Abstract for Charlie Brummit

Title: Procyclical leverage and inside money in a simple model of a banking crisis

Abstract: The mechanisms by which financial systems amplify small shocks and precipitate widespread insolvency remain poorly understood. We present a simple model comprising banks and investors trading risky assets that shows how system-wide default can arise out of even small shocks to beliefs about the future. The investors are risk-averse, while the banks maximize their equity subject to a tolerable likelihood of insolvency. First, we show that banks' leverage (i.e., how much debt finances their assets) is procyclical, meaning that it increases and decreases in response to positive and negative news, respectively. Importantly, this behavior causes large price drops in response to small negative shocks to beliefs about the future, even when preceded by positive shocks of the same magnitude. Finally, we show that regulating the banks with capital requirements can limit their leverage and thereby prevent some crises, but it can also cause larger declines in asset prices in the face of negative shocks.