

GUIDE TO BLOOMBERG'S INFORMATION PROGRAMS

THE BLOOMBERG SYSTEM

Bloomberg is a computer information and retrieval system providing access to financial and economic data, news, and analytics. Bloomberg terminals are common in most trading floors and are becoming more common in universities where they are used for research, teaching, and managing student investment funds. The Bloomberg system provides 24-hour, instant access to information on most U.S. and foreign securities: stocks, bonds, asset-backed securities, swaps, and derivatives; economic information by country; current and historical news and information on corporations and countries; analytical packages for evaluating bonds, equity, derivatives, and portfolios. For detailed applications of the system, one should view the Bloomberg tutorials. These tutorials can be accessed directly from the Bloomberg system by typing CU to bring up the Bloomberg Information Menu and then clicking "Tutorials" or by simply typing NI BUSEMR.

Bloomberg Keyboard

The Bloomberg keyboard allows you to access information within the 'Bloomberg System.' The keyboard consists of several specialized, color-coded function keys and yellow functional buttons:

- **Green Action Keys** send a specific request to the system with the system in turn responding:
 - **GO:** Press <go> for entering commands
 - **NEWS** Press <News> for accessing 24-hour, on-line global news service
 - **HELP:** Press <help> for terminology, formulas, and defaults. For specific information, type a name and then press <help>; for help from a Bloomberg representative, press <help> twice.
 - **MENU:** Press <Menu> to back up to the previous screen or menu.
 - **PRINT**
 - **PAGE FWD**
 - **PAGE BACK**
- **Yellow Functional Buttons** take the user to information and analytical functions for specific markets:
 - **GOVT:** Domestic and foreign securities and indices
 - **EQUITY:** Equity news, company information, company financial information, historical prices, equity indices, mutual fund information, and equity derivatives (a company's option, futures, warrants, convertibles, and swaps)
 - **CMDTY:** Commodities by sector, futures, options, and OTC pricing contributors
 - **CORP:** Corporate bonds and bond indices
 - **INDEX:** Indices for markets and countries
 - **CRNCY:** Foreign exchange spot rates, forward rates, and cross rates, currency monitors, and currency indices
 - **M-MKT:** Money market rates and indices (e.g., LIBOR, commercial paper rates, and federal funds rates)

- **MRTG:** Mortgage securities, agency pool reports, and prepayment statistics
- **MUNI:** Municipal indices and Moody’s municipal bonds
- **PFD:** Preferred stock information
- **CLIENT** – General function for creating, customizing, and updating portfolios

The yellow functional buttons are a good way to get started on Bloomberg. For example, to access information on a company and its securities, you press the “Equity” button, [EQUITY], and then press the ‘Go’ button, <go>. A menu will appear that will identify where a function or information is located. You can then type the number corresponding to the menu option in the top left corner of the screen and press <go>, or move the cursor to the option and click. For example, to find a company or security’s ticker symbol from the Equity Menu Screen, you would do the following:

- Press [EQUITY]
- Type 1 on the Menu Screen and hit <go> (or move cursor to “Finding Securities,” (Option 1) and click. This will bring up the “Ticker Symbol Look Up” Screen.
- On Ticker Symbol Look Up Screen, type the name of the company as accurately as possible. This will bring up a list of companies.
- Scroll down to find the name of the company.
- Click the name of the company or type the ticker symbol to access a menu of information and functions for that company: Company Information/Description, Historical Prices, News/Research.

Similar procedures can be followed to identify tickers or identifies for bonds, corporate securities, commodities, currencies, and indices: Press the relevant “Yellow Key” (e.g., [CORP] or [INDEX]) and <go> and then type or click the “Find Security” option.

Note, if you know the ticker symbol or identifier, then you can access the stock, bond, index, or currency directly by typing the ticker/identifier and then pressing the relevant key; for example to access IBM, enter: IBM [EQUITY].

