	72382161	0.0							
2024-01-02	00:00:00+03:00	155.0	169.1	154.6	169.1	34025794	0.0							
2024-01-03	00:00:00+03:00	173.5	179.4	161.4	163.5	70903373	0.0							
2024-01-04	00:00:00+03:00	164.0	167.3	161.4	161.6	18969438	0.0							
2024-01-05	00:00:00+03:00	162.3	162.8	151.2	152.8	21863978	0.0							
2024-01-08	00:00:00+03:00	152.8	156.8	148.5	151.5	23067667	0.0							
2024-01-09	00:00:00+03:00	152.5	155.1	148.2	149.0	14317207	0.0							
2024-01-10	00:00:00+03:00	149.0	149.2	143.9	144.1	12981904	0.0							
2024-01-11	00:00:00+03:00	145.0	146.9	140.5	141.1	12203435	0.0							
2024-01-12	00:00:00+03:00	140.1	150.3	139.6	145.5	22670274	0.0							
2024-01-15	00:00:00+03:00	146.4	147.0	137.8	138.9	18778755	0.0							
2024-01-16	00:00:00+03:00	138.9	143.5	134.8	138.6	21782139	0.0							
2024-01-17	00:00:00+03:00	137.9	139.5	135.9	135.9	9118291	0.0							
2024-01-18	00:00:00+03:00	136.8	139.6	136.1	136.2	10210266	0.0							
2024-01-19	00:00:00+03:00	136.9	139.8	136.4	137.6	10194952	0.0							
2024-01-22	00:00:00+03:00	137.7	145.4	137.6	141.4	15231965	0.0							
2024-01-23	00:00:00+03:00	143.0	143.2	137.6	137.7	8192612	0.0							
2024-01-24	00:00:00+03:00	138.1	139.5	136.4	137.8	7431288	0.0							
2024-01-25	00:00:00+03:00	138.5	140.6	137.9	139.0	8165830	0.0							
2024-01-26	00:00:00+03:00	139.2	152.9	139.0	148.0	29629480	0.0							
2024-01-29	00:00:00+03:00	149.0	149.9	145.7	146.0	14086439	0.0							
2024-01-30	00:00:00+03:00	146.4	148.8	144.7	145.6	9032525	0.0							
2024-01-31	00:00:00+03:00	145.8	146.9	144.8	145.6	8678823	0.0							
2024-02-01	00:00:00+03:00	146.1	149.3	145.8	147.4	10777940	0.0							
2024-02-02	00:00:00+03:00	147.9	148.7	144.3	144.9	9099290	0.0							
2024-02-05	00:00:00+03:00	145.3	146.1	144.3	144.3	6578295	0.0							
2024-02-06	00:00:00+03:00	144.6	145.3	142.5	143.0	7727266	0.0							
2024-02-07	00:00:00+03:00	143.3	148.0	142.5	143.7	14691492	0.0							
2024-02-08	00:00:00+03:00	144.4	158.0	143.6	158.0	31857762	0.0							
2024-02-09	00:00:00+03:00	161.4	170.2	161.4	163.6	32624059	0.0							

Stock Splits

Date														
2023-12-28	00:00:00+03:00		0.0											
2023-12-29	00:00:00+03:00		0.0											
2024-01-02	00:00:00+03:00		0.0											
2024-01-03	00:00:00+03:00		0.0											
2024-01-04	00:00:00+03:00		0.0											
2024-01-05	00:00:00+03:00		0.0											
2024-01-08	00:00:00+03:00		0.0											
2024-01-09	00:00:00+03:00		0.0											
2024-01-10	00:00:00+03:00		0.0											
2024-01-11	00:00:00+03:00		0.0											
2024-01-12	00:00:00+03:00		0.0											
2024-01-15	00:00:00+03:00		0.0											
2024-01-16	00:00:00+03:00		0.0											
2024-01-17	00:00:00+03:00		0.0											
2024-01-18	00:00:00+03:00		0.0											
2024-01-19	00:00:00+03:00		0.0											
2024-01-22	00:00:00+03:00		0.0											
2024-01-23	00:00:00+03:00		0.0											
2024-01-24	00:00:00+03:00		0.0											
2024-01-25	00:00:00+03:00		0.0											
2024-01-26	00:00:00+03:00		0.0											
2024-01-29	00:00:00+03:00		0.0											
2024-01-30	00:00:00+03:00		0.0											
2024-01-31	00:00:00+03:00		0.0											
2024-02-01	00:00:00+03:00		0.0											
2024-02-02	00:00:00+03:00		0.0											
2024-02-05	00:00:00+03:00		0.0											
2024-02-06	00:00:00+03:00		0.0											
2024-02-07	00:00:00+03:00		0.0											
2024-02-08	00:00:00+03:00		0.0											
2024-02-09	00:00:00+03:00		0.0	,				Open	High	Low	Close	Volume	Dividends	\
Date														
2023-12-28	00:00:00+03:00	30.60	31.98	30.60	31.90	1617481	0.0							
2023-12-29	00:00:00+03:00	31.90	32.44	31.54	31.92	1942798	0.0							
2024-01-02	00:00:00+03:00	32.38	32.90	32.30	32.90	2167449	0.0							
2024-01-03	00:00:00+03:00	32.88	34.66	31.70	31.88	2648582	0.0							
2024-01-04	00:00:00+03:00	31.86	33.30	31.68	33.20	4012817	0.0							
2024-01-05	00:00:00+03:00	33.30	33.40	32.58	33.10	1952404	0.0							
2024-01-08	00:00:00+03:00	33.20	33.90	33.14	33.44	2342944	0.0							
2024-01-09	00:00:00+03:00	33.58	34.24	32.62	32.62	4913300	0.0							
2024-01-10	00:00:00+03:00	32.66	33.02	32.40	32.64	3205280	0.0							
2024-01-11	00:00:00+03:00	32.70	33.70	32.68	33.14	4670020	0.0							
2024-01-12	00:00:00+03:00	33.10	34.20	32.58	33.86	5300228	0.0							
2024-01-15	00:00:00+03:00	34.24	34.78	33.94	34.46	4546751	0.0							
2024-01-16	00:00:00+03:00	34.60	34.72	33.98	34.10	3322091	0.0							
2024-01-17	00:00:00+03:00	33.98	34.94	33.90	34.38	5429865	0.0							
2024-01-18	00:00:00+03:00	34.54	34.66	33.48	33.60	3179052	0.0							
2024-01-19	00:00:00+03:00	33.60	34.90	33.26	34.76	5452041	0.0							
2024-01-22	00:00:00+03:00	34.74	35.06	34.22	34.24	4712308	0.0							
2024-01-23	00:00:00+03:00	34.44	34.66	33.74	33.98	3439594	0.0							
2024-01-24	00:00:00+03:00	33.98	35.04	33.56	34.66	7030147	0.0							
2024-01-25	00:00:00+03:00	34.98	36.52	34.78	36.14	6765351	0.0							
2024-01-26	00:00:00+03:00	36.30	36.64	35.34	36.40	7276485	0.0							



