Working with business dates

Business dates

- Suppose we're working with data from the New York Stock Exchange
- This stock market is closed on weekends
- On a Monday, you want to know the stock price from the last workday (Friday)
- We need to create a calendar so that Stata knows that the previous workday was Friday, and not Sunday
- These types of dates, where some dates are omitted from our calendar, are called business dates

Creating business calendars

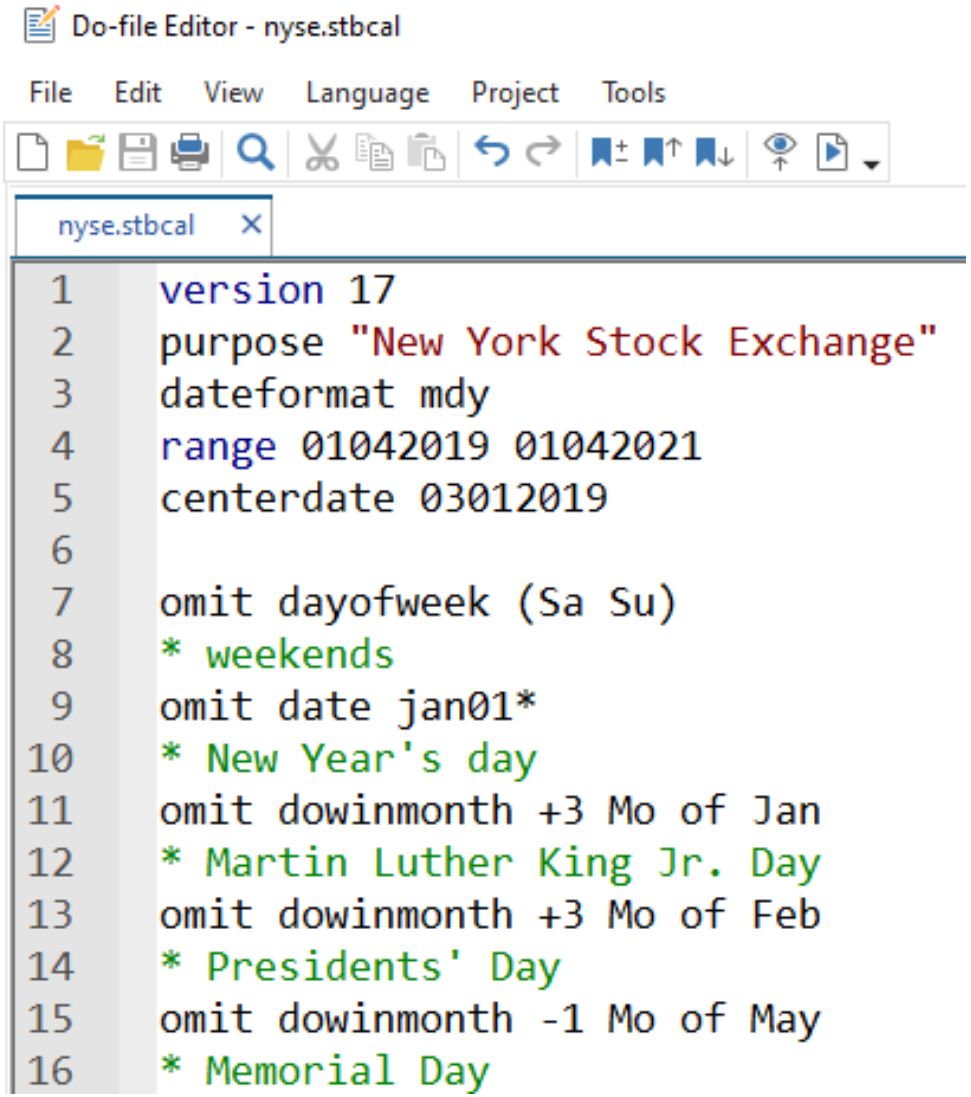
A. Create a calendar from the dataset in memory

- **`bcal create`** *`filename`*`,` **`from(`***`varname`***`)`**
  - See [D] bcal for details

B. Create a calendar manually

- Tell Stata what dates to omit, the range of dates covered by the calendar, and other details

Creating a business calendar



Fictional data

```
. use dates, clear

. describe

Contains data from dates.dta
 Observations:           160
    Variables:             1                  28 Oct 2020 14:41
-------------------------------------------------------------------------------
Variable      Storage   Display    Value
    name         type    format    label      Variable label
-------------------------------------------------------------------------------
regdate         int     %td
-------------------------------------------------------------------------------
Sorted by: regdate

. list in 1/5

     +-----------+
     |   regdate |
     |-----------|
  1. | 01jan2020 |
  2. | 02jan2020 |
  3. | 03jan2020 |
  4. | 04jan2020 |
  5. | 05jan2020 |
     +-----------+
```

Converting daily dates to business dates

```
. generate business = bofd("nyse", regdate)
(50 missing values generated)

. format business %tbnyse

. list business regdate if business==.
```

	business	regdate
1.	.	01jan2020
4.	.	04jan2020
5.	.	05jan2020
11.	.	11jan2020
12.	.	12jan2020
18.	.	18jan2020
19.	.	19jan2020

Asserting that our omitted dates are truly omitted

```
. generate nextday = business + 1
(50 missing values generated)

. format nextday %tbnyse

. list in 1/8
```

	regdate	business	nextday
1.	01jan2020	.	.
2.	02jan2020	02jan2020	03jan2020
3.	03jan2020	03jan2020	06jan2020
4.	04jan2020	.	.
5.	05jan2020	.	.
6.	06jan2020	06jan2020	07jan2020
7.	07jan2020	07jan2020	08jan2020
8.	08jan2020	08jan2020	09jan2020

Asserting that our omitted dates are truly omitted

```
. list in 17/22
```

	regdate	business	nextday
17.	17jan2020	17jan2020	21jan2020
18.	18jan2020	.	.
19.	19jan2020	.	.
20.	20jan2020	.	.
21.	21jan2020	21jan2020	22jan2020
22.	22jan2020	22jan2020	23jan2020

But what if

- The actual day of the week that the holiday falls on varies across years
  (e.g., the Christmas holiday may be observed Friday/Monday or Monday/Tuesday depending on what day of the week the 24th falls on)

- The holidays are observed in some years, and not in others
  (e.g., some places no longer observe Columbus day)

Stata can handle these variations; see [D] Datetime business calendars creation for details.

For another introduction to business calendars, see [D] Datetime business calendars.