Loading Information on a Stock, Bond, Currency, or Index

In general, to load a corporation’s security (e.g., stock or bond), index, currency, or commodity in Bloomberg:

- Type in the ticker or identifier
- Press the yellow key that represents the type of asset; e.g., [EQUITY] or [CORP]
- Hit <go>

Examples:

- To pull up IBM’s stock: enter IBM [EQUITY] <go>
- To pull up IBM’s 6.5% coupon bond maturing in 10/2028, enter IBM 6.5 10/28 [CORP] <go>
- To pull up the S&P 500 index: enter SPX [Index] <go>

- To pull up the British Pound: enter GBP [CRNCY] <go>
- To pull up crude oil futures contracts traded on the New York Mercantile Exchange. Enter CLa [CMDITY] <go>
- To pull up U.S. Treasury Bonds. Enter: US [GOVT] <go>

Once you've loaded the security or index, you are taken to a "homepage" menu that categorizes all the functions on the selected security and submenu screens that can be accessed by either typing the number or function in the left corner of the screen or clicking the relevant option.

There are two main types of screens in Bloomberg – descriptive and analytical. Descriptive screens provide information about the underlying security, such as trade information, expiration, and risk information. Descriptive screens pull data from Bloomberg and present it in an orderly fashion; they usually do not perform calculations. Analytical screens, on the other hand, typically solve for the price of the security or portfolio based on customized inputs.

In Bloomberg, many of the functions that are used for evaluating securities are common and as a result have a common command. For instance, the GP function is a price graph that can be used for each security type. Derivatives, indices, interest rates, currencies, commodities, and bond futures often use many of the same functions. If you know the name of the function (e.g. DES for description) and the security is already loaded, then you can access the function's screen directly by simply typing the name of the function (e.g., DES) in the top left corner; if the security is not loaded, then you can type the ticker, hit the yellow key, and type the function; for example: IBM [EQUITY] DES <go>. Also note that once you have accessed the function screen, you can always press the green "Help" key to bring up a screen with information, defaults, and instructions related to that function.

GETTING STARTED

BLOOMBERG COMPANY INFORMATION

- Type Company Ticker
- Hit <Equity>

Example:

- IBM <Equity>

You will see a menu with useful function: Company Information, Historical Prices, and News. Some of the interesting functions and information:

- Press green "Quote 1" or "Quote " key for a snap shot and market information.
- Hit Relative Performance from Menu or type RV.
- Type FA (Financial Analysis)
- Type HH for Hoover's Handbook

BLOOMBERG CORPORATE BOND INFORMATION AND FUNCTIONS

- Type Company Ticker
- Hit <Corp>
- You will see a menu of outstanding bonds of the company. Type the number of the bond

and press <go>. This will bring up a “Menu” of functions and information that can be accessed on that bond.

Example:

- IBM <corp>

You will see a menu with useful function:

- Yield and Spread Analysis—YAS (Hit 2 from Menu and then go to YAS)
- Issue and Issuer information: Description (Trace Trade Graph); Ratings; Prospectus
- DDIS: Determines how a company is leveraged using maturity distribution
- RVM: Graphs the historical spreads.
- TRA: Calculates total return of a particular bond
- GP graphs historical closing prices
- RV graphs historical spreads
- ISSD provides an overview of financial data on the issuer
- CRPR views current and historical ratings

Useful functions for interest rates and general bond information:

- YCRV: Yield curve analysis
- BTMM: Overview of current interest rates: Fed funds; Treasuries, Repos and LIBOR.
- GGR: Global summary
- IYC: International yield curves
- IM: Access to Treasury and money-market information
- SRCH creates custom bond searches

BLOOMBERG NEWS AND THE ECONOMY

For general information related to fixed income:

- N to access all Bloomberg news
- NH for current news by newswires
- TOP For Bloomberg news and information
- TOP BON for top bond information
- NI FED for Federal Reserve Information
- NI for information on corporate and country ratings

