Replication code for Centralizing Over-The-Counter Markets?
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Remarks:
The Matlab code evolved with the paper, and includes variables that are no longer used in the published version of the draft. For instance, set eta=0. Further, the benchmark model refers to the model without loyalty benefits. The data is proprietary.

Estimation

mainfile.m

- choose model specification as described in the header of the file
- estimates the model using "*MatlabEstimationData_$week _$homedealer _$keepall _$quantityrobust _$largetrade _$fej.csv" created in Mainfile_ModelEstimation_STATA.do*

Uses the following functions for the estimation

- **gridsearch_avg.m**, which uses **gmm_fun_y_c_avg.m** to find a good starting point for the GMM estimation
- **gmm_fun_y_c_avg.m**, **gmm_fun_y_c_avg_eta.m** and **gmm_fun_y_c_avg_eta_H.m** (which use **model_prediction_avg_eta.m**) to conduct the GMM estimation. The latter should in principle run also for eta=0 and H=0 and replace the first two functions. I kept the old code to avoid making a mistake when writing the model extensions.
- **gradient_fun_y3_avg** calculates standard errors

For retailer=0, the code computes variables for the status quo, using

- **status_quo_fun.m** which uses **model_prediction_avg.m**, **model_prediction_avg_eta.m** and **model_prediction_avg_H.m** for the benchmark model with eta=0, when eta>0 and for the home dealer model.

Output

- saves one estimation file per investor group and specification
  '/momentsatestimate',['_',num2str(side),'_' num2str(retailer),'_',num2str(day), '_', num2str(homedealer), '_', num2str(keepall),'_', num2str(quantityrobus), '_', num2str(largetrade), '_', num2str(tradesize),'_',num2str(fej)]
  /estimation',['_',num2str(side),'_' num2str(retailer),'_',num2str(day), '_', num2str(homedealer), '_', num2str(keepall),'_', num2str(quantityrobus),'_', num2str(largetrade), '_', num2str(tradesize),'_',num2str(fej)]

estimate_tables.m uses **plot_estimation_restuls2.m**

- produces input for the estimation table and the graphs of the estimates in the draft

histogram_plot2.m

- produces the probability density plot of the yields (Figure 7)

Counterfactuals

Note: Not all counterfactuals run for the sell-side. I only estimated everything for the buy-side.

mainfile_combine.m

- choose model specification as described in the header of the file (identical to mainfile.m)
- conducts the counterfactuals using the matlab files that come out of mainfile.m

Runs the status quo for all investor groups, using

- **status_quo_fun.m** which uses **model_prediction_avg.m**, **model_prediction_avg_eta.m** and **model_prediction_avg_H.m** for the benchmark model with eta=0, when eta>0 and for the home dealer model.
  Output: '/counterfac_SQ_',[num2str(side),'_' num2str(retailer), '_',num2str(day), '_', num2str(homedealer), '_', num2str(keepall),'_', num2str(quantityrobus),'_', num2str(largetrade), '_', num2str(tradesize), '_', num2str(fej), '_', num2str(loyalty)]

Runs all counterfactuals using

- **counterfac_per_side_fun.m** which uses **model_prediction_avg.m**, **model_prediction_avg_eta.m** and **model_prediction_avg_H.m** for the benchmark model with eta=0, when eta>0 and for the home dealer model.
  Output: '/counterfac_',[num2str(side), '_',num2str(day), '_', num2str(homedealer), '_', num2str(keepall),'_', num2str(quantityrobus),'_', num2str(largetrade), '_', num2str(tradesize),'_' num2str(CF),'_',num2str(flexible), '_', num2str(fej), '_', num2str(loyalty)]

policy_analysis.m

- The file creates information for the welfare tables using **welfare_fun_H4** and **welfare_fun_add** which uses data created with mainfile_combine.m and **allocative_efficient.m** to compute the allocative efficient allocation for the benchmark model (homedealer=0). The latter does not work for the home dealer model. The welfare functions also uses **CI_fun.m** to compute confidence intervals (not used in the final draft), and **HHI_fun.m** to compute the herfindahl index.

modelfit.m

- produces the model fit

Auxiliary files

- **keep.do** keeps only specified variables

- **cell2csv.do** converst cells in cvs document