A Bloomberg Terminal Primer¹

©Nicola Borri Department of Economics and Finance LUISS University Contact email: nborri@luiss.it This version: October 22, 2018

¹This primer is an introduction to Bloomberg mainly designed for undergraduate and master students, as well as practitioners, that have never used a Bloomberg terminal before, and that want to learn quickly the first steps required to start using one. I thank Rob Langrick and participants to various Bloomberg for Education conferences who helped me understand that you never stop learning new and additional Bloomberg functions; Blair Wilkie for her Bloomberg Weekly Tip; and Giorgio di Giorgio who convinced me to publish this primer. Note that I am not affiliated in any ways with Bloomberg, nor I have been in the past. This primer was first prepared as teaching material for my finance classes at LUISS University, Rome.

Contents

1	Introduction	3
2	First steps on Bloomberg	4
	2.1 First time login	4
	2.2 First functions	5
3	Specific Bloomberg functions	19
	3.1 How to look for a specific stock	19
	3.2 How to search the universe of stocks	23
	3.3 How to search the universe of fixed-income securities	23
	3.4 How to search for an ETF	25
	3.5 How to search for a mutual fund	25
	3.6 Searching for Fields	26
	3.7 Plotting Graphs	27
	3.8 Indices	28
	3.9 Credit Risk	29
	3.10 Currency Markets	30
	3.11 Excel Templates	30
	3.12 Miscellaneous Functions	31
	3.13 How to build and manage a financial portfolio	31
4	Using Bloomberg with Excel	35

5 Conclusions

36

1 Introduction

Bloomberg is a platform that provides real-time and historical market data (e.g., stock prices, bond quotes and yields, GDP and unemployment data, news, etc.). According to the New York Times, "Bloomberg is the web that weaves together much of the global financial ecosystem" (April, 17 2015). This primer describes some basic functions that should allow anyone to start using Bloomberg in no time. All the functions illustrated in this primer must be entered in the Bloomberg command line on the top of a typical Bloomberg terminal window, as the one represented in figure 1.





Notes: This image captures a typical Bloomberg Terminal window after login. Users enter functions in the command line, in the upper left part of the window where the light blue square cursor is visible.

A great learning tool is currently available on Bloomberg and it is called the Bloomberg Market Concepts $\langle BMC \rangle$. Reading this primer and taking the Bloomberg BMC will give the reader a great overview of what is possible to achieve using Bloomberg. BMC is a 8-hour self-paced e-learning course that provides an introduction to financial markets. BMC consists of 4 modules (economic indicators, currencies, fixed-income, and equities). At the end of the course, users receive a certificate of completion. Note that you can take the course for free using a Bloomberg terminal. If instead, if you want to take the course on any computer using a web browser, then you will have to pay a fee: at the time this primer was written, the fee was listed at \$149². Once you take the test, you can add your resume to the

 $^{^{2}}$ Note that < BMC > replaced < BESS >, a test used to evaluate users' knowledge after an online tutorial. Also the BAT test is no longer available on Bloomberg.

Bloomberg platform in order to make it available to all the users (and potential employers); or you can add the BMC certificate to your linkedin profile. This shows how Bloomberg can also help users with their job search. For example, < JOBS >, which recently replaced Bloomberg Talent Search (< BTS >), is a function that users and recruiters can use to search and post job vacancies. Potential employers can search users according to many different selection criteria and possibly contact them with job offers. On Bloomberg it is also possible to search for people using the < PEOP > function. The latter is a very useful networking tool when searching for a job. A useful function to use when preparing for an interview is < USER >. By writing < USER > and then < GO >, Bloomberg users will access the users' workflow. For example, you can select a "job" to see what are the functions that Bloomberg users with that particular jobs are more likely to use (for example, the job corresponding with the position you are interviewing for, e.g., stock analyst). Needless to say, make sure you know how to use these functions to look smart during your interview. A last useful feature that you can use to prepare for an interview is < QUICK >, for Bloomberg quick takes. You will find a long list of topics, and by clicking on them you will get "quick" and basic information on all of these. This way you can make sure to be up to date with all the most recent and relevant discussion topics and hopefully ace your job interview. In the next sections, we will cover in detail various Bloomberg functions.

2 First steps on Bloomberg

In this section you will learn the basic Bloomberg functions that will allow you to take the first steps on Bloomberg in order to quickly learn how to use a terminal and enjoy your experience.

2.1 First time login

The first time you use a Bloomberg terminal, you need to create a user account. You will need your cellphone to activate your personal account. Follow the on-screen instructions and you will be soon be able to access Bloomberg. Typically terminals are associated with a specific machine, and you will be able to access Bloomberg only on that specific machine (or on different machines also associated with a Bloomberg subscription). However, if you are lucky enough, you will get a Bloomberg anywhere subscription that lets you connect to Bloomberg using a web browser, or applications on your mobile devices (see figure 2). Note that your Bloomberg account will be linked to the professional email you have used at registration. If you change job or, for example, finish college and start using Bloomberg at





Notes: To access your Bloomberg Anywhere account you will need a biometric authentication. A finger swipe scanner is embedded in the Bloomberg keyboard, and a portable scanner, known as a B-UNIT, allows you to access your account from any location using a computer or mobile device. The B-UNIT, represented in the image, is the size of a credit card.

work, you will will need to start a new Bloomberg registration. Needless to say, a subscription to Bloomberg is expensive and most workplaces and colleges will offer access to a limited number of terminals.

2.2 First functions

This section presents a short list of useful functions that will get you started with Bloomberg. Section 3 presents additional specific functions with examples to understand when and how to use them. If readers have access to a Bloomberg terminal, it is recommended that they try to use each of the following functions while they proceed reading this primer.

Bloomberg is first of all an incredible source of real-time and historical financial (and not only) news. To search for news, type < NI > and a subject title, for example EQUITY, ITALY, etc. Note that the Bloomberg command line works much like the Google search bar using the auto-complete function, providing live suggestions for your search while typing your query. With time, you will learn to use fast commands and shortcuts that suit your needs. For example, suppose you are interested in the main news of the day about the Italian economy, you can type first < NI IT>. Other useful codes that you can add after < NI > are ECB, i.e., news about the European Central Bank including main interest rates; FED, i.e., news about the Federal Reserve; or TOP, i.e., the top news of the day (see figure 3). Note that you can customize the news view: for example, order news by time, relevance, or most

Figure 3: Top News



Notes: The image represents the Bloomberg Terminal window after entering the function < NI TOP >, that loads the top news for the day. The screenshot is from October 11, 2018.

read; select source; etc. For advanced news search you can type < N >, for the news and research menu. Alternatively, you can simply type < NI > for the news categories browser. For example, you can choose management changes (shortcut MGMTCHG) and then CFO changes in the topics menu to read all the news regarding changes in the CFOs in the data range you selected.

Bloomberg is also an amazing resource for charts and summary moves for the major financial indices (e.g., equity, fixed income, commodities, etc.). You can start by using the < GMM > function. This function, which stands for "Global macro movers" is very used on news broadcast and provides and immediate graphical snapshot of different markets in different countries at that moment in time using colors to highlight the performance. Note that you can also set a past date and, for example, look at what markets looked like on the days of some important events (e.g., Brexit referendum, President Trump's election, etc.). In particular, you can also directly select "events" in the menu of the GMM window to get to the GMM window corresponding to some relevant events selected by Bloomberg, or economic releases, etc. Note that the GMM window, represented in figure 4, contains several pages, and it is possible to customize it to your needs.

You can access additional resources on the major financial indices and other financial data using the following functions.

• < WEI >: World equity table. Summary information on the main world equity

Clistic Viewer View Devices	MM - Related Functions Menu *			
a billenebri billequity a	interactor and the state of the			
LLP <go> to Open</go>	in Launchpad			
My Markets	Legend Settir	ngs 🔹	Page 1/3	Global Macro Movers
Movers 🔹 1D	MTD • Events •			
Equity Indices	Forex	Sovereign Bonds	Commodities	Sovereign CDS
Japan Nikkei -3.89% 22590.86 c -915.18	BBG USD Index -0.16% √√√ 1188.55 c -1.88	United Kingdom 2Y -3.5 bp ↑ 0.862	Aluminum SHF -1.52% 14270 c -220	China CDS + 2.73 bp 65.72
S&P 500 -3.29% 2785.68 c -94.66	China Offshore Renm -0.13% √n ^{44,√/1} ↓ 6.9334 +0.0091	China 10Y -3.2 bp ~ 3.578	Copper SHF -0.97% /* 50210 c -490	United Kingdom CDS + 0.03 bp 28.70 c
Canada SPTSX -2.12% 15517.40 c -336.65	Mexico Peso +0.28% √√ ↑19.1022 -0.0527	Japan 30Y -1.5 bp 0.914	Gas 0il -1.18% ~~~~ 730.50 d -8.75	Mexico CDS - 0.18 bp ↑124.31
China CSI 300 -4.80% 3124.11 c -157.48	Canada Dollar +0.14%^ ↑1.3050 -0.0018	Mexico (USD) 5Y -2.2 bp _/^^ ↑ 3.933	Iron Ore SGX -0.83% ⊮ ↓ 69.42 d -0.58	Japan CDS -0.01 bp 23.93 c
U.K. FTSE 100 -1.22%	Japan Yen +0.07% ~~ 〜 ↓ 112.20 -0.08	United States 30Y -1.0 bp ~~√ ↑ 3.337	U.K. Nat Gas - 1.87 % 68.82 d -1.31	Canada CDS + 0.01 bp 26.87 c
Mexico IPC -0.76% 48136.18 c -369.04	China Renminbi NDF -0.06% ,™™™ 6.9405 +0.0045	Canada 5Y +0.0 bp 2.415 c	Brent Crude -1.13% ∽√√ ↑82.15 d -0.94	
Factors to Wate	ch: Pay attention	to the metrics ti	hat matter.	FTW §
	🔊 🛞 🛍 🔲 📔 🕼 🏵 🧠	🗟 🕼 😷 🕢 🖧	2 S 💶 🕁 🐵 🔾 🛯	

Figure 4: Global Macro Movers

Notes: The image represents the Bloomberg Terminal window after entering the function < GMM >, that loads global macro movers. The screenshot is from October 11, 2018.

indices. Note that if you click on the small chart icon next to each index, the corresponding chart will pop up (see figure 5). The small icons provide a snapshot of the last two days as well as intraday movements of the corresponding indices. By clicking on the icons, you can also modify the length of the sample, and edit the graph. Note that you can edit the time-frame of the table. The default window will show the main indices for the Americas, EMEA (i.e., Europe, Middle East and Africa), and Asia/Pacific. For each index, the Bloomberg Terminal window will show the value, the net change, the percentage change, the day/time at which the index has been computed, the year-to-date percentage change in value and the currency adjusted (i.e., local currency) year-to-date percentage change in value. The latter is important when, for example, you compare a European equity index with a U.S. equity index. Since the two indices are originally computed in different currencies, a correct comparison requires to first make sure they are reported in the same currency. You also have the option to add additional information regarding movers, volatility, ratios, and futures. Note also a general color-convention used throughout Bloomberg: numbers in "red" indicate a price below the prior day close price; numbers in "green" a price above the prior day close price. As a general rule, just move the cursor on one of the headers (e.g. Net Chg, %Ytd, etc.) to see a short explanation of the corresponding variable.

