# The relationship between Exchange rates and Inflation: Purchasing Power Parity (PPP)

**[Q:]** What is [Purchasing Power Parity](http://economics.about.com/cs/money/a/purchasingpower.htm) (PPP) and how does [inflation](http://economics.about.com/od/inflationanddeflation/) in two countries affect the [exchange rates](http://economics.about.com/od/exchangerates/) between the two countries.

**[A:]** A great deal of information on [Purchasing Power Parity](http://economics.about.com/cs/money/a/purchasingpower.htm) can be found in the article " [A Beginner's Guide to Purchasing Power Parity Theory](http://economics.about.com/cs/money/a/purchasingpower.htm)". For a short answer on the link between [inflation](http://economics.about.com/od/inflationanddeflation/) and exchange rates, first we'll need a definition of Purchasing Power Parity. We'll use the one from *The Dictionary of Economics* which defines [Purchasing Power Parity](http://economics.about.com/cs/money/a/purchasingpower.htm) as:

A theory which states that the exchange rate between one currency and another is in equilibrium when their domestic purchasing powers at that rate of exchange are equivalent.

Using this definition, we can show the link between [inflation](http://economics.about.com/od/inflationanddeflation/) and exchange rates. To illustrate the link, we'll take two fictional countries: Mikeland and Coffeeville. Suppose that on January 1st, 2004, the prices for every good in each country is identical. Thus a football that costs 20 Mikeland Dollars in Mikeland costs 20 Coffeeville Pesos in Coffeeville. If [Purchasing Power Parity](http://economics.about.com/cs/money/a/purchasingpower.htm) holds then 1 Mikeland Dollar must be worth 1 Coffeville Peso, otherwise we could make a risk free profit buying footballs in one market and selling in the other. So here [PPP](http://economics.about.com/cs/money/a/purchasingpower.htm) requires a 1 for 1 exchange rate.

Now let's suppose Coffeville has a 50% [inflation](http://economics.about.com/od/inflationanddeflation/) rate whereas Mikeland has no [inflation](http://economics.about.com/od/inflationanddeflation/) whatsoever. If the [inflation](http://economics.about.com/od/inflationanddeflation/) in Coffeeville impacts every good equally, then the price of footballs in Coffeeville will be 30 Coffeville Pesos on January 1, 2005. Since there is zero [inflation](http://economics.about.com/od/inflationanddeflation/) in Mikeland, the price of footballs will still be 20 Mikeland Dollars on Jan 1 2005.

If purchasing power parity holds and we cannot make money from buying footballs in one country and selling them in the other, then 30 Coffeeville Pesos must now be worth 20 Mikeland Dollars. If 30 Pesos = 20 Dollars, then 1.5 Pesos must equal 1 Dollar. Thus our Peso-to-Dollar exchange rate is 1.5, meaning that it costs 1.5 Coffeville Pesos to purchase 1 Mikeland Dollar on foreign exchange markets.

If two countries have differing rates of inflation, then the relative prices of goods in the two countries, such as footballs, will change. The relative price of goods is linked to the exchange rate through the theory of Purchasing Power Parity. As we have seen, [PPP](http://economics.about.com/cs/money/a/purchasingpower.htm) tells us that if a country has a relatively high [inflation](http://economics.about.com/od/inflationanddeflation/) rate we should see the value of its currency decline.