

sharp ratio

```
sharpe = (portfolio.mean())/(portfolio.std())
sharpe_ratio = pd.DataFrame(sharpe, columns=["Sharpe_Ratio"])
sharpe_ratio
```

Sharpe_Ratio	
Cnsmr	0.135249
Manuf	0.111704
HiTec	0.180174
HiIth	0.087061
Other	0.188059

```
market.mean()/market.std()
```

```
Mkt    0.227439
dtype: float64
```

treynor ratio

```
treynor = (portfolio.mean())/alpha_beta_table["Beta"]
treynor_ratio = pd.DataFrame(treynor, columns=["Treynor_Ratio"])
treynor_ratio
```

Treynor_Ratio	
Cnsmr	0.700400
Manuf	0.597399
HiTec	0.899834
HiIth	0.559742
Other	0.969046

```
market.mean()/1
```

```
Mkt    1.0085
dtype: float64
```

sortino ratio

```
downside_return = (downside*downside).mean()
sortino = (portfolio.mean())/(np.sqrt(downside_return))
sortino_ratio = pd.DataFrame(sortino, columns=["Sortino_Ratio"])
sortino_ratio
```

Sortino_Ratio	
Cnsmr	0.210609
Manuf	0.170922
HiTec	0.286594
HiIth	0.128389
Other	0.282145