2024-01-29 00:00:00+03:00	36.54	37.00	36.18	36.68	4840607	0.0
2024-01-30 00:00:00+03:00	36.76	37.00	36.00	36.14	4755732	0.0
2024-01-31 00:00:00+03:00	36.18	36.70	36.02	36.34	5009773	0.0
2024-02-01 00:00:00+03:00	36.38	37.68	36.34	37.22	6125185	0.0
2024-02-02 00:00:00+03:00	37.50	38.24	35.80	35.86	7173675	0.0
2024-02-05 00:00:00+03:00	36.08	37.26	35.96	36.70	4802385	0.0
2024-02-06 00:00:00+03:00	36.68	37.20	36.34	37.00	4817252	0.0
2024-02-07 00:00:00+03:00	37.30	38.38	37.16	37.52	7374198	0.0
2024-02-08 00:00:00+03:00	37.80	38.20	37.66	38.20	4726054	0.0
2024-02-09 00:00:00+03:00	38.40	39.44	38.34	39.02	8593095	0.0

Stock Splits

date		
2023-12-28 00:00:00+03:00		0.0
2023-12-29 00:00:00+03:00		0.0
2024-01-02 00:00:00+03:00		0.0
2024-01-03 00:00:00+03:00		0.0
2024-01-04 00:00:00+03:00		0.0
2024-01-05 00:00:00+03:00		0.0
2024-01-08 00:00:00+03:00		0.0
2024-01-09 00:00:00+03:00		0.0
2024-01-10 00:00:00+03:00		0.0
2024-01-11 00:00:00+03:00		0.0
2024-01-12 00:00:00+03:00		0.0
2024-01-15 00:00:00+03:00		0.0
2024-01-16 00:00:00+03:00		0.0
2024-01-17 00:00:00+03:00		0.0
2024-01-18 00:00:00+03:00		0.0
2024-01-19 00:00:00+03:00		0.0
2024-01-22 00:00:00+03:00		0.0
2024-01-23 00:00:00+03:00		0.0
2024-01-24 00:00:00+03:00		0.0
2024-01-25 00:00:00+03:00		0.0
2024-01-26 00:00:00+03:00		0.0
2024-01-29 00:00:00+03:00		0.0
2024-01-30 00:00:00+03:00		0.0
2024-01-31 00:00:00+03:00		0.0
2024-02-01 00:00:00+03:00		0.0
2024-02-02 00:00:00+03:00		0.0
2024-02-05 00:00:00+03:00		0.0
2024-02-06 00:00:00+03:00		0.0
2024-02-07 00:00:00+03:00		0.0
2024-02-08 00:00:00+03:00		0.0
2024-02-09 00:00:00+03:00	0.0	]
Construct Time series...		

Ordered Table:

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	Date	AHGAZ.IS	TUKAS.IS	KOZAL.IS	AKFGY.IS	\
0	2023-12-28 00:00:00+03:00	9.73	6.63	19.57	1.86	
1	2023-12-29 00:00:00+03:00	10.24	6.83	19.53	1.97	
2	2024-01-02 00:00:00+03:00	10.31	7.10	19.91	1.95	
3	2024-01-03 00:00:00+03:00	9.90	6.76	19.22	1.84	
4	2024-01-04 00:00:00+03:00	10.15	6.84	19.67	1.86	
5	2024-01-05 00:00:00+03:00	10.21	6.94	19.65	1.83	
6	2024-01-08 00:00:00+03:00	10.32	7.11	19.78	1.90	
7	2024-01-09 00:00:00+03:00	10.04	6.94	19.45	1.86	
8	2024-01-10 00:00:00+03:00	10.10	6.94	19.60	1.88	
9	2024-01-11 00:00:00+03:00	10.22	6.93	19.91	1.91	
10	2024-01-12 00:00:00+03:00	10.36	7.15	20.40	1.89	
11	2024-01-15 00:00:00+03:00	10.64	7.09	20.40	1.91	
12	2024-01-16 00:00:00+03:00	10.56	7.15	20.34	1.90	
13	2024-01-17 00:00:00+03:00	10.72	7.25	20.36	1.89	
14	2024-01-18 00:00:00+03:00	11.00	7.41	20.12	1.87	
15	2024-01-19 00:00:00+03:00	12.10	7.38	20.20	1.87	
16	2024-01-22 00:00:00+03:00	12.18	7.38	20.10	1.91	
17	2024-01-23 00:00:00+03:00	12.09	7.31	19.71	1.92	
18	2024-01-24 00:00:00+03:00	12.12	7.47	19.93	1.95	
19	2024-01-25 00:00:00+03:00	12.29	7.55	20.48	2.04	
20	2024-01-26 00:00:00+03:00	12.58	7.66	20.88	2.08	
21	2024-01-29 00:00:00+03:00	12.70	7.71	20.94	2.04	
22	2024-01-30 00:00:00+03:00	12.79	7.63	20.74	2.02	
23	2024-01-31 00:00:00+03:00	12.68	8.39	20.76	2.05	
24	2024-02-01 00:00:00+03:00	12.73	8.59	21.20	2.09	
25	2024-02-02 00:00:00+03:00	13.30	8.43	21.08	2.16	
26	2024-02-05 00:00:00+03:00	13.11	8.52	21.36	2.19	
27	2024-02-06 00:00:00+03:00	13.24	8.53	21.24	2.19	
28	2024-02-07 00:00:00+03:00	13.31	8.42	21.12	2.24	
29	2024-02-08 00:00:00+03:00	13.31	8.75	21.22	2.31	
30	2024-02-09 00:00:00+03:00	13.51	8.84	22.14	2.32	

	GUBRF.IS	IPEKE.IS
0	139.9	31.90
1	153.8	31.92
2	169.1	32.90
3	163.5	31.88
4	161.6	33.20
5	152.8	33.10
6	151.5	33.44

7	149.0	32.62
8	144.1	32.64
9	141.1	33.14
10	145.5	33.86
11	138.9	34.46
12	138.6	34.10
13	135.9	34.38
14	136.2	33.60
15	137.6	34.76
16	141.4	34.24
17	137.7	33.98
18	137.8	34.66
19	139.0	36.14
20	148.0	36.40
21	146.0	36.68
22	145.6	36.14
23	145.6	36.34
24	147.4	37.22
25	144.9	35.86
26	144.3	36.70
27	143.0	37.00
28	143.7	37.52
29	158.0	38.20
30	163.6	39.02

Initial prices:  
Symbol  
AHGAZ.IS 9.73  
TUKAS.IS 6.63  
KOZAL.IS 19.57  
AKFGY.IS 1.86  
GUBRF.IS 139.9  
IPEKE.IS 31.9  
Name: InitialPrices, dtype: object

