

To better understand what causes the changes in Peru's foreign exchange rate (E) it is helpful to first look at trend analyses of key economic indicators for Peru and compare them to another country, in this study, the United States. The two economic indicators used in this study to analyze these changes are interest rates and inflation rates. All graphs shown include monthly data over a 10 year period, from February 1998 to February 2007. 6 month Certificate of Deposit is used to represent interest rates. Monthly percentage changes of each country's Consumer Price Index are used to represent inflation rates. Figure 1(inflation) and Figure 2(interest rates) show Peru's economic data and Figure 3(inflation) and Figure 4(interest rates) show the United State's economic data.

The question is; which indicator better explains the past movements of E ? The foreign exchange market is a forward looking market and E changes due to people's expectations. If they think interest rates in Peru are going to increase in the future, they are more willing to invest their money in Peru and vice versa if they expect interest rates to drop. Also, people are more willing to invest in the country with the lower inflation rate. Inflation differential ($\pi - \pi^*$) is used to predict long run expectations of the future exchange rate (E^e). π is the United States and π^* is Peru. Looking at Figure 6, whenever the trend line drops below zero, Peru's inflation rate exceeds that of the U.S. At the highest peaks in the line, Peru's inflation rate is lower than the U.S. and we should be able to see a corresponding, but lagged, increase in E in Figure 5. This increase in E can be explained with relative purchasing power parity (RPPP). RPPP in laments terms states that the value of the currency in the high inflation country will depreciate while the value of the currency in the low inflation country will appreciate the amount of the inflation differential. An increase in E means the Peruvian sol is appreciating against the U.S. dollar and its value is increasing, and vice versa when E decreases. Looking at Figure 5, an increase in E is

when the trend line is upward sloping. E falls rapidly from the beginning of 1998 to the beginning of 1999. It continues to fall until the end of 2002, but at a slower rate.

Now, back to Figure 6, in October 1998 inflation rates are low for Peru, and in Figure 5 in January 1999 there is a slight increase in E, which falls again in Aug 1999 after the inflation differential dips back down to zero in February 1999 in Figure 5. Inflation rates are highest in Peru in the beginning months of 2003 but make a big decline again after the middle of the year. Following this information, E rises significantly around the beginning of 2004 as seen in Figure 5.

The interest rate differential in Figure 7, doesn't do as well of a job in showing the correlation that would cause the rise and fall of E. There are a couple instances in the graph that are worth pointing out however. In February 1999, Peru's interest rates on 6 month CD's were significantly higher than in the US. E jumps slightly in Figure 5 at about the same time as these interest rates were so appealing to direct and foreign investors. Interest rates in Peru fall dramatically in the middle of 1999 which is related by a slight fall in E at about the same time. Figure 7 shows Peru interest rates peaking high again at the beginning of 2000, but the trend line for E is stable at this time in Figure 5. After early 2000, the interest rate differential slowly shrinks and reaches zero by early 2006. However, in Figure 5, E continues to be volatile from the end of 2004 to middle of 2006, while continuing on a slow upward trend until current.

After comparing the interest rate differential and the inflation rate differential with the movements of the exchange rate, it seems that inflation rates explain better changes in Peru's E.

