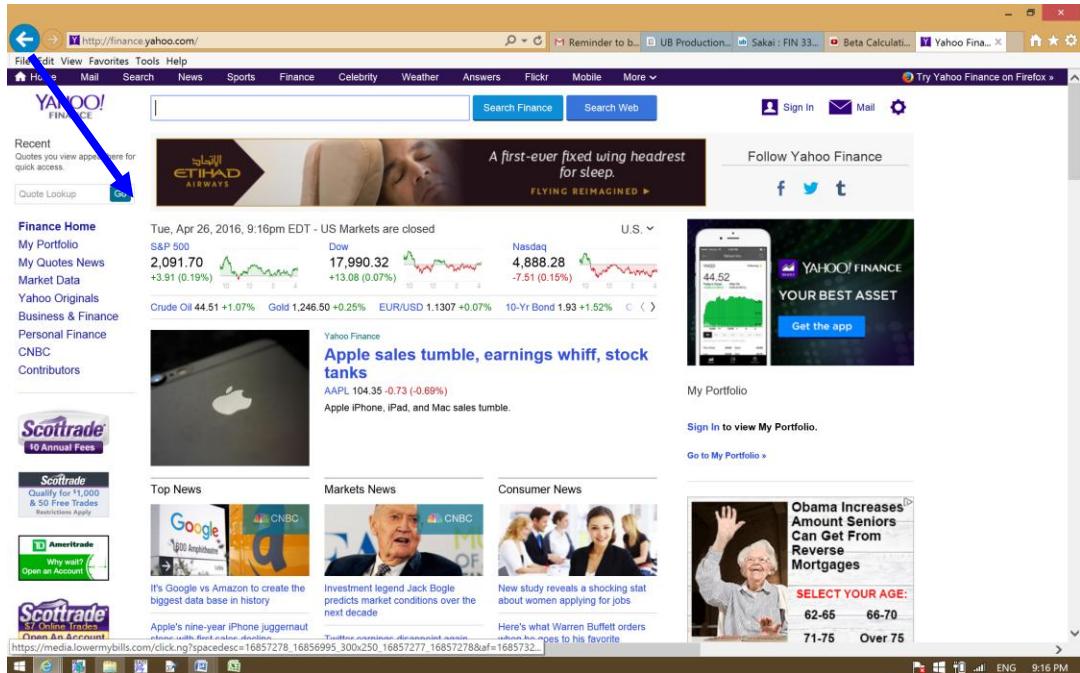
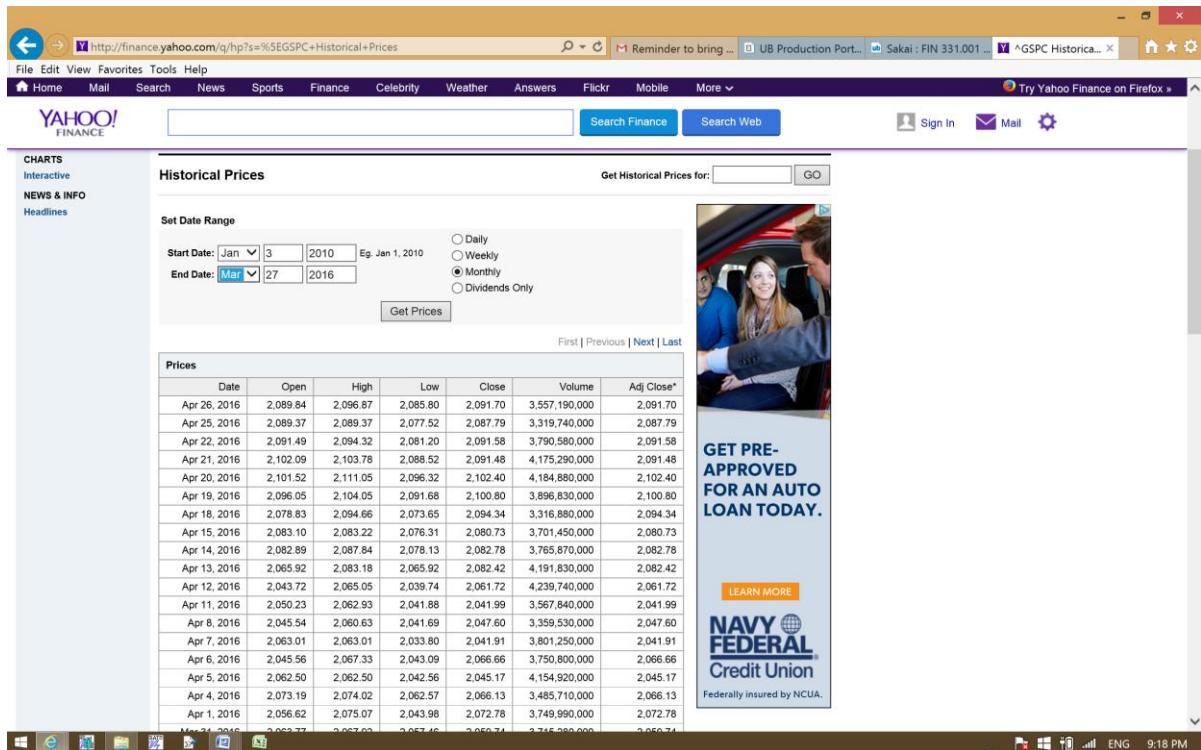


