Ron Schelling, private trader, explains the importance of correlations between the major currency pairs.
In order to be an effective trader, it is important to understand how certain currency pairs move in relation to other pairs. Because currencies are priced in pairs, no single pair trades completely independently of the others. Once you know about these correlations and how they change, you can take advantage of them to control your portfolio or spread between currency pairs.

**Defining correlation**

The reason for the independence of currency pairs is not too difficult to follow.

If you are trading the Euro against the Swiss Franc (EUR/CHF), for example, you are actually trading part of EUR/USD and USD/CHF pairs.

When you take out from both pairs the US Dollar you are left with EUR/CHF.

Therefore the EUR/CHF must be somewhat correlated to one or even both currency pairs. While some currency pairs will move in tandem, other currency pairs may move in opposite directions, which is essentially the result of more complex forces.

Correlation in the financial world is the statistical relationship between two securities or currency pairs. The correlation coefficient ranges between -1 and +1.

A correlation of +1 implies that the two currency pairs will move in the same direction 100% of the time. A correlation of -1 implies the two currency pairs will move in the opposite direction 100% of the time.

A correlation of zero implies that the relationship between the currency pairs is completely random.

**Reading the correlation table**

With the knowledge of correlation in mind, let's have a look at the correlation tables below for the major currency pairs.

<table>
<thead>
<tr>
<th></th>
<th>EUR/USD</th>
<th>USD/CHF</th>
<th>GBP/USD</th>
<th>USD/JPY</th>
<th>AUD/USD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 month</td>
<td>-0.96</td>
<td>0.91</td>
<td>-0.93</td>
<td>0.92</td>
<td></td>
</tr>
<tr>
<td>3 months</td>
<td>-0.89</td>
<td>0.82</td>
<td>-0.48</td>
<td>0.45</td>
<td></td>
</tr>
<tr>
<td>6 months</td>
<td>-0.96</td>
<td>0.94</td>
<td>-0.84</td>
<td>0.72</td>
<td></td>
</tr>
</tbody>
</table>

Table 1 - Correlation Table

Table 1 shows that over a 1 month period the EUR/USD and AUD/USD had a very strong correlation of 0.92 over one month of time. This implies that when the EUR/USD rallies, the AUD/USD will also rally 92% of the time.

A much weaker correlation between the EUR/USD against AUD/USD is 0.45 over a period of three months. This is a change to take advantage of that difference in correlation by buying the AUD/USD on a three months basis.

The EUR/USD against USD/CHF has a traditional perfect negative correlation of -0.96 and this relationship remain strong over a longer period of time.

**Correlations are changing**

Correlations are changing as sentiment of global economic factors are changing constantly and therefore daily correlations are not always in line with longer term average correlation levels.

Therefore you can compare longer term correlations, for example six months, to the daily correlation levels.

In Table 2, we can see that on the second day the correlation between the EUR/USD and GBP/USD (0.48) is below the average of 0.77, while on day seven the correlation (0.95) is above the average of 0.77.

<table>
<thead>
<tr>
<th>Date</th>
<th>EUR/USD</th>
<th>GBP/USD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day 1</td>
<td>6 month correlation</td>
<td>0.65</td>
</tr>
<tr>
<td>Day 2</td>
<td>6 month correlation</td>
<td>0.48</td>
</tr>
<tr>
<td>Day 3</td>
<td>6 month correlation</td>
<td>0.63</td>
</tr>
<tr>
<td>Day 4</td>
<td>6 month correlation</td>
<td>0.85</td>
</tr>
<tr>
<td>Day 5</td>
<td>6 month correlation</td>
<td>0.91</td>
</tr>
<tr>
<td>Day 6</td>
<td>6 month correlation</td>
<td>0.93</td>
</tr>
<tr>
<td>Day 7</td>
<td>6 month correlation</td>
<td>0.95</td>
</tr>
</tbody>
</table>

**Table 2 - Correlation Table**

Most technical analysis software can calculate the standard correlation automatically or you can keep track of it in a spreadsheet program.

The tables shown are looking at forward currency prices while most of us trade the cash or spot Forex markets only and don’t use or look to forward price levels.

Therefore we are looking to another way for trading Forex with spreads between currency pairs of cash currency pairs.

In Figure 1, we are looking at two high correlated currencies with daily bars. On top we see EUR/USD and below it GBP/USD. Both currencies are almost traded parallel to each other.

The ratio at the bottom is the EUR/USD divided by GBP/USD, which is the same as the EUR/GBP on the third chart from the top. So another way of looking to combination of EUR/USD against GBP/USD is by taking out both US Dollar signs and you are left with EUR/GBP.
**What is the advantage of trading those spreads?**

Do you remember your last big loss in currency trading? Overnight positions hit your stop or unexpected moves?

With spreads we are looking to avoid big unexpected moves. The disadvantage is that you pay double trading cost, so for the two currencies involved, however several brokers use very low bid/ask spreads.

So in our sample chart EUR/USD against GBP/USD we are actually trading the ratio (bottom chart) or EUR/GBP (third chart from the top).

**How to trade the spread in practice?**

We like to start the trade with a near Dollar neutral amount. As the ratio is just the EUR/GBP we are trading the spreads as follows:

EUR/USD 100,000 against GBP/USD 70,000.

Question is then when do we have a trading signal?

We are using the recalculated RSI and moving average on the ratio. Normally the RSI is moving between 0 and 100, but in our sample we use the RSIz which is moving between -50 and +50.

On the zero level there is the same power of upward and downward pressure.

Levels above zero means more upward pressure and levels below zero means there is more downward pressure. The moving average in the RSIz helps us to confirm the initial signal.

Looking to the last signal we see the RSIz moving above the zero line and confirmed by the moving average on the RSIz. Furthermore, the spread itself is already above its moving average. Therefore the EUR/USD was bought (100,000) and GBP/USD was sold (70,000).

Of course any combination of currencies or even a basket can be traded against each other, but keep in mind their correlation. Trading spreads this way keeps you out of unexpected large moves against you, or stopped out several times, by trading only the single major currencies.

This way of trading can be done on daily bars or even intraday trading, but intraday trading means also more signals and more cost as well.

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