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# investment guide

*Release 1.2.0*

jj

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## ABOUT

Investing in emerging markets is not as straightforward as one might think. The only way is up? Not really...

Emerging markets can be compared to America before 1900. (idea : Mark Faber)

A lot of boom and bust, and signs of globalisation. English investors withdrawing money for other purposes.

After reading quite a few books on investing, I have become convinced that the stock exchange can generate a return, but not all the time.

I think there are seasons. So you seed and harvest, but in the correct season.

Most small time investors like myself end up in losing money,

This book is automatically generated from Jupyter notebooks that capture realtime (up to date) data from the internet.

The purpose is not a weatherforecast but a season-detection, which could support investment decisions.



## EM INDONESIA

### 2.1 relationship between currency rate - inflation - stockexchange

an attempt to use free available data sources, and to investigate if there is any predictive aspect to this

- The parameter that is lacking, is politics. (howto to quantify this?)
- Currency as a parameter is examined
- futures in the bond market, currency default swaps, spread ....

$$\alpha\beta\gamma\Delta\Gamma$$

2022-01-05

```
<Response [200]>
https://sdw-wsrest.ecb.europa.eu/service/data/EXR/D.IDR.EUR.SP00.A?startPeriod=2015-
↪12-01&endPeriod=2022-01-05
```

```
<?xml version="1.0" encoding="UTF-8"?><message:GenericData xmlns:message="http://www.
↪sdmx.org/resources/sdmxml/schemas/v2_1/message" xmlns:common="http://www.sdmx.org/
↪resources/sdmxml/schemas/v2_1/common" xmlns:xsi="http://www.w3.org/2001/XMLSchema-
↪instance" xmlns:generic="http://www.sdmx.org/resources/sdmxml/schemas/v2_1/data/
↪generic" xsi:schemaLocation="http://www.sdmx.org/resources/sdmxml/schemas/v2_1/
↪message https://sdw-wsrest.ecb.europa.eu:443/vocabulary/sdmx/2_1/SDMXMessage.xsd
↪http://www.sdmx.org/resources/sdmxml/schemas/v2_1/common https://sdw-wsrest.ecb.
↪europa.eu:443/vocabulary/sdmx/2_1/SDMXCommon.xsd http://www.sdmx.org/resources/
↪sdmx/schemas/v2_1/data/generic https://sdw-wsrest.ecb.europa.eu:443/vocabulary/
↪sdmx/2_1/SDMXDataGeneric.xsd">
<message:Header>
<message:ID>10b8cdd1-89b5-4cfb-9c92-a809906292e4</message:ID>
<message:Test>false</message:Test>
<message:Prepared>2022-01-07T13:32:10.385+01:00</message:Prepared>
<message:Sender id="ECB"/>
<message:Structure structureID="
```

Hmmm, the response is in XML. Not impossible, but also not the easiest format to work within Pandas. Fortunately, the ECB's API lets us get the data in CSV format by specifying it in the header of the request.

```
<Response [200]>
```

```
'KEY,FREQ,CURRENCY,CURRENCY_DENOM,EXR_TYPE,EXR_SUFFIX,TIME_PERIOD,OBS_VALUE,
↪OBS_STATUS,OBS_CONF,OBS_PRE_BREAK,OBS_COM,TIME_FORMAT,BREAKS,COLLECTION,
↪COMPILING_ORG,DISS_ORG,DOM_SER_IDS,PUBL_ECB,PUBL_MU,PUBL_PUBLIC,UNIT_INDEX_
```

```

→BASE,COMPILATION,COVERAGE,DECIMALS,NAT_TITLE,SOURCE_AGENCY,SOURCE_PUB,
→TITLE,TITLE_COMPL,UNIT,UNIT_MULTrnEXR.D.IDR.EUR.SP00.A,D,IDR,EUR,SP00,A,
→2015-12-01,14641.99,A,,,P1D,,A,,,,,,,,,2,,DE2,,Indonesian rupiah/Euro,
→"ECB reference exchange rate, Indonesian rupiah/Euro, 2:15 pm (C.E.T.)",
→IDR,0rnEXR.D.IDR.EUR.SP00.A,D,IDR,EUR,SP00,A,2015-12-02,14646.1,A,,,P1D,
→,A,,,,,,,,,2,,DE2,,Indonesian rupiah/Euro,"ECB reference exchange rate,
→Indonesian rupiah/Euro, 2:15 pm (C.E.T.)",IDR,0rnEXR.D.IDR.EUR.SP00.A,D,
→IDR,EUR,SP00,A,2015-12-03,14733.44,A,,,P1D,,A,,,,,,,,,2,,DE2,,Indonesian
→rupiah/Euro,"ECB reference exchange rate, Indonesian rupiah/Euro, 2:15 pm
→(C.E.T.)",IDR,0rnEXR.D.IDR.EUR.SP00.A,D,IDR,EUR,SP00,A,2015-12-04,15094.88,
→A,,,P1D,,A,,,,,,,,,2,,DE2,,Indonesian rupiah/Eur'

