## Outline:

So basically to pull the data from db I used three simple queries:
- get everything from global_data
  - *select * from global_data;*
- *check if New York is in the list*
  - *select city, country from city_list where city='New York'*
- *get city data*
  - *select * from city_data where city='New York'*

Then I exported data sets as csv files and got everything together in one sheet. All the next steps and manipulations I was doing were in Excel. To play a bit with data I created 3 "moving average" columns to show long, reasonable and short distances. As 263 years is not that much to analyze and state something about weather trends I decided to watch data in several charts: 3y-10y-100y respectively. There were several gaps over the years so I excluded blank rows and the ones, which did not have corresponding values in global or city tables.
Those years were 1746-1749 (missing data), 1743,1744,1745 (missing New York data), 1780,2014, 2015 (missing global data).
To calculate moving average I used "average" excel build-in function with 3, 10 and 100 cells range. I played with different charts in excel and I think 'marked lines' is a good choice for showing trend over long period of time as you are able to compare fluctuations at each given point. I put several labels to show rising trend on 100-Y-MA chart.

100-Y-MA

10-Y-MA

3-Y-MA
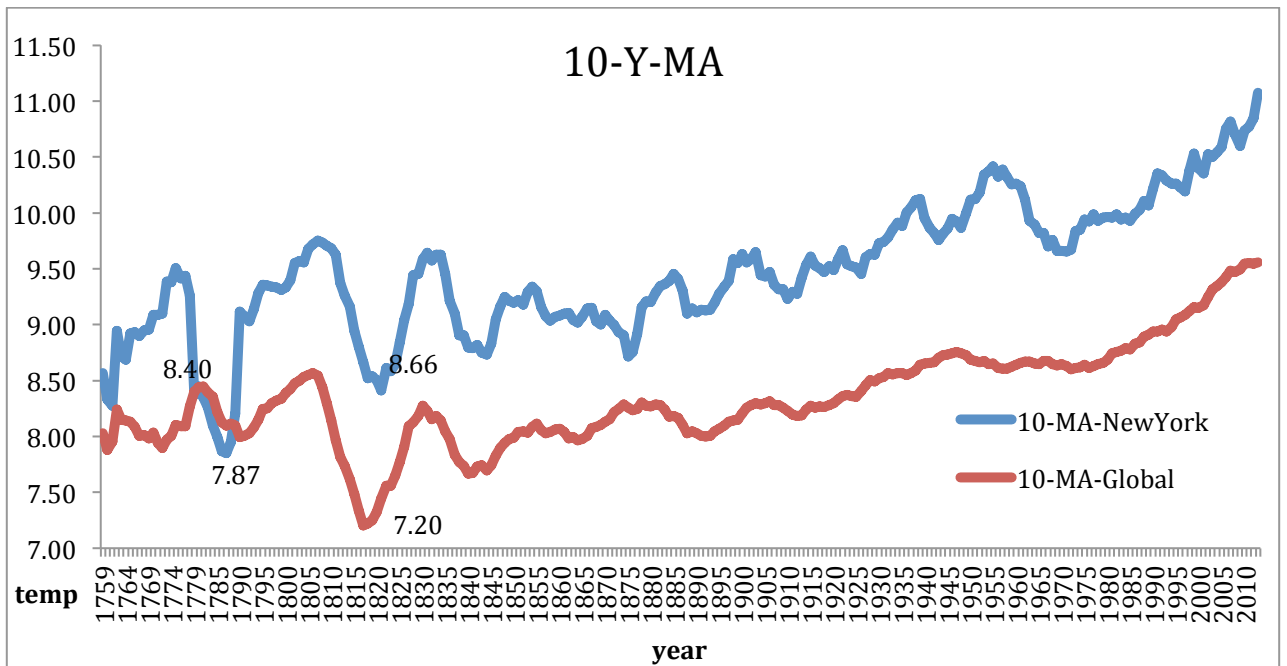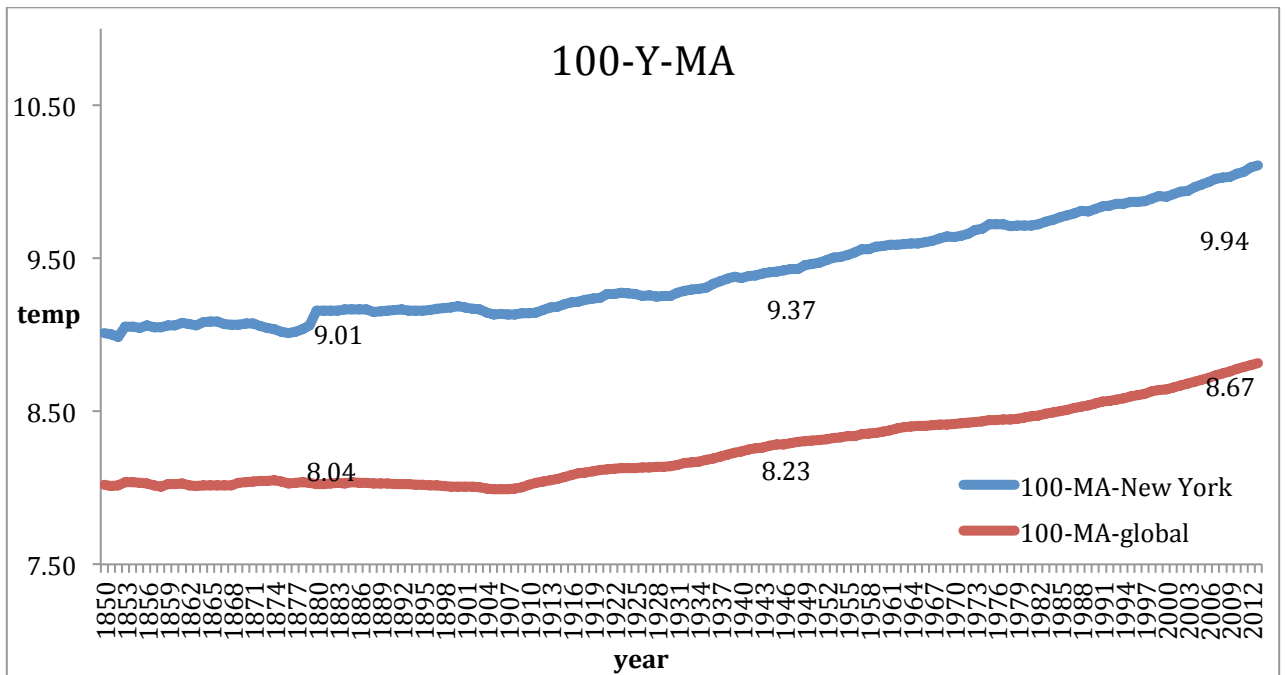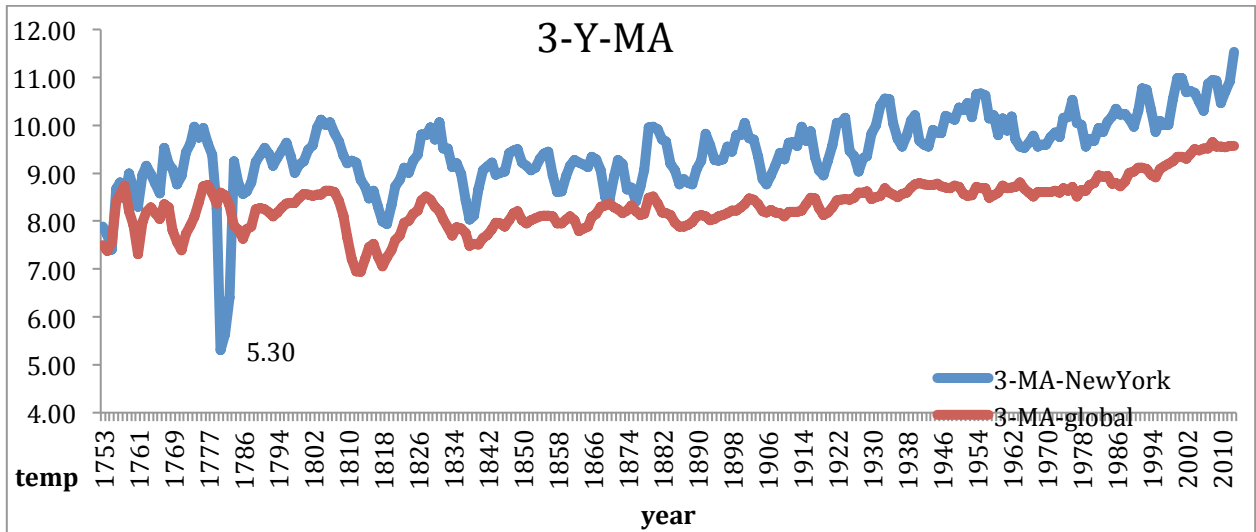
Observations:

1) Within given period of time (263 years) rising trend takes place globally and locally (New York). Global and local temperatures increase over the time.
2) Local (NY) temperature grows faster than global.
3) NY City is hotter on average than global.
4) 10 years (1778-1788) longest period where averages were closest to each other.
5) The more time goes by the lower delta becomes between high and low values on the given time frame (global trend).
6) Correlation is positive (x grows y grows). They're several places, which hard to fit but trend is positive.

Trend