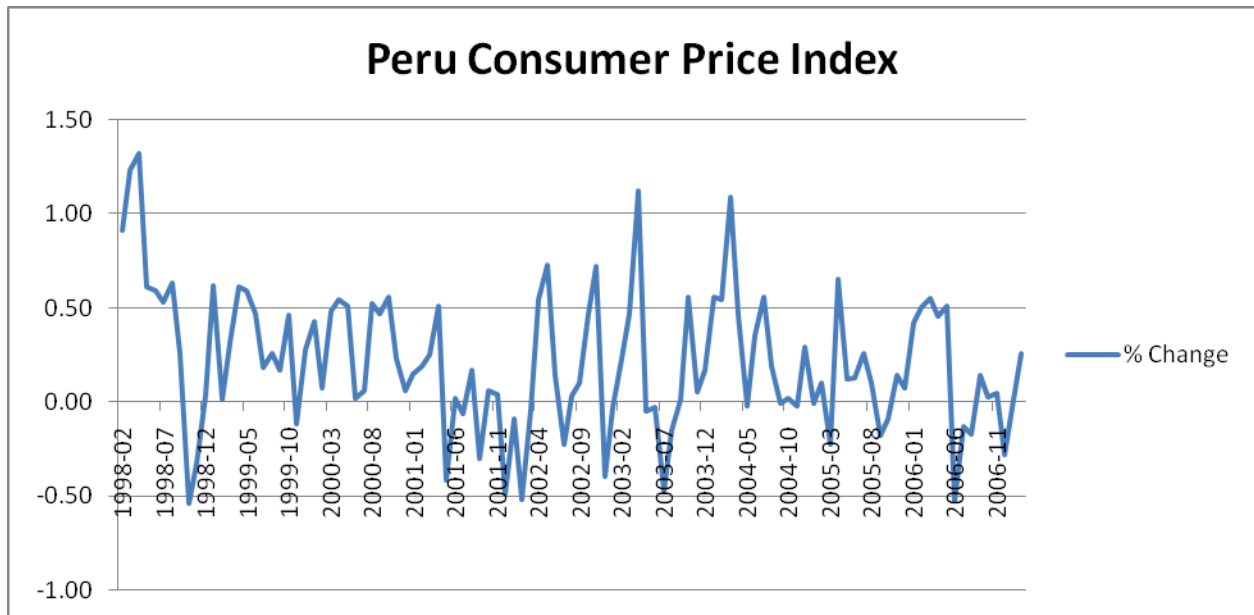


Figure 1

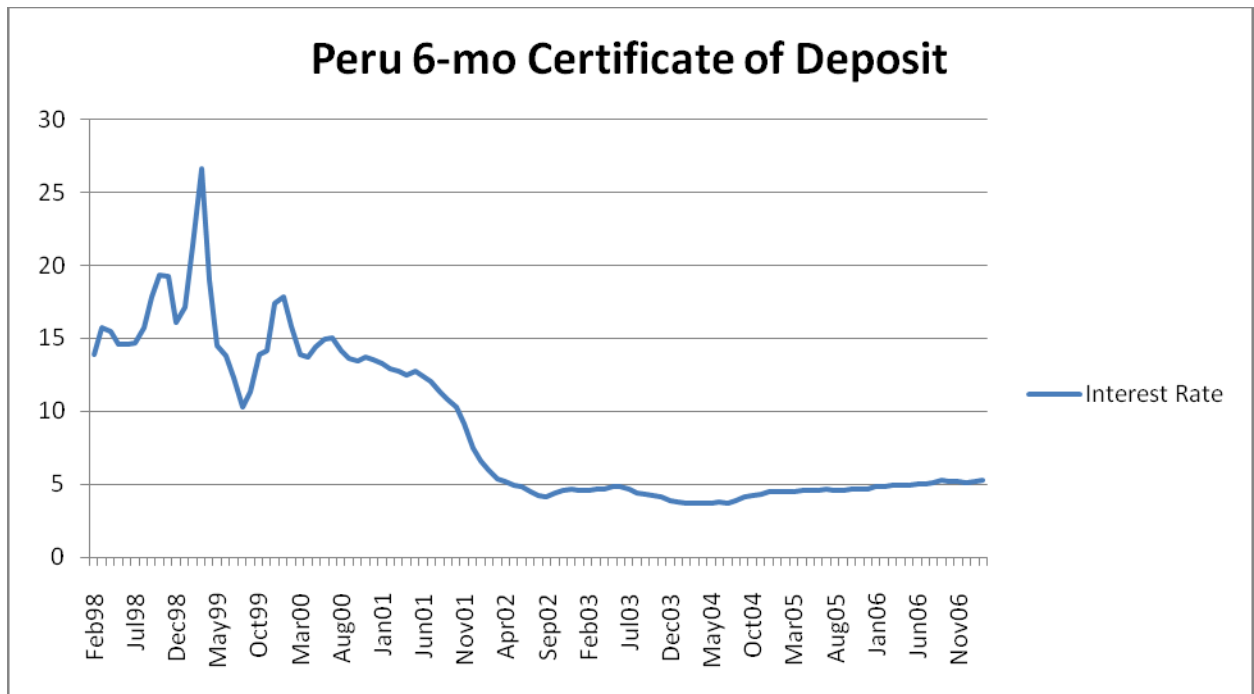