Final prices: Symbol  
AHGAZ.IS 13.51  
TUKAS.IS 8.84  
KOZAL.IS 22.14  
AKFGY.IS 2.32  
GUBRF.IS 163.6  
IPEKE.IS 39.02  
Name: FinalPrices, dtype: object

Prices:  
-----  
[[ 9.73 10.24 10.31 9.9 10.15 10.21 10.32 10.04 10.1 10.22  
10.36 10.64 10.56 10.72 11. 12.1 12.18 12.09 12.12 12.29  
12.58 12.7 12.79 12.68 12.73 13.3 13.11 13.24 13.31 13.31  
13.51]  
[ 6.63 6.83 7.1 6.76 6.84 6.94 7.11 6.94 6.94 6.93  
7.15 7.09 7.15 7.25 7.41 7.38 7.38 7.31 7.47 7.55  
7.66 7.71 7.63 8.39 8.59 8.43 8.52 8.53 8.42 8.75  
8.84]  
[ 19.57 19.53 19.91 19.22 19.67 19.65 19.78 19.45 19.6 19.91  
20.4 20.4 20.34 20.36 20.12 20.2 20.1 19.71 19.93 20.48  
20.88 20.94 20.74 20.76 21.2 21.08 21.36 21.24 21.12 21.22  
22.14]  
[ 1.86 1.97 1.95 1.84 1.86 1.83 1.9 1.86 1.88 1.91  
1.89 1.91 1.9 1.89 1.87 1.87 1.91 1.92 1.95 2.04  
2.08 2.04 2.02 2.05 2.09 2.16 2.19 2.19 2.24 2.31  
2.32]  
[139.9 153.8 169.1 163.5 161.6 152.8 151.5 149. 144.1 141.1  
145.5 138.9 138.6 135.9 136.2 137.6 141.4 137.7 137.8 139.  
148. 146. 145.6 145.6 147.4 144.9 144.3 143. 143.7 158.  
163.6 ]  
[ 31.9 31.92 32.9 31.88 33.2 33.1 33.44 32.62 32.64 33.14  
33.86 34.46 34.1 34.38 33.6 34.76 34.24 33.98 34.66 36.14  
36.4 36.68 36.14 36.34 37.22 35.86 36.7 37. 37.52 38.2  
39.02]]

FirstPrices:  
-----  
['2023-12-28 00:00:00+03:00' 9.73 6.63 19.57 1.86 139.9]  
portfolio['Portfolio\_Shares']:

-----  
Symbol  
AHGAZ.IS 48279.0  
TUKAS.IS 42190.0  
KOZAL.IS 8588.0  
AKFGY.IS 21828.0  
GUBRF.IS 232.0  
IPEKE.IS 623.0  
Name: Portfolio\_Shares, dtype: float64

prices:  
-----  
[[ 9.73 6.63 19.57 1.86 139.9 31.9 ]  
[ 10.24 6.83 19.53 1.97 153.8 31.92]]

[	10.31	7.1	19.91	1.95	169.1	32.9	]
[	9.9	6.76	19.22	1.84	163.5	31.88	]
[	10.15	6.84	19.67	1.86	161.6	33.2	]
[	10.21	6.94	19.65	1.83	152.8	33.1	]
[	10.32	7.11	19.78	1.9	151.5	33.44	]
[	10.04	6.94	19.45	1.86	149.	32.62	]
[	10.1	6.94	19.6	1.88	144.1	32.64	]
[	10.22	6.93	19.91	1.91	141.1	33.14	]
[	10.36	7.15	20.4	1.89	145.5	33.86	]
[	10.64	7.09	20.4	1.91	138.9	34.46	]
[	10.56	7.15	20.34	1.9	138.6	34.1	]
[	10.72	7.25	20.36	1.89	135.9	34.38	]
[	11.	7.41	20.12	1.87	136.2	33.6	]
[	12.1	7.38	20.2	1.87	137.6	34.76	]
[	12.18	7.38	20.1	1.91	141.4	34.24	]
[	12.09	7.31	19.71	1.92	137.7	33.98	]
[	12.12	7.47	19.93	1.95	137.8	34.66	]
[	12.29	7.55	20.48	2.04	139.	36.14	]
[	12.58	7.66	20.88	2.08	148.	36.4	]
[	12.7	7.71	20.94	2.04	146.	36.68	]
[	12.79	7.63	20.74	2.02	145.6	36.14	]
[	12.68	8.39	20.76	2.05	145.6	36.34	]
[	12.73	8.59	21.2	2.09	147.4	37.22	]
[	13.3	8.43	21.08	2.16	144.9	35.86	]
[	13.11	8.52	21.36	2.19	144.3	36.7	]
[	13.24	8.53	21.24	2.19	143.	37.	]
[	13.31	8.42	21.12	2.24	143.7	37.52	]
[	13.31	8.75	21.22	2.31	158.	38.2	]
[	13.51	8.84	22.14	2.32	163.6	39.02	]]

OrderedTable['PF\_Value']:

```
-----
0      1010472.11
1      1048827.22
2      1070585.07
3      1026184.62
4      1046312.29
5      1050497.53
6      1065535.14
7      1040046.70
8      1043543.86
9      1051848.06
10     1073129.84
11     1083395.72
12     1081037.36
13     1092482.52
14     1109837.02
15     1163412.74
16     1167847.02
17     1156397.19
18     1167587.00
19     1187057.99
20     1212258.10
21     1219513.68
22     1217900.21
23     1245605.12
24     1262074.75
25     1281913.50
26     1279981.19
27     1285534.10
28     1284819.93
29     1304870.63
30     1328252.83
```

Name: PF\_Value, dtype: float64  
Residue cash: 317780.719999999974

Average return of the current portfolio is 0.7255130650297559 %

Showing Tearsheet of NEG\_SHARPE.csv Portfolio...

```
=====
***** PORTFOLIO TEARSHEET *****
```

