```
1    %let path=%str(C:\Users\lihon\OneDrive - Kent State University\2023Spring\crsp_or);
2    *OR_name  ;
3    ODS NOPROCTITLE;
4    options nolabel;
5    options mlogic MPRINT;
6    options cpuCount = actual;
7    options msglevel=i FULLSTIMER;
```

```
8    Options THREADS;
9
10   libname oneDrive "&path";
NOTE: Libref ONEDRIVE was successfully assigned as follows:
      Engine:        V9
      Physical Name: C:\Users\lihon\OneDrive - Kent State University\2023Spring\crsp_or
11   /*match back to the data*/
12   *OR_name
13   libname or_crsp "C:\Users\lihon\Downloads\or_crsp_merged";
14
15   libname mergback "C:\Users\lihon\Downloads\merge_back";
NOTE: Libref MERGBACK was successfully assigned as follows:
      Engine:        V9
      Physical Name: C:\Users\lihon\Downloads\merge_back

16   proc sort data = mergback.or_ee_trans_permno_rf_id NODUPKEY
17            out  = or_ee_trans_permno_rf_id_unique;
18   by rf_id ee_name or_name exec_dt ee_gvkey or_gvkey ee_country or_fic
18 ! or_country_name vreal;
19   run;

NOTE: There were 125795 observations read from the data set
      MERGBACK.OR_EE_TRANS_PERMNO_RF_ID.
NOTE: SAS sort was used.
NOTE: 946 observations with duplicate key values were deleted.
NOTE: The data set WORK.OR_EE_TRANS_PERMNO_RF_ID_UNIQUE has 124849 observations and 41
      variables.
NOTE: PROCEDURE SORT used (Total process time):
      real time            1.72 seconds
      user cpu time        0.23 seconds
      system cpu time      0.32 seconds
      memory               279166.43k
      OS Memory            289616.00k
      Timestamp            06/17/2024 11:32:32 PM
      Step Count                        1  Switch Count  0


20   PROC IMPORT OUT= WORK.assignment
```

```
21                    DATAFILE= "D:\Research\patent\data\uspto\2022\assignment.dta"
22                    DBMS=STATA REPLACE;
23    run;

NOTE: VARCHAR data type is not supported by the V9 engine. Variable cname has been
      converted to CHAR data type.
NOTE: VARCHAR data type is not supported by the V9 engine. Variable caddress_1 has been
      converted to CHAR data type.
NOTE: VARCHAR data type is not supported by the V9 engine. Variable caddress_2 has been
      converted to CHAR data type.
NOTE: VARCHAR data type is not supported by the V9 engine. Variable caddress_3 has been
      converted to CHAR data type.
NOTE: VARCHAR data type is not supported by the V9 engine. Variable caddress_4 has been
      converted to CHAR data type.
NOTE: VARCHAR data type is not supported by the V9 engine. Variable convey_text has
      been converted to CHAR data type.
NOTE: The import data set has 10046764 observations and 14 variables.
NOTE: WORK.ASSIGNMENT data set was successfully created.
NOTE: PROCEDURE IMPORT used (Total process time):
      real time            1:11.63
      user cpu time        39.01 seconds
      system cpu time      26.25 seconds
      memory               302764.90k
      OS Memory            356572.00k
      Timestamp            06/17/2024 11:38:38 PM
      Step Count                        2  Switch Count  0


24    proc sql;
25      create table or_ee_gvkey_patentid_record_dt as
26      select  a.*
27              ,record_dt
28          from or_ee_trans_permno_rf_id_unique as a
29              inner join assignment as b
30          on a.rf_id =b.rf_id;
NOTE: SAS threaded sort was used.
NOTE: Table WORK.OR_EE_GVKEY_PATENTID_RECORD_DT created, with 124849 rows and 42
      columns.
```

```
31          quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time           9.02 seconds
      user cpu time       4.26 seconds
      system cpu time     5.75 seconds
      memory              417374.09k
      OS Memory           428820.00k
      Timestamp           06/17/2024 11:39:39 PM
      Step Count                          3  Switch Count  0


32   run;

33   data  my_all_trans;
34       set or_ee_gvkey_patentid_record_dt(drop = us_grant);
35           rec_exec_days =intck('day', record_dt, exec_dt );
36           if upcase(or_country_name) NE upcase(ee_country) & not missing
36 ! (or_country_name) & not missing(ee_country)
37               then foreign = 1 ;
38           else if not missing(or_country_name) & not missing(ee_country) then
38 ! foreign = 0;
39           else   foreign = .;
40           taxdiff=or_country_tax - ee_country_tax;
41
42           if abs(taxdiff ) < 0.0021 then taxdiff = 0;
43   run;

NOTE: Missing values were generated as a result of performing an operation on missing
      values.
      Each place is given by: (Number of times) at (Line):(Column).
      62 at 35:24     3795 at 40:32   3795 at 42:12
NOTE: There were 124849 observations read from the data set
      WORK.OR_EE_GVKEY_PATENTID_RECORD_DT.
NOTE: The data set WORK.MY_ALL_TRANS has 124849 observations and 44 variables.
NOTE: DATA statement used (Total process time):
      real time           1.00 seconds
      user cpu time       0.09 seconds
```

```
       system cpu time      0.23 seconds
       memory               1355.06k
       OS Memory            14612.00k
       Timestamp            06/17/2024 11:41:37 PM
       Step Count                        4  Switch Count  0


44   data  foreign_trans; * There were 25513 observations;
45       set my_all_trans (where =( NOT missing(permno)
46                               and  foreign=1));
47
48   run;

NOTE: There were 25513 observations read from the data set WORK.MY_ALL_TRANS.
      WHERE (not MISSING(permno)) and (foreign=1);
NOTE: The data set WORK.FOREIGN_TRANS has 25513 observations and 44 variables.
NOTE: DATA statement used (Total process time):
       real time            0.36 seconds
       user cpu time        0.09 seconds
       system cpu time      0.07 seconds
       memory               1105.56k
       OS Memory            14620.00k
       Timestamp            06/17/2024 11:42:07 PM
       Step Count                        5  Switch Count  0


49   proc rank  data=foreign_trans
50             out = foreign_trans_decile groups=10;
51       var taxdiff;
52   ranks decile;
53   run;

NOTE: The data set WORK.FOREIGN_TRANS_DECILE has 25513 observations and 45 variables.
NOTE: PROCEDURE RANK used (Total process time):
       real time            0.08 seconds
       user cpu time        0.00 seconds
       system cpu time      0.06 seconds
       memory               3205.37k
```

```
      OS Memory           16916.00k
      Timestamp           06/17/2024 11:42:27 PM
      Step Count                    6  Switch Count  0


54    PROC DATASETS NOLIST;
NOTE: Writing HTML Body file: sashtml.htm
55    COPY IN = work OUT = mergback ;
56    select  foreign_trans_decile;
57    RUN;

NOTE: Copying WORK.FOREIGN_TRANS_DECILE to MERGBACK.FOREIGN_TRANS_DECILE (memtype=DATA).
INFO: Engine's block-read method is in use.
INFO: Engine's block-write  method is in use.
NOTE: There were 25513 observations read from the data set WORK.FOREIGN_TRANS_DECILE.
NOTE: The data set MERGBACK.FOREIGN_TRANS_DECILE has 25513 observations and 45
      variables.

NOTE: PROCEDURE DATASETS used (Total process time):
      real time           2:06.32
      user cpu time       0.93 seconds
      system cpu time     1.81 seconds
      memory              6600.75k
      OS Memory           18460.00k
      Timestamp           06/17/2024 11:45:57 PM
      Step Count                    7  Switch Count  1


58    data  foreign_trans_exec_record10; * There were 25513 observations;
59        set my_all_trans (where =( NOT missing(permno)
60                             and  foreign=1
61                             and 0 le rec_exec_days<5));
62    run;

NOTE: There were 1345 observations read from the data set WORK.MY_ALL_TRANS.
      WHERE (not MISSING(permno)) and (foreign=1) and (rec_exec_days>=0 and
      rec_exec_days<5);
NOTE: The data set WORK.FOREIGN_TRANS_EXEC_RECORD10 has 1345 observations and 44
```

```
          variables.
NOTE: DATA statement used (Total process time):
      real time            20.01 seconds
      user cpu time        0.21 seconds
      system cpu time      0.59 seconds
      memory               1107.31k
      OS Memory            18716.00k
      Timestamp            06/17/2024 11:46:17 PM
      Step Count                        8  Switch Count  1


63    proc rank  data=foreign_trans_exec_record10
64              out = foreign_trans_exec_record10_decile groups=10;
ERROR: Invalid data set name foreign_trans_exec_record10_decile.
65        var taxdiff;
66    ranks decile;
67    run;

NOTE: The SAS System stopped processing this step because of errors.
NOTE: PROCEDURE RANK used (Total process time):
      real time            0.11 seconds
      user cpu time        0.00 seconds
      system cpu time      0.00 seconds
      memory               184.37k
      OS Memory            27156.00k
      Timestamp            06/17/2024 11:54:59 PM
      Step Count                        9  Switch Count  0


68    proc rank  data=foreign_trans_exec_record10
69              out = foreign_trans_execrec10_decile groups=10;
70        var taxdiff;
71    ranks decile;
72    run;

NOTE: The data set WORK.FOREIGN_TRANS_EXECREC10_DECILE has 1345 observations and 45
      variables.
NOTE: PROCEDURE RANK used (Total process time):
```

```
     real time           0.01 seconds
     user cpu time       0.00 seconds
     system cpu time     0.00 seconds
     memory              2411.06k
     OS Memory           29464.00k
     Timestamp           06/17/2024 11:56:03 PM
     Step Count                       10  Switch Count  0


73   /*https://wrds-www.wharton.upenn.edu/pages/support/applications/event-studies/event
73 ! -study-research-application/*/
74
75   /* **************************************************************************** */
76   /* ********* W R D S   R E S E A R C H   A P P L I C A T I O N S ************** */
77   /* **************************************************************************** */
78   /* Program : EVTSTUDY.SAS                                                     */
79   /* Summary : Provides a sample methodology for calculating Cumulative         */
80   /*           Abnormal Returns(CARs)& Buy-Hold Abnormal Returns(BHARs)          */
81   /*           with various t-statistics (CS test, Standardized CS test&Patell Z) */
82   /*           in an event study setting. Displays the dynamics of mean CARs and */
83   /*           BHARs in the event window specified by the user                   */
84   /*                                                                            */
85   /* Date    : Sep 2011                                                         */
86   /* Author  : Denys Glushkov, WRDS                                             */
87   /* **************************************************************************** */
88
89   /* STEP 1A: Speficify the parameters necessary to run the event study such as  */
90   /* the length of estimation period and event window, gap b/w estimation & event */
91   /* window, etc                                                                */
92   *%libname mycrsp "C:\Users\hli5\OneDrive - Kent State University\aaaa\event_Study";
93   libname mycrsp "C:\Users\lihon\patent Dropbox\Victor Li\wrds_data";
NOTE: Libref MYCRSP was successfully assigned as follows:
     Engine:        V9
     Physical Name: C:\Users\lihon\patent Dropbox\Victor Li\wrds_data
94   * libname evtstudy "C:\Users\lihon\OneDrive - Kent State
94 ! University\aaaa\event_Study\June6_res";
95   %let outputPath=%str(C:\Users\lihon\OneDrive - Kent State
95 ! University\aaaa\event_Study\result);
```

```
96    libname evtstudy "&outputPath\Foreign_rec_exe10";
NOTE: Libref EVTSTUDY was successfully assigned as follows:
      Engine:        V9
      Physical Name: C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\Foreign_rec_exe10
97    %let crsp=mycrsp; /*CRSP libary to be used (CRSPQ - quarterly, CRSP-annual update
97 ! */
98    %let estper=150; /*Length of the estimation period in trading days over which    */
99                    /*the risk model is estimated                                    */
100
101   %let start=-2; /*Beginning of the event window (wtr to the event date,e.g. -2)   */
102   %let end=2;    /*End of the event window (relative to the event date, e.g., +1)  */
103   %let gap=66;   /*Length of pre-event window,i.e., number of trading days b/w      */
104                    /*the end of estimation period and the start of the event window */
105
106   %let minest=70; /*Minimum of non-missing returns required for estimation        */
107   %let evtwin=%eval(&end-&start+1);       /*length of event window in trading days */
108
109   /* STEP 1B: As an example, create the input table containing Permno-event dates  */
110   /* corresponding to the stock additions to and deletions from S&P 500 index      */
111
112
113   *  %event_crack(relation_exec) ;
114   * %let permno_list=relation_exec;
115   *%let permno_list=foreign_relation;
116   * %let permno_list=for_event_study_v2;
117   * %let permno_list=oree_gvkey_patentid_record_dtv2;
118   %let permno_list=foreign_trans_exec_record10
119
120   /*- %macro event_crack(permno_list, evt_date=exec_dt); */
121
122   proc sql;
123     create table input
         ------
         180
ERROR 180-322: Statement is not valid or it is used out of proper order.
124     as select distinct permno, record_dt as edate format MMDDYY10.
125     from &permno_list where not missing(&start) and year(record_dt);
```

```
126  quit;
127
128  /* STEP 2. Creating Trading Calendar that accounts for the presence of  */
129  /* weekends, holidays and other non-trading days in the estimation      */
130  /* and event windows                                                    */
131  data caldates;
132
133   merge &crsp..dsi(keep=date rename=(date=estper_beg))
134     &crsp..dsi(keep=date firstobs=&estper rename=(date=estper_end))
135     &crsp..dsi(keep=date firstobs=%eval(&estper+&gap+1) rename=(date=evtwin_beg))
136     &crsp..dsi(keep=date firstobs=%eval(&estper+&gap-&start+1)
136! rename=(date=evtdate))
137     &crsp..dsi(keep=date firstobs=%eval(&estper+&gap+&evtwin)
137! rename=(date=evtwin_end));
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the
file encoding does not match the session encoding. Cross Environment Data Access will
be used, which might require additional CPU resources and might reduce performance.
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the
file encoding does not match the session encoding. Cross Environment Data Access will
be used, which might require additional CPU resources and might reduce performance.
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the
file encoding does not match the session encoding. Cross Environment Data Access will
be used, which might require additional CPU resources and might reduce performance.
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the
file encoding does not match the session encoding. Cross Environment Data Access will
be used, which might require additional CPU resources and might reduce performance.
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the
file encoding does not match the session encoding. Cross Environment Data Access will
be used, which might require additional CPU resources and might reduce performance.
138
139    format estper_beg estper_end evtwin_beg evtdate evtwin_end date9.;
140    label  estper_beg='Start of the Estimation Window'
141           estper_end='End of the Estimation Window'
142           evtwin_beg='Start of the Event Window'
143           evtwin_end='End of the Event Window'
144           evtdate='Event Date';
145    index+1;
```

```
146      if nmiss(estper_beg,estper_end,evtwin_beg,evtwin_end,evtdate)=0;
147   run;

NOTE: There were 25799 observations read from the data set MYCRSP.DSI.
NOTE: There were 25650 observations read from the data set MYCRSP.DSI.
NOTE: There were 25583 observations read from the data set MYCRSP.DSI.
NOTE: There were 25581 observations read from the data set MYCRSP.DSI.
NOTE: There were 25579 observations read from the data set MYCRSP.DSI.
NOTE: The data set WORK.CALDATES has 25579 observations and 6 variables.
NOTE: DATA statement used (Total process time):
      real time             0.14 seconds
      user cpu time         0.06 seconds
      system cpu time       0.00 seconds
      memory                1698.40k
      OS Memory             29460.00k
      Timestamp             06/18/2024 12:31:48 AM
      Step Count                        11  Switch Count  0


148
149   /*STEP 3: If event date is a non-trading day*/
150   /*       select the closest trading day that*/
151   /* follows the event day                                          */
152   proc sql;
152!         create table temp
153    as select a.permno
154              ,b.*
155      from input a
156         left join
157         caldates b
158      on b.evtdate-a.edate>=0
159      group by a.edate
160      having (b.evtdate-a.edate)=min(b.evtdate-a.edate);
ERROR: File WORK.INPUT.DATA does not exist.
161
162
163    /*Returns for sample securities around the event dates */
NOTE: The SAS System stopped processing this step because of errors.
```

```
NOTE: PROCEDURE SQL used (Total process time):
      real time           0.00 seconds
      user cpu time       0.00 seconds
      system cpu time     0.00 seconds
      memory              311.03k
      OS Memory           29716.00k
      Timestamp           06/18/2024 12:31:48 AM
      Step Count                      12  Switch Count  0



164    proc sql;
165    create table evtrets_temp
166    as select a.permno, a.date format date9., a.ret as ret1,
167             b.evtdate, b.estper_beg, b.estper_end,
168             b.evtwin_beg, b.evtwin_end
169    from &crsp..dsf a, temp b
170    where a.permno=b.permno and b.estper_beg<=a.date<=b.evtwin_end;
INFO: Data file MYCRSP.DSF.DATA is in a format that is native to another host, or the
file encoding does not match the session encoding. Cross Environment Data Access will
be used, which might require additional CPU resources and might reduce performance.
ERROR: File WORK.TEMP.DATA does not exist.
171    quit;
NOTE: The SAS System stopped processing this step because of errors.
NOTE: PROCEDURE SQL used (Total process time):
      real time           0.01 seconds
      user cpu time       0.00 seconds
      system cpu time     0.00 seconds
      memory              676.15k
      OS Memory           29716.00k
      Timestamp           06/18/2024 12:31:48 AM
      Step Count                      13  Switch Count  0


172    /* Merge in the risk factors                                    */
173    /* User can create her own risk factors and use it instead of FF+M ones*/



174    proc sql;
```

```
175   create view evtrets1
176     as select a.*, (b.mktrf+b.rf) as mkt, b.mktrf, b.rf,b.smb, b.hml, b.umd
177     from evtrets_temp a left join
178         &crsp..ff_factors_daily (keep=date mktrf smb hml umd rf) b
179     on a.date=b.date;
NOTE: SQL view WORK.EVTRETS1 has been defined.
180      quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time              0.01 seconds
      user cpu time          0.00 seconds
      system cpu time        0.01 seconds
      memory                 102.34k
      OS Memory              29716.00k
      Timestamp              06/18/2024 12:31:48 AM
      Step Count                       14  Switch Count  0


181   /*Bring in delisting returns*/
182      proc sql;
183   create table evtrets (drop=ret1 where=(not missing(mkt)))
184     as select a.*,
185     (1+a.ret1)*sum(1,b.dlret)-1-a.mkt as exret label='Market-adjusted total ret',
186     (1+a.ret1)*sum(1,b.dlret)-1 as ret "Ret adjusted for delisting"
187     from evtrets1 a left join &crsp..dsedelist (where=(missing(dlret)=0)) b
188     on a.permno=b.permno and a.date=b.dlstdt
189   order by a.permno,a.evtdate,a.date;
ERROR: File WORK.EVTRETS_TEMP.DATA does not exist.
INFO: Data file MYCRSP.FF_FACTORS_DAILY.DATA is in a format that is native to another
host, or the file encoding does not match the session encoding. Cross Environment Data
Access will be used, which might require additional CPU resources and might reduce
performance.
INFO: Data file MYCRSP.DSEDELIST.DATA is in a format that is native to another host, or
the file encoding does not match the session encoding. Cross Environment Data Access
will be used, which might require additional CPU resources and might reduce performance.
190  quit;
NOTE: The SAS System stopped processing this step because of errors.
NOTE: PROCEDURE SQL used (Total process time):
      real time              0.04 seconds
```

       user cpu time   0.01 seconds
       system cpu time   0.01 seconds
       memory   1287.50k
       OS Memory   29972.00k
       Timestamp   06/18/2024 12:31:48 AM
       Step Count   15   Switch Count   0

191
192   /* STEP 4. Estimating Factor Exposures over the estimation period*/

193   proc printto log=junk; run;

NOTE: PROCEDURE PRINTTO used (Total process time):
       real time   0.00 seconds
       user cpu time   0.00 seconds
       system cpu time   0.00 seconds
       memory   6.68k
       OS Memory   29972.00k
       Timestamp   06/18/2024 12:31:48 AM
       Step Count   18   Switch Count   0

