

### 3.1.2 Local Factors

Our solution also allows a role for the leverage and equity of local banks. As a proxy for local leverage we use the ratio of bank assets to capital in levels (*Local Leverage*) and growth (*Local Leverage growth*) from the World Bank WDI database. As a proxy for local equity growth, we use the commercial banks' net income to yearly averaged total assets (ROA) (*Local Equity growth*) from the World Bank Financial Development and Structure Dataset. By using this proxy, we implicitly assume that a constant fraction of the earnings is retained as equity.

A distinctive feature of our model is the impact of exchange rate changes on capital flows. We include the log difference of the real exchange rate ( $\Delta RER$ ), where RER is computed as the log of nominal exchange rate\*(US CPI/local CPI). The nominal exchange rate is in units of national currency per U.S. Dollar (from the IMF's IFS database). Bruno and Shin (2013) find in vector autoregression (VAR) exercises that a decline in the US Fed Funds rate is followed by an increase in US broker dealer leverage, an acceleration of capital flows and a depreciation of the US dollar.

In addition to the variables explicitly modeled in our theoretical framework, we also include a number of other control variables. The annual growth rate in money supply ( $\Delta M2$ ) is measured as the difference in end-of-year totals relative to the level of M2 (from the World Bank WDI). Our rationale for including the growth in M2 arises from the domestic monetary implications of capital flows. The regional banks in Figure 7 do not have a currency mismatch: they raise US dollar funding and lending in dollars. However, the local borrowers - typically non-financial corporates - may have a currency mismatch either to hedge export receivables or to engage in outright speculation on local currency appreciation. One way for them to do so is to borrow in US dollars and then deposit the local currency proceeds into the domestic banking system. Such deposits would be captured as corporate deposits, a component of M2. Thus, we would predict that banking inflows are associated with increases in M2.

$\Delta GDP$  and *Inflation* are the country percentage changes in GDP and Inflation, respectively (data from the WEO). Faster growing economies could have greater demand for credit