• < WB >: Government bond table. Summary information on main world government

Figure 5: World Equity Indices

Citrix Viewer View Devices									/₽60₽♡	Thu 10.12 AM Q 🗿 🎞
UNICREDIT SPA Equity	• WEI •	Related Fi	inctions Menu ×						Message	* 📑 🔅
LLP <go> to Op</go>	en i	n Lau	nchpad					_	_	
News - Settings								World	l Equity	Indices
Standard	Move	rs '	Volatility 🗹	Ratios Fu	utures	Δ Α'	VAT 10D	8Chg	J YTD	- EUR -
1) Americas	RMI	2Day	Value	Net Chg	*Chg	P/E	Est FY1	Est FY2	DvYld	%YtdCur
11) DOW JONES		man man	25598.74	-831.83 -3	.15%	18.16	16.16	14.77	2.17	+7.70%
12) S&P 500	23		2785.68 d	-94.66 -3	.29%	20.14	17.11	15.51	1.89	+8.36%
13) NASDAQ		m	7422.05	-315.97 -4	.08%	45.08	21.77	18.86	1.06	+11.81%
14) S&P/TSX Comp	23		15517.40 d	-336.65 -2		17.06	15.05	13.25	3.02	-4.08%
15) S&P/BMV IPC	23	Comments of the second	48136.18 d	-369.04 -0	.76%	17.11	16.42	14.27	2.16	+4.50%
16) IBOVESPA	23		83679 . 11d	-2408.44 -2	.80%	19.51	12.31	10.08	3.40	+0.45%
2) EMEA		~								
21) Euro Stoxx 50	23	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	3224.74 d	-42.16 -1	29%	15.28	13.33	12.02	3.81	-7.97%
22) FTSE 100	23		7048.70 d	-97.04 -1	36%	15.74	12.67	11.70	4.49	-6.90%
23) CAC 40	23	<u> </u>	5133.86 d	-72.36 -1	39%	16.02	13.68	12.48	3.37	-3.36%
24) DAX	23		11580.65 d	-131.85 -1	13%	13.63	12.53	11.21	3.32	-10.35%
25) IBEX 35	23	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	9034.80 d	-128.10 -1	40%	13.25	11.81	10.92	4.27	-10.05%
26) FTSE MIB	[]	(* ~ .	19448.50 d	-270.54 -1	37%	11.22	10.67	9.27	4.13	-11.00%
27) OMX STKH30	63		1566.30	-28.83 -1	81%	16.59	15.26	14.04	4.33	-6.33%
28) SWISS MKT	23	Γ.	8755.06 d	-137.82 -1	55%	23.38	15.31	13.87	3.42	-4.36%
 Asia/Pacific 		~ ~								
31) NIKKEI	[]		22590.86 d	-915.18 -3	.89%	16.33	15.90	14.24	1.80	+3.58%
32) HANG SENG	23		25265.83 d	-927.24 -3	.54%	9.64	10.47	9.43	3.96	-12.43%
33) CSI 300	63	<u> </u>	3124.11 d	-157.48 -4	.80%	11.57	10.68	9.26	2.56	-24.29%
34) S&P/ASX 200		m	5883.76	-166.05 -2	.74%	16.19	14.81	14.15	4.46	-8.37%
Stay ahead of	f Hui	rlcan	e Michael	L.					HU	IRR ₿
		1	1	s 🗊 🏦 🕇 🕢) 🛈 🚭	© S 🛙	I 🚬 🥪 💿		 , Ű	

Notes: The image represents the Bloomberg Terminal window after entering the function < WEI >, that loads world equity indices. The screenshot is from October 11, 2018.

bond indices. Note that if you click on the charts under the "yield" column, the corresponding charts will appear. Recall that there is an inverse relationship between bond prices and yields. You can edit the time-frame of the table. From the default window, you can click on the spreads or curves tab to obtain data on, respectively, yield spreads and the term structure of interest rates. For the spread, you can choose the term of reference (i.e., the benchmark, like Germany for the Eurozone as represented in figure 6). Note that Bloomberg additionally reports the historical data rage, with low, high and average values over a given period of time (the default range is 3 months).

- < EMEQ >: Emerging market equities. This table is similar to the one obtained with < WEI >, but it refers specifically to emerging market equity indices.
- < GLCO >: Global commodity prices. This function provides an overview for energy, metals, agriculture, and more in general commodity prices. It works very similarly to
 < WEI > and < WB >, and also reports information on aggregate volume.
- < WCR >: World currency rates. The default currency is the USD. You can edit the default currency and the basket of currency considered and look at daily spot quotes and percentage changes at 1-day, 5-day, 1-month, 3-month, and 6-month.
- < VCCY >: Crypto currency monitors. This function provides an overview of cryptcurrency prices (see figure 7). Bloomberg by default reports the spot prices of

Figure 6: World Bonds

Citrix Viewer View Devices											■/♀ⓒ⇒♀	> Thu 10:16 AM	Q 🖸 📼
VINICREDIT SPA Equity	, ·	• WB • Rela	ted Function	ons Menu	*						Messag	e ★ 🖬	: 🌣 <mark>?</mark>
									Se	e what's	5 New In	wB <g< td=""><td>$0 > \times$</td></g<>	$0 > \times$
Degional			Evene	-	Cottin					Mar	d Dond	Maril	
Regional		070	Expo	n.	Settin	gs •				wor	и вопи	Mark	ets
90 Bonds 92 Spre	eads	93) Cu	rves					11/-6-10			2 March	_	
Maturity 10 Year	-	Sett	Gern	any	Connerd	"CD (D-)		Historical D	ata Range	A	3 Month	S V	DCT
Region		Υld	Spa	Cng	Spread	#SD/Day	/ Low	Range	пign	Avg	+/-	#50	RSI
1) Americas		2 1 5 4	DEE 1	. 4 0			246 5	Avg Now	270.6		10.0	2.0	FO 0
10) United States	\sim	3.134	205.1	+4.0	~~~~	0.0	240.5		270.0	255.0	11.0	2.0	56.6
1) Canada	\sim	2.552	202.9	+5.0		0.7	177.0		207.2	191.4	26.2	1./	37.0
12) Brazit (USD)	\simeq	3.392	052.6	++.0		0.2	776.0		1020.7	333.1	-20.2	-0.9	29.0
13) Argentina (USD)	~	4 560	405.0	+3.7			770.0 280 E		400.9	204 5	03.7	1 5	55.5
	-	4.502	403.2			0	580.5		109.8	390.5	2.7	1.5	52.2
2) EffEA		1 669	116 E	-0.7		-0.1	95.2		117 2	00.0	16 7	17	70.3
20) Officed Kingdoff	ž	0.962	25.0	-0.7		-0.1	272		26.4	22.2	2 9	1.7	54 1
	-	0.502	55.7			0.,	27.5		50.4		5.6	1./	54.1
23) Italy		3 557	305.4	+10.6		0.4	211 5		305.4		50.3	2 1	50.0
24) Spain	ž	1 613	111 0	+5.5		0.9	89.8		113.8	102.4	8.6	14	51 3
25) Portugal	ě	1 963	146.0	+6.1		0.0	127.7		158.3	141 2	4.8	0.7	50.5
26) Sweden	ě	0.692	18.0	+3.0		1.5	7.8		18.9	13.0	5.9	2.7	50.0
20) Netherlands	ě	0.613	11.0	+0.6		0.8	8.1		11.8	9.7	14	1.7	54.7
28) Switzerland	ě	0.035	-46.8	+3.4		1.9	-54.0		-46.0		3.1	1.7	47.7
29) Greece	ě	4.462	395.9	+10.1		0.5	338.2		413.5	368.6	27.3	1.3	63.4
3) Asia / Pacific							00012		12010	00010	2,10	110	0011
30) Japan		0.136	-36.7	+4.4		0.8	3 -42.8	_	-21.7			-0.9	43.3
31) Australia	ă	2.726	222.3	+2.7		0.5	213.8		233.3		0.2		52.4
32) New Zealand	ě	2,604	210.1	+1.1	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	0.1	201.7		251.4		-13.1	-1.1	45.4
33) South Korea	ě	2.336	183.3	+0.4									
34) China	0	3.578	307.5	+1.7	->. M	0.2	2 298.2		333.1		-9.4	-1.1	34.6
													A A
Screen on t	he	facto	rs tha	at ma	itter.						WA	C	Ş
				0 📧 🙆		- h 🛤 (1 and
	70			- <u>•</u>		V 💷 于 🤇			$\sim \sim \sim$			E	

Notes: The image represents the Bloomberg Terminal window after entering the function < WB >, that loads world bond indices, and choosing the tab "spreads". The screenshot is from October 11, 2018.

bitcoin, ripple, ethereum, and litecoin in U.S. dollars, together with the prices of futures on bitcoin. Note that from this window you can also have access to intra-day and historical prices.





Notes: The image represents the Bloomberg Terminal window after entering the function < VCCY >, that loads the crypto currency monitor. The screenshot is from October 11, 2018.

• < WIRP >: World interest rate predictor. It provides interest rate probabilities, at different dates and for different countries, based on futures market. For example, in figure 8 we reports the window corresponding to the U.S. as of October 10, 2018. Bloomberg reports interest rate hike and cut probabilities, along as the probabilities that the interest rates lie in different intervals. At the bottom of the window, Bloomberg additionally reports the time-series evolution of these probabilities, in order to get a quick snapshot of possible changes in the monetary policy cycles.

Citrix Viewer View Devices									8 / ♀ ⊚ ⇒ ⊽	🗢 Thu 1106 AN 🤉 🗿 🎞
VS Recession Pr	ob Forecast Index	• WIRP • Rel	ated Functio	ns Menu ×					Messa	ge ★* 📭 🌣 <mark>?</mark> *
99) Export I	Data	-				FCC	wor	ld Interes	st Rate P	robability
United States		Instrum	ient 📕	utures: Fe	ea Funas	- Effec	tive 💌	Fed ET	ective R	ate 2.18
1) Overview	2) Future	Implied Pro	Dability		2) 4 4	(D	- Datas			
Dates		Colculation		C=	3) Add	/ Remov	e Rates	Based or	rate 20	0-2.25
Meeting	Hike Prob	Cut Prob	2-2.25	2 25-2 5	25-275	2 75-3	3-3 25 3	25-353	5-3 75	Ewd Rate
11/08/2018	2.0%	0.0%	98.0%	2.25 2.5	0.0%	0.0%	0.0%	0.08	0.08	2 19
12/19/2018	72.2%	0.0%	27.8%	70.7%	1.5%	0.0%	0.0%	0.0%	0.0%	2.37
01/30/2019	73.8%	0.0%	26.2%	68.2%	5.5%	0.1%	0.0%	0.0%	0.0%	2.38
03/20/2019	90.6%	0.0%	9.4%	41.3%	45.6%	3.6%	0.1%	0.0%	0.0%	2.54
05/01/2019	91.4%	0.0%	8.6%	38.7%	45.3%	7.0%	0.3%	0.0%	0.0%	2.57
06/19/2019	96.1%	0.0%	3.9%	22.1%	41.6%	28.1%	4.0%	0.2%	0.0%	2.71
07/31/2019	96.4%	0.0%	3.6%	20.9%	40.4%	29 . 0%	5.6%	0.4%	0.0%	2.72
09/18/2019	97.7%	0.0%	2.3%	14.8%	33.5%	33.0%	13.9%	2.3%	0.2%	2.81
10/30/2019	97.8%	0.0%	2.2%	14.0%	32.2%	33.1%	15.2%	3.0%	0.3%	2.83
	Analysis fo	or Meeting	11/08/2	018 🗸	4) Add/Re	emove S	ieries 🔹			
			~	+ 1md	2 Avrotate		Probability of Itika Probability of No Change	2.0 (2-2.25) 98.0		
				m	10		Probability of Cut	~ ~		
				~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	min	m	m			
				~~~	m	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	M	"Um		
				~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	m	m	$\sim$	m		
Nay Jun Ju	N Aug 2017	Sep Oct	Nov	Dec Jan	Feb	Har Apr	Hay 2018	hi ni	Aq	See Oct
				Histori	cal Date					
Stay ahea	ad of Hur	ricane M	lichae	<b>.</b>						URR§
			200			-		13		440 Barris
	3 💋 🔍 🖳	11	1 (BE) 👝 🗉	S 🛃 📊 🗂		© S X	TEX (INC.)			

