Presentation Monday 7 December

**Methods**

We have used IV Panel Model. At the beginning of our research, we are quickly confronted with a problem of endogeneity. It has been reverse causality.

Reverse Causality can be explained with the relationship between the stock price of the company and Total NAV of ETF.

At the following graph, we can that:

TOTAL NAV => PRICE => PE => PRICE => TOTAL NAV

Then, our solution is to use an instrumental variable to isolate the impact of Total NAV on the PE of the company. We use a dummy variable called inS&P500. It takes a value of 1 if the company is in the S&P 500 and 0 otherwise. This instrument has been tested to assure that will be relevant and exogeneous.

Isolating the effect of NAV, we can estimate if the growth of NAV of ETF can disturb PE of company and so, create distortion between book value and market value of the company.

**Models**

Of course, in our model, it has been necessary to incorporate the control variable as mentioned Benoit. Moreover, in order to eliminate Time-invariant characteristics of the company, fixed effects have been added.

As said Benoit, our dataset is composed of 226 companies in different sectors. So, we have decided to use clustering with companies in order to adjust the standard deviation of our estimators.

To estimate our IV Panel model, we used a 2SLS Regression. Then, the first stage regression can be written as the followings:

(show 1st stage)

This step allows isolating the growth rate of total NAV ETF. Then, we estimate this variable with our instrument “being in S&P 500”. After that, we have included this “first step” regression in our regression of the second step.

Finally, our final regression can be written:

(Show 2nd stage)

Where beta\_1 is the principal coefficient of our model.

Now, Oscar will be talking about our results.