
Using the Bloomberg Professional System for Finance Classes

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In recent years, business schools have made sizeable investments in technology that provide students with instruction and experience in collecting, processing and communicating information as well as other skills that are transferable to the workplace upon graduation. A growing number of schools already have invested or are considering an investment in the Bloomberg Professional System as a tool for students in various finance classes. This subscription service, provided by Bloomberg L.P., provides a wealth of information that can be illustrated for many topics covered in undergraduate and graduate courses. This paper identifies potential applications for illustrating the financial data available through a Bloomberg subscription and presents the potential benefits to a university for investing in Bloomberg compared to traditional reference materials that have been part of many university library holdings.

INTRODUCTION

Financial education has continuously blended theory and practice and has derived much of its popularity with business students by bringing financial data into the classroom. The use of financial data has developed from the sifting of annual reports of publicly-traded corporations to the ability to track tick-by-tick trading in real time. Keeping abreast of the various resources of financial data has become both a time-consuming as well as a resource-consuming hurdle for instructors, school libraries and administrators. More recently, schools have made sizeable investments in teaching centers, computer labs, and financial information centers (the "trading rooms") for students to witness the dynamic forces at work in various markets.

An irony shown between teaching and research is that while many professors themselves utilize databases in their research, there is little application of those same databases in the classroom (Clinebell and Clinebell, 1995). Since many schools do subscribe to many databases, extending the use to classroom applications would be a way to spread out the costs and more easily justify the continued investment in these resources.

WHAT IS BLOOMBERG?

Bloomberg is the popular subscription-based data service that provides a vast array of financial, economic and general information to users. Bloomberg LLP originally offered this service to the investment community and has expanded the service to individuals and academic institutions. In addition to the breadth of data that the service provides, the easy access to this data is also an attraction for many users. The service mimics the services of cable TV providers, providing access through a portal (the subscriber's television) that, while fixed in its location, offers easy accessibility to content that the subscriber can choose.

Bloomberg in fact, does provide its information services to the various media. There is Bloomberg Radio, Bloomberg TV and Bloomberg.com. These basic services draw data from the same sources and provide news and some analysis to a wider audience than that of the subscriber base. The expanded resources that are available to subscribers is the expanded access to Bloomberg Professional Systems.

RELATED STUDIES

Much of the literature stems from the use of technology and computer applications in teaching. Since there formerly were relatively few databases that could be incorporated into classroom illustrations and applications, there has been little research into the use of such databases. In addition, while many instructors have their own favorite websites, based on their own individual research interests or through casual browsing, many students are unaware of the vast number of sites as well as the alternatives to searching for sites to find specific information.

Clinebell and Clinebell (1995) used information generated by a survey of 241 schools and found a varied use of databases. Investment classes had the highest usage (32.4%) of databases, while Institutions classes had the least (5.4%). Their survey also found, not surprisingly, that larger schools showed a greater use of databases. St. Pierre (1996) looks at the benefits of the Bridge Information System, which, like Bloomberg, is a proprietary system that bundles information from different contributors. Smith (1996) shows an illustration of online access to EDGAR and presents a format that instructors can apply different internet resources that offer flexibility in teaching.

CLASSROOM APPLICATIONS

St. Pierre (1996) provides some examples of the uses of Bridge in classroom applications. Following her design, some general illustrations are shown here.

Figure 1. Figure 1 Ratios Illustration

Page		P065 Equity DES	
Hit 1 <GO> for more detailed financial analysis (FA).		Page 3 /10	
RATIOS			
HD US		HOME DEPOT INC	
FY END JAN 2007		* = Trailing 12 month ~ = Last Quarter Q4:2007	
ISSUE DATA		PER SHARE DATA	
Price	USD 38.22	CASH FLOW ANALYSIS	
*P/E	13.36	*Trailing 12m EPS	2.86
*Div Yld	2.35%	Dividends/share	.68
~Price/Book	3.04	~Book value/share	12.56
*Price/Sales	.86	Sales/share	44.22
*EV/T12 EBITDA	7.86	Cash Flow/Basic sh	
~Market cap.	78002.10M	~Shares out	2040.87
~Enterprise Value	89049.10M	FCF/share	
Price/Cashflow		Price/FCF	
Cashflow/net inc		Payout ratio	24.07%
Csh gen/Csh req		Dvd coverage	4.16
Cash-oper/sales		Eff int. rate	4.98%
GROWTH POTENTIAL		PROFITABILITY	
Dil EPS CO YrChg	2.84%	EBITDA	11435.00M
Cap Yr change	18.38%	EBIT	9673.00M
BVPS Yr change	-.87%	Operating margin	10.65%
R & D to sales		Pretax margin	10.25%
Retention rate	75.93%	Return on assets	11.91%
Sales Yr change	11.44%	Return on Com Eqty	22.18%
Employee Yr chan		Return on cap.	17.74%
Asset Yr change	17.49%	Asset turnover	1.88
~Current ratio		~Quick ratio	
Debt to assets		T debt/Com eqty	
A/R turnover		Inv. turnover	
Gross margin		EBIT/total inter	
Currency: US DOLLAR			
Australia 61 2 9777 8600 Brazil 5511 3048 4500 Europe 44 20 7330 7500 Germany 49 69 920410 Hong Kong 852 2977 6000 Japan 81 3 3201 8900 Singapore 65 6212 1000 U.S. 1 212 318 2000 Copyright 2007 Bloomberg L.P. H187-1067-1 25-Mar-2007 15:43:03			