For economic and financial market information:

- ECO calendar of economic releases
- WECO for world economic calendar. The function can be used to find economic indicators
- ECST to find world economic statistics. The function can be used to find economic indicators and Beige Book.
- CBQ for market summary benchmark information
- FOMC for information on policy changes of the FOMC
- FED for a calendar of Federal Reserve releases
- FWCV used to project implied forward rates

SETTING UP A PORTFOLIO

A user can set up a stock or fixed-income portfolio on Bloomberg. Once the portfolio is loaded, the user can obtain current market information and apply Bloomberg analytics to analyze the portfolio.

Steps for Creating Portfolios

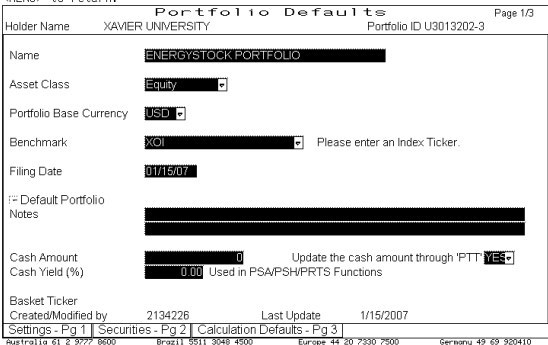
1. **Step 1: PRTU:** PRTU displays a list of portfolios. To create a portfolio using PRTU:

- Type PRTU
- On PRTU Screen, click the “Create New” button. This will bring up a three-page screen for inputting information:
 - Page 1: Name of your portfolio, Asset Class (Equity, fixed income, balanced), and Benchmark (e.g., S&P 500)
 - Page 2: Screen for inputting securities by their identifiers (Note: A helpful way to load securities is to go to the index and find the securities of interest; then drop and drag the security)
 - Page 3 identifies the defaults
- Once the portfolio is loaded, hit the menu key. The name you have given to the portfolio will then be displayed on the PRTU Screen.

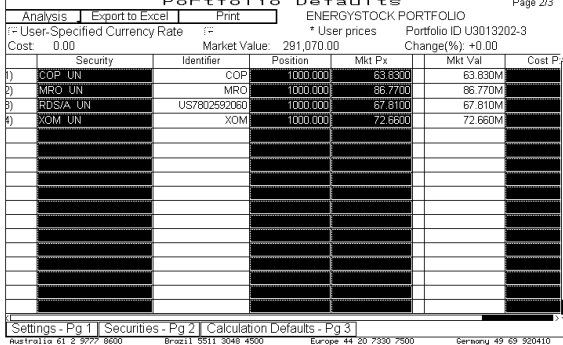
The exhibit below shows page 1 and 2 of the PRTU Screens from loading a four-security energy stock portfolio, named Energy Stock Portfolio: Conoco Phillips, Exxon Mobile, Marathon Oil, and Royal Dutch Shell. This portfolio is evaluated relative to the American Stock Exchange Oil Index XOJ = identifier).

Exhibit PRTU

<HELP> for explanation.
<MENU> to return.dgp Client PRTU<HELP> for explanation.
<MENU> to return.dgp Client PRTU



Portfolio Defaults Page 1/3
Holder Name: XAMIER UNIVERSITY Portfolio ID: U3013202-3
Name: ENERGESTOCK PORTFOLIO
Asset Class: Equity
Portfolio Base Currency: USD
Benchmark: XOJ Please enter an Index Ticker.
Filing Date: 01/15/07
Cash Amount: 0 Update the cash amount through 'PTT'
Cash Yield (%): 0.00 Used in PSA/PSH/PRTS Functions
Basket Ticker: Created/Modified by 2134226 Last Update 1/15/2007



Security	Identifier	Position	Mkt Px	Mkt Val	Cost P
1) COP UN	COP	1000,000	63.8300	63.830M	
2) MRO UN	MRO	1000,000	86.7700	86.770M	
3) RDSA UN	US7802592060	1000,000	67.8100	67.810M	
4) XOM UN	XOM	1000,000	72.6600	72.660M	

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2. **Step 4: PMEN:** With the portfolio loaded, type PMEN to access a menu of functions to apply to the portfolio: Display and Valuation, Equity Analytics, News and Research headlines. For example, clicking the “News and Research” function (NPH) for the Energy Stock Portfolio displays current news listings for each stock in the portfolio (see exhibit).

