Equity Valuation using Bloomberg

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# Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Company Information</td>
<td></td>
</tr>
<tr>
<td>a. Company Data</td>
<td>3</td>
</tr>
<tr>
<td>b. Beta</td>
<td>5</td>
</tr>
<tr>
<td>c. Financials</td>
<td>6</td>
</tr>
<tr>
<td>d. Filings</td>
<td>8</td>
</tr>
<tr>
<td>e. Earnings and Estimates</td>
<td>13</td>
</tr>
<tr>
<td>f. Pricing Data</td>
<td>16</td>
</tr>
<tr>
<td>g. Discounted Cash Flow Inputs</td>
<td>17</td>
</tr>
<tr>
<td>i. Risk Free Rate</td>
<td></td>
</tr>
<tr>
<td>ii. WACC Calculation</td>
<td></td>
</tr>
<tr>
<td>iii. Equity Risk Premium</td>
<td></td>
</tr>
<tr>
<td>II. Comparable Companies</td>
<td>19</td>
</tr>
<tr>
<td>III. Industry Information</td>
<td>20</td>
</tr>
<tr>
<td>IV. Macroeconomic Information</td>
<td>21</td>
</tr>
</tbody>
</table>
I. Company Information
   a. Company Data
1. Login to Bloomberg
2. Click on the New Tab panel
3. Enter your ticker into the search bar (e.g. AAPL). The search dropdown will populate with related functions and securities. In this instance, we are interested in AAPL US Equity.

4. Now you will have the option to select functions related to your security. These functions can be used to provide you with almost all of the information you need to know about your company. For a high-level overview, click on the Security Description (DES).
5. Within DES you can find general information about the company such as the business description, price chart, estimates, and financial ratios.
b. Beta

Under the Profile tab of DES, Bloomberg provides a 2-year unadjusted beta. This beta is calculated using regression analysis of the company’s weekly stock price returns against a market proxy (S&P 500).

Beta gives you information about the volatility of a stock compared to the overall market, therefore it is a measure of systematic risk. A beta higher than 1.0 indicates the stock is more volatile than the overall market, and a beta lower than 1.0 indicates the stock is less volatile than the overall market.

Additional beta measures and adjustments can be made by typing the BETA function into the search bar in the top left.

Any variable can be changed that is related to the regression analysis that produces the beta. Comparing beta measures over different time periods can provide you with insight on if the stock has become more or less volatile than the market over time. The beta input you choose should reflect your views about the future expected volatility of the company.

Adjusted beta is a forward-looking measure that uses the historical beta as an input. The formula for adjusted beta assumes that a security’s beta moves toward the market average (1.00) over time.

\[
\text{Adjusted Beta} = \text{Raw Beta} \times (0.67) + 1.00 \times (0.33)
\]
c. Financials

Next, you analyze the company’s historical financial statements by entering the *Financial Analysis (FA)* function.

There are many settings within financial analysis, including being able to chart line items. You can either select the blue chart next to a line items to graph it or select “Show Chart Grid” under “Actions”. There is the option to change the graphs to line charts.

Additionally, you can download and export all of the financial statements by selecting “Export”. You can either export the current tab you are on to Excel or download an Excel template from the *Excel Template Library (XLTP)*, which will try to populate an entire pre-created spreadsheet with the financials of your company.
Also, FA contains a breakdown of revenue segments in the Segments tab. Apple reports its revenues based on product categories seen below.

This allows us to observe trends in Apple’s revenue composition. In this scenario, you would investigate how the Services segment has become a larger portion of total revenue. Next, you could think how segment trends may evolve in the future, and how shifting trends could impact the company’s profitability. For example, if a certain growing segment is more profitable than others, that implies a favorable improvement in margins. Companies do not always disclose segment margins, but if they do, these inputs are critical in the valuation process. If they do disclose specific percentages, or general trends, it would often be in earnings releases or earnings calls.

The Ratios tab gives a historical overview of profitability, growth, credit, operating, and leverage ratios. This information is useful when identifying how a company ranks on the above characteristics. For example, based on the profitability measures, we can observe a slight deterioration in Apple’s profit margins in 2016 and 2017, which was most likely caused by an increase in research and development spending coupled with slower revenue growth.
d. Filings

The following steps in your company analysis process involves parsing through the public filings to get a better understanding of the business. This helps you learn about the risks, trends, and opportunities associated with the company. The filings also contain financial information and accounting details in the footnotes.

