Optional Problem Set 2

Do not attempt to answer this question using the IS-LM model.

Assume that the Central Bank of Crisisland decides to implement a fixed exchange rate equal to 1. At the same time, in order to escape from a recession, they plan to increase the money supply using the following rule:

\[ M = 10 \times t, \]

where \( M \) is money supply and \( t \) is time (in years and starting at \( t = 1 \)).

Assume that prices react rather fast to money supply, so that:

\[ P = \frac{M}{10}. \]

Where \( M \) is the price index.

1. How is the real exchange rate affected over time?
2. Now suppose that the dependance of net exports on real exchange rate is as follows:

\[ NX(\epsilon) = \log(\epsilon). \]

Does the Marshall-Lerner condition hold? Is the country gaining or losing competitiveness?

3. At the time this program is implemented (\( t = 1 \)) Crisisland does not have any outstanding debt and has foreign reserves equal to 10. Explain the nature and time of the crisis under the two following scenarios (‘graph’ the answer, you don’t need to obtain the exact times but describe the condition they need to satisfy):

- Crisisland decides to use its reserves to cover the trade deficit.
- Crisisland decides to ask for loans to cover the trade deficit. Assume that is only short term loans that need to be renegotiated everyday. And as a first approximation the interest rate is low enough to be considered equal to zero.