Figure 2

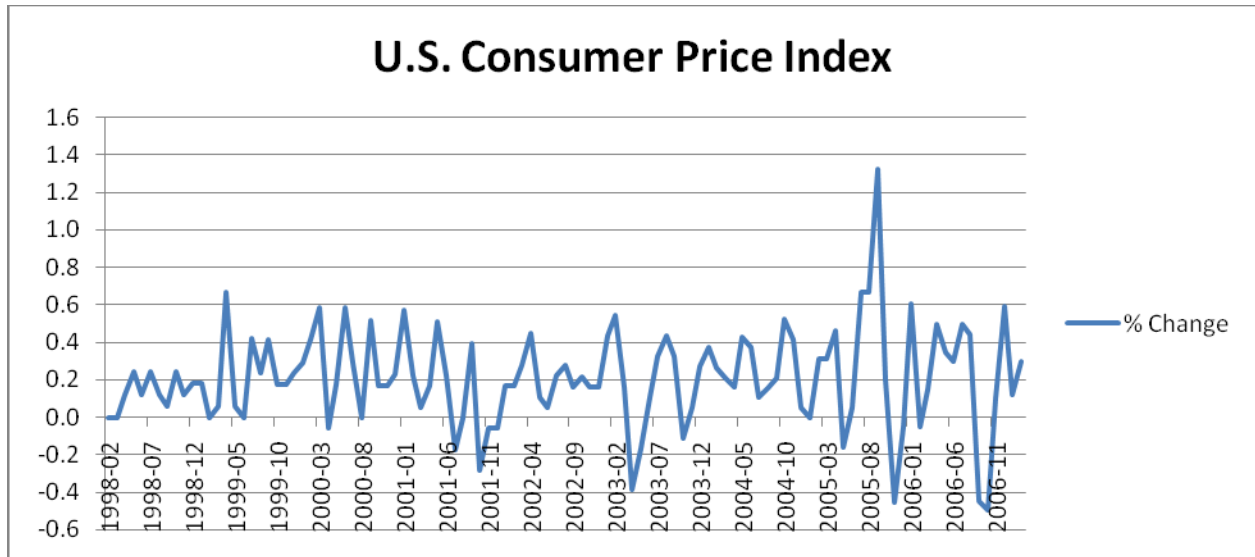


Figure 3