204
205
206   /* STEP 5. Calculating Abnormal Returns for all models */
207   /* for each trading day in the event window   */
208   data abrets1/view=abrets1; merge
209   evtrets(where=(evtwin_beg<=date<=evtwin_end) in=in_evtrets)
210   params (where=(_model_='eq0')
211   keep=permno evtdate _model_ _rmse_ _p_ _edf_
212   rename=(_rmse_=std0 _p_=p0 _edf_=edf0))
213
214   params (where=(_model_='eq1')
215   keep=permno evtdate _model_ _rmse_ intercept mktrf
216   rename=(_rmse_=std1 intercept=alpha1 mktrf=beta1))
217
218   params (where=(_model_='eq2')

```
219        keep=permno evtdate _model_ _rmse_ intercept mktrf smb hml
220        rename=(_rmse_=std2 intercept=alpha2 mktrf=beta2 smb=sminb2 hml=hminl2))
221
222    params (where=(_model_='eq3')
223        keep=permno evtdate _model_ _rmse_ intercept mktrf smb hml umd
224        rename=(_rmse_=std3 intercept=alpha3 mktrf=beta3 smb=sminb3 hml=hminl3
224! umd=umind3));
ERROR: File WORK.EVTRETS.DATA does not exist.
ERROR: Variable _rmse_ is not on file WORK.PARAMS.
ERROR: Variable _p_ is not on file WORK.PARAMS.
ERROR: Variable _edf_ is not on file WORK.PARAMS.
ERROR: Invalid DROP, KEEP, or RENAME option on file WORK.PARAMS.
ERROR: Variable _rmse_ is not on file WORK.PARAMS.
ERROR: Variable intercept is not on file WORK.PARAMS.
ERROR: Variable mktrf is not on file WORK.PARAMS.
ERROR: Invalid DROP, KEEP, or RENAME option on file WORK.PARAMS.
ERROR: Variable _rmse_ is not on file WORK.PARAMS.
ERROR: Variable intercept is not on file WORK.PARAMS.
ERROR: Variable mktrf is not on file WORK.PARAMS.
ERROR: Variable smb is not on file WORK.PARAMS.
ERROR: Variable hml is not on file WORK.PARAMS.
ERROR: Invalid DROP, KEEP, or RENAME option on file WORK.PARAMS.
ERROR: Variable _rmse_ is not on file WORK.PARAMS.
ERROR: Variable intercept is not on file WORK.PARAMS.
ERROR: Variable mktrf is not on file WORK.PARAMS.
ERROR: Variable smb is not on file WORK.PARAMS.
ERROR: Variable hml is not on file WORK.PARAMS.
ERROR: Variable umd is not on file WORK.PARAMS.
ERROR: Invalid DROP, KEEP, or RENAME option on file WORK.PARAMS.
225    by permno evtdate;
226
227    retain missret;
228    if first.permno then missret=missing(ret);
229    if missing(ret) then missret+1; /*count number of missing returns*/
230
231    var0=std0**2;
232    var1=std1**2;
233    var2=std2**2;
```

```
234    var3=std3**2;
235
236    abret0  = exret; *extra over market;
237    expret1 = alpha1 + beta1*mktrf;  *CAPM;
238    abret1  = ret-expret1;
239
240    expret2 = alpha2+beta2*mktrf+sminb2*smb+hminl2*hml; *FF3factor;
241    abret2=ret-expret2;
242
243    expret3 =alpha3+beta3*mktrf+sminb3*smb+hminl3*hml+umind3*umd;
244    abret3=ret-expret3;
245
246    nobs=p0+edf0;  /*number of observations used in estimation*/
247    drop p0 edf0 estper_beg estper_end std0 std1 std2 std3 _model_ exret;
248    if in_evtrets and nobs>&minest;
249    * I add the followings;
250    if nobs=150;
251  run;

NOTE: The SAS System stopped processing this step because of errors.
NOTE: DATA statement used (Total process time):
      real time           0.00 seconds
      user cpu time       0.00 seconds
      system cpu time     0.00 seconds
      memory              767.28k
      OS Memory           30232.00k
      Timestamp           06/18/2024 12:31:48 AM
      Step Count                    19  Switch Count  0


252
253  /* Transform dates to event time using CRSP Trading Calendar     */
254  /* Using the latter takes into account non-consecutive date records*/
255  /* do not use lag to avoid non-consecutive date records*/
256  proc sql;
257    create table abrets
258      as select a.*, (b.index-c.index) as evttime
259      from          abrets1 a
```

```
260          left join  caldates b
261       on a.date    = b.evtdate
262          left join caldates c
263      on a.evtdate = c.evtdate
264      order by permno, evtdate, date;
ERROR: File WORK.ABRETS1.DATA does not exist.
265  quit;
NOTE: The SAS System stopped processing this step because of errors.
NOTE: PROCEDURE SQL used (Total process time):
      real time           0.00 seconds
      user cpu time       0.00 seconds
      system cpu time     0.00 seconds
      memory              464.50k
      OS Memory           29972.00k
      Timestamp           06/18/2024 12:31:48 AM
      Step Count                       20  Switch Count  0


266
267  /*
268  proc contents data=abrets short varnum;
269  run;
270  */


271  proc sort data=abrets   nodupkey;
ERROR: File WORK.ABRETS.DATA does not exist.
272    by PERMNO evtdate DATE
273       evtwin_beg evtwin_end
274       mkt mktrf rf smb hml umd ret
275       alpha1 beta1
276       alpha2 beta2 sminb2 hminl2
277       alpha3 beta3 sminb3 hminl3 umind3
278       missret var0 var1 var2 var3
279       abret0 expret1 abret1 expret2 abret2 expret3 abret3 nobs evttime ;
280  run;

NOTE: The SAS System stopped processing this step because of errors.
NOTE: PROCEDURE SORT used (Total process time):
```

```
      real time            0.00 seconds
      user cpu time        0.00 seconds
      system cpu time      0.00 seconds
      memory               19.03k
      OS Memory            29972.00k
      Timestamp            06/18/2024 12:31:48 AM
      Step Count                       21  Switch Count  0
```

```
281
282  /* 673   proc sql;
283  674      create table abrets as
284  675      select distinct * from abrets;
285  WARNING: This CREATE TABLE statement recursively references the target table. A
285! consequence of this
286           is a possible data integrity problem.
287  NOTE: Table WORK.ABRETS created, with 253797 rows and 37 columns.
288
289    */
290  /* Calculating Rolling Cumulative Abnormal Returns and various stats */
291  /* Transformout= calculates cumulative product of gross returns and  */
292  /* subtracts 1 to arrive at the total net cumulative return        */


293  proc expand data=abrets
294              out=car  /* Cumulative returns*/
ERROR: File WORK.ABRETS.DATA does not exist.
295              method=none;
296    by permno evtdate;
297    id date;
298    convert ret=cret/transformout=(+1 cuprod -1);        /*actural cumulative
298! return from CRSP*/
ERROR: No data set open to look up variables.
299    convert mkt=cmkt/transformout=(+1 cuprod -1);        /*cumulative  market
299! return*/
ERROR: No data set open to look up variables.
300
301    /*cumulative market model return: expret1= alpha1 + beta1*mktrf; */
302    convert expret1 =cexpret1 /transformout=(+1 cuprod -1);
```

```
ERROR: No data set open to look up variables.
303
304    /*expret2 = alpha2+ beta2*mktrf+ sminb2*smb+ hminl2*hml; */
305    convert expret2 =cexpret2 /transformout=(+1 cuprod -1); /*cumulative FF-3 factor
305! return */
ERROR: No data set open to look up variables.
306
307    /*  expret3 =alpha3+beta3*mktrf+sminb3*smb+hminl3*hml+umind3*umd; */
308    convert expret3 =cexpret3 /transformout=(+1 cuprod -1);/*cumulative FF-4 factor
308! return */
ERROR: No data set open to look up variables.
309
310    convert abret0=car0/transformout=(sum);
ERROR: No data set open to look up variables.
311    convert abret1=car1/transformout=(sum);
ERROR: No data set open to look up variables.
312    convert abret2=car2/transformout=(sum);
ERROR: No data set open to look up variables.
313    convert abret3=car3/transformout=(sum);
ERROR: No data set open to look up variables.
314  run;

NOTE: The SAS System stopped processing this step because of errors.
WARNING: The data set WORK.CAR may be incomplete.  When this step was stopped there
         were 0 observations and 0 variables.
NOTE: PROCEDURE EXPAND used (Total process time):
      real time           0.01 seconds
      user cpu time       0.00 seconds
      system cpu time     0.00 seconds
      memory              175.59k
      OS Memory           29972.00k
      Timestamp           06/18/2024 12:31:49 AM
      Step Count                        22  Switch Count  0


315  /*
316  proc contents data =car;
317
318
```

```
319  proc contents data =car;
320  ods select  Variables;
321  run;
322  */
323
324
325  /* Car_Evtdate Table: */
326  /* the cross-sectional output that contains for each       */
327  /* "firm-event date":                                                   */
328  /*   1) CAR, BHAR, and SCAR (standardized CAR)                          */
329  /*   2) Alpha and Beta from the estimation period                      */
330  /*   3) Estimation period variance                                     */
331
332  /* Car_Evtwin Table contains Raw, Abnormal, Std. and Buy-and-Hold Abnormal  */
333  /* Daily Returns "firm-date" in event time                             */


334  proc printto log=junk;run;
```

NOTE: PROCEDURE PRINTTO used (Total process time):
      real time   0.00 seconds
      user cpu time   0.00 seconds
      system cpu time   0.00 seconds
      memory   5.71k
      OS Memory   30228.00k
      Timestamp   06/18/2024 12:31:49 AM
      Step Count   25 Switch Count 0

```
372
373  /*Put Cross-sectional and aggregate results together for further analysis*/
374  data allcars;
375      merge
376    car_evtwin
377          (rename=(bhar0=bhar0win
378                   bhar1=bhar1win
379                   bhar2=bhar2win
380                   bhar3=bhar3win
```

```
381                     car0=car0win
382          car1=car1win
383          car2=car2win
384          car3=car3win
385          cret=cretwin))
386    car_evtdate;
387   by permno evtdate;
388   run;
```

ERROR: BY variable permno is not on input data set WORK.CAR_EVTWIN.
ERROR: BY variable evtdate is not on input data set WORK.CAR_EVTWIN.
ERROR: BY variable permno is not on input data set WORK.CAR_EVTDATE.
ERROR: BY variable evtdate is not on input data set WORK.CAR_EVTDATE.
NOTE: The SAS System stopped processing this step because of errors.
WARNING: The data set WORK.ALLCARS may be incomplete. When this step was stopped there
         were 0 observations and 38 variables.
NOTE: DATA statement used (Total process time):
      real time   0.00 seconds
      user cpu time   0.00 seconds
      system cpu time   0.00 seconds
      memory   751.87k
      OS Memory   30228.00k
      Timestamp   06/18/2024 12:31:49 AM
      Step Count   26 Switch Count 0


```
389
390   /* STEP 6: Compute Cumulative Average Abnormal Return (CAR_MEAN) */
391   /* and Average Buy-Hold Abnormal Return (BHAR_MEAN)              */
392   /* and other stats across all distinct events                   */
393   * proc means data=allcars noprint;
394   proc means data=allcars( where = (nobs=150)) noprint;
395     class evttime; id nobs;
```
ERROR: Variable EVTTIME not found.
```
396     var ret cret
```
ERROR: Variable RET not found.
```
397     car0 car1 car2 car3
398     bhar0 bhar1 bhar2 bhar3
```

```
399    bhar0win bhar1win bhar2win bhar3win
400    cretwin
401    car0win car1win car2win car3win
402    scar0 scar1 scar2 scar3
403    abret0 abret1 abret2 abret3
404    sar0 sar1 sar2 sar3
405    pat_scale;
406    output out=allstats
407    mean =
408       n =
409       t =
410     sum =/autoname;
411  run;
```

```
412
413  /*calculate different stats for assessing    */
414  /*statistical signficance of abnormal returns*/


415  data MA_Evtdate (keep=evttime car0_n cret_mean car0_mean car0_t scar0_t
416                   bhar0_mean pat_car0 model)
417      MM_Evtdate (keep=evttime car1_n cret_mean car1_mean car1_t scar1_t
418                   bhar1_mean pat_car1 model )
419      FF_Evtdate (keep=evttime car2_n cret_mean car2_mean car2_t scar2_t
420                   bhar2_mean pat_car2 model )
421        FFM_Evtdate (keep=evttime car3_n cret_mean car3_mean car3_t scar3_t
```

```
422                    bhar3_mean pat_car3 model )
423     MA_Evtwin  (keep=evttime cretwin_mean abret0_n ret_mean abret0_mean
424                  car0win_mean bhar0win_mean abret0_t sar0_t pat_ar0 )
425     MM_Evtwin  (keep=evttime cretwin_mean abret1_n ret_mean abret1_mean
426                  car1win_mean bhar1win_mean abret1_t sar1_t pat_ar1 )
427     FF_Evtwin  (keep=evttime cretwin_mean abret2_n ret_mean abret2_mean
428                  car2win_mean bhar2win_mean abret2_t sar2_t pat_ar2 )
429     FFM_Evtwin (keep=evttime cretwin_mean abret3_n ret_mean abret3_mean
430                  car3win_mean bhar3win_mean abret3_t sar3_t pat_ar3 );
431  set allstats;
432  by evttime;
433    if _n_=1 and missing(evttime) then do;
434    abret0_mean=.;
435    abret1_mean=.;
436    abret2_mean=.;
437    abret3_mean=.;
438    cretwin_mean=0;
439    ret_mean=.;
440    bhar1win_mean=0;
441    bhar1win_mean=0;
442    bhar2win_mean=0;
443    bhar3win_mean=0;
444    end;
445    /*Patell Z statistics*/
446    pat_car0=scar0_mean/(sqrt(pat_scale_sum)/scar0_n);
447    pat_car1=scar1_mean/(sqrt(pat_scale_sum)/scar1_n);
448    pat_car2=scar2_mean/(sqrt(pat_scale_sum)/scar2_n);
449    pat_car3=scar3_mean/(sqrt(pat_scale_sum)/scar3_n);
450    pat_ar0=sar0_mean/(sqrt(pat_scale_sum)/sar0_n);
451    pat_ar1=sar1_mean/(sqrt(pat_scale_sum)/sar1_n);
452    pat_ar2=sar2_mean/(sqrt(pat_scale_sum)/sar2_n);
453    pat_ar3=sar3_mean/(sqrt(pat_scale_sum)/sar3_n);
454  label
455    pat_ar0=       'Patell Z for AR_MA'  pat_ar1=       'Patell Z for AR_MM'
456    pat_ar2=       'Patell Z for AR_FF'  pat_ar3=       'Patell Z for AR_FFM'
457    abret0_t=      'CS t-stat, AR_MA'    abret1_t=      'CS t-stat, AR_MM'
458    abret2_t=      'CS t-stat, AR_FF'    abret3_t=      'CS t-stat, AR_FFM'
459    sar0_t=        'Std CS test, AR_MA'  sar1_t=        'Std CS test, AR_MM'
```

```
460     sar2_t=         'Std CS test, AR_FF'  sar3_t=         'Std CS test, AR_FFM'
461     abret0_mean=    'Mean AR_MA'          abret1_mean=    'Mean AR_MM'
462     abret2_mean=    'Mean AR_FF'          abret3_mean=    'Mean AR_FFM'
463     car0_n=         'Number of events in the portfolio'
464     abret0_n=       'Number of events in the portfolio'
465     evttime=        'Event Time t'
466     cret_mean=      "Mean CTR (&start, &end)"
467     cretwin_mean=   "Mean CTR (&start,t) "
468     car0win_mean=   "Average CAR_MA (&start, t)"
469     car1win_mean=   "Average CAR_MM (&start, t)"
470     car2win_mean=   "Average CAR_FF (&start, t)"
471     car3win_mean=   "Average CAR_FFM (&start, t)"
472    bhar0win_mean= "Mean BHAR_MA (&start, t)"
473    bhar1win_mean=  "Mean BHAR_MM (&start, t)"
474    bhar2win_mean= "Mean BHAR_FF (&start, t)"
475    bhar3win_mean=  "Mean BHAR_FFM (&start, t)"
476  ;
477    format ret_mean cret_mean abret0_mean abret1_mean abret2_mean abret3_mean
478          car0_mean car1_mean car2_mean car3_mean bhar0_mean bhar1_mean
479          bhar2_mean bhar3_mean cretwin_mean
480          bhar0win_mean bhar1win_mean bhar2win_mean bhar3win_mean
481          car0win_mean car1win_mean car2win_mean car3win_mean
482       percent7.4
483          abret0_t abret1_t abret2_t abret3_t sar0_t sar1_t sar2_t sar3_t
484          pat_car0 pat_car1 pat_car2 pat_car3 pat_ar0 pat_ar1 pat_ar2 pat_ar3
485          car0_t car1_t car2_t car3_t scar0_t scar1_t scar2_t scar3_t
486       comma10.2;
487   if evttime=0 then do; model='Market-Adjusted'; output MA_Evtdate;
488                         model='Market Model';    output MM_Evtdate;
489                         model='FF Model';        output FF_Evtdate;
490                         model='Carhart Model';   output FFM_Evtdate;
491                 end;
492   if missing(evttime) then evttime=&start-1;
493   output MA_Evtwin;
494   output MM_Evtwin;
495   output FF_Evtwin;
496   output FFM_Evtwin;
497  run;
```

```
NOTE: Variable pat_scale_sum is uninitialized.
NOTE: Variable scar0_n is uninitialized.
NOTE: Variable scar0_mean is uninitialized.
NOTE: Variable scar1_n is uninitialized.
NOTE: Variable scar1_mean is uninitialized.
NOTE: Variable scar2_n is uninitialized.
NOTE: Variable scar2_mean is uninitialized.
NOTE: Variable scar3_n is uninitialized.
NOTE: Variable scar3_mean is uninitialized.
NOTE: Variable sar0_n is uninitialized.
NOTE: Variable sar0_mean is uninitialized.
NOTE: Variable sar1_n is uninitialized.
NOTE: Variable sar1_mean is uninitialized.
NOTE: Variable sar2_n is uninitialized.
NOTE: Variable sar2_mean is uninitialized.
NOTE: Variable sar3_n is uninitialized.
NOTE: Variable sar3_mean is uninitialized.
NOTE: Variable abret0_t is uninitialized.
NOTE: Variable abret1_t is uninitialized.
NOTE: Variable abret2_t is uninitialized.
NOTE: Variable abret3_t is uninitialized.
NOTE: Variable sar0_t is uninitialized.
NOTE: Variable sar1_t is uninitialized.
NOTE: Variable sar2_t is uninitialized.
NOTE: Variable sar3_t is uninitialized.
NOTE: Variable car0_n is uninitialized.
NOTE: Variable abret0_n is uninitialized.
NOTE: Variable cret_mean is uninitialized.
NOTE: Variable car0win_mean is uninitialized.
NOTE: Variable car1win_mean is uninitialized.
NOTE: Variable car2win_mean is uninitialized.
NOTE: Variable car3win_mean is uninitialized.
NOTE: Variable bhar0win_mean is uninitialized.
NOTE: Variable car0_mean is uninitialized.
NOTE: Variable car1_mean is uninitialized.
NOTE: Variable car2_mean is uninitialized.
NOTE: Variable car3_mean is uninitialized.
```

```
NOTE: Variable bhar0_mean is uninitialized.
NOTE: Variable bhar1_mean is uninitialized.
NOTE: Variable bhar2_mean is uninitialized.
NOTE: Variable bhar3_mean is uninitialized.
NOTE: Variable car0_t is uninitialized.
NOTE: Variable car1_t is uninitialized.
NOTE: Variable car2_t is uninitialized.
NOTE: Variable car3_t is uninitialized.
NOTE: Variable scar0_t is uninitialized.
NOTE: Variable scar1_t is uninitialized.
NOTE: Variable scar2_t is uninitialized.
NOTE: Variable scar3_t is uninitialized.
ERROR: BY variable evttime is not on input data set WORK.ALLSTATS.
WARNING: The variable car0_n in the DROP, KEEP, or RENAME list has never been
         referenced.
WARNING: The variable car1_n in the DROP, KEEP, or RENAME list has never been
         referenced.
WARNING: The variable car2_n in the DROP, KEEP, or RENAME list has never been
         referenced.
WARNING: The variable car3_n in the DROP, KEEP, or RENAME list has never been
         referenced.
WARNING: The variable abret0_n in the DROP, KEEP, or RENAME list has never been
         referenced.
WARNING: The variable abret1_n in the DROP, KEEP, or RENAME list has never been
         referenced.
WARNING: The variable abret2_n in the DROP, KEEP, or RENAME list has never been
         referenced.
WARNING: The variable abret3_n in the DROP, KEEP, or RENAME list has never been
         referenced.
NOTE: The SAS System stopped processing this step because of errors.
WARNING: The data set WORK.MA_EVTDATE may be incomplete.  When this step was stopped
         there were 0 observations and 8 variables.
WARNING: The data set WORK.MM_EVTDATE may be incomplete.  When this step was stopped
         there were 0 observations and 8 variables.
WARNING: The data set WORK.FF_EVTDATE may be incomplete.  When this step was stopped
         there were 0 observations and 8 variables.
WARNING: The data set WORK.FFM_EVTDATE may be incomplete.  When this step was stopped
         there were 0 observations and 8 variables.
```

WARNING: The data set WORK.MA_EVTWIN may be incomplete. When this step was stopped
         there were 0 observations and 9 variables.
WARNING: The data set WORK.MM_EVTWIN may be incomplete. When this step was stopped
         there were 0 observations and 9 variables.
WARNING: The data set WORK.FF_EVTWIN may be incomplete. When this step was stopped
         there were 0 observations and 9 variables.
WARNING: The data set WORK.FFM_EVTWIN may be incomplete. When this step was stopped
         there were 0 observations and 9 variables.
NOTE: DATA statement used (Total process time):
      real time   0.06 seconds
      user cpu time   0.00 seconds
      system cpu time   0.01 seconds
      memory   2089.62k
      OS Memory   32020.00k
      Timestamp   06/18/2024 12:31:49 AM
      Step Count   28 Switch Count 0