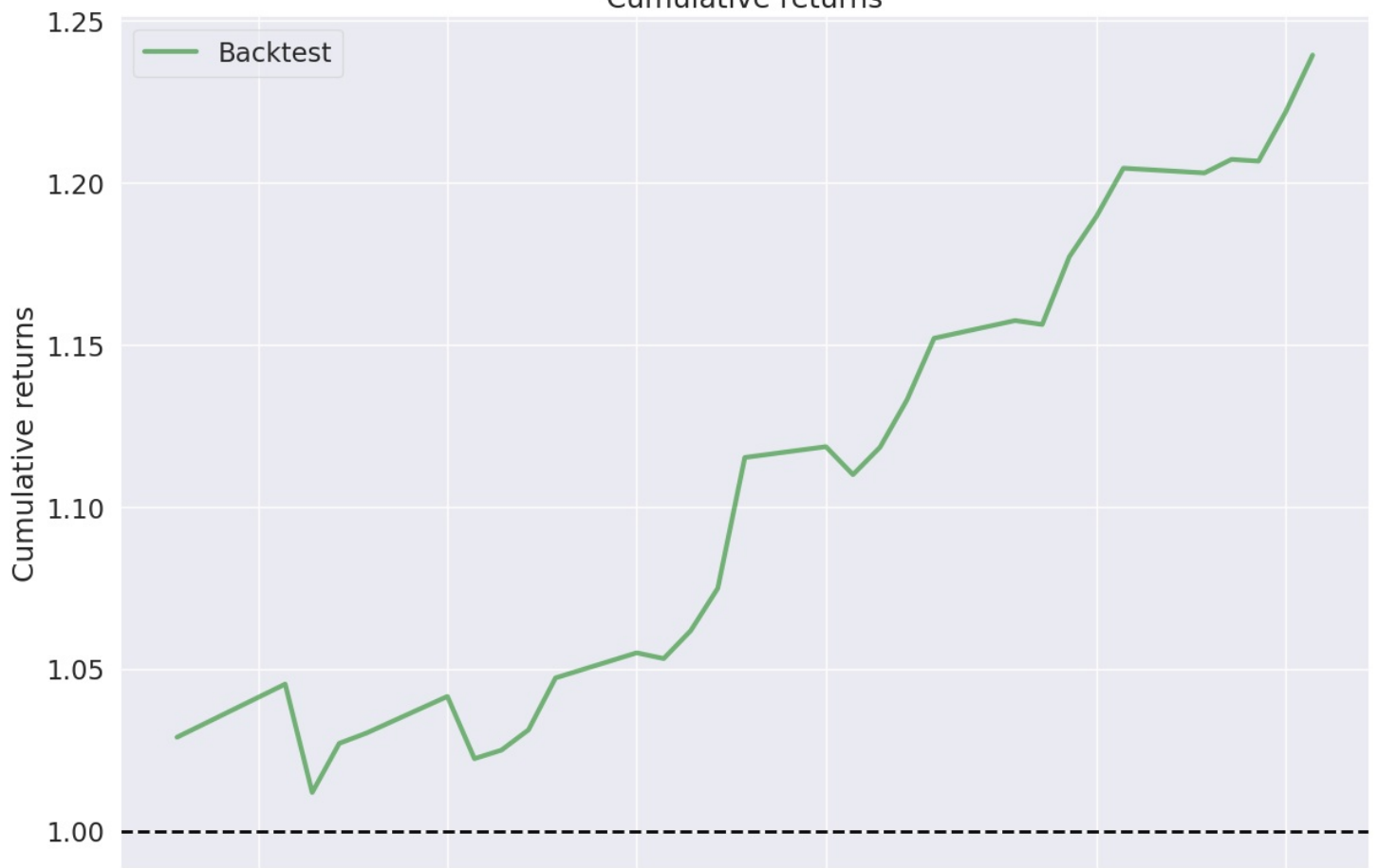
```
/usr/local/lib/python3.10/dist-packages/pyfolio/timeseries.py:724: FutureWarning: The default dtype for empty Series will
be 'object' instead of 'float64' in a future version. Specify a dtype explicitly to silence this warning.
    stats = pd.Series()
/usr/local/lib/python3.10/dist-packages/pyfolio/plotting.py:648: FutureWarning: iteritems is deprecated and will be remov
ed in a future version. Use .items instead.
    for stat, value in perf_stats[column].iteritems():
```

Start date	2023-12-29
End date	2024-02-09
Total months	1
Backtest	
Annual return	506.1%
Cumulative returns	23.9%
Annual volatility	20.4%
Sharpe ratio	8.98
Calmar ratio	158.25
Stability	0.94
Max drawdown	-3.2%
Omega ratio	4.48
Sortino ratio	16.70
Skew	-0.68
Kurtosis	2.25
Tail ratio	1.76
Daily value at risk	-1.8%

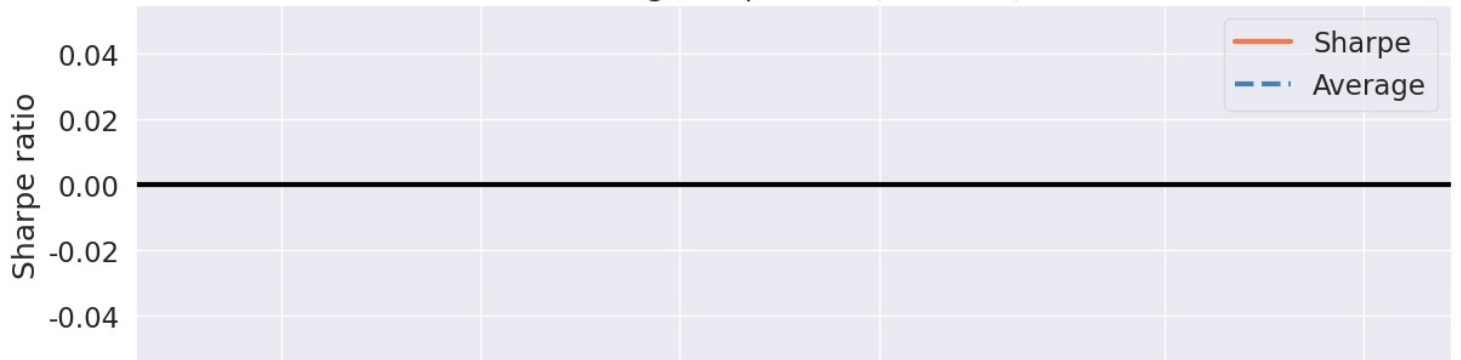
```
/usr/local/lib/python3.10/dist-packages/pyfolio/plotting.py:805: FutureWarning: The default dtype for empty Series will be 'object' instead of 'float64' in a future version. Specify a dtype explicitly to silence this warning.
  oos_cum_returns = pd.Series([])
***** end of TEARSHEET *****
```

Error generating returns tear sheet: 'NoneType' object has no attribute 'savefig'

