CheggSolutions - Thegdp

Finance: Purchasing Power Parity (PPP)

Given:

- Expected annual inflation rate in the US (\(I_h\)) = 6%
- Expected annual inflation rate in Switzerland (\(I_f\)) = 4%
- Current Exchange Rate: 1 CHF = USD 0.75

Step-by-Step Solution:

Step 1: Understanding Purchasing Power Parity (PPP)

Purchasing Power Parity theory asserts that exchange rates between currencies are in equilibrium when their purchasing power is the same in each of the two countries. According to the PPP theory, the expected future exchange rate can be found using the following formula:

```
\[
\text{Expected Spot Rate} = \text{Current Spot Rate} \times \left(1 + \frac{I_h}{1 + I_f}\right)
\]
```

Supporting statement:

This equation helps in predicting the future exchange rate based on the relative inflation rates of the two countries.

Step 2: Define the Variables and Plug in the Values

- \(\text{Current Spot Rate} = 0.75\) USD/CHF
- \(I_h = 6\% = 0.06\)
- \(I_f = 4\% = 0.04\)

The formula to use is:

```
\[
\text{Expected Spot Rate} = 0.75 \times \left(\frac{1 + 0.06}{1 + 0.04}\right)
\]
```

Supporting statement:

Using the given data for each country's inflation rate and the current exchange rate into the formula to calculate the expected future exchange rate.

Step 3: Calculate the Ratio of Inflation Factors

Calculate the ratio of the inflation factors:

```
\[
\text{Inflation Ratio} = \frac{1 + I_h}{1 + I_f} = \frac{1 + 0.06}{1 + 0.04} = \frac{1.06}{1.04}
\]
```

Calculate the value:

```
\[
\text{Inflation Ratio} = \frac{1.06}{1.04} \approx 1.0192
\]
```

Supporting statement:

Calculating the inflation factor ratio gives the proportional change in the exchange rate due to differences in inflation rates in the two countries.

Step 4: Calculate the Expected Spot Rate

Now, substitute the calculated inflation ratio back into the formula for the expected spot rate:

```
\[
\text{Expected Spot Rate} = 0.75 \times 1.0192 \approx 0.7644
\]
```

Supporting statement:

By multiplying the current exchange rate by the inflation ratio, the expected future exchange rate is obtained.

Step 5: Final Solution

The expected spot price for CHF one year later, according to Purchasing Power Parity, is approximately \(0.7644 \)

Supporting statement:

The final expected rate has been calculated considering the effects of inflation rates in both countries.

Final Answer:

```
\[
\boxed{0.7644}
\]
```

The expected spot price for CHF should be USD 0.7644.