Explication Methodologie for Quantlet Subsample analysis :

« We wanted to study the Difference

, we devide our data set in several subsamble (Ex Pre 2008 crisis, Post 2008 crisis) and run a regression for each subsamples with log return of stock price as dependent variable and the common factor as independent variable. Second we test for the signifiance of the difference between the coefficient of our previous regressions with the help of dummy variables.

**Slide 1 + 2  : Type of firm**

File needed on the slide:

* Regression Oil Other.txt
* Equation model : Stock ~ Oil + Gas + Market + EURUSD + DumFirmT + DumFirmT + DumFirmT\*Oil + DumFirmT\*Gas +
* Equation model Dummy  : Stock ~ Oil + Gas + Market + EURUSD + DumFirmT + DumFirmT + DumFirmT\*Oil + DumFirmT\*Gas + DumFirmT\*Market + DumFirmT\*EURUSD

Interpretation :

* Oil – Only dummy significantly different from 0 : Quite logically there is big difference
  + As we already said the the two firm stated as « other » are mainly producing electricity and it is interesting to see that the coefficient attached to oil is actually negative for them which show that the market consider the two good as substitut and that therefore a depreciation in oil price as a negative effect on the stock price of an electricity producer.
  + Interestingly we do not see that in the gaz coefficient. The oil company ofen produce gaz so maje sense. The electricity we could have awaited some sort of negative effect…

**Slide 3 + 4 : Structural Break 2008**

File needed on the slide:

* Regression 2008.txt
* Equation model Stock ~ Oil + Gas + Market + EURUSD
* Equation model Dummy : Stock ~ Oil + Gas + Market + EURUSD + DumFirmT + DumFirmT\*Oil + DumFirmT\*Gas + DumFirmT\*Market + DumFirmT\*EURUSD

Interpretation :

* Euro/USD : Complete inversion of the effect.
* Euro s’apprécie -> positive
* Before when euro rise -> stock price return decrease
* After when euro rise -> stock price increase.
* DumP : the dummy is significantly different. Which is not very informative in the Random model