

Week 7: Self Assessment

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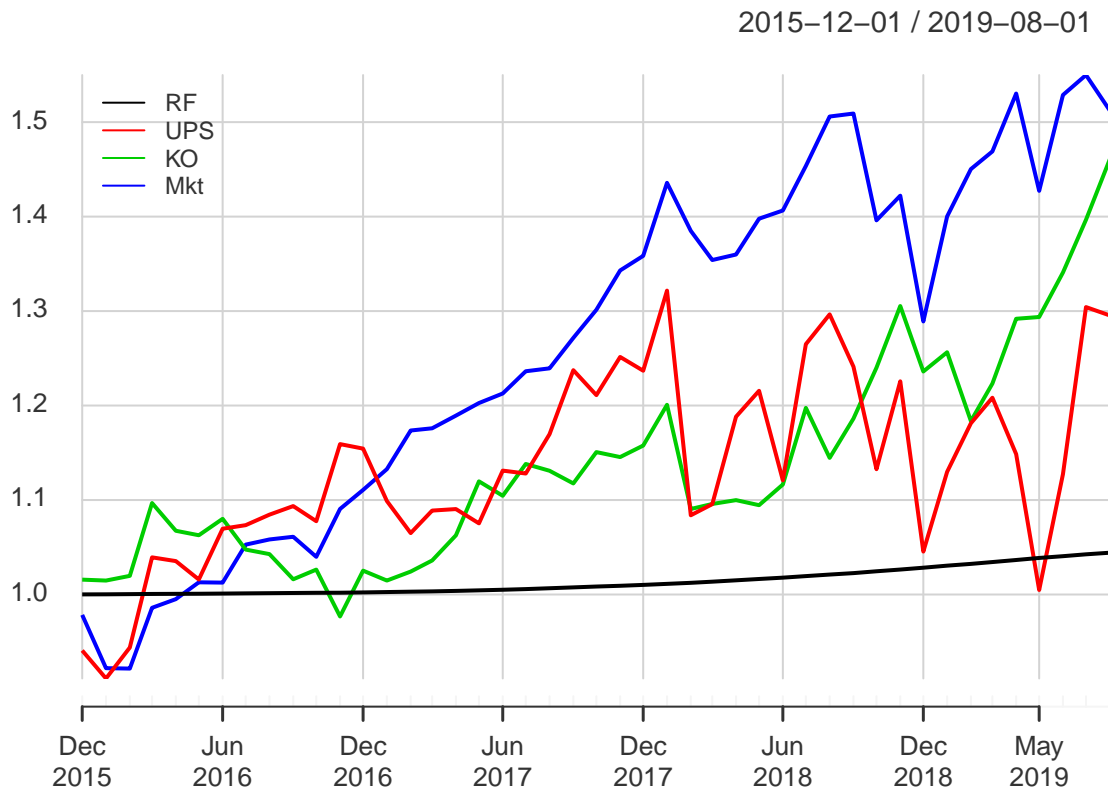
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Question 1

a:

```
## Loading required package: zoo
##
## Attaching package: 'zoo'
## The following objects are masked from 'package:base':
##
##   as.Date, as.Date.numeric
##
## Attaching package: 'lubridate'
## The following object is masked from 'package:base':
##
##   date
##
## Attaching package: 'PerformanceAnalytics'
## The following object is masked from 'package:graphics':
##
##   legend
##
##           RF           UPS           KO           Mkt
## 2015-12-01 1e-04 -0.059265990  0.015707901 -0.0216
## 2016-01-01 1e-04 -0.031487147 -0.000931283 -0.0576
## 2016-02-01 2e-04  0.035944259  0.004893142 -0.0005
## 2016-03-01 2e-04  0.101124671  0.075585176  0.0698
## 2016-04-01 1e-04 -0.003792522 -0.026743221  0.0093
## 2016-05-01 1e-04 -0.018844734 -0.004464390  0.0179
## 2016-06-01 2e-04  0.052928782  0.016367823 -0.0003
## 2016-07-01 2e-04  0.003527532 -0.030121712  0.0397
## 2016-08-01 2e-04  0.010360964 -0.004584034  0.0052
## 2016-09-01 2e-04  0.008373973 -0.025558364  0.0027
```

b:



Neither UPS or KO outperform the market at the end of the given period as seen in the cumulative return plot above. Both stocks outperform the market for brief periods, but the overall cumulative return of the market is greater at the end of the given period than either of the stocks.

c:

```
##                               UPS      KO
## StdDev Sharpe (Rf=0.1%, p=95%): 0.10408624 0.2284131
## VaR Sharpe (Rf=0.1%, p=95%):    0.06470290 0.1521215
## ES Sharpe (Rf=0.1%, p=95%):     0.04710351 0.1128447

##                               UPS      KO
## Treynor Ratio: Mkt 0.04635955 0.4449498
```

KO has the higher Sharpe ratio (.23 vs .10) and is therefore the better investment when using this metric since the Sharpe ratio is a measure of reward vs risk.

Question 2

Types of Market Efficiency

1. Weak form - Security prices reflect all information found in past prices and volume
2. Semi-Strong Form - Security prices reflect all publicly available information
3. Strong-Form - Security prices reflect all information (public and private)

Question 3

Types of Behavioral Bias

1. Overconfidence - Tendency to overestimate one's ability
2. Loss aversion - Tendency of individuals to seek pride and avoid regret in their decisions
3. Recency effect - People tend to overemphasize a recent information when making investment decisions
4. Anchoring - Individuals tend to take action based on a single fact or figure that should have little bearing on their decision while ignoring more important information.