Figure 8: World Interest Rate Predictor

Notes: The image represents the Bloomberg Terminal window after entering the function < WIRP >, that loads the world interest rate predictor. The screenshot is from October 11, 2018.

- < FTW >: Factors to watch. It reveals which factors have historically or are currently moving equity returns across market segments. This function will enable you to assess key factor exposures for a single security; track relevant factor performance; and monitor active returns (see figure 9).
- < ILBE >: World inflation breakeven rates. ILBE displays breakeven inflation data. Breakeven rates are the difference between an inflation-index bond and a regular bond. Standard maturity is 10-year. Therefore, for a rate of inflation equal to the breakeven rate, the investor should be indifferent between the nominal and the inflation-linked security. Therefore, ILBE provides market-based (i.e., risk-neutral) estimates of inflation expectations. Inflation-indexed bonds (also known as inflationlinked bonds or colloquially as linkers) are bonds where the principal is indexed to

Figure 9:	Factors	to	Watch
-----------	---------	----	-------

Citrix Viewer View Devices	This - Dalated Europtions Manuel M					. /	Maccada	Thu 147 PM Q Q III
Tor s change index	DANK 404200						Hessage	: 🛪 📭 🖓 <mark>:</mark>
LPFT 37553 I	PAN:486292							
United States	Settings					F	actors to	o Watch
Quantile Spreadr	Rura Eactor Returns							
Quantité Spréada								
Sector All Sectors	View Monitor	Return N	et Long-Si	nort (Q1-Q5)%				
Style	Name	1D Ret	1W Ret	Prior Month	YTD Ret	1Y Ret	7Y Ret	15Y Ret
Curated	<filter></filter>							
1) Dividends	Dividend Yield (Indicated)	1.70%	5.48%	0.44%	-3.73%	-10.18%	-8.03%	-21.86%
2) Value	PORT US Value	1.65%	5.73%	-0.22%	-12.04%	-18.22%	12.46%	138.82%
3) Profitability	PORT US Profit	0.86%	3.59%	1.38%	-3.87%	-3.16%	3.42%	69.96%
<ol> <li>Leverage</li> </ol>	PORT US Leverage	0.78%	3.00%	1.04%	-6.66%	-12.87%	-5.98%	-17.02%
5) Share Buybacks	1Y Share Buyback	0.73%	2.29%	1.76%	-1.53%	0.63%	22.79%	70.82%
6) Growth	5Y Actual Sales Growth	0.18%	-1.37%	-2.02%	-0.47%	0.76%	-22.45%	-15.71%
7) Short Interest	SI Days to Cover	0.06%	-0.16%	-1.12%	4.96%	1.35%	-6.81%	-31.75%
8) Size	PORT US Size	-0.06%	1.85%	2.16%	-5.69%	-6.37%	0.21%	-1.45%
9) Dispersion	Sales Dispersion (FY1)	-0.15%	-0.34%	-0.05%	-6.52%	-9.71%	-44.75%	-59.54%
10) Revisions	3M EPS Revision % (FY1)	-0.31%	-0.36%	-0.85%	0.75%	1.14%	40.04%	113.63%
11) Technicals	14D RSI	-0.32%	-0.36%	1.83%	-6.03%	-0.98%	-35.52%	-52.75%
12) Surprises	EPS Surprise % (Last)	-0.48%	-1.07%	-0.07%	0.23%	0.24%	17.86%	41.94%
13) Tax Rate	Effective Tax Rate (LTM)	-0.52%	-1.94%	0.95%	0.03%	5.40%	11.35%	36.47%
14) Sentiment	Sell Side Expected Return	-0.60%	-3.71%	-1.81%	0.15%	-0.57%	26.71%	89.32%
15) Growth	1Y Fwd EPS Growth (FY) %	-0.76%	0.08%	0.78%	4.42%	3.76%	56.92%	44.70%
16) Revisions	3M Target Price Change %	-1.05%	-2.05%	0.51%	7.86%	14.09%	39.08%	103.25%
17) Momentum	PORT US Momentum	-1.81%	-3.79%	-1.18%	1.75%	8.73%	40.67%	16.03%
18) Volatility	1M Volatility	-1.94%	-5.75%	-1.18%	-4.48%	6.01%	-20.27%	-57.50%
Net long-short retur	n (Q1-Q5) is negative when b	ottom 20%	stocks bas	sed on factor w	alues (Q5	) outperfor	m top 20%	5 (Q1).
Sector Performation	ance: Dividend Yield (Indicate	d)   View 9	Securities			Cumulati	ve P	eriodic
				300) Edit	Panel	301)	Expand	Panel
361 TWT 13:43	Nikkei Asian Revie	w: Sind	apore	shares po	st stee	epest s	inale-c	lav dec
360 TWT 13.43	Marco Rubio: As th	e sun r	ises o	n NW #Flo	rida th	e early	/ repor	ts I a
250 PN 12.43		Peoie	1303 0			l libeet	, lepoi	10
559 BN 15:45	0.3. Cash Prices &	CBASIS	101 00	in, soybe	ans and	meat	. <del>oe</del> t.	10
Functions fo	or the Market: Action	nable ir	nsights	& functio	on kno	wledge	. E	FMŝ
	2 🗊 📾 📾 📹 💕 🐼 🙈 1	R 🗹 🖣		<u>° 🔊 😪 🖬 🖻</u>				
								A DESCRIPTION OF THE OWNER

Notes: The image represents the Bloomberg Terminal window after entering the function < FTW >, that loads the factors to watch. The screenshot is from October 11, 2018.

inflation. Figure 10 reports the largest and smallest breakevens for all countries as of October 10, 2018. Note that breakeven rates can also be computed using swaps or forward rates.

Figure 10:	World	Inflation	Breakeven	Rates
------------	-------	-----------	-----------	-------

Citeta Viewer View Davices	📕 🖊 🕲 🤑 (j) 🖓 ⊕ (⊂) Thu 350 PM (Q) 🔘 📼
Comparison of the second se	Message ★ 🗔 🌣 ?
We	orld Inflation Breakeven Rates
Breakevens Inflation Monitor Inflation Indices	
Term All   Country/Region All   Type Nomina	l Bond v Inflation Bond 🛛 🔽
Period Now    Pricing Status Actives	
Largest Breakevens	
1) South Africa Breakeven 20 Year	6.99
2) South Africa Breakeven 15 Year	6.87
3) South Africa Breakeven 10 Year	6.48
4) Greece Generic Inflation Break	6.00
5) South Africa Breakeven 5 Year	5.81
6) Brazil Breakeven 10 Year	5.44
7) Brazil Breakeven 40 Year	5.37
8) Brazil Breakeven 30 Year	5.35
Smallest Breakevens	
77) Italy Breakeven 5 Year	1.11
78) Italy Breakeven 4 Year	1.07
79) US Breakeven 1 Year	0.98
80) Italy Breakeven 2 Year	0.71
81) Japan Breakeven 7 Year	0.49
82) Japan Breakeven 10 Year	0.49
83) Japan Breakeven 5 Year	0.49
84) Japan Breakeven 6 Year	0.47
Factors to Watch: Pay attention to the metrics that matte	r. FTW 🕯

Notes: The image represents the Bloomberg Terminal window after entering the function < ILBE >, for world inflation breakeven rates. The screenshot is from October 11, 2018.

• < BETA >: historical beta. This function estimates the beta of a security, for example a stock, with respect to another stock (i.e., the aggregate market in the CAPM spirit). The function is highly customizable and returns various statistics to gauge the significance of the regression estimate. Figure 11 reports the market beta for the Apple stock. The period of analysis is 10/11/2016 to 10/11/2018 at weekly frequency, and the "market" is the S&P 500 Index. In this case, the raw beta is 0.988 and the  $R^2$  approximately 22%.

· · · · · · · · · · · · · · · · · · ·	Figure	11:	Market	Beta
---------------------------------------	--------	-----	--------	------

Citrite Viewer View Devices		/0.⊈ © 🐨 + 🗢 Thu 458 PM 0, 0 📼
APPLE INC Equity • BETA • Related Functions Menu *		Message ★ 🖓 🌣 ?
AAPI 115 \$ 1,216,96 +0.60	216.97P 4	~1
4 6 At 16:40 d Vol 17 120 021 0 214 520 H 219 50/2		
ADD US Foreitre Deletive Index SDY Index - 00 Actions	T) Edit	Historical Bata
AAPL USE Drive Index Drive Index Drive Provide Address Provide		Historicat Beta
Last Price Data Last Price Wity Clinear Deta	Winsorize	Std Dev Local
6M YTD 1Y 2Y 5Y Max Weekly V	Z Statistics // Tra	ansformations
Company + Track & Amontania Q. Zoon & Select B Carp	$\mathbf{Y} = \mathbf{APPIFINC}$	
24 • Y = 0.988 X = 0.375 •	X = S&P 500 INDEX	
12	Linear Beta	Range 1
	Raw BETA	0.988
	Adjusted BETA	0.992
	ALPHA (Intercept)	0.375
	R^2 (Correlation^2)	0.219
	R (Correlation)	• 0.468
	Std Dev of Error	2.773
	Std Error of ALPHA	0.279
	Std Error of BEIA	0.186
	t-lest	5.319
	Last T-Value	-0.000
	Last P-Value	-0.020
	Number of Points	103
2000 20 20 20 20 20 20 20 20 20 20 20 20	Last Spread	• 2661.28
	Last Ratio	• 0.078
***		
2020 Tender (2016) - 201701		
Whether debute a the stack menders whether sources		
what's driving the stock market right now?		
== 🛂 🚓 🜮 🖉 🔄 🛍 💼 💼 🔛 🎭 🥽 🖦 🕵 🛸 📬 👘 🗰 🕰 🏟 Si 🖬 🔚 😓 🤅	15X ( ) WE ( ) 🛑 🚬 –	

Notes: The image represents the Bloomberg Terminal window after entering first the function < APPL US Equity >, for the Apple stock ticker, and then the function < BETA >, for the historical market beta. The screenshot is from October 11, 2018.

- < BI >: Business intelligence. For example, type first < APPL US Equity > and then < BI INDUSTRY > to access reports from Bloomberg analysts for that particularly industry. As another example, type the function < BI OUTLG > to access the global outlooks developed by the Bloomberg Intelligence Unit.
- < BMAP >: Bloomberg commodity map: plots the world map, and identify reserves of different commodities (e.g. oil, gold, etc.), mines, vessel routes, etc. For example, in figure 12 we reports the Bloomberg commodity map and identify locations of refineries.
- < CCRV >: Commodity curve analysis. This function, applied to a commodity (e.g., Brent crude), returns the curve based on futures for different maturity dates. It



#### Figure 12: Bloomberg Commodity Map

Notes: The image represents the Bloomberg Terminal window after entering the function < BMAP >, that loads the Bloomberg commodity map. The screenshot is from October 11, 2018.

is also possible to super-impose on the same plot past curves to analyze the changes in expectations regarding the commodity prices.