```

The columns we need are 'TIME\_PERIOD' for the dates and 'OBS\_VALUE' for the prices. Let's also do a sanity check on the prices in 'OBS\_VALUE'.

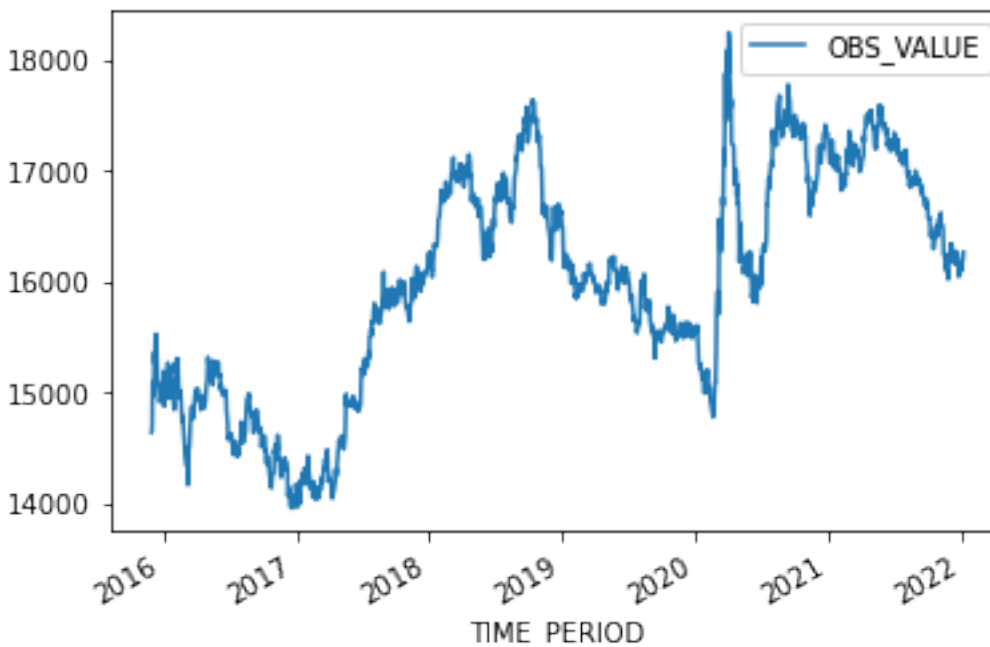
```

count      1562.000000
mean       15992.655090
std         1005.163041
min         13959.270000
25%         15147.605000
50%         16040.725000
75%         16875.982500
max         18239.610000
Name: OBS_VALUE, dtype: float64

```

the spike is the FX - market is 2021-12-20 where you get 20.0434 Lira for 1 Euro.

```
<AxesSubplot: xlabel='TIME_PERIOD'>
```



Indonesian Rupiah against EURO - data taken from ECB

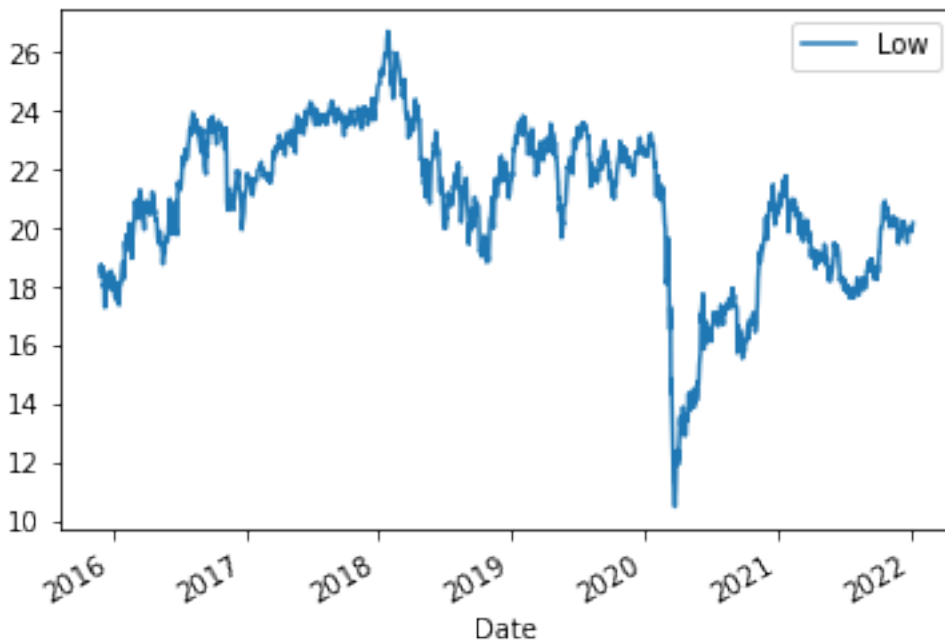
**watch the 2020 spike in exchange ratio, which I think is an outflow of capital to US/Europe**