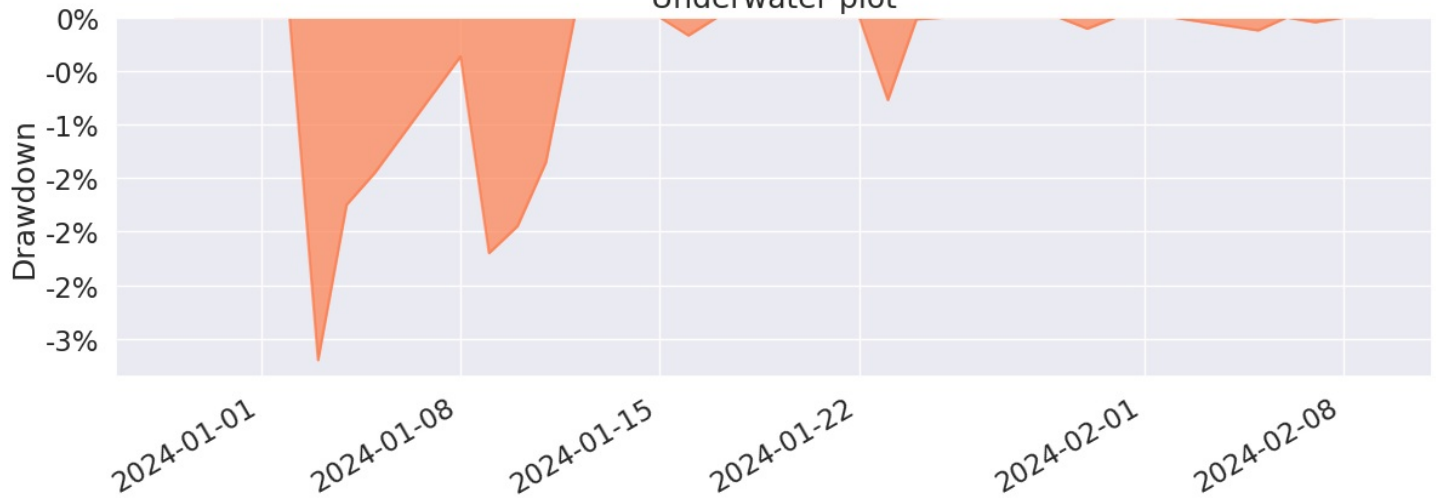
Cumulative returns



Rolling Sharpe ratio (6-month)



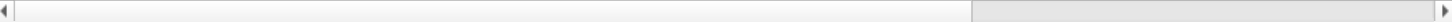
Underwater plot



CURRENT PORTFOLIO PERFORMANCE

```
/usr/local/lib/python3.10/dist-packages/pyfolio/timeseries.py:724: FutureWarning: The default dtype for empty Series will
be 'object' instead of 'float64' in a future version. Specify a dtype explicitly to silence this warning.
stats = pd.Series()
<ipython-input-118-97d2e39f3402>:3: DeprecationWarning: Risk functions in pyfolio.timeseries are deprecated and will be r
emoved in a future release. Please install the empyrical package instead.
    max_drawdown = np.abs(100*pf.timeseries.max_drawdown(OrderedTimeSeries['pct_change'].dropna()))
<ipython-input-118-97d2e39f3402>:4: DeprecationWarning: Risk functions in pyfolio.timeseries are deprecated and will be r
emoved in a future release. Please install the empyrical package instead.
    annual_return = pf.timeseries.annual_return(OrderedTimeSeries['pct_change'].dropna())
<ipython-input-118-97d2e39f3402>:5: DeprecationWarning: Risk functions in pyfolio.timeseries are deprecated and will be r
emoved in a future release. Please install the empyrical package instead.
    sharpe_ratio = pf.timeseries.sharpe_ratio(OrderedTimeSeries['pct_change'].dropna())
Annual return      5.060754
Cumulative returns  0.239247
Annual volatility   0.203553
Sharpe ratio       8.981920
Calmar ratio       158.245634
Stability           0.943324
Max drawdown       -0.031980
Omega ratio        4.482514
Sortino ratio      16.697749
Skew               -0.676100
Kurtosis           2.246864
Tail ratio         1.764438
Daily value at risk -0.018390
dtype: float64
```

	Quantity	Purchase Price	Purchased Value	Current Price	Market Value	Start PF %	End PF %	PnL %	Purchase Amount	End Quantity	Portfolio_Weights	InitialPrices
Symbol												
AHGAZ.IS	48279.0	9.62	469754.67	13.51	652249.29	46.49	49.11	39.29	652249.0	48278.0	0.491058	9.73
TUKAS.IS	42190.0	6.30	279719.7	8.84	372959.60	27.68	28.08	35.08	372959.0	42189.0	0.280790	6.63
KOZAL.IS	8588.0	18.99	168067.16	22.14	190138.32	16.63	14.31	13.53	190138.0	8587.0	0.143149	19.57
AKFGY.IS	21828.0	1.75	40600.08	2.32	50640.96	4.02	3.81	26.29	50640.0	21827.0	0.038126	1.86
GUBRF.IS	232.0	172.60	32456.8	163.60	37955.20	3.21	2.86	13.73	37955.0	231.0	0.028575	139.9
IPEKE.IS	623.0	29.82	19873.7	39.02	24309.46	1.97	1.83	23.88	24309.0	622.0	0.018302	31.9



```
['AHGAZ.IS',
 'TUKAS.IS',
 'KOZAL.IS',
 'GUBRF.IS',
 'AKFGY.IS',
 'IPEKE.IS',
 'TRY=X']
```

```
*****
Starting Download of filtered 7 BIST30 assets
*****
Downloading AHGAZ.IS
Downloading TUKAS.IS
Downloading KOZAL.IS
Downloading GUBRF.IS
Downloading AKFGY.IS
Downloading IPEKE.IS
Downloading TRY=X
*****
DOWNLOADED 7 TICKERS from BIST30
*****
```

