(2010) and Fostel and Geanakoplos (2008, 2012) have examined how the risk bearing capacity of the financial system can be severely diminished when leverage falls through an increase in collateral requirements. Similarly, Gorton (2009, 2010) and Gorton and Metrick (2012) have explored the analogy between classical bank runs and the modern run in capital markets driven by increased collateral requirements and reduced borrowing capacity.

Our model of global banking combines these earlier insights with the institutional features underpinning the international banking system, such as the centralised funding and credit allocation decisions documented by Cetorelli and Goldberg (2012a, 2012b). In particular, we construct a "double-decker" model of banking where regional banks borrow in US dollars from global banks in order to lend to local corporate borrowers. In turn, the global banks finance cross-border lending to regional banks by tapping US dollar money market funds in financial centres.

A distinctive feature of our model is the link between local currency appreciation and loosening of financial conditions through the build-up of leverage in the banking sector. The channel is through shifts in the effective credit risk faced by banks who lend to local borrowers that may have a currency mismatch. When the local currency appreciates, local borrowers' balance sheets become stronger, resulting in lower credit risk and hence expanded bank lending capacity. In this way, currency appreciation leads to greater risk-taking by banks. This "risk-taking channel" of currency appreciation entails a link between exchange rates and financial stability.

In addition, given the pre-eminent role of the US dollar as the currency used to denominate debt contracts, our results shed light on why dollar appreciation constitutes a tightening of global financial conditions, and why financial crises are associated with dollar shortages.

The combination of the rapid growth of the banking sector fuelled by capital inflows and an appreciating local currency has been a classic early warning indicator of emerging economy crises. Gourinchas and Obstfeld (2012) conduct an empirical study using data from 1973 to 2010 and find that two factors emerge consistently as the most robust and significant predictors of financial crises, namely a rapid increase in leverage and a sharp real appreciation of the currency. Their finding holds both for emerging and advanced