Currency Crises Early Warning Systems:
why they should be Dynamic

This code estimates both static and dynamic Logit and Probit (binary-choice) models. Three types of dynamic models can be considered by including the lagged binary variable ($Dynamic_y$), the lagged index ($Dynamic_\pi$) or both of them ($Dynamic_y$;Dy_π) as explanatory variables. A (T,1) binary vector must be specified, as well as a (T,N) matrix of explanatory variables. The user can also choose the lag length, the type of model and select between Logit and Probit specifications. The results include estimated parameters, standard-errors, t-statistics as well as information criteria. The series of estimated probabilities is saved in .csv format.

Note on the Estimated Models

This code can estimate both Logit and Probit model:

$$\mathrm{P}_{t-1}(y_t = 1) = F(\pi_t), \tag{1}$$

where F is the the logistic cumulative distribution function (Logit) and the normal cumulative distribution function (Probit), respectively. Besides, the index π_t depends on the dynamics chosen (static model or one of the three dynamic choices respectively):

1. Static model:

$$\pi_t = \alpha + \beta_1 x_{t-lag}, \tag{2}$$

2. Dynamic model including the lagged binary variable y_{t-1}:

$$\pi_t = \alpha + \beta_1 x_{t-lag} + \delta y_{t-1}, \tag{3}$$

3. Dynamic model including the lagged index π_{t-1}:

$$\pi_t = \alpha + \beta_1 x_{t-lag} + \xi \pi_{t-1}, \tag{4}$$

4. Dynamic model including both the lagged binary variable y_{t-1} and the lagged index π_{t-1}:

$$\pi_t = \alpha + \beta_1 x_{t-lag} + \delta y_{t-1} + \xi \pi_{t-1}, \tag{5}$$