is positive, it indicates the central bank is being preemptive in that it is trying to avoid future inflation, as indicated by a positive output gap, with an increase in interest rates. Conversely, if the GDP gap is negative, then actual GDP is less than potential GDP, and a positive value for β_1 implies the central bank will cut its interest rate in times of recession.

A positive value for β_2 implies that if current actual inflation exceeds the central bank's targeted level, the central bank would dampen inflationary pressures by increasing the interest rate. Thus, if $\beta_2 > 0$, the central bank is reacting more to current inflation while a positive β_1 indicates the monetary authority is acting to preempt future inflation.

Finally, assume the exchange rate is defined as the units of home country currency per one U.S. dollar. If the exchange rate increases, then g_t^e is greater than zero, the home country's currency has depreciated. If β_3 is positive, then the central bank adjusts interest rates to stabilize exchange rates. If the country's currency becomes stronger, the central bank reduces domestic interest rates to weaken demand for its currency. Conversely, if the home country's currency is becoming too weak, the monetary authority's actions will increase domestic interest rates and increase demand for its currency.

If adjustment costs are present, the central bank may not be able to instantaneously reach its targeted interest rate, f_t^*. Assume the central bank's adjustment mechanism is similar to that of the capital stock adjustment:

$$\Delta f_t = \gamma(f_t^* - f_{t-1}) + \rho \Delta f_{t-1} \tag{3}$$

where γ is the central bank's speed of adjustment and ρ measures the persistence of the monetary policy that the central bank is following.[3] After substituting equation (2) into equation (3), combining like terms and adding an error term, one obtains the following econometric model that will be estimated:

$$\Delta f_t = B_0 + B_1 \Delta f_{t-1} + B_2 f_{t-1} + B_3 y_t + B4\pi_\tau + B_5 g^e{}_t + \varepsilon \tag{4}$$

where:

$$B_0 = \gamma(r_t - \beta_2 \pi_t^*)$$
$$B_1 = \rho$$
$$B_2 = -\gamma$$
$$B_3 = \gamma\beta_1$$
$$B_4 = \gamma(1+\beta_2)$$
$$B_5 = \gamma\beta_3 \quad .$$

Description of the Data

Quarterly time series for real GDP, price level, and interbank interest rate were obtained, often from the web page of the monetary authority of each country. In