



Using Bloomberg Functions for Managing Student Managed Fund at Sukkur IBA University

Suresh Kumar^{1*}, Hyder Ali², Waseem Sajjad³, Muhammad Asim⁴

Abstract

The primary goal of this work is to highlight tools that members of SIBA Student managed funds are utilizing for investment related decision making and better management of their fund. We describe the Bloomberg Terminal functions, which step wise helping the student, in screening the securities for potential investment, preparing quality investment recommendations on selected securities, and measuring portfolio risk and returns. Bloomberg functions are elaborated in a way to follow investment policy of SIBA student managed fund.

Keywords: Student Managed Fund, Bloomberg Terminal, Investment Policy

1. Introduction

According to Wikipedia as of 2008, more than 200 universities have student-managed funds (SMF), which vary in asset size from hundred thousand dollars to millions of dollars. Chincarini and Le (2018), reported that total number of SMF had reached to figure of 389 in 2017, where 353 SMF lies in USA and 36 in rest of the world. Through this program; students receive hands-on experience in the field of finance by allowing them to actually manage a portfolio instead of doing simulations and just reading courses. The opportunity for students of Sukkur IBA University (SIBA) to manage portfolio with real money dates back to 2015, with official notification for the formation of student managed fund and Investment Advisory Committee comprised of faculty and industry professionals. Pool of money was initially contributed by endowment fund of Sukkur IBA University, which business students invest in securities and other financial markets as a learning experience. This fund is acting as a passive open-ended mutual fund, where buying or selling, withdrawal or investment, benchmark, and other key decisions mainly depend on investment policy. Students work in groups conducting research and analysis of securities listed in Pakistan Stock Exchange, in line with investment policy and present formal investment recommendations in front of Investment Advisory Committee. This practice allow students to manage portfolio like professional fund managers, instead of a random selection of securities. Fund Manager (usually a senior faculty member) is obligated to prepare report /newsletter of fund performance at the end of semester.

SIBA's student managed fund is basic initiative of Sukkur IBA Financial Trading Lab. Established in Jan 2014. Sukkur IBA Financial Trading Lab is now regarded as first financial lab of Pakistan. The Financial trading room is equipped with trading terminal which simulate and allow live trading of securities listed in Pakistan Stock Exchange (PSX). In addition 12 machines are loaded with Bloomberg Professional Terminal which is a leading investment analysis platform of world. The Bloomberg Professional Services (BPS) available to students at SIBA Financial Trading Lab, competing the resources of professional in industry. Number of investment banks, brokerage houses, investment research firms are getting financial and economic data from BPS (Clifford & Creswell, 2009). It is obvious that member of SMF being expert in operating Bloomberg terminal would have stronger contribution in managing SMF. In this paper we will show how to utilize Bloomberg terminal to professionally manage student managed fund according to provided investment policy. Operating Bloomberg terminal is same like working on Google, where you found a command line and type the needed information to have display. But instead of writing whole sentence or word, Bloomberg require mnemonics (a short, memorable name) to be entered in command line. For example, FA for financial analysis and CN for company news. These mnemonics are called Bloomberg functions, which are unique application in Bloomberg terminal to display required information and analyze on security and markets for decision making. There are thousands of the functions available in Bloomberg terminal, in this paper we will focus on those function which are specifically helpful to students for managing SMF.

2. Literature Review

Literature mostly steams from use of different function of Bloomberg into business school's syllabus or curriculum. Numerous business schools have adopted Bloomberg terminal and integrated syllabus with such technology for hands-on experiences in classroom (Athavale, Edwards, & Kemper, 2016; Schmutz, 2017; Moreale & Zaynutdinova, 2018). Number of scholars have suggested different projects and exercises related to integrate syllabus of finance and economics subjects with Bloomberg terminal. Coe (2007) reported the Bloomberg functions for the subjects including financial management, derivatives analysis, investments and banking, international finance. Moreale and Zaynutdinova (2018) suggested Bloomberg's application in intermediates finance courses. Lei and li (2012) contributed functions for security analysis and portfolio management. Athavale, Edwards, and Kemper, (2016) provided simple exercises on Bloomberg terminal for better understanding of basics

^{1*} Faculty of Management Science, Sukkur IBA University, Sukkur, Sindh, Pakistan, Email: sureshkumar@iba-suk.edu.pk

² Faculty of Management Science, Sukkur IBA University, Sukkur, Sindh, Pakistan

³ Faculty of Management Science, Sukkur IBA University, Sukkur, Sindh, Pakistan

⁴ Faculty of Management Science, Sukkur IBA University, Sukkur, Sindh, Pakistan

of finance, and also elaborated use Bloomberg excel to contribute toward security valuation models. In Jan, 2018 Bloomberg for Education and CFA Institute added new function CFAPRO<Go>, which stated 373 Bloomberg functions to integrate CFA subjects on Bloomberg terminal. But still there has been little research to suggest Bloomberg functions for managing student managed funds.