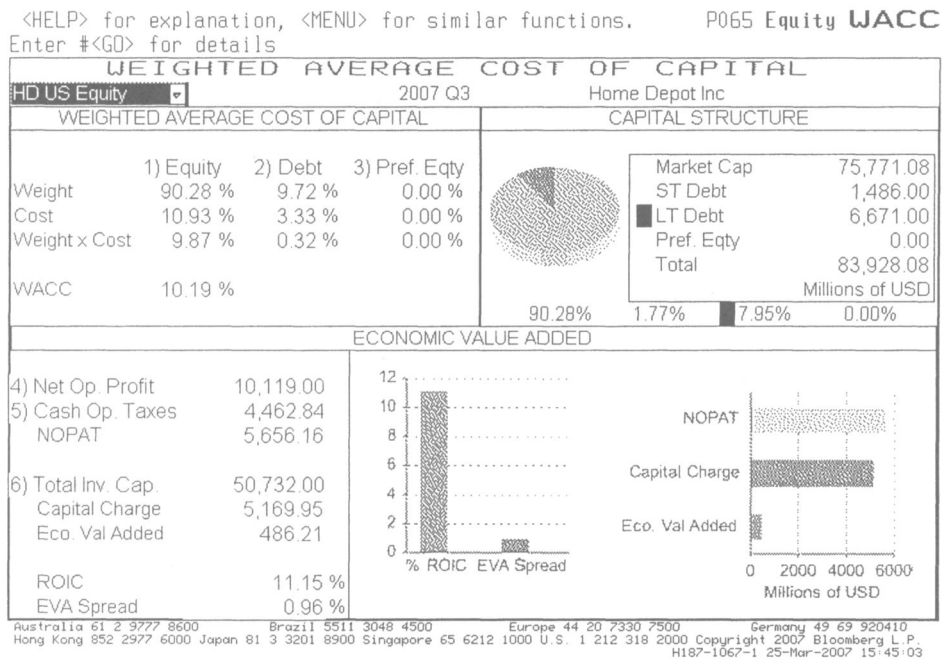
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Financial Management

Students in undergraduate and graduate financial management classes are shown the management of corporations and the use of ratios in determining the success, or lack of, in management's ability to operate businesses. Bloomberg, as do many resources, provides the financial statements to allow students to learn fundamental analysis. Like other resources, Bloomberg provides quick snapshots of various ratios. Figure 1 illustrates these ratios for a company. These can be viewed for The Home Depot by typing the command "HD <EQUITY> DES <GO>". In addition, Bloomberg has additional descriptive characteristics and incorporates materials from third party contributors, such as Hoover's, to efficiently provide more details of a company's operations, history, and management.

Another application for using a firm's financial information is in approximating the cost of capital from the use of debt and equity. Bloomberg illustrates a calculation for the

Figure 2. WACC Calculator Illustration



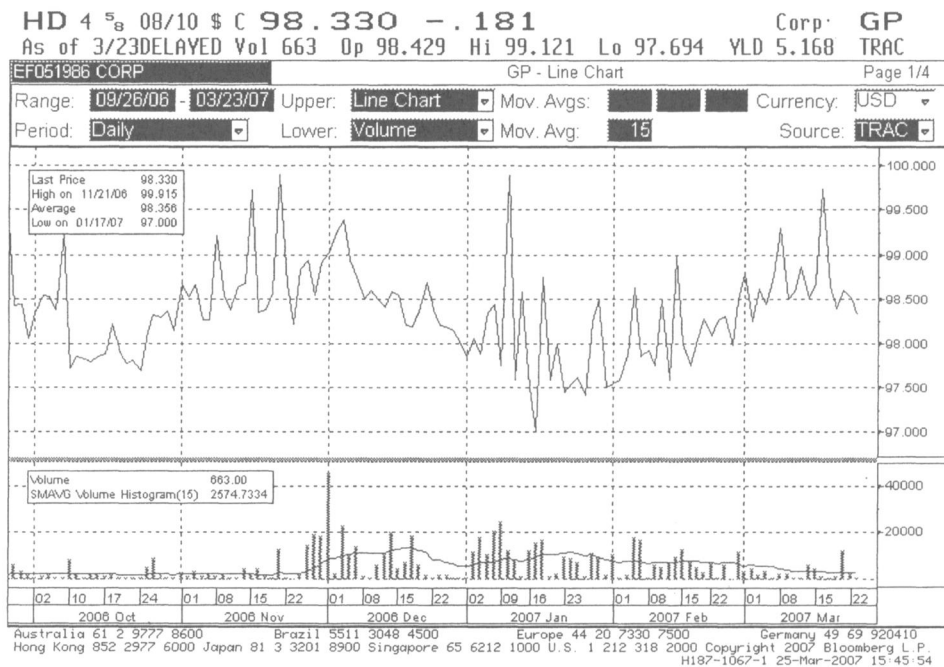
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Weighted Average Cost of Capital using both; drawing upon either current period data or user-inputted values. Figure 2 shows the WACC for Home Depot. The command for this is “HD<EQUITY> WACC <GO>”.

