

## Big Data Asset Pricing

### Exercise 4: Hig-Dimensional Return Predictions

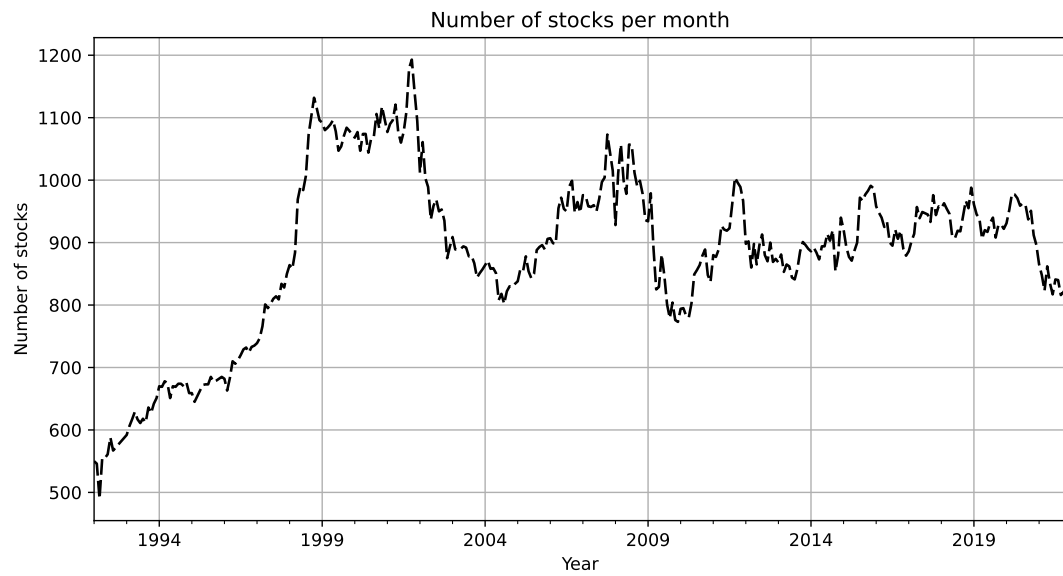
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**Statement:** I certify with my signature that I have solved the exercise according to the Code of Professional Conduct and Ethics. For example, I have not plagiarized others, but, instead, solved the exercise myself (possibly with allowed collaboration with other students), and I have referenced my sources appropriately.

