

FIN 3014 — PRINCIPLES OF BUSINESS FINANCE LAB
Beta Calculation Assignment

Due Date: March 11

This assignment will build toward a larger assignment at the end of the semester.

Goals for this assignment:

- Gather historical price data
- Gather historical S&P500 data
- Use excel to plot a scatter chart and calculate beta
- Create a report with a chart and your observations

Your tasks:

1. Collect historical price data.

For your assigned company, use the monthly return data that you calculated for your stock and for the S&P500 in your Stock Prices and Returns assignment.

2. Manipulate data.

There are several methods for calculating a regression in excel. For this assignment, we will use the charting capability to calculate beta for our stock. You will begin by choosing the “insert” option above the excel spreadsheet. You will choose “chart” and then “XY (scatter)” for the type of chart. The chart wizard will guide you through the process.

You will want to choose the “series” option to tell excel what data you want to use. Be sure to use your S&P500 return column for your “X value” and your stock return column for your “Y value”.

This process will give you a scatter graph that plots your stock’s return and the S&P500 return. However, it does not give you a regression line or slope. To get a regression line, you will need to click your left mouse key to make several of the data points turn yellow. With your mouse pointing to one of these yellow data points, right click your mouse. Choose “add trendline”. We will use the default (linear) trend line. However, you will want to choose “options” so that you can place “display equation on chart”.

You may find that your regression equation is difficult to read if it is placed over the data points. You can move this equation to the side of the graph (it is in a text box) so that it will be easier to read.

Make sure that you have properly labeled your graph and that your graph has a title.

3. Creating your reports:

These reports will include a chart and some comment from you regarding your observations of the data. A chart is a graphical presentation of data which makes

observations easier. You will select options so that Excel knows what kind of plot to draw. You will add labels to your chart to explain the plot and so you can interpret the results.

- ❖ Keep your report to one page, portrait, with a size 12 font that is easy to read.
- ❖ Use either company specific colors or primary colors.
- ❖ Use different types of lines (dots and dashes) to distinguish between the companies if it is printed in black and white or grayscale.
- ❖ Use labels to identify all important information
- ❖ Place the legend at the bottom of the chart so that you use the maximum width possible for your plot.

Risk report

Using the beta you calculated, along with your chart:

1. Explain how risky your stock is relative to the S&P500.
2. Compare the beta that you calculate with the beta that is provided on the <http://finance.yahoo.com> website (or some alternative source) for your stock. If they differ, why do you think this might be the case?