Revisiting Glabadanidis (2015) Market Timing with Moving Averages

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In this section of the program you can re-define the values of the variables

```r
#======================================================================
# DEFINE THE VARIABLES

# logical variable (TRUE or FALSE), defines whether to simulate with look-ahead bais or not
look.ahead.bias <- TRUE

# define the length of the averaging period, the number of months
window.length <- 24

# define the level of transaction costs
tc <- 0.005

# select the dataset
dataSet <- "1"

# define the historical period
start <- as.yearmon(paste(1960,1), "%Y %m")
end <- as.yearmon(paste(2011,12), "%Y %m")

switch(dataSet,
       "1" = {
         data <- read.table("Portfolios_Formed_on_ME.txt", header=TRUE)
         dataset.name <- "Size-sorted portfolios"
       },
       "2" = {
         data <- read.table("Portfolios_Formed_on_BE-ME.txt", header=TRUE)
         dataset.name <- "Book-to-market-sorted portfolios"
       },
       "3" = {
         data <- read.table("10_Portfolios_Prior_12_2.txt", header=TRUE)
         dataset.name <- "Momentum-sorted portfolios"
       },
       {
         stop("Unknown data set!")
       }
)
```
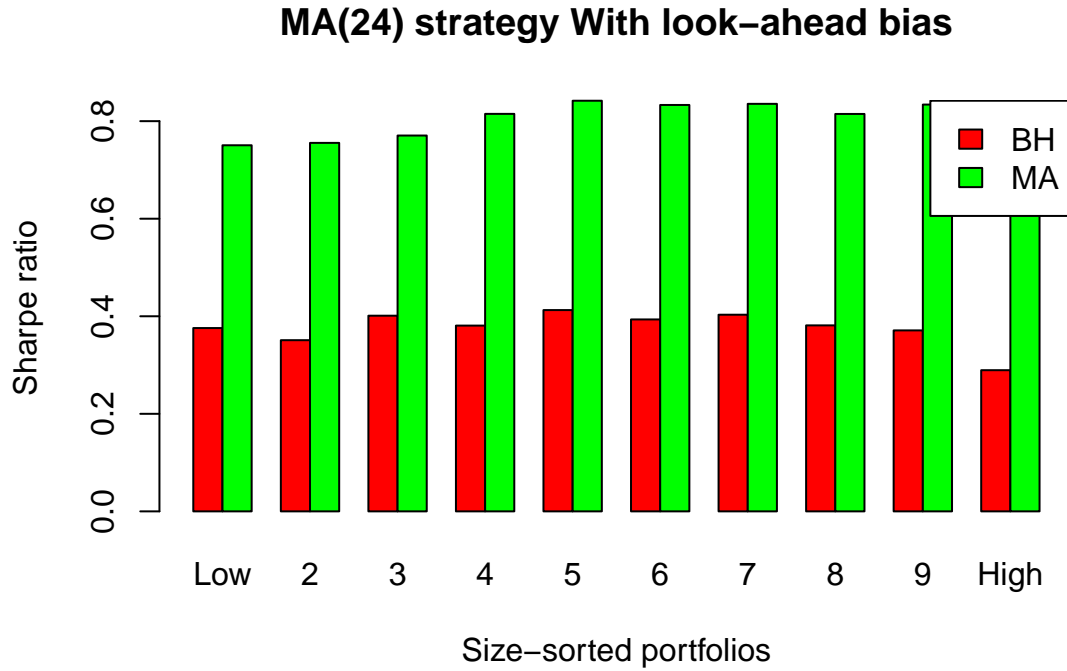
Below is the table with the summary statistics of the BH and MA strategies.

	μ_{BH}	σ_{BH}	s_{BH}	SR_{BH}	α_{BH}	pval	μ_{MA}	σ_{MA}	s_{MA}	SR_{MA}	pval	α_{MA}	pval
Low	13.57	22.43	-0.13	0.38	-0.79	0.39	17.95	17.03	0.35	0.75	0.00	5.25	0.00
2	12.95	22.28	-0.22	0.35	-1.23	0.03	17.89	16.86	0.27	0.76	0.00	5.63	0.00
3	13.68	21.29	-0.40	0.40	0.03	0.94	17.67	16.25	0.04	0.77	0.00	5.43	0.00
4	12.94	20.51	-0.46	0.38	-0.48	0.34	17.57	15.25	0.05	0.81	0.00	5.69	0.00
5	13.31	19.81	-0.48	0.41	0.44	0.39	17.48	14.66	-0.08	0.84	0.00	5.43	0.00
6	12.44	18.57	-0.49	0.39	0.14	0.81	16.58	13.72	0.08	0.83	0.00	5.25	0.00
7	12.50	18.27	-0.45	0.40	0.43	0.45	16.41	13.48	0.17	0.84	0.00	5.62	0.00
8	11.91	17.77	-0.43	0.38	0.29	0.60	15.91	13.23	0.14	0.81	0.00	5.48	0.00
9	11.20	16.35	-0.40	0.37	0.25	0.63	15.18	12.04	0.21	0.83	0.00	5.42	0.00
High	9.46	14.99	-0.31	0.29	0.52	0.04	13.10	11.70	-0.20	0.68	0.00	3.87	0.00

Table 1: Summary statistics for the respective buy-and-hold (BH) portfolio returns and the moving average (MA) strategy portfolio returns. μ is the annualized average return, σ is the annualized standard deviation of returns, s is the skewness, SR is the annualized Sharpe ratio, α is the alpha in the Fama-French-Carhart 4-factor model, and *p-val* is the p-value. μ, σ, and α are reported in percentages.

Finally the bar plots that illustrate the performances of the BH and MA strategies.

MA(24) strategy With look−ahead bias