



Bloomberg – A Teaching Innovation

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Finding the proper balance between theory and application is a challenge faced in many university disciplines. Although the task to locate timely and meaningful datasets that allow students to apply the theory to real world problems can be an ominous and time-consuming task, practical application in conjunction with theory is essential in preparing students to meet the demands of today's labor market.

While the internet provides numerous data sites with varying degrees of credibility, the challenge is often sorting through the myriad of sites, deciphering which are credible, then extracting the relevant information needed to conduct the analysis. The goal is to find the relevant data necessary for students to gain knowledge, understanding, and ultimately wisdom.

As many traditional teaching pedagogies give way to innovative, case-based teaching methods, the need for relevant, readily available data for students to analyze

becomes increasingly important. Class discussions become more meaningful as students analyze data, discuss their observations and relate their findings to the underlying theory.

BLOOMBERG

Founded more than 30 years ago, Bloomberg employs more than 15,000 people in 192 locations around the world, and is a leader in global business and financial news, data, and analytics. The goal of Bloomberg is to provide business and financial professionals with reliable news and needed data at a single location. Just as the sun never set on the British Empire, Bloomberg is gathering news and information around the world, producing over 5,000 stories a day from 150 bureaus in 73 countries¹.

The University currently has nine Bloomberg terminals available to students in the Economics Lab in Smith 123 and in the Student Technology Center in the McKay Library room 140A during the labs' open times. Each student is required to create a log-in which allows for the personalization of settings on the terminal.

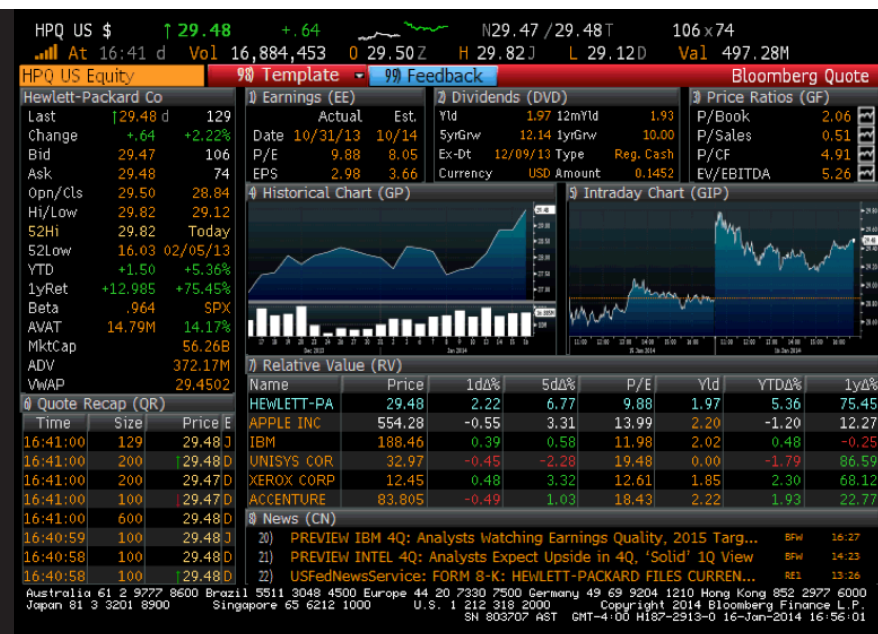
The Bloomberg Essentials Online Training (BESS) function provides online video tutorials to help students quickly become familiar with the basic Bloomberg functions and system operations. In addition to the core training, Bloomberg offers training videos in the market segments of equities, fixed income, foreign exchange, and commodities. After viewing the training videos and successfully completing the core and market sector exams (with a score of 75% or better), students can become Bloomberg certified in that market sector. Certification in Bloomberg is just one more way students are able to differentiate themselves in the job market indicating they are familiar with functions and capabilities of Bloomberg.