498
499 /* STEP 7. Putting Event Date CARs and BHARS for various risk models together*/
500 data allevtdate; set
501   MA_Evtdate (rename=(car0_mean=car_mean bhar0_mean=bhar_mean
502   car0_n=n car0_t=car_t scar0_t=scar_t pat_car0=pat_car))
503   MM_Evtdate (rename=(car1_mean=car_mean bhar1_mean=bhar_mean
504   car1_n=n car1_t=car_t scar1_t=scar_t pat_car1=pat_car))
505   FF_Evtdate (rename=(car2_mean=car_mean bhar2_mean=bhar_mean
506   car2_n=n car2_t=car_t scar2_t=scar_t pat_car2=pat_car))
507   FFM_evtdate (rename=(car3_mean=car_mean bhar3_mean=bhar_mean
508   car3_n=n car3_t=car_t scar3_t=scar_t pat_car3=pat_car));
ERROR: Variable car0_n is not on file WORK.MA_EVTDATE.
ERROR: Invalid DROP, KEEP, or RENAME option on file WORK.MA_EVTDATE.
ERROR: Variable car1_n is not on file WORK.MM_EVTDATE.
ERROR: Invalid DROP, KEEP, or RENAME option on file WORK.MM_EVTDATE.
ERROR: Variable car2_n is not on file WORK.FF_EVTDATE.
ERROR: Invalid DROP, KEEP, or RENAME option on file WORK.FF_EVTDATE.
ERROR: Variable car3_n is not on file WORK.FFM_EVTDATE.
ERROR: Invalid DROP, KEEP, or RENAME option on file WORK.FFM_EVTDATE.
509   length=&evtwin;

```
510    label pat_car=    'Patell Z'
511          car_mean=   "Mean CAR (&start, &end)"
512          bhar_mean=  "Mean BHAR (&start, &end)"
513          car_t=      'Cross-sectional t-stat for CAR'
514          scar_t=     'Standaridized cross-sectional t-stat for CAR'
515          length=     'Length of event window in trading days';
516    run;

NOTE: The SAS System stopped processing this step because of errors.
WARNING: The data set WORK.ALLEVTDATE may be incomplete.  When this step was stopped
         there were 0 observations and 6 variables.
NOTE: DATA statement used (Total process time):
      real time           0.01 seconds
      user cpu time       0.01 seconds
      system cpu time     0.00 seconds
      memory              493.03k
      OS Memory           30740.00k
      Timestamp           06/18/2024 12:31:49 AM
      Step Count                        29   Switch Count   0


517
518
519   /*Cross-sectional output for CARs/BHARs at the firm-event level*/
520   data car_evtdate;
521     retain permno evtdate alpha1 beta1 cret car0 bhar0 var0 car1 bhar1 var1
522         car2 bhar2 var2 car3 bhar3 var3 nrets nobs;
523     set car_evtdate;
524     label alpha1= 'Alpha (Market Model)'
525           beta1=  'Beta (Market Model'
526           car0=   'CAR_MA'
527           car1=   'CAR_MM'
528           car2=   'CAR_FF'
529      car3=   'CAR_FFM'
530           bhar0=  'BHAR_MA'
531      bhar1=  'BHAR_MM'
532           bhar2=  'BHAR_FF'
533      bhar3=  'BHAR_FFM'
```

```
534              var0=    'Estimation period variance (Market-adjusted returns)'
535              var1=    'Estimation period variance (Market Model)'
536              var2=    'Estimation period variance (FF Model)'
537              var3=    'Estimation period variance (Carhart Model)'
538              cret=    'Cumulative Total Return'
539              nrets=   'Number of non-missing returns in event window'
540              nobs=    'Length of the estimation period';
541      keep permno evtdate alpha1 beta1 cret car0 bhar0 var0 car1 bhar1 var1
542           car2 bhar2 var2 car3 bhar3 var3 nrets nobs;
543      format cret alpha1
544             car0 bhar0
545         car1 bhar1
546         car2 bhar2
547         car3 bhar3
548             percent7.4
549             beta1 comma10.3;
550  run;

NOTE: Variable permno is uninitialized.
NOTE: Variable evtdate is uninitialized.
NOTE: Variable alpha1 is uninitialized.
NOTE: Variable beta1 is uninitialized.
WARNING: The variable permno in the DROP, KEEP, or RENAME list has never been
         referenced.
WARNING: The variable evtdate in the DROP, KEEP, or RENAME list has never been
         referenced.
NOTE: There were 0 observations read from the data set WORK.CAR_EVTDATE.
NOTE: The data set WORK.CAR_EVTDATE has 0 observations and 17 variables.
NOTE: DATA statement used (Total process time):
      real time           0.00 seconds
      user cpu time       0.00 seconds
      system cpu time     0.00 seconds
      memory              591.15k
      OS Memory           30740.00k
      Timestamp           06/18/2024 12:31:49 AM
      Step Count                       30  Switch Count  0
```

```
551  /* Save the summary statistics and
552  the CARs on the event window
553  */
554
555  PROC DATASETS NOLIST;
556  COPY IN = work OUT = evtstudy ;
557  select  allevtdate allstats car_evtwin ;
558  RUN;
```

NOTE: Copying WORK.ALLEVTDATE to EVTSTUDY.ALLEVTDATE (memtype=DATA).
INFO: Engine's block-read method is in use.
INFO: Engine's block-write method is in use.
NOTE: There were 0 observations read from the data set WORK.ALLEVTDATE.
NOTE: The data set EVTSTUDY.ALLEVTDATE has 0 observations and 6 variables.
NOTE: Copying WORK.ALLSTATS to EVTSTUDY.ALLSTATS (memtype=DATA).
INFO: Engine's block-read method is in use.
INFO: Engine's block-write method is in use.
NOTE: There were 0 observations read from the data set WORK.ALLSTATS.
NOTE: The data set EVTSTUDY.ALLSTATS has 0 observations and 0 variables.
NOTE: Copying WORK.CAR_EVTWIN to EVTSTUDY.CAR_EVTWIN (memtype=DATA).
INFO: Engine's block-read method is in use.
INFO: Engine's block-write method is in use.
NOTE: There were 0 observations read from the data set WORK.CAR_EVTWIN.
NOTE: The data set EVTSTUDY.CAR_EVTWIN has 0 observations and 17 variables.

```
559
560  /* As an illustration, plot Carhart CAARs and average BHARs in the event window*/
561  options nodate orientation=landscape;
562  ods pdf file="&outputPath\Car0_evtrets_5days.pdf";
```
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\result\Car0_evtrets_5days.pdf", printer "PDF".
```
563  goptions device=pdfc; /* Plot Saved in Home Directory */
564  axis1 label=(angle=90 "Cumulative Abnormal Returns");
565  axis2 label=("Event time");
566  symbol interpol=join w=3 l=1;
567
568
569
```

```
NOTE: PROCEDURE DATASETS used (Total process time):
      real time            1.30 seconds
      user cpu time        0.06 seconds
      system cpu time      0.14 seconds
      memory               3867.68k
      OS Memory            33048.00k
      Timestamp            06/18/2024 12:31:50 AM
      Step Count                        31  Switch Count  0


570  proc gplot data =MA_Evtwin;
571    where evttime>=&start;
572    Title "Market adjusted model:  CARs and BHARs around the event date";
573    plot (  carOwin_mean bharOwin_mean)*evttime
574         /overlay legend vaxis=axis1 haxis=axis2;
575  run;

WARNING: Unsupported device 'PDFC' for HTML destination. Using default device 'PNG'.
NOTE: No observations in data set WORK.MA_EVTWIN.
575!     quit;

NOTE: PROCEDURE GPLOT used (Total process time):
      real time            0.60 seconds
      user cpu time        0.03 seconds
      system cpu time      0.03 seconds
      memory               786.43k
      OS Memory            33560.00k
      Timestamp            06/18/2024 12:31:51 AM
      Step Count                        32  Switch Count  0


575!              ods pdf close;
NOTE: ODS PDF printed no output.
      (This sometimes results from failing to place a RUN statement before the ODS PDF CLOSE statement.)
576
577  ods pdf file="&outputPath\Car1_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\result\Car1_evtrets_5days.pdf", printer "PDF".
```

```
578  proc gplot data =MM_Evtwin;
579   where evttime>=&start;
580   Title "Market model:  CARs and BHARs around the event date";
581   plot (  car1win_mean bhar1win_mean)*evttime
582        /overlay legend vaxis=axis1 haxis=axis2;
583  run;

NOTE: No observations in data set WORK.MM_EVTWIN.
583!     quit;

NOTE: PROCEDURE GPLOT used (Total process time):
      real time           0.01 seconds
      user cpu time       0.00 seconds
      system cpu time     0.00 seconds
      memory              609.71k
      OS Memory           33560.00k
      Timestamp           06/18/2024 12:31:51 AM
      Step Count                     33  Switch Count  0


583!           ods pdf close;
NOTE: ODS PDF printed no output.
      (This sometimes results from failing to place a RUN statement before the ODS PDF CLOSE statement.)
584
585  ods pdf file="&outputPath\Car2_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\result\Car2_evtrets_5days.pdf", printer "PDF".
586  proc gplot data =FF_Evtwin;
587   where evttime>=&start;
588   Title "FF 3-factor model:CARs and BHARs around the event date";
589   plot (cretwin_mean car2win_mean bhar2win_mean)*evttime
590        /overlay legend vaxis=axis1 haxis=axis2;
591  run;

NOTE: No observations in data set WORK.FF_EVTWIN.
591!     quit;

NOTE: PROCEDURE GPLOT used (Total process time):
```

```
      real time             0.00 seconds
      user cpu time         0.00 seconds
      system cpu time       0.00 seconds
      memory                606.81k
      OS Memory             33560.00k
      Timestamp             06/18/2024 12:31:51 AM
      Step Count                        34   Switch Count  0


591!          ods pdf close;
NOTE: ODS PDF printed no output.
      (This sometimes results from failing to place a RUN statement before the ODS PDF CLOSE statement.)
592
593  ods pdf file="&outputPath\Car3_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\result\Car3_evtrets_5days.pdf", printer "PDF".
594  proc gplot data =FFM_Evtwin;
595   where evttime>=&start;
596   Title "Carhart 4 Factor model: Carhart CARs and BHARs around the event date";
597   plot (cretwin_mean car3win_mean bhar3win_mean)*evttime
598        /overlay legend vaxis=axis1 haxis=axis2;
599  run;

NOTE: No observations in data set WORK.FFM_EVTWIN.
599!     quit;

NOTE: PROCEDURE GPLOT used (Total process time):
      real time             0.01 seconds
      user cpu time         0.00 seconds
      system cpu time       0.01 seconds
      memory                600.50k
      OS Memory             33560.00k
      Timestamp             06/18/2024 12:31:51 AM
      Step Count                        35   Switch Count  0


599!          ods pdf close;
NOTE: ODS PDF printed no output.
```

```
       (This sometimes results from failing to place a RUN statement before the ODS PDF CLOSE statement.)
600
601  ods pdf file="&outputPath\Car0_3_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\result\Car0_3_evtrets_5days.pdf",
      printer "PDF".
602  proc  gplot data =allstats;
603   where evttime>=&start;
ERROR: Variable evttime is not on file WORK.ALLSTATS.
604   Title "Cars from four models: around the event date";
605   plot (car0win_mean  car1win_mean  car2win_mean  car3win_mean )*evttime
ERROR: Variable CAR0WIN_MEAN not found.
ERROR: Variable CAR1WIN_MEAN not found.
ERROR: Variable CAR2WIN_MEAN not found.
ERROR: Variable CAR3WIN_MEAN not found.
606        /overlay legend vaxis=axis1 haxis=axis2;
ERROR: Variable EVTTIME not found.
NOTE: The previous statement has been deleted.
607  run;

NOTE: No variables in data set WORK.ALLSTATS.
607!     quit;

NOTE: PROCEDURE GPLOT used (Total process time):
      real time           0.01 seconds
      user cpu time       0.00 seconds
      system cpu time     0.01 seconds
      memory              445.12k
      OS Memory           33560.00k
      Timestamp           06/18/2024 12:31:51 AM
      Step Count                        36  Switch Count  0


607!          ods pdf close;
NOTE: ODS PDF printed no output.
      (This sometimes results from failing to place a RUN statement before the ODS PDF CLOSE statement.)
608
609
```

```
610  ods pdf file="&outputPath\Four_model_BHARS_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\result\Four_model_BHARS_evtrets_5days.pdf",
      printer "PDF".
611  proc  gplot data =allstats;
612    where evttime>=&start;
ERROR: Variable evttime is not on file WORK.ALLSTATS.
613    Title "Compareison BHARs from 4 models: BHARs around the event date";
614    plot (bharO_mean  bhar1_mean  bhar2_mean  bhar3_mean )*evttime
ERROR: Variable BHARO_MEAN not found.
ERROR: Variable BHAR1_MEAN not found.
ERROR: Variable BHAR2_MEAN not found.
ERROR: Variable BHAR3_MEAN not found.
615         /overlay legend vaxis=axis1 haxis=axis2;
ERROR: Variable EVTTIME not found.
NOTE: The previous statement has been deleted.
616  run;

NOTE: No variables in data set WORK.ALLSTATS.
616!     quit;

NOTE: PROCEDURE GPLOT used (Total process time):
      real time            0.01 seconds
      user cpu time        0.00 seconds
      system cpu time      0.01 seconds
      memory               444.37k
      OS Memory            33560.00k
      Timestamp            06/18/2024 12:31:51 AM
      Step Count                        37  Switch Count  O


617
618  ods pdf close;
NOTE: ODS PDF printed no output.
      (This sometimes results from failing to place a RUN statement before the ODS PDF CLOSE statement.)
619  run;quit; ods pdf close;
620
621  run;quit; ods pdf close;
```

```
622
623  /*house cleaning*
624   proc sql;
625    drop table abrets, allcars, allstats, caldates, car, car_evtwin, evtrets, temp,
626            evtrets_temp,ffm_evtdate, ff_evtdate, ma_evtdate, mm_evtdate, params;
627    drop view  evtrets1, abrets1; quit;
628  */
629  *%mend  event_crack;
630  /* ********************************************************************************* */
631  /* *************  Material Copyright Wharton Research Data Services  ************** */
632  /* *************************** All Rights Reserved *************************** */
633  /* ********************************************************************************* */

634  evtstudy
634  evtstudy
     --------
     180
ERROR 180-322: Statement is not valid or it is used out of proper order.

635  /*https://wrds-www.wharton.upenn.edu/pages/support/applications/event-studies/event-study-research-application/*/
636
637  /* ************************************************************************* */
638  /* *********  W R D S   R E S E A R C H   A P P L I C A T I O N S ************** */
639  /* ************************************************************************* */
640  /* Program : EVTSTUDY.SAS                                           */
641  /* Summary : Provides a sample methodology for calculating Cumulative      */
642  /*           Abnormal Returns(CARs)& Buy-Hold Abnormal Returns(BHARs)      */
643  /*           with various t-statistics (CS test, Standardized CS test&Patell Z)  */
644  /*           in an event study setting. Displays the dynamics of mean CARs and  */
645  /*           BHARs in the event window specified by the user            */
646  /*                                                               */
647  /* Date    : Sep 2011                                              */
648  /* Author  : Denys Glushkov, WRDS                                    */
649  /* ************************************************************************* */
650
651  /* STEP 1A: Speficify the parameters necessary to run the event study such as   */
652  /* the length of estimation period and event window, gap b/w estimation & event */
653  /* window, etc                                                      */
```

```sas
654  *%libname mycrsp "C:\Users\hli5\OneDrive - Kent State University\aaaa\event_Study";
655  libname mycrsp "C:\Users\lihon\patent Dropbox\Victor Li\wrds_data";
```
NOTE: Libref MYCRSP was successfully assigned as follows:
      Engine: V9
      Physical Name: C:\Users\lihon\patent Dropbox\Victor Li\wrds_data
```sas
656  * libname evtstudy "C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\June6_res";
657  %let outputPath=%str(C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\result);
658  libname evtstudy "&outputPath\Foreign_rec_exe10";
```
NOTE: Libref EVTSTUDY was successfully assigned as follows:
      Engine: V9
      Physical Name: C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\result\Foreign_rec_exe10
```sas
659  %let crsp=mycrsp; /*CRSP libary to be used (CRSPQ - quarterly, CRSP-annual update  */
660  %let estper=150; /*Length of the estimation period in trading days over which    */
661                   /*the risk model is estimated                                   */
662
663  %let start=-2; /*Beginning of the event window (wtr to the event date,e.g. -2)   */
664  %let end=2;    /*End of the event window (relative to the event date, e.g., +1)  */
665  %let gap=66;   /*Length of pre-event window,i.e., number of trading days b/w     */
666                 /*the end of estimation period and the start of the event window */
667
668  %let minest=70; /*Minimum of non-missing returns required for estimation        */
669  %let evtwin=%eval(&end-&start+1);      /*length of event window in trading days */
670
671  /* STEP 1B: As an example, create the input table containing Permno-event dates  */
672  /* corresponding to the stock additions to and deletions from S&P 500 index      */
673
674
675  *  %event_crack(relation_exec) ;
676  * %let permno_list=relation_exec;
677  *%let permno_list=foreign_relation;
678  * %let permno_list=for_event_study_v2;
679  * %let permno_list=oree_gvkey_patentid_record_dtv2;
680  %let permno_list=foreign_trans_exec_record10;
681
682  /*- %macro event_crack(permno_list, evt_date=exec_dt); */
683
684  proc sql;
685    create table input
```

```
686    as select distinct permno, record_dt as edate format MMDDYY10.
687    from &permno_list where not missing(&start) and year(record_dt);
NOTE: Table WORK.INPUT created, with 1009 rows and 2 columns.

688  quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time          0.12 seconds
      user cpu time      0.00 seconds
      system cpu time    0.01 seconds
      memory             5207.06k
      OS Memory          37144.00k
      Timestamp          06/18/2024 08:56:36 AM
      Step Count                      38  Switch Count  0


689
690  /* STEP 2. Creating Trading Calendar that accounts for the presence of  */
691  /* weekends, holidays and other non-trading days in the estimation      */
692  /* and event windows                                                    */
693  data caldates;
694
695   merge &crsp..dsi(keep=date rename=(date=estper_beg))
696     &crsp..dsi(keep=date firstobs=&estper rename=(date=estper_end))
697     &crsp..dsi(keep=date firstobs=%eval(&estper+&gap+1) rename=(date=evtwin_beg))
698     &crsp..dsi(keep=date firstobs=%eval(&estper+&gap-&start+1) rename=(date=evtdate))
699     &crsp..dsi(keep=date firstobs=%eval(&estper+&gap+&evtwin) rename=(date=evtwin_end));
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
```

INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
```
700
701    format estper_beg estper_end evtwin_beg evtdate evtwin_end date9.;
702    label  estper_beg='Start of the Estimation Window'
703           estper_end='End of the Estimation Window'
704           evtwin_beg='Start of the Event Window'
705           evtwin_end='End of the Event Window'
706           evtdate='Event Date';
707      index+1;
708    if nmiss(estper_beg,estper_end,evtwin_beg,evtwin_end,evtdate)=0;
709  run;
```

NOTE: There were 25799 observations read from the data set MYCRSP.DSI.
NOTE: There were 25650 observations read from the data set MYCRSP.DSI.
NOTE: There were 25583 observations read from the data set MYCRSP.DSI.
NOTE: There were 25581 observations read from the data set MYCRSP.DSI.
NOTE: There were 25579 observations read from the data set MYCRSP.DSI.
NOTE: The data set WORK.CALDATES has 25579 observations and 6 variables.
NOTE: DATA statement used (Total process time):
      real time   0.06 seconds
      user cpu time   0.04 seconds
      system cpu time   0.00 seconds
      memory   1620.50k
      OS Memory   32020.00k
      Timestamp   06/18/2024 08:56:36 AM
      Step Count   39 Switch Count 0


```
710
711  /*STEP 3: If event date is a non-trading day*/
712  /*     select the closest trading day that*/
713  /* follows the event day                                    */
714  proc sql;
714!         create table temp
715   as select a.permno
716           ,b.*
```

```
717    from input a
718        left join
719        caldates b
720    on b.evtdate-a.edate>=0
721    group by a.edate
722    having (b.evtdate-a.edate)=min(b.evtdate-a.edate);
```
NOTE: The execution of this query involves performing one or more Cartesian product joins that can not be optimized.
NOTE: The query requires remerging summary statistics back with the original data.
NOTE: SAS threaded sort was used.
NOTE: Table WORK.TEMP created, with 1009 rows and 7 columns.

```
723
724
725    /*Returns for sample securities around the event dates */
```
NOTE: PROCEDURE SQL used (Total process time):
```
      real time            2.64 seconds
      user cpu time        3.42 seconds
      system cpu time      0.67 seconds
      memory               290689.10k
      OS Memory            320300.00k
      Timestamp            06/18/2024 08:56:39 AM
      Step Count                        40  Switch Count  0
```


```
726     proc sql;
727    create table evtrets_temp
728    as select a.permno, a.date format date9., a.ret as ret1,
729            b.evtdate, b.estper_beg, b.estper_end,
730            b.evtwin_beg, b.evtwin_end
731    from &crsp..dsf a, temp b
732    where a.permno=b.permno and b.estper_beg<=a.date<=b.evtwin_end;
```
INFO: Data file MYCRSP.DSF.DATA is in a format that is native to another host, or the file encoding does not match the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and might reduce performance.
NOTE: Table WORK.EVTRETS_TEMP created, with 222196 rows and 8 columns.

```
733     quit;
```
NOTE: PROCEDURE SQL used (Total process time):

```
      real time            49.22 seconds
      user cpu time        48.12 seconds
      system cpu time      0.89 seconds
      memory               5847.28k
      OS Memory            37144.00k
      Timestamp            06/18/2024 08:57:28 AM
      Step Count                        41  Switch Count  0


734   /* Merge in the risk factors                                    */
735   /* User can create her own risk factors and use it instead of FF+M ones*/
736    proc sql;
737   create view evtrets1
738     as select a.*, (b.mktrf+b.rf) as mkt, b.mktrf, b.rf,b.smb, b.hml, b.umd
739     from evtrets_temp a left join
740          &crsp..ff_factors_daily (keep=date mktrf smb hml umd rf) b
741     on a.date=b.date;
NOTE: SQL view WORK.EVTRETS1 has been defined.
742      quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time            0.00 seconds
      user cpu time        0.00 seconds
      system cpu time      0.00 seconds
      memory               103.15k
      OS Memory            32020.00k
      Timestamp            06/18/2024 08:57:28 AM
      Step Count                        42  Switch Count  0


743   /*Bring in delisting returns*/
744      proc sql;
745   create table evtrets (drop=ret1 where=(not missing(mkt)))
746     as select a.*,
747     (1+a.ret1)*sum(1,b.dlret)-1-a.mkt as exret label='Market-adjusted total ret',
748     (1+a.ret1)*sum(1,b.dlret)-1 as ret "Ret adjusted for delisting"
749     from evtrets1 a left join &crsp..dsedelist (where=(missing(dlret)=0)) b
750     on a.permno=b.permno and a.date=b.dlstdt
751   order by a.permno,a.evtdate,a.date;
```

INFO: Data file MYCRSP.FF_FACTORS_DAILY.DATA is in a format that is native to another host, or the file encoding does not match the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and might reduce performance.
INFO: Data file MYCRSP.DSEDELIST.DATA is in a format that is native to another host, or the file encoding does not match the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and might reduce performance.
NOTE: SAS threaded sort was used.
NOTE: Table WORK.EVTRETS created, with 222196 rows and 15 columns.

