In [1]:
```
import pandas as pd
```

In [2]:
```
pip install quandl
```

```
Requirement already satisfied: quandl in c:\users\junhe\anaconda3\lib\site-pa
ckages (3.5.0)
Requirement already satisfied: python-dateutil in c:\users\junhe\anaconda3\li
b\site-packages (from quandl) (2.8.0)
Requirement already satisfied: numpy>=1.8 in c:\users\junhe\anaconda3\lib\sit
e-packages (from quandl) (1.16.5)
Requirement already satisfied: requests>=2.7.0 in c:\users\junhe\anaconda3\li
b\site-packages (from quandl) (2.22.0)
Requirement already satisfied: inflection>=0.3.1 in c:\users\junhe\anaconda3
\lib\site-packages (from quandl) (0.4.0)
Requirement already satisfied: six in c:\users\junhe\anaconda3\lib\site-packa
ges (from quandl) (1.12.0)
Requirement already satisfied: more-itertools in c:\users\junhe\anaconda3\lib
\site-packages (from quandl) (7.2.0)
Requirement already satisfied: pandas>=0.14 in c:\users\junhe\anaconda3\lib\s
ite-packages (from quandl) (0.25.1)
Requirement already satisfied: urllib3!=1.25.0,!=1.25.1,<1.26,>=1.21.1 in
c:\users\junhe\anaconda3\lib\site-packages (from requests>=2.7.0->quandl) (1.
24.2)
Requirement already satisfied: chardet<3.1.0,>=3.0.2 in c:\users\junhe\anacon
da3\lib\site-packages (from requests>=2.7.0->quandl) (3.0.4)
Requirement already satisfied: certifi>=2017.4.17 in c:\users\junhe\anaconda3
\lib\site-packages (from requests>=2.7.0->quandl) (2019.9.11)
Requirement already satisfied: idna<2.9,>=2.5 in c:\users\junhe\anaconda3\lib
\site-packages (from requests>=2.7.0->quandl) (2.8)
Requirement already satisfied: pytz>=2017.2 in c:\users\junhe\anaconda3\lib\s
ite-packages (from pandas>=0.14->quandl) (2019.3)
Note: you may need to restart the kernel to use updated packages.
```

In [3]:
```
import quandl
```

In [4]:
```
mydata = quandl.get("BOE/XUDLBK67", authtoken="W_5enFAPeCixzYcm_cT4")
```

In [5]:
```
mydata.head(10)
```

Out[5]:

Date	Value
1990-01-02	90.7445
1990-01-03	90.9773
1990-01-04	90.7776
1990-01-05	91.1766
1990-01-08	91.5705
1990-01-09	92.1006
1990-01-10	92.4177
1990-01-11	92.2114
1990-01-12	92.6000
1990-01-15	92.7368

In [6]:
```
mydata.tail(10)
```

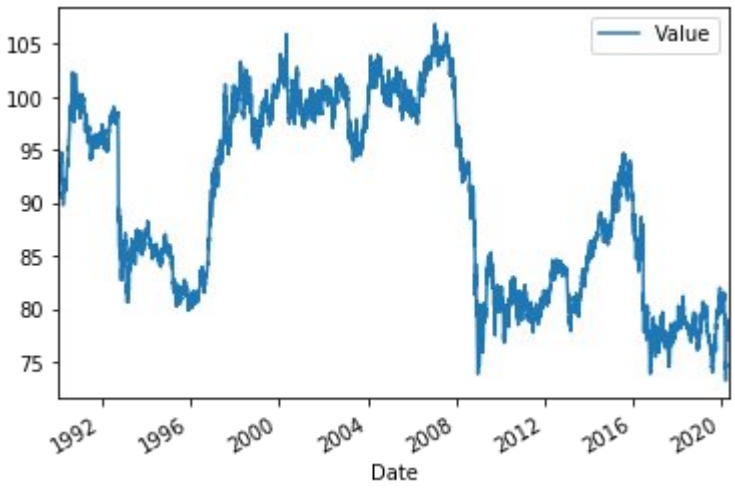
Out[6]:

Date	Value
2020-04-29	78.3186
2020-04-30	78.9706
2020-05-01	78.4445
2020-05-04	78.0285
2020-05-05	78.5001
2020-05-06	78.1786
2020-05-07	77.7614
2020-05-11	78.0275
2020-05-12	77.5675
2020-05-13	77.0988

In [7]:
```
import matplotlib.pyplot as plt
%matplotlib inline
```

In [8]:
```
mydata.plot()
```

Out[8]:
```
<matplotlib.axes._subplots.AxesSubplot at 0x2a012381808>
```



In [9]:
```
mydata = quandl.get("BOE/XUDLBK67", authtoken="W_5enFAPeCixzYcm_cT4",returns
="numpy")
```

