EXERCISE 3

To examine the macroeconomic performance of your country, there are two policy measures we want to examine, one that demonstrates its fiscal policy and one that demonstrates its monetary policy. We then want to relate those policy choices to international and domestic constraints and pressures. We are particularly interested in whether the country tried to use its macro policy to achieve domestic goals and whether it was successful in stabilizing production.

1. Fiscal policy

We want to express the government budget deficit as a share of GDP. The government budget position may be reported as the “Cash Surplus or Deficit” or as “Net Operating Balance.” For Mexico (country code 273) this shows up as 273cCSD. If you have figures reported for all levels of government, as shown by an entry like 273a, use them. More likely, you will just have figures for the central government, as in the case of Mexico where the series is identified as 273c. Nominal GDP is 99B. Note that these line numbers are greater than those for the balance of payments entries and appear after them.

Governments often choose a more expansionary fiscal policy (a larger deficit as a share of GDP) when they are in an economic recession and want to stimulate aggregate demand. To demonstrate a country's position in the business cycle, retrieve the data series for GDP in prices given for a base year, such as 2000, which controls for the effect of inflation on the nominal GDP figure you used above.
You will use the first two lines in an excel spreadsheet to create a new line showing the ratio of the deficit to GDP. Be careful to note whether your two series are measured in the same units. In the case of Mexico, both the deficit and GDP are reported in billions of pesos. Therefore, to express the ratio in percentage form we merely need to multiply by 100. The formula shown is “= 100*H3/H2.”

For a member of the European Union, you will find that the IMF already reports this ratio for you.

In your Excel spreadsheet you should see a series like line 2.
Save these data as an Excel spreadsheet, and open a line chart to plot real GDP. On the “Layout” tab, click on “Trendline, more options.” On that screen choose an “Exponential Trendline” and also click on the options to “Show the equation” and “Show the R-squared.”
The exponential trend line shows the trend rate of growth in the economy, and the coefficient shown in the equation, 0.030 for Mexico, indicates the average annual rate of growth in real output.

We can see that the 1995 financial crisis resulted in a major recession in Mexico, as real GDP is well below the trend line that year.
Finally, plot the budget deficit as a share of GDP on the same chart. You might allow for a secondary axis to label this fiscal policy series, although we do not want to exaggerate the importance of small changes in the deficit/GDP ratio, say from -1.25 to -1.50. Therefore, we do not make that modification here.

2. Monetary Policy

The Central Bank may attempt to alter the real interest rate in order to control inflation. Keeping inflation under control is desirable to encourage residents to hold the country’s currency rather than convert into a more stable currency. Also, keeping inflation close to the rate in other major trading partners may allow the country’s exporters to remain competitive without having the currency depreciate, as purchasing power parity otherwise would require. To carry out a policy of inflation targeting, the Central Bank will raise the real interest rate when inflation is greater than its target. That will reduce the demand for output in the economy, as consumption and investment are discouraged by the higher real interest rate. If the cause of the inflation was too much demand, then this policy eventually will bring the actual inflation rate down. When inflation is below its target, the central bank can let the real interest rate decline, which will result in greater output as consumption and investment increase. The inflation rate will rise toward the target.

To see whether the Central Bank follows such a rule over this period, we will use some of the information you collected in exercise #2. You already calculated the real interest rate, and that is one variable we want to plot. The second variable we want to create is the difference between the country’s inflation rate and the inflation rate in the United States. (If you made your purchasing power parity comparison with respect to inflation in France or Germany, use that rate in place of the U.S. inflation rate.) Thus, we are implying that the U.S. inflation rate is the Central Bank’s target, and we want to create a series that shows how much the
country’s inflation rate deviates from that target. Recall that we don't have a value for 1992. Therefore, we will select the names of these series first, paste them into the new table, and then select the values for these series for 1993-2007. When you copy and paste the real interest rate and inflation rates from your earlier exercise, remember that you will want to paste just the values, because Excel will not know where to find the underlying data series you used to create these variables. At the “Home” tab, click on the “paste arrow” to get the option to paste the values, and select it.

<table>
<thead>
<tr>
<th>Actual value of peso</th>
<th>0.323</th>
<th>0.321</th>
<th>0.296</th>
<th>0.156</th>
</tr>
</thead>
<tbody>
<tr>
<td>PPP value of peso</td>
<td>0.323</td>
<td>0.305</td>
<td>0.291</td>
<td>0.218</td>
</tr>
<tr>
<td>Percentage overvaluation of peso</td>
<td>0.0</td>
<td>5.2</td>
<td>1.7</td>
<td>-28.4</td>
</tr>
</tbody>
</table>

Interest parity prediction of percentage change in peso value:
- Actual percentage change in peso value:
  - Inflation rate in Mexico: 7.4, 6.1, 38.6
  - Inflation rate in US: 1.5, 1.3, 3.6
  - Real interest rate in Mexico: 7.1, 7.5, 7.1
  - Real interest rate in US: 1.5, 2.0, 1.0
Create a chart to plot these latter two series, the inflation gap of Mexican inflation minus US inflation and the real interest rate.
3. Interpretation

a) When the IMF makes loans to member countries, the recipients often agree to reduce the government budget deficit as a share of GDP. Current letters of intent signed with the IMF generally refer to the primary budget surplus (which represents government revenues minus expenditures before considering interest payments); in the debt crises of the 1980s, however, goals often were stated in terms of the ratio you calculated above (which includes interest payments). As part of the 1992 Maastricht Treaty agreement to establish the European Monetary Union, European countries agreed to maintain that ratio at less than 3 percent, although several large countries exceeded that standard in the 2002-2005 period. In 2005 the members of the EMU rewrote the pact in a way that is likely to allow many more exceptions. How would you characterize your country's performance relative to such a standard?

Did your country use fiscal policy in a counter-cyclical way, allowing a larger deficit as a share of GDP in years when GDP was depressed? You might interpret the chart you created on page Error! Bookmark not defined. by indicating the proportion of years in which fiscal policy was counter cyclical.

If your country had an outstanding loan from the IMF (see the Use of Fund Credit line on the balance of payments to indicate whether the country is either receiving or repaying a loan), does that seem to have resulted in a more restrictive fiscal policy? That would occur if the IMF conditionality called for a lower budget deficit and that provision was enforced.

b) Does the Central Bank appear to adjust the real interest rate to control inflation? In that case, the two series you plotted in Chart 2 should move together.

Some complications may enter into your interpretation, however. If the riskiness of investing in this country rises, for example, the real interest will have to rise to compensate investors for larger potential losses, even if the inflation rate is not further above its target value. Implicitly, the Central Bank acts as if it has a target for its exchange rate, too, and it may be willing to raise the real interest rate to achieve that target, in spite of the lower output that will result. Or, the Central Bank may have an output target and be willing to accept higher inflation in order to achieve it. Worldwide, however, there has been a decline in inflation, which suggests that Central Banks have paid particular attention to fighting inflation. Does your country fall in that category?