Exhibit RPT

1
Hit # <GD> to View Securities within each Market Sector. P181 Client RPT
Equity Portfolio Risk Report PAGE 1/ 1

Holder Name: XAVIER UNIVERSITY	Name: ENERGESTOCK PORTFOLIO
Portfolio: U3013202-3	Mkt Val(\$): 291,070.00
# of Issues: 4	Stock Avg Beta: 1.27
Risk Value (\$): 3,684.84	Futures Value(\$):

Market Breakdown	MktValue	Beta	RiskAmt	Futr Cnt	MktValue (\$)	Zof port	RiskAmt (\$)	Zof risk
U.S.	5	291.07M	1.27	3,684.84	H	291.07M	100.0	3,684.84 100.0

Australia 61 2 9277 8600 Brazil 5511 5048 4500 Europe 44 20 7330 7500 Germany 49 49 920410
Hong Kong 852 2577 6000 Japan 81 3 3201 8900 Singapore 65 6212 1000 U.S. 1 212 318 2000 Copyright 2007 Bloomberg L.P.
HQP046810 13-Jun-2007 20:45:28

Exhibit NPH

Enter 21 <GD> for Portfolio News Defaults Client NPH
Portfolio Headlines. Enter Selection To View Story

1) CONOCOPHILLIPS (COP)
2) BN 19:35 Venezuela Seeks Cuts in World, Local OIL Production (Update2)
3) BN 18:39 Chevron, Shell Delay LNG Projects, Sending Natural Gas Higher
4) BN 17:39 Venezuela Wants Oil, Joint Venture Output Slashed (Update1)
5) MARATHON OIL CORP (MRO)
6) BN 18:39 Chevron, Shell Delay LNG Projects, Sending Natural Gas Higher
7) PRN 1/12 Seven Summits Research Releases Comments on HPO, MRO, AZN,
8) BN 1/11 *NO MARKET ON CLOSE (REBALANCE); HRO (NYSE)
9) ROYAL DUTCH SHELL PLC-AD(RDSA)
10) BN 18:39 Chevron, Shell Delay LNG Projects, Sending Natural Gas Higher
11) BN 18:01 Dutch Gas Boom Bypasses People Who Live Closest to Its Source
12) PRN 13:05 ROYAL DUTCH SHELL PLC: Buyback of Dun Shares
13) EXXON MOBIL CORP (XOM)
14) BN 19:35 Venezuela Seeks Cuts in World, Local OIL Production (Update2)
15) BN 18:39 Chevron, Shell Delay LNG Projects, Sending Natural Gas Higher
16) BN 18:01 Dutch Gas Boom Bypasses People Who Live Closest to Its Source

Portfolio ID#: 3 JAMES PAULKIEWICZ - XAVIER UNI
Australia 61 2 9277 8600 Brazil 5511 5048 4500 Europe 44 20 7330 7500 Germany 49 49 920410
Hong Kong 852 2577 6000 Japan 81 3 3201 8900 Singapore 65 6212 1000 U.S. 1 212 318 2000 Copyright 2007 Bloomberg L.P.
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Other Bloomberg Portfolio Functions

- PMEN – Current portfolio homepage and functions
- PDSP – Portfolio Display
- PLST – Portfolio List. To load portfolio, use /# Client (# = Portfolio number, which can be found in PLST)
- PFST – Portfolio Edit