5. Data Tables

This section covers so-called **data tables**. They provide an overview for certain topics in tabular form.

In [1]:

```
import fxcmpy
import pandas as pd
import datetime as dt
con = fxcmpy.fxcmpy(config_file='fxcm.cfg')
```

5.1. Account Information

The `con.get_accounts()` method shows **meta information** for the default or multiple accounts.

In [2]:

```
con.get_accounts().T
```

Out[2]:

	0
accountId	2815291
accountName	02815291
balance	463636
dayPL	-66.957
equity	463595
grossPL	-40.957
hedging	N
mc	N
mcDate	
ratePrecision	0
t	6
usableMargin	461595
usableMargin3	461595
usableMargin3Perc	99.5686
usableMarginPerc	99.5686
usdMr	2000
usdMr3	2000

5.2. Offers

The `fxcmpy` connection object provides a number of methods to fetch **current data** from the API.

The `con.get_offers()` method retrieves and displays a table with current **offers**.

In [3]:

```
con.get_offers(kind='dataframe')
```

Out[3]:

	buy	buyTradable	currency	defaultSortOrder	emr	fractionDigits	high	instrumentType	lmr	
0	1.17255	True	EUR/USD	100	0	5	1.17260	1	0	1.1674
1	112.32900	True	USD/JPY	200	0	3	112.57500	1	0	112.18
2	1.32858	True	GBP/USD	300	0	5	1.32941	1	0	1.3223
3	0.99735	True	USD/CHF	400	0	5	1.00261	1	0	0.9971
4	1.16930	True	EUR/CHF	500	0	5	1.17160	1	0	1.1689
5	0.74373	True	AUD/USD	600	0	5	0.74436	1	0	0.7408

	buy	buyTradable	currency	defaultSortOrder	emr	fractionDigits	high	instrumentType	lmr	
6	1.31447	True	USD/CAD	700	0	5	1.31674	1	0	1.3135
7	0.67900	True	NZD/USD	800	0	5	0.67943	1	0	0.6757
8	0.88266	True	EUR/GBP	900	0	5	0.88428	1	0	0.8815
9	131.69900	True	EUR/JPY	1000	0	3	131.70900	1	0	131.07
10	149.22900	True	GBP/JPY	1100	0	3	149.33500	1	0	148.38
11	112.64400	True	CHF/JPY	1200	0	3	112.64800	1	0	111.92
12	1.32494	True	GBP/CHF	1300	0	5	1.32686	1	0	1.3237
13	1.57679	True	EUR/AUD	1400	0	5	1.57711	1	0	1.5717
14	1.54110	True	EUR/CAD	1500	0	5	1.54119	1	0	1.5360
15	0.97751	True	AUD/CAD	1600	0	5	0.97820	1	0	0.9748
16	83.53500	True	AUD/JPY	1700	0	3	83.70000	1	0	83.229
17	85.47000	True	CAD/JPY	1800	0	3	85.63900	1	0	85.184
18	76.26900	True	NZD/JPY	1900	0	3	76.32600	1	0	75.801
19	1.74623	True	GBP/CAD	2000	0	5	1.74709	1	0	1.7393
20	1.95710	True	GBP/NZD	2100	0	5	1.95841	1	0	1.9523
21	1.78668	True	GBP/AUD	2200	0	5	1.78750	1	0	1.7798
22	1.09549	True	AUD/NZD	2800	0	5	1.09795	1	0	1.0949
23	8.82027	True	USD/SEK	3000	0	5	8.89671	1	0	8.8170
24	10.34100	True	EUR/SEK	3200	0	5	10.38880	1	0	10.335
25	9.48275	True	EUR/NOK	3600	0	5	9.49270	1	0	9.4683
26	8.08820	True	USD/NOK	3700	0	5	8.12669	1	0	8.0846
27	18.79320	True	USD/MXN	3800	0	5	18.92002	1	0	18.789
28	0.74172	True	AUD/CHF	3900	0	5	0.74494	1	0	0.7412
29	1.72720	True	EUR/NZD	4000	0	5	1.72963	1	0	1.7237
...	...	...	...	...	...	...	...	...	...	...
31	7.84913	True	USD/HKD	5000	0	5	7.84923	1	0	7.8477
32	8.53100	True	ZAR/JPY	7100	0	3	8.55600	1	0	8.4190
33	4.84870	True	USD/TRY	8300	0	5	4.86673	1	0	4.8226
34	5.68710	True	EUR/TRY	8700	0	5	5.69008	1	0	5.6480
35	0.67722	True	NZD/CHF	8900	0	5	0.67927	1	0	0.6761
36	0.75889	True	CAD/CHF	9000	0	5	0.76233	1	0	0.7585
37	0.89248	True	NZD/CAD	9100	0	5	0.89287	1	0	0.8891
38	23.17800	True	TRY/JPY	9800	0	3	23.30300	1	0	22.915
39	6.69068	True	USD/CNH	799	0	5	6.72510	1	0	6.6830
40	6227.76000	True	AUS200	100100	0	2	6274.76000	2	0	6226.5
41	9716.50000	True	ESP35	100200	0	2	9785.50000	2	0	9705.0

