What’s the plan?

- Further support
- Selected content & practicalities
- FactSet basics:
  - Index constituents (= example of defining sample)
  - Financials
  - Stock prices
  - Index returns
- Eikon basics
Further support (1)

- Contact the data librarians for short questions by mail or to make an appointment: infofm@ubn.ru.nl
- Visit our office: EOS 01.545
- Always mention: topic, supervisor, sample and variables & historical timeframe
- Follow-up workshops as of 18 March (to be scheduled)
- Check our Library Guide Business and Economics! https://libguides.ru.nl/BE
Further support (2)

- **Eikon**: help (in desktop version)
- Contact with Eikon helpdesk *always* through NSM Library Team
- **FactSet**: help → online assistant
- Elaborate help-section with e-learning, tipsheets etc. or contact the data librarians or the FactSet helpdesk yourself
Selected content

FactSet and Eikon are a huge databases, with e.g.

- Aggregated accounting data & financial ratios for listed companies
- Historical stock prices, index returns, futures, options, bonds etc.
- Environmental, social and governance (CSR/ESG) data (*Eikon only!*)
- Exchange rates
- Macroeconomic data
- News, M&A, venture capital, private equity deals
- Company profiles, filings, league tables, real time data etc.
Considerations

- Both very suitable for historical time series: coverage, depends on data type – usually at least c. 15 years, for equities up to 40 years
- Eikon is most suitable for huge amounts of data however
- Mainly listed companies (non listed companies → consider Orbis)
- Mainly financial data (board related data → consider BoardEx)
- Coverage China limited (consider → CSMAR)
- M&A/event studies → modules in Eikon, FacsSet and Orbis (Zephyr)

*For FactSet and Eikon some Excel skills are required!*
Practicalities - FactSet

Access:
- Through webversion, desktop version & Excel add-in
- Available on campus (computers in MSC and Central Library) and off campus
- Account required → get one through the Library Team (infofm@ubn.ru.nl)
- Download the software on your own device
Practicalities – Eikon

Access:

- Eikon is available on 4 terminals on campus (EOS 01.570)

- Book a 2 hour timeslot (max. 4 hours a week) by sending an e-mail to infofm@ubn.ru.nl stating in the subject: ‘Eikon reservation’

- See for more details and availability the Eikon Calendar on the Library Guide Business & Economics
FactSet basics – constituents

Use the universal screening tool to create a sample, e.g. CAC 40 firms 2010-2011
FactSet basics – constituents

Define your sample in 3 steps:
1. Apply criteria
2. Add (static) variables
3. Export to Excel in order to get historical data

1a. Remove default Criteria (S&P 500)
FactSet basics – constituents

1b. Search for the indices/stock exchanges you need to get the constituents

In this case CAC 40.
1c. You get the current constituents by default. To get historical index constituents (in this case 2010) → click on the formula bar (turns yellow) → change

FG_CONSTITUENTS(180454,0,CLOSE) to FG_CONSTITUENTS(180454,1/1/2010,CLOSE)
(or the year you need)
1d. Add additional index formulas (step 1b) and change them (step 1c) to get constituents of other years

You’ll see the number of results increase as the firms are added in the bottom of the screen.
2. Once finished defining your sample → add (static) variables in the bottom of your screen and remove useless variables. Historical time series must downloaded in Excel (next)

Always add identifiers like the ISIN code!
FactSet basics – constituents

3. Export to Excel
FactSet basics – financials

Get financials

1. Make a new sheet → copy the codes in column A
FactSet basics – financials

2. Paste the copied codes transposed (right mouse click) in cell B1 of the new sheet

Add start and end dates for the years you need
3. First get the data for one firm

Open the FactSet sidebar

Select the first code with the reference cell button
FactSet basics – financials

4. Search & select the variable you need (in this case: total assets)

Select frequency etc. and use cell reference for dates and refer to the cells where you entered the dates

cells turn green with the output; click insert to finalize
5. In order to get the data for all the firms, change the formula in B6
   \[=FDS(B1;"FG\_PRICE("&B3&","&B4&")")\] to
   \[=FDS(B\$1;"FG\_PRICE("&$B\$3&","&$B\$4&")")\] and press \text{ctrl-shift-enter} (to make an array formula)

Now select all the cells with data (here B6:B7) and use the fill-handle to copy the data right for all the codes
6. FactSet does not automatically refresh the data (you get #Calc) → click ‘Refresh’
7. In order to get the data in your dataset copy the variables & the firm codes and use paste special (right mouse click) to paste transposed as values behind your data & remove all columns except the ones with the data.

