# Rolling-window regressions



Thomas_mp
Occasional Contributor

Posts: 14

## Rolling-window regressions

07-01-2015 09:02 PM

Hello, The question may be confusing. Allow me to explain. I am running a regression Proc reg data= all_compus2 outest=est noprint ; ; model2 :model log_ME = log_BE In_income_positve dummy_NI_negative leverage /noprint; ; by year group ; run;; I have about 2,000 observations per year (this number changes, depending on the year); I have 50 years of data. So I have about 100,000 = 2,000x50 observations, divided- each year in 48 groups. I run the regression and keep the parameter estimates and the intercept for each regression. The tricky part is that for each year "T", I have to use observations for the prior 10 years (from "T-10" to "T-1"). For instance, for the year 2000, I have to run a regression with observations from 1990-1999; then for

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year 2001, another regression with observations in years 1991-2000; for 2002 with observations 1992-2001… etc. So I will run 40 of identical regressions (I will miss 10 years of data), one per year, using 10 years of data starting the prior year. I have to do a lop, but I do not know how. Any body has an idea how to do this in a simple way? Thank you for your help,

Message 1 of 4 (286 Views)

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Reply

Reeza
Grand Advisor

Posts: 13,554

## Re: Rolling-window regressions

07-01-2015 10:57 PM

Can you please clean up how your code is formatted?
Also, do you have a license for SAS/ETS?

Message 2 of 4 (226 Views)

0 Likes

Reply

Thomas_mp
Occasional Contributor

Posts: 14

## Re: Rolling-window regressions

07-01-2015 11:29 PM

Hello Reeza, The data consists of apprx 100,000 observations, in rows, each observation is a firm; the variables are firm- accounting characteristics observed annually; the groups identify industries. I have 50 years of data.  I need to run about 40 regressions, one regression for each year and group, using observations of the prior 10 years;  I keep the estimated coefficients and intercept for each regression to use in other analysis. The proc reg for each regression is Proc reg data= all_compus2  outest=est  noprint ; model2 :model log_ME  = log_BE ln_income_positve  dummy_NI_negative  leverage  /noprint; ; by year group ; run;; I am not sure about the SAS/ETS.  I will ask tomorrow to  technical support Thank you !!

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## Recommendations

macro for a rolling window regression

rolling window

macro for a rolling window regression

Regression over rolling windows for each company

How to make the code work in rolling window analys...

PGStats
Respected Advisor

Posts: 4,265

## Re: Rolling-window regressions

07-01-2015 11:48 PM

I would try to replicate the data to create all the required 10-year periods. Something like this:

```
%let lastYear=2014;
data expanded;
set all_compus2;
do year10 = year to year+9;
  if year10 <= &lastYear then output;
  end;
run;
proc sort data=expanded; by year10 group year; run;
Proc reg data= expanded outest=est  noprint;
model2 :model log_ME  = log_BE  ln_income_positve  dummy_NI_negative  leverage  /noprint;
by year10 group ;
run;
```

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