You can access SEC filings by entering the Document Search (DS) function in the search bar.

Types of Filings:

- **10K** – annual financial statements that follow a set structure of presentation; contains important information such as latest share count on the cover, financial statements, management discussion and analysis, and footnotes.
- **10Q** – interim financial quarter performance and highlights; less detailed footnotes and analysis than 10Ks; 10Q forms are unaudited and filed within 40-45 days of quarter end.
• 8K – required in the case of a materially significant event that affects a company’s financial position or share price; earnings press releases (PR) are often filed as 8K’s; such earnings releases usually become public before the official 10Q or 10K filing; the nature of PR may contain more information on GAAP to non-GAAP reconciliations and future guidance; 8K’s are also filed in the case of acquisitions, substantial asset sales or restructurings.

• Form 14A (Proxy) – represents a notification to shareholders about matters to be brought before meetings; usually contains latest share count (better source than 10Q’s or 10K’s when it’s a more recent filing); contains a great amount of detail around acquisitions as it solicits shareholder approval.

There are additional types of filings, but the above are some of the most used by analysts when performing company valuation.

You can also find initiation and research reports within this function. Initiation reports often contain more extensive analysis on a company’s business and financials, but they can also be outdated. Research reports are usually released after earnings as equity analysts update price targets according to how results compare to their assumptions in their models, which are supported by investment theses. Research reports should always tie the narrative to the numbers.

Outlook for certain companies can be gleaned using the Bloomberg Intelligence (BICO) function. These reports come from Bloomberg’s internal research team. This function can provide primers on key topics related to the company.

Another source of company information is the Company News (CN) function. This function shows individual company news, providing live insight on current events related to your company. News can be filtered by importance, which is determined by artificial intelligence, and is ordered by time.
Now we will discuss how to find debt information for your company. To get a visual of a company’s debt, type the **Debt Distribution** (DDIS) function into the search bar. This gives an overview of the maturity dates of company debt and the magnitude of debt maturing each year. This is important because it’s not wise to invest in a company with a ton of debt all maturing in the same year. The summary statistics on the right can also be used for WACC calculations. Inputs to use could include the total debt and the weighted average fixed coupon, which is essentially the interest rate a company is paying on its debt.

To perform some deeper liquidity risk analysis, you can check the company’s credit rating using the **Credit Profile** (CRPR) function. Another place to analyze if a company is able to meet their liquidity requirements is in
Financial Analysis (FA) under the “Liquidity” tab. This tab contains historical liquidity ratios for your company, which can inform you of the underlying financial health of the company.

Lastly, the Security Ownership (HDS) function can provide an entire overview of who own’s the stock you’re analyzing. This can be important to determine concentration risk in a small group of shareholders and whether management has invested in the business.

The “Ownership Summary” tab includes data on institutional, geographic, investment vehicle, and insider ownership.
The “Insider Transactions” tab shows where key employees either purchased or sold shares. These can be routine, automatic transactions are can be leading indicators of future company results.

**e. Earnings and Estimates**

To find information about the next earnings date, earnings trends, future financial estimates, and past surprise history, enter the *Earnings & Estimates (EE)* function.
From this section, you can also navigate to *Earnings History* (ERN), *Earnings Estimates Graph* (EEG), *Earnings Trends* (EM), *Consensus Overview* (EEO), and *Analyst Coverage* (ANR). These functions can also be typed directly into the search bar.

*Earnings History* (ERN) displays the entire history of a company reported earnings compared to consensus estimates.
The *Earnings Estimates Graph* (EEG) shows how consensus estimates change over time. There are also other measures you can select to overlay the stock price chart.

*Earnings Trends* (EM) connects past earnings and growth rates to future estimates.

*Consensus Overview* (EOO) provides an aggregate estimate for all the important financial items from analysts covering the stock. It is important to understand consensus estimates and the underlying drivers of their estimates as an investor. It is then up to you whether or not to agree with estimates. If you disagree and have evidence to support your alternative stance, then you could have an attractive investment opportunity, given there is a large enough margin of safety to compensate you for risk, which could be different depending on your conviction in your narrative and your desired return.
Analyst Coverage (ANR) is another function that can be used to gain a better understanding of consensus. This function can provide information such as the consensus target price, the distribution of ratings. Another important element of the included information is that each rating is associated with a firm and an analyst. This is important because you may find over time that some analysts or firms are more credible than others because they are more accurate in their estimates. You can also use this information to reach out to analysts who cover the company who may either have come to the same conclusions as you are have a completely different opinion about the company. It is always important to understand the opposing perspective when evaluating companies.
f. Pricing Data

Pricing data can be found in the *Historical Volatility Table (HVT)*.

