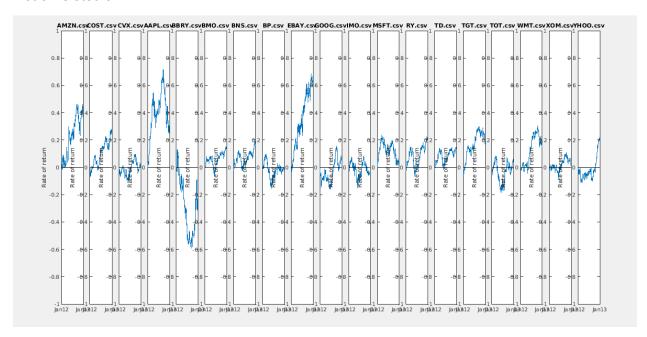
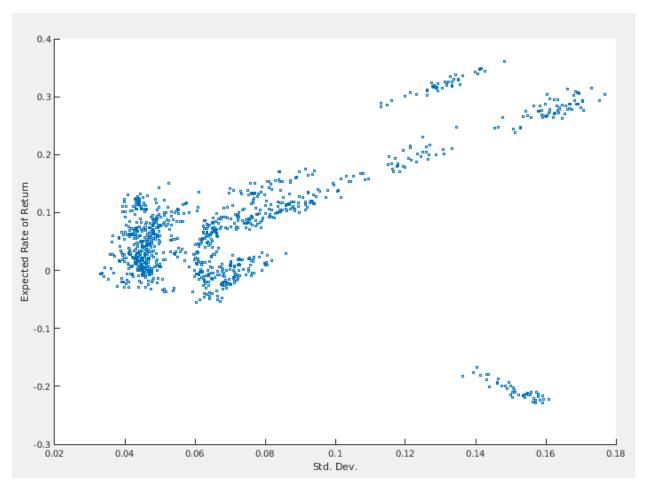
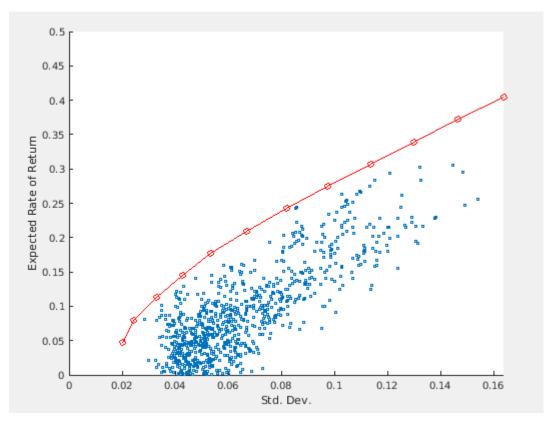
## Plot of 19 Stocks

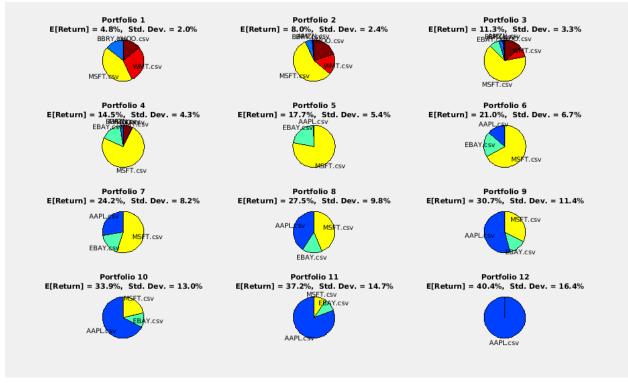


# Portfolio Scatter plot:



#### **Efficient Frontier:**





### Market Portfolio Results:

## Binary search:

Iter x |f(x)|

- 1 9.19e-02 4.34e-02
- 2 5.60e-02 1.39e-02
- 3 3.80e-02 2.56e-02
- 4 4.70e-02 1.80e-02
- 5 5.15e-02 3.20e-03
- 6 5.37e-02 9.39e-03
- 7 5.26e-02 3.18e-03
- 8 5.20e-02 1.60e-03
- 9 5.23e-02 8.39e-04
- 10 5.24e-02 6.26e-04
- 11 5.24e-02 6.42e-04
- 12 5.24e-02 3.51e-05
- 13 5.24e-02 2.97e-04
- 14 5.24e-02 1.32e-04
- 15 5.24e-02 4.80e-05
- 16 5.24e-02 6.48e-06
- 17 5.24e-02 1.43e-05
- 18 5.24e-02 3.90e-06
- 19 5.24e-02 1.29e-06
- 20 5.24e-02 1.30e-06
- 21 5.24e-02 5.16e-09