Fletcher School, Tufts University

13. Choosing a Monetary and Exchange Rate Regime in an Open Economy

E212 Macroeconomics

Prof. George Alogoskoufis

Monetary Policy and Fiscal Policy in Open Economies

- In a floating exchange rate regime a monetary expansion can lead to higher output and employment, causing a depreciation of the exchange rate and to a temporary improvement in the current account.
- In contrast, in a system of fixed exchange rates, monetary policy cannot be used to achieve internal and external balance, as it has to remain geared to the objective of stabilizing the exchange rate.
- Fiscal policy could substitute for monetary policy under fixed exchange rates, but fiscal policy has two many weaknesses as a macroeconomic policy instrument: First, it implies conflict between the objectives of internal and external balance. Second, it is rather inflexible, in the sense that changes in fiscal policy require long and variable design and implementation lags, as changes in national budgets, legislative procedures etc. Third, too frequent a recourse to fiscal policy has implications for both the evolution of government debt and external debt of a country.
- When the conflict between internal and external balance is acute, then the only solution is a devaluation of the exchange rate, which is a form of monetary policy.

Fixed or Flexible Exchange Rates?

- Why would a country want to abandon the short-term instrument of monetary policy, choosing a fixed exchange rate regime? Even more importantly, why would a country want to to join a currency area, like the euro area, in which the possibility of devaluation of the exchange rate does not even exist?
- In order to provide a comprehensive answer to these questions, we must go beyond the limitations of short-term analysis and analyze the pros and cons of the two systems of fixed and floating exchange rates both for the medium run and the long run. Only then can we have a complete picture of the advantages and disadvantages of alternative exchanger rate regimes.

Inflationary Expectations and the Exchange Rate Regime

- The systematic use of monetary policy may lead to a high and rising inflation, without securing high output and employment in the medium run.
- In this case, the advantage of floating exchange rates, in that they allow monetary policy to pursue the short run objectives of internal and external balance, loses much of its attractiveness.
- When our analysis is extended to account for the determination of inflation through the Phillips curve, the arguments in favor of the use of monetary policy to achieve the objective of high employment loses a lot of its power.
- While in the short run monetary policy can respond to shocks that temporarily raise unemployment, in the medium run, monetary policy cannot reduce unemployment, and it has to be focused on the problem of inflation.

Fixed Exchange Rates as a Tool to Reduce High Inflation

- If in a floating exchange rate regime, the government and the central bank of a country have been using monetary policy in a way that has led to high and rising inflation, then, one way in which they can affect inflationary expectations quickly and reduce inflation is to fix the exchange rate with a low inflation international currency, as this is a signal of their determination to reduce inflation, and will lead to a quick adjustment of expectations.
- This will ensure that the reduction in inflation will be associated with a lower rise in unemployment than otherwise, as expectations will adjust more quickly.
- Fighting inflation is exactly the reason that so many countries choose to have fixed or managed exchange rate regimes (see IMF Exchange Rate Arrangements and Exchange Rate Restrictions).

Exchange Rate Crises and Fixed Exchange Rate Regimes

- One of the greatest weaknesses of a fixed exchange rate regime is that it may collapse under the weight of a crisis of confidence in the ability of the central bank to maintain a constant nominal exchange rate.
- A crisis of confidence can take place either because of fundamental reasons, for example because the foreign reserves of the central bank are not sufficient for it to engage in the necessary interventions in the foreign exchange market, or because of non fundamental reasons, such as sudden shifts in expectations in international currency markets.
- If for any reason expectations of an imminent devaluation of the exchange rate take hold, this will lead to an increase in domestic interest rates in order to maintain a fixed exchange rate.
- At the same time, the central bank will be forced to make interventions in the foreign exchange market, reducing its foreign reserves.

How Expectations Affect Nominal Interest Rates

$$i = i^* + \frac{S - S^e}{S}$$

$$S^e < S \Rightarrow i > i^*$$

An expected future devaluation of the exchange rate, either for fundamental or for non-fundamental reasons, causes a rise in interest rates in the home country, in order to maintain the fixed exchange rate

Confidence Crises in Fixed Exchange Rate Regimes

- When a confidence crisis breaks out, the central bank has two options.
- The first is to raise domestic interest rates, without abandoning the fixed exchange rate. The required hike in interest rates may be quite high.
- The second option is to succumb to the pressure and either proceed to a devaluation of the exchange rate, or choose to move from fixed to floating rates.
- In both cases, the fixed exchange rate regime is destabilized.

The High Interest Rate Option During a Crisis

- Maintaining sufficiently high interest rates, makes it unattractive for dealers in the foreign exchange market to borrow in domestic currency at the domestic interest rate i, and convert the proceeds in foreign currency which has the lower yield i^*.
- In this way the central bank limits the currency outflow and the pressure on the exchange rate.
- However, being forced to raise domestic interest rates significantly in order to maintain the fixed exchange rate entails significant costs for domestic households and firms and for domestic aggregate demand, output and employment.