Now we import data from the Indonesian stock exchange, IDX - VanEck Vectors Indonesia Index ETF



[\*\*\*\*\*100%\*\*\*\*\*] 1 of 1 completed

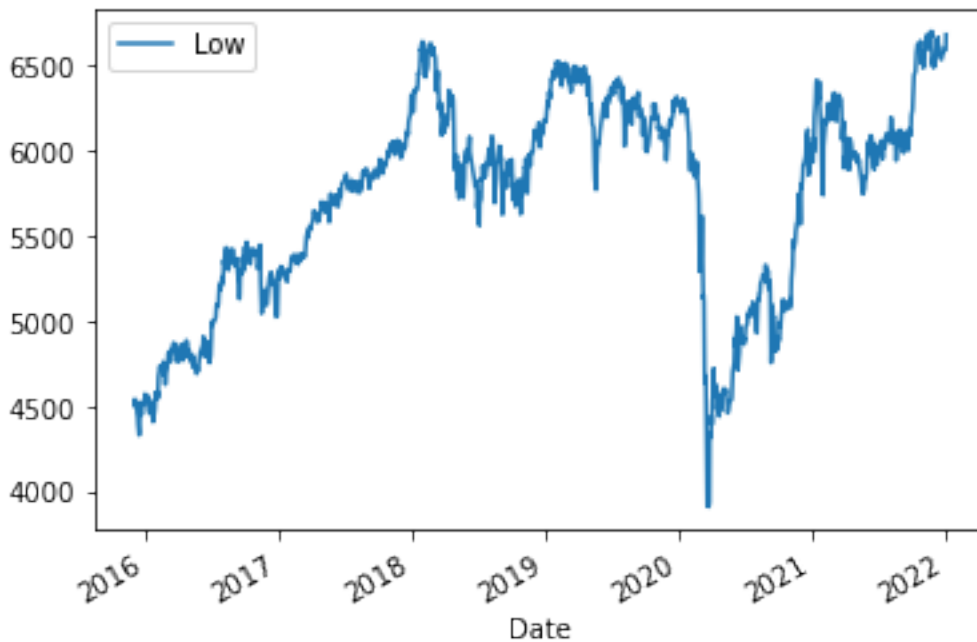
<AxesSubplot:xlabel='Date'>



graph is IDX - VanEck Vectors Indonesia Index ETF

[\*\*\*\*\*100%\*\*\*\*\*] 1 of 1 completed