Or paste transposed as values in another sheet and use VLOOKUP to connect to an already existing dataset (if the FactSet firmID’s are in there already).
8. Result

Repeat the process for your other variables

Please not you can do this only for a limited number of codes at a time, but a few hundreds should work. Otherwise use Eikon.
Same workflow (until step 6), but select a stock variable (like ‘price’). And do not paste them in your master (panel) data sheet yet and keep in vertical outlook → merge in Stata.
FactSet basics – index returns

Search for the identifier of the index (magnifying glass) \(\rightarrow\) connect with the variable you need (usually price or returns) and customize output.
Practicalities – Eikon

Eikon consists of **2 separate features / databases:**

- **an Excel add-in called ‘Thomson Reuters Datastream’,** most suitable for long term historical data

- **a ‘desktop version’,** mainly for real time data, company profiles, charting options etc.

- **The desktop version has its own Excel add-in, called ‘Thomson Reuters’**
Practicalities – Eikon

Eikon ‘desktop version’, consists of numerous apps

You can recognize it by the ‘black bar’ at the top of the screen
Eikon – financials (1)

Data retrieval from Eikon in Excel, 2 basic ways:

Static request

Or

Time series request
Eikon – financials (2)

Time series request

Choose series (e.g. companies)

Case: R&D expenses of Shell, BP and Exxon Mobile, 2014-2017
Eikon – financials (3)

Time series request

- Search for companies [red] – *search is very sensitive!*
- select as many companies as you like
- *Always search in the appropriate category!* (here: equities) [green]
- After you’re done, click ‘use’ [pink]
Eikon – financials (4)

Time series request

Choose datatypes (variables)
Time series request

- Choose as many datatypes as you like
- As long as:
  - They are in the same category as the series (here: equities)
  - Have the same interval (e.g. yearly)
  - Are not static

Eikon – financials (5)
Eikon – financials (6)

Time series request

Click on an item for a definition
Eikon – financials (7)

Time series request
Select always at least the (start) **date(s)** and the **interval**
Eikon – financials (8)

Time series request
Adjust some more (optional) – just play with it!

- Change currency
- Transpose output
- Display currency
- Embed to be able to edit it later
Time series request
Display custom header to add static variables (e.g. ISIN code, industry codes)

Make sure you choose static variables here!

And submit!
Eikon – financials (10)

Time series request
The result… R&D expenses of 3 companies, with name, SIC (=industry code), ISIN, currency and values

To edit the request -> select cell ‘Name’ (A1) and click ‘edit request’
Eikon – historical stock prices (1)

Time series request
Works more or less the same; take as many companies as you like, but:

- Take daily prices (week, month, year is no average!)
- To avoid ‘padding’ (same price on some non-trading days as day before), use P#S
Eikon – historical stock prices (2)

Time series request
Result (not transposed):

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>BP (#$) - B ROYAL DUTCH</td>
<td>SI EXXON MOBIL (#$) - EXXON MOBIL</td>
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<td>GB00B03MLX29</td>
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<td>£</td>
<td>£</td>
<td>U$</td>
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</tr>
<tr>
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<td>26,145</td>
<td>93,99</td>
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</table>
Eikon – index constituents (1)

Static request
Find series to search for the index.

Constituents are available in lists per index

Case: companies AEX, March 2012
Eikon – index constituents (2)

Static request
Search for the index (AEX) in the category *constituent lists*.
Eikon – index constituents (3)

Static request
Click on the blue code (LAMSTEOE) to select it.
(you can select multiple lists one by one)
Static request
By default you get the *current* companies on the AEX, so add month and last 2 digits of the year to the code to get the historical constituents. E.g. LAMSTEOE March 2012 = LAMSTEOE0312

Add necessary *static* datatypes: e.g. name, ISIN, mnemonic (Datastream code) etc.
Repeat for constituents each month/year, or use a request table.

Use the ISIN-codes/mnemonics to retrieve financial data.

**Interested in a workshop on how to do this?**

**Attend the support session on event studies and/or contact me/consult the Library Guide Business & Economics for upcoming workshops (starting week 12).**
Eikon – index returns (1)

Time series request
Choose an index (or multiple indices) as series in the category *equity indices*.

Case: S&P 100 and FTSE 100 daily price and return index, last 5 years.
Time series request
Choose appropriate datatypes (category *equity indices*), e.g. Return Index (RI) and Price Index (PI). Choose RI#S and PI#S to avoid padding on non-trading days.

The result:
Three things to (definitely) remember

- 2 steps: create sample & get the data
- Use Excel version Eikon/FactSet to get the historical data
- Always request identifiers (especially the ISIN-code)

ANY QUESTIONS?