Project

Strategy Evaluation Project

You have just graduated and received a job paying much more than you expected. You would like to save $1000 every month, but are not sure where to invest. Your financial advisor proposes two strategies:

1. Keep investing in the S&P 500 index fund **SPY** with $1000 added each month, *irrespective* of whether the market is going up or down.

2. Save $1000 and add to a savings account. Next step would be to decide on **one** of the Technical Trading Rules (TTR), which are available as part of the **TTR** package. You can type

?TTR

to see the list.

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Strategy 2 (cont...)

If the TTR indicates that it is time to invest or stay invested, you keep your money invested in the **SPY** fund, with $1000 added each month. If the TTR indicates to withdraw from the market i.e. indicates a sell signal, you take your money out and keep adding $1000 a month to the savings account. When the TTR indicates it's time to buy i.e. invest, you take all the money from your savings account and invest in the **SPY** stock.

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Since you took R programming course in your graduate school, you would like to backtest this strategy for 30 years i.e. go back 30 years in time and check if you had followed this strategy for these 30 years, how much money would you have accumulated using strategy 1 and strategy 2.

You can make use of any package or tool available in R. This project involves doing research and learning about financial terms. Hopefully, it will help you with your investment plans also. You can assume that you start with a $0 balance, and you add $1000 every month.

** Note: If the past 30 years' data is not available, you can use as much data as you can get **

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What to submit:

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1. A table indicating how much money you would have at the end of each year by following strategy 1 and strategy 2.

2. A plot indicating the returns of both strategies over the 30 year period.

3. The total money accumulated at the end of 30 years using the different strategies.

4. One paragraph explanation of which strategy is the best and if the results surprised you.