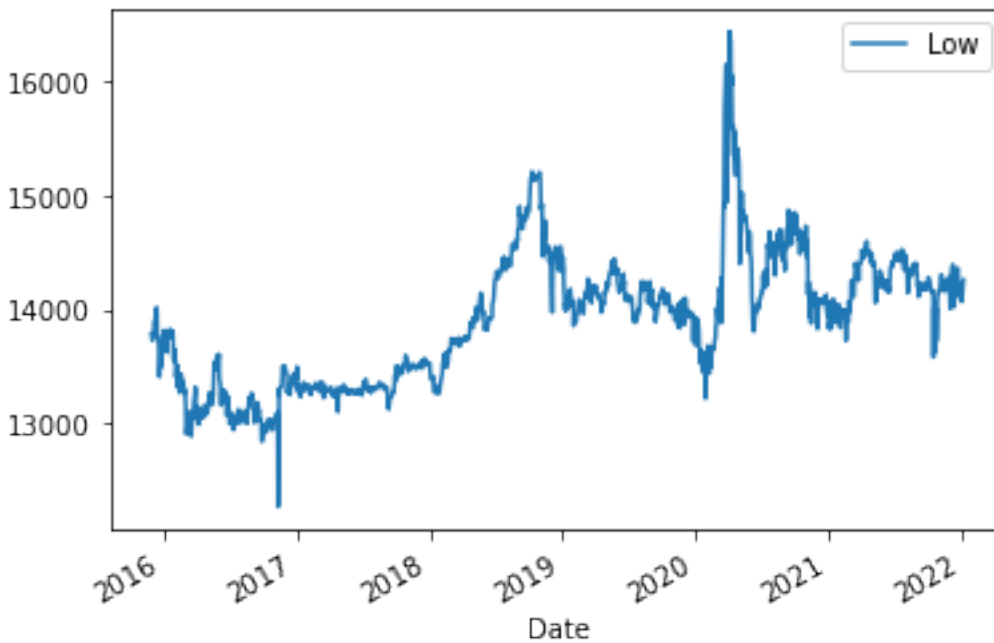
<AxesSubplot:xlabel='Date'>



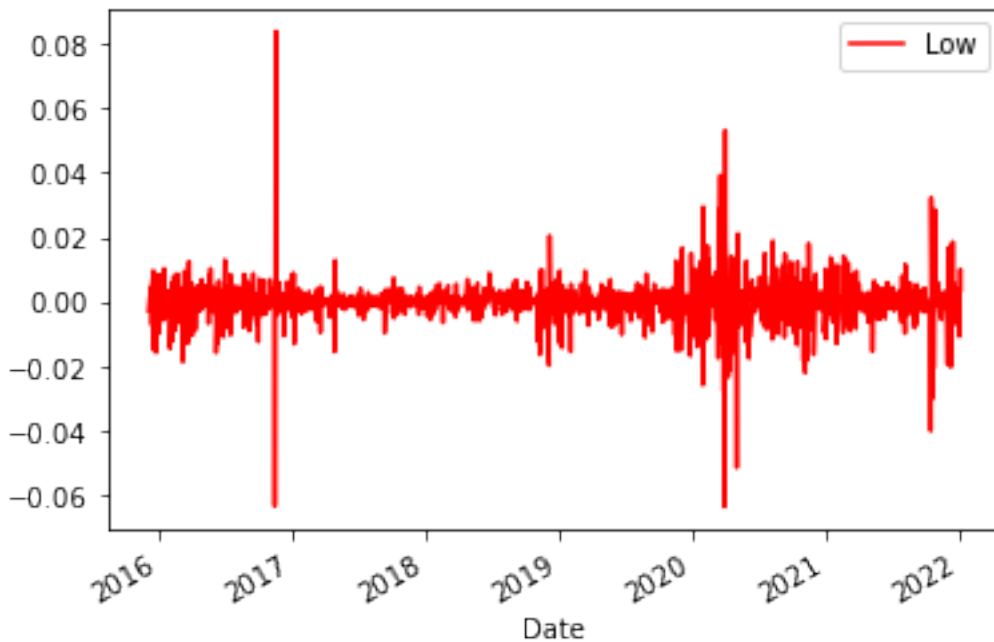
jakarta stock exchange in Rupiah

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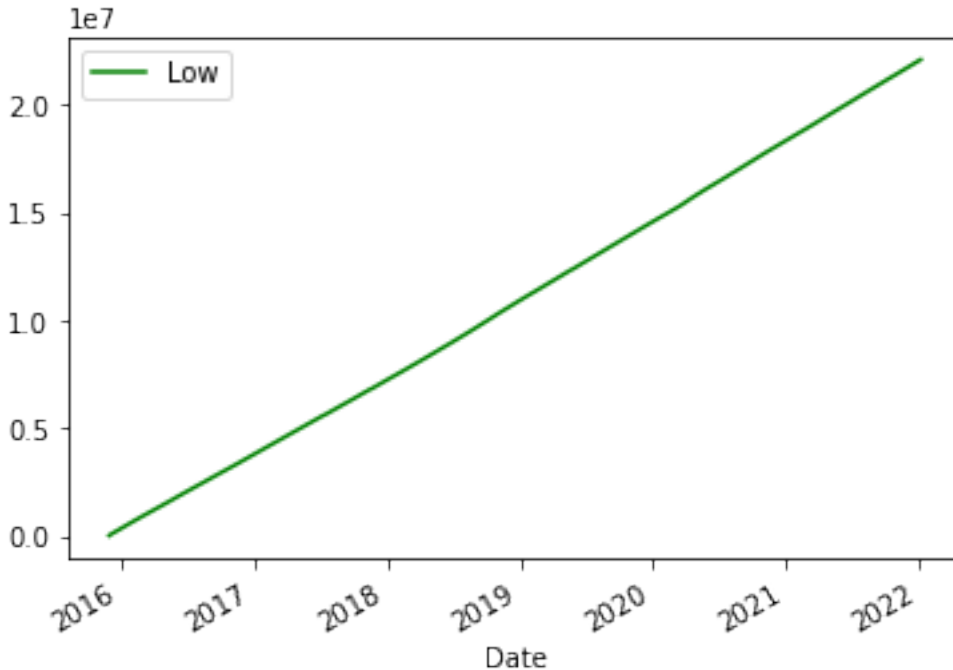
<AxesSubplot:xlabel='Date'>