1



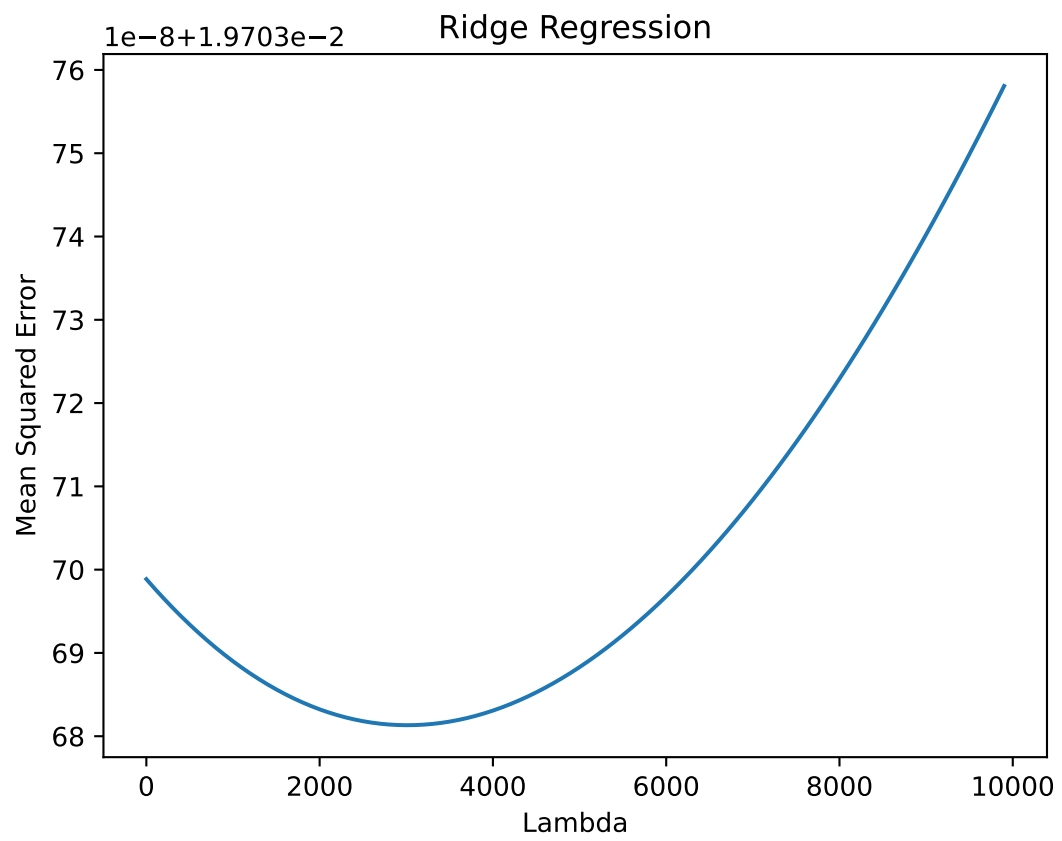
2

2.a

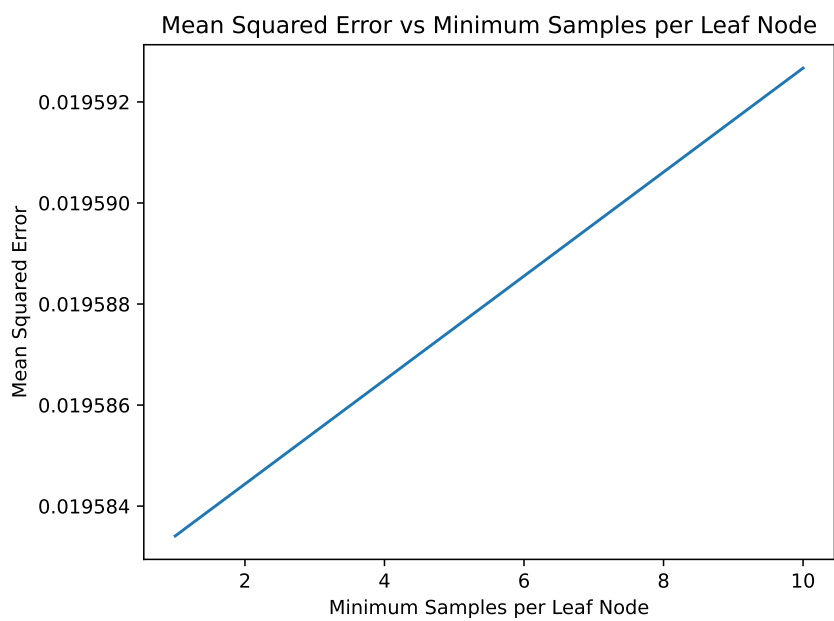
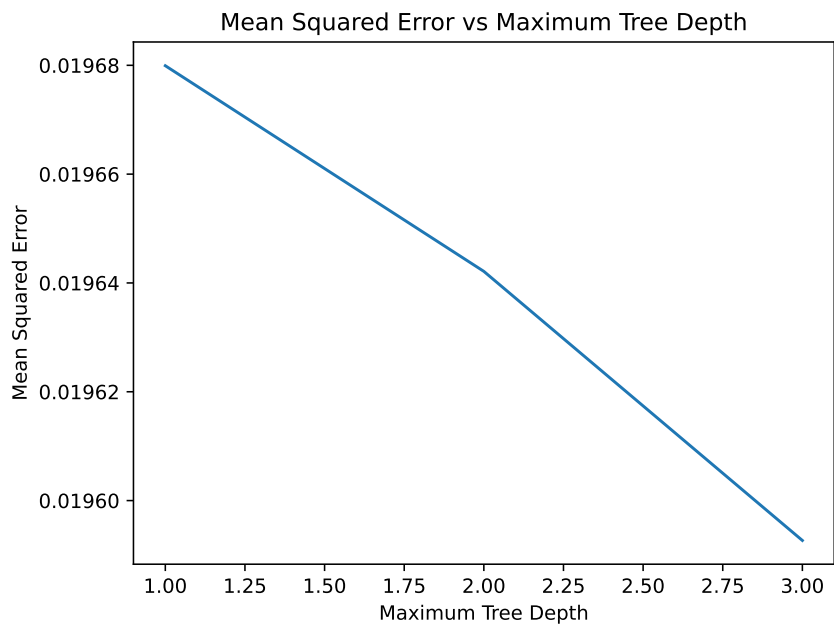
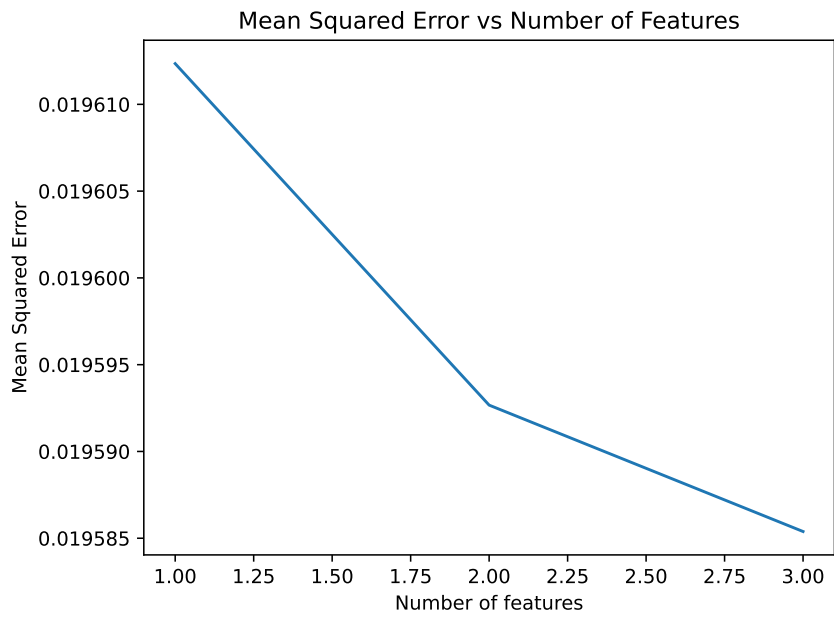
Table 1: The table shows the results of the Fama-Macbeth regression.

