



MS IN BUSINESS ANALYTICS
BA 692 – INVESTMENT THEORY/ADVANCED CORPORATE FINANCE
Professor Sury

PROJECT 2

Due: Monday 11/8/21, 1159pm to Canvas

COMPARABLES ANALYSIS (10 points)

Query the user to provide a publicly traded stock, a time frame, and a time granularity (e.g., daily, weekly, monthly, etc.) Provide exception handling in case the stock doesn't have the appropriate history or data (i.e., query the user for another stock if the chosen one does not have the data required).

Automatically determine comparable companies based upon SIC code, GICS code, or any other methodology (or, at a minimum, query the user for a set of comparable tickers, but make sure you do exception handling if the dates/data are unavailable for chosen tickers).

Then, collect the relevant information that you need for the lever/unlever process (i.e., effective tax rate, D/E ratio, equity beta). You may need to query the user for a debt beta assumption—if you need it. For simplicity, you may assume that the debt beta applies to all companies. Note that you will need to run the equity beta via historical SCL for each comparable.

Next, for each comparable (and the target company), you will have to query the user as to which capital structure assumption applies (e.g., constant debt or constant D/E). Note that if the assumption for a particular company is constant debt, then the debt beta is automatically assumed to be zero for that company.

Run the unlever/relever process and determine the equity beta and report to the user.

Query the user for a risk-free rate and expected rate of return on the market. Provide the user with a cost of equity and compare it to the cost of equity as would have been calculated by a historical SCL regression. Comment on any differences.

OPTIONAL: A better submission would attempt to compute a FCFE (levered cash flow) based upon previous year's income statement and balance sheet (if possible) and a relevant growth rate (you can estimate a trend via regression or other predictive approach; or you can query the user for a reasonable growth rate).

Compute the value of the equity using a constant growth rate DCF assumption, using your estimate for FCFE, growth rate, and the cost of equity as calculated above with comps and/or historical SCL regression. Compare with the current market value to determine a BUY/SELL/HOLD signal.

Be prepared to present your program to the class. Random teams will be selected to showcase their program at the beginning of class. Don't forget to use proper documentation in your code.

Turn in your code (.pynb) and output (.pdf) to Canvas, under Assignments by the deadline.