Investments

Students in various investments-related courses are shown the types, characteristics and uses of debt and equity securities. While much information is available for publicly traded common stock from alternative outlets, less information is provided towards the respective debt and preferred issues a company may have outstanding. Bloomberg provides a great deal of descriptive as well as pricing data for these other instruments that offer details for students to learn more of how these are valued. Figure 3, found by the command “HD <CORP> GP <GO>” shows the price history for Home Depot’s 5 3/8% note that matured in April 2006. In addition to graphic illustrations, actual prices are provided in tabular form (function HP) for accuracy as well as copying or exporting to a spreadsheet. The descriptive characteristics of the preferred “B” issue for Six Flags, Inc.

Figure 3. Historic Bond Price Illustration



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are shown in Figure 4. The symbol for the preferred shares are similar to that of the common shares; and the command for accessing this information is “PKS <PFD> DES <GO>”. The descriptive information for a company’s corporate debt is set up in a similar manner.

Students can also see results of investing in different securities and finding the returns from these investments, not only by comparing prices, but by incorporating dividends to find total returns. By using a comparative returns tool, securities can be evaluated against other securities as well as market and industry indices, for both price gains and dividend yields. The illustration for comparing the returns of Home Depot to Lowe’s as well as to the S&P 500 are shown in Figure 5, by typing “HD <EQUITY> COMP <GO>”. Bloomberg also provides the flexibility and illustrates the potential for future returns by allowing users to plug in potential future prices.

Figure 4. Preferred Stock Description Illustration

DES		P065 Pfd	DES
PREFERRED SECURITY DISPLAY		Page 1 / 1	
SIX FLAGS INC (SIX) 7.2500% 8/15/09 Series		[EXCH]	
CONVERTIBLE INFORMATION		IDENTIFIERS	1) Additional Sec Info
CONV TO 1.1990 SHARES		EXCH SYM SIX B	2) Convertible Info.
SIX (US) \$6.08 ()		ISIN USB3001P5052	3) Corporate Actions
CONVERTIBLE UNTIL 8/14/09		CUSIP 83001P505	4) Cds Spreads/RED Info
PARITY 7.29 PREMIUM 220.85		RATINGS	5) Ratings
CUMULATIVE		Moody's Caa2	6) Custom Notes
Name SIX FLAGS INC		S&P CCC- *	7) Identifiers
Market of Issue Public		Fitch CCC-	8) Fees/Restrictions
SECURITY INFORMATION		Composite CCC-	9) Prospectus
Country US Currency USD		ISSUE SIZE	10) Sec. Specific News
Div 7 1/4 % Fixed		Amt Issued/Outstanding	11) Involved Parties
QUARTLY 30/360		11,500,000.00 SHR/	12) Issuer Information
Workout Series		11,500,000.00 SHR	13) Pricing Sources
CONVERTIBLE		Min Piece/Increment	14) Pfd Dividend Hist.
1st Settle Date 1/23/01		25.00/ 25.00	15) Related Securities
Div Pay Date 2/15/07		Par Amount 25.00	16) Issuer Web Page
Ex-Div Date 1/30/07		BOOK RUNNER/EXCHANGE	
Calc Typ (57)%TYPE PRFD		LEH	65) Old DES
HAVE PROSPECTUS DTC		NEW YORK	66) Send as Attachment
PRX/SHR=\$20.85. PREM=20%. PIERS (PFD INCOME EQTY REDEEMABLE SHRS). DEP SHR REP			
1/100 SHR PFD. MAND CVR IF CM STK @LST 120% OF CVR PRX FROM 2/15/04. POISON PUT.			
Australia 61 2 9277 8600 Brazil 5511 3048 4500 Europe 44 20 7330 7500 Germany 49 69 920410			
Hong Kong 852 2977 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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Figure 5. Stock Comparison Description

DES	P065 Pfd	DES
PREFERRED SECURITY DISPLAY		
SIX FLAGS INC (SIX) 7.2500% 8/15/09 Series		Page 1/ 1
[EXCH]		
CONVERTIBLE INFORMATION		IDENTIFIERS
CONV TO 1.1990 SHARES		EXCH SYM SIX B
SIX (US) \$6.08 ()		ISIN USB3001P5052
CONVERTIBLE UNTIL 8/14/09		CUSIP 83001P505
PARITY 7.29 PREMIUM 220.85		RATINGS
CUMULATIVE		Moody's Caa2
Name SIX FLAGS INC		S&P CCC- *
Market of Issue Public		Fitch CCC-
SECURITY INFORMATION		Composite CCC-
Country US Currency USD		ISSUE SIZE
Div 7 1/4 % Fixed		Amt Issued/Outstanding
QUARTLY 30/360		11,500,000.00 SHR/
Workout Series		11,500,000.00 SHR
CONVERTIBLE		Min Piece/Increment
1st Settle Date 1/23/01		25.00/ 25.00
Div Pay Date 2/15/07		Par Amount 25.00
Ex-Div Date 1/30/07		BOOK RUNNER/EXCHANGE
Calc Typ (57)%TYPE PRFD		LEH
HAVE PROSPECTUS DTC		NEW YORK
PRX/SHR=\$20.85. PREM=20%. PIERS (PFD INCOME EQTY REDEEMABLE SHRS). DEP SHR REP		
1/100 SHR PFD. MAND CVR IF CM STK @LST 120% OF CVR PRX FROM 2/15/04. POISON PUT.		
Australia 61 2 9277 8600 Brazil 5511 3048 4500 Europe 44 20 7330 7500 Germany 49 69 920410		
Hong Kong 852 2977 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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Figure 6. International Stock Markets Illustration

