



Figure 11. **Cross-border bank claims, leverage and VIX.** The left panel plots cross-border claims of BIS reporting country banks on borrowers in countries as listed (from BIS banking statistics table 7A). The series are normalized to 100 in March 2003. The right panel plots log of VIX lagged by one quarter, and leverage of the US broker dealer sector (inverted) from the US Flow of Funds. Leverage is defined as (equity + total liabilities)/equity.

and the US dollar is the currency underpinning the global banking system, our variable is a good empirical counterpart to our model setting built around banking claims of global banks that use US dollar wholesale funding. The key organisational criteria of the BIS locational statistics data are the country of residence of the reporting banks and their counterparties as well as the recording of all positions on a gross basis, including those vis-à-vis own affiliates. This makes the locational statistics appropriate for measuring the role of banks in the intermediation of international capital flows and lending flows.

The left panel of Figure 11 plots the cross-border claims of BIS-reporting banks from the BIS Locational Statistics Table 7A on counterparties listed on the right. The series have been normalised to equal 100 in March 2003. Although the borrowers have wide geographical spread, we see a synchronised boom in cross-border lending before the recent financial crisis.

The right panel of Figure 11 plots the leverage of the US broker dealer sector from 1990. Leverage increases gradually up to 2007, and then falls abruptly with the onset of the financial crisis. The right panel also shows how US broker dealer leverage is closely (negatively) associated with the risk measure given by the VIX index of the implied volatility in S&P 500 stock index option prices from Chicago Board Options Exchange (CBOE). This