- < GC3D >: Type this function to graph 3D curves (for example, yield or swap curves). The 3D plot will show the tenor (i.e., 1M, 3M, etc.), the rate, and the corresponding date. In this way, you can immediately visualize recent changes in the yield curves with different maturity.
- < OVME >: Option valuation. This function is for equity, and a similar function exists for currencies. If you type this function, a window will appear with all the typical inputs from the Black-Scholes formula. You can play with the parameters, and see how the option price changes (see figure 13). This is a also a great educational tool to test your understanding of the formula.
- < TAYL >: Taylor rule model. This is the classic Taylor rule for monetary policy. Pick a country (e.g., the United States), and immediately check the implied interest rate that the central bank should set to be consistent with the rule (see figure 14). You can easily modify and customize the rule, and change the data range. As for the function < OVME > discussed above, also < TAYL > is a great educational tool. Use it to test your understanding of this famous model of monetary policy. For the United States, Bloomberg reports the Taylor estimate along the current FED rate,

#### Figure 13: Option Valuation



Notes: The image represents the Bloomberg Terminal window after entering first the function < OVME >, for option valuation. The screenshot is from October 11, 2018.

and the time series of the difference between these two series. Note that in figure 14, the difference is highlighted in red to denote that interest rates should be higher than those actually set by the FED according to the rule. Finally, note how in the bottom of the Bloomberg window the formula for the Taylor rule is displayed. By changing the values of the formula parameters you can easily modify the rule according to your priors.

Bloomberg is also a great resource for economic statistics for different countries and markets. The following functions will give you access to different economic indicators.

• < EC0 >: Economic data releases for the week, by region. A great function to start with is < EC0 >, which loads the economic calendars, i.e., the economic releases for a given day, like CPI, GDP, new housing starts, etc. You can edit the time-frame, the country/region, and, by clicking on each economic release, you can get more information, including charts and related news. A very useful piece of information, for each news release, is its expected value coming from a survey of experts. According to the efficient market hypothesis, market prices should be affected only by *new* information, and not by the simple release of information that is already public (i.e., all available information is already incorporated in market prices). Therefore, the difference between the actual value of a given release, and its expected value, can be interpreted





Notes: The image represents the Bloomberg Terminal window after entering first the function < TAYL >, for the Taylor rule model. The screenshot is from October 11, 2018.

as a *news shock*. News shocks should affect market prices. For example, you can try selecting one economic release (say, the "adjusted retail and food services sales"), and by clicking on it you will be able to read the release time, the forecasted value by a sample of experts, the values from prior releases, together with a plot of the historical time-series of the actual index and the corresponding survey values. For each economic release, the default Bloomberg window (reported in figure 15) has information on the day/time, an indicator or relevance, the name of the economic release, the period, the survey value, the actual value, the prior value, and the revised value. Note that you can listen/watch live the release of the economic information when available.

- < ECST >: World economic statistics. Start by selecting the country, or region, then select the statistics you are interested in. As for the functions described above, you will get news and general information on the selected statistics, and a chart. The default window reports information on the main components of GDP, i.e., consumption, public and private investment, imports and exports for the current and previous quarter.
- < ECOW >: Economic Data Watch. For each country, the default window reports data on GDP, inflation, the labor market, the housing market, consumer confidence, etc. It is possible to choose among many different indicators as reported in figure 16 (e.g., national accounts (default), labor market, housing market, etc.). Data are for

Figure	15:	Economic	Calendars
--------	-----	----------	-----------

Cliffy Viewer View Dryces     SUNICREDIT SPA Fourity FECO Related Functions Menu 8					Message	Thu 10:38 AM Q 0 ==				
Contened to A requiry Leo Realed Fanelons Hend					nessage	· · ·				
9 (GD) to Save as Default										
1) Calendars • 2) Alerts 3) Export • 4) Settings • Economic Calendars										
United States 6) Browse	10:34:38		1	0/11/18	□ - 10/	18/18				
Economic Releases All Economic Re	eleases		Vi	ew • Age	nda 🔍 We	ekly A				
Date Time A M R Event		Period	Surv(M)	Actual	Prior	Revised				
21) 10/11 14:30 A CPI MoM		Sep	0.2%		0.2%					
22) 10/11 14:30 · CPI Ex Food and	d Energy MoM	Sep	0.2%		0.1%					
23) 10/11 14:30 · CPI YoY		Sep	2.4%		2.7%					
24) 10/11 14:30  CPI Ex Food and	d Energy YoY	Sep	2.3%		2.2%					
25) 10/11 14:30 - CPI Index NSA		Sep	252.697		252.146					
26) 10/11 14:30  CPI Core Index	SA	Sep	258.629		258.141					
27) 10/11 14:30 - Real Avg Weekl	y Earnings YoY	Sep			0.5%					
28) 10/11 14:30 - Real Avg Hourly	y Earning YoY	Sep			0.2%					
29) 10/11 14:30 🔹 🔺 Initial Jobless	Claims	Oct 6	207k		207k					
30) 10/11 14:30 🔹 🔺 Continuing Clair	ms l	Sep 29	1660k		1650k					
31) 10/11 15:45 🔹 🔺 Bloomberg Con	sumer Comfort	0ct 7			61.6					
32) 10/11 15:45 Bloomberg Oct.	United States E	conom	ic Survey							
33) 10/11-10/18 Monthly Budget	Statement	Sep	\$75 <b>.</b> 0b		\$7 <b>.</b> 9b					
34) 10/12 14:30 Import Price In	dex MoM	Sep	0.2%		-0.6%					
35) 10/12 14:30 - Import Price In	ndex ex Petro	Sep	-0.1%		-0.2%					
36) 10/12 14:30 - Import Price In	ndex YoY	Sep	3.1%		3.7%					
37) 10/12 14:30 Export Price In	dex MoM	Sep	0.2%		-0.1%					
38) 10/12 14:30 Export Price In	dex YoY	Sep	2.9%		3.6%					
39) 10/12 16:00 June 10. of Mich. Sent	iment	Oct P	100.5		100.1					
Stay ahead of Hurricane Michae	l				ΗL	JRR				
	8 🗊 🚠 🚏 🕢 🦉	5 @ <mark>\$</mark>	🚺 🔛 🥪 🐼							

Notes: The image represents the Bloomberg Terminal window after entering the function < ECO >, that loads the economic calendars. The screenshot is from October 11, 2018.

the last four quarters.

1) Charts 2) Export - Econor	mic Data	<b></b>						
D Charts 2) Export - Econor	mic Data							
Country, United Clotes		Watch						
Country officed states								
National Accounts Leading Indicator Components O	)3 18	04 18						
I Draducer Prices Housing Market Jul	Aug Sep	Oct						
11) B National Labor Market								
12) Real GDP ( Economic Activity Personal Sector								
13) Real GDP ( NBER Business Cycle Indicators External Sector								
10 Personal C Business Conditions Government Sector								
14) Personal C 15) Privata Inv Fed Sr. Loan Officer Survey Monetary Sector								
16 Gov/t Spen Leading Indicators Financial Sector								
17) Change in Inventories (USD 16.1 30.3								
18) Nominal GDP (USD bn) 19832 20041 20412								
19) Nominal GDP (yoy %) 4.5 4.6 5.4								
20) GDP Price Deflator (qog %, 2.5 2.0 3.0								
22) B Consumer Prices								
2) Consumer Price Index (yoy 2.0 2.2 2.1 2.1 2.2 2.4 2.5 2.8 2.9 2.9	2.7							
24) CPI ex-Food & Energy (yoy 1.8 1.7 1.8 1.8 1.8 1.8 2.1 2.1 2.2 2.3 2.4	2.2							
	~ ~							
2) PLE Price Index (yoy %) 1.7 1.9 1.8 1.8 1.9 2.1 2.0 2.3 2.3 2.3 (you want the second seco	2.2							
20) COLE PLE HIDEX (909 6) 1.6 1.6 1.6 1.6 1.7 2.0 1.7 2.0 2.0 2.0	2.0							
Screen on the factors that matter. WATCH								

Figure 16: Economic Data Watch

Notes: The image represents the Bloomberg Terminal window after entering the function < ECOW >, that loads the economic data watch. The screenshot is from October 11, 2018.

• < ECFC >: Economic Forecasts. This function returns, for different countries, the

forecasts of several key macroeconomic variables (i.e., GDP and its components, price indices, etc.), along the data for previous years. As reported in figure 17, actual data are reported in amber color, and forecasts in white. It is possible to choose whether to report private or official data, and the frequency (i.e., yearly, or quarterly). Note that the window also reports the probability of recession within 12 months. This probability is computed as median survey value. If you click on the corresponding value (i.e., 15% for the U.S. as of October 10, 2018), you can access additional information as the individual probabilities expressed by different contributors, along with mean and Bloomberg weighted average value (see figure 18).

Figure 17: Economic Forecasts

Clerk Viewer View Devices	od Eunctions M	tonu X								10.57 AM Q 🔵 📼
V ONICKEDIT SPA Equity · ECFC · Relati	eu Functions r								riessage	K La ₩ r
2										
								Econo	mie Fe	
90 Chart 97) Set as D		ew	Con	tributor	Compo	cito				lecasts
Lipited States	Brows		Drivat		Officia	SI Select or enter to char	ge contributor.		ιy Ο Q	uartert
officed States	BIOWS	Δ.	tual / F	orecast	c	Pro	ability	of Rece	accion	15 0%
Indicator	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Economic Activity	2011	LOIL	2010	2011	2010	2010	201/	2010	2017	2020
Real GDP (YoY%)	1.6	2.2	1.8	2.5	2.9	1.6	2.2	2.9	2.5	1.9
- Consumer Spending (	1.9	1.5	1.5	2.9	3.7	2.7	2.5	2.6	2.5	2.1
- Government Spending.	-3.1	-2.1	-2.4	-0.9	1.9	1.4	-0.1	1.6	1.9	1.2
Private Investment (	6.6	11.0	6.9	5.4	4.8	-1.3	4.8	5.8	4.4	3.0
- Exports (YoY%)	7.1	3.4	3.6	4.3	0.6	-0.1	3.0	4.5	3.1	3.4
Imports (YoY%)	5.6	2.7	1.5	5.1	5.5	1.9	4.6	4.3	3.5	3.3
Industrial Production (Yo	3.1	3.0	2.0	3.1	-1.0	-1.9	1.6	3.7	2.7	2.1
Price Indices										
CPI (YoY%)	3.2	2.1	1.5	1.6	0.1	1.3	2.1	2.5	2.3	2.3
PCE Price Index (YoY%)							1.7	2.1	2.1	2.1
└ Core PCE (yoy%)	1.6	1.9	1.5	1.6	1.3	1.7	1.6	1.9	2.1	2.2
➡ 50) News Headlines   NSE	»									
51) Bloomberg Consensus	Global F	late For	ecasts	as of Oo	ct. 9 (Ta	able)			BN	10/09
52) Bloomberg Consensus	Global R	late For	ecasts	as of Od	ct. 9 (Ta	able)			BN	10/09
53) U.S. Federal Reserve's	6 Econom	nic Proj	ections	(Table)	)				BN	09/26
54) Median Economic Proje	ections c	of the F	ederal F	Reserve	Board	(Table)			BN	09/26
55) Median Long-Run Fed	Funds Ra	ate Expe	ected at	: 3% (Ta	ble)			_	BN	09/26
What time of the year	r is bes	st to s	ell VO	D? A	PPS S	EASO	N <go< td=""><td>$\geq$</td><td>AP</td><td>PS 🕯</td></go<>	$\geq$	AP	PS 🕯
	1 19 18 6		🐔 🚮 🖀	<b>(7) (1) (4)</b>	9 💿 Ⴝ 🗴	I 🗋 🌧 (				
								-		Statement Street and

Notes: The image represents the Bloomberg Terminal window after entering the function < ECFC >, that loads the economic forecasts. The screenshot is from October 11, 2018.