	buy	buyTradable	currency	defaultSortOrder	emr	fractionDigits	high	instrumentType	lmr	
42	5407.53000	True	FRA40	100300	0	2	5439.63000	2	0	5406.2
43	12518.25000	True	GER30	100400	0	2	12598.40000	2	0	12511.
44	28524.00000	False	HKG33	100500	0	2	28679.00000	2	0	28296.
45	22610.50000	True	JPN225	100700	0	2	22734.50000	2	0	22573.
46	7378.05000	True	NAS100	100800	0	2	7398.75000	2	0	7375.5
47	2798.90000	True	SPX500	101000	0	2	2806.55000	2	0	2798.4
48	7567.25000	True	UK100	101200	0	2	7670.25000	2	0	7564.4
49	25034.80000	True	US30	101300	0	2	25113.90000	2	0	25019.
50	2.76180	True	Copper	101600	0	4	2.79870	3	0	2.7464
51	11370.00000	True	CHN50	1020	0	2	11551.00000	2	0	11302.
52	3445.70000	True	EUSTX50	103500	0	2	3464.70000	2	0	3444.6
53	12004.00000	True	USDOLLAR	105800	0	0	12004.00000	7	0	12001.
54	69.86500	True	USOil	200100	0	3	70.89500	3	0	69.715
55	73.88500	True	UKOil	200200	0	3	75.37500	3	0	73.605
56	832.26000	True	SOYF	2003	0	2	839.38000	3	0	826.12
57	2.76800	True	NGAS	201500	0	4	2.77850	3	0	2.7395
58	162.85000	True	Bund	300100	0	3	162.97500	4	0	162.70
59	1244.78000	True	XAU/USD	400100	0	2	1245.80000	5	0	1239.9
60	15.84100	True	XAG/USD	400200	0	3	15.93900	5	0	15.659

61 rows × 25 columns

5.3. Open Positions

The `con.get_open_positions()` method retrieves and shows the **open positions** for the default account.

In [4]:

```
con.get_open_positions(kind='list')
```

Out[4]:

```
[{'accountId': '2815291',
  'accountName': '02815291',
  'amountK': 200,
  'close': 112.307,
  'com': 0,
  'currency': 'USD/JPY',
  'currencyPoint': 17.80666,
  'grossPL': -51.64415,
  'isBuy': True,
  'isDisabled': False,
  'limit': 0,
  'open': 112.336,
  'ratePrecision': 3,
  'roll': 0,
  'stop': 0,
  'stopMove': 0,
  't': 1,
  'time': '07162018112746',
  'tradeId': '187518554',
```

```
  'usedMargin': 2000,
  'valueDate': '',
  'visiblePL': -2.9}]
```

5.4. Closed Positions

Similarly, the `con.get_closed_positions()` method retrieves and presents the **closed positions**.

The parameter `kind` has to be `dataframe` (default) or `list`.

In [5]:

```
con.get_closed_positions(kind='dataframe').T
```

Out[5]:

	0
accountName	02815291
amountK	100
close	1.17254
closeTime	07162018112750
com	0
currency	EUR/USD
currencyPoint	10
grossPL	-26
isBuy	False
open	1.17228
openTime	07162018112734
ratePrecision	5
roll	0
t	2
tradeId	187518509
valueDate	
visiblePL	-2.6

5.5. Open Orders

Open orders are retrieved via `con.get_orders()`.

In [6]:

```
con.get_orders().T
```

Out[6]:

	0	1
accountId	2815291	2815291
accountName	02815291	02815291
amountK	300	30
buy	110	0
currency	USD/JPY	EUR/USD
currencyPoint	26.712	3
expireDate	12012018110000	10112018000000
isBuy	True	False
isELSOrder	False	False
isEntryOrder	True	True
isLimitOrder	True	False
isNetQuantity	False	False
isStopOrder	False	True
limit	112	1.12
limitPegBaseType	-1	-1
limitRate	112	1.12
ocoBulkId	0	423235902
orderId	422719537	423235903
range	0	0
ratePrecision	3	5

```
                          0              1
sell            0              1.13
status          1              1
stop            0              1.15
stopMove        0              0
stopPegBaseType -1             -1
stopRate        0              1.15
t               3              3
time            07122018091708 07122018143856
timeInForce     GTD            GTD
tradeId         186558353      186829211
type            LE             SE
```

5.6. Summaries

A **summary** can be created over all open or closed positions, over an account or over "everything".

In [7]:

```
con.get_open_positions_summary().T
```

Out[7]:

```
                     0
accountId
accountName
amountK       200
close         0
com           0
currency      USD/JPY
currencyPoint 0
grossPL       -67.6771
isBuy         False
isDisabled    False
isTotal       True
limit         0
open          0
ratePrecision 0
roll          0
stop          0
stopMove      0
t             1
time          None
tradeId
usedMargin    0
valueDate
visiblePL     -3.8
```

In [8]:

```
con.get_closed_positions_summary().T
```

Out[8]:

```
                    0
accountName
amountK       100
close         0
closeTime     None
com           0
currency      EUR/USD
currencyPoint 0
grossPL       -26
isBuy         False
isTotal       True
open          0
```

```
                    0
openTime      None
ratePrecision 0
roll          0
t             2
tradeId
valueDate
visiblePL     -2.6
```

In [9]:

```
con.get_accounts_summary().T
```

Out[9]:

```
                         0
accountId
accountName
balance           463636
dayPL             -91.8955
equity            463570
grossPL           -65.8955
hedging
isTotal           True
mc
mcDate            None
ratePrecision     0
t                 6
usableMargin      461570
usableMargin3     461570
usableMargin3Perc 99.5686
usableMarginPerc  99.5686
usdMr             2000
usdMr3            2000
```

In [10]:

```
con.get_summary().T
```

Out[10]:

```
                      0
amountK        200
amountKBuy     200
amountKSell    0
avgBuy         112.336
avgSell        0
closeBuy       0
closeSell      112.299
currency       USD/JPY
currencyPoint  17.8078
grossPL        -65.8955
isBuyDisabled  False
isSellDisabled True
netLimit       0
netPL          -65.8955
netStop        0
netStopMove    0
offerId        2
plBuy          -65.8955
plSell         0
ratePrecision  3
rollSum        0
t              5
usedMargin     2000
usedMarginBuy  2000
usedMarginSell 0
```

In [11]:

```
con.close()
```