In [10]:
```
mydata
```

Out[10]:
```
rec.array([('1990-01-02T00:00:00.000000000', 90.7445),
           ('1990-01-03T00:00:00.000000000', 90.9773),
           ('1990-01-04T00:00:00.000000000', 90.7776), ...,
           ('2020-05-11T00:00:00.000000000', 78.0275),
           ('2020-05-12T00:00:00.000000000', 77.5675),
           ('2020-05-13T00:00:00.000000000', 77.0988)],
          dtype=[('Date', '<M8[ns]'), ('Value', '<f8')])
```

In [11]:
```
mydata = quandl.get("BOE/XUDLBK67", authtoken="W_5enFAPeCixzYcm_cT4",start_da
te="2015-01-01",end_date="2020-05-12")
```

In [12]:
```
mydata.head()
```

Out[12]:

	Value
Date	
2015-01-02	87.5746
2015-01-05	87.1572
2015-01-06	86.8385
2015-01-07	86.7763
2015-01-08	86.8316

In [13]:
```
mydata.tail()
```

Out[13]:

Date	Value
2020-05-05	78.5001
2020-05-06	78.1786
2020-05-07	77.7614
2020-05-11	78.0275
2020-05-12	77.5675

In [14]:
```
mydata = quandl.get("BOE/XUDLBK67", authtoken="W_5enFAPeCixzYcm_cT4",collapse
="monthly")
```

In [15]:
```
mydata.head()
```

Out[15]:

Date	Value
1990-01-31	93.4727
1990-02-28	94.4273
1990-03-31	92.2266
1990-04-30	91.2955
1990-05-31	93.7264

In [16]:
```
mydata.tail()
```

Out[16]:

Date	Value
2020-01-31	81.2501
2020-02-29	79.4184
2020-03-31	77.7571
2020-04-30	78.9706
2020-05-31	77.0988

In [17]:
```
mydata = quandl.get("BOE/XUDLBK67", authtoken="W_5enFAPeCixzYcm_cT4",collapse
="weekly")
```

In [18]:
```
mydata.head()
```

Out[18]:

Date	Value
1990-01-07	91.1766
1990-01-14	92.6000
1990-01-21	92.2508
1990-01-28	92.2778
1990-02-04	93.5285

In [19]:
```
mydata.tail()
```

Out[19]:

Date	Value
2020-04-19	78.6889
2020-04-26	78.0059
2020-05-03	78.4445
2020-05-10	77.7614
2020-05-17	77.0988

In [20]:
```
mydata = quandl.get("BOE/XUDLBK67", authtoken="W_5enFAPeCixzYcm_cT4",collapse
="annual")
```

In [21]:
```
mydata.head()
```

Out[21]:

Date	Value
1990-12-31	99.0920
1991-12-31	96.9177
1992-12-31	84.4633
1993-12-31	87.1535
1994-12-31	85.3082

In [22]:
```
mydata.tail()
```

Out[22]:

Date	Value
2016-12-31	77.4240
2017-12-31	78.1468
2018-12-31	76.9684
2019-12-31	80.6856
2020-12-31	77.0988

In [23]:
```
mydata = quandl.get("BOE/XUDLBK67", authtoken="W_5enFAPeCixzYcm_cT4",transformation="rdiff")
```

In [24]:
```
mydata.head()
```

Out[24]:

Date	Value
1990-01-03	0.002565
1990-01-04	-0.002195
1990-01-05	0.004395
1990-01-08	0.004320
1990-01-09	0.005789

In [25]:
```
mydata.tail()
```

Out[25]:

Date	Value
2020-05-06	-0.004096
2020-05-07	-0.005336
2020-05-11	0.003422
2020-05-12	-0.005895
2020-05-13	-0.006042

In [26]:
```
series = quandl.get("BOE/XUDLBK67", authtoken="W_5enFAPeCixzYcm_cT4",start_date="1990-01-01",end_date="2020-05-12")
```

In [32]:
```
import matplotlib.font_manager as fm
font1= {'family':'Consolas','size':30,'color':'black'}
font2= {'family':'Verdana','size':22,'color':'darkred'}
font3= {'family':'Candara','size':22,'color':'blue'}


plt.figure(figsize = (20,10))
plt.plot(series, color='red')


plt.title('Sterling Exchange rate(£ Value)',fontdict=font1)
plt.ylabel('Price (£)',fontdict=font2)
plt.xlabel('date',fontdict=font3)
plt.show()
```