

Finance 40500
Group Assignment #7

Suppose that you have the following data:

SUMMARY OUTPUT: BRITISH POUND (ANNUAL % CHANGE - \$ Per Pound)			
<i>Regression Statistics</i>			
Multiple R	0.27		
Standard Error	1.70		
Observations	255.00		
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>
Intercept	0.06	0.04	1.34
Inflation Differential (US – UK)	1.31	0.32	4.11
Prior Percentage Change	0.84	0.44	1.93
SUMMARY OUTPUT: SOUTH KOREAN WON (ANNUAL % CHANGE - \$ per Won)			
<i>Regression Statistics</i>			
Multiple R	0.37		
Standard Error	1.22		
Observations	365.00		
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>
Intercept	-0.04	0.01	-5.90
% Change in S Korean TB	0.31	0.13	2.32
Interest Differential (US - South Korea)	-1.84	0.64	-2.89

Correlation Matrix

	British Pound (% Change)	S. Korean Won (% Change)
British Pound (% Change)	1.00	
S. Korean Won (% Change)	-.73	1.00

Current Data: Great Britain

Current Exchange Rate (\$ Per Pound): \$1.8941
 Previous Exchange Rate (\$ Per Pound): \$1.8765
 Inflation Rate (Annual): 4.0%
 Trade Balance: - L 125MB

Previous Trade Balance: - L 110B
Interest Rate (Annual): 4.5%

Current Data: South Korea

Current Exchange Rate (\$ Per Won): \$.00104
Previous Exchange Rate (\$ Per Won):\$.00105
Inflation Rate (Annual): 4.5%
Trade Balance: 104 Billion Won
Previous Trade Balance: 92 Billion Won
Interest Rate (Annual): 6%

Current Data: United States

Inflation Rate (Annual): 3.5%
Trade Balance: -\$620B
Previous Trade Balance: -\$590B
Interest Rate (Annual): 5.75%

You own a company that sells bicycles. Currently, you purchase all of your materials in the United States and all of your sales are in the United States. Your costs per bicycle are \$45 and your current price is \$75. Currently, your annual sales are 125,000 (you are operating at full capacity).

- 1) Given the above data, calculate the distribution for the Pound and Won exchange rates one year from now.
- 2) You are contemplating an expansion of sales overseas. In particular, you are interested in the South Korean market. You have a limited production capability, so increasing sales to S. Korea will require an equal cutback in domestic sales. Suppose that you forecast sales of 50,000 bicycles in S. Korea at a Won price of 75,000 Won over the next year. Given your above research on the S. Korean Won, calculate your expected total sales (in dollars) assuming that you convert your Won revenues to dollars at the end of the year.
- 3) Calculate a 95% confidence interval for your total revenues.
- 4) Now, suppose that you decided to shift your remaining production capacity towards British sales. If you set a price of L45 per bicycle (Total British sales are equal to 75,000). Redo (3)
- 5) If you wanted to minimize the currency exposure that you face, what percentage of your total revenues should be from Britain? (You may need to do this in excel).
- 6) Now, suppose that you began buying components overseas as well. Suppose that you bought enough parts for 20,000 bicycles in the US (for \$45 apiece), and the remaining parts (105,000) in South Korea for 34,000 Won apiece. Calculate your total currency exposure.