CSV files merged

```
/usr/local/lib/python3.10/dist-packages/numpy/lib/function_base.py:518: RuntimeWarning: Mean of empty slice.
    avg = a.mean(axis, **keepdims_kw)
/usr/local/lib/python3.10/dist-packages/numpy/core/_methods.py:182: RuntimeWarning: invalid value encountered in divide
    ret = um.true_divide(
/usr/local/lib/python3.10/dist-packages/pandas/core/frame.py:10474: RuntimeWarning: Degrees of freedom <= 0 for slice
    base_cov = np.cov(mat.T, ddof=ddof)
/usr/local/lib/python3.10/dist-packages/numpy/lib/function_base.py:2704: RuntimeWarning: divide by zero encountered in di
vide
    c *= np.true_divide(1, fact)
/usr/local/lib/python3.10/dist-packages/numpy/lib/function_base.py:2704: RuntimeWarning: invalid value encountered in mul
```

```
multiply
c *= np.true_divide(1, fact)
/usr/local/lib/python3.10/dist-packages/numpy/lib/function_base.py:518: RuntimeWarning: Mean of empty slice.
avg = a.mean(axis, **keepdims_kw)
/usr/local/lib/python3.10/dist-packages/numpy/core/_methods.py:182: RuntimeWarning: invalid value encountered in divide
ret = um.true_divide(
/usr/local/lib/python3.10/dist-packages/pandas/core/frame.py:10474: RuntimeWarning: Degrees of freedom <= 0 for slice
base_cov = np.cov(mat.T, ddof=ddof)
/usr/local/lib/python3.10/dist-packages/numpy/lib/function_base.py:2704: RuntimeWarning: divide by zero encountered in di
vide
c *= np.true_divide(1, fact)
/usr/local/lib/python3.10/dist-packages/numpy/lib/function_base.py:2704: RuntimeWarning: invalid value encountered in mul
tiple
c *= np.true_divide(1, fact)
/usr/local/lib/python3.10/dist-packages/numpy/lib/function_base.py:518: RuntimeWarning: Mean of empty slice.
avg = a.mean(axis, **keepdims_kw)
/usr/local/lib/python3.10/dist-packages/numpy/core/_methods.py:182: RuntimeWarning: invalid value encountered in divide
ret = um.true_divide(
/usr/local/lib/python3.10/dist-packages/pandas/core/frame.py:10474: RuntimeWarning: Degrees of freedom <= 0 for slice
base_cov = np.cov(mat.T, ddof=ddof)
/usr/local/lib/python3.10/dist-packages/numpy/lib/function_base.py:2704: RuntimeWarning: divide by zero encountered in di
vide
c *= np.true_divide(1, fact)
/usr/local/lib/python3.10/dist-packages/numpy/lib/function_base.py:2704: RuntimeWarning: invalid value encountered in mul
tiple
c *= np.true_divide(1, fact)
/usr/local/lib/python3.10/dist-packages/numpy/lib/function_base.py:518: RuntimeWarning: Mean of empty slice.
avg = a.mean(axis, **keepdims_kw)
/usr/local/lib/python3.10/dist-packages/numpy/core/_methods.py:182: RuntimeWarning: invalid value encountered in divide
ret = um.true_divide(
/usr/local/lib/python3.10/dist-packages/pandas/core/frame.py:10474: RuntimeWarning: Degrees of freedom <= 0 for slice
base_cov = np.cov(mat.T, ddof=ddof)
/usr/local/lib/python3.10/dist-packages/numpy/lib/function_base.py:2704: RuntimeWarning: divide by zero encountered in di
vide
c *= np.true_divide(1, fact)
/usr/local/lib/python3.10/dist-packages/numpy/lib/function_base.py:2704: RuntimeWarning: invalid value encountered in mul
tiple
c *= np.true_divide(1, fact)
/usr/local/lib/python3.10/dist-packages/numpy/lib/function_base.py:518: RuntimeWarning: Mean of empty slice.
avg = a.mean(axis, **keepdims_kw)
/usr/local/lib/python3.10/dist-packages/numpy/core/_methods.py:182: RuntimeWarning: invalid value encountered in divide
ret = um.true_divide(
/usr/local/lib/python3.10/dist-packages/pandas/core/frame.py:10474: RuntimeWarning: Degrees of freedom <= 0 for slice
base_cov = np.cov(mat.T, ddof=ddof)
/usr/local/lib/python3.10/dist-packages/numpy/lib/function_base.py:2704: RuntimeWarning: divide by zero encountered in di
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c *= np.true_divide(1, fact)
/usr/local/lib/python3.10/dist-packages/numpy/lib/function_base.py:2704: RuntimeWarning: invalid value encountered in mul
tiple
c *= np.true_divide(1, fact)
/usr/local/lib/python3.10/dist-packages/numpy/lib/function_base.py:518: RuntimeWarning: Mean of empty slice.
avg = a.mean(axis, **keepdims_kw)
/usr/local/lib/python3.10/dist-packages/numpy/core/_methods.py:182: RuntimeWarning: invalid value encountered in divide
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/usr/local/lib/python3.10/dist-packages/pandas/core/frame.py:10474: RuntimeWarning: Degrees of freedom <= 0 for slice
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/usr/local/lib/python3.10/dist-packages/numpy/lib/function_base.py:2704: RuntimeWarning: divide by zero encountered in di
vide
c *= np.true_divide(1, fact)
/usr/local/lib/python3.10/dist-packages/numpy/lib/function_base.py:2704: RuntimeWarning: invalid value encountered in mul
tiple
c *= np.true_divide(1, fact)
array([0.09405855, 0.19244727, 0.09861237, 0.09381854, 0.32242169,
       0.16553136, 0.03311021])
```

```
{'return': 0.0, 'risk': nan, 'sharpe': nan}  
[0.0941 0.1924 0.0986 0.0938 0.3224 0.1655 0.0331]
```

```
/usr/local/lib/python3.10/dist-packages/numpy/lib/function_base.py:518: RuntimeWarning: Mean of empty slice.  
    avg = a.mean(axis, **keepdims_kw)  
/usr/local/lib/python3.10/dist-packages/numpy/core/_methods.py:182: RuntimeWarning: invalid value encountered in divide  
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/usr/local/lib/python3.10/dist-packages/pandas/core/frame.py:10474: RuntimeWarning: Degrees of freedom <= 0 for slice  
    base_cov = np.cov(mat.T, ddof=ddof)  
/usr/local/lib/python3.10/dist-packages/numpy/lib/function_base.py:2704: RuntimeWarning: divide by zero encountered in di  
vide  
    c *= np.true_divide(1, fact)  
/usr/local/lib/python3.10/dist-packages/numpy/lib/function_base.py:2704: RuntimeWarning: invalid value encountered in mul  
tiply  
    c *= np.true_divide(1, fact)  
/usr/local/lib/python3.10/dist-packages/numpy/lib/function_base.py:518: RuntimeWarning: Mean of empty slice.  
    avg = a.mean(axis, **keepdims_kw)  
/usr/local/lib/python3.10/dist-packages/numpy/core/_methods.py:182: RuntimeWarning: invalid value encountered in divide  
    ret = um.true_divide(  
/usr/local/lib/python3.10/dist-packages/pandas/core/frame.py:10474: RuntimeWarning: Degrees of freedom <= 0 for slice  
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/usr/local/lib/python3.10/dist-packages/numpy/lib/function_base.py:2704: RuntimeWarning: divide by zero encountered in di  
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    c *= np.true_divide(1, fact)  
/usr/local/lib/python3.10/dist-packages/numpy/lib/function_base.py:2704: RuntimeWarning: invalid value encountered in mul  
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/usr/local/lib/python3.10/dist-packages/numpy/lib/function_base.py:518: RuntimeWarning: Mean of empty slice.  
    avg = a.mean(axis, **keepdims_kw)  
/usr/local/lib/python3.10/dist-packages/numpy/core/_methods.py:182: RuntimeWarning: invalid value encountered in divide  
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/usr/local/lib/python3.10/dist-packages/pandas/core/frame.py:10474: RuntimeWarning: Degrees of freedom <= 0 for slice  
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vide  
    c *= np.true_divide(1, fact)  
/usr/local/lib/python3.10/dist-packages/numpy/lib/function_base.py:2704: RuntimeWarning: invalid value encountered in mul  
tiply  
    c *= np.true_divide(1, fact)  
/usr/local/lib/python3.10/dist-packages/numpy/lib/function_base.py:518: RuntimeWarning: Mean of empty slice.  
    avg = a.mean(axis, **keepdims_kw)  
/usr/local/lib/python3.10/dist-packages/numpy/core/_methods.py:182: RuntimeWarning: invalid value encountered in divide  
    ret = um.true_divide(  
/usr/local/lib/python3.10/dist-packages/pandas/core/frame.py:10474: RuntimeWarning: Degrees of freedom <= 0 for slice  
    base_cov = np.cov(mat.T, ddof=ddof)  
/usr/local/lib/python3.10/dist-packages/numpy/lib/function_base.py:2704: RuntimeWarning: divide by zero encountered in di  
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    c *= np.true_divide(1, fact)  
/usr/local/lib/python3.10/dist-packages/numpy/lib/function_base.py:2704: RuntimeWarning: invalid value encountered in mul  
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/usr/local/lib/python3.10/dist-packages/numpy/lib/function_base.py:518: RuntimeWarning: Mean of empty slice.  
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/usr/local/lib/python3.10/dist-packages/numpy/lib/function_base.py:2704: RuntimeWarning: divide by zero encountered in di  
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/usr/local/lib/python3.10/dist-packages/numpy/lib/function_base.py:2704: RuntimeWarning: invalid value encountered in mul  
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    c *= np.true_divide(1, fact)  
/usr/local/lib/python3.10/dist-packages/numpy/lib/function_base.py:518: RuntimeWarning: Mean of empty slice.  
    avg = a.mean(axis, **keepdims_kw)
```