752 quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time   0.65 seconds
      user cpu time   0.70 seconds
      system cpu time   0.18 seconds
      memory   54756.34k
      OS Memory   84880.00k
      Timestamp   06/18/2024 08:57:29 AM
      Step Count   43 Switch Count 0

753
754 /* STEP 4. Estimating Factor Exposures over the estimation period*/
755 proc printto log=junk; run;

NOTE: PROCEDURE PRINTTO used (Total process time):
      real time   0.00 seconds
      user cpu time   0.00 seconds
      system cpu time   0.00 seconds
      memory   5.75k
      OS Memory   32276.00k
      Timestamp   06/18/2024 08:57:30 AM
      Step Count   46 Switch Count 0

766
767
768 /* STEP 5. Calculating Abnormal Returns for all models */
769 /* for each trading day in the event window   */

```
770  data abrets1/view=abrets1; merge
771    evtrets(where=(evtwin_beg<=date<=evtwin_end) in=in_evtrets)
772    params (where=(_model_='eq0')
773       keep=permno evtdate _model_ _rmse_ _p_ _edf_
774       rename=(_rmse_=std0 _p_=p0 _edf_=edf0))
775
776    params (where=(_model_='eq1')
777       keep=permno evtdate _model_ _rmse_ intercept mktrf
778       rename=(_rmse_=std1 intercept=alpha1 mktrf=beta1))
779
780    params (where=(_model_='eq2')
781       keep=permno evtdate _model_ _rmse_ intercept mktrf smb hml
782       rename=(_rmse_=std2 intercept=alpha2 mktrf=beta2 smb=sminb2 hml=hminl2))
783
784    params (where=(_model_='eq3')
785       keep=permno evtdate _model_ _rmse_ intercept mktrf smb hml umd
786       rename=(_rmse_=std3 intercept=alpha3 mktrf=beta3 smb=sminb3 hml=hminl3 umd=umind3));
787    by permno evtdate;
788
789    retain missret;
790    if first.permno then missret=missing(ret);
791    if missing(ret) then missret+1; /*count number of missing returns*/
792
793    var0=std0**2;
794    var1=std1**2;
795    var2=std2**2;
796    var3=std3**2;
797
798    abret0  = exret; *extra over market;
799    expret1 = alpha1 + beta1*mktrf;  *CAPM;
800    abret1  = ret-expret1;
801
802    expret2 = alpha2+beta2*mktrf+sminb2*smb+hminl2*hml; *FF3factor;
803    abret2=ret-expret2;
804
805    expret3 =alpha3+beta3*mktrf+sminb3*smb+hminl3*hml+umind3*umd;
806    abret3=ret-expret3;
807
```

```
808    nobs=p0+edf0;   /*number of observations used in estimation*/
809    drop p0 edf0 estper_beg estper_end std0 std1 std2 std3 _model_ exret;
810    if in_evtrets and nobs>&minest;
811    * I add the followings;
812    if nobs=150;
813  run;
```

```
814
815  /* Transform dates to event time using CRSP Trading Calendar      */
816  /* Using the latter takes into account non-consecutive date records*/
817  /* do not use lag to avoid non-consecutive date records*/
818  proc sql;
819    create table abrets
820      as select a.*, (b.index-c.index) as evttime
821      from            abrets1 a
822        left join  caldates b
823      on a.date    = b.evtdate
824        left join caldates c
825      on a.evtdate = c.evtdate
826      order by permno, evtdate, date;
```

```
INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
NOTE: Missing values were generated as a result of performing an operation on missing values.
      Each place is given by: (Number of times) at (Line):(Column).
      5 at 1032:12    5 at 1033:12    5 at 1034:12    5 at 1035:12    5 at 1038:27    5 at 1039:16    5 at 1041:25
      5 at 1042:13    5 at 1044:24    5 at 1045:13    5 at 1047:10
NOTE: View WORK.ABRETS1.VIEW used (Total process time):
      real time             0.19 seconds
      user cpu time         0.07 seconds
      system cpu time       0.07 seconds
      memory                46029.00k
      OS Memory             76904.00k
      Timestamp             06/18/2024 08:57:31 AM
      Step Count                          48  Switch Count  28

NOTE: There were 5040 observations read from the data set WORK.EVTRETS.
      WHERE (evtwin_beg<=date) and (date<=evtwin_end);
NOTE: There were 1005 observations read from the data set WORK.PARAMS.
      WHERE _model_='eq0';
NOTE: There were 1005 observations read from the data set WORK.PARAMS.
      WHERE _model_='eq1';
NOTE: There were 1005 observations read from the data set WORK.PARAMS.
      WHERE _model_='eq2';
NOTE: There were 1005 observations read from the data set WORK.PARAMS.
      WHERE _model_='eq3';
NOTE: Table WORK.ABRETS created, with 4970 rows and 37 columns.

827  quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time             0.48 seconds
      user cpu time         0.10 seconds
      system cpu time       0.18 seconds
      memory                46029.00k
      OS Memory             76904.00k
      Timestamp             06/18/2024 08:57:31 AM
      Step Count                          48  Switch Count  29


828
```

```
829   /*
830   proc contents data=abrets short varnum;
831   run;
832   */
833   proc sort data=abrets  nodupkey;
834     by PERMNO evtdate DATE
835        evtwin_beg evtwin_end
836        mkt mktrf rf smb hml umd ret
837        alpha1 beta1
838        alpha2 beta2 sminb2 hminl2
839        alpha3 beta3 sminb3 hminl3 umind3
840        missret var0 var1 var2 var3
841        abret0 expret1 abret1 expret2 abret2 expret3 abret3 nobs evttime ;
842   run;

NOTE: There were 4970 observations read from the data set WORK.ABRETS.
NOTE: SAS sort was used.
NOTE: 0 observations with duplicate key values were deleted.
NOTE: The data set WORK.ABRETS has 4970 observations and 37 variables.
NOTE: PROCEDURE SORT used (Total process time):
      real time           0.00 seconds
      user cpu time       0.00 seconds
      system cpu time     0.00 seconds
      memory              5014.53k
      OS Memory           38188.00k
      Timestamp           06/18/2024 08:57:31 AM
      Step Count                         49  Switch Count  0


843
844   /* 673  proc sql;
845   674     create table abrets as
846   675     select distinct * from abrets;
847   WARNING: This CREATE TABLE statement recursively references the target table. A consequence of this
848            is a possible data integrity problem.
849   NOTE: Table WORK.ABRETS created, with 253797 rows and 37 columns.
850
851     */
```

```
852  /* Calculating Rolling Cumulative Abnormal Returns and various stats */
853  /* Transformout= calculates cumulative product of gross returns and  */
854  /* subtracts 1 to arrive at the total net cumulative return           */
855  proc expand data=abrets
856               out=car  /* Cumulative returns*/
857               method=none;
858    by permno evtdate;
859    id date;
860    convert ret=cret/transformout=(+1 cuprod -1);          /*actural cumulative return from CRSP*/
861    convert mkt=cmkt/transformout=(+1 cuprod -1);          /*cumulative  market return*/
862
863    /*cumulative market model return: expret1= alpha1 + beta1*mktrf; */
864    convert expret1 =cexpret1 /transformout=(+1 cuprod -1);
865
866    /*expret2 = alpha2+ beta2*mktrf+ sminb2*smb+ hminl2*hml; */
867    convert expret2 =cexpret2 /transformout=(+1 cuprod -1); /*cumulative FF-3 factor return */
868
869    /*  expret3 =alpha3+beta3*mktrf+sminb3*smb+hminl3*hml+umind3*umd; */
870    convert expret3 =cexpret3 /transformout=(+1 cuprod -1);/*cumulative FF-4 factor return */
871
872    convert abret0=car0/transformout=(sum);
873    convert abret1=car1/transformout=(sum);
874    convert abret2=car2/transformout=(sum);
875    convert abret3=car3/transformout=(sum);
876  run;

NOTE: The data set WORK.CAR has 4970 observations and 46 variables.
NOTE: PROCEDURE EXPAND used (Total process time):
      real time           0.15 seconds
      user cpu time       0.04 seconds
      system cpu time     0.03 seconds
      memory              970.65k
      OS Memory           34332.00k
      Timestamp           06/18/2024 08:57:31 AM
      Step Count                        50  Switch Count  0


877  /*
```

```
878   proc contents data =car;
879
880
881   proc contents data =car;
882   ods select  Variables;
883   run;
884   */
885
886
887   /* Car_Evtdate Table: */
888   /* the cross-sectional output that contains for each      */
889   /* "firm-event date":                                      */
890   /*   1) CAR, BHAR, and SCAR (standardized CAR)             */
891   /*   2) Alpha and Beta from the estimation period         */
892   /*   3) Estimation period variance                        */
893
894   /* Car_Evtwin Table contains Raw, Abnormal, Std. and Buy-and-Hold Abnormal  */
895   /* Daily Returns "firm-date" in event time                */
896   proc printto log=junk;run;

NOTE: PROCEDURE PRINTTO used (Total process time):
      real time           0.00 seconds
      user cpu time       0.00 seconds
      system cpu time     0.00 seconds
      memory              6.75k
      OS Memory           33812.00k
      Timestamp           06/18/2024 08:57:31 AM
      Step Count                     53  Switch Count  0


934
935   /*Put Cross-sectional and aggregate results together for further analysis*/
936   data allcars;
937       merge
938     car_evtwin
939           (rename=(bhar0=bhar0win
940                    bhar1=bhar1win
941                    bhar2=bhar2win
```

```
942                        bhar3=bhar3win
943                        car0=car0win
944              car1=car1win
945              car2=car2win
946              car3=car3win
947              cret=cretwin))
948     car_evtdate;
949   by permno evtdate;
950   run;
```

```
951
952   /* STEP 6: Compute Cumulative Average Abnormal Return (CAR_MEAN) */
953   /* and Average Buy-Hold Abnormal Return (BHAR_MEAN)              */
954   /* and other stats across all distinct events                   */
955   * proc means data=allcars noprint;
956   proc means data=allcars( where = (nobs=150)) noprint;
957     class evttime; id nobs;
958     var ret cret
959     car0 car1 car2 car3
960     bhar0 bhar1 bhar2 bhar3
961     bhar0win bhar1win bhar2win bhar3win
962     cretwin
963     car0win car1win car2win car3win
964     scar0 scar1 scar2 scar3
965     abret0 abret1 abret2 abret3
```

```
966    sar0 sar1 sar2 sar3
967    pat_scale;
968    output out=allstats
969    mean =
970       n =
971       t =
972      sum =/autoname;
973  run;
```

NOTE: Multiple concurrent threads will be used to summarize data.
NOTE: There were 4970 observations read from the data set WORK.ALLCARS.
      WHERE nobs=150;
NOTE: The data set WORK.ALLSTATS has 6 observations and 132 variables.
NOTE: PROCEDURE MEANS used (Total process time):
      real time   0.76 seconds
      user cpu time   0.06 seconds
      system cpu time   0.01 seconds
      memory   6820.73k
      OS Memory   38944.00k
      Timestamp   06/18/2024 08:57:32 AM
      Step Count   55 Switch Count 0


```
974
975  /*calculate different stats for assessing    */
976  /*statistical signficance of abnormal returns*/
977  data MA_Evtdate (keep=evttime car0_n cret_mean car0_mean car0_t scar0_t
978                   bhar0_mean pat_car0 model)
979       MM_Evtdate (keep=evttime car1_n cret_mean car1_mean car1_t scar1_t
980                   bhar1_mean pat_car1 model )
981       FF_Evtdate (keep=evttime car2_n cret_mean car2_mean car2_t scar2_t
982                   bhar2_mean pat_car2 model )
983       FFM_Evtdate (keep=evttime car3_n cret_mean car3_mean car3_t scar3_t
984                   bhar3_mean pat_car3 model )
985       MA_Evtwin  (keep=evttime cretwin_mean abret0_n ret_mean abret0_mean
986                   car0win_mean bhar0win_mean abret0_t sar0_t pat_ar0 )
987       MM_Evtwin  (keep=evttime cretwin_mean abret1_n ret_mean abret1_mean
988                   car1win_mean bhar1win_mean abret1_t sar1_t pat_ar1 )
```

```
989          FF_Evtwin   (keep=evttime cretwin_mean abret2_n ret_mean abret2_mean
990                       car2win_mean bhar2win_mean abret2_t sar2_t pat_ar2 )
991          FFM_Evtwin  (keep=evttime cretwin_mean abret3_n ret_mean abret3_mean
992                       car3win_mean bhar3win_mean abret3_t sar3_t pat_ar3 );
993   set allstats;
994   by evttime;
995    if _n_=1 and missing(evttime) then do;
996     abret0_mean=.;
997     abret1_mean=.;
998     abret2_mean=.;
999     abret3_mean=.;
1000    cretwin_mean=0;
1001    ret_mean=.;
1002    bhar1win_mean=0;
1003    bhar1win_mean=0;
1004    bhar2win_mean=0;
1005    bhar3win_mean=0;
1006    end;
1007    /*Patell Z statistics*/
1008    pat_car0=scar0_mean/(sqrt(pat_scale_sum)/scar0_n);
1009    pat_car1=scar1_mean/(sqrt(pat_scale_sum)/scar1_n);
1010    pat_car2=scar2_mean/(sqrt(pat_scale_sum)/scar2_n);
1011    pat_car3=scar3_mean/(sqrt(pat_scale_sum)/scar3_n);
1012    pat_ar0=sar0_mean/(sqrt(pat_scale_sum)/sar0_n);
1013    pat_ar1=sar1_mean/(sqrt(pat_scale_sum)/sar1_n);
1014    pat_ar2=sar2_mean/(sqrt(pat_scale_sum)/sar2_n);
1015    pat_ar3=sar3_mean/(sqrt(pat_scale_sum)/sar3_n);
1016   label
1017    pat_ar0=       'Patell Z for AR_MA'  pat_ar1=       'Patell Z for AR_MM'
1018    pat_ar2=       'Patell Z for AR_FF'  pat_ar3=       'Patell Z for AR_FFM'
1019    abret0_t=      'CS t-stat, AR_MA'    abret1_t=      'CS t-stat, AR_MM'
1020    abret2_t=      'CS t-stat, AR_FF'    abret3_t=      'CS t-stat, AR_FFM'
1021    sar0_t=        'Std CS test, AR_MA'  sar1_t=        'Std CS test, AR_MM'
1022    sar2_t=        'Std CS test, AR_FF'  sar3_t=        'Std CS test, AR_FFM'
1023    abret0_mean=   'Mean AR_MA'          abret1_mean=   'Mean AR_MM'
1024    abret2_mean=   'Mean AR_FF'          abret3_mean=   'Mean AR_FFM'
1025    car0_n=        'Number of events in the portfolio'
1026    abret0_n=      'Number of events in the portfolio'
```

```
1027     evttime=        'Event Time t'
1028     cret_mean=      "Mean CTR (&start, &end)"
1029     cretwin_mean=   "Mean CTR (&start,t) "
1030     car0win_mean=   "Average CAR_MA (&start, t)"
1031     car1win_mean=   "Average CAR_MM (&start, t)"
1032     car2win_mean=   "Average CAR_FF (&start, t)"
1033     car3win_mean=   "Average CAR_FFM (&start, t)"
1034     bhar0win_mean=  "Mean BHAR_MA (&start, t)"
1035     bhar1win_mean=   "Mean BHAR_MM (&start, t)"
1036     bhar2win_mean=  "Mean BHAR_FF (&start, t)"
1037     bhar3win_mean=   "Mean BHAR_FFM (&start, t)"
1038   ;
1039     format ret_mean cret_mean abret0_mean abret1_mean abret2_mean abret3_mean
1040            car0_mean car1_mean car2_mean car3_mean bhar0_mean bhar1_mean
1041            bhar2_mean bhar3_mean cretwin_mean
1042            bhar0win_mean bhar1win_mean bhar2win_mean bhar3win_mean
1043            car0win_mean car1win_mean car2win_mean car3win_mean
1044        percent7.4
1045            abret0_t abret1_t abret2_t abret3_t sar0_t sar1_t sar2_t sar3_t
1046            pat_car0 pat_car1 pat_car2 pat_car3 pat_ar0 pat_ar1 pat_ar2 pat_ar3
1047            car0_t car1_t car2_t car3_t scar0_t scar1_t scar2_t scar3_t
1048        comma10.2;
1049     if evttime=0 then do; model='Market-Adjusted'; output MA_Evtdate;
1050                           model='Market Model';    output MM_Evtdate;
1051                           model='FF Model';        output FF_Evtdate;
1052                           model='Carhart Model';   output FFM_Evtdate;
1053                    end;
1054     if missing(evttime) then evttime=&start-1;
1055     output MA_Evtwin;
1056     output MM_Evtwin;
1057     output FF_Evtwin;
1058     output FFM_Evtwin;
1059   run;


NOTE: There were 6 observations read from the data set WORK.ALLSTATS.
NOTE: The data set WORK.MA_EVTDATE has 1 observations and 9 variables.
NOTE: The data set WORK.MM_EVTDATE has 1 observations and 9 variables.
NOTE: The data set WORK.FF_EVTDATE has 1 observations and 9 variables.
```

1060
1061 /* STEP 7. Putting Event Date CARs and BHARS for various risk models together*/
1062 data allevtdate; set
1063   MA_Evtdate (rename=(car0_mean=car_mean bhar0_mean=bhar_mean
1064   car0_n=n car0_t=car_t scar0_t=scar_t pat_car0=pat_car))
1065   MM_Evtdate (rename=(car1_mean=car_mean bhar1_mean=bhar_mean
1066   car1_n=n car1_t=car_t scar1_t=scar_t pat_car1=pat_car))
1067   FF_Evtdate (rename=(car2_mean=car_mean bhar2_mean=bhar_mean
1068   car2_n=n car2_t=car_t scar2_t=scar_t pat_car2=pat_car))
1069   FFM_evtdate (rename=(car3_mean=car_mean bhar3_mean=bhar_mean
1070   car3_n=n car3_t=car_t scar3_t=scar_t pat_car3=pat_car));
1071   length=&evtwin;
1072   label pat_car=   'Patell Z'
1073   car_mean= "Mean CAR (&start, &end)"
1074   bhar_mean= "Mean BHAR (&start, &end)"
1075   car_t=   'Cross-sectional t-stat for CAR'
1076   scar_t=   'Standaridized cross-sectional t-stat for CAR'
1077   length=   'Length of event window in trading days';
1078 run;

NOTE: There were 1 observations read from the data set WORK.FFM_EVTDATE.
NOTE: The data set WORK.ALLEVTDATE has 4 observations and 10 variables.
NOTE: DATA statement used (Total process time):
      real time   0.01 seconds
      user cpu time   0.01 seconds
      system cpu time   0.00 seconds
      memory   1116.93k
      OS Memory   34068.00k
      Timestamp   06/18/2024 08:57:32 AM
      Step Count   57 Switch Count 0

```
1079
1080
1081  /*Cross-sectional output for CARs/BHARs at the firm-event level*/
1082  data car_evtdate;
1083    retain permno evtdate alpha1 beta1 cret car0 bhar0 var0 car1 bhar1 var1
1084         car2 bhar2 var2 car3 bhar3 var3 nrets nobs;
1085    set car_evtdate;
1086    label alpha1= 'Alpha (Market Model)'
1087          beta1=  'Beta (Market Model'
1088          car0=   'CAR_MA'
1089          car1=   'CAR_MM'
1090          car2=   'CAR_FF'
1091      car3=   'CAR_FFM'
1092          bhar0=  'BHAR_MA'
1093      bhar1=  'BHAR_MM'
1094          bhar2=  'BHAR_FF'
1095      bhar3=  'BHAR_FFM'
1096          var0=    'Estimation period variance (Market-adjusted returns)'
1097          var1=    'Estimation period variance (Market Model)'
1098          var2=    'Estimation period variance (FF Model)'
1099          var3=    'Estimation period variance (Carhart Model)'
1100          cret=    'Cumulative Total Return'
1101          nrets=   'Number of non-missing returns in event window'
1102          nobs=    'Length of the estimation period';
1103    keep permno evtdate alpha1 beta1 cret car0 bhar0 var0 car1 bhar1 var1
1104         car2 bhar2 var2 car3 bhar3 var3 nrets nobs;
```

```
1105    format cret alpha1
1106         car0 bhar0
1107      car1 bhar1
1108      car2 bhar2
1109      car3 bhar3
1110          percent7.4
1111          beta1 comma10.3;
1112  run;
```

NOTE: There were 994 observations read from the data set WORK.CAR_EVTDATE.
NOTE: The data set WORK.CAR_EVTDATE has 994 observations and 19 variables.
NOTE: DATA statement used (Total process time):
      real time   0.00 seconds
      user cpu time   0.00 seconds
      system cpu time   0.00 seconds
      memory   700.25k
      OS Memory   33812.00k
      Timestamp   06/18/2024 08:57:32 AM
      Step Count   58   Switch Count   0


```
1113  /* Save the summary statistics and
1114  the CARs on the event window
1115  */
1116
1117  PROC DATASETS NOLIST;
1118  COPY IN = work OUT = evtstudy ;
1119  select  allevtdate allstats car_evtwin ;
1120  RUN;
```

NOTE: Copying WORK.ALLEVTDATE to EVTSTUDY.ALLEVTDATE (memtype=DATA).
INFO: Engine's block-read method is in use.
INFO: Engine's block-write method is in use.
NOTE: There were 4 observations read from the data set WORK.ALLEVTDATE.
NOTE: The data set EVTSTUDY.ALLEVTDATE has 4 observations and 10 variables.
NOTE: Copying WORK.ALLSTATS to EVTSTUDY.ALLSTATS (memtype=DATA).
INFO: Engine's block-read method is in use.
INFO: Engine's block-write method is in use.