	Parameter	Std. Err.	T-stat	P-value	Lower CI	Upper CI
be_me	0.0282	0.0261	1.0822	0.2792	-0.0229	0.0794
ret_12_1	-0.0231	0.0208	-1.1070	0.2683	-0.0639	0.0178
market_equity	-0.0490	0.0260	-1.8887	0.0589	-0.0999	0.0019

2.b



2.c

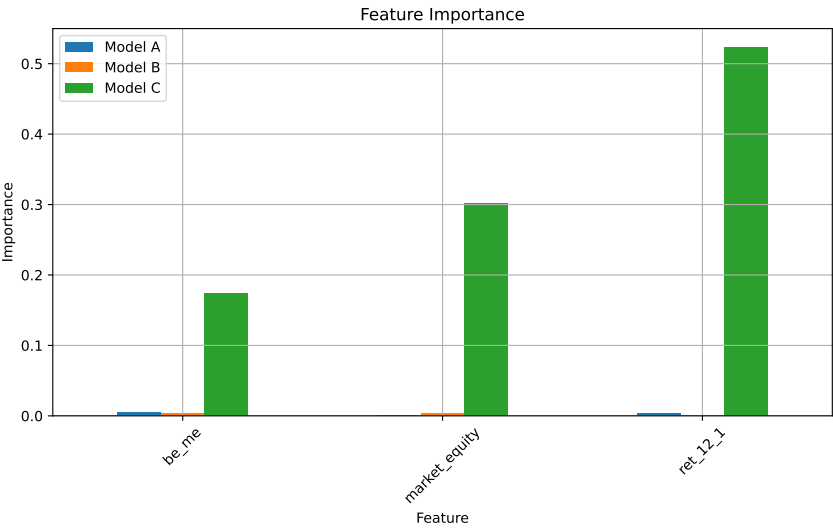


3

Table 2

Model	In-sample R2
Model A	0.0012
Model B	0.0010
Model C	0.0010

4



5

5.a

Table 3

Model	Out-sample R2
Model A	0.2471
Model B	0.0010
Model C	0.0010

## 5.b

Table 4

$r_i - r_f$	t-stat	$\alpha$	$t(\alpha)$	Sharpe Ratio	Information Ratio
-0.0671	-0.8578	-0.0703	-5.1026	-0.8578	-0.9058
-0.0309	-0.3667	-0.0359	-2.5628	-0.3667	-0.4323
-0.0351	-0.4452	-0.0401	-2.9172	-0.4452	-0.5189

## Appendix

Here you can find the python code that I used to solve the exercise. [Link to the GitHub repository.](#)