Covered Interest Parity Example

CIP: $R = R^* + \frac{F-E}{E}$

Suppose: $R = .08$ (8% per year)

$R^* = .05$ (5% per year)

$E = 1.3$ ($/euro)

$F = 1.365$ ($/euro)

What would you do?

Covered euro return:

$$.05 + \frac{1.365 - 1.3}{1.3} = .05 + .05 = .10 > .08 !$$

Arbitrage: Borrow low, Lend high

1.) Borrow $100 [must pay back $108]

2.) Convert to 76.923 euro

3.) Invest in euro deposit [get 80.769 euro]

4.) Sell the euro forward [get $110.25]

$2.25 pure arbitrage profit!

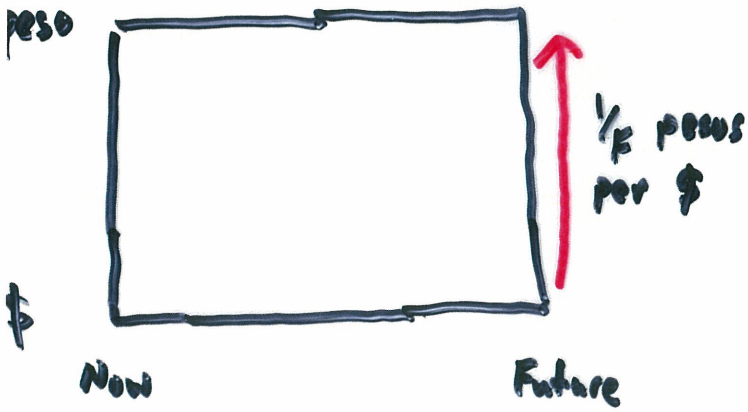
Synthetic Forwards

Suppose you want pesos 2 years from now at a known price, but there is no 2-year forward market in pesos.

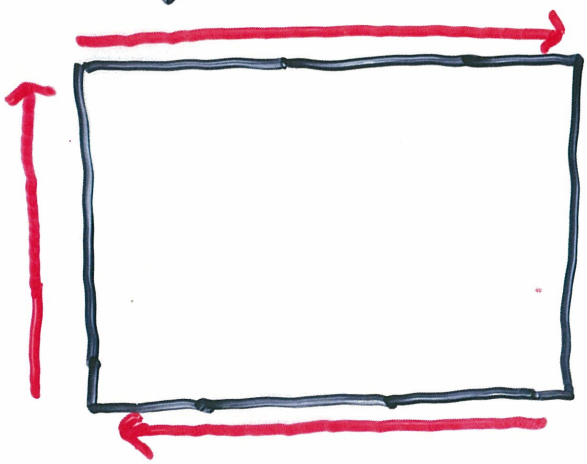
Key Point: Buying a currency forward is equivalent to borrowing domestically and lending abroad.

Both require you to pay domestic currency in the future + receive foreign currency.

Forward Purchase



synthetic Forward



1.) Borrow $\frac{1}{1+R}$ $

2.) Convert to $\frac{1}{1+R}\frac{1}{E}$ pesos

3.) Invest in pesos & get $\frac{1+R^*}{1+R}\frac{1}{E}$ future pesos

CIP

$$\frac{1}{F} = \frac{1+R^*}{1+R}\frac{1}{E}$$