*this is the indonesian rupiah against the dollar*



*this is the indonesian rupiah against the dollar daily change percentage*



```

-----
TypeError                                Traceback (most recent call last)

/tmp/ipykernel_11872/3973843293.py in <module>
      9 dftcurstokfil.tail()
     10 #dfcurstock.tail()
--> 11 dftcurstokfil.plot()

~/anaconda3/lib/python3.8/site-packages/pandas/plotting/_core.py in __call__(self,
-> *args, **kwargs)
     970         data.columns = label_name
     971
--> 972         return plot_backend.plot(data, kind=kind, **kwargs)
     973
     974     __call__.__doc__ = __doc__

~/anaconda3/lib/python3.8/site-packages/pandas/plotting/_matplotlib/_init_.py in
-> plot(data, kind, **kwargs)
     69         kwargs["ax"] = getattr(ax, "left_ax", ax)
     70         plot_obj = PLOT_CLASSES[kind](data, **kwargs)
--> 71         plot_obj.generate()
     72         plot_obj.draw()
     73         return plot_obj.result

~/anaconda3/lib/python3.8/site-packages/pandas/plotting/_matplotlib/core.py in
-> generate(self)
    284     def generate(self):
    285         self._args_adjust()
--> 286         self._compute_plot_data()

```

(continues on next page)

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```
287         self._setup_subplots()
288         self._make_plot()

~/anaconda3/lib/python3.8/site-packages/pandas/plotting/_matplotlib/core.py in _
->compute_plot_data(self)
    451         # no non-numeric frames or series allowed
    452         if is_empty:
--> 453             raise TypeError("no numeric data to plot")
    454
    455         self.data = numeric_data.apply(self._convert_to_ndarray)

