MF731 HW Problems for Assignment 4

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1.Stress Test for a Market-Cap Weighted Portfolio of Microsoft and Apple Stocks.

(1) the initial EWMA sigma and mu are shown below:

```
the Mean is about:  [0.00125025 0.00106069]
the Sigma is about:  [[1.29896289e-04 3.30063144e-05]
 [3.30063144e-05 1.51851733e-04]]
```

(2) the VaRs are shown below:

```
Initial one day VaR:   14383.85
Initial 10 day VaR:   45485.72
3x Initial 10 day VaR:  136457.15
```

(3) – (5)

(a) the average K-day portfolio loss is about: **7.0691e+04**

(b) K-day VaR: **150919.76**

(c) exceedance1: **70.12%**

(d) exceedance2: **8.716%**

For the detail, please check the matlab code file.