WEI				N166 Govt WEI			
Hit # <GO> to select security							
World Equity Indices				98) Emerging Markets			
Base Currency: CAD Ticker: N							
1) Americas 2) News							
				Last Trade Information		Percent Change	
				Value	Net Chg % Chg Time	% Ytd	% YtdCur
4) DOW JONES INDUS. AVG				12461.14	+13.62 +.11 16:03	-.02	-.64
5) S&P 500 INDEX				1434.56	-.48 -.03 16:05	+1.15	+.52
6) NASDAQ COMPOSITE INDEX				2451.74	-4.18 -.17 16:05	+1.51	+.88
7) S&P/TSX COMPOSITE INDEX				13141.59	-13.96 -.11 16:05	+1.81	+1.81
8) MEXICO BOLSA INDEX				28270.95	+51.40 +.18 15:45	+6.89	+4.27
9) BRAZIL BOVESPA STOCK IDX				45442.10	-188.76 -.41 16:05	+2.18	+5.25
2) Europe/Africa/Middle East 23) News							
10) DJ STOXX 50 € PR				3726.62	+68.77 +1.88 13:22	+.80	+1.29
11) FTSE 100 INDEX				6318.00	+61.20 +.98 12:36	+1.56	+1.33
12) CAC 40 INDEX				5598.37	+96.19 +1.75 13:10	+1.02	+1.52
13) DAX INDEX				6856.96	+144.90 +2.16 15:29	+3.94	+4.45
14) IBEX 35 INDEX				14490.10	+179.60 +1.26 12:38	+2.43	+2.93
15) S&P/MIB INDEX				41547.00	+828.00 +2.03 12:35	+.27	+.77
16) AMSTERDAM EXCHANGES INDX				509.01	+8.12 +1.62 13:07	+2.76	+3.27
17) OMX STOCKHOLM 30 INDEX				1223.57	+18.90 +1.57 12:44	+6.65	+3.97
18) SWISS MARKET INDEX				9074.25	+132.09 +1.48 12:30	+3.28	+3.16
3) Asia/Pacific 24) News							
19) NIKKEI 225				17419.20	+256.00 +1.49 3:00	+1.12	+1.30
20) HANG SENG INDEX				19690.25	+173.84 +.89 4:01	-1.37	-2.36
21) S&P/ASX 200 INDEX				5955.70	+93.80 +1.60 3/22	+5.04	+6.82
Australia 61 2 9777 8600 Brazil 5511 3048 4500 Europe 44 20 7330 7500 Germany 49 69 920410							
Hong Kong 852 2977 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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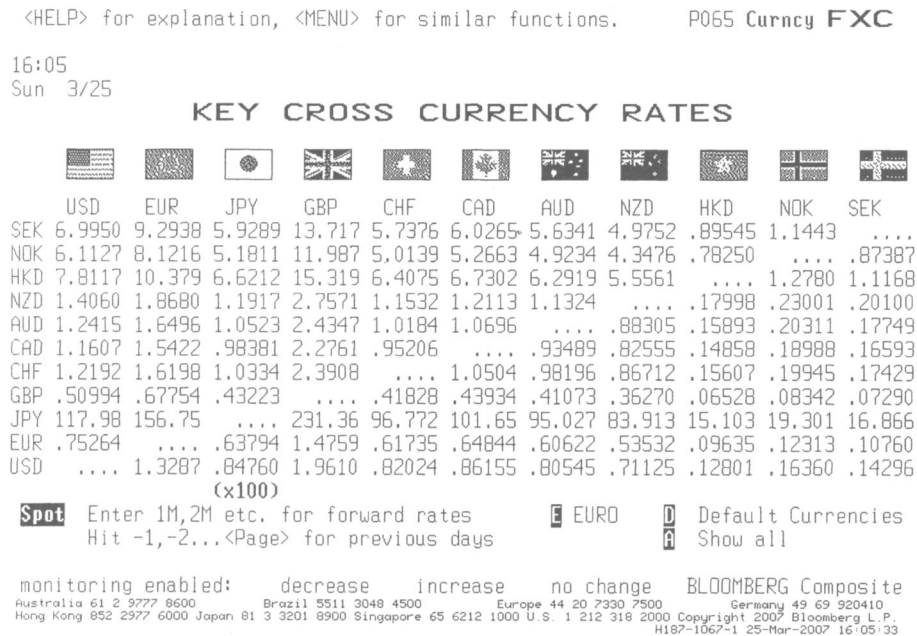
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International Finance

International finance classes offer the study of different global markets and the investment and financing alternatives. Bloomberg provides descriptive details and pricing for thousands of international securities and markets that is very difficult to find elsewhere. Since the pricing data feeds into Bloomberg in real time, it is easy to see the activity of the markets by watching the prices change. Figure 6 shows the main menu for accessing the various global stock markets as well as the respective indices that participate in those markets. The command to access this menu is “<COMDTY> WEI <GO>”.