1121
1122 /* As an illustration, plot Carhart CAARs and average BHARs in the event window*/
1123 options nodate orientation=landscape;
1124 ods pdf file="&outputPath\Car0_evtrets_5days.pdf";
1125 goptions device=pdfc; /* Plot Saved in Home Directory */
1126 axis1 label=(angle=90 "Cumulative Abnormal Returns");
1127 axis2 label=("Event time");
1128 symbol interpol=join w=3 l=1;
1129
1130
1131

1132 proc gplot data =MA_Evtwin;
1133   where evttime>=&start;
1134   Title "Market adjusted model: CARs and BHARs around the event date";
1135   plot (car0win_mean bhar0win_mean)*evttime
1136   /overlay legend vaxis=axis1 haxis=axis2;
1137 run;

```
NOTE: 40994 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot.png.
1137!    quit;


NOTE: There were 5 observations read from the data set WORK.MA_EVTWIN.
      WHERE evttime>=-2;
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE GPLOT used (Total process time):
      real time           1.57 seconds
      user cpu time       0.23 seconds
      system cpu time     0.09 seconds
      memory              8936.46k
      OS Memory           44012.00k
      Timestamp           06/18/2024 08:57:34 AM
      Step Count                         60  Switch Count  0



1137!          ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\Car0_evtrets_5days.pdf.
1138
1139  ods pdf file="&outputPath\Car1_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\result\Car1_evtrets_5days.pdf", printer "PDF".
1140  proc gplot data =MM_Evtwin;
1141   where evttime>=&start;
1142   Title "Market model:  CARs and BHARs around the event date";
1143   plot (car1win_mean bhar1win_mean)*evttime
1144        /overlay legend vaxis=axis1 haxis=axis2;
1145  run;


NOTE: 46945 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot1.png.
1145!    quit;


NOTE: There were 5 observations read from the data set WORK.MM_EVTWIN.
      WHERE evttime>=-2;
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
```

```
NOTE: PROCEDURE GPLOT used (Total process time):
      real time            0.29 seconds
      user cpu time        0.18 seconds
      system cpu time      0.06 seconds
      memory               8621.43k
      OS Memory            44012.00k
      Timestamp            06/18/2024 08:57:34 AM
      Step Count                        61  Switch Count  0


1145!          ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\Car1_evtrets_5days.pdf.
1146
1147  ods pdf file="&outputPath\Car2_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\result\Car2_evtrets_5days.pdf", printer "PDF".
1148  proc gplot data =FF_Evtwin;
1149   where evttime>=&start;
1150   Title "FF 3-factor model:CARs and BHARs around the event date";
1151   plot (car2win_mean bhar2win_mean)*evttime
1152        /overlay legend vaxis=axis1 haxis=axis2;
1153  run;

NOTE: 47008 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot2.png.
1153!     quit;

NOTE: There were 5 observations read from the data set WORK.FF_EVTWIN.
      WHERE evttime>=-2;
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE GPLOT used (Total process time):
      real time            0.27 seconds
      user cpu time        0.17 seconds
      system cpu time      0.07 seconds
      memory               8591.15k
      OS Memory            44012.00k
      Timestamp            06/18/2024 08:57:35 AM
```

```
      Step Count                                  62  Switch Count  0


1153!          ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\Car2_evtrets_5days.pdf.
1154
1155  ods pdf file="&outputPath\Car3_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\result\Car3_evtrets_5days.pdf", printer "PDF".
1156  proc gplot data =FFM_Evtwin;
1157   where evttime>=&start;
1158   Title "Carhart 4 Factor model: Carhart CARs and BHARs around the event date";
1159   plot (car3win_mean bhar3win_mean)*evttime
1160        /overlay legend vaxis=axis1 haxis=axis2;
1161  run;

NOTE: 44925 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot3.png.
1161!     quit;

NOTE: There were 5 observations read from the data set WORK.FFM_EVTWIN.
      WHERE evttime>=-2;
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE GPLOT used (Total process time):
      real time             0.28 seconds
      user cpu time         0.18 seconds
      system cpu time       0.09 seconds
      memory                8622.00k
      OS Memory             44012.00k
      Timestamp             06/18/2024 08:57:35 AM
      Step Count                                  63  Switch Count  0



1161!          ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\Car3_evtrets_5days.pdf.
1162
```

```
1163  ods pdf file="&outputPath\Car0_3_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\result\Car0_3_evtrets_5days.pdf",
      printer "PDF".
1164  proc  gplot data =allstats;
1165   where evttime>=&start;
1166   Title "CARs from the four models: around the event date";
1167   plot (car0win_mean  car1win_mean  car2win_mean  car3win_mean )*evttime
1168        /overlay legend vaxis=axis1 haxis=axis2;
1169  run;

NOTE: 56255 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot4.png.
1169!    quit;

NOTE: There were 5 observations read from the data set WORK.ALLSTATS.
      WHERE evttime>=-2;
NOTE: PROCEDURE GPLOT used (Total process time):
      real time           0.29 seconds
      user cpu time       0.18 seconds
      system cpu time     0.07 seconds
      memory              8734.00k
      OS Memory           44012.00k
      Timestamp           06/18/2024 08:57:36 AM
      Step Count                       64  Switch Count  0


1169!          ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\Car0_3_evtrets_5days.pdf.
1170
1171
1172  ods pdf file="&outputPath\BHARS0_3_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\result\BHARS0_3_evtrets_5days.pdf",
      printer "PDF".
1173  proc  gplot data =allstats;
1174   where evttime>=&start;
1175   Title "BHARs from the four models: BHARs around the event date";
```

```
1176  plot (bhar0_mean  bhar1_mean  bhar2_mean  bhar3_mean )*evttime
1177        /overlay legend vaxis=axis1 haxis=axis2;
1178  run;

NOTE: 17788 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot5.png.
1178!    quit;

NOTE: There were 5 observations read from the data set WORK.ALLSTATS.
      WHERE evttime>=-2;
NOTE: PROCEDURE GPLOT used (Total process time):
      real time           0.25 seconds
      user cpu time       0.14 seconds
      system cpu time     0.07 seconds
      memory              8686.34k
      OS Memory           44012.00k
      Timestamp           06/18/2024 08:57:36 AM
      Step Count                          65  Switch Count  0


1179
1180  ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\BHARS0_3_evtrets_5days.pdf.
1181  run;quit; ods pdf close;
1182
1183
1184
1185  /*house cleaning*
1186   proc sql;
1187     drop table abrets, allcars, allstats, caldates, car, car_evtwin, evtrets, temp,
1188              evtrets_temp,ffm_evtdate, ff_evtdate, ma_evtdate, mm_evtdate, params;
1189     drop view  evtrets1, abrets1; quit;
1190  */
1191  *%mend  event_crack;
1192  /* ******************************************************************************* */
1193  /* *************  Material Copyright Wharton Research Data Services  ************* */
1194  /* ***************************** All Rights Reserved ***************************** */
1195  /* ******************************************************************************* */
```

```
1196  proc report data=allevtdate;
1197    column  model Cret_mean   car_mean  bhar_mean    car_t  scar_t  pat_car n ;
1198    define  model / display;
1199    define  Cret_mean / display;
1200    define car_mean / display;
1201    define  bhar_mean / display;
1202   define  car_t / display;
1203   define  scar_t / display;
1204   define  pat_car / display;
1205   define n / display "total Obs";
1206
1207  run;
```

```
1208  options nolabel;
1209  proc report data=allstats;
1210    column  evttime abret0_Mean abret1_Mean abret2_Mean abret3_Mean  abret0_t abret1_t abret2_t abret3_t sar0_t
1210! sar1_t sar2_t sar3_t;
1211    define  evttime / display;
1212    define  abret0_Mean / display format=7.5;
1213    define abret1_Mean / display format=7.5;
1214    define  abret2_Mean / display format=7.5;
1215    define  abret3_Mean / display format=7.5;
1216    define  abret0_t / display format=5.3;
```

```
1217    define   abret1_t / display format=5.3;
1218    define   abret2_t / display format=5.3;
1219    define   abret3_t / display format=5.3;
1220     define   sar0_t / display format=5.3;
1221    define   sar1_t / display format=5.3;
1222    define   sar2_t / display format=5.3;
1223    define   sar3_t / display format=5.3;
1224
1225   where   NOT missing(evttime);
1226
1227   run;
```

```
1228  proc report data=allstats;
1229     column  evttime   car0_Mean car1_Mean car2_Mean car3_Mean car0_t car1_t car2_t car3_t scar0_t scar1_t scar2_t
1229! scar3_t ;
1230    define   evttime / display;
1231    define   car0_Mean / display format=7.5;
1232    define  car1_Mean / display format=7.5;
1233    define   car2_Mean / display format=7.5;
1234   define   car3_Mean / display format=7.5;
1235   define   car0_t / display format=5.3;
1236   define   car1_t / display format=5.3;
1237   define   car2_t / display format=5.3;
```

```
1238   define  car3_t / display format=5.3;
1239    define  scar0_t / display format=5.3;
1240   define  scar1_t / display format=5.3;
1241   define  scar2_t / display format=5.3;
1242   define  scar3_t / display format=5.3;
1243
1244  where  NOT missing(evttime);
1245
1246  run;
```

```
1247  proc freq data=car;
1248  table evttime;
1249  run;
```

```
1250   proc freq data=car;
1251   table evttime/missing;
1252   run;
```

```
1253   proc report data=allstats;
1254      column  evttime  car0_Mean car1_Mean car2_Mean car3_Mean car0_t car1_t car2_t car3_t scar0_t scar1_t scar2_t
1254! scar3_t ;
1255     define  evttime / display;
1256     define  car0win_mean / display format=7.5;
1257     define car1win_mean / display format=7.5;
1258     define  car2win_mean / display format=7.5;
1259    define  car3_win_mean / display format=7.5;
1260    define  car0_t / display format=5.3;
1261    define  car1_t / display format=5.3;
1262    define  car2_t / display format=5.3;
1263    define  car3_t / display format=5.3;
1264     define  scar0_t / display format=5.3;
1265    define  scar1_t / display format=5.3;
1266    define  scar2_t / display format=5.3;
1267    define  scar3_t / display format=5.3;
1268
1269   where  NOT missing(evttime);
1270
1271   run;
```

WARNING: car3_win_mean is not in the report definition.
WARNING: car2win_mean is not in the report definition.
WARNING: car1win_mean is not in the report definition.
WARNING: car0win_mean is not in the report definition.
NOTE: Multiple concurrent threads will be used to summarize data.
NOTE: There were 5 observations read from the data set WORK.ALLSTATS.
      WHERE not MISSING(evttime);
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE REPORT used (Total process time):
      real time   0.04 seconds
      user cpu time   0.00 seconds
      system cpu time   0.01 seconds
      memory   7713.31k
      OS Memory   58424.00k
      Timestamp   06/18/2024 09:26:41 AM
      Step Count   71 Switch Count 0

1272 options nolabel;
1273 proc report data=allstats;
1274   column evttime car0win_Mean car1win_Mean car2win_Mean car3win_Mean car0_t car1_t car2_t car3_t scar0_t
1274! scar1_t scar2_t scar3_t ;
1275   define evttime / display;
1276   define car0win_mean / display format=7.5;
1277   define car1win_mean / display format=7.5;
1278   define car2win_mean / display format=7.5;
1279   define car3_win_mean / display format=7.5;
1280   define car0_t / display format=5.3;
1281   define car1_t / display format=5.3;
1282   define car2_t / display format=5.3;
1283   define car3_t / display format=5.3;
1284   define scar0_t / display format=5.3;
1285   define scar1_t / display format=5.3;
1286   define scar2_t / display format=5.3;
1287   define scar3_t / display format=5.3;
1288
1289 where NOT missing(evttime);

```
1290
1291  run;

WARNING: car3_win_mean is not in the report definition.
NOTE: Multiple concurrent threads will be used to summarize data.
NOTE: There were 5 observations read from the data set WORK.ALLSTATS.
      WHERE not MISSING(evttime);
NOTE: PROCEDURE REPORT used (Total process time):
      real time            0.03 seconds
      user cpu time        0.01 seconds
      system cpu time      0.00 seconds
      memory               7679.25k
      OS Memory            58424.00k
      Timestamp            06/18/2024 09:27:25 AM
      Step Count                        72  Switch Count  0


1292  proc report data=allstats;
1293    column  evttime  car0win_Mean car1win_Mean car2win_Mean car3win_Mean car0_t car1_t car2_t car3_t scar0_t
1293! scar1_t scar2_t scar3_t ;
1294    define  evttime / display;
1295    define  car0win_mean / display format=7.5;
1296    define  car1win_mean / display format=7.5;
1297    define  car2win_mean / display format=7.5;
1298   define   car3_win_mean / display format=7.5;
1299   define  car0_t / display format=5.3;
1300   define  car1_t / display format=5.3;
1301   define  car2_t / display format=5.3;
1302   define  car3_t / display format=5.3;
1303    define  scar0_t / display format=5.3;
1304   define  scar1_t / display format=5.3;
1305   define  scar2_t / display format=5.3;
1306   define  scar3_t / display format=5.3;
1307
1308  where  NOT missing(evttime);
1309
1310  run;
```

```
WARNING: car3_win_mean is not in the report definition.
NOTE: Multiple concurrent threads will be used to summarize data.
NOTE: There were 5 observations read from the data set WORK.ALLSTATS.
      WHERE not MISSING(evttime);
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE REPORT used (Total process time):
      real time            0.04 seconds
      user cpu time        0.00 seconds
      system cpu time      0.01 seconds
      memory               7708.15k
      OS Memory            59448.00k
      Timestamp            06/18/2024 09:49:08 AM
      Step Count                           73  Switch Count  0


1311  proc report data=allstats;
1312    column  evttime  car0win_Mean car1win_Mean car2win_Mean car3win_Mean car0_t car1_t car2_t car3_t scar0_t
1312! scar1_t scar2_t scar3_t ;
1313    define  evttime / display;
1314    define   car0win_mean / display format=7.5;
1315    define   car1win_mean / display format=7.5;
1316    define   car2win_mean / display format=7.5;
1317    define   car3_win_mean / display format=7.5;
1318    define   car0_t / display format=5.3;
1319    define   car1_t / display format=5.3;
1320    define   car2_t / display format=5.3;
1321    define   car3_t / display format=5.3;
1322    define  scar0_t / display format=5.3;
1323    define  scar1_t / display format=5.3;
1324    define  scar2_t / display format=5.3;
1325    define  scar3_t / display format=5.3;
1326
1327  where  NOT missing(evttime);
1328  run;

WARNING: car3_win_mean is not in the report definition.
NOTE: Multiple concurrent threads will be used to summarize data.
```

NOTE: There were 5 observations read from the data set WORK.ALLSTATS.
      WHERE not MISSING(evttime);
NOTE: PROCEDURE REPORT used (Total process time):
      real time   0.20 seconds
      user cpu time   0.01 seconds
      system cpu time   0.01 seconds
      memory   7708.96k
      OS Memory   59448.00k
      Timestamp   06/18/2024 10:23:18 AM
      Step Count   74 Switch Count 0

1329 %let outputPath=%str(C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\result\Foreign_rec_exe10);
1330
1331
1332 ods latex path=&outputpath file='Foreign_rec_exc10_model_summary_report.tex' style=journal;
NOTE: Line generated by the macro variable "OUTPUTPATH".
1   C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\result\Foreign_rec_exe10
         -
         22
         -
         76
ERROR 22-322: Syntax error, expecting one of the following: DYNAMIC, NO_BOTTOM_MATTER, NO_TOP_MATTER, TITLE, URL.
ERROR 76-322: Syntax error, statement will be ignored.
1333 Title 'Summary report of the four models';
1334 options nolabel;
1335 proc report data=allevtdate;
1336   column model Cret_mean   car_mean bhar_mean   car_t scar_t pat_car n ;
1337   define model / display;
1338   define Cret_mean / display;
1339   define car_mean / display;
1340   define bhar_mean / display;
1341   define car_t / display;
1342   define scar_t / display;
1343   define pat_car / display;
1344   define n / display "total Obs";
1345
1346 run;

1347 ods latex close;

1348

1349 title;

1350

1351

1352

1353

1354 /*

1355 Variables in Creation Order

1356 evttime nobs _TYPE_ _FREQ_ ret_Mean cret_Mean

1357 car0_Mean car1_Mean car2_Mean car3_Mean

1358 bhar0_Mean bhar1_Mean bhar2_Mean bhar3_Mean

1359 bhar0win_Mean bhar1win_Mean bhar2win_Mean bhar3win_Mean

1360 cretwin_Mean car0win_Mean car1win_Mean car2win_Mean car3win_Mean

1361 scar0_Mean scar1_Mean scar2_Mean scar3_Mean

1362

1363 abret0_Mean abret1_Mean abret2_Mean abret3_Mean

1364 sar0_Mean sar1_Mean sar2_Mean sar3_Mean

1365 pat_scale_Mean

1366 ret_N cret_N car0_N car1_N car2_N car3_N

1367 bhar0_N bhar1_N bhar2_N bhar3_N

1368 bhar0win_N bhar1win_N bhar2win_N bhar3win_N

1369 cretwin_N car0win_N car1win_N car2win_N car3win_N

```
1370  scar0_N scar1_N scar2_N scar3_N
1371
1372  abret0_N abret1_N abret2_N abret3_N
1373  sar0_N sar1_N sar2_N sar3_N
1374  pat_scale_N
1375  ret_t cret_t
1376  car0_t car1_t car2_t car3_t
1377  bhar0_t bhar1_t bhar2_t bhar3_t
1378  bhar0win_t bhar1win_t bhar2win_t bhar3win_t
1379  cretwin_t car0win_t car1win_t car2win_t car3win_t
1380  scar0_t scar1_t scar2_t scar3_t
1381
1382  abret0_t abret1_t abret2_t abret3_t
1383
1384  sar0_t sar1_t sar2_t sar3_t
1385
1386  pat_scale_t
1387
1388  ret_Sum cret_Sum car0_Sum car1_Sum car2_Sum car3_Sum
1389  bhar0_Sum bhar1_Sum bhar2_Sum bhar3_Sum
1390  bhar0win_Sum bhar1win_Sum bhar2win_Sum bhar3win_Sum
1391  cretwin_Sum car0win_Sum car1win_Sum car2win_Sum car3win_Sum scar0_Sum scar1_Sum scar2_Sum scar3_Sum
1392  abret0_Sum abret1_Sum abret2_Sum abret3_Sum sar0_Sum sar1_Sum sar2_Sum sar3_Sum pat_scale_Sum
1393
1394  */
1395
1396
1397  ods latex path=&outputPath file='Foreign_rec_exc10_ARet_summary_report.tex' style=Journal2;
NOTE: Line generated by the macro variable "OUTPUTPATH".
1     C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\result\Foreign_rec_exe10
         -
         22
          -
         76
ERROR 22-322: Syntax error, expecting one of the following: DYNAMIC, NO_BOTTOM_MATTER, NO_TOP_MATTER, TITLE, URL.
ERROR 76-322: Syntax error, statement will be ignored.
1398  Title 'Summary report of abnormal returns';
1399  options nolabel;
```

```
1400  proc report data=allstats;
1401    column  evttime abret0_Mean abret1_Mean abret2_Mean abret3_Mean  abret0_t abret1_t abret2_t abret3_t sar0_t
1401! sar1_t sar2_t sar3_t;
1402    define  evttime / display;
1403    define  abret0_Mean / display format=7.5;
1404    define  abret1_Mean / display format=7.5;
1405    define  abret2_Mean / display format=7.5;
1406    define  abret3_Mean / display format=7.5;
1407    define  abret0_t / display format=5.3;
1408    define  abret1_t / display format=5.3;
1409    define  abret2_t / display format=5.3;
1410    define  abret3_t / display format=5.3;
1411    define  sar0_t / display format=5.3;
1412    define  sar1_t / display format=5.3;
1413    define  sar2_t / display format=5.3;
1414    define  sar3_t / display format=5.3;
1415
1416  where  NOT missing(evttime);
1417
1418  run;

NOTE: Multiple concurrent threads will be used to summarize data.
NOTE: There were 5 observations read from the data set WORK.ALLSTATS.
      WHERE not MISSING(evttime);
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE REPORT used (Total process time):
      real time           0.05 seconds
      user cpu time       0.01 seconds
      system cpu time     0.00 seconds
      memory              7769.50k
      OS Memory           50196.00k
      Timestamp           06/18/2024 10:49:31 AM
      Step Count                        76  Switch Count  0


1419  ods latex close;title;
1420
```

```
1421  ods latex path=&outputPath file='Foreign_rec_exc1O_Car_summary_report.tex' style=Journal2;
NOTE: Line generated by the macro variable "OUTPUTPATH".
1     C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\result\Foreign_rec_exe1O
         -
         22
         -
         76
ERROR 22-322: Syntax error, expecting one of the following: DYNAMIC, NO_BOTTOM_MATTER, NO_TOP_MATTER, TITLE, URL.
ERROR 76-322: Syntax error, statement will be ignored.
1422  Title 'Summary report of CARS from the four models';
1423  options nolabel;
1424  proc report data=allstats;
1425    column  evttime  car0win_Mean car1win_Mean car2win_Mean car3win_Mean car0_t car1_t car2_t car3_t scar0_t
1425! scar1_t scar2_t scar3_t ;
1426    define  evttime / display;
1427    define   car0win_mean / display format=7.5;
1428    define   car1win_mean / display format=7.5;
1429    define   car2win_mean / display format=7.5;
1430    define   car3_win_mean / display format=7.5;
1431    define   car0_t / display format=5.3;
1432    define   car1_t / display format=5.3;
1433    define   car2_t / display format=5.3;
1434    define   car3_t / display format=5.3;
1435    define  scar0_t / display format=5.3;
1436    define  scar1_t / display format=5.3;
1437    define  scar2_t / display format=5.3;
1438    define  scar3_t / display format=5.3;
1439
1440  where  NOT missing(evttime);
1441  run;


WARNING: car3_win_mean is not in the report definition.
NOTE: Multiple concurrent threads will be used to summarize data.
NOTE: There were 5 observations read from the data set WORK.ALLSTATS.
      WHERE not MISSING(evttime);
NOTE: PROCEDURE REPORT used (Total process time):
      real time           0.04 seconds
      user cpu time       0.01 seconds
```

1442 ods latex close; title;
1443 %contents(car_evtwin)

       -

       180
WARNING: Apparent invocation of macro CONTENTS not resolved.
ERROR 180-322: Statement is not valid or it is used out of proper order.
1444 %contents(car_evtdate)
WARNING: Apparent invocation of macro CONTENTS not resolved.