Also, pricing data can be visualized using the *Line Chart (GP)* function.
g. DCF Inputs
   i. Risk Free Rate
A proxy for the risk-free rate is the 10Y US Treasury yield. This information can be found search for the US Generic Govt 10 Yr (USGG10YR) and entering the Security Description (DES) function.

![US 10 Year Treasury Yield](image)

ii. Weighted Average Cost of Capital
Bloomberg has a Weighted Average Cost of Capital (WACC) function that automatically calculates for you using Bloomberg’s data for security weights and costs.

![Bloomberg WACC Calculation](image)

While this is incredibly helpful and probably good enough, it is best practice to calculate WACC using your own data if it does not entirely align with Bloomberg’s. The following table represents all inputs needed to calculate a company’s WACC, but this function does allow you to manually change inputs by selecting them.
### Input | Formula / Where to find it?
--- | ---
**Beta** | BETA function; can also compute on your own by regressing the stock price against a market proxy.
**Risk-Free Rate** | USGG10YR → DES function
**Weight of Debt** | Calculate using input from the *Financial Analysis* (FA) function → Key Stats → LTM total debt or the most recent filing
**Weight of Equity** | Calculate using input from DES → Mkt Cap
**Cost of Equity** | $R_f + \beta_a \times \text{Equity Risk Premium}$
**Cost of Debt (after-tax)** | $K_d \times (1 - t)$; find tax rate from FA → Ratios → Profitability → Additional

\[
WACC = \frac{W_e}{W_e + W_d} 	imes K_e + \frac{W_d}{W_e + W_d} \times K_d \times (1 - t)
\]

#### iii. Equity Risk Premium

The equity risk premium is the expected return on stocks, net of the risk-free rate in an economy. This excess return compensates investors for taking on the relatively higher risk of equity investments compared to risk-free securities. Consequently, riskier securities demand a higher premium.

We can consider the concept of equity risk premium in two directions:
- Historical equity risk premium
- Implied equity risk premium

The historical equity risk premium is a backward-looking measure and can be estimated by observing stock market and government bond performance over a defined period. The time frame and method of calculation will affect the estimates.

We can calculate the ERP using the formula:

\[
\text{ERP} = \beta_a (R_m - R_f),
\]

Where:
- $\beta_a$ is the asset beta
- $R_m$ is the return of the overall market
- $R_f$ is the risk-free rate

The implied equity risk premium is a forward-looking measure and can change depending on your period of analysis. We can estimate it using a discounted cash flow approach and current stock index levels to calculate the future risk premium implied by the current stock price levels. This approach assumes that the current valuation levels are correct, or put in other words, markets are efficient.

The *Equity Risk Premium* (EQRP) function can be used to calculate this measure within Bloomberg.
II. Comparable Companies

Comparable company analysis is a way to determine how much a company is worth by comparing it to other companies of similar size in similar industries. The Relative Valuation (RV) function displays how your company compares to its peers. This information can be valuable when determining if your company is being mispriced relative to its competitors. However, it is important to remember that your company could be trading at a premium or a discount for a reason, and should not always deserve to be trading at the median. It is up to you as an analyst to determine what you believe the trading multiples should be for your company.

The Equity Relative Valuation (EQRV) function also shows a summary of current multiples, but also shows the current multiples of the firm compared to its historical multiples.
III. Industry Information
To learn more about the industry that your company is in, enter the Bloomberg Intelligence Primer (BICO) function. Under “Related Primers”, click on “Industry”.

This will bring you to Bloomberg Intelligence (BI), which will contain a yearly outlook on the industry that your company is classified in. You can also type in the BI function directly and search for the industry that way.
IV. Macroeconomic Information

Lastly, Bloomberg has an expansive list of Economic Data & Analysis functions. The *World Economic Statistics* (ECST) function lists all of the key indicators for the country being browsed.
Next, the *Bloomberg Economic News and Analysis* (BE) shows economic-related news corresponding to the country being browsed.

Lastly, the *Economic Calendars* (ECO) function shows upcoming economic releases.