Learning the different foreign currencies and the exchange rates between currencies is another popular aspect of international finance. With Bloomberg, almost all currencies can be examined and the exchange rates and cross-currency rates can be illustrated effectively. The dynamics and the power of having near-time access to market information is highlighted by the changes in exchange rates during a trading day. Figure 7 shows a cross-currency table set up for the major currencies (“<CURRENCY> FXC <GO>”).

Figure 7. Exchange Rates Illustration



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Students can compare U.S.-traded ADRs with the original issues (or equivalent issues) in other markets. This provides a useful illustration of the interaction of markets as well as learning more of price parity.

Derivatives

More finance departments are offering specific courses in derivatives, and the access to more information is available. There are several internet sites that provide information for options and futures quotes, but Bloomberg extends the descriptive as well as the informative elements of these instruments and provides historic prices and graphs (including expired contracts). In addition, Bloomberg includes calculators, including the Black-Scholes Option Pricing Model. Figure 8 depicts a partial Options Monitor for Home Depot, showing the various strike prices and expiration dates for both calls and puts. This can be found by typing "HD <EQUITY> OMON <GO>". Each specific option contract has its unique symbol, and can be separately accessed for historic prices and trading volume. Similar to options, futures contracts can be identified and tracked. The access to the various commodities can be found by the command "<COMDTY><GO>".

Figure 8. Options Monitor Illustration

HD US \$ SC 38.22 -.11 N --x-- SHO Equity OMON

As of Mar23 DELAYED Vol 11,566,757 Op 38.35 N Hi 38.47 N Lo 38.07 N

Template List	Edit	Contract Months	Security List	HD US Equity	Go
---------------	------	-----------------	---------------	--------------	----

Option Monitor: HOME DEPOT INC

Center 38.22 Number of Strikes 18 -or- % from Center Exchange C
(Composite)

CALL							PUT						
Ticker	Strike	Bid	Ask	Last	Volume	Open	Ticker	Strike	Bid	Ask	Last	Volume	Open
HD 21 APR 07 (Contract Size: 100)							HD 21 APR 07 (Contract Size: 100)						
1) HD+DF	30.00	8.30	8.40	8.90 y			18) HD+PF	30.00		.05	.04 y		
2) HD+DZ	32.50	5.80	6.00	6.00 y	41	5.90	19) HD+PZ	32.50		.05	.05 y		
3) HD+DG	35.00	3.40	3.50	3.60 y			20) HD+PG	35.00	.05	.10	.09 y		
4) HD+DU	37.50	1.30	1.35	1.34 y	34	1.40	21) HD+PU	37.50	.40	.45	.41 y	361	.45
5) HD+DH	40.00	.20	.25	.20 y	345	.20	22) HD+PH	40.00	1.80	1.90	1.85 y	2	1.85
6) HD+DV	42.50		.05	.04 y			23) HD+PV	42.50	4.20	4.40	4.10 y	10	4.10
7) HD+DI	45.00		.05	.05 y	7	.05	24) HD+PI	45.00	6.70	6.90	7.30 y		
8) HD+DS	47.50		.05				25) HD+PS	47.50	9.20	9.40			
9) HD+DJ	50.00		.05				26) HD+PJ	50.00	11.70	11.90	8.40 y		
10) HD+DK	55.00		.05				27) HD+PK	55.00	16.70	16.90	16.30 y		
11) HD+DL	60.00		.05				28) HD+PL	60.00	21.70	21.90	21.30 y		
HD 19 MAY 07 (Contract Size: 100)							HD 19 MAY 07 (Contract Size: 100)						
12) HD+EE	25.00	13.40	13.50	12.70 y			29) HD+QE	25.00		.05	.05 y		
13) HD+EY	27.50	10.90	11.00	11.00 y			30) HD+QY	27.50		.05	.05 y		
14) HD+EF	30.00	8.40	8.60	7.90 y			31) HD+QF	30.00		.05	.05 y		
15) HD+EZ	32.50	6.00	6.10	6.20 y	30	6.20	32) HD+QZ	32.50	.05	.10	.15 y		
16) HD+EG	35.00	3.70	3.80	3.90 y			33) HD+QG	35.00	.25	.30	.25 y	44	.25
17) HD+EU	37.50	1.80	1.85	1.80 y	94	1.85	34) HD+QU	37.50	.80	.85	.85 y	379	.75

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Hong Kong 852 2977 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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Figure 9 furthers this illustration by highlighting the various types of metals futures contracts ("**<COMDTY> METL <GO>**"). Again, the vast array of data available through Bloomberg is highlighted here. Each of these metals contracts has its own unique symbol. Each can be examined for its own price history as well as finding any options contracts written on each futures contract.

