Formula for conversion:

$EURO = $USD\*.8817

$USD = $EURO/.8817

$JAP = $USD\* 109.556

$USD = $JAP/ 109.556

I would probably go ahead and convert my money in my country because it seems safer, and I wouldn’t have to carry large amounts of USD with me on the flight.

**Which Company is better to use?**

Company A - This company will charge a fixed rate of 15% on $USD to Foreign monies. It will also charge a fixed rate of 15% for all Foreign monies to $USD.

Company B - This company will charge a fixed amount of $30 USD for any $USD to Foreign monies amount exchange. It will also charge a fixed amount of $30 for all Foreign monies to $USD.

Company A charges a modest 15% fee on all currency exchanges, meaning that the fee increases linearly with the exchange amount. Meanwhile, Company B charges a flat rate of 30$ on all exchanges – meaning the fee is always 30$ regardless of the amount.

Given this; for making a few, large currency exchanges, it is better to use Company B since the fee doesn’t depend on the exchange amount. The fewer times you exchange with them, the less times you pay the flat fee. In the same vein, if you plan to make multiple, smaller exchanges – it is better to use Company A. This is because the fee is based directly on the exchange amount and is usually less than the flat rate. No matter how many times you exchange with them, you will always pay with respect to how much you exchanged.

**How I did this:**

The first thing to do was to devise a system where I could determine which conversion to perform based on the user’s need. The system I chose has two inputs – one for the starting currency type, and one for the ending currency type. I achieved this by using numbers and showing the user which number corresponds to which currency type. Then I ask them for the value of money they plan to exchange. I then have a series of if statements which determine the conversion rate, since the conversion rate depends on the start, end and order of exchange. This then converts the gross amount they could expect to receive if there were no fees.

Since there are fees, I wrote a block for Company A and Company B. Company A charges a rate of 15%, this is easy to express numerically and does not depend on the currency type. Company B charges 30$ USD – which has other equivalences in other currencies. I handled this with another if block. Then I printed the amount of the fee and the amount the user should receive after the fee has been assessed. Finally, I compared the total value of A to the total value of B so that the customer can see which company is better for them to choose.

**Honor Code**

As a Highlander, I will conduct myself with honor and integrity at all times. I will not lie, cheat, or steal, nor will I accept the actions of those who do. This program is solely my work, or proper attribution has been given to code that I did not write. If I am found to violate this policy, I realize I will receive an F for this course with no exceptions.

Signed,

Andrew Taylor Caudill