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. \( t_{Patell} = \frac{SCAR_i}{\sqrt{n}} \)

2. \( t_{cs} = \frac{CAR_i}{\sqrt{Var(CAR_i)}} \)

3. \( t_{BMP} = \frac{SCAR_i}{\sqrt{Var(SCAR_i)}} \)

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).