

# Data Providers

We will use the following two data providers:

- [Quandl \(https://www.quandl.com/\)](https://www.quandl.com/): macroeconomic data, interest rates, futures prices ...
- [Tiingo \(https://www.tiingo.com/welcome\)](https://www.tiingo.com/welcome): stock market prices and dividends.

To access these servers we need to install the following two libraries:

```
In [ ]: import sys
!conda install --yes --prefix {sys.prefix} quandl
!{sys.executable} -m pip install tiingo --upgrade --no-cache-dir
```

Now get your API keys:

- [Quandl \(https://www.quandl.com/\)](https://www.quandl.com/), sign up and then go to account setting page
- [Tiingo \(https://www.tiingo.com/welcome\)](https://www.tiingo.com/welcome), sign up, go to [API docs \(https://api.tiingo.com/docs/general/overview\)](https://api.tiingo.com/docs/general/overview) and log in

To connect to these services you need to run this cell (**with your own keys**) every time you start a notebook:

```
In [ ]: from tiingo import TiingoClient
import quandl

tiingo = TiingoClient({'api_key': 'put_your_api_key_right_here'})

quandl.ApiConfig.api_key = 'top_secret_Quandl_key'
```

Test that tiingo is working:

```
In [ ]: tiingo.get_dataframe('MSFT') # This should produce 1 line of output with
adjClose, adjHigh, ...
```

Test that Quandl is working:

```
In [ ]: quandl.get(['FRED/DGS1']) # This should produce a table with column 'FR
ED/DGS1 - Value'
```