Banking

Students in banking classes utilize financial statement information and conduct ratio analysis both to determine the management of banking institutions as well as potential and existing loan accounts. In addition to having economic data available, Bloomberg provides current interest rates and illustrates alternative yield curves to apply to interest rate models. The Yield Curve on any specific day is illustrated in Figure 10, and can be accessed by typing "**<GOVT> YCRV <GO>**". Bloomberg includes credit risk models, such as a calculator that determines the Altman "Z" Score for companies. The "Z" Score, found in Figure 11 for the Ford Motor Company, is illustrated by typing "**F <EQUITY> AZS <GO>**". The calculation is time-specific (the data for the most recent quarter is shown)

Figure 9. Commodities Illustration

Comdty METL

P065 Comdty METL

Metal Markets

	Ticker Symbol	Value	Change	% Change	Time
1) Precious Metals					
4) Gold Spot	GOLDS	657.40	-6.60	-.99%	03/23
5) COMEX Gold Active Month	GCJ7	657.30	-6.90	-1.04%	03/23
6) Silver Spot	SILV	13.16	-.30	-2.23%	03/23
7) COMEX Silver Active Month	SIK7	13.23	-.25	-1.88%	03/23
8) Platinum Spot	PLAT	1227.00	-9.00	-.73%	03/23
9) NYMEX Platinum Active Month	PLJ7	1233.40	-7.60	-.61%	03/23
10) Palladium Spot	PALL	353.00	-2.50	-.70%	03/23
11) NYMEX Palladium Active Month	PAM7	359.50	1.75	.49%	03/23
2) Base Metals					
12) LME 3 month Aluminum High Grade	LMALDS03	2763.00	-17.00	-.61%	03/23
13) LME 3 Month Copper	LMCDS03	6720.00	.00	.00%	03/23
14) LME 3 Month Lead	LMPBDS03	1900.00	-25.00	-1.30%	03/23
15) LME 3 Month Zinc	LMZSDS03	3155.00	-45.00	-1.41%	03/23
16) COMEX Copper	HGK7	306.90	-.40	-.13%	03/23
17) Shanghai Copper	CUM7	61730.00	730.00	1.20%	03/23
3) Metal Bulletin Steel Prices					
18) Chinese Hot Rolled Coil	MBSTCHHR	455.00	.00	.00%	10/19
19) U.S. Hot Rolled Coil	MBSTUSHR	580.00	.00	.00%	03/22

Australia 61 2 9727 8600

Brazil 5511 3048 4500

Europe 44 20 7330 7500

Germany 49 69 920410

Hong Kong 852 2977 6000

Japan 81 3 3201 8900

Singapore 65 6212 1000

U.S. 1 212 318 2000

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 Hong Kong 852 2977 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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and draws from the same variables that were used in the original model. In addition, Bloomberg provides a "Financial Health" grade that gives an additional measure of risk by combining both the Altman "Z" with the company's average rating on its debt.

SUBSTITUTION FOR EXISTING LIBRARY RESOURCES

University libraries have made substantial investments of monetary and space resources with subscriptions to financial resources in both print and online access. An obvious challenge to a school of any size to adopting Bloomberg as a primary source of financial data would be the cost of the subscriptions for other materials. However, as Pettijohn (1996) states, 'navigating the Internet with a Web browser generally is much easier than scanning library indexes or hunting through stacks for articles...'. The ease of accessing data from a PC or laptop to information is an attractive alternative for many students and instructors.

With establishing a dedicated finance lab, a School of Business takes on some of the characteristics of a library, namely, by providing the use of the resources to those who