A very useful Bloomberg function when analyzing a given company or industry is < SPLC >, or supply chain analysis. Suppose you have to prepare a report on a given company, say Fiat Chrysler Automobiles (< FCAU US Equity >). A first step could be to type < SPLC > to access the supply chain analysis for this company. This means that you can immediately visualize the suppliers, the customers, and its competitors. By clicking on any supplier, or competitor, or customer, you can access further information, and the supply chain graph for this additional company. In figure 19 we report the supply chain analysis for the Fiat Chrysler group. The figure lists the main suppliers, customers, and competitors. Note that by clicking on the name of, for example, a supplier, we can access its supply chain and we continue this process to have a deep understanding of the market.



Figure 18: Probability of Recession

Notes: The image represents the Bloomberg Terminal window for the U.S. recession probability forecast index (< ECRPUS 1Y >). The screenshot is from October 11, 2018.



Figure 19: Supply Chain Analysis

Notes: The image represents the Bloomberg Terminal window after entering first the ticker < FCAU US Equity > and the function < SPLC >, that loads the supply chain analysis. The screenshot is from October 11, 2018.

Finally, when working with Bloomberg becomes a routine, it is very useful to use "Launchpad". Launchpad is a customizable display consisting of a number of smaller windows, called components, each dedicated to permanently displaying one set of data. It is very convenient to set and customize your **Launchpad**. To start launchpad use the function < BLP >. To start a given terminal window in launchpad, use the function < LLP >. When you will start Bloomberg, a series of different windows (that you have previously selected) will immediately pop-up and perfectly fit your monitor, or monitors. A standard launchpad would contain selected news, world equity indices, currency markets, and global macro movers.

# **3** Specific Bloomberg functions

The previous section presented a group of functions that can get you started with Bloomberg. This section presents additional functions and provides details and examples on how to use them.

#### 3.1 How to look for a specific stock

Suppose you have in mind a company, say Apple, and you want information about this company. You can start by entering the company's name in the command line. The autocomplete will help you with your search. In the list that will appear, select the company you are looking for under the heading "securities." After you hit < GO >, the Apple company page will appear, and at top left, you will see the ticker, or security identifier. Normally the ticker is a 3 character abbreviation, followed by a 2-digit location indicator. However, the ticker can also have more than 3 characters. For example, for Apple is APPL US, A further interesting example is Alphabet's ticker, which is GOOG. Alphabet is a particularly interesting example. It was created through a corporate restructuring of Google on October 2, 2015. Note also that, in April 2014, the Google stock split in two categories: Google class C shares, with ticker GOOG; and Google class A shares, with ticker GOOGL. Both stocks are traded in the market. GOOG shares have no voting rights, while GOOGL shares have one vote each. Before the stock split, all Google shares had voting rights. To make things even more fun, there exist Google class B shares, but they are not traded in public markets. Each of the class B shares gives the right to ten votes. These shares are usually held by Google insiders. In the main ticker page (see figure 20), just click on one of the options to get the corresponding information. Note that the main ticker window also reports information on price and volume, and currency of denomination.

The main options (i.e., functions) are:

• < DES >: provides a brief description of the company, the market capitalization, top management, 1-year return, etc. Note that in this window you can access a Bloomberg Intelligence Primer on the company, and have a quick snapshot of the fundamentals,

#### Figure 20: Apple Inc Equity



Notes: The image represents the Bloomberg Terminal window after entering the ticker < APPL US Equity >, that loads the Apple Inc. ticker page. The screenshot is from October 11, 2018.

including a price chart for the last year. The window also provides different tabs: issue info, ratios, revenue and EPS, and industry info. Additionally, it provides information on the names of the top managers, and by clicking any of the names you can have immediate access to their bios. The company description window for Apple is reported in figure 21.

- < CN >: provides news for the company. Note that you can narrow the news search using the box on the top of the page.
- < GP >: provides the price chart of the stock. You can edit the time-frame, add benchmark indices or stocks, change the currency. Note that, at the bottom of the window, Bloomberg reports also a volume bar graph (see figure 22 for the graph plot for the Apple stock). You can edit the graph using the options under the "edit tab". However, it is recommended to first save the graph, under the "actions" tab, before editing. In fact, some of the edit options are available only for saved graphs. Once the graph is saved, it can be accessed at a later date, or shared with other Bloomberg users.
- < GPL >: provides the price chart of the stock on a logarithmic scale. You can edit the time-frame, add benchmark indices or stocks, etc. This is particularly useful for longer time-series, and/or for assets whose value has changed a lot during the selected

#### Figure 21: Apple Inc Equity (Security Description)



Notes: The image represents the Bloomberg Terminal window after entering first the ticker < APPL US Equity >, that loads the Apple Inc. ticker page, and then the function < DES >, for security description. The screenshot is from October 11, 2018.



Figure 22: Apple Inc Equity (Graph Plot)

Notes: The image represents the Bloomberg Terminal window after entering first the ticker < APPL US Equity >, that loads the Apple Inc. ticker page, and then the function < GP >, for graph plot. The screenshot is from October 11, 2018.

time-frame. It is based on orders of magnitude, rather than a standard linear scale, so the value represented by each equidistant mark on the scale is the value at the previous mark multiplied by a constant. < RV >: provides a comparison table with peers: this includes share price, market capitalization, revenue growth, ownership, credit, etc. Note that it is possible to compare the whole company, as well as segments of the company. The information provided by the < RV > is curated by Bloomberg Intelligence. Figure 23 reports this information for the Apple stock.



Figure 23: Apple Inc Equity (Relative Valuation)

Notes: The image represents the Bloomberg Terminal window after entering first the ticker < APPL US Equity >, that loads the Apple Inc. ticker page, and then the function < RV >, for relative valuation. The screenshot is from October 11, 2018.

- < DVD >: provides dividend information, like payment dates, ratios, etc.
- < FA >: provides a financial analysis table with balance sheet information. Note that the default window provides the key statistics. It is also possible to load income and balance sheet statements, as well as cash flow templates and company ratios. Balance sheets can be reported either "as reported", or "adjusted", i.e., in a standardized format that makes it easier comparison with peers.
- < GF >: provides a graph of financial fundamentals (note: you can choose the variables you like).
- < HDS >: it provides information on the security ownership, with a list of the major shareholders.
- < PHDC >: provides the custom ownership search (for example, you can look at transactions of insiders).

- < MGMT >: provides information on the company management, including bios of the top management.
- < EVT >: provides a list of upcoming reporting dates.

Note that these *are not* the only options available. By clicking on each of the main group functions (i.e., company overview, company analysis, etc.), additional available functions will show up. We leave it to the curiosity of the readers to explore these additional functions.

#### 3.2 How to search the universe of stocks

In the previous section we learned how to search for a specific stock by simply typing the stock name, for example the Apple stock, in the Bloomberg command line. Suppose now that you are instead interested in searching for a security (or a set of securities) that satisfies some criteria of your choice: e.g., it is traded in the U.S. market, the currency is the USD, and it belongs to the energy sector. You can select more stringent criteria: e.g., the security price-to-earning ratio must be below some threshold value, etc. On Bloomberg you can use the function  $\leq$  SECF >, or security finder (see figure 24); or the function  $\leq$  EQS >, or equity screening (see figure 25). The use of both functions is similar: you are required to input the selection criteria. With < EQS > you can easily add customized search criteria. The output of the functions is the list of securities that match your criteria. Suppose now that you have found a list of securities that match your searching criteria. You can easily export the list to Excel by dragging the Excel icon from the top right of the Bloomberg window on an Excel file (note: the Excel drag-and-drop feature is common to many other Bloomberg terminal windows), or by using the "export" tab. Note that with < EQS >, you start with the entire universe of active and inactive securities available on Bloomberg (at the time this primer was written, 1,034,149). By selecting more stringent criteria, you restrict the available set of securities. For example, if you want to consider only the actively traded securities, the number drops to 334,576. To add criteria, you can simply enter a description in the "add criteria" field, or search for available fields.

#### 3.3 How to search the universe of fixed-income securities

Suppose you are interested in searching for a fixed income security, rather than an equity security. The function  $\langle$  SRCH  $\rangle$ , or fixed income search, is the equivalent of  $\langle$  EQS  $\rangle$  for bonds. Note that by default Bloomberg searches among the universe of *active securities*, which at the time this primer was written was equal to 404,100 securities. This is most of the time the right choice if you are, for example, a trader looking for a security to buy or

#### Figure 24: Security Finder

Citrix Viewer View Devices			B / Q ♥ () 🖓 + 🗢 Thu 150 PM () Q 🗰
YoY % Change Index • SECF •	Related Functions Menu      *		Message ★ 🗔 🌣 ?
Sorting is not	available for large results se	ts.	
<search></search>	98) Export *	1-22 of 1000+ resul	lts Security Finder
Category All Securitie			.0
category pattered file			to the second se
Security	Description	Category	Sub-Category
			Security Finder Sub-Chappy
1) IBM US Equity	International Business Machines Corp (U.S.)	Equities	Stocks Hight-dick for more options.
2) T Govt	United States Treasury Note/Bond (Multiple Ma	aFixed Income	Government Bonds
3) SPX Index	S&P 500 Index	Index/Stats	Equity Index
4) TSLA US Equity	Tesla Inc (U.S.)	Equities	Stocks
5) TLRY US Equity	Tilray Inc Class 2 (U.S.)	Equities	Stocks
6) USGG10YR Index	US Generic Govt 10 Year Yield	Index/Stats	Miscellaneous Indices
7) BTPS Govt	Italy Buoni Poliennali Del Tesoro (Multiple Mat	Fixed Income	Government Bonds
8) EUR Curncy	Euro United States Dollar Spot	Currencies	Spot and Cross Rates
9) GE US Equity	General Electric Co (U.S.)	Equities	Stocks
10) EURUSD Curncy	Euro / United States Dollar Cross	Currencies	Spot and Cross Rates
11) CT10 Govt	Current United States 10 Year Government Not	e Fixed Income	Government Bonds
12) AAPL US Equity	Apple Inc (U.S.)	Equities	Stocks
13) AMZN US Equity	Amazon.com Inc (U.S.)	Equities	Stocks
14) FB US Equity	Facebook Inc Class A (U.S.)	Equities	Stocks
15) INDU Index	Dow Jones Industrial Average	Index/Stats	Equity Index
16) JPY Curncy	Japanese Yen Spot	Currencies	Spot and Cross Rates
17) CL1 Comdty	Generic 1st Crude Oil, WTI	Commodities	Energy Commodity Securities
18) BABA US Equity	Alibaba Group Holding Ltd (U.S.) - Depositary.	Equities	Stocks
19) XAU Curncy	Gold United States Dollar Spot	Currencies	Spot and Cross Rates
20) GNR Mtge	Government National Mortgage Association (Mu	Mortgages	Commercial Mortgage Backed
21) SX5E Index	EURO STOXX 50 Price EUR	Index/Stats	Equity Index
22) GBP Curncy	British Pound United States Dollar Spot	Currencies	Spot and Cross Rates
		300) Edit Panel	. 301) Expand Panel
404 HAA 13:46 S	outh Africa confirms Saudi int	erest in state	arms firm
403 TWT 13:46 R	euters Business: Delta profit	beats on strong	) demand, higher tick
402 TWT 13:46 R	euters Business: Mounting cost	s add to worrie	s about 2019 U.S. pr
What time of t	he year is best to sell VOD? Al	PPS SEASON	
🗾 🖉 🗞 🖓 🗾	) 🛍 📁 💕 🖏 🛞 🥽 🗮 🜠 🏥 🚏 🕖 🥯 🥸	2 (S' 💵 🗀 🥪 🐵 🔵 🛛	I 💿 💼 🔚 🖏 🖏 🖏 🛃 🖤

Notes: The image represents the Bloomberg Terminal window after entering the function < SECF >, that loads the security finder. The screenshot is from October 11, 2018.