Ammermann, Runyon, and Conceicao (2011) suggested strategies to SMF for portfolio development. Philips, Volker, and Cockrell (2018) provided guideline for designing student managed fund. Daugherty and Vang (2015) reported, effect of SMF on financial learning of participants by measuring effectiveness of their investment decision in first and last two month of academic years. After reviewing of the literature, we believe the most important contribution of this paper is that it appears to be the first attempt to approach specific Bloomberg functions for managing SMF.

2.1. Investment Policy

One of the objective of SIBA SMF is to reserve and improve the monetary value of underlying assets for incoming classes to manage, that’s why a passive strategy is recommended to manage portfolio, with some constraint. Given following are some key points of investment policy of SIBA SMF;

The funds shall be invested exclusively in Pakistan listed equity and fixed income securities, and open ended mutual funds.

1. For the equity portion of fund, no more than 10% of initial fund amount will be invested in single security, as students should diversify fund investment into different sectors. However students can invest up to 20% of funds in single sector/industry.
2. No investment will be allowed in penny stocks (small capitalization corporations).
3. Short selling in ready market and buying on margin or CFS is not allowed.
4. Future trading is allowed only for hedging the risk by taking an offsetting position in related securities. Other wise trade in futures is not allowed.
5. No trade will be allowed in securities, having less than 100,000 accumulated turnover in last week.
6. The fund prefers value stocks over growth stocks.

2.2. Fund Management

The class split into groups of three to four students to make proposals. Presentation includes; (i) company background, (ii) industry analysis, (iii) financial ratio analysis (i.e. liquidity, profitability, asset and debt management), (iv) stock valuation utilizing price multiples and growth and valuation models, discounted cash flow analysis or relative valuation model, (v) recommended action (hold, buy, sell, stop limits) (vi) recommended holding period and any other material information, (vii) recommended weights in portfolio.

After reviewing all recommendations, members and advisory committee voted upon portfolio adjustment. Decisions to change the existing portfolio require at least 51% vote of the students, professors and all members of funds. The advisory committee have discrete power for ultimate decision of alteration in portfolio. If the advisory committee finalize an investment decision, the fund manager will execute the transaction.

2.3. Uploading portfolio on Bloomberg Terminal

It is one of the key task of fund members to keep eye on their portfolio risk and relative returns on regular basis. Once portfolio has been formed, its value will change with fluctuation in market prices. Members in SMF are required to report portfolio performance at every meeting, normally schedule on weekly basis. Bloomberg offers three main functions; i.e. BBU <Go>, PRTU <Go> and PORT <Go> to perform this task. For uploading the Student Managed Fund one can apply the function BBU<Go> (Bloomberg Uploader). BBU allow users to create your portfolio in Microsoft excel first with required columns of i. Date ii. Volume iii. Security ID iv. Cusip or sedol v. Purchased price vi. Total market value, and then upload same sheet in BPS with the help of BBU function. See figure 01.

Portfolio Name	Security ID	Sedol	Cusip	ISIN	Security Name	Quantity	Drifting Weight	Date	FX Rate	Market Value	
BBG_US_Equity_Portfolio	AAPL US	2046251	037833100	US0378331005	APPLE INC	1000	0.06	364.83	1/3/2019	1	364,830.00
BBG_US_Equity_Portfolio	ABT US	2002395	002824100	US0028241000	ABBOTT LABORATORIES	5000	0.04	52.51	1/3/2019	1	262,550.00
BBG_US_Equity_Portfolio	ADBE US	2008154	00724F101	US00724F1012	ADOBE SYSTEMS INC	5000	0.02	25.24	1/3/2019	1	126,200.00
BBG_US_Equity_Portfolio	APD US	2011602	009158106	US0091581068	AIR PRODUCTS & CHEMICALS INC	3000	0.04	81.87	1/3/2019	1	245,610.00
BBG_US_Equity_Portfolio	BLK US	2494504	09247X101	US09247X1019	BLACKROCK INC	1100	0.03	164.75	1/3/2019	1	181,225.00
BBG_US_Equity_Portfolio	COST US	2701271	22160K105	US22160K1051	COSTCO WHOLESALE CORP	3000	0.03	78.54	1/3/2019	1	235,620.00
BBG_US_Equity_Portfolio	CTXS US	2182553	177376100	US1773761002	CITRIX SYSTEMS INC	2500	0.02	60.43	1/3/2019	1	151,075.00
BBG_US_Equity_Portfolio	CVX US	2838555	166764100	US1667641005	CHEVRON CORP	3000	0.04	96.84	1/3/2019	1	296,520.00
BBG_US_Equity_Portfolio	D US	2542049	25746U109	US25746U1097	DOMINION RESOURCES INCVA	4750	0.03	48.74	1/3/2019	1	231,515.00