[illegible]

```

vide
    c *= np.true_divide(1, fact)
/usr/local/lib/python3.10/dist-packages/numpy/lib/function_base.py:2704: RuntimeWarning: invalid value encountered in multiply
    c *= np.true_divide(1, fact)
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    avg = a.mean(axis, **keepdims_kw)
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/usr/local/lib/python3.10/dist-packages/numpy/lib/function_base.py:2704: RuntimeWarning: invalid value encountered in multiply
    c *= np.true_divide(1, fact)

```

```

% weights of BEST PF
{'return': 0.0, 'risk': nan, 'sharpe': nan}
AKFGY.IS      428228.71
TUKAS.IS      255555.84
IPEKE.IS      219825.84
KOZAL.IS      130965.73
AHGAZ.IS      124988.59
GUBRF.IS      124590.12
TRY=X         43965.17
Name: Amount in 1328252.8299999998 TL, dtype: float64

```

```
/usr/local/lib/python3.10/dist-packages/numpy/lib/function_base.py:518: RuntimeWarning: Mean of empty slice.
  avg = a.mean(axis, **keepdims_kw)
/usr/local/lib/python3.10/dist-packages/numpy/core/_methods.py:182: RuntimeWarning: invalid value encountered in divide
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/usr/local/lib/python3.10/dist-packages/pandas/core/frame.py:10474: RuntimeWarning: Degrees of freedom <= 0 for slice
  base_cov = np.cov(mat.T, ddof=ddof)
/usr/local/lib/python3.10/dist-packages/numpy/lib/function_base.py:2704: RuntimeWarning: divide by zero encountered in di
vide
  c *= np.true_divide(1, fact)
/usr/local/lib/python3.10/dist-packages/numpy/lib/function_base.py:2704: RuntimeWarning: invalid value encountered in mul
tiply
  c *= np.true_divide(1, fact)
/usr/local/lib/python3.10/dist-packages/numpy/lib/function_base.py:518: RuntimeWarning: Mean of empty slice.
  avg = a.mean(axis, **keepdims_kw)
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  c *= np.true_divide(1, fact)
/usr/local/lib/python3.10/dist-packages/numpy/lib/function_base.py:2704: RuntimeWarning: invalid value encountered in mul
tiply
  c *= np.true_divide(1, fact)
```

```
making operation with Best_PF_For_bist30.csv
% weights of BEST PF
{'return': 0.0, 'risk': nan, 'sharpe': nan}
assets
ASELS.IS      648984.33
AKBNK.IS      404851.46
TCELL.IS      212520.45
YKBNK.IS       36526.95
FROTO.IS      17931.41
Name: Amount in 1328252.8299999998 TL, dtype: float64
```

```
/usr/local/lib/python3.10/dist-packages/numpy/lib/function_base.py:518: RuntimeWarning: Mean of empty slice.
  avg = a.mean(axis, **keepdims_kw)
/usr/local/lib/python3.10/dist-packages/numpy/core/_methods.py:182: RuntimeWarning: invalid value encountered in divide
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tiply
  c *= np.true_divide(1, fact)
```

Unnamed: 0	assets	%	Amount	buy_price	shares_to_buy	Portfolio_Weights	InitialPrices	FinalPrices	Portfolio_Amounts	Port
0	16 ASELS.IS	49.51	49510.0	44.18	1120.0	0.4951	41.44	44.18	49510.0	
1	6 AKBNK.IS	26.49	26490.0	38.04	696.0	0.2649	30.62	38.04	26490.0	
2	11 TCELL.IS	18.92	18920.0	53.00	356.0	0.1892	57.94	53.00	18920.0	
3	2 YKBNK.IS	2.42	2420.0	20.06	120.0	0.0242	16.27	20.06	2420.0	
4	21 FROTO.IS	1.87	1870.0	728.00	2.0	0.0187	858.71	728.00	1870.0	
5	4 BIMAS.IS	0.79	790.0	301.00	2.0	0.0079	267.35	301.00	790.0	

```
assets
ASELS.IS      48.86
AKBNK.IS      30.48
TCELL.IS      16.00
YKBNK.IS       2.75
FROTO.IS       1.35
Name: %, dtype: float64
```

% Amount in 1328252.8299999998 TL

assets		
ASELS.IS	48.86	648984.33
AKBNK.IS	30.48	404851.46
TCELL.IS	16.00	212520.45
YKBNK.IS	2.75	36526.95
FROTO.IS	1.35	17931.41

{'AHGAZ': -652249.31, 'TUKAS': -372959.58, 'KOZAL': -190138.33, 'GUBRF': -37955.22, 'AKFGY': -50640.97, 'IPEKE': -24309.42, 'ASELS': 648984.33, 'AKBNK': 404851.46, 'TCELL': 212520.45, 'YKBNK': 36526.95, 'FROTO': 17931.41}

Shopping List for persistent Markowitz portfolio, as for tomorrow:

