

Abstract (summary):

One of the main lessons from Asian Financial Crises is that a country is more likely to be hit by a currency crisis when it has low levels of international reserves in relation to short-term external debt. What is not clear yet is, to what extent, a country with high reserves is able to avoid currency attacks stemming from weak fundamentals like current account deficits and real effective exchange rate appreciation. First generation crisis models suggest that size of international reserves affects only the timing of a crisis. Second generation crisis models, however, imply that higher reserves may reduce the probability of a crisis in a vulnerable zone. This dissertation investigates systematically the potential tradeoffs between high reserves and weak fundamentals in currency crises and considers the implications for optimal levels of reserve holdings.

In the first essay of the dissertation, *A Simple Model of Precautionary Demand for Reserves*, we develop a model to demonstrate that high reserves are ineffective in protecting against currency crises when the economy is in a zone of bad fundamentals, but can be effective in offsetting weak fundamentals in a vulnerable zone. Furthermore, the countries with weaker fundamentals in a vulnerable zone require higher levels of international reserves to avoid a crisis.

The second essay, *Can High Reserves Offset Weak Fundamentals*, extends Sachs, Tornell and Velasco (1996) and confirms the predictions in the first essay. It uses a probit model for 42 emerging markets countries to examine the tradeoffs among different measures of weak fundamentals and reserve levels. The empirics suggest that reserve hoarding is effective when the economy is in a vulnerable zone. The weaker are the fundamentals, the higher is the demand for international reserves.

The third essay of the dissertation, *The Imprecision of the Precision Weights*, discusses the inappropriate use of the precision weights in constructing the composite variable, the exchange market pressure (EMP). The precision-weighted EMP discounts the components with higher variability by imposing the inverse of their variance as the weights. However, the higher variability of the components merely reflects the government's preference to use such policy tools to absorb the exchange market pressure more frequently. This essay extends the model in Weymark (1995) and derives the exchange rate elasticities of reserves and interest rates. We develop the new EMP weighted by the elasticities. By comparing the new EMP with the conventional precision-weighted EMP, we conclude that the precision weights are imprecise and conceptually incorrect.