1445 %macro contents(table);
1446 Title "Varibales in table &table";
1447 proc contents data= &table;
1448 ods select variables;
1449 run;
1450 %mend contents;
1451 %macro contents_short(table);
1452 Title "Varibales in table &table";
1453 proc contents data= &table varnum short ;
1454 ods select variable;
1455 run;
1456 %contents(car_evtwin)
1457 %contents(car_evtdate)
1458 %macro contents(table);
1459 Title "Varibales in table &table";
1460 proc contents data= &table;
1461 ods select variables;
1462 run;
1463 %mend contents;
1464 %macro contents_short(table);
1465 Title "Varibales in table &table";
1466 proc contents data= &table varnum short ;

```
1467  ods select variable;
1468  run;
1469  %contents(car_evtwin)
1470  %contents(car_evtdate)
1471  %mend contents;
WARNING: Extraneous text on %MEND statement ignored for macro definition CONTENTS_SHORT.
1472  %mend contents;

1473   ;*';*";*/;quit;run;
1474   ODS _ALL_ CLOSE;
1475   QUIT; RUN;

1476  %contents(car_evtwin)
MLOGIC(CONTENTS):  Beginning execution.
MLOGIC(CONTENTS):  Parameter TABLE has value car_evtwin
MPRINT(CONTENTS):   Title "Varibales in table car_evtwin";
MPRINT(CONTENTS):   proc contents data= car_evtwin;
MPRINT(CONTENTS):   ods select variables;
MPRINT(CONTENTS):   run;
WARNING: No output destinations active.
NOTE: PROCEDURE CONTENTS used (Total process time):
      real time            0.21 seconds
      user cpu time        0.01 seconds
      system cpu time      0.01 seconds
      memory               520.90k
      OS Memory            48920.00k
      Timestamp            06/18/2024 11:22:18 AM
      Step Count                       78  Switch Count  0

WARNING: Output 'variables' was not created.  Make sure that the output object name, label, or path is spelled
         correctly.  Also, verify that the appropriate procedure options are used to produce the requested output
         object.  For example, verify that the NOPRINT option is not used.
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.

MLOGIC(CONTENTS):  Ending execution.
1477  %contents(car_evtdate)
MLOGIC(CONTENTS):  Beginning execution.
```

```
MLOGIC(CONTENTS):  Parameter TABLE has value car_evtdate
MPRINT(CONTENTS):   Title "Varibales in table car_evtdate";
MPRINT(CONTENTS):   proc contents data= car_evtdate;
MPRINT(CONTENTS):   ods select variables;
MPRINT(CONTENTS):   run;
WARNING: No output destinations active.
NOTE: PROCEDURE CONTENTS used (Total process time):
      real time           0.03 seconds
      user cpu time       0.01 seconds
      system cpu time     0.01 seconds
      memory              379.21k
      OS Memory           48920.00k
      Timestamp           06/18/2024 11:22:18 AM
      Step Count                        79  Switch Count  0


WARNING: Output 'variables' was not created.  Make sure that the output object name, label, or path is spelled
         correctly.  Also, verify that the appropriate procedure options are used to produce the requested output
         object.  For example, verify that the NOPRINT option is not used.


MLOGIC(CONTENTS):  Ending execution.

1478   ODS _ALL_ CLOSE;
1479  %contents(car_evtwin)
MLOGIC(CONTENTS):  Beginning execution.
MLOGIC(CONTENTS):  Parameter TABLE has value car_evtwin
MPRINT(CONTENTS):   Title "Varibales in table car_evtwin";
MPRINT(CONTENTS):   proc contents data= car_evtwin;
MPRINT(CONTENTS):   ods select variables;
MPRINT(CONTENTS):   run;
WARNING: No output destinations active.
NOTE: PROCEDURE CONTENTS used (Total process time):
      real time           0.03 seconds
      user cpu time       0.00 seconds
      system cpu time     0.01 seconds
      memory              379.87k
      OS Memory           48920.00k
      Timestamp           06/18/2024 11:23:00 AM
      Step Count                        80  Switch Count  0
```

WARNING: Output 'variables' was not created. Make sure that the output object name, label, or path is spelled
         correctly. Also, verify that the appropriate procedure options are used to produce the requested output
         object. For example, verify that the NOPRINT option is not used.

MLOGIC(CONTENTS): Ending execution.

1480 %contents(car_evtwin)
MLOGIC(CONTENTS): Beginning execution.
MLOGIC(CONTENTS): Parameter TABLE has value car_evtwin
MPRINT(CONTENTS):   Title "Varibales in table car_evtwin";
MPRINT(CONTENTS):   proc contents data= car_evtwin;
MPRINT(CONTENTS):   ods select variables;
MPRINT(CONTENTS):   run;
WARNING: No output destinations active.
NOTE: PROCEDURE CONTENTS used (Total process time):
      real time   0.01 seconds
      user cpu time   0.00 seconds
      system cpu time   0.00 seconds
      memory   377.15k
      OS Memory   48920.00k
      Timestamp   06/18/2024 11:27:51 AM
      Step Count   81 Switch Count 0

WARNING: Output 'variables' was not created. Make sure that the output object name, label, or path is spelled
         correctly. Also, verify that the appropriate procedure options are used to produce the requested output
         object. For example, verify that the NOPRINT option is not used.

MLOGIC(CONTENTS): Ending execution.

1481 ODS html file="My File.htm";
NOTE: Writing HTML Body file: My File.htm
1482 proc contents data =car_evtwin;
1483 run;

NOTE: PROCEDURE CONTENTS used (Total process time):
      real time   0.06 seconds
      user cpu time   0.03 seconds

```
      system cpu time      0.01 seconds
      memory               1634.03k
      OS Memory            50712.00k
      Timestamp            06/18/2024 11:30:24 AM
      Step Count                        82  Switch Count  0


1484  %contents(car_evtdate)
MLOGIC(CONTENTS):  Beginning execution.
MLOGIC(CONTENTS):  Parameter TABLE has value car_evtdate
MPRINT(CONTENTS):   Title "Varibales in table car_evtdate";
MPRINT(CONTENTS):   proc contents data= car_evtdate;
MPRINT(CONTENTS):   ods select variables;
MPRINT(CONTENTS):   run;
NOTE: PROCEDURE CONTENTS used (Total process time):
      real time            0.04 seconds
      user cpu time        0.01 seconds
      system cpu time      0.00 seconds
      memory               519.37k
      OS Memory            50712.00k
      Timestamp            06/18/2024 11:31:32 AM
      Step Count                        83  Switch Count  0


MLOGIC(CONTENTS):  Ending execution.

1485   %put Current path is %curdir;
WARNING: Apparent invocation of macro CURDIR not resolved.
Current path is %curdir
1486  options nolabel;
1487  proc report data=allstats;
1488    column  evttime  car0win_Mean car1win_Mean car2win_Mean car3win_Mean car0_t car1_t car2_t car3_t scar0_t
1488! scar1_t scar2_t scar3_t ;
1489    define  evttime / display;
1490    define   car0win_mean / display format=7.5;
1491    define   car1win_mean / display format=7.5;
1492    define   car2win_mean / display format=7.5;
1493    define   car3win_mean / display format=7.5;
```

```
1494    define   car0_t / display format=5.3;
1495    define   car1_t / display format=5.3;
1496    define   car2_t / display format=5.3;
1497    define   car3_t / display format=5.3;
1498    define  scar0_t / display format=5.3;
1499    define  scar1_t / display format=5.3;
1500    define  scar2_t / display format=5.3;
1501    define  scar3_t / display format=5.3;
1502
1503  where  NOT missing(evttime);
1504  run;
```

NOTE: Multiple concurrent threads will be used to summarize data.
NOTE: There were 5 observations read from the data set WORK.ALLSTATS.
      WHERE not MISSING(evttime);
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE REPORT used (Total process time):
      real time   0.21 seconds
      user cpu time   0.01 seconds
      system cpu time   0.01 seconds
      memory   7985.84k
      OS Memory   58416.00k
      Timestamp   06/18/2024 12:16:37 PM
      Step Count   84 Switch Count 0


```
1505   proc means data=car_evtdate;
1506   class evttime;
```
ERROR: Variable EVTTIME not found.
```
1507   var car0 car1 car2 cars;
```
ERROR: Variable CARS not found.
```
1508   run;
```

NOTE: The SAS System stopped processing this step because of errors.
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE MEANS used (Total process time):

```
        real time              0.00 seconds
        user cpu time          0.00 seconds
        system cpu time        0.00 seconds
        memory                 92.43k
        OS Memory              53016.00k
        Timestamp              06/18/2024 12:19:57 PM
        Step Count                        85  Switch Count  0


1509   proc means data=car_evtdate;
1510
1511   var car0 car1 car2 cars;
ERROR: Variable CARS not found.
1512   run;

NOTE: The SAS System stopped processing this step because of errors.
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE MEANS used (Total process time):
        real time              0.00 seconds
        user cpu time          0.00 seconds
        system cpu time        0.00 seconds
        memory                 92.43k
        OS Memory              53016.00k
        Timestamp              06/18/2024 12:20:19 PM
        Step Count                        86  Switch Count  0


1513   proc means data=car_evtdate;
1514
1515   var car0 car1 car2 car3;
1516   run;

NOTE: Multiple concurrent threads will be used to summarize data.
NOTE: There were 994 observations read from the data set WORK.CAR_EVTDATE.
NOTE: PROCEDURE MEANS used (Total process time):
        real time              0.04 seconds
        user cpu time          0.04 seconds
```

```
       system cpu time    0.00 seconds
       memory             7026.46k
       OS Memory          58668.00k
       Timestamp          06/18/2024 12:20:30 PM
       Step Count                       87  Switch Count  0


1517   proc means data=car_evtwin;
1518
1519   var car0 car1 car2 car3;
1520   run;

NOTE: Multiple concurrent threads will be used to summarize data.
NOTE: There were 4970 observations read from the data set WORK.CAR_EVTWIN.
NOTE: PROCEDURE MEANS used (Total process time):
       real time          0.06 seconds
       user cpu time      0.06 seconds
       system cpu time    0.00 seconds
       memory             7024.00k
       OS Memory          58668.00k
       Timestamp          06/18/2024 12:22:05 PM
       Step Count                       88  Switch Count  0


1521   proc means data=car_evtwin;
1522   class evttime;
1523   var car0 car1 car2 car3;
1524   run;

NOTE: Multiple concurrent threads will be used to summarize data.
NOTE: There were 4970 observations read from the data set WORK.CAR_EVTWIN.
NOTE: PROCEDURE MEANS used (Total process time):
       real time          0.07 seconds
       user cpu time      0.04 seconds
       system cpu time    0.00 seconds
       memory             8749.68k
       OS Memory          60204.00k
       Timestamp          06/18/2024 12:22:49 PM
```

```
1525  ods latex path=&outputPath file='Foreign_rec_exc10_Car_summary_report.tex' style=Journal2;
```
NOTE: Line generated by the macro variable "OUTPUTPATH".
```
1     C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\result\Foreign_rec_exe10
          -
          22
          -
          76
```
ERROR 22-322: Syntax error, expecting one of the following: DYNAMIC, NO_BOTTOM_MATTER, NO_TOP_MATTER, TITLE, URL.
ERROR 76-322: Syntax error, statement will be ignored.
```
1526  Title 'Summary report of CARS from the four models';
1527  options nolabel;
1528  proc report data=allstats;
1529    column  evttime  car0_Mean car1_Mean car2_Mean car3_Mean car0_t car1_t car2_t car3_t scar0_t scar1_t scar2_t
1529! scar3_t ;
1530    define  evttime / display;
1531    define   car0_mean / display format=7.5;
1532    define   car1_mean / display format=7.5;
1533    define   car2_mean / display format=7.5;
1534    define   car3_mean / display format=7.5;
1535    define   car0_t / display format=5.3;
1536    define   car1_t / display format=5.3;
1537    define   car2_t / display format=5.3;
1538    define   car3_t / display format=5.3;
1539    define  scar0_t / display format=5.3;
1540    define  scar1_t / display format=5.3;
1541    define  scar2_t / display format=5.3;
1542    define  scar3_t / display format=5.3;
1543
1544  where  NOT missing(evttime);
1545  run;
```

NOTE: Multiple concurrent threads will be used to summarize data.
NOTE: There were 5 observations read from the data set WORK.ALLSTATS.
      WHERE not MISSING(evttime);
NOTE: PROCEDURE REPORT used (Total process time):

```
      real time              0.06 seconds
      user cpu time          0.04 seconds
      system cpu time        0.01 seconds
      memory                 7814.78k
      OS Memory              58928.00k
      Timestamp              06/18/2024 12:25:24 PM
      Step Count                        90  Switch Count  0


1546  ods latex close; title;
1547   proc means data=allcars;
1548   class evttime;
1549   var car0 car1 car2 car3;
1550   run;

NOTE: Multiple concurrent threads will be used to summarize data.
NOTE: There were 4970 observations read from the data set WORK.ALLCARS.
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE MEANS used (Total process time):
      real time              0.07 seconds
      user cpu time          0.03 seconds
      system cpu time        0.01 seconds
      memory                 8829.34k
      OS Memory              60716.00k
      Timestamp              06/18/2024 12:29:00 PM
      Step Count                        91  Switch Count  0


1551  proc report data=allstats;
1552    column  evttime  car0win_Mean car1win_Mean car2win_Mean car3win_Mean car0_t car1_t car2_t car3_t scar0_t
1552! scar1_t scar2_t scar3_t ;
1553   define  evttime / display;
1554   define   car0win_mean / display format=7.5;
1555   define   car1win_mean / display format=7.5;
1556   define   car2win_mean / display format=7.5;
1557   define   car3win_mean / display format=7.5;
1558   define   car0_t / display format=5.3;
```

```
1559    define    car1_t / display format=5.3;
1560    define    car2_t / display format=5.3;
1561    define    car3_t / display format=5.3;
1562    define   scar0_t / display format=5.3;
1563    define   scar1_t / display format=5.3;
1564    define   scar2_t / display format=5.3;
1565    define   scar3_t / display format=5.3;
1566
1567  where   NOT missing(evttime);
1568  run;
```

```
1569  proc report data=allstats;
1570    column  evttime  car0win_Mean  car1win_Mean car2win_Mean car3win_Mean
1571                     car0win_t    car1win_t    car2win_t    car3win_t
1572                     scar0in_t scar1win_t scar2win_t scar3win_t ;
1573    define  evttime / display;
1574    define   car0win_mean / display format=7.5;
1575    define   car1win_mean / display format=7.5;
1576    define   car2win_mean / display format=7.5;
1577    define   car3win_mean / display format=7.5;
1578    define   car0win_t / display format=5.3;
1579    define   car1win_t / display format=5.3;
1580    define   car2win_t / display format=5.3;
```

```
1581    define   car3win_t / display format=5.3;
1582    define   scar0win_t / display format=5.3;
1583    define   scar1win_t / display format=5.3;
1584    define   scar2win_t / display format=5.3;
1585    define   scar3win_t / display format=5.3;
1586
1587  where   NOT missing(evttime);
1588  run;
```

WARNING: scar0win_t is not in the report definition.
ERROR: Variable scar1win_t is not on file WORK.ALLSTATS.
ERROR: Variable scar2win_t is not on file WORK.ALLSTATS.
ERROR: Variable scar3win_t is not on file WORK.ALLSTATS.
NOTE: The SAS System stopped processing this step because of errors.
NOTE: There were 1 observations read from the data set WORK.ALLSTATS.
      WHERE not MISSING(evttime);
NOTE: PROCEDURE REPORT used (Total process time):
      real time   0.00 seconds
      user cpu time   0.00 seconds
      system cpu time   0.00 seconds
      memory   254.48k
      OS Memory   50956.00k
      Timestamp   06/18/2024 12:38:55 PM
      Step Count   93 Switch Count 0


```
1589  proc contents data =allstats;
1590  run;
```

NOTE: PROCEDURE CONTENTS used (Total process time):
      real time   0.07 seconds
      user cpu time   0.03 seconds
      system cpu time   0.01 seconds
      memory   722.20k
      OS Memory   50956.00k
      Timestamp   06/18/2024 12:39:55 PM
      Step Count   94 Switch Count 0

```
1591   proc report data=allstats;
1592      column  evttime  car0win_Mean  car1win_Mean car2win_Mean car3win_Mean
1593                       car0win_t     car1win_t    car2win_t    car3win_t
1594                       scar0_t       scar1_t      scar2_t      scar3_t
1595                       bhar0win_t    bhar1win_t   bhar2win_t   bhar3win_t ;
1596      define  evttime / display;
1597      define   car0win_mean / display format=7.5;
1598      define   car1win_mean / display format=7.5;
1599      define   car2win_mean / display format=7.5;
1600      define   car3win_mean / display format=7.5;
1601      define   car0win_t / display format=5.3;
1602      define   car1win_t / display format=5.3;
1603      define   car2win_t / display format=5.3;
1604      define   car3win_t / display format=5.3;
1605      define  scar0_t / display format=5.3;
1606      define  scar1_t / display format=5.3;
1607      define  scar2_t / display format=5.3;
1608      define  scar3_t / display format=5.3;
1609       define  bhar0win_t / display format=5.3;
1610       define  bhar1win_t / display format=5.3;
1611       define  bhar2win_t / display format=5.3;
1612       define  bhar3win_t / display format=5.3;
1613
1614   where  NOT missing(evttime);
1615   run;


NOTE: Multiple concurrent threads will be used to summarize data.
NOTE: There were 5 observations read from the data set WORK.ALLSTATS.
      WHERE not MISSING(evttime);
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE REPORT used (Total process time):
      real time            0.06 seconds
      user cpu time        0.01 seconds
      system cpu time      0.01 seconds
      memory               7583.32k
      OS Memory            56088.00k
```

```
1616
1617  ods latex path=&outputPath file='Foreign_rec_exc10_Car_summary_report.tex' style=Journal2;
```
NOTE: Line generated by the macro variable "OUTPUTPATH".
```
1     C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\result\Foreign_rec_exe10

        -
        22

        -
        76
```
ERROR 22-322: Syntax error, expecting one of the following: DYNAMIC, NO_BOTTOM_MATTER, NO_TOP_MATTER, TITLE, URL.
ERROR 76-322: Syntax error, statement will be ignored.
```
1618  Title 'Summary report of CARS from the four models';
1619  options nolabel;
1620  proc report data=allstats;
1621     column  evttime  car0win_Mean  car1win_Mean  car2win_Mean  car3win_Mean
1622                      car0win_t      car1win_t      car2win_t      car3win_t
1623                      scar0_t        scar1_t        scar2_t        scar3_t
1624                      bhar0win_t     bhar1win_t     bhar2win_t     bhar3win_t ;
1625     define  evttime / display;
1626     define   car0win_mean / display format=7.5;
1627     define   car1win_mean / display format=7.5;
1628     define   car2win_mean / display format=7.5;
1629     define   car3win_mean / display format=7.5;
1630     define   car0win_t / display format=5.3;
1631     define   car1win_t / display format=5.3;
1632     define   car2win_t / display format=5.3;
1633     define   car3win_t / display format=5.3;
1634     define  scar0_t / display format=5.3;
1635     define  scar1_t / display format=5.3;
1636     define  scar2_t / display format=5.3;
1637     define  scar3_t / display format=5.3;
1638      define  bhar0win_t / display format=5.3;
1639      define  bhar1win_t / display format=5.3;
1640      define  bhar2win_t / display format=5.3;
1641      define  bhar3win_t / display format=5.3;
```

```
1642
1643  where  NOT missing(evttime);
1644  run;

NOTE: Multiple concurrent threads will be used to summarize data.
NOTE: There were 5 observations read from the data set WORK.ALLSTATS.
      WHERE not MISSING(evttime);
NOTE: PROCEDURE REPORT used (Total process time):
      real time           0.06 seconds
      user cpu time       0.04 seconds
      system cpu time     0.00 seconds
      memory              7584.48k
      OS Memory           56088.00k
      Timestamp           06/18/2024 12:48:56 PM
      Step Count                      96  Switch Count  0


1645  ods latex close; title;
1646  ods latex path="&outputPath" file='Foreign_rec_exc10_Car_summary_report.tex' style=Journal2;
NOTE: Writing LATEX Body file: Foreign_rec_exc10_Car_summary_report.tex
1647  Title 'Summary report of CARS from the four models';
1648  options nolabel;
1649  proc report data=allstats;
1650    column  evttime  car0win_Mean  car1win_Mean car2win_Mean car3win_Mean
1651                      car0win_t     car1win_t    car2win_t    car3win_t
1652                      scar0_t       scar1_t      scar2_t      scar3_t
1653                      bhar0win_t    bhar1win_t   bhar2win_t   bhar3win_t ;
1654    define  evttime / display;
1655    define   car0win_mean / display format=7.5;
1656    define   car1win_mean / display format=7.5;
1657    define   car2win_mean / display format=7.5;
1658    define   car3win_mean / display format=7.5;
1659    define   car0win_t / display format=5.3;
1660    define   car1win_t / display format=5.3;
1661    define   car2win_t / display format=5.3;
1662    define   car3win_t / display format=5.3;
1663    define  scar0_t / display format=5.3;
1664    define  scar1_t / display format=5.3;
```

```
1665    define  scar2_t / display format=5.3;
1666    define  scar3_t / display format=5.3;
1667     define  bhar0win_t / display format=5.3;
1668     define  bhar1win_t / display format=5.3;
1669     define  bhar2win_t / display format=5.3;
1670     define  bhar3win_t / display format=5.3;
1671
1672  where  NOT missing(evttime);
1673  run;
```

NOTE: Multiple concurrent threads will be used to summarize data.
NOTE: There were 5 observations read from the data set WORK.ALLSTATS.
      WHERE not MISSING(evttime);
NOTE: PROCEDURE REPORT used (Total process time):
      real time   0.06 seconds
      user cpu time   0.01 seconds
      system cpu time   0.01 seconds
      memory   7680.39k
      OS Memory   56600.00k
      Timestamp   06/18/2024 12:49:33 PM
      Step Count   97 Switch Count 0

```
1674  ods latex close; title;
1675  ods latex path="&outputpath"  file='Foreign_rec_exc10_model_summary_report.tex' style=journal;
```
NOTE: Writing LATEX Body file: Foreign_rec_exc10_model_summary_report.tex
```
1676  Title 'Summary report of the four models';
1677  options nolabel;
1678  proc report data=allevtdate;
1679    column  model Cret_mean   car_mean  bhar_mean    car_t  scar_t  pat_car n ;
1680    define  model / display;
1681    define  Cret_mean / display;
1682    define  car_mean / display;
1683    define  bhar_mean / display;
1684   define   car_t / display;
1685   define  scar_t / display;
1686   define  pat_car / display;
1687   define n / display "total Obs";
```

```
1688
1689  run;
```

