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## Assignment 3

### The model

In the study of default probability of the borrower, a bank employ binary choice model to determine the probability of the its clients.

The study employs the following model:

$$Prob(Y=1/X) = f(X1, X2, X3)$$

Where  $Y_i = 1$  if the borrower is nonperforming loan (NPL).  
= 0 otherwise.  
 $X1, X2, X3$  are independent variables.

Strategic NPLs can be determined as the case where the borrower is expected to be good loan but in practice that borrower turned out to be bad loan or NPL.

### Requirements:

1. Estimate the model assuming that the probability function is cumulative normal distribution function. Interpret your estimated result (overall test, individual test, pseudo R2, counted R2).
2. Compute marginal effect at mean and at median.
3. Determine the number of Strategic NPLs firms in this case using the threshold of predicted value = 0.5
4. Determine the number of Strategic NPLs firms in this case using the threshold of predicted value = 0.3