Figure: 01: Source: Bloomberg L.P

Secondly you may also perform same task with the help of function PRTU <Go> (Portfolio Administration). PRTU <Go> not only allow you to upload your portfolio but also enable you to alter and manage portfolio. Whenever fund manager purchase or sell any security you may add/subtract in portfolio accordingly. In addition PRTU also allow you to share portfolio with fund members so that everyone can analyze and updated with current risk and returns of investment. You can also set the benchmark i.e. KSE-100 index and analyze portfolio performance against stated benchmark. Refer to figure. 02

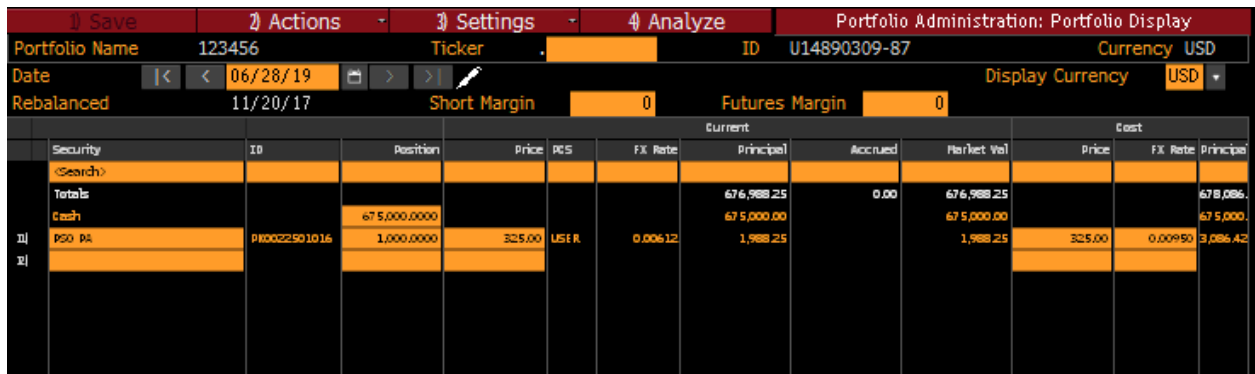


Figure: 02: Source: Bloomberg L.P

3. Managing portfolio with Bloomberg terminal

Finally PORT <Go> (Portfolio and risk analytics) function provides detailed analysis of fund investment in portfolio as a whole. SIBA SMF is sum of holdings in different securities, as the consequence of past transactions of different batches (enrolled students). Apart from past performance of fund, students are more curious about performance of portfolio in their holding period, especially with consideration of transaction they had made in their holding period. The difference in underlying assets of student fund between two adjacent holding periods is consequence of internal and external transaction and corporate actions. Where internal transaction are linked to buy and sell activities of securities, and withdrawals or new investment (supervised by treasurer of SIBA Student managed fund) in student fund are referred as external transaction. Corporate distribution of cash or stock dividend, stock splits, coupon etc. are corporate action. According to Gan (2014), in order to measure performance of a portfolio in a holding period it important to distinguish the effect of external and internal transactions and corporate distribution. This function empowers funds users to analyze fund position and future risk, with intraday and historical fund performance and transaction-based performance. After entering the transaction details through PRTU <Go> function, PORT<Go> have information on all transactions along with corporate distribution. Then Modified Dietz is used to compute return, based on transactions in given period of time; as given below:

$$R = \frac{V^E - V^B - \sum C^i}{V^B + \sum C^i W_i}$$

Where V^E is ending market value, and V^B is beginning market value, of a security. C^i is transaction value and W_i is weight. Athavale, Estep, and Kemper (2016) suggested model on Bloomberg excel to calculate holding period return of portfolio.

