
xbbg Documentation

Release 0.6.2

Alpha x1

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Bloomberg data toolkit for humans

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CHAPTER 1

Features

Below are main features. Jupyter notebook examples can be found [here](#).

- Excel compatible inputs
- Straightforward intraday bar requests
- Subscriptions

CHAPTER 2

Requirements

- Bloomberg C++ SDK version 3.12.1 or higher
 - Bloomberg API Library
 - Download C++ Experimental Release (for latest python API version 3.14.0, this can only be downloaded thru `WAPI<GO>` in terminal).
 - Copy `blpapi3_32.dll` and `blpapi3_64.dll` under `bin` folder to Bloomberg installation folder `blp/DAPI`
- Bloomberg Open API (need to install manually as shown below)
- numpy, pandas, ruamel.yaml and pyarrow

CHAPTER 3

Installation

```
pip install blpapi --index-url=https://bloomberg.bintray.com/pip/simple
pip install xbbg
```


CHAPTER 4

What's New

0.6.0 - Speed improvements and tick data availability

0.5.0 - Rewritten library to add subscription, BEQS, simplify interface and remove dependency of *pdblp*

0.1.22 - Remove PyYAML dependency due to security vulnerability

0.1.17 - Add `adjust` argument in `bdh` for easier dividend / split adjustments


```
In[1]: from xbbg import blp
```

5.1 Basics

BDP example:

```
In[2]: blp.bdp(tickers='NVDA US Equity', flds=['Security_Name', 'GICS_Sector_Name'])
Out[2]:
```

	security_name	gics_sector_name
NVDA US Equity	NVIDIA Corp	Information Technology

BDP with overrides:

```
In[3]: blp.bdp('AAPL US Equity', 'Eqy_Weighted_Avg_Px', VWAP_Dt='20181224')
Out[3]:
```

	eqy_weighted_avg_px
AAPL US Equity	148.75

BDH example:

```
In[4]: blp.bdh(
...:     tickers='SPX Index', flds=['High', 'Low', 'Last_Price'],
...:     start_date='2018-10-10', end_date='2018-10-20',
...: )
Out[4]:
```

	SPX Index	High	Low	Last_Price
2018-10-10		2,874.02	2,784.86	2,785.68
2018-10-11		2,795.14	2,710.51	2,728.37
2018-10-12		2,775.77	2,729.44	2,767.13
2018-10-15		2,775.99	2,749.03	2,750.79

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2018-10-16	2,813.46	2,766.91	2,809.92
2018-10-17	2,816.94	2,781.81	2,809.21
2018-10-18	2,806.04	2,755.18	2,768.78
2018-10-19	2,797.77	2,760.27	2,767.78

BDH example with Excel compatible inputs:

```
In[4]: blp.bdh(
...:     tickers='SHCOMP Index', flds=['High', 'Low', 'Last_Price'],
...:     start_date='2018-09-26', end_date='2018-10-20',
...:     Per='W', Fill='P', Days='A',
...: )
Out[4]:
      SHCOMP Index
           High      Low Last_Price
2018-09-28    2,827.34  2,771.16    2,821.35
2018-10-05    2,827.34  2,771.16    2,821.35
2018-10-12    2,771.94  2,536.66    2,606.91
2018-10-19    2,611.97  2,449.20    2,550.47
```

BDH without adjustment for dividends and splits:

```
In[5]: blp.bdh(
...:     'AAPL US Equity', 'Px_Last', '20140605', '20140610',
...:     CshAdjNormal=False, CshAdjAbnormal=False, CapChg=False
...: )
Out[5]:
      AAPL US Equity
           Px_Last
2014-06-05         647.35
2014-06-06         645.57
2014-06-09          93.70
2014-06-10          94.25
```

BDH adjusted for dividends and splits:

```
In[6]: blp.bdh(
...:     'AAPL US Equity', 'Px_Last', '20140605', '20140610',
...:     CshAdjNormal=True, CshAdjAbnormal=True, CapChg=True
...: )
Out[6]:
      AAPL US Equity
           Px_Last
2014-06-05         85.45
2014-06-06         85.22
2014-06-09         86.58
2014-06-10         87.09
```

BDS example:

```
In[7]: blp.bds('AAPL US Equity', 'DVD_Hist_All', DVD_Start_Dt='20180101', DVD_End_Dt=
↪ '20180531')
Out[7]:
           declared_date      ex_date record_date payable_date  dividend_amount_
↪dividend_frequency dividend_type
AAPL US Equity    2018-05-01    2018-05-11    2018-05-14    2018-05-17          0.73  ↪
↪           Quarter  Regular  Cash
```

