11th set GAUSS assignments Financial Econometrics

The GAUSS code `GAUSS_session11.prg` for this assignment sheet is based on chapter 5 and 6 of the book "Using SAS in Financial Research", written by Boehmer, Broussard, Kallunki (2002) and partly on chapter 4 of "The Econometrics of Financial Markets" from Campbell, Lo, MacKinlay (1997). The data set `returns.dat` contains the event date (`evntdate`), return data (`ret`), market return data (`mrktret`), a date variable (`dat`), a dummy variable for positive or negative earnings announcements (`evntdum`) and a firm indicator (`firm`).

1. Event study analysis (continued)

i) Write a procedure which returns several test statistics designed for event study analysis as there are:

1. $t_{Patell} = \dfrac{\overline{SCAR_i}}{\sqrt{n}}$

2. $t_{cs} = \dfrac{\overline{CAR_i}}{\widehat{Var}(\overline{CAR_i})}$

3. $t_{BMP} = \dfrac{\overline{SCAR_i}}{\widehat{Var}(\overline{SCAR_i})}$

Compare the test statistics for the $SCAR$ calculated without taking into account parameter uncertainty (column 5 in the `out` matrix)and for the "correct" $SCAR$ which takes into account parameter uncertainty (column 6 in the `out` matrix).