Figure 10. Yield Curve

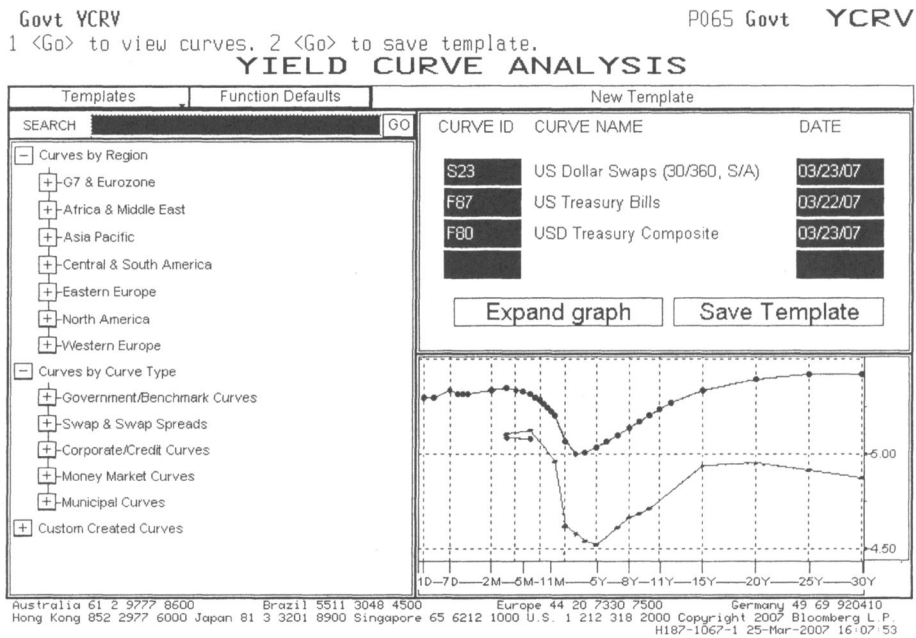
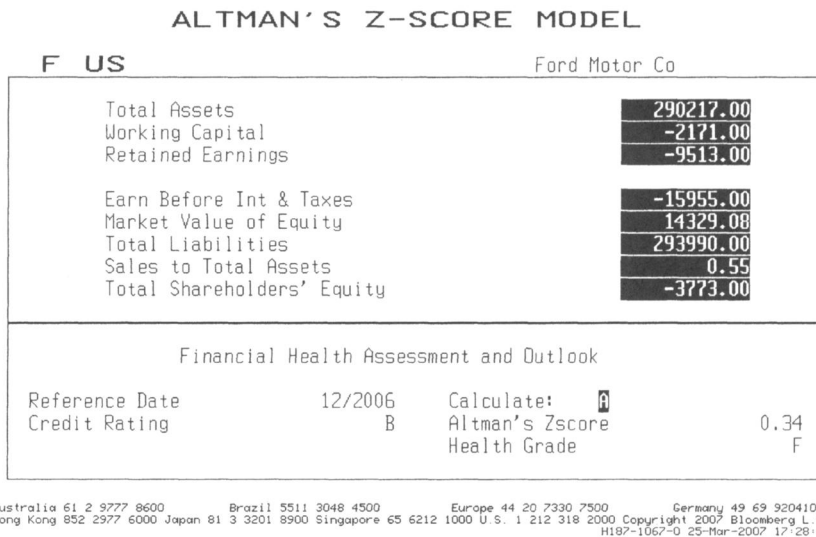


Figure 11. Altman's "Z" Score

<HELP> for explanation, <MENU> for similar functions. P065 Equity AZS



support and maintain the cost of such resources and to restrict, appropriately, the access and use of resources to others. By agreement, the use of the “open” and “closed” Bloomberg systems both allows and restricts access to those who directly benefit from and support the use of Bloomberg in classes and limits access to those that may use Bloomberg for separate purposes.

The monthly subscription for the Bloomberg Professional System is \$675. There is an additional charge for equipment rental, which is \$100 per month. This would make the annual cost of subscribing \$9,300. This university subscription for academic use is half of the regular desktop rate charged to commercial customers.

The annual subscriptions¹ to some of the widely utilized publications, and their format, are as follows:

Subscription Prices of Finance-related Library References

Resource	Medium	Annual Cost
Dun & Bradstreet	Print	\$5,328
Eviews	Online	\$2,000
International Financial Statistics	Print	\$260
International Financial Statistics	Online	\$1,240
Mergent Manuals	Print	\$1,655
Mergent	Online	\$22,500
Standard & Poor's Net Advantage	Online	\$13,219
Standard & Poor's Research Insight	Online	\$16,964
Bloomberg Professional (Academic)	Online	\$9300

COMPARISON TO INTERNET RESOURCES

A major source of competition for the use of Bloomberg is the access to online resources through the Internet. Morris (1998) provides illustrative subscription prices for a variety of Internet-based quote systems. With the exception of Bridge, most of the services do not provide more than current quotes and charts. For the purpose of many classroom illustrations, historic data would be more suitable.

Internet portals, such as AOL and Yahoo! provide news, quotes, and charts, and also provide some historical quotes for U.S. equities and for some indices. With some providers, the historical quotes can be easily downloaded and exported into spreadsheets. The major drawback to the many free resources is that the information provided is the lack of historical data, beyond charts, and the breadth of information available through

one site. Another drawback is the simple fact that the data is found at different web sites.

Internet-based finance sites provide much in the way of descriptions of the various types of securities available. Through subscriptions, clients can access further data, both historical as well as real-time that corresponds to their respective needs.

APPLYING BLOOMBERG TO RESEARCH PROJECTS

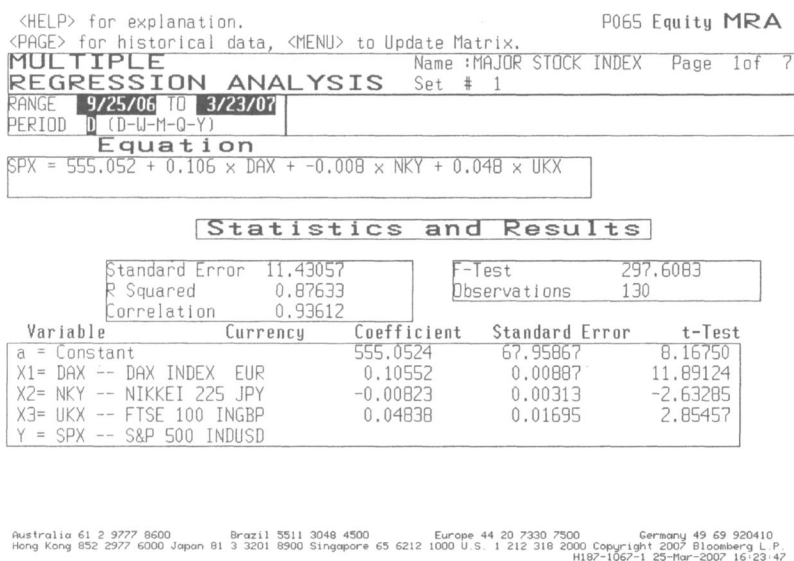
Bloomberg provides two means of accessing data. The first, more familiar version is the “open” system. The open system is password-protected and provides limited flexibility in downloading data for further use. Typically, the only means to use data through this version is to transcribe manually or to copy the contents from the screen onto another application, typically Excel. This limits the amount of data that can be put to use and creates the potential for input errors.