Further PORT <Go> function of BPS “provides a comprehensive set of investment portfolio analytics including performance attribution, characteristics, risk, scenario analysis and portfolio construction”. Refer to figure. 03



Figure: 03: Source: Bloomberg L.P

3.1. Security screening in compliance to investment policy

As per investment policy of SIBA Student managed fund should be invested in Pakistani, mid and large cap, value (preferred) securities, having required turnover rate of 100,000 shares in a week. Three main functions of BPS, commonly used by students, for screening are; EQS <Go> (equity screening), FSRC <Go> (Fund Screening), and SRCH <Go> (fixed income search). Detailed as below;

EQS	Equity Screening	For selection of equity securities
FSRC	Fund Screening	For selection of mutual funds
SRCH	Fixed Income search	For selection of fixed income securities

Following Table; 01 and Figure 04 are showing how equity screening functions EQS<Go> of BPS helps in filtering the information.

Table 1

Equity Securities Filters					
Number of Equity Securities universe	Having Active Trading Status	Show primary security of company only	Having Country of domicile- Pakistan	Mid and Large capitalized equities	5 days Turnover greater than 100000
1149217	372882	91702	537	113	54



Figure: 04: Source: Bloomberg L.P

It is important to notice that even EQS<Go> function is able to put on different ratios i.e. price to earnings ratio or price to book ratio etc. to filter growth and value stocks. For example, Fama and French (1998) reported that those firms having high ratios of book-to-market equity (B/M), earning to price (E/P), and cash flow to price (C/P) are value stocks. Rozeff and Zaman (1998) applied ratio of cash flow per share to price per share (CF/P) to separate growth and value stock. But we encourage students to go through, industry (research houses) formal research reports and company news to decide either buy/sell recommendations are made, being a value or growth investment. Commonly ANR <Go> (Analyst recommendation) and CN <Go> (Company News) functions will

allow you to access on formal reports of different research houses. ANR and CN functions are further discussed in security analysis section.

Table 2

Mutual Funds Filters					
Number of Mutual Funds universe	Having Active Market Status	Show primary share class	Fund Type – Open End Funds	Country of domicile Pakistan	Fund Asset class equity focused
900085	383148	134628	98324	145	36

Actions ▾		Fund Screening			
Build/Edit Screen	My Screens	Example Screens			
Universe Criteria					
Classifications	Fund Type	Country of Domicile	Country of Availability		
Portfolio/Worksheets	Currency	Manager Location	Fund Description		
Universe Criteria					
Holdings Classifications	Allocations	Exposure			
Screening Criteria					
Type screening criteria and select from the suggested fields					Fields
Currency conversion not selected					
Selected Screening Criteria					Matches
Universe Criteria					900085
1) Market Status: Active					383148
12) Fund Primary Share Class = Yes					134628
13) Fund Type: Open-End Funds					98324
14) Country of Domicile: Pakistan					145
15) Fund Asset Class Focus: Equity					36

Figure: 05: Source: Bloomberg L.P

Table 3

Fixed Income Securities Filters				
Number of Govt. & Corp. Bonds Universe	Having active security status	Country of incorporation Pakistan	Maturity greater than Jan/01/20	Having Moody's rating in range of Aaa to B3
2541824	427467	118	90	25

Actions ▾		Settings		Fixed Income Search	
Build/Edit Search	My Searches	Example Searches			
Build with Criterion	Build by Merging Saved Searches				
As of 06/25/2019					
1. Select Universe					
1) Asset Classes	Corporates, Governments			2,541,824 securities	
12) Sources	All Securities				
2. Criteria					
Field					
31)	Security Status	Include	Bonds: Active	427,467	
32) And	Country of Incorporation	Include	(Pakistan)	118	
33) And	Maturity	Greater than	01/01/2020	90	
34) And	Moody's Rating	In the range	Aaa – B3	25	
35) And					Fields

Figure: 06: Source: Bloomberg L.P

4. Security Analysis

As elaborated in literature, number of scholars have suggested different projects, exercises, and Bloomberg functions, related to security analysis and portfolio management on Bloomberg terminal. But those exercises and projects are designed to cover textbook and theories. On the contrary, SIBA Student managed fund involve real money. Therefore it opt for formulating investment recommendation like professional research report, based on past and current financial and accounting data of economy, industry, sector and securities. According to Bersin (2012), on average business studies courses are unable to meet finance industry expectations and unable provide those of financial and accounting skills which demand by industry. Being early birds in research and lacking professional skillset. Consequently students at SIBA are encouraged to review professional research reports and back test their facts figures, make addition of other analysis tools in connection with support or decline of professional reports and check their compliance with provided investment policy. Two of frequently used functions, which updated members about current status, are; ANR<Go> -analyst recommendation, and CN<Go> - company news.