The Unfolding of a Typical Exchange Rate Crisis

- At first the government and the central bank seek to assure in all tones that they will defend the fixed exchange rate and will not proceed to a devaluation. Statements are made at a high, even the highest political level. This first line of defense rarely works.
- The central bank begins to raise the short-term interest rates and make foreign exchange market interventions. This second line of defense may also prove ineffective, especially if the interest rate increase is insufficient to persuade speculators to stop betting on a devaluation.
- After a few hours, or days, or weeks, the central bank resorts either to a very large increase in interest rates, in order to convince markets that it does not intend to devalue or succumbs and devalues the currency either through a one off devaluation or through a switch to a system of floating exchange rates.

Major Crises of Fixed Exchange Rate Regimes

- *Sterling Crisis*, (Great Britain, Black Wednesday 16 September 1992) Loss of Foreign Exchange Reserve equal to £27 billion, cost of support £3.4 billion. Britain never contemplated participating in the EMS again.
- *Peso Crisis*, (Argentina, late 2001, early 2002), Parity with dollar from 1/1 to 3.75 / 1 in six months, collapse of banking system, riots, inflation, recession.
- Many other older and more recent crises had similar characteristics.
- Thus, a fixed exchange rate regime, not only precludes the use of monetary policy to stabilize the economy, but is also subject to potential exchange rate crises, which generally entail high economic costs.

Fluctuations and Volatility in Floating Exchange Rate Regimes

- Floating exchange rate regimes may not be characterized by crises, but they are characterized by significant fluctuations and volatility.
- There are significant short-term and medium term fluctuations in nominal exchange rates, which are caused by changes in expectations about the future path of interest rates. Due to the gradual adjustment of prices these fluctuations are translated into fluctuations in real exchange rates, affecting the path of output and employment, as well as the current account.
- These fluctuations are not linked to the need to achieve internal and external balance and are often destabilizing and imply significant real costs.

How Current Exchange Rates are Affected by Expectations

$$S_t = \frac{1+i_t}{1+i_t^*} S_{t+1}^e$$

$$S_{t+1}^e = \frac{1+i_{t+1}^e}{1+i^{*e}_{t+1}} S_{t+2}^e$$

$$S_t = \frac{1+i_t}{1+i_t^*} \frac{1+i_{t+1}^e}{1+i^{*e}_{t+1}} S_{t+2}^e$$

$$S_t = \frac{1+i_t}{1+i_t^*} \frac{1+i_{t+1}^e}{1+i^{*e}_{t+1}} \cdots \frac{1+i_{t+n-1}^e}{1+i^{*e}_{t+n-1}} S_{t+n}^e$$

Expectations and Nominal and Real Exchange Rates

- The current exchange rate is affected by two types of expectations. Expectations about the future development of domestic and international interest rates for the next n periods, and the expectation for the exchange rate value n periods from today.
- Anything affecting these expectations affects the current value of the exchange rate immediately and causes fluctuations and volatility.
- Due to the gradual adjustment of goods prices, these fluctuations and volatility in the nominal exchange rate cause fluctuations and volatility in the real exchange rate as well, affecting the current account and aggregate demand, therefore, output and employment.

How Floating Exchange Rates were Expected to Work

- When, following the collapse of the Bretton Woods system, countries moved to a regime of floating exchange rates, proponents of this transition expected that exchange rates would not fluctuate too much, as they would be determined by economic fundamentals, including monetary and fiscal policy.
- The fluctuations and volatility that materialized initially surprised them, but when they realized that exchange rates are determined just like other financial variables, and depended on expectations, we economists came up with the current theories of floating exchange rates.
- Yet, fluctuations and volatility remain an unwelcome by product of the current regime of floating exchange rates.

Fixed or Floating Exchange Rates

- In a floating exchange rate regime a country has the ability to use monetary policy to address short-term shocks to output, employment and external balance.
- This feature is a major advantage of a floating exchange rate regime.
- In contrast, in a system of fixed exchange rates, monetary policy cannot be used, and should remain geared at stabilizing the exchange rate.
- If a government or central bank does not use monetary policy carefully, and ends up causing high and growing inflation, then it is probably preferable to stabilize the exchange rate vis-a-vis a low inflation international currency.
- This way, it can address the problem of high inflation, importing the anti-inflationary credibility of the low inflation currency.

Exchange Rate Crises and Exchange Rate Volatility

- In any case, a fixed exchange rate regime runs the risk of a currency crisis, which can cause significant economic costs and destabilize not only the exchange rate but also the economy in general.
- This danger does not threaten floating exchange rate regimes, but there are large short and medium run fluctuations and volatility in nominal and real exchange rates under such regimes.
- Many, if not most, economists today believe that floating rate regimes are a better option, especially if a country can acquire anti-inflationary credibility through other means, such as appointing an independent central banker.