NOTE: Multiple concurrent threads will be used to summarize data.
NOTE: There were 4 observations read from the data set WORK.ALLEVTDATE.
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE REPORT used (Total process time):
      real time   0.06 seconds
      user cpu time   0.01 seconds
      system cpu time   0.01 seconds
      memory   8270.14k
      OS Memory   56608.00k
      Timestamp   06/18/2024 12:50:12 PM
      Step Count   98 Switch Count 0

```
1690  ods latex close;
1691
1692  title;

1693  ods latex path="&outputPath" file='Foreign_rec_exc10_ARet_summary_report.tex' style=Journal2;
```
NOTE: Writing LATEX Body file: Foreign_rec_exc10_ARet_summary_report.tex
```
1694  Title 'Summary report of abnormal returns';
1695  options nolabel;
1696  proc report data=allstats;
1697    column  evttime abret0_Mean abret1_Mean abret2_Mean abret3_Mean  abret0_t abret1_t abret2_t abret3_t sar0_t
1697! sar1_t sar2_t sar3_t;
1698    define  evttime / display;
1699    define  abret0_Mean / display format=7.5;
1700    define  abret1_Mean / display format=7.5;
1701    define  abret2_Mean / display format=7.5;
1702    define  abret3_Mean / display format=7.5;
1703    define  abret0_t / display format=5.3;
1704    define  abret1_t / display format=5.3;
1705    define  abret2_t / display format=5.3;
1706    define  abret3_t / display format=5.3;
1707    define  sar0_t / display format=5.3;
```

```
1708    define  sar1_t / display format=5.3;
1709    define  sar2_t / display format=5.3;
1710    define  sar3_t / display format=5.3;
1711
1712  where  NOT missing(evttime);
1713
1714  run;
```

NOTE: Multiple concurrent threads will be used to summarize data.
NOTE: There were 5 observations read from the data set WORK.ALLSTATS.
      WHERE not MISSING(evttime);
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE REPORT used (Total process time):
      real time   0.04 seconds
      user cpu time   0.01 seconds
      system cpu time   0.03 seconds
      memory   7871.78k
      OS Memory   57120.00k
      Timestamp   06/18/2024 12:52:50 PM
      Step Count   99 Switch Count 0

```
1715  ods latex close;title;
1716  data  foreign_trans_execrec10_dec10;
1717  set foreign_trans_execrec10_decile (where = (decile=9));
1718  run;
```

NOTE: There were 109 observations read from the data set WORK.FOREIGN_TRANS_EXECREC10_DECILE.
      WHERE decile=9;
NOTE: The data set WORK.FOREIGN_TRANS_EXECREC10_DEC10 has 109 observations and 45 variables.
NOTE: DATA statement used (Total process time):
      real time   0.03 seconds
      user cpu time   0.01 seconds
      system cpu time   0.00 seconds
      memory   1099.62k
      OS Memory   52532.00k
      Timestamp   06/18/2024 01:12:38 PM

```
1719  outputPath
1719  outputPath
      ----------
      180
ERROR 180-322: Statement is not valid or it is used out of proper order.

1720  outputPath
1720  outputPath
      ----------
      180
ERROR 180-322: Statement is not valid or it is used out of proper order.

1721  /*https://wrds-www.wharton.upenn.edu/pages/support/applications/event-studies/event-study-research-application/*
1721! /
1722
1723  /* ************************************************************************** */
1724  /* ********* W R D S   R E S E A R C H   A P P L I C A T I O N S ************** */
1725  /* ************************************************************************** */
1726  /* Program : EVTSTUDY.SAS                                            */
1727  /* Summary : Provides a sample methodology for calculating Cumulative        */
1728  /*           Abnormal Returns(CARs)& Buy-Hold Abnormal Returns(BHARs)        */
1729  /*           with various t-statistics (CS test, Standardized CS test&Patell Z)  */
1730  /*           in an event study setting. Displays the dynamics of mean CARs and   */
1731  /*           BHARs in the event window specified by the user                 */
1732  /*                                                                   */
1733  /* Date    : Sep 2011                                                 */
1734  /* Author  : Denys Glushkov, WRDS                                     */
1735  /* ************************************************************************** */
1736
1737  /* STEP 1A: Speficify the parameters necessary to run the event study such as    */
1738  /* the length of estimation period and event window, gap b/w estimation & event  */
1739  /* window, etc                                                       */
1740  *%libname mycrsp "C:\Users\hli5\OneDrive - Kent State University\aaaa\event_Study";
1741  libname mycrsp "C:\Users\lihon\patent Dropbox\Victor Li\wrds_data";
NOTE: Libref MYCRSP was successfully assigned as follows:
```

```
      Engine:         V9
      Physical Name: C:\Users\lihon\patent Dropbox\Victor Li\wrds_data
1742  * libname evtstudy "C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\June6_res";
1743  %let outputPath=%str(C:\Users\lihon\OneDrive - Kent State
1743! University\aaaa\event_Study\result\foreign_rec_exe10Dec9);
1744  * libname evtstudy "&outputPath\Foreign_rec_exe10";
1745  libname evtstudy "&outputPath";
NOTE: Libref EVTSTUDY was successfully assigned as follows:
      Engine:         V9
      Physical Name: C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\result\foreign_rec_exe10Dec9
1746  %let crsp=mycrsp; /*CRSP libary to be used (CRSPQ - quarterly, CRSP-annual update  */
1747  %let estper=150; /*Length of the estimation period in trading days over which    */
1748                   /*the risk model is estimated                                    */
1749
1750  %let start=-2; /*Beginning of the event window (wtr to the event date,e.g. -2)   */
1751  %let end=2;     /*End of the event window (relative to the event date, e.g., +1)  */
1752  %let gap=66;    /*Length of pre-event window,i.e., number of trading days b/w     */
1753                   /*the end of estimation period and the start of the event window */
1754
1755  %let minest=70; /*Minimum of non-missing returns required for estimation         */
1756  %let evtwin=%eval(&end-&start+1);       /*length of event window in trading days */
1757
1758  /* STEP 1B: As an example, create the input table containing Permno-event dates  */
1759  /* corresponding to the stock additions to and deletions from S&P 500 index      */
1760
1761
1762  *  %event_crack(relation_exec) ;
1763  * %let permno_list=relation_exec;
1764  *%let permno_list=foreign_relation;
1765  * %let permno_list=for_event_study_v2;
1766  * %let permno_list=oree_gvkey_patentid_record_dtv2;
1767  * %let permno_list=foreign_trans_exec_record10;
1768  %let permno_list=foreign_trans_execrec10_dec10;
1769
1770
1771  /*- %macro event_crack(permno_list, evt_date=exec_dt); */
1772
1773  proc sql;
```

```
1774    create table input
1775    as select distinct permno, record_dt as edate format MMDDYY10.
1776    from &permno_list where not missing(&start) and year(record_dt);
NOTE: Table WORK.INPUT created, with 93 rows and 2 columns.

1777  quit;
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE SQL used (Total process time):
      real time           0.03 seconds
      user cpu time       0.01 seconds
      system cpu time     0.00 seconds
      memory              5353.75k
      OS Memory           57896.00k
      Timestamp           06/18/2024 01:21:53 PM
      Step Count                          101  Switch Count  0


1778
1779  /* STEP 2. Creating Trading Calendar that accounts for the presence of  */
1780  /* weekends, holidays and other non-trading days in the estimation      */
1781  /* and event windows                                                    */
1782  data caldates;
1783
1784   merge &crsp..dsi(keep=date rename=(date=estper_beg))
1785     &crsp..dsi(keep=date firstobs=&estper rename=(date=estper_end))
1786     &crsp..dsi(keep=date firstobs=%eval(&estper+&gap+1) rename=(date=evtwin_beg))
1787     &crsp..dsi(keep=date firstobs=%eval(&estper+&gap-&start+1) rename=(date=evtdate))
1788     &crsp..dsi(keep=date firstobs=%eval(&estper+&gap+&evtwin) rename=(date=evtwin_end));
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
```

INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and might reduce performance.
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and might reduce performance.
1789
1790   format estper_beg estper_end evtwin_beg evtdate evtwin_end date9.;
1791   label estper_beg='Start of the Estimation Window'
1792   estper_end='End of the Estimation Window'
1793   evtwin_beg='Start of the Event Window'
1794   evtwin_end='End of the Event Window'
1795   evtdate='Event Date';
1796   index+1;
1797   if nmiss(estper_beg,estper_end,evtwin_beg,evtwin_end,evtdate)=0;
1798 run;

NOTE: There were 25799 observations read from the data set MYCRSP.DSI.
NOTE: There were 25650 observations read from the data set MYCRSP.DSI.
NOTE: There were 25583 observations read from the data set MYCRSP.DSI.
NOTE: There were 25581 observations read from the data set MYCRSP.DSI.
NOTE: There were 25579 observations read from the data set MYCRSP.DSI.
NOTE: The data set WORK.CALDATES has 25579 observations and 6 variables.
NOTE: DATA statement used (Total process time):
      real time   0.09 seconds
      user cpu time   0.07 seconds
      system cpu time   0.00 seconds
      memory   1622.03k
      OS Memory   53540.00k
      Timestamp   06/18/2024 01:21:53 PM
      Step Count   102 Switch Count 0

1799
1800 /*STEP 3: If event date is a non-trading day*/
1801 /*   select the closest trading day that*/
1802 /* follows the event day   */
1803 proc sql;

```
1803!          create table temp
1804   as select a.permno
1805               ,b.*
1806    from input a
1807         left join
1808         caldates b
1809    on b.evtdate-a.edate>=0
1810    group by a.edate
1811    having (b.evtdate-a.edate)=min(b.evtdate-a.edate);
```
NOTE: The execution of this query involves performing one or more Cartesian product joins that can not be optimized.
NOTE: The query requires remerging summary statistics back with the original data.
NOTE: SAS threaded sort was used.
NOTE: Table WORK.TEMP created, with 93 rows and 7 columns.

```
1812
1813
1814    /*Returns for sample securities around the event dates */
```
NOTE: PROCEDURE SQL used (Total process time):
```
      real time            0.61 seconds
      user cpu time        0.45 seconds
      system cpu time      0.20 seconds
      memory               52083.70k
      OS Memory            103448.00k
      Timestamp            06/18/2024 01:21:54 PM
      Step Count                           103  Switch Count  0
```

```
1815    proc sql;
1816    create table evtrets_temp
1817    as select a.permno, a.date format date9., a.ret as ret1,
1818           b.evtdate, b.estper_beg, b.estper_end,
1819           b.evtwin_beg, b.evtwin_end
1820    from &crsp..dsf a, temp b
1821    where a.permno=b.permno and b.estper_beg<=a.date<=b.evtwin_end;
```
INFO: Data file MYCRSP.DSF.DATA is in a format that is native to another host, or the file encoding does not match the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and might reduce performance.
NOTE: Table WORK.EVTRETS_TEMP created, with 20553 rows and 8 columns.

```
1822    quit;
NOTE: PROCEDURE SQL used (Total process time):
        real time           37.08 seconds
        user cpu time       36.26 seconds
        system cpu time     1.79 seconds
        memory              5848.53k
        OS Memory           58664.00k
        Timestamp           06/18/2024 01:22:31 PM
        Step Count                        104   Switch Count  0


1823   /* Merge in the risk factors                                    */
1824   /* User can create her own risk factors and use it instead of FF+M ones*/
1825    proc sql;
1826   create view evtrets1
1827     as select a.*, (b.mktrf+b.rf) as mkt, b.mktrf, b.rf,b.smb, b.hml, b.umd
1828     from evtrets_temp a left join
1829          &crsp..ff_factors_daily (keep=date mktrf smb hml umd rf) b
1830     on a.date=b.date;
NOTE: SQL view WORK.EVTRETS1 has been defined.
1831      quit;
NOTE: PROCEDURE SQL used (Total process time):
        real time           0.01 seconds
        user cpu time       0.00 seconds
        system cpu time     0.00 seconds
        memory              102.96k
        OS Memory           53284.00k
        Timestamp           06/18/2024 01:22:31 PM
        Step Count                        105   Switch Count  0


1832   /*Bring in delisting returns*/
1833      proc sql;
1834   create table evtrets (drop=ret1 where=(not missing(mkt)))
1835     as select a.*,
1836     (1+a.ret1)*sum(1,b.dlret)-1-a.mkt as exret label='Market-adjusted total ret',
1837     (1+a.ret1)*sum(1,b.dlret)-1 as ret "Ret adjusted for delisting"
```

```
1838    from evtrets1 a left join &crsp..dsedelist (where=(missing(dlret)=0)) b
1839    on a.permno=b.permno and a.date=b.dlstdt
1840  order by a.permno,a.evtdate,a.date;
INFO: Data file MYCRSP.FF_FACTORS_DAILY.DATA is in a format that is native to another host, or the file encoding does
not match the session encoding. Cross Environment Data Access will be used, which might require additional CPU
resources and might reduce performance.
INFO: Data file MYCRSP.DSEDELIST.DATA is in a format that is native to another host, or the file encoding does not
match the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources
and might reduce performance.
NOTE: SAS threaded sort was used.
NOTE: Table WORK.EVTRETS created, with 20553 rows and 15 columns.

1841  quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time            0.22 seconds
      user cpu time        0.25 seconds
      system cpu time      0.04 seconds
      memory               37086.79k
      OS Memory            86224.00k
      Timestamp            06/18/2024 01:22:31 PM
      Step Count                        106  Switch Count  0


1842
1843  /* STEP 4. Estimating Factor Exposures over the estimation period*/
1844  proc printto log=junk; run;

NOTE: PROCEDURE PRINTTO used (Total process time):
      real time            0.00 seconds
      user cpu time        0.00 seconds
      system cpu time      0.00 seconds
      memory               6.96k
      OS Memory            53284.00k
      Timestamp            06/18/2024 01:22:31 PM
      Step Count                        109  Switch Count  0


1855
```

```
1856
1857   /* STEP 5. Calculating Abnormal Returns for all models */
1858   /* for each trading day in the event window           */
1859   data abrets1/view=abrets1; merge
1860     evtrets(where=(evtwin_beg<=date<=evtwin_end) in=in_evtrets)
1861     params (where=(_model_='eq0')
1862        keep=permno evtdate _model_ _rmse_ _p_ _edf_
1863        rename=(_rmse_=std0 _p_=p0 _edf_=edf0))
1864
1865     params (where=(_model_='eq1')
1866        keep=permno evtdate _model_ _rmse_ intercept mktrf
1867        rename=(_rmse_=std1 intercept=alpha1 mktrf=beta1))
1868
1869     params (where=(_model_='eq2')
1870        keep=permno evtdate _model_ _rmse_ intercept mktrf smb hml
1871        rename=(_rmse_=std2 intercept=alpha2 mktrf=beta2 smb=sminb2 hml=hminl2))
1872
1873     params (where=(_model_='eq3')
1874        keep=permno evtdate _model_ _rmse_ intercept mktrf smb hml umd
1875        rename=(_rmse_=std3 intercept=alpha3 mktrf=beta3 smb=sminb3 hml=hminl3 umd=umind3));
1876     by permno evtdate;
1877
1878     retain missret;
1879     if first.permno then missret=missing(ret);
1880     if missing(ret) then missret+1; /*count number of missing returns*/
1881
1882     var0=std0**2;
1883     var1=std1**2;
1884     var2=std2**2;
1885     var3=std3**2;
1886
1887     abret0  = exret; *extra over market;
1888     expret1 = alpha1 + beta1*mktrf;  *CAPM;
1889     abret1  = ret-expret1;
1890
1891     expret2 = alpha2+beta2*mktrf+sminb2*smb+hminl2*hml; *FF3factor;
1892     abret2=ret-expret2;
1893
```

```
1894    expret3 =alpha3+beta3*mktrf+sminb3*smb+hminl3*hml+umind3*umd;
1895    abret3=ret-expret3;
1896
1897    nobs=p0+edf0;   /*number of observations used in estimation*/
1898    drop p0 edf0 estper_beg estper_end std0 std1 std2 std3 _model_ exret;
1899    if in_evtrets and nobs>&minest;
1900    * I add the followings;
1901    if nobs=150;
1902  run;
```

```
NOTE: DATA STEP view saved on file WORK.ABRETS1.
NOTE: A stored DATA STEP view cannot run under a different operating system.
NOTE: DATA statement used (Total process time):
      real time              0.03 seconds
      user cpu time          0.00 seconds
      system cpu time        0.03 seconds
      memory                 1034.31k
      OS Memory              53540.00k
      Timestamp              06/18/2024 01:22:32 PM
      Step Count                        110  Switch Count  0
```

```
1903
1904  /* Transform dates to event time using CRSP Trading Calendar       */
1905  /* Using the latter takes into account non-consecutive date records*/
1906  /* do not use lag to avoid non-consecutive date records*/
1907  proc sql;
1908    create table abrets
1909      as select a.*, (b.index-c.index) as evttime
1910      from           abrets1 a
1911        left join  caldates b
1912      on a.date    = b.evtdate
1913         left join caldates c
1914      on a.evtdate = c.evtdate
1915      order by permno, evtdate, date;
```
```
NOTE: SAS threaded sort was used.
INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
```

```
INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
NOTE: View WORK.ABRETS1.VIEW used (Total process time):
      real time           0.15 seconds
      user cpu time       0.12 seconds
      system cpu time     0.07 seconds
      memory              45726.14k
      OS Memory           96376.00k
      Timestamp           06/18/2024 01:22:32 PM
      Step Count                        111  Switch Count  9

NOTE: There were 465 observations read from the data set WORK.EVTRETS.
      WHERE (evtwin_beg<=date) and (date<=evtwin_end);
NOTE: There were 93 observations read from the data set WORK.PARAMS.
      WHERE _model_='eq0';
NOTE: There were 93 observations read from the data set WORK.PARAMS.
      WHERE _model_='eq1';
NOTE: There were 93 observations read from the data set WORK.PARAMS.
      WHERE _model_='eq2';
NOTE: There were 93 observations read from the data set WORK.PARAMS.
      WHERE _model_='eq3';
NOTE: Table WORK.ABRETS created, with 465 rows and 37 columns.

1916  quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time           0.32 seconds
      user cpu time       0.17 seconds
      system cpu time     0.25 seconds
      memory              45726.14k
      OS Memory           96376.00k
      Timestamp           06/18/2024 01:22:32 PM
      Step Count                        111  Switch Count  10


1917
1918  /*
```

```
1919  proc contents data=abrets short varnum;
1920  run;
1921  */
1922  proc sort data=abrets  nodupkey;
1923    by PERMNO evtdate DATE
1924       evtwin_beg evtwin_end
1925       mkt mktrf rf smb hml umd ret
1926       alpha1 beta1
1927       alpha2 beta2 sminb2 hminl2
1928       alpha3 beta3 sminb3 hminl3 umind3
1929       missret var0 var1 var2 var3
1930       abret0 expret1 abret1 expret2 abret2 expret3 abret3 nobs evttime ;
1931  run;
```

NOTE: There were 465 observations read from the data set WORK.ABRETS.
NOTE: SAS sort was used.
NOTE: 0 observations with duplicate key values were deleted.
NOTE: The data set WORK.ABRETS has 465 observations and 37 variables.
NOTE: PROCEDURE SORT used (Total process time):
      real time   0.01 seconds
      user cpu time   0.00 seconds
      system cpu time   0.01 seconds
      memory   1925.18k
      OS Memory   55344.00k
      Timestamp   06/18/2024 01:22:32 PM
      Step Count   112 Switch Count 0


```
1932
1933  /* 673  proc sql;
1934  674     create table abrets as
1935  675     select distinct * from abrets;
1936  WARNING: This CREATE TABLE statement recursively references the target table. A consequence of this
1937          is a possible data integrity problem.
1938  NOTE: Table WORK.ABRETS created, with 253797 rows and 37 columns.
1939
1940    */
1941  /* Calculating Rolling Cumulative Abnormal Returns and various stats */
```

```sas
1942  /* Transformout= calculates cumulative product of gross returns and  */
1943  /* subtracts 1 to arrive at the total net cumulative return           */
1944  proc expand data=abrets
1945            out=car  /* Cumulative returns*/
1946            method=none;
1947    by permno evtdate;
1948    id date;
1949    convert ret=cret/transformout=(+1 cuprod -1);        /*actural cumulative return from CRSP*/
1950    convert mkt=cmkt/transformout=(+1 cuprod -1);        /*cumulative  market return*/
1951
1952    /*cumulative market model return: expret1= alpha1 + beta1*mktrf; */
1953    convert expret1 =cexpret1 /transformout=(+1 cuprod -1);
1954
1955    /*expret2 = alpha2+ beta2*mktrf+ sminb2*smb+ hminl2*hml; */
1956    convert expret2 =cexpret2 /transformout=(+1 cuprod -1); /*cumulative FF-3 factor return */
1957
1958    /*  expret3 =alpha3+beta3*mktrf+sminb3*smb+hminl3*hml+umind3*umd; */
1959    convert expret3 =cexpret3 /transformout=(+1 cuprod -1);/*cumulative FF-4 factor return */
1960
1961    convert abret0=car0/transformout=(sum);
1962    convert abret1=car1/transformout=(sum);
1963    convert abret2=car2/transformout=(sum);
1964    convert abret3=car3/transformout=(sum);
1965  run;
```

NOTE: The data set WORK.CAR has 465 observations and 46 variables.
NOTE: PROCEDURE EXPAND used (Total process time):
      real time   0.06 seconds
      user cpu time   0.00 seconds
      system cpu time   0.03 seconds
      memory   970.65k
      OS Memory   54564.00k
      Timestamp   06/18/2024 01:22:32 PM
      Step Count   113 Switch Count 0


```sas
1966  /*
1967  proc contents data =car;
```

```
1968
1969
1970  proc contents data =car;
1971  ods select  Variables;
1972  run;
1973  */
1974
1975
1976  /* Car_Evtdate Table: */
1977  /* the cross-sectional output that contains for each      */
1978  /* "firm-event date":                                      */
1979  /*   1) CAR, BHAR, and SCAR (standardized CAR)             */
1980  /*   2) Alpha and Beta from the estimation period          */
1981  /*   3) Estimation period variance                         */
1982
1983  /* Car_Evtwin Table contains Raw, Abnormal, Std. and Buy-and-Hold Abnormal  */
1984  /* Daily Returns "firm-date" in event time                 */
1985  proc printto log=junk;run;
```