Citrix Viewer View Devices			B /0 ♥ © ₽ ÷ ♡ Thuisophi Q 0 III
50 11 12 13 14 PERT BLD BURG GAAR DUTT DUTT BURT			• · · _
1 (CON for Result		a last unsaved screen	
97) Formula	B) Actions · 99) Back	test	Fauity Screening
My Recent Screens			As Of 10/11/2018
11) west_eu_insurance	Screening Criteria		
20)All Saved Screens	II) Exchanges	Sectors     Sectors     Sectors	More Categories
	Add Criteria		the categories
Popular Screens			3) Fields
22)High CDS Spreads			
23) Insider Buyers			
24) Quality Screen		uitouio	Matalaa
26) Value Screen	Selected Screening C	птепа	1034149
30) More Screens	51) Trading Status: A	ctive	334576 .
		es: Show Primary Security of com	pany only 71268 •
	ss) Add screening crit	teria	
			<ol> <li>See Results   WATC »</li> </ol>
		300) Edit	Panel 301) Expand Panel
406 BFW 13:47 Net	tflix Analysts Exp	pect Rebound for Subsc	riber Trends Next Week
405 BFW 13:47 FV	CBankcorp Rated Ne	ew Outperform at Raymo	nd James; PT \$22
404 HAA 13:46 Sou	Ith Airica coniirn	ns Saudi interest in s	tate arms firm
Browse, save and wa	tv: atch the day's top data	visualizations.	GTV
	a 🖬 📽 👧 🙈 🔜 🚮 .		R 🔿 🖬 🦳 🥅 🔚 📰 📼 📼 🖷 🖤 🔤

Figure 25: Equity Screening

Notes: The image represents the Bloomberg Terminal window after entering the function < EQS >, that loads the equity screening. The screenshot is from October 11, 2018.

sell. However, suppose you are a researcher and you are interested in building a sample that goes back in time. For example, you want to look at the behavior of all the bonds issued by the Republic of Italy in the last twenty years. Clearly, many of these bonds have matured and are not active anymore and by using the option "active" you would build a sample that suffers from *selection bias*. You can include these bonds in your search by removing the option "active", in the search criteria. In this case, the number of securities increases to 2,406,323. Note that including in your sample "inactive" assets is often useful in order to avoid a *sample selection bias*. For example, if you need to analyze the performance of all the NYSE listed stocks in the last 20 years and you do not include stocks of companies that have gone out of business you will most likely over-estimate the performance of the NYSE equity market. Note that you can build and edit existing searches, and load previously saved searches.

#### **3.4** How to search for an ETF

An exchange-traded fund (ETF) is an investment fund traded on stock exchanges, much like stocks. Most ETFs track an index, such as a stock index or bond index. ETFs may be attractive as investments because of their low costs, tax efficiency, and stock-like features. To search for an ETF, just use the < ETF > function to access the ETF library (see figure 26). You can search ETFs for asset class, exchange, strategy, etc. The function works similarly to < EQS > and < SRCH >. Note that you can choose among different tabs to display the ETFs: key metrics, cost, performance, flow, liquidity, allocations, and regulatory structure. The default window displays key metrics, and includes 30-day volatility, class and fund assets value, year-to-day return and flows, and number of holdings in portfolio.

#### 3.5 How to search for a mutual fund

A mutual fund is a professionally managed investment fund that pools money from many investors to purchase securities. These investors may be retail or institutional in nature. Much like stocks and fixed-income securities, it is very easy to search for a mutual fund on Bloomberg. Simply type < FSRC >, for Fund Screening. You will be able to enter different selection criteria (i.e., fund type, country of availability, etc.) to select the funds in which you are interested (see figure 27). At the time of this writing, the universe of funds is equal to 841,479, while active funds are 373,998. The standard universe criteria are: classifications; fund type; country of domicile; country of availability; portfolio/monitor; currency; manager location; fund description; holdings classifications; allocations; and exposure.

Figure 26: ETF search

Citrix Viewer View Device	×11									<b>8 / 0</b> V 6		Q 🔿 🎞
YoY % Change	Index • E	TF • Related	Functions Menu ♥								Message 🛧 🗔	¢* <mark>?*</mark>
Action	s •	Ex	port 🔹	Settinas					Exch	ange Ti	raded Fur	nds
Unnamed Se	arch											
Fund Type: /	All × As	set Class:	Equity × Exch	ange: Italy ×			😣 A	ggregate		1W \	YTD	1Y
							E	low (USD	) 41.3	22M -306.	.64162	.41M
					1)	Select	Criteria 🗧	low/Asse	ts +.	47% -3.	49% -1	.85%
43 matching	, funds,	54 match	ing tickers						_			
Key Metrics	Cost	Perfor	mance Flow	Liquidity	Allocatio	ns	Regulatory	Structure				
ncker		30D VOL	(MLN USD)	(MLN USD)	Return	YID	(MLN USD)	Yield	# of Holdings	Share	Listing	y 1
Median		1.30k	21.07	27.44	-1.10%		.00	+3.27%	161			
11) EQQQ	IM	13.47k	2,520.03	2,631.56	+17.53%		+243.97	+.56%	103		N	
12) ETFMIB	IM	579.17k	550.18	550.18	-7.28%		-223.78	+3.74%	40	Y	N	
13) ITAMID	IM	22.54k	403.47	403.47	-11.46%	_	-252.51		60	Y	N	
14) APEX	IM	1.33k	366.27	366.27	-11.61%		+15.79		951	Y	N	
15) HLTW	IM	964.67	359.46	577.73	+15.39%		+82.06		137	Y	N	
16) TNOW	IM	961.00	208.64	268.29	+14.79%	_	+68.72		175	Y	N	
17) LEVMIB	IM	712.33k	156.31	156.31			-185.30	+8.85%		Y	N	
18) EUFM	IM	3.90k	113.25	113.25			+107.58		683	Y.	N	
19) WLDX	IM	12.93	106.17	105.81	+7.38%		-3.40		1,390	¥.	N	
20) XBRMIB	IM	1.89M	105.64	105.64	+4.97%		-40.12			Ľ.	N	
2D ENERW	IM	459.50	75.32	126.24	+11.25%		-81.24		81	Y	N	
22) BERMIB	IM	131.09k	74.75	/4./5	+3.196		+35.08	5	276	, Y	N	
23) INDGW	IM	1.20K	51.11	61.30	+1.49%		-19.05		2/0	<u>.</u>	N	
24) DXJZ	IM	369./3	46.65	245.38	-1.87%		+18.24		507	N	N	
25) FINSW	IMI	147.63	44.48	63.98	-1.10*		-14.06		247	Y .	N	-
ETF LIST ACTI	ons: 2	screen ETF	S   FSRC »	3) Build	Scoring M			± D	search for	Thestor	s   15 ×	- 1
	10.50					3	UU) Edi	t Pan	ei 301	) Exp	and Pan	eı
661 APW	13:58	Indor	nesian Cit	y's Recov	ery to	э та	ke 2 Ye	ars,	Search	Nears	End	
660 APW	13:58	Israe	el Says It	: Destroye	ed a Ha	amas	Tunnel	Stre	tching	From (	Gaza	
659 BI	13:58	Best	of BI Res	search - A	America	as M	orning	Note				
Eunetic	ne fo	r the l	Market: A	ctionable	insia	hte	& funct	ion k	owled	ae		7 ŝ
Function		i ule i	Market: A	cuonable	maig	111.5	a runci		lowied	ge.		Πŝ
	R 🖉 🚺		🗂 💕 🚯 🌑	🗎 🔜 🗹 , 🕯 🗂		2 <b>9</b> @	S [°] x I h	^) 📾 🍋				
												1

Notes: The image represents the Bloomberg Terminal window after entering the function < ETF >, that loads the ETF search window. The screenshot is from October 11, 2018.

Figure 27: Fund search

Finder File Edit View Go Window Hep     VoV 9 Chaptro Indov - ECDC - Dalated E	unctions Monu X		B / 0 ♥ ⊕ ⊋ ⊕ ♡ Thu305FM 0, 0 ☎ Maccado, As Dis As 23
Tor s change muex - Forc - Related F	anctions Piena V		Piessage 🕷 La 👽 r
1 (CON for results	94 (CO) to clea	ar criteria	
98) Actions			Fund Screening
Universe Criteria			
1) Classifications	S) Fund Type	S) Country of Domicile	Country of Availability
S) Portfolio/Monitor	S Currency	S) Manager Location	S) Fund Description
Universe Criteria			
9) Holdings Classifications	(i) Allocations	61) Exposure	
Screening Criteria			
<type a<="" criteria="" screening="" td=""><td>nd select from the sug</td><td>gested fields&gt;</td><td>2) Fields</td></type>	nd select from the sug	gested fields>	2) Fields
%) Currency conversion not sele	cted		
Selected Screening Criteria			Matches
Universe Criteria			841479
12) Fund Brimany Share Class	Vec		3/3998
12) Fund Frinnary Share class -	- Tes		199694
%) Results sorted by Total Return	n Ytd and limited to 50	000	1) Results
91) Build/Edit Screen 92) My Screens	93) Example Screens		
		300) Edit	Panel 301) Expand Panel
367 BN 15:02 Oceane	ering Reader In	nterest Jumps; Stock	Declined 6.1%
366 BN 15:02 Titan	International R	Reader Interest Surge	es; Stock Dropped 2.2%
365 AGN 15:02 Union	data reveals co	ost of living pressur	e
Charts Featured on TV:			сти
Browse, save and watch	the day's top data v	isualizations.	GIV
	I 🔄 🖏 🏵 🥽 🖬 🚺 🖬	I T 🕖 🙂 🕾 🖼 S 💶 🖆 🥪	▩ੑੑੑੑੑੑੑ , , , , , , , , , , , , , , , ,

Notes: The image represents the Bloomberg Terminal window after entering the function < FSRC >, that loads the fund search window. The screenshot is from October 11, 2018.

### 3.6 Searching for Fields

A very useful function for someone starting to use Bloomberg is < FLDS >, which opens the Data Field Finder. Insert or look for a security in which are interested, and then just enter

key words related to the field of your interest. Bloomberg will show a list of available fields and you have the option to select those you like. By clicking on a specific field Bloomberg will show you a short definition. Browsing through the data field finder is a great way to learn what kind of information you can find on Bloomberg.

