Purchasing power parity

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By using the covered interest arbitrage, which is an investment strategy where an investor buys a foreign denominated foreign currency, and hedges his foreign exchange risk by selling a forward contract in the amount of the proceeds of the investment back into his base currency, banks and individuals can protect themselves by taking advantage of favorable interest rates because of the utilization of the forward selling contract. Instead of risking unstable exchange rates, banks and individuals can sell at a predetermined rate but lose the chance to earn more because the effective interest rate at that time can be made more favorable.

In this example the investor is based in the United States and assumes the following prices and rates: spot USD/EUR = $1. 2000, forward USD/EUR for 1 year delivery = $1. 2300, dollar interest rate = 4. 0%, euro interest rate = 2. 5%.

- Exchange USD 1, 200, 000 into EUR 1, 000, 000
- Buy EUR 1, 000, 000 worth of euro-denominated bonds
- Sell EUR 1, 025, 000 via a 1 year forward contract, to receive USD 1, 260, 750, i. e. agree to exchange the euros back into US dollars in 1 year at today's forward price.
- This set of transactions can be viewed as having an effective dollar interest rate of (1, 260, 750/1, 200, 000)-1 = 5. 1%
- Alternatively, if the USD 1, 200, 000 were borrowed at 4%, USD 1, 248, 000 would be owed in 1 year, leaving an arbitrage profit of 1, 260, 750 - 1, 248, 000 = USD 12, 750 in 1 year.

Using the theory of purchasing power parity, explain how inflation impacts exchange rates. Based on the theory of purchasing power parity, what can

we infer about the difference in inflation between Ireland and the USA during the year your lottery winnings were invested?

Relative Purchasing Power Parity refers to rates of changes of price levels, that is, inflation rates. This proposition states that the rate of appreciation of a currency is equal to the difference in inflation rates between the foreign and the home country. For example, if Ireland has an inflation rate of 1% and the US has an inflation rate of 3%, the US Dollar will depreciate against the Euro by 2% per year. This proposition holds well empirically especially when the inflation differences are large .

Inflation rates impact exchange rates because the rate of appreciation of a currency is equal to the difference in inflation rates between the foreign and the home country. This means that the inflation rate of Ireland was much lower than the inflation rate of the USA over the same period.

References

1. Kenneth Rogoff: The Purchasing Power Parity Puzzle, Journal of Economic Literature, 34(2), June 1996, pages 647-668.
2. Wilfred J. Ethier: Modern International Economics, 3rd edition. W. W. Norton ; Comp. , New York/London: 1995.