Another way students are able to differentiate themselves is by taking the Bloomberg Aptitude Test (BAT). This two-hour proctored test allows students to demonstrate their competency and compare themselves with other students around the world. The exam covers news analysis, economics, math, analytical reasoning, financial statement analysis, investment banking, global markets, and chart and graph analysis. The Bloomberg Talent Search (BTS) function displays the student's overall performance on the BAT in each of the sectors



Figure 1. Bloomberg Industries, Industry Outlook for Computer Hardware. Source: Bloomberg

Figure 2. Bloomberg Quote Screen of Hewlett-Packard Co. Source: Bloomberg



along with the student's education, career interests, past work experience, and leadership/awards. A student's name and other personal information is not initially disclosed. Employers who are interested in a student can request more information, whereupon the student has the choice to disclose additional information, including a resume. Currently there are over 2,475 institutions in 60 countries involved in the Bloomberg Aptitude Test.

EDUCATIONAL APPLICATIONS

Fenton Broadhead, BYU-Idaho Academic Vice President, said, "Teaching without reflection, repetition, and application is only entertainment." Bloomberg is a tool to facilitate the active learning students require to understand the principles. Confucius reminds us, "I hear and I forget. I see and I remember. I do and I understand." As students struggle with the complexities of the data and the significance of the situations, then analyze and make recommendations, they become problem solvers and decisions makers.

There are many uses of Bloomberg ranging from business, finance, and economics to law and government. The following example demonstrates some of the basic functionality and information Bloomberg provides to students who are assigned a project to analyze a company. The example focuses on the resources available for an equity, but similar resources are available for bond markets, money markets, foreign exchange, commodities and derivatives. Information of all types can easily be accessed using Bloomberg, from the macroeconomic data of countries throughout the world to the microeconomic data of individual companies and commodities.

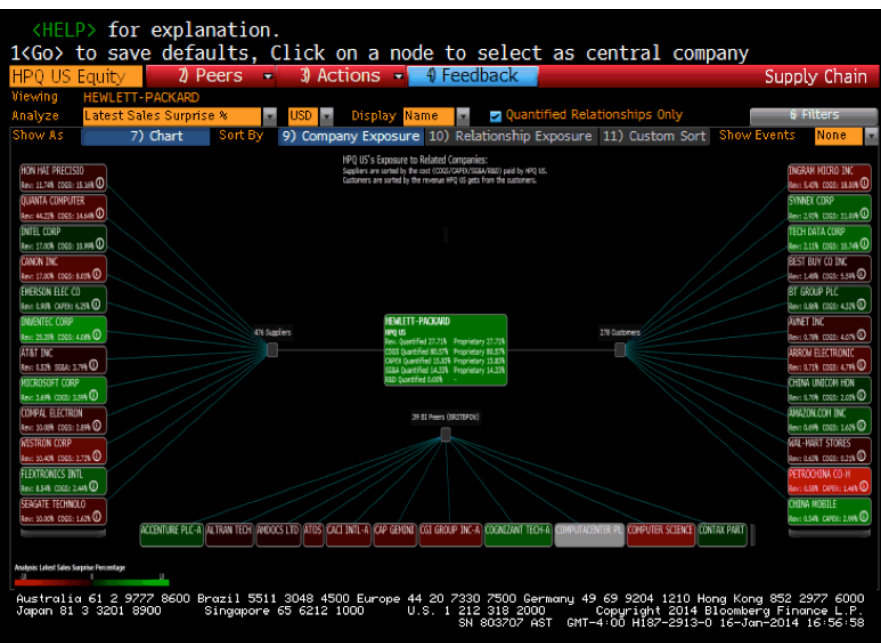


Figure 3. Supply Chain Analysis Screen of Hewlett-Packard Co. Source: Bloomberg

INDUSTRY ANALYSIS

Once students have a sense of the overall economy, their focus narrows to the particular industry of the company they are analyzing. The Bloomberg Industries – Industry Research (BI) function provides key industry data, interactive charts, and written analysis from industry experts for every major sector of the economy. Measurements of key drivers and metrics for the sector are given along with an industry outlook and outline of critical themes. Students are able to quickly obtain the essential information needed to understand an industry, the firms in that industry and the market outlook.