### 3.7 Plotting Graphs

Suppose you selected the Fiat Chrysler Automobiles ticker FCA IM and then entered  $\langle$  GP > to plot the historical graph. It is good practice to save the graph, because in this way you have access to different options that are not otherwise available. In figure 28 we report the graph plot for the period 10/11/2017 to 10/11/2018 and click on the "key events" options. Blue flags denote the key events, and if you scroll with your mouse on each flag, you can get information on that particular event. For example, in the figure a key event on 7/25/2018 in which FCA missed the EBIT target in the second quarter and shares fell 4.1% is highlighted. Alternatively, you can open the chart content options on the graph as



Figure 28: Graph and Key Events

Notes: The image represents the Bloomberg Terminal window after entering first the ticker < FCA IM Equity >, that loads the FCA group ticker page, and then the function < GP >, for graph plot and select the key events option. The screenshot is from October 11, 2018.

it is shown in figure 29 which considers again the FCA ticker for a longer period that starts 10/11/2015 and ends 10/11/2018. In this case, you can add a security, field, study, or event. The figure considers the example in which the event "CEO" and "dividends" are added. Flags denote the events. In the sample, we can see that the CEO of FCA changed after

the unexpected death of Sergio Marchionne. Different background colors denote the time in which the different CEOs are in charge. The list of additional events that can be taken into consideration includes debt offerings, dividends, stock buybacks, or even transactions involving insiders (e.g., top management, existing large shareholders, etc.).



Figure 29: Graph and Content Options

Notes: The image represents the Bloomberg Terminal window after entering first the ticker < FCA IM Equity >, that loads the FCA group ticker page, and then the function < GP >, for graph plot and open the chart content options. The screenshot is from October 11, 2018.

#### 3.8 Indices

If you are interested in an index, say the Dow Jones Industrial Average, you are probably also interested in knowing its components, and the corresponding weights. A useful function is  $\langle \text{MEMB} \rangle$ , that provides the components of an index. For example, if you type  $\langle \text{INDU Index} \rangle$  and then  $\langle \text{GO} \rangle$ , and then  $\langle \text{MEMB} \rangle$  and  $\langle \text{GO} \rangle$  you will see the components of the Dow index: their tickers, names, and index weights. A good exercise is to compare the weights of the DJ Industrial Average with those in the S&P 500 index. Obviously, the S&P 500 index has many more members (the Dow has only 30 members). But the more interesting difference is that, while the DJ Industrial Average is a *price-weighted* index, the S&P 500 index is a *market capitalization weighted* index. The value of the Dow is not a weighted arithmetic mean and does not represent its component companies' market capitalization, but rather the sum of the price of one share of stock for each component stocks has a stock

split or stock dividend, so as to generate a consistent value for the index. If you want to replicate the Dow, you can drag and drop the tickers and the weights on an excel file, and then download historical data on the different components. Note that weights change over time.

Citrix Viewer View	Davices		<b>u</b> / 0	🖞 🕼 🖓 👋 🔿 Тързатем 🔍 🔕 📼					
<u>0</u> 0 0 0 0	PERST BEEZ MEMB SEARE COULD DOOL MONT BEES ROC MEMB 2554 2570								
	C 25508 74 _831 83	25406 17/255	283 83						
	10 Oct 0 26441 72 H 26441 72 H	25-60.17/252	00.74						
H 0H 10 UCT 0 26441.73 H 26441.73 L 25593.65 Prev 25598.74									
INDU Index Display Output Alert Member									
Dow Jones	s Industrial Average	30 Members		Currency LCL					
Members	Historical Summary								
3) Stats (	Group by None		4) Fields As of 10/1	1/2018 🛱 😂 名					
Ticker	Name	Weight (%)∗↓	Shares	Price					
11) BA	UN Boeing Co/The	9.733480	1.000000	367.4700					
12) UNH	UN UnitedHealth Group Inc	6.968416	1.000000	263.0800					
13) AAPL	UW Apple Inc	5.730905	1.000000	216.3600					
14) GS	UN Goldman Sachs Group Inc/The	5.691968	1.000000	214.8900					
15) MMM	UN 3M Co	5.354513	1.000000	202.1500					
16) HD	UN Home Depot Inc/The	5.130691	1.000000	193.7000					
17) MCD	UN McDonald's Corp	4.459754	1.000000	168.3700					
18) CAT	UN Caterpillar Inc	3.806830	1.000000	143.7200					
19) IBM	UN International Business Machines	. 3.779547	1.000000	142.6900					
20) JNJ	UN Johnson & Johnson	3.648167	1.000000	137.7300					
21) V	UN Visa Inc	3.589630	1.000000	135.5200					
22) UTX	UN United Technologies Corp	3.473083	1.000000	131.1200					
23) TRV	UN Travelers Cos Inc/The	3.394944	1.000000	128.1700					
24) CVX	UN Chevron Corp	3.247407	1.000000	122.6000					
25) DIS	UN Walt Disney Co/The	2.989416	1.000000	112.8600					
26) JPM	UN JPMorgan Chase & Co	2.952597	1.000000	111.4700					
27) MSFT	UW Microsoft Corp	2.811947	1.000000	106.1600					
28) AXP	UN American Express Co	2.743344	1.000000	103.5700					
29) WMT	UN Walmart Inc	2.536474	1.000000	95.7600					
30) XOM	UN Exxon Mobil Corp	2.238751	1.000000	84.5200					
31) PG	UN Procter & Gamble Co/The	2.157168	1.000000	81.4400					
5) Analyz	ze List *Index Weight (%) Calculated by Blo	oomberg							
Facto	rs to Watch: Pay attention to the	e metrics that ma	tter.	FTW 🕯					
	2 🖉 🔄 🔟 🗂 💕 🛤 🏵 🖨 🤜 🚮 🕇 🥑	🔍 🗳 🔯 S 🖬 🖿 🥪 👳	0 🖬 🔕 🚍 🚽 🖓						

Figure 30: Member Weightings

Notes: The image represents the Bloomberg Terminal window after entering first the ticker < INDU Index >, that loads the Dow Jones Industrial Average Index, and then the function < MEMB >, that provides information on the member weightings. The screenshot is from October 11, 2018.

#### 3.9 Credit Risk

In Bloomberg you can find plenty of important data to measure credit risk. If you are interested in credit default swaps (CDS), just type  $\langle$  CDX  $\rangle$  for the CDS index monitor. Recall that a credit default swap is a financial swap agreement in which the seller of the CDS will compensate the buyer in the event of a debt default (by the debtor) or other credit event. For credit ratings, you can type  $\langle$  CSDR  $\rangle$ , for sovereign ratings. Figure 31 reports sovereign ratings for the Eurozone. You can easily customize the set of countries of interest. Note that for each country, Bloomberg reports by default the ratings on foreign currency long-term debt, and foreign currency short-term debt. Emerging countries typically issue debt in their own, local, currency. By selecting the local currency option, Bloomberg displays ratings on local currency long-term debt, and local currency short-term debt. Note that by clicking on one of the ratings, we have access to the historical ratings

with the dates of rating changes.

Citric Viewer View Davices	Index • CSDR •	- Related Func	tions Menu ^a	*				8 /	o∵⊙⇒⊘⇒ Message n	useine 0,0 ≕ k* ⊑; ¢*??
										5
Euro Zone		- 1)	Settings	5				So\	/ereign F	latings
Foreign Currency	Local	Currency	Ign	ore Watch		Highlight	changes in	last 🛛 💈	20 busine	ss days.
	Fo	reign Curre	ency Long	Term	Fore	eign Curre	ncy Short	Term		
Country	Moody's	S&P	Fitch	R&1	Moody's	S&P	Fitch	R&I	Last	Update
21) Estenia	A1	0.0	0.0	ND	ND	0.1.	<b>E4</b> .	ND	MM/DD/	
20 Estonia	AL	AA-	AA-	NK	NR	A-1+	F1+	NR	10/0	05/2018
		A BBB	A-	A-	NIC	A-1	E L	NIC	09/2	21/2018
23) Cyprus		DDD-			ND	A-3		NIR	09/	14/2018
25) Spain	Baa1	A-11		A-	D-2	A-211	E1	ND	09/	$\frac{10}{2018}$
26) Finland	A-1	A-4			ND	A-20	E1+	ND	08/1	27/2018
20) Italy	Baa? *-	BBBU	BBB	BBB+	(P)P-2	A-211	E2	NP	06/	25/2018
28) Portugal	Ba1	BBB=11	BBB	BBB-	NR	A=31	E2	NR	06/	11/2018
20) Belgium	423		AA-		NR	A-1+11	F1+	NR	04/	16/2018
30) Germany	Aaa	AAAu	AAA	AAA	NR	A-1+11	F1+	NR	03/	12/2018
31) Slovenia	Baa1	A+	A-	A-	NR	A-1	F1	NR	03/	12/2018
32) Lithuania	A3	A	A-	NR	P-2	A-1	F1	NR	03/0	02/2018
33) Ireland	A2	A+	A+	A	P-1	A-1	F1+	a-1	02/0	05/2018
(Rating: Up, Down, N	lo Change, Ini	tial, Affirm	nation (R&	I Only))						
10) Pating Nowa   NEW	16									
10 Kating News   New	aded to B- by	y Fitch							REW	10.39
1) Zambia Downgr	aded to B- D	icit Targot		oro Ficcal P	icke				ETT	10/10
12) Therefore Ratings. T	nde Fall ac Fi	tch Cute Pa	ting Furth	ore inscat R	15K5				BN	15:30
14) Zambia Eurobor	nds Fall as Fit	tch Cuts Ra	ting Furth	er Into Jun	k(1)				BN	15:30 +
		ten euto ne	ing run	ier into sun						
										DEÂ
Stay on top o	or econor	nic nev	vs and	comme	entary.					<b>B</b>
										600
📰 🖳 🐼 🐨 🧭 📓		🍋 🏵 🚱	🖏 🚺 🖉	7 🕖 🔍 🛃	7 🕑 S 🛛 🗏	E 💎 🖭			0 0 0	

Figure 31: Sovereign Ratings

Notes: The image represents the Bloomberg Terminal window after entering the function < CSDR >, for sovereign ratings. The screenshot is from October 11, 2018.

#### 3.10 Currency Markets

In Bloomberg there are many functions related to currency market mechanics. Some of these are the following. < ECTR > displays trade flows. < FXCA > is a currency conversion calculator. < PEG > provides a list of currency with a peg exchange rate. Note that a fixed exchange rate, sometimes called a pegged exchange rate, is a type of exchange rate regime in which a currency's value is fixed against either the value of another single currency to a basket of other currencies or to another measure of value, such as gold. < WIRA > reports the international reserves of different countries. Finally, < FXC > displays the currency matrix (i.e., how many units of currency in row are required to buy 1 unit of currency in column).

#### 3.11 Excel Templates

A very useful function is < XLTP >: the Excel Template Library. By entering this function and then < GO >, you will have access to several Excel templates that perform various tasks. First, you might find the template that suits your needs among the many available. Second, and more importantly, by studying the templates, and the Excel macros

behind them, you will learn how to combine Excel and Bloomberg, and how to build your own template.

### 3.12 Miscellaneous Functions

This section presents additional useful functions. As usual, it is recommended to try each of these functions on a Bloomberg terminal.

