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Online annex to BIS Bulletin No 71: "Fiscal and monetary policy in emerging market economies: what are the risks and policy trade-offs?"

Dynamics of the sovereign risk premium channel in emerging market economies (EMEs)

We use local projections to study the response of sovereign risk to an increase in the fiscal deficit and the response of the exchange rate to higher sovereign risk (Jordà (2005)). We estimate two separate panels based on the following equations:

$$CDS\ spread_{i,t+h:t-1} = \alpha_i + \beta_1 GDP\ growth_{i,t} + \beta_2 Log\ change\ CPI_{i,t} + \beta_3 \Delta\ exchange\ rate_{i,t} + \beta_4 Policy\ rate_{i,t} + \beta_6 Primary\ deficit_{i,t} + \beta_7 Log\ Oil\ prices_t + \beta_8 Log\ US\ dollar\ broad\ index_{i,t} + \varepsilon_{i,t}$$

$$\Delta\ exchange\ rate_{i,t+h:t-1} = \alpha_i + \beta_1 GDP\ growth_{i,t} + \beta_2 Log\ change\ CPI_{i,t} + \beta_4 Policy\ rate_{i,t} + \beta_5\ CDS\ spread_{i,t} + \beta_6 Primary\ deficit_{i,t} + \beta_7 Log\ Oil\ prices_t + \beta_8 Log\ US\ dollar\ broad\ index_{i,t} + \varepsilon_{i,t}$$

The vector of domestic variables includes the log change of real GDP, log change in CPI, the change in the exchange rate, the policy rate in per cent, the five-year CDS spreads in basis points and the primary fiscal deficit as a percentage of GDP. The external block includes the log of oil prices and the US dollar broad index. The sample includes 19 EMEs: BR, CL, CO, MX, PE, CN, ID, IN, KR, MY, PH, TH, CZ, HU, IL, PL, TR, and ZA. The sample period is from Q1 2000 to Q2 2022 at a quarterly frequency. Quarterly fiscal data repeat the annual figure. Standard errors are based on Driscoll and Kraay (1998). Confidence intervals at 90%.

Capital flows at risk in EMEs

We estimate four-quarter-ahead capital flow distributions that depend on the US policy rate (shadow rate), the domestic policy rate, realised equity volatility, expected domestic GDP growth and government debt. We focus on gross capital inflows, defined as the sum of debt, equity and bank flows from non-residents to the domestic economy. We estimate the model as a country-panel quantile regression with fixed effects using quarterly data from Q1 2000 to Q4 2022 on a sample of 17 EMEs (Aguilar et al (2023)). Predicted quantiles are interpolated using a skewed t-distribution.[1] The econometric specification is:

$$y^{\alpha}_{i,t:t+h} = \delta^{\alpha}_i + \beta^{\alpha}_1 y_{i,t-1} + \beta^{\alpha}_2 US\ policy\ rate_t + \beta^{\alpha}_3 Domestic\ policy\ rate_{i,t} + \beta^{\alpha}_4 Equity\ volatility_{i,t} + \beta^{\alpha}_5 Expected\ GDP\ growth_{i,t} + \beta^{\alpha}_6 Govt\ debt_{i,t} + \varepsilon_{i,t}$$

[1] See further details on this framework in Aguilar et al (2023) and Gelos et al (2022).

where δ_i^{α} denotes country fixed effects; $y_{i,t:t+h}$ denotes gross inflows to country i between quarters t and $t+4$ as a percentage of potential GDP and α denotes the fifth, 25th, 50th, 75th and 95th percentiles.

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