Buy/Sell						
AHGAZ	-652249.31					
TUKAS	-372959.58					
KOZAL	-190138.33					
GUBRF	-37955.22					
AKFGY	-50640.97					
IPEKE	-24309.42					
ASELS	648984.33					
AKBNK	404851.46					
TCELL	212520.45					
YKBNK	36526.95					
FROTO	17931.41					
Unnamed: 0	assets	%	Amount	buy_price	shares_to_buy	\
0	16 ASELS.IS	49.51	49510.0	44.18	1120.0	
1	6 AKBNK.IS	26.49	26490.0	38.04	696.0	
2	11 TCELL.IS	18.92	18920.0	53.00	356.0	
3	2 YKBNK.IS	2.42	2420.0	20.06	120.0	
4	21 FROTO.IS	1.87	1870.0	728.00	2.0	
5	4 BIMAS.IS	0.79	790.0	301.00	2.0	
Portfolio_Weights InitialPrices FinalPrices Portfolio_Amounts \						
0	0.4951	41.44	44.18	49510.0		
1	0.2649	30.62	38.04	26490.0		
2	0.1892	57.94	53.00	18920.0		
3	0.0242	16.27	20.06	2420.0		
4	0.0187	858.71	728.00	1870.0		
5	0.0079	267.35	301.00	790.0		
Portfolio_Shares Purchased Value Market Value PnL % Start PF % \						
0	1194	49479.36	52750.92	6.61	49.72	
1	865	26486.30	32904.60	24.23	26.62	
2	326	18888.44	17278.00	-8.53	18.98	
3	148	2407.96	2968.88	23.29	2.42	
4	2	1717.42	1456.00	-15.22	1.73	
5	2	534.70	602.00	12.59	0.54	
End PF %	Final_Cost	Rebalance Buy Price	Rebalance Shares			
0	48.86	48860.0	44.18	1120.0		
1	30.48	30480.0	38.04	696.0		
2	16.00	16000.0	53.00	356.0		
3	2.75	2750.0	20.06	120.0		
4	1.35	1350.0	728.00	2.0		
5	0.56	560.0	301.00	2.0		

Requirement already satisfied: nbconvert in /usr/local/lib/python3.10/dist-packages (6.5.4)  
Requirement already satisfied: lxml in /usr/local/lib/python3.10/dist-packages (from nbconvert) (4.9.4)  
Requirement already satisfied: beautifulsoup4 in /usr/local/lib/python3.10/dist-packages (from nbconvert) (4.12.3)  
Requirement already satisfied: bleach in /usr/local/lib/python3.10/dist-packages (from nbconvert) (6.1.0)  
Requirement already satisfied: defusedxml in /usr/local/lib/python3.10/dist-packages (from nbconvert) (0.7.1)  
Requirement already satisfied: entrypoints>=0.2.2 in /usr/local/lib/python3.10/dist-packages (from nbconvert) (0.4)  
Requirement already satisfied: Jinja2>=3.0 in /usr/local/lib/python3.10/dist-packages (from nbconvert) (3.1.3)  
Requirement already satisfied: jupyter-core>=4.7 in /usr/local/lib/python3.10/dist-packages (from nbconvert) (5.7.1)  
Requirement already satisfied: jupyterlab-pygments in /usr/local/lib/python3.10/dist-packages (from nbconvert) (0.3.0)  
Requirement already satisfied: MarkupSafe>=2.0 in /usr/local/lib/python3.10/dist-packages (from nbconvert) (2.1.5)  
Requirement already satisfied: mistune<2,>=0.8.1 in /usr/local/lib/python3.10/dist-packages (from nbconvert) (0.8.4)  
Requirement already satisfied: nbclient>=0.5.0 in /usr/local/lib/python3.10/dist-packages (from nbconvert) (0.9.0)  
Requirement already satisfied: nbformat>=5.1 in /usr/local/lib/python3.10/dist-packages (from nbconvert) (5.9.2)  
Requirement already satisfied: packaging in /usr/local/lib/python3.10/dist-packages (from nbconvert) (23.2)  
Requirement already satisfied: pandocfilters>=1.4.1 in /usr/local/lib/python3.10/dist-packages (from nbconvert) (1.5.1)  
Requirement already satisfied: pygments>=2.4.1 in /usr/local/lib/python3.10/dist-packages (from nbconvert) (2.16.1)  
Requirement already satisfied: tinycss2 in /usr/local/lib/python3.10/dist-packages (from nbconvert) (1.2.1)  
Requirement already satisfied: traitlets>=5.0 in /usr/local/lib/python3.10/dist-packages (from nbconvert) (5.7.1)  
Requirement already satisfied: platformdirs>=2.5 in /usr/local/lib/python3.10/dist-packages (from jupyter-core>=4.7->nbconvert) (4.2.0)  
Requirement already satisfied: jupyter-client>=6.1.12 in /usr/local/lib/python3.10/dist-packages (from nbclient>=0.5.0->nbconvert) (6.1.12)  
Requirement already satisfied: fastjsonschema in /usr/local/lib/python3.10/dist-packages (from nbformat>=5.1->nbconvert) (2.19.1)  
Requirement already satisfied: jsonschema>=2.6 in /usr/local/lib/python3.10/dist-packages (from nbformat>=5.1->nbconvert) (4.19.2)  
Requirement already satisfied: soupsieve>1.2 in /usr/local/lib/python3.10/dist-packages (from beautifulsoup4->nbconvert) (2.5)  
Requirement already satisfied: six>=1.9.0 in /usr/local/lib/python3.10/dist-packages (from bleach->nbconvert) (1.16.0)  
Requirement already satisfied: webencodings in /usr/local/lib/python3.10/dist-packages (from bleach->nbconvert) (0.5.1)  
Requirement already satisfied: attrs>=22.2.0 in /usr/local/lib/python3.10/dist-packages (from jsonschema>=2.6->nbformat>=5.1->nbconvert) (23.2.0)  
Requirement already satisfied: jsonschema-specifications>=2023.03.6 in /usr/local/lib/python3.10/dist-packages (from jsonschema>=2.6->nbformat>=5.1->nbconvert) (2023.12.1)  
Requirement already satisfied: referencing>=0.28.4 in /usr/local/lib/python3.10/dist-packages (from jsonschema>=2.6->nbformat>=5.1->nbconvert) (0.33.0)  
Requirement already satisfied: rpds-py>=0.7.1 in /usr/local/lib/python3.10/dist-packages (from jsonschema>=2.6->nbformat>=5.1->nbconvert) (0.17.1)  
Requirement already satisfied: pyzmq>=13 in /usr/local/lib/python3.10/dist-packages (from jupyter-client>=6.1.12->nbclient>=0.5.0->nbconvert) (23.2.1)  
Requirement already satisfied: python-dateutil>=2.1 in /usr/local/lib/python3.10/dist-packages (from jupyter-client>=6.1.12->nbclient>=0.5.0->nbconvert) (2.8.2)  
Requirement already satisfied: tornado>=4.1 in /usr/local/lib/python3.10/dist-packages (from jupyter-client>=6.1.12->nbclient>=0.5.0->nbconvert) (6.3.2)

--2024-02-11 21:14:45-- https://raw.githubusercontent.com/MarkovMarkowitz/MarkovMarkowitz/main/ON3\_AnalyzeAndReplacePortfolio\_v10A.ipynb  
Resolving raw.githubusercontent.com (raw.githubusercontent.com)... 185.199.108.133, 185.199.109.133, 185.199.110.133, ...  
Connecting to raw.githubusercontent.com (raw.githubusercontent.com)|185.199.108.133|:443... connected.  
HTTP request sent, awaiting response... 404 Not Found  
2024-02-11 21:14:45 ERROR 404: Not Found.

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