

# Macro-Finance Homework 4

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1. Run a panel regression with country fixed effects; all countries together, NOT separately. Produce a table with the  $\theta$  at different horizons with standard error & t-stat/stars.

LP	$\theta$	$\sigma$	t
$h = 0$	-0.0411933	0.0108031	-3.81(***)
$h = 1$	-0.0642834	0.0157284	-4.09(***)
$h = 2$	-0.0688681	0.0197221	-3.49 (***)

Table 1: Local Projection  $\Delta y_{i,t+h} = \alpha_i + \theta_h Crisis_{i,t} + \Gamma_{h,j} X_{i,t-1} + u_{h,i,t+h}$ ,  $h=\{0,1,2\}$

2. Bonus: now focus only on those crisis episodes where real credit growth in the year before the crisis is 2ppts (0.02) above average. So  $Crisis = 1$  if both  $crisisJST=1$  and *lagged credit growth* > *mean* + 0.02, and zero otherwise.
3. Re-estimate the local projection for this definition of  $Crisis_{i,t}$ , and report the coefficients in a separate table.

LP	$\theta$	$\sigma$	t
$h = 0$	-0.0411933	0.0108031	-3.81(***)
$h = 1$	-0.0642834	0.0157284	-4.09 (***)
$h = 2$	-0.0688681	0.0197221	-3.49(***)

Table 2: Local Projection  $\Delta y_{i,t+h} = \alpha_i + \theta_h Bonus\_Crisis_{i,t} + \Gamma_{h,j} X_{i,t-1} + u_{h,i,t+h}$ ,  $h=\{0,1,2\}$

4. Write a few sentences about whether financial crises are costly, how costly, and whether credit growth makes a difference (if you did the bonus part).

Looking at the coefficients, we can notice that financial crises are costly for the economy. A financial crisis ( $crisis_{JST} = 1$ ) at period  $t$  will lead to a decrease in real GDP per capita growth by 0.041% (-0.0411933). A financial crisis seems to have long term effects in the economy. In particular it decreases real GDP per capita growth by 0.059% (-0.0595918) at the next period ( $t+1$ ) and by 0.068% (-0.0688681) at the period after ( $t+2$ ). In total, a financial crisis seems to decrease real GDP growth by 0.168% cumulatively in the first 3 years.

It is worth mentioning that we don't observe any change in the effect of a crisis to growth. In particular we observe that the introduction of credit growth doesn't change the coefficient's values.