Calculating beta in excel

Step 1. Download the data for SP 500 and calculate rolling returns. Make sure that you use the same data range that you used for other stocks. For example, if the data that you downloaded for your stocks starts in January 2010 and ends in March 2016, then the data for SP 500 should have the same range.



The screenshot shows the Yahoo Finance homepage. At the top, there is a search bar and a navigation bar with links for Home, Mail, Search, News, Sports, Finance, Celebrity, Weather, Answers, Flickr, Mobile, and More. Below the navigation bar, there is a banner for Etihad Airways. The main content area displays market data for Tuesday, April 26, 2016, 9:16pm EDT - US Markets are closed. It shows S&P 500 at 2,091.70 (+3.91 0.19%), Dow at 17,990.32 (+13.08 0.07%), Nasdaq at 4,888.28 (-7.51 0.15%), Crude Oil at 44.51 +1.07%, Gold at 1,246.50 -0.25%, and EUR/USD at 1.1307 +0.07%. Below this, there is a news article about Apple sales tumbling. The right side of the page features a 'Follow Yahoo Finance' section with social media links (Facebook, Twitter, YouTube) and a 'YOUR BEST ASSET' advertisement for the app.



The screenshot shows the Yahoo Finance historical prices page for the S&P 500. The top navigation bar is identical to the previous screenshot. The main content area is titled 'Historical Prices' and includes a 'Set Date Range' section where the start date is set to Jan 3, 2010, and the end date is set to Mar 27, 2016. Below this, there is a table titled 'Prices' showing daily historical price data for the S&P 500 from April 2, 2016, to April 24, 2016. The table includes columns for Date, Open, High, Low, Close, Volume, and Adj Close*. To the right of the table, there is an advertisement for Navy Federal Credit Union with the text 'GET PRE-APPROVED FOR AN AUTO LOAN TODAY.' and a 'LEARN MORE' button.

Step 2. Use the =slope function in excel and use stock return as the known Y's and SP 500 return as known Xs. So if you have WMT and FB in your portfolio you would calculate the betas in the following manner: =slope(WMTreturncolumn,SPreturncolumn) and slope(FBreturncolumn,SPreturncolumn) and you would do it for each stock in your portfolio.

Step 3. Remember that

- A beta of 1 implies the asset has the same systematic risk as the overall market
- A beta < 1 implies the asset has less systematic risk than the overall market
- A beta > 1 implies the asset has more systematic risk than the overall market

–

Step 4. Portfolio beta is simply

$$\beta_p = W_1 \times \beta_1 + W_2 \times \beta_2 + \dots + W_n \times \beta_n$$

you just take the individual betas and do a weighted average.