Table 4

Company Overview		
DSCO	Company Documents Search	Allow to access fillings and other documents of related firm.
DES	Description	Basic introduction of firm.
DVD	Dividend /Split Summary	Provide access to past distributions of company
MGHL	Management Holdings	Details of stocks holding by management or board members.
OWN	Ownership Summary	Details of institutional holdings of stocks.
RSKC	Company Risk	Access to company risk data.
Company Analysis		
BETA	Historical Beta	Beta Calculations
FA	Financial Analysis	Access to numerous financial ratios
WACC	Weighted Average Cost of Capital	Calculation of weighted average cost of capital
COMP	Comparative Return	used for comparison of security return with benchmark
RV	Relative Valuation	Compare company performance against industry.
RVR	Relative Value ranking	
Economic and Industry Analysis		
ECFC	Economic Forecast	Basic macro-economic forecast
SBPK	State Bank of Pakistan	
BI	Bloomberg Intelligence	Access to research and news about industries and companies.

Source: Authors' Own Compilation

ANR<Go> function is one of those function, which offers access to all research reports of single security, officially contributed by different research houses and verified industry analyst, with recommendations of buy, sell or hold, including target price in stated time period. In addition this function also allow you to set alter to notify you if analyst have change his/her opinion on given recommendation.

CN<Go> (Company News) function allow fund members to stay connected with latest news about the security in consideration. CN<Go> function also allow to set alerts, which notify you through email or mobile messages whenever any material news report updated on terminal.

In addition EVTS<Go> (Event Calendar) function display the detailed schedule of upcoming events (i.e. shareholders' meeting dates, board meeting and earning release dates) in given time period, of related securities. Fund members are provided with event calendar of those securities currently held by portfolio.

Lie and Li (2012) had provided list basic functions of Bloomberg, useful for individual security, industry, and economic analysis. Table. 04 is updated summary of those functions. We would like to add only those function which are useable for SIBA SMF. Even some of those functions are not applicable for Pakistani securities or altered by authorities. Bloomberg L.P regularly updates, alter, remove and introduce new function on their terminal.

5. Conclusion

The support the hypothesis that the use of technology in student managed fund at SIBA, enhance the student's ability to evaluate the data, keeping them updated with industry and security related events, saving lot of time and energy, normally vested in screening and selection of security, helping them in writing their report with exact

facts and figures. This paper has shown some of the applications of Bloomberg terminal that can be efficiently utilized for managing SMF, by having access to resource that professional use for analyses. It is important to notice here that number of functions of Bloomberg terminal available for developed countries (specially related to economic and industry analysis) are not applicable and available for developing economies, like Pakistan, which create some constraints and require students to put additional efforts in gathering the data.

References

- Ammermann, P. A., Runyon, L. R., & Conceicao, R. (2011). A new quantitative approach for the management of a student-managed investment fund. *Managerial Finance*, 37(7), 624-635.
- Ascioglu, A., & Maloney, K. J. (2019). From stock selection to multi-asset investment management: The evolution of a student-managed investment fund. *Managerial Finance*.
- Athavale, M., Edwards, J., & Kemper, K. J. (2016). Bloomberg 201: from Wall Street to university avenue. *Advances in Financial Education*, 34-50.
- Bersin, J. (2012). Growing gap between what business needs and what education provides. Retrieved January, 31, 2016.
- Clifford, S., & Creswell, J. (2009). At Bloomberg, modest strategy to rule the world. *The New York Times*, 14.
- Coe, T. S. (2007). Using the Bloomberg Professional System for finance classes. *Journal of Financial Education*, 48-62.
- Daugherty, M. S., & Vang, D. O. (2015). Using Performance Data to Evaluate Student Learning in a Student Managed Investment Fund. *Journal of Higher Education Theory and practice*, 15(2), 85.
- Fama, E. F., & French, K. R. (1998). Value versus growth: The international evidence. *The journal of finance*, 53(6), 1975-1999.
- Lei, A. Y., & Li, H. (2012). Using Bloomberg Terminals in a security analysis and portfolio management course. *Journal of Economics and Finance Education*, 11(1), 72-92.
- Moreale, J., & Zaynutdinova, G. R. (2018). A Bloomberg Terminal Application in an Intermediate Finance Course.
- Phillips, M., Volker, J., & Cockrell, S. (2019). A student-managed investment fund course design structure. *Managerial Finance*.
- Rozeff, M. S., & Zaman, M. A. (1998). Overreaction and insider trading: Evidence from growth and value portfolios. *The Journal of Finance*, 53(2), 701-716.
- Schmutz, B. P. (2017). Incorporating the Bloomberg Professional Terminal into an introductory finance course. *Journal of Economics and Finance Education*, 16(2), 59-68.
- Yingjin Gan (2014). Bloomberg Transaction-based Performance Measurement and Attribution. Retrieved from Bloomberg L.P white papers.