If the company produces or consumes a particular commodity, the Commodities (F9) section provides an in-depth market analysis and market overview. The Fundamentals (FDM) function provides information about physical demand and supply statistics of the various commodities as well as transportation, environment, and weather information. Drilling down in the Commodity Playbook (CPLY), statistics on individual commodities are available including the primary fundamental drivers of that commodity and the related macroeconomic statistics.

Past, present, and future prices are available for various commodities. Historical prices are available in daily to yearly periodicities in graphical or table format using the Historical Line Chart (GP) function. Intraday prices range from one to 240 minutes. The function for finding current or spot prices depends on the commodity: AGGP for Agriculture Spot Prices, BOIL for spot oil prices and refined products, USME for spot metal prices, and FXC for spot rates of foreign currency along with forward and fixing rates. Since the current price of a commodity can vary by location based on supply and demand factors, Bloomberg provides current prices by location for various sites around the world.

The CTM (Exchange Contracts) function provides the future prices of exchange traded commodities, bonds,

MACROECONOMICS

Starting from a macroeconomic perspective, Bloomberg's World Economic Statistics (ECST) function gives national income accounts, price levels, labor market data, interest rates, and other macroeconomic numbers broken down by sector. Students are able to assess the overall economic health of the countries in which their company operates or does business. The Economic Calendars (ECO) function lists the release dates of macroeconomic measures along with the median estimate of surveyed economists. As students track these numbers throughout the semester, they are able to see the impact on the company as the macroeconomic numbers are released and either meet or differ from expectations. Clicking on a particular macroeconomic measure allows a student to drill down and get additional details. The Economists' Estimates (ECOS) and Economic Forecasts (ECFC) provide further details about economic estimates by various economists.

currency, and credit derivatives. Students are able to see how future prices have changed during a given time period using the Commodity Curve Analysis (CCRV) function. The Commodity Price Forecasts (CPFC) function allows students to compare exchange-traded future prices to the median forecasted price of the commodity by analysts.

The Supply Chain Analysis (SPLC) function provides a visual of the main suppliers, competitors, and customers of the company, and serves to aid students in assessing the various forces faced by the company. Bloomberg currently covers the supply chain for over 26,000 companies, and with the given data available in Bloomberg, an industry

analysis using Porter's Five Forces takes on a whole new dimension. For example, Bloomberg shows that Hewlett-Packard, the world's largest provider of PCs, has 476 suppliers, 278 customers, and 39 peers.

In addition to the Supply Chain Analysis, in-depth historical and future estimates of financial information can be accessed using the Financial Analysis (FA) function. Balance sheets, income statements, and cash flow statements along with key financial ratios allow for a thorough analysis of the company's financial situation. An Ownership Summary (OWN) provides a breakdown of which institutions, including the government, own shares in the company along with a geographical breakdown of that ownership. The Credit Rating Profile (CRPR) function indicates the company's credit worthiness based on ratings by Moody's, Standard and Poor's, Fitch, and

others. Company research from over 2,500 providers is located using the Research (BRC) function. These reports from brokers, market research firms, and industry associations are aggregated on a single screen.

The Relative Value (RV) function allows students to benchmark the company's performance with comparable companies in the industry. These measurement include financial ratios, markets, ownership, and credit ratings. In addition, custom fields can be created as needed.

The Historical Line Chart (GP) function for an equity is similar to that for a commodity. The graph can be augmented by comparing the company's price relative to other companies or indices. Technical studies such as the Relative Strength Index, Bollinger Bands, and Mean Average Convergence Divergence can be added for further analysis. In addition, major events related

