Mini Case KMP Ch. 6, p. 184

*Note:* Although not absolutely necessary, you are advised to use a computer spreadsheet to work the following problem.

1. Use the price data from the table that follows for the Standard & Poor’s 500 Index, Wal-Mart, and Target to calculate the holding-period returns for the 24 months from July 2007 through June 2009.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **MONTH** |  | **S&P 500** |  | **WALMART** |  | **TARGET** |
| Jun-07 |  |  1,503.35  |  | 46.32 |  | 61.86 |
| Jul-07 |  |  1,455.27  |  | 44.24 |  | 58.91 |
| Aug-07 |  |  1,473.99  |  | 42.22 |  | 64.28 |
| Sep-07 |  |  1,526.75  |  | 42.24 |  | 61.98 |
| Oct-07 |  |  1,549.38  |  | 43.75 |  | 59.83 |
| Nov-07 |  |  1,481.14  |  | 46.35 |  | 58.62 |
| Dec-07 |  |  1,468.36  |  | 46.20 |  | 48.88 |
| Jan-08 |  |  1,378.55  |  | 49.32 |  | 54.17 |
| Feb-08 |  |  1,330.63  |  | 48.21 |  | 51.56 |
| Mar-08 |  |  1,322.70  |  | 51.45 |  | 49.67 |
| Apr-08 |  |  1,385.59  |  | 56.63 |  | 52.07 |
| May-08 |  |  1,400.38  |  | 56.63 |  | 52.43 |
| Jun-08 |  |  1,280.00  |  | 55.12 |  | 45.68 |
| Jul-08 |  |  1,267.38  |  | 57.50 |  | 44.44 |
| Aug-08 |  |  1,282.83  |  | 58.17 |  | 52.26 |
| Sep-08 |  |  1,164.74  |  | 58.98 |  | 48.35 |
| Oct-08 |  |  968.75  |  | 54.96 |  | 39.54 |
| Nov-08 |  |  896.24  |  | 55.03 |  | 33.44 |
| Dec-08 |  |  903.25  |  | 55.45 |  | 34.21 |
| Jan-09 |  |  825.88  |  | 46.60 |  | 30.91 |
| Feb-09 |  |  735.09  |  | 48.70 |  | 28.20 |
| Mar-09 |  |  797.87  |  | 51.82 |  | 34.25 |
| Apr-09 |  |  872.81  |  | 50.13 |  | 41.10 |
| May-09 |  |  919.14  |  | 49.74 |  | 39.30 |
| June-09 |  |  946.21  |  | 48.68 |  | 39.00 |

1. Calculate the average monthly holding-period returns and the standard deviation of these returns for the S&P 500 Index, Wal-Mart, and Target.
2. Plot (1) the holding-period returns for Wal-Mart against the Standard &Poor’s 500 Index, and (2) the Target holding-period returns against the Standard &Poor’s 500 Index.
3. From your graphs in part c, describe the nature of the relationship between the stock returns for Wal-Mart and the returns for the S&P 500 Index. Make the same comparison for Target.
4. Assume that you have decided to invest one-half of your money in Wal-Mart and the remaining in Target. Calculate the monthly holding-period returns for your two-stock portfolio. (Hint: The monthly return for the portfolio is the average of the two stocks’ monthly returns.)
5. Plot the returns of your two-stock portfolio against the Standard &Poor’s 500 Index as you did for the individual stocks in part c. How does this graph compare to the graphs for the individual stocks? Explain the difference.
6. The following table shows the returns on an *annualized* basis that were realized from holding long-term government bonds for the same period. Calculate the average *monthly* holding-period returns and the standard deviations of these returns. (*Hint*: You will need to convert the annual returns to monthly returns by dividing each return by 12 months.)

|  |  |  |
| --- | --- | --- |
| **MONTH AND YEAR** |  | **ANNUALIZED RATE OF RETURN (%)** |
|  |  |  |  |  |  |
| Jul-07 |  |  | 5.00% |  |  |
| Aug-07 |  |  | 4.67% |  |  |
| Sep-07 |  |  | 4.52% |  |  |
| Oct-07 |  |  | 4.53% |  |  |
| Nov-07 |  |  | 4.15% |  |  |
| Dec-07 |  |  | 4.10% |  |  |
| Jan-08 |  |  | 3.74% |  |  |
| Feb-08 |  |  | 3.74% |  |  |
| Mar-08 |  |  | 3.51% |  |  |
| Apr-08 |  |  | 3.68% |  |  |
| May-08 |  |  | 3.88% |  |  |
| Jun-08 |  |  | 4.10% |  |  |
| Jul-08 |  |  | 4.01% |  |  |
| Aug-08 |  |  | 3.89% |  |  |
| Sep-08 |  |  | 3.69% |  |  |
| Oct-08 |  |  | 3.81% |  |  |
| Nov-08 |  |  | 3.53% |  |  |
| Dec-08 |  |  | 2.42% |  |  |
| Jan-09 |  |  | 2.52% |  |  |
| Feb-09 |  |  | 2.87% |  |  |
| Mar-09 |  |  | 2.82% |  |  |
| Apr-09 |  |  | 2.93% |  |  |
| May-09 |  |  | 3.29% |  |  |
| Jun-09 |  |  | 3.18% |  |  |