

Chapter 29 Financial Crises

Question 29.4

Academics have spent considerable effort to predict currency crises. Developing a so called “early warning system” is considered very useful. With such a system financial market participants may determine beforehand whether to invest in an economy and policy advisors may be able to take actions to prevent a currency crisis.

In their paper “Leading indicators of currency crises” Kaminsky, Lizondo and Reinhart¹ develop such an early warning system. A number of potential indicators are monitored in the 24 months before a crisis. If a certain indicator departs from “normal” during this period (exceeds a certain threshold value) this is taken as a warning signal of a currency crisis. The table below shows some of the most reliable indicators of a currency crisis found by Kaminsky et al.

Early warning signals
M2 / international reserves
Real exchange rate
Trade balance
Stock prices
Output

29.4A Why are early warning systems better in predicting first generation type currency crises instead of second generation type currency crises?

29.4B Explain why the international reserves can be used as an early warning signal of a currency crises. Should this indicator increase or decrease in order to signal a crisis?

¹ G. Kaminsky, S. Lizondo and C.M. Reinhart, Leading indicators of currency crises, IMF staff papers, Vol. 45 no. 1, March 1998

- 29.4C Explain why the real exchange rate and the trade balance can be used as a warning signal of a crisis. Keep in mind that excessive spending by the government leads to a higher demand for both traded and nontraded goods.
- 29.4D Based on the indicators in the table every government could in principle publicly announce whether it is crisis prone or not. Do you think it is a good idea for a government to do this?

Question 29.5

The economic costs of financial crises can be very large as shown in paragraph 29.7 of the main text. So one may wonder whether it is worth it to liberalize the capital account and risk a currency crisis. Some economists argue that the economic costs of financial crisis are indeed too big and countries should therefore opt for capital controls. Others however claim that capital account liberalization fosters growth by a more efficient allocation of resources. These gains in economic growth are well worth the costs of financial crises.

A survey of this issue is given by the IMF researchers Edison, Klein, Ricci and Sløk in their paper “Capital account liberalization and economic performance: Survey and synthesis”. Locate this paper on the internet and answer the following questions.

- 29.5A Why, according to the authors, is there no agreement among different researchers about the relationship between capital account liberalization and economic growth?
- 29.5B What do the regression results of the authors suggest? Does this surprise you given their employer?
- 29.5C Based on the survey, do you think developing countries should open their capital accounts?

Question 29.6

It is not always clear-cut whether a country experiences a financial crisis or not. A country that is forced to devalue its currency after a speculative attack is of course in a financial crisis. It is difficult

however to judge whether a country that fences off a speculative attack is also in a financial crisis.

To recognize a currency crisis Eichengreen, Rose and Wyplosz² have therefore developed a widely used indicator:

$$\text{Index} = \frac{\Delta e}{e} - \frac{\sigma_e}{\sigma_R} \frac{\Delta R}{R} + \frac{\sigma_e}{\sigma_i} \frac{\Delta i}{i}$$

in which the change in the exchange rate (e), official foreign exchange reserves (R) and the short-term interest rate (i) are added and weighted by the standard deviation of the rate of change (σ).

A currency crisis is defined as a period when the index is at least two standard deviations above its mean.

Select a country (maybe every student in class can select a different country) and search the internet for monthly time series data on the exchange rate, official foreign exchange reserves and the short-term interest rate. For some developing countries the short-term interest rate may not be available. In this case you can delete the interest-term from the equation above. Has your country experienced a currency crisis during its history?

² B. Eichengreen, A. Rose and K. Wyplosz, "Exchange market mayhem: The antecedents and aftermath of speculative attacks", *Economic Policy*, October 1996.