

Public Policy 253 - Agricultural and Resource Economics 253
Fall 2004

Homework Assignment #4

Foreign Exchange Crisis and Real Exchange Rate Analysis
Due on Monday November 15

In this assignment, you will be analyzing a foreign exchange crisis in a country of your choice, and prepare a report to the Minister of Finance of the country that provides an analysis of the causes of the crisis and of the measures implemented to overcome the crisis, and gives recommendations on policies that could facilitate recovery and prevent another crisis.

Choose a country that has suffered an important foreign exchange crisis in the last decade, for example Mexico in 1994, Thailand, Malaysia, Indonesia with their 1997-98 crises, Brazil with its 1999 crisis, Argentina in 2001, Nigeria in 1995, Zambia in 1994, or one of the CFA countries in 1994.

1. An overview of the crisis

Document the evidence of a crisis with macro-economic indicators during a period that roughly extends 5-10 years before the crisis to the most recent available year. For this purpose, report in Tables or graphs: Aggregate performance with GDP and GDP/capita, inflation, and real exchange rate (RER). Explain how you calculated the RER used. Delineate on your graphs periods of pre-crisis, crisis, and recovery.

2. The pre-crisis period and the causes of the crisis

Document the evolution of the financial situation prior to the crisis with tables and graphs that show the following: Balance of payments, real exchange rate, domestic inflation, interest rate. What was the exchange rate system?

Document the evolution of macro-economic indicators of the real economy: GDP, exports, imports, balance of trade, and balance of capital (financial) accounts. Was there any evidence of weakness in the balance of trade? If the balance of trade deteriorated, what was the cause? (For this, look at changes in import prices and in the volume of trade.)

What were the main weaknesses of the economy? What were the main causes of the crisis?

3. The crisis

How did the crisis break out? External shocks, international actions (drastic change in capital movements, foreign creditors interventions), or domestic actions (domestic devaluation, other government interventions)?

What was the succession of measures taken by the government and foreign institutions? Distinguish what seems to have been short term stabilization interventions to stop the crisis, and longer term adjustment policies designed to redress more fundamental imbalances in the economy.

4. The recovery

Document the effect of the policies discussed above. For example: If there were fiscal policy interventions, show the evolution of government expenditures, revenues, and deficit. If there were minimum wage policy interventions, show the evolution of real wages, employment, etc. If there were monetary policies interventions, show the evolution of money supply and inflation.

Extend the analysis of the indicators you looked at for the pre-crisis period, and observe those that have marked a positive turn around, those that are still deficient, and those that may have deteriorated and hence should be subject of concern.

5. Social protection

Was the country concerned with impact of the crisis and the reforms on the poor? If yes, document what was done if information is available.

6. Public policy recommendations to the Minister

Conclude with some recommendations of additional reforms that could help accelerate the recovery and set the country on a less vulnerable path.

Note: Start your report with an executive summary that recounts your most important findings on the main causes, the evolution, and the resolution of the crisis, supported by precise results. And then, after a summary of your positive analysis, summarize your main recommendations.

Sources for statistical data:

International Financial Statistics, from the International Monetary Fond. Monthly and Annual Series
 2003 World Development Indicators. This is available through the California Digital Library.

Note on the calculation of trend and growth rates:

Suppose you have a graph like the following which represents the balance of trade for Senegal from 1970 to 1995. There is a clear improvement of the balance between 1981 and 1995. How does one compute the trend in improvement?

- Should one use a growth (exponential) trend or a linear trend? It would be better to use an average growth rate. Yet, when you have a mix of positive and negative values like in this case, and when there is no obvious non-linear trend, like in this case again, you can use a linear trend.
- How does one choos the extreme points? Although there is a clear upward trend from 1981 to 1995, there are quite a bit of fluctuations. Hence, if you trace a trend between A and D which are the observed values for 1981 and 1995, you will find a very steep slope. If you just took one year later, say from 1982 to 1995, you would find a much lower average improvement. This is clearly artificial. This is why you should draw your trend based on a regression and not just the observed values of the two extreme dates.

By contrast, for the domestic price, it is better to estimate an exponential trend. This gives you an estimated inflation rate. For example for the years 1970 to 1983, the estimated inflation rate in Senegal is 8.1%.

In Excel, you can either create a series of estimated values using the trend (for linear trend) or growth (for exponential trend) functions. Or you can even directly request to add a trend on the graph by selecting the series and the "add trend line" command.