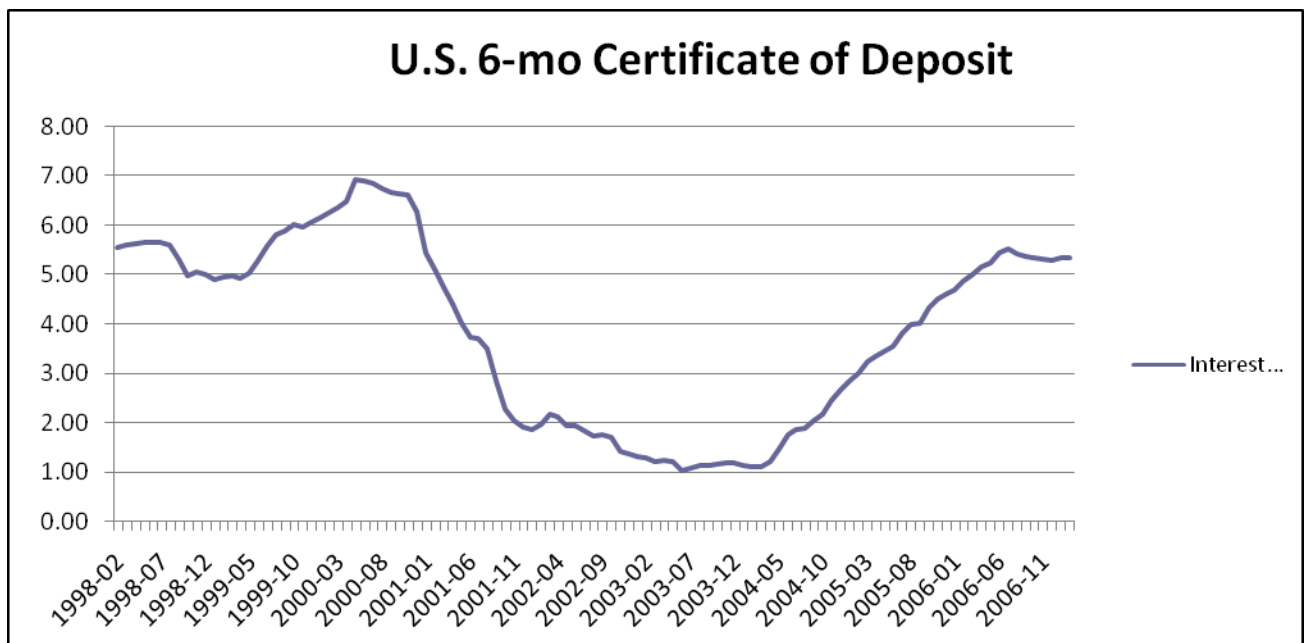
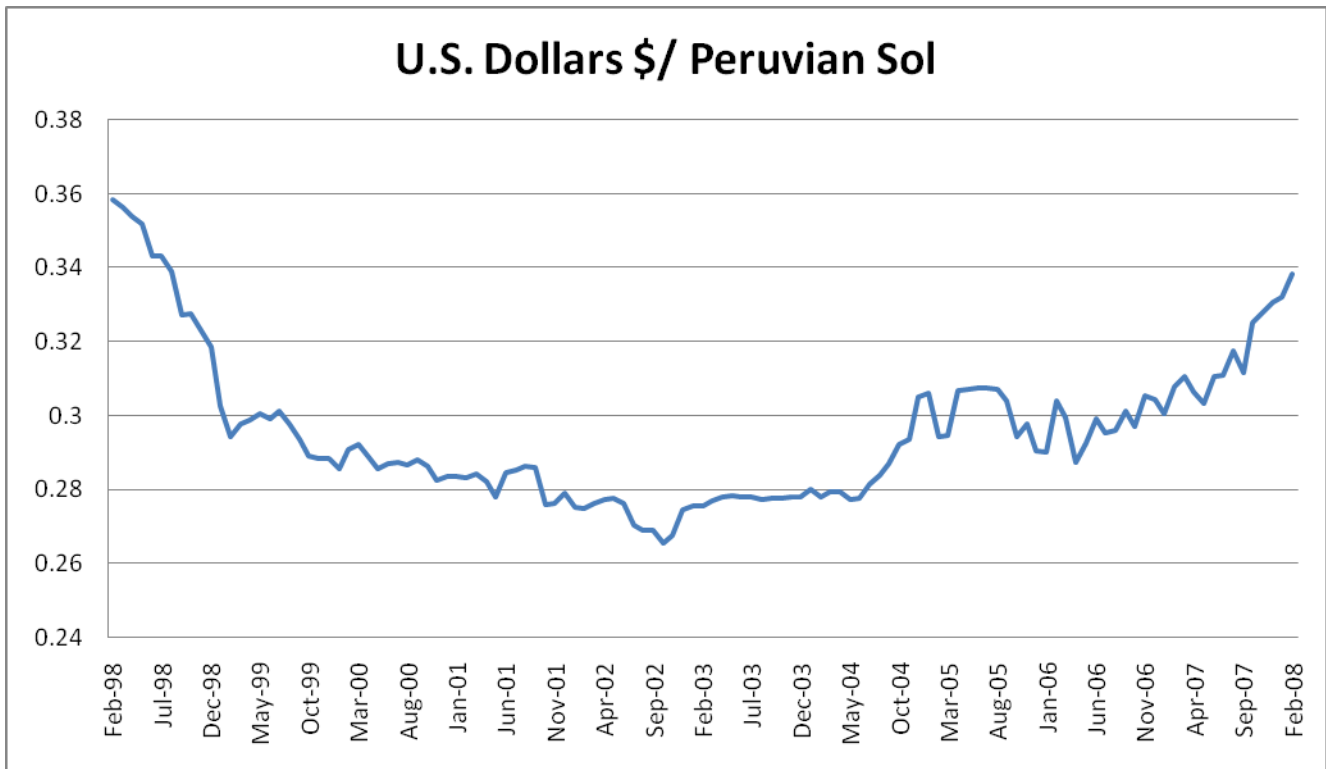