- < MRUL >: Creates rules for Bloomberg email and messaging service. This function is very useful to forward, for example, Bloomberg emails to a different accounts (e.g. gmail, yahoo, etc.).
- < GRAB >: to send by email an attachment.
- < HELP >: Type the function followed by the topic you need help with. Through this function, you can also access various short video tutorials.
- < HDSK >: This function opens the help desk. You can type your query, and almost immediately a Bloomberg assistant will help you find the answer. Note that Bloomberg offers live assistance 24/7.
- < MAIN >: This general function provides a list of the main functions you can use.
- < USER ENHANCE>: This function provides a list of the new features and improvements of Bloomberg. You can search within different asset classes (i.e., fixed-income, equity, mobile, etc.), job roles, area (i.e., buy-side or sell-side). You can also set alerts to be always up to date with new functions introduced to Bloomberg.

### 3.13 How to build and manage a financial portfolio

A great feature in Bloomberg is the management of a financial portfolio. Once a portfolio is properly saved in Bloomberg, it is very easy to monitor its performance, evaluate its risk, and test it under different scenarios. In addition, you can create a link between the portfolio and Bloomberg alerts, check relevant corporate news pertaining your portfolio, and you can also add the portfolio to the Launchpad for real-time monitoring. In particular, some of the main available features, distinguished according to the relevant time-horizon (i.e., past, present and future), are:

#### 1. past

• backtesting

- performance attribution
- historical performance
- historical risk

#### 2. present

- real time profits and losses (P&L)
- portfolio news and alerts
- excel and pdf reporting

#### 3. future

- tracking error
- value-at-risk
- scenario analysis
- trade simulation
- forward looking risk

In Bloomberg there exist different solutions to enter and save a portfolio:

1. The standard starting point is the function < PRTU >, which stands for portfolio administration and is a "holding-based system", based on positions in different securities rather than transactions. Under this function, you can create your portfolio by entering the various components: i.e., quantity of cash and different securities and the corresponding dates (see figure 32). For each security, you will be typically asked the quantity (e.g., the number of shares you own) and the purchasing price. Alternative options let you insert weights, as opposed to number of shares. In order to add a security to your portfolio, you can enter the ticker, or the ISIN number in case you know it, or just the security's name waiting for the auto-complete to help you find the right ticker. Note that if you enter cash, you must enter the currency in place of the identifier, and remember that the cash quantity entered is multiplied by Bloomberg by 1,000 (i.e., if you enter \$1,000 it means \$1 million). Finally, note that if you enter securities by weights, rather than using the number of shares, you have the option to use "drifting weights", which vary over time to keep the relative market cap of a given security in your portfolio constant. This could be, for example, particularly useful if you are building a hypothetical portfolio that you plan to use as benchmark. For example, you can build a 60/40 portfolio, and use traded ETFs in place of market indices if these are not available (or if your Bloomberg subscription does not contain all indices) to track the performance of a benchmark portfolio investing 60% in stocks and 40% in bonds. By using *drifting weights* you can be sure that your portfolio will maintain, over time, the desired 60/40 ratio. The example portfolio from figure 32 shows that Bloomberg displays the current price and market value, along the price and market value evaluated at the cost of investment. Finally, the last three columns report the change in value of the portfolio. In addition, note that you can change the currency denomination of the portfolio, and set short and futures margins.

APPLE INC Equity → PRTU → Related Functions Menu ≠          Statistication       Image: Statistication         CBE minute from the statistication       Image: Statistication	Message ★	<mark>□;</mark> ¢:?:
ACTIONS ' ACTIONS ' ALAPANYZE PORTIONO ADMINISTRATION' P	ortfolio Di	snlav
Portfolio Name PORTFOLIO RANIERI M	Currency	FUR
Date IC (10/11/18 D ) C Display O	irrency	
Rebalanced 03/08/18 Short Margin 0 Futures Margin 0		
Current Cost Cha	nge	
Security ID Position Price Principal Market Val Price Principal Cost Val Mkt Val & Market Val	Principal 1	Principal
Totals 7,842.33 7,842.33 5,159.16 5,159.16 52.01 577.9	52.01	577.97
Cash 0.0000 0.001 11) CSB(J/2 IM IE00B3/WN393 20.0000 105.26 2.105.20 2.105.20 0.00	0.00	0.00
2) CSSPX IM IE00B5BMR087 8.0000 234.30 1,874.40 1,874.40 177.93 1,423.40 1,423.40 31.68 451.0	31.68	451.00
ID         SEGA IM         IE00B4WX3364         14,0000         119,69         1,675,66         125,12         1,751,68         1,751,68         -4,34         -76,0           M         SMEA IM         IE00B4WX3364         14,0000         119,69         1,675,66         125,12         1,751,68         1,924,08         -4,34         -76,00           M         SMEA IM         IE00B4W43364         14,0000         119,69         1,675,66         125,12         1,924,08         1,023         -202,93	-4.34	-76.02
	10.25	202.77
Last Update 03/08/2018 - 10:05:27 Zoom	+ 70	)% 🔹
<b>BloomborgBusinessweek</b> Complimentary print subscription Delivered to your door		202
Broomine gradine and the complimentary print subscription. Delivered to your door.	DEVIC	
	100 C	- select
	6	CONTRACTOR OF STREET,

Figure 32: Portfolio Administration

Notes: The image represents the Bloomberg portfolio administration window accessed using the < PRTU > function and opening a previously saved hypothetical portfolio.

- 2. An alternative function to build or update your portfolio is < PTT >, which creates a trade ticket. This is sometimes useful as, by default, Bloomberg computes portfolio's returns on a holding base. By using < PTT > we can create the transaction history, and compute the corresponding returns. For example, figure 33 reports the portfolio trade ticker for an hypothetical investment in the Apple stock. Once the trade is submitted, it will be sent to the desired portfolio. Note that using < PTT >, you can add the unit cost and the commissions.
- Probably, the best way to create and update your portfolio is by combining an Excel file and the function < BBU >, for Bloomberg uploader. For example, we can first create an Excel file where you enter, in different columns, the security id, quantity,



Figure 33: Portfolio Trade Ticker

Notes: The image represents the Bloomberg portfolio trade ticker window accessed using the < PTT > function.

data classification, and portfolio name (see figure 34). Note that, for security id, using the ISIN is not the most efficient solution as the same security might be traded in different exchanges. Therefore, it is better to use the Bloomberg id: e.g., IBM US equity for IBM. The supported securities are equity (common shares, funds and ETFs), fixed income (corporate, government, ABS, etc.) and derivatives (futures, FX forwards, CDS, spot currencies). Then, you can simply drag the excel file in the < BBU > window, and map the Excel sheet and columns into Bloomberg (i.e., you need to tell Bloomberg which column contains the id, etc.). Note that when you use the Bloomberg uploader, the cash position must not be divided by 1,000 as for < PRTU >. It is possible to set up regular updates of your portfolio: Bloomberg will periodically check your Excel file (which must be saved in the computer which is logged into Bloomberg), and update your portfolio.

Note that once you are the "owner" of a portfolio, you can share it with other Bloomberg users (i.e., say, your team members). Once the portfolio has been created and properly saved, Bloomberg offers various useful metrics to evaluate its risk and performance. For example, the function < PORT > provides the **portfolio and risk analytics**, with information like the contribution to return of each component, the daily profits and losses, etc. Within the < PORT > window, you can also look at measures of risk like the value-at-risk (VaR) and the likely performance under different "stress" scenarios. Also, you can add benchmark portfolios. Additional useful functions that you can choose from once you are looking at a



Figure 34: Portfolio using Bloomberg uploader

Notes: The image represents an excel file ready to be imported in the Bloomberg uploader.

portfolios are:

- < NPH >: portfolio news. News related to the components of your portfolio.
- < PORT HP >: historical performance. Historical performance of your portfolio.
- < PORT OP >: portfolio optimization. This function allows the construction of an optimal portfolio given a set of constraints. It also allows for backtesting the performance of the portfolio.
- The option "portfolio look through" is particularly useful if you have funds in your portfolio. In this case, you can "open up" the funds and visualize all the assets you have invested in *through* the fund.

At the time of the last update of these notes, Bloomberg is offering as a "beta" feature upon request the possibility to associate a ticker to your portfolio, so that by all means the portfolio becomes like a security. This could be very useful to *tickerize* the portfolios, for example, to apply to a portfolio all the functions we can typically apply to a security.

## 4 Using Bloomberg with Excel

It is very likely that you will need to download data from Bloomberg to Excel in order to perform data analysis, to use the data with additional statistical and econometric software and packages, etc. Importing data to Excel is very simple using the Excel Bloomberg addin. In this primer, I focus on importing "historical end-of-day" data using the Bloomberg Spreadsheet Builder. When you open Excel, go to the Bloomberg tab first, and then choose "Bloomberg Spreadsheet Builder". A wizard, reported in figure 35, will open. The options are "blank data table", "historical data table", and "intraday data table". Figure 36 describes the Excel wizard after having selected, for example, "historical data table". At this point, you need to select the securities in which you are interested in. You can either select them manually, using the search field. In this case, as usual, type only the first letters of the security of interest and an array of options will pop-up. Alternatively, you can dragand-drop Bloomberg security identifiers directly in the right box of the Excel wizard titled "selected securities". For example, suppose that you are interested in the historical data on all the members of the Dow Jones Industrial Average Index. In this case, you can first use the function < INDU Index > and then < MEMB >, as described in section 3.8, to obtain the list of the Dow's members. Then, you can directly drag the small Excel icon that you will see in the Bloomberg Terminal window to the Excel spreadsheet builder wizard. In no time you will have loaded all the 30 securities forming the Dow in the Excel wizard. After having selected the securities, importing the data to Excel is straightforward. First, you will have to select the data type (for example, last price or PX_LAST). Also for the data type selection, if you do not know the right data type name in advance, simply type the first letters and an array of options will pop-up. Second, you will have to select the data range. Third, you will have to select the desired excel layout. Note that the Excel file is able to import the historical data using a macro. By examining your excel file, and with some practice, you will be able to understand and modify directly the Excel macro using excel functions working with the Bloomberg add-in. For example, the standard function to import historical data is called BDH, and requires several inputs, including the Bloomberg identifier, requested data type and range.

# 5 Conclusions

This objective of this primer is to give readers a quick overview of the many functions in Bloomberg to be able to use a Bloomberg Terminal in no time. Over the years, Bloomberg has become a must-have instrument for people working in financial markets. Needless to say, mastering Bloomberg will require time and passion and interaction with many colleagues and friends.

Clotix Viewer View Devices		8 / 0 ♥ (c) ♥ → ○ Thu 500 PM Q. 0 Ⅲ
THE WARE INSPECTION FOR THE POWERS THAT A REVEW YOR INCOMESS	Bookt + Excel	7 00 - 0 A Set
erentikele Input Function II3. Erentikele Input Function II3. Conter Territoria Conter File Conter Conter Conter File Conter Conter Conter File Conter Conter	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
$AI \rightarrow I \times \sqrt{f_0}$		
	A N O P Q R S T U V W X Y Z AA AB AC AD AE AF	AG AH AL AJ AK AL AM
	Spreadsheet Builder ? ×	
	The this Seesakibest Builder to converse the data and large of user Paral Ba	
	Blank Data Table	
	Creates a data table comprised of data fields and securities	
	A manufactory Table	
	Chains a data bains comprised or mountain data herus and securities	
	Intraday Data Table	
	Protecting of the first sector of the first sector sectors	
	Bloomberg Next Carcel	
( ) 9ml ()		

Figure 35: Bloomberg Spreadsheet Builder (1)

Notes: The image represents the Bloomberg spreadsheet builder (first step).



Figure 36: Bloomberg Spreadsheet Builder (2)

Notes: The image represents the Bloomberg spreadsheet builder (second step).