TypeError: no numeric data to plot
```

in this graph there is a correlation between exchange rate and stock index, this begs the question if in the case of the indonesian stock exchange, we can use a significant change in currency rate as a signal to quit?

In order to get a clear idea, let's examine the 2020 covid crisis.

## EM RUSSIA

### 3.1 relationship between currency rate - inflation - stockexchange

an attempt to use free available data sources, and to investigate if there is any predictive aspect to this

- The parameter that is lacking, is politics. (howto to quantify this?)
- Russia has been fighting inflation

$$\alpha\beta\gamma\Delta\Gamma$$

this report **is** valid till : 2022-01-14

Russian rubel against EURO - data taken from ECB

Now we import data from the Indonesian stock exchange, IDX - VanEck Vectors Indonesia Index ETF

[\*\*\*\*\*100%\*\*\*\*\*] 1 of 1 completed

<AxesSubplot:xlabel='Date'>

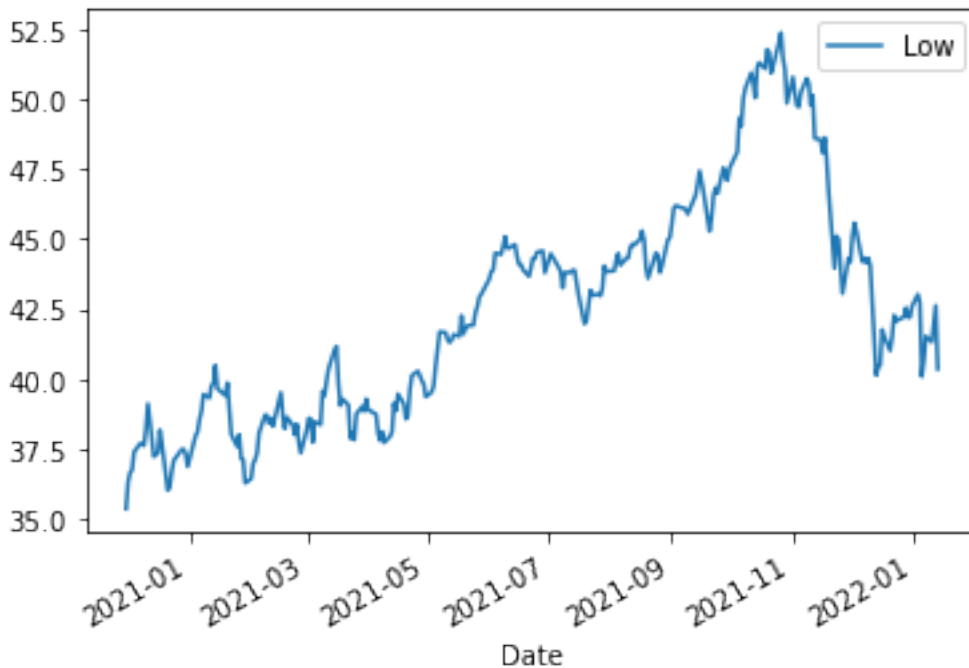


Public Joint-Stock Company Moscow Exchange MICEX-RTS (MOEX.ME) MCX - MCX Real Time Price. Currency in RUB

is there a way to get a headstart in information about currency : libor rate, cds ... ?

[\*\*\*\*\*100%\*\*\*\*\*] 1 of 1 completed

<AxesSubplot:xlabel='Date'>



this is an ETF on russian companies

- Gazprom PJSC GAZP 14.29%
- Sberbank of Russia PJSC SBER 13.11%
- PJSC Lukoil LKOH 11.75%
- Mining and Metallurgical Company NORILSK NICKEL PJSC GMKN 5.58%
- NOVATEK PJSC GDR NVTX 4.97%
- Yandex NV Shs Class-A- YNDX 4.74%
- TCS Group Holding PLC GDR Repr Class -A- Reg-S TCS 4.54%
- Tatneft PJSC TATN 4.10%
- Rosneft Oil Co ROSN 3.33%
- Polyus PJSC PLZL 3.06%

[\*\*\*\*\*100%\*\*\*\*\*] 1 of 1 completed

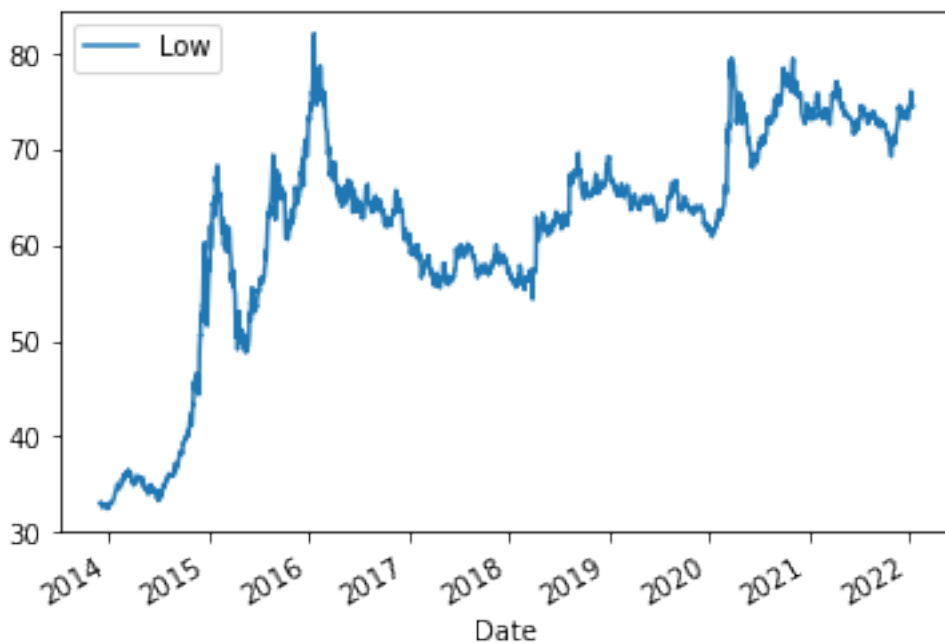
<AxesSubplot:xlabel='Date'>



*this is russian rubel against the euro*

[\*\*\*\*\*100%\*\*\*\*\*] 1 of 1 completed

<AxesSubplot:xlabel='Date'>



*this is the russian rubel against the dollar*