Group Feedback III

Please note that this feedback was given on Friday, November 20th. I was trying to problem-solve how to fit a Hidden Markov Model – specifically, how do I fit the thing to the data that I had? I was confusing myself by trying to use the distributions of the loss functions (somehow), but the problem is that there's no "data" in that case – it's already factored into the loss function. I sent the group a detailed explanation of what problem I was trying to solve, and I was able to boil it down into a key question – how do I select an optimal model in the presence of a loss function that penalizes overprediction much more severely than underprediction?

My group was able to give thoughtful answers on the background and motivation of my problems – namely whether the I was explaining the economic theory of the efficient market hypothesis correctly – as well as an idea of incorporating additional lagged terms into the HMM.

As it goes, I ended up not incorporating either piece, at least not right now. I think the problem is well-motivated from an economics perspective, but I think it really could use mentorship from someone in the field of financial economics who sees the promise of the models that I am proposing if it were fed data that could help it shine. I also ended up not incorporating the idea of incorporating additional lagged terms simply because the code I was working off of was not set up to do that (at least from my perspective) and I didn't want to plug things into a black-box package without really understanding the guts of the code.

Group Feedback IV

This feedback was given on Friday, November 27th. I was able to show my group the work from the changepoint algorithm with some added smoothing. My group was positive and encouraging about my work, and encouraged me to add more smoothed data and to make sure that the narrative was clear. I did end up working on the narrative and making sure it was smoother, but I chose not to add more plots simply because I wasn't completely sure what they would add besides additional length to the paper. The problem I find with this work is that I fear it's caught in a no-mans-land of not theoretical enough for a statistician to care about while also not generating powerful enough results for an economist to notice. At least not yet, and I have the feeling that this work can really grow into something great.

Group Feedback V

This feedback occurred on Saturday, November 28th and Sunday, November 29th. A group member wrote back with some questions about my thesis – the most pertinent of which was whether the changepoint algorithm was well motivated since adding together PCA vectors doesn't necessarily produce something meaningful since they are mutually orthogonal. Fair point, but I suppose the usefulness or lack thereof of the algorithm must speak for itself based on its

predictive accuracy. I'm not sure if it's there yet, but I believe there is some potential in the algorithm.

Lastly, I ran the narrative by my parents, and they seem to be quite positive about it. I hope you enjoy reading it as much as I enjoyed writing it.

- Steven