Figure 4

Figure 5



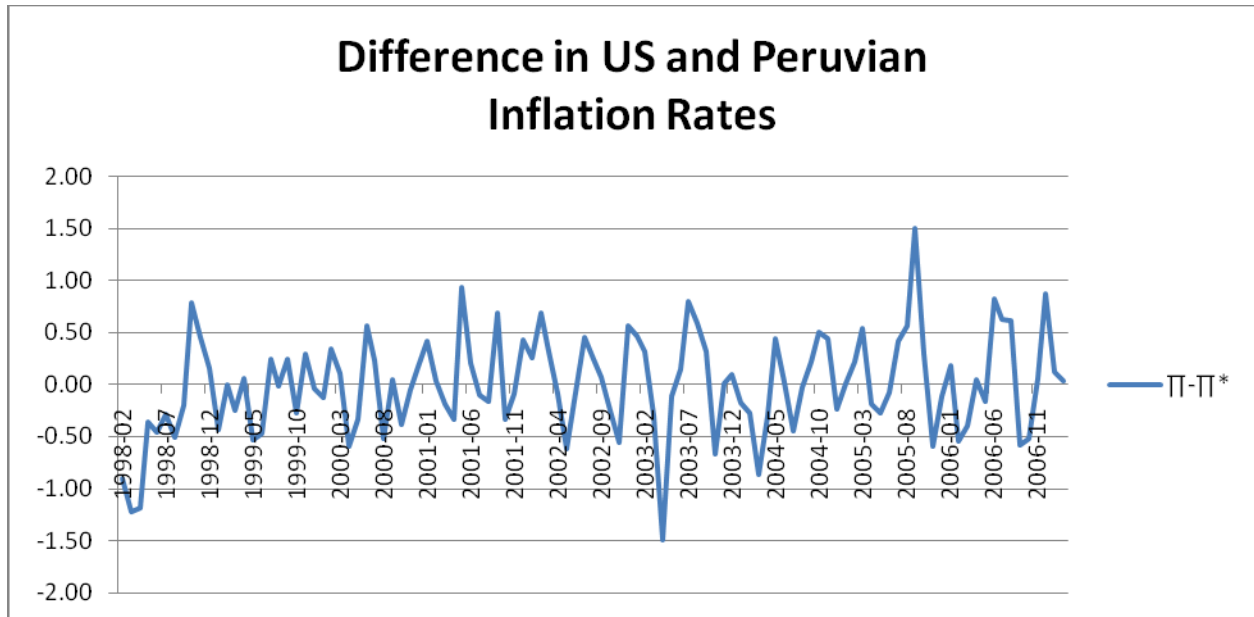


Figure 6

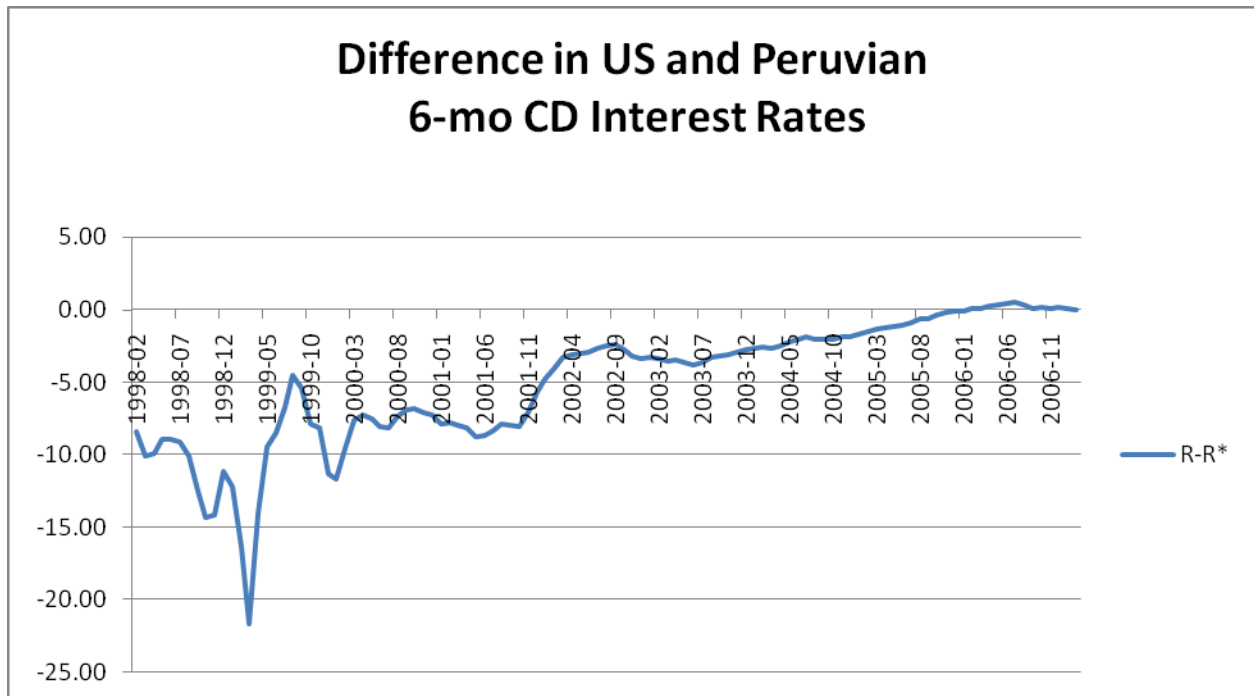


Figure 7

References

“Foreign Exchange Rates.” www.oanda.com

“Annual Data.” Central Reserve Bank of Peru. <http://www.bcrp.gob.pe/>

“Statistical Series.” Central Reserve Bank of Peru. <http://www.bcrp.gob.pe/>