Market Forecasting using Exponential Model

Movies and the Exponential Model

The file "Lab - Exponential & Movies.xls" contains data for 72 movies. The first sheet in the Excel workbook contains box office sales data. The second sheet in the Excel workbook contains potential covariate data.

Exponential & Movies.xls

1. Divide the data set into a calibration sample that contains weeks 1-6 and a validation sample that contains weeks 7-8.

2. Estimate an exponential model for each individual movie on your calibration sample. Forecast sales and calculate your forecast-MAPE for your validation sample.

3. Estimate an aggregate exponential model on your calibration sample. Forecast sales and calculate your forecast-MAPE for your validation sample.

4. What covariates would you expect to affect movie box office sales and in what direction?

5. With your calibration sample, estimate an exponential model with the two covariates that you expect to have the great effect on sales.

6. Using your estimates from step 5, forecast sales in your validation sample and calculate your forecast-MAPE.

7. Compare the forecast-MAPE across the three versions of the model estimated.