Bloomberg does provide some tools to provide a means of analyzing data internally. The Multiple Regression Analysis function can be used to see the possible causal effects that one or more independent securities have on a dependent security. These can be specified by the user and can be applied to specific time periods. This is a general function and can be accessed by typing “MRA <GO>”. Bloomberg also provides a function, **BETA**, which calculates the systematic risk of a stock to a market index. The benefit of using the Multiple Regression Analysis function is that the time periods as well as the variables can be catered to the needs of the user. Figure 12 shows the output of a Multiple Regression Analysis that looks at the prices of the S&P 500 regressed against the DAX, Nikkei 225 and FTSE 100 Indices.

The second version is the “closed” system. By agreement with Bloomberg, the access to this system is restricted to a relatively few users; e.g., employees of a firm or students in a finance department. The access to the information is the same as with the “open” system, but more ease and flexibility is provided for downloading data directly to an Excel spreadsheet. Users can determine what specific series they wish to download and the time period of the series. In addition, a single firm or index can be retrieved or the simultaneous retrieval of many series is possible. The gains in efficiency from the use of the “closed” system would benefit students and instructors by making the research retrieval portion of projects and research papers easier and allow more time to analyze the data.

A more recent adaptation provided to subscribers is Bloomberg Anywhere, which is a communications card that allows an individual user to access Bloomberg on their desktop or laptop at any site. While this offers flexibility and convenience to the user, this would not be a practical feature for academic use, since only one user of an account can access Bloomberg at any given time. For finance classes, the most cost-effective method of using Bloomberg would be to set up a dedicated classroom or lab for classes and student and faculty research.

Figure 12. Multiple Regression Analysis



(Used with permission of Bloomberg LP)

SUMMARY

Business schools constantly seek to provide an academic setting that will make the transition from the classroom to the workplace as easy as possible. Technology has been and will continue to be used in classrooms. This continuous investment will enhance the ability to analyze data and communicate the results of that analysis. In addition, investment needs to be made with the data resources that can be used in the classroom.

This paper has shown some of the applications that the Bloomberg Professional System provides to many finance classes. By having classes use the same resources that professionals use in their daily tasks, there is increased currency in the education that finance classes offer to students. Despite the perception of having a high cost, Bloomberg proves to be a more cost-effective and convenient alternative to library resources. Schools that have Bloomberg can continue to provide a variety of finance data and also release scarce financial resources for other uses.

ENDNOTE

¹ These subscription prices represent the 2005 prices of continued subscriptions. Depending on the features agreed upon within the subscription, the prices to institutions may vary.

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Appendix: Summary of Bloomberg Function Commands used in these Illustrations

Bloomberg Application	Commands Used in the Illustration	Figure
Description of Company, showing Current Period Ratios	"Symbol" <EQUITY> DES <GO> shown on page 3 out of 10	1
Weighted Average Cost of Capital Calculator	"Symbol" <EQUITY> WACC <GO>	2
Graph of a specific Bond Price History	"Symbol" <CORP> GP <GO>	3
Characteristics of a Preferred Stock Issue	"Symbol" <PFD> DES <GO>	4
Stock Returns Compared to Other Securities or Indices	"Symbol" <EQUITY> COMP <GO>	5
Illustration of Different International Stock Indices	<COMDTY> WEI <GO>	6
Key Cross Currency Rates	<CURRENCY> FXC <GO>	7
Stock Option Monitor	"Symbol" <EQUITY> OMON <GO>	8
Table of Various Commodities	<COMDTY> METL <GO>	9
Current Period Yield Curve	<GOVT> YCRV <GO>	10
Altman's "Z"	"Symbol" <EQUITY> AZS <GO>	11
Multiple Regression Analysis	MRA <GO>	12

Note: "Symbol" represents the specific company/index/asset or unique security name that is used for information. Unique names are required for individual corporate bond issues or futures contracts since these are tracked by their coupon and maturity dates. Similarly, option contracts are specified by whether they are calls or puts, as well as their strike price and expiration date. The respective security key, depicting the yellow keys on the Bloomberg keyboard, are shown, as an example, as <EQUITY> (for common stock information); and the specific function is shown in **BOLD**. Most of these functions are commonly applied across the different securities provided. The function list The function list for each security can be found by the "Symbol" <SECURITY> <GO> command.