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AAPL US Equity	2018-02-01	2018-02-09	2018-02-12	2018-02-15	0.63	↵
↵	Quarter	Regular	Cash			

Intraday bars BDIB example:

```
In[8]: blp.bdib(ticker='BHP AU Equity', dt='2018-10-17').tail()
Out[8]:
```

BHP AU Equity							
	open	high	low	close	volume	num_trds	
2018-10-17 15:56:00+11:00	33.62	33.65	33.62	33.64	16660	126	
2018-10-17 15:57:00+11:00	33.65	33.65	33.63	33.64	13875	156	
2018-10-17 15:58:00+11:00	33.64	33.65	33.62	33.63	16244	159	
2018-10-17 15:59:00+11:00	33.63	33.63	33.61	33.62	16507	167	
2018-10-17 16:10:00+11:00	33.66	33.66	33.66	33.66	1115523	216	

Above example works because 1) AU in equity ticker is mapped to EquityAustralia in markets/assets.yml, and 2) EquityAustralia is defined in markets/exch.yml. To add new mappings, define BBG_ROOT in sys path and add assets.yml and exch.yml under BBG_ROOT/markets.

Intraday bars within market session:

```
In[9]: blp.bdib(ticker='7974 JT Equity', dt='2018-10-17', session='am_open_30').tail()
Out[9]:
```

7974 JT Equity							
	open	high	low	close	volume	num_trds	
2018-10-17 09:27:00+09:00	39,970.00	40,020.00	39,970.00	39,990.00	10800	44	
2018-10-17 09:28:00+09:00	39,990.00	40,020.00	39,980.00	39,980.00	6300	33	
2018-10-17 09:29:00+09:00	39,970.00	40,000.00	39,960.00	39,970.00	3300	21	
2018-10-17 09:30:00+09:00	39,960.00	40,010.00	39,950.00	40,000.00	3100	19	
2018-10-17 09:31:00+09:00	39,990.00	40,000.00	39,980.00	39,990.00	2000	15	

Corporate earnings:

```
In[10]: blp.earning('AMD US Equity', by='Geo', Eqy_Fund_Year=2017, Number_Of_
↵Periods=1)
Out[10]:
```

	level	fy2017	fy2017_pct
Asia-Pacific	1.00	3,540.00	66.43
China	2.00	1,747.00	49.35
Japan	2.00	1,242.00	35.08
Singapore	2.00	551.00	15.56
United States	1.00	1,364.00	25.60
Europe	1.00	263.00	4.94
Other Countries	1.00	162.00	3.04

Dividends:

```
In[11]: blp.dividend(['C US Equity', 'MS US Equity'], start_date='2018-01-01', end_
↵date='2018-05-01')
Out[11]:
```

	dec_date	ex_date	rec_date	pay_date	dvd_amt	dvd_freq	↵
↵dvd_type							
C US Equity	2018-01-18	2018-02-02	2018-02-05	2018-02-23	0.32	Quarter	↵
↵Regular Cash							
MS US Equity	2018-04-18	2018-04-27	2018-04-30	2018-05-15	0.25	Quarter	↵
↵Regular Cash							
MS US Equity	2018-01-18	2018-01-30	2018-01-31	2018-02-15	0.25	Quarter	↵
↵Regular Cash							

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New in 0.1.17 - Dividend adjustment can be simplified to one parameter `adjust`:

- BDH without adjustment for dividends and splits:

```
In[12]: blp.bdh('AAPL US Equity', 'Px_Last', '20140606', '20140609', adjust='-')
Out[12]:
```

	AAPL US Equity	Px_Last
2014-06-06		645.57
2014-06-09		93.70

- BDH adjusted for dividends and splits:

```
In[13]: blp.bdh('AAPL US Equity', 'Px_Last', '20140606', '20140609', adjust='all')
Out[13]:
```

	AAPL US Equity	Px_Last
2014-06-06		85.22
2014-06-09		86.58

5.2 Data Storage

If `BBG_ROOT` is provided in `os.environ`, data can be saved locally. By default, local storage is preferred than Bloomberg for all queries.

Noted that local data usage must be compliant with Bloomberg Datafeed Addendum (full description in *DAPI<GO>*):

To access Bloomberg data via the API (and use that data in Microsoft Excel), your company must sign the ‘Datafeed Addendum’ to the Bloomberg Agreement. This legally binding contract describes the terms and conditions of your use of the data and information available via the API (the “Data”). The most fundamental requirement regarding your use of Data is that it cannot leave the local PC you use to access the BLOOMBERG PROFESSIONAL service.