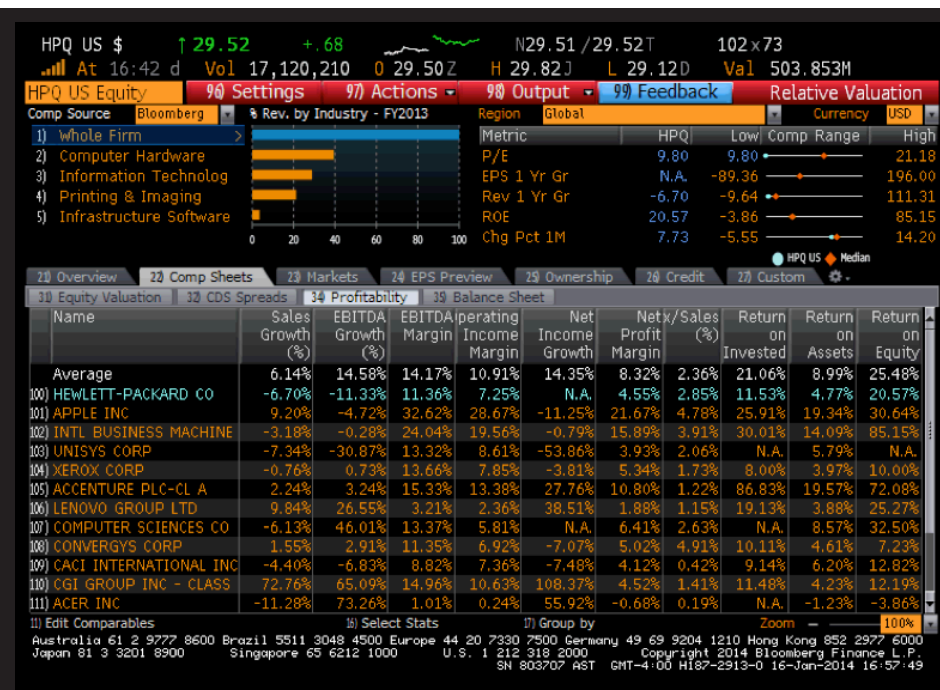


Figure 4. Comparable Analysis Screen of Hewlett-Packard Co., Source: Bloomberg

EQUITY ANALYSIS

Information about publicly-held companies worldwide is available with only a few keystrokes using the Equity screen (F8), allowing students to quickly access a company's filings, news, and financial information and to compare with other peer firms. The Bloomberg Quote (BQ) function provides a snapshot of the equity including key statistics such as earnings, dividends, and price ratios, along with a comparison to other companies. A list of analysts' recommendations, price targets and price target time periods and a consensus rating about the company's stock price is available using the ANR (Analyst Recommendations) function.



Figure 5. Historical Graph Line Screen of Hewlett-Packard Co. Source: Bloomberg

to the company can be added to the graph such as acquisitions, dividends, and debt offerings, as well as major news and macroeconomic announcements. With the use of Bloomberg students are able to find the needed information to conduct a thorough analysis of a company even with limited time for data gathering.

CONCLUSION

With a scarcity of time each semester to cover the desired course topics, Bloomberg reduces the time required to gather data, freeing up valuable time for analysis. It offers seamless data conversion from Bloomberg to Excel for further study. Traditionally, students would spend 80% of their time gathering data, but only 20% of their time conducting analyses. With easy access to reliable data, those numbers can be reversed, allowing students more time to analyze the data and examine the results, better preparing students to be problem solvers, not just data gatherers. As students evaluate data and analyze results, their level of understanding deepens. Knowing

Bloomberg's functions for finding and retrieving data gives students an added advantage as they go to work for companies that use Bloomberg terminals. Demonstrating knowledge via the Bloomberg Aptitude Test further helps students differentiate themselves. In an increasingly competitive job market, the need for students to know, do, and become requires students to be adept problem solvers and decisions makers in a data rich environment.

With such rapid advancements in technology, the challenge is to adapt and incorporate those changes to improve the educational experience for students and better prepare them for the job market. As Abraham Lincoln taught: "It is not 'can any of us imagine better?' but, 'can we all do

better?' The dogmas of the quiet past, are inadequate to the stormy present. The occasion is piled high with difficulty, and we must rise with the occasion. As our case is new, so we must think anew, and act anew."²

Notes:

¹Bloomberg Publication: Know More, Do More, Bloomberg for Education.

²Lincoln, Abraham, Annual Message to Congress, Concluding Remarks, Washington, D.C., December 1, 1862.

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