Group Assignment #2

General Instructions.

Please form groups of three to five people in order to solve the two “mini-cases” below. You have a month to complete the work: the due date for this group assignment is December 15, 2010 at 5PM.

In order to handle this second assignment, you should NOT need to gather any market information from Bloomberg, Thompson, IFS (the IMF’s International Monetary Statistics), or any other database. Instead, I have gathered the data required in a spreadsheet that you can get from the course website called second-assignment_data_IFS_2010.xls

Please remember that no collaboration is allowed between groups (of course, maximum collaboration is expected within a given group). If you have any doubts about the honor code that governs the completion of this assignment, please consult the course syllabus or talk to me!
Part 1 – USD, Turkish Lira and Purchasing Power Parity.

The Veritas Emerging Market Fund specializes in investing in the world’s emerging stock markets. Mr. Henry Guessright, an experienced hand in international investment and your boss, is currently interested in the Turkish stock market. He correctly guessed in 2005 that Turkey would eventually be invited to negotiate its membership in the European Union and that this situation would boost the stock market in Turkey.

This late Fall (2010), he is quite concerned with the potential for exchange rate volatility in Turkey and would like to understand what has historically driven Turkish exchange rates. Since the inflation rate was long higher or much higher in Turkey than in the U.S., he is guessing that purchasing power parity has prevailed – at least to some extent. As members of his team, he has tasked your group with checking this out.

In other words, you have to prepare a report on the following question: Does purchasing power parity typically hold for the Turkish lira-U.S. dollar exchange rate? Among other things, Mr. Guessright would like you to do the following:

a. Using monthly data (the highest sampling frequency at which inflation information is provided), plot the past exchange rate changes against the differential inflation rates between Turkey and the U.S. for the last nineteen years (Jan. 1991 – Sept. 2010).
   **Hint 1**: This plot should provide a hint as to whether there are one or more “structural breaks” in the time series (i.e., it may provide a clue as to whether PPP holds during the entire time period, or only during some time sub-period but not during some other time period).
   **Hint 2**: Comment on “outliers” in the monthly (or quarterly) observations and any possible “structural breaks” in the observed trends.

b. Regress percentage exchange rate changes on the inflation differential and provide estimates of the intercept and of the slope coefficient. Interpret the regression results.
   **Hint**: if the graph in part a. suggests structural breaks, does it make sense to run the regressions for the entire sample, or does it make more sense to run regressions for sub-periods?

c. Compare the forecasting performance of PPP vs. uncovered IRP in the 1990-1999 and 2000-2010 periods. Have PPP and/or IRP held at different horizons (say, 1 month, 3 months, 6 months, 1 year, or even 3 years)?

**Data sources:**

Data from the IMF’s *International Financial Statistics* series are posted online.
Mr. Henry Guessright of Veritas Emerging Market Fund is at it again. This time, his interest is in commodity currencies. He foresaw in 2002 that a commodity “super-cycle” would materialize amid strong growth in emerging economies and guessed that the resulting commodity boom would drive higher the currencies of commodity-producing countries – including Brazil and South Africa.

He is now (2010) concerned with the changes in the competitive standing of non-commodity stocks in South Africa and Brazil. As members of his team, he has tasked your group with checking this out.

In other words, you should prepare a report on real exchange rate changes in those three countries. You could use current account country shares to look at effective real exchange rates. As a first pass, however, Mr. Guessright tells you that a key worry is competitiveness with China, which he feels really pegs to the US dollar. Hence he would like you to do the following:

d. Using monthly data (the highest sampling frequency at which inflation information is provided), plot the past exchange rate changes against the differential inflation rates between each of those three countries and the United States.

e. Using the monthly CPI and FX data, create a time series of the real exchange rate since 2000, and comment on possible changes in the competitive position of Brazilian and South African firms relative to U.S. firms. (Hint: Do you see a change after 2003?)

**Data sources:**

Data from the IMF’s *International Financial Statistics* series are posted online.