

2nd set SAS assignments

For the current and the coming SAS exercises: *Get familiar with the included SAS Help function and the SAS Online Tutorial which can be found here:*

<http://www.id.unizh.ch/software/unix/statmath/sas/sasdoc/main.htm>.

1. Working with data

- i) Create a library named *saskurs* pointing to a directory of your choice.
- ii) Import the dataset `stockprices.xls` with `PROC IMPORT` into your library call it `stockprices`.

Hint `PROC IMPORT`: Use SAS help. See `PROC IMPORT Statement`. Define in the procedure `datafile`, `out` and the options `replace` and `DBMS`.

- iii) Use a data step and format the variable `DATUM` as `date8.`. Label the variables:

- DAX: DAX Index
- BAS: BASF Stock Price
- BAY: Bayer Stock Price
- HOE: Hoechst Stock Price
- CBK: Commerzbank Stock Price
- DBK: Deutsche Bank Stock Price
- DRB: Dresdner Bank Stock Price

Hint: Use a macro for labeling the stocks to avoid a too long code.

- iv) Make use of a data step to create a series of the lagged price for each stock (use function `lag()`) and calculate the log-return for each stock price series (use function `log()`). Drop the lagged prices from the dataset. **Hint:** Use a macro to avoid a too long code.

- v) Choose a return series and/or a price series and plot them. (Use `PROC GGPLOT`) **Hint:** Write a macro that is flexible regarding the plotted variable (=return or price) and the stock.
- vi) Create a data set from `stockprices` that contains the first or the last observation of each year. **Hint:** `dat_year=year(datum);` Sort the data by `datum`. Then use a data step with a `by` statement, as `by dat_year datum;` and `first.dat_year` or `last.dat_year`.
- vii) Export the data set from vi) into a `.txt` file with `PROC EXPORT`. **Hint** `PROC EXPORT`: Use SAS help. See `PROC EXPORT Statement`. Define in the procedure `DATA`, `OUTFILE` and the options `REPLACE` and `DBMS`.