NOTE: PROCEDURE PRINTTO used (Total process time):
      real time   0.00 seconds
      user cpu time   0.00 seconds
      system cpu time   0.00 seconds
      memory   6.96k
      OS Memory   53796.00k
      Timestamp   06/18/2024 01:22:32 PM
      Step Count   116 Switch Count 0


```
2023
2024  /*Put Cross-sectional and aggregate results together for further analysis*/
2025  data allcars;
2026     merge
2027    car_evtwin
2028          (rename=(bhar0=bhar0win
2029                   bhar1=bhar1win
2030                   bhar2=bhar2win
2031                   bhar3=bhar3win
```

```
2032                     car0=car0win
2033          car1=car1win
2034          car2=car2win
2035          car3=car3win
2036          cret=cretwin))
2037    car_evtdate;
2038   by permno evtdate;
2039   run;
```

```
2040
2041   /* STEP 6: Compute Cumulative Average Abnormal Return (CAR_MEAN) */
2042   /* and Average Buy-Hold Abnormal Return (BHAR_MEAN)              */
2043   /* and other stats across all distinct events                   */
2044   * proc means data=allcars noprint;
2045   proc means data=allcars( where = (nobs=150)) noprint;
2046     class evttime; id nobs;
2047     var ret cret
2048     car0 car1 car2 car3  /* at evttime*/
2049     cretwin car0win car1win car2win car3win /* at evttime=2*/
2050     bhar0 bhar1 bhar2 bhar3
2051     bhar0win bhar1win bhar2win bhar3win
2052
2053     scar0 scar1 scar2 scar3
```

```
ERROR: Variable SCAR2 not found.
2054    abret0 abret1 abret2 abret3
ERROR: Variable SCAR3 not found.
2055    sar0 sar1 sar2 sar3 /*originally from car_evtwin*/
2056    pat_scale;
ERROR: Variable PAT_SCALE not found.
2057    output out=allstats
2058    mean =
ERROR: You cannot open WORK.ALLSTATS.DATA for output access with member-level control because WORK.ALLSTATS.DATA is
in use by you in resource environment ViewTable Window.
2059        n =
2060        t =
2061      sum =/autoname;
2062  run;

NOTE: The SAS System stopped processing this step because of errors.
NOTE: PROCEDURE MEANS used (Total process time):
      real time           0.01 seconds
      user cpu time       0.01 seconds
      system cpu time     0.00 seconds
      memory              327.21k
      OS Memory           53796.00k
      Timestamp           06/18/2024 01:22:32 PM
      Step Count                      118  Switch Count  0


2063
2064  /*calculate different stats for assessing   */
2065  /*statistical signficance of abnormal returns*/


2066  data MA_Evtdate (keep=evttime car0_n cret_mean car0_mean car0_t scar0_t
2067                   bhar0_mean pat_car0 model)
2068     MM_Evtdate (keep=evttime car1_n cret_mean car1_mean car1_t scar1_t
2069                   bhar1_mean pat_car1 model )
2070     FF_Evtdate (keep=evttime car2_n cret_mean car2_mean car2_t scar2_t
2071                   bhar2_mean pat_car2 model )
2072     FFM_Evtdate (keep=evttime car3_n cret_mean car3_mean car3_t scar3_t
2073                   bhar3_mean pat_car3 model )
```

```
2074       MA_Evtwin  (keep=evttime cretwin_mean abret0_n ret_mean abret0_mean
2075                   car0win_mean bhar0win_mean abret0_t sar0_t pat_ar0 )
2076       MM_Evtwin  (keep=evttime cretwin_mean abret1_n ret_mean abret1_mean
2077                   car1win_mean bhar1win_mean abret1_t sar1_t pat_ar1 )
2078       FF_Evtwin  (keep=evttime cretwin_mean abret2_n ret_mean abret2_mean
2079                   car2win_mean bhar2win_mean abret2_t sar2_t pat_ar2 )
2080       FFM_Evtwin (keep=evttime cretwin_mean abret3_n ret_mean abret3_mean
2081                   car3win_mean bhar3win_mean abret3_t sar3_t pat_ar3 );
2082    set allstats;
2083    by evttime;
2084      if _n_=1 and missing(evttime) then do;
2085      abret0_mean=.;
2086      abret1_mean=.;
2087      abret2_mean=.;
2088      abret3_mean=.;
2089      cretwin_mean=0;
2090      ret_mean=.;
2091      bhar1win_mean=0;
2092      bhar1win_mean=0;
2093      bhar2win_mean=0;
2094      bhar3win_mean=0;
2095      end;
2096      /*Patell Z statistics*/
2097      pat_car0=scar0_mean/(sqrt(pat_scale_sum)/scar0_n);
2098      pat_car1=scar1_mean/(sqrt(pat_scale_sum)/scar1_n);
2099      pat_car2=scar2_mean/(sqrt(pat_scale_sum)/scar2_n);
2100      pat_car3=scar3_mean/(sqrt(pat_scale_sum)/scar3_n);
2101      pat_ar0=sar0_mean/(sqrt(pat_scale_sum)/sar0_n);
2102      pat_ar1=sar1_mean/(sqrt(pat_scale_sum)/sar1_n);
2103      pat_ar2=sar2_mean/(sqrt(pat_scale_sum)/sar2_n);
2104      pat_ar3=sar3_mean/(sqrt(pat_scale_sum)/sar3_n);
2105    label
2106      pat_ar0=       'Patell Z for AR_MA'  pat_ar1=       'Patell Z for AR_MM'
2107      pat_ar2=       'Patell Z for AR_FF'  pat_ar3=       'Patell Z for AR_FFM'
2108      abret0_t=      'CS t-stat, AR_MA'    abret1_t=      'CS t-stat, AR_MM'
2109      abret2_t=      'CS t-stat, AR_FF'    abret3_t=      'CS t-stat, AR_FFM'
2110      sar0_t=        'Std CS test, AR_MA'  sar1_t=        'Std CS test, AR_MM'
2111      sar2_t=        'Std CS test, AR_FF'  sar3_t=        'Std CS test, AR_FFM'
```

```
2112     abret0_mean=    'Mean AR_MA'          abret1_mean=     'Mean AR_MM'
2113     abret2_mean=    'Mean AR_FF'          abret3_mean=     'Mean AR_FFM'
2114     car0_n=         'Number of events in the portfolio'
2115     abret0_n=       'Number of events in the portfolio'
2116     evttime=        'Event Time t'
2117     cret_mean=      "Mean CTR (&start, &end)"
2118     cretwin_mean=   "Mean CTR (&start,t) "
2119     car0win_mean=   "Average CAR_MA (&start, t)"
2120     car1win_mean=   "Average CAR_MM (&start, t)"
2121     car2win_mean=   "Average CAR_FF (&start, t)"
2122     car3win_mean=   "Average CAR_FFM (&start, t)"
2123     bhar0win_mean= "Mean BHAR_MA (&start, t)"
2124     bhar1win_mean=  "Mean BHAR_MM (&start, t)"
2125     bhar2win_mean= "Mean BHAR_FF (&start, t)"
2126     bhar3win_mean=  "Mean BHAR_FFM (&start, t)"
2127   ;
2128    format ret_mean        cret_mean        cretwin_mean
2129           abret0_mean    abret1_mean     abret2_mean     abret3_mean
2130           car0_mean      car1_mean       car2_mean       car3_mean
2131           bhar0_mean     bhar1_mean      bhar2_mean      bhar3_mean
2132           bhar0win_mean bhar1win_mean   bhar2win_mean   bhar3win_mean
2133           car0win_mean  car1win_mean    car2win_mean    car3win_mean
2134       percent7.4
2135           abret0_t  abret1_t    abret2_t   abret3_t
2136           sar0_t    sar1_t      sar2_t     sar3_t
2137           pat_car0  pat_car1    pat_car2   pat_car3
2138           pat_ar0   pat_ar1     pat_ar2    pat_ar3
2139           car0_t    car1_t      car2_t     car3_t
2140           scar0_t   car1_t      scar2_t    scar3_t
2141       comma10.2;
2142    if evttime=0 then do; model='Market-Adjusted'; output MA_Evtdate;
2143                          model='Market Model';    output MM_Evtdate;
2144                          model='FF Model';        output FF_Evtdate;
2145                          model='Carhart Model';   output FFM_Evtdate;
2146                   end;
2147    if missing(evttime) then evttime=&start-1;
2148    output MA_Evtwin;
2149    output MM_Evtwin;
```

```
2150    output FF_Evtwin;
2151    output FFM_Evtwin;
2152  run;

NOTE: There were 6 observations read from the data set WORK.ALLSTATS.
NOTE: The data set WORK.MA_EVTDATE has 1 observations and 9 variables.
NOTE: The data set WORK.MM_EVTDATE has 1 observations and 9 variables.
NOTE: The data set WORK.FF_EVTDATE has 1 observations and 9 variables.
NOTE: The data set WORK.FFM_EVTDATE has 1 observations and 9 variables.
NOTE: The data set WORK.MA_EVTWIN has 6 observations and 10 variables.
NOTE: The data set WORK.MM_EVTWIN has 6 observations and 10 variables.
NOTE: The data set WORK.FF_EVTWIN has 6 observations and 10 variables.
NOTE: The data set WORK.FFM_EVTWIN has 6 observations and 10 variables.
NOTE: DATA statement used (Total process time):
      real time          0.09 seconds
      user cpu time      0.01 seconds
      system cpu time    0.03 seconds
      memory             2454.18k
      OS Memory          55588.00k
      Timestamp          06/18/2024 01:22:32 PM
      Step Count                   119  Switch Count  0


2153
2154  /* STEP 7. Putting Event Date CARs and BHARS for various risk models together*/
2155  data allevtdate; set
2156    MA_Evtdate  (rename=(car0_mean=car_mean bhar0_mean=bhar_mean
2157                 car0_n=n car0_t=car_t scar0_t=scar_t pat_car0=pat_car))
2158    MM_Evtdate  (rename=(car1_mean=car_mean bhar1_mean=bhar_mean
2159                 car1_n=n car1_t=car_t scar1_t=scar_t pat_car1=pat_car))
2160    FF_Evtdate  (rename=(car2_mean=car_mean bhar2_mean=bhar_mean
2161                 car2_n=n car2_t=car_t scar2_t=scar_t pat_car2=pat_car))
2162    FFM_evtdate (rename=(car3_mean=car_mean bhar3_mean=bhar_mean
2163                 car3_n=n car3_t=car_t scar3_t=scar_t pat_car3=pat_car));
2164    length=&evtwin;
2165    label pat_car=   'Patell Z'
2166          car_mean=  "Mean CAR (&start, &end)"
2167          bhar_mean= "Mean BHAR (&start, &end)"
```

```
2168          car_t=     'Cross-sectional t-stat for CAR'
2169          scar_t=    'Standaridized cross-sectional t-stat for CAR'
2170          length=    'Length of event window in trading days';
2171  run;
```

```
2172
2173
2174  /*Cross-sectional output for CARs/BHARs at the firm-event level*/
2175  data car_evtdate;
2176    retain permno evtdate alpha1 beta1 cret car0 bhar0 var0 car1 bhar1 var1
2177        car2 bhar2 var2 car3 bhar3 var3 nrets nobs;
2178    set car_evtdate;
2179    label alpha1= 'Alpha (Market Model)'
2180          beta1=  'Beta (Market Model'
2181          car0=   'CAR_MA'
2182          car1=   'CAR_MM'
2183          car2=   'CAR_FF'
2184     car3=   'CAR_FFM'
2185          bhar0=  'BHAR_MA'
2186     bhar1=  'BHAR_MM'
2187          bhar2=  'BHAR_FF'
2188     bhar3=  'BHAR_FFM'
2189          var0=   'Estimation period variance (Market-adjusted returns)'
```

```
2190           var1=    'Estimation period variance (Market Model)'
2191           var2=    'Estimation period variance (FF Model)'
2192           var3=    'Estimation period variance (Carhart Model)'
2193           cret=    'Cumulative Total Return'
2194           nrets=   'Number of non-missing returns in event window'
2195           nobs=    'Length of the estimation period';
2196    keep permno evtdate alpha1 beta1 cret car0 bhar0 var0 car1 bhar1 var1
2197         car2 bhar2 var2 car3 bhar3 var3 nrets nobs;
2198    format cret alpha1
2199           car0 bhar0
2200       car1 bhar1
2201       car2 bhar2
2202       car3 bhar3
2203           percent7.4
2204           beta1 comma10.3;
2205  run;

ERROR: You cannot open WORK.CAR_EVTDATE.DATA for output access with member-level control because
WORK.CAR_EVTDATE.DATA is in use by you in resource environment DATASTEP.
NOTE: The SAS System stopped processing this step because of errors.
NOTE: DATA statement used (Total process time):
      real time            0.01 seconds
      user cpu time        0.01 seconds
      system cpu time      0.00 seconds
      memory               343.71k
      OS Memory            53796.00k
      Timestamp            06/18/2024 01:22:32 PM
      Step Count                        121  Switch Count  0


2206  /* Save the summary statistics and
2207  the CARs on the event window
2208  */
2209
2210  PROC DATASETS NOLIST;
2211  COPY IN = work OUT = evtstudy ;
2212  select  allevtdate allstats car_evtwin ;
2213  RUN;
```

```
NOTE: Copying WORK.ALLEVTDATE to EVTSTUDY.ALLEVTDATE (memtype=DATA).
INFO: Engine's block-read method is in use.
INFO: Engine's block-write  method is in use.
NOTE: There were 4 observations read from the data set WORK.ALLEVTDATE.
NOTE: The data set EVTSTUDY.ALLEVTDATE has 4 observations and 10 variables.
NOTE: Copying WORK.ALLSTATS to EVTSTUDY.ALLSTATS (memtype=DATA).
INFO: Engine's block-read method is in use.
INFO: Engine's block-write  method is in use.
NOTE: There were 6 observations read from the data set WORK.ALLSTATS.
NOTE: The data set EVTSTUDY.ALLSTATS has 6 observations and 132 variables.
NOTE: Copying WORK.CAR_EVTWIN to EVTSTUDY.CAR_EVTWIN (memtype=DATA).
INFO: Engine's block-read method is in use.
INFO: Engine's block-write  method is in use.
NOTE: There were 4970 observations read from the data set WORK.CAR_EVTWIN.
NOTE: The data set EVTSTUDY.CAR_EVTWIN has 4970 observations and 22 variables.
2214
2215  /* As an illustration, plot Carhart CAARs and average BHARs in the event window*/
2216  options nodate orientation=landscape;
2217  ods pdf file="&outputPath\Car0_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\foreign_rec_exe10Dec9\Car0_evtrets_5days.pdf", printer "PDF".
2218  goptions device=pdfc; /* Plot Saved in Home Directory */
2219  axis1 label=(angle=90 "Cumulative Abnormal Returns");
2220  axis2 label=("Event time");
2221  symbol interpol=join w=3 l=1;
2222
2223
2224


NOTE: PROCEDURE DATASETS used (Total process time):
      real time            0.29 seconds
      user cpu time        0.09 seconds
      system cpu time      0.07 seconds
      memory               4230.75k
      OS Memory            54824.00k
      Timestamp            06/18/2024 01:22:33 PM
```

```
       Step Count                               122  Switch Count  0


2225  proc gplot data =MA_Evtwin;
2226   where evttime>=&start;
2227   Title "Market adjusted model:  CARs and BHARs around the event date";
2228   plot (car0win_mean bhar0win_mean)*evttime
2229        /overlay legend vaxis=axis1 haxis=axis2;
2230  run;

WARNING: Unsupported device 'PDFC' for HTML destination. Using default device 'PNG'.
NOTE: 40994 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot6.png.
2230!     quit;

NOTE: There were 5 observations read from the data set WORK.MA_EVTWIN.
      WHERE evttime>=-2;
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE GPLOT used (Total process time):
      real time            0.34 seconds
      user cpu time        0.20 seconds
      system cpu time      0.04 seconds
      memory               8731.54k
      OS Memory            62204.00k
      Timestamp            06/18/2024 01:22:33 PM
      Step Count                               123  Switch Count  0


2230!          ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\foreign_rec_exe10Dec9\Car0_evtrets_5days.pdf.
2231
2232  ods pdf file="&outputPath\Car1_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\foreign_rec_exe10Dec9\Car1_evtrets_5days.pdf", printer "PDF".
2233  proc gplot data =MM_Evtwin;
2234   where evttime>=&start;
```

```
2235   Title "Market model:  CARs and BHARs around the event date";
2236   plot (car1win_mean bhar1win_mean)*evttime
2237         /overlay legend vaxis=axis1 haxis=axis2;
2238  run;
```

NOTE: 46945 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files_TD25772_DELL2_\gplot7.png.
```
2238!    quit;
```

NOTE: There were 5 observations read from the data set WORK.MM_EVTWIN.
      WHERE evttime>=-2;
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE GPLOT used (Total process time):
      real time   0.31 seconds
      user cpu time   0.20 seconds
      system cpu time   0.09 seconds
      memory   8606.90k
      OS Memory   62204.00k
      Timestamp   06/18/2024 01:22:33 PM
      Step Count   124 Switch Count 0


```
2238!          ods pdf close;
```
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\foreign_rec_exe10Dec9\Car1_evtrets_5days.pdf.
```
2239
2240  ods pdf file="&outputPath\Car2_evtrets_5days.pdf";
```
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\foreign_rec_exe10Dec9\Car2_evtrets_5days.pdf", printer "PDF".
```
2241  proc gplot data =FF_Evtwin;
2242   where evttime>=&start;
2243   Title "FF 3-factor model:CARs and BHARs around the event date";
2244   plot (car2win_mean bhar2win_mean)*evttime
2245         /overlay legend vaxis=axis1 haxis=axis2;
2246  run;
```

NOTE: 47008 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files_TD25772_DELL2_\gplot8.png.

```
2246!    quit;

NOTE: There were 5 observations read from the data set WORK.FF_EVTWIN.
      WHERE evttime>=-2;
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE GPLOT used (Total process time):
      real time           0.32 seconds
      user cpu time       0.18 seconds
      system cpu time     0.10 seconds
      memory              8601.78k
      OS Memory           62460.00k
      Timestamp           06/18/2024 01:22:34 PM
      Step Count                          125  Switch Count  0


2246!          ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\foreign_rec_exe10Dec9\Car2_evtrets_5days.pdf.
2247
2248  ods pdf file="&outputPath\Car3_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\foreign_rec_exe10Dec9\Car3_evtrets_5days.pdf", printer "PDF".
2249  proc gplot data =FFM_Evtwin;
2250   where evttime>=&start;
2251   Title "Carhart 4 Factor model: Carhart CARs and BHARs around the event date";
2252   plot (car3win_mean bhar3win_mean)*evttime
2253        /overlay legend vaxis=axis1 haxis=axis2;
2254  run;

NOTE: 44925 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot9.png.
2254!    quit;

NOTE: There were 5 observations read from the data set WORK.FFM_EVTWIN.
      WHERE evttime>=-2;
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
```

```
NOTE: PROCEDURE GPLOT used (Total process time):
      real time            0.28 seconds
      user cpu time        0.15 seconds
      system cpu time      0.07 seconds
      memory               8623.81k
      OS Memory            62460.00k
      Timestamp            06/18/2024 01:22:34 PM
      Step Count                        126  Switch Count  0


2254!          ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\foreign_rec_exe10Dec9\Car3_evtrets_5days.pdf.
2255
2256  ods pdf file="&outputPath\Car0_3_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\foreign_rec_exe10Dec9\Car0_3_evtrets_5days.pdf", printer "PDF".
2257  proc  gplot data =allstats;
2258   where evttime>=&start;
2259   Title "CARs from the four models: around the event date";
2260   plot (car0win_mean  car1win_mean  car2win_mean  car3win_mean )*evttime
2261        /overlay legend vaxis=axis1 haxis=axis2;
2262  run;

NOTE: 56255 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot10.png.
2262!     quit;

NOTE: There were 5 observations read from the data set WORK.ALLSTATS.
      WHERE evttime>=-2;
NOTE: PROCEDURE GPLOT used (Total process time):
      real time            0.31 seconds
      user cpu time        0.18 seconds
      system cpu time      0.07 seconds
      memory               8539.03k
      OS Memory            62204.00k
      Timestamp            06/18/2024 01:22:35 PM
      Step Count                        127  Switch Count  0
```

```
2262!           ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\foreign_rec_exe10Dec9\Car0_3_evtrets_5days.pdf.
2263

2264
2265  ods pdf file="&outputPath\BHARS0_3_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\foreign_rec_exe10Dec9\BHARS0_3_evtrets_5days.pdf", printer "PDF".
2266  proc  gplot data =allstats;
2267   where evttime>=&start;
2268   Title "BHARs from the four models: BHARs around the event date";
2269   plot (bhar0_mean  bhar1_mean  bhar2_mean  bhar3_mean )*evttime
2270         /overlay legend vaxis=axis1 haxis=axis2;
2271  run;

NOTE: 17788 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot11.png.
2271!     quit;

NOTE: There were 5 observations read from the data set WORK.ALLSTATS.
      WHERE evttime>=-2;
NOTE: PROCEDURE GPLOT used (Total process time):
      real time            0.28 seconds
      user cpu time        0.17 seconds
      system cpu time      0.07 seconds
      memory               8504.25k
      OS Memory            62204.00k
      Timestamp            06/18/2024 01:22:35 PM
      Step Count                      128  Switch Count  0


2272
2273  ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\foreign_rec_exe10Dec9\BHARS0_3_evtrets_5days.pdf.
2274  run;quit; ods pdf close;
```

```
2275
2276
2277
2278   /*house cleaning*
2279    proc sql;
2280      drop table abrets, allcars, allstats, caldates, car, car_evtwin, evtrets, temp,
2281               evtrets_temp,ffm_evtdate, ff_evtdate, ma_evtdate, mm_evtdate, params;
2282      drop view  evtrets1, abrets1; quit;
2283   */
2284   *%mend  event_crack;
2285   /* ******************************************************************************* */
2286   /* *************  Material Copyright Wharton Research Data Services  ************* */
2287   /* **************************** All Rights Reserved **************************** */
2288   /* ******************************************************************************* */

2289   %let outputPath=%str(C:\Users\lihon\OneDrive - Kent State
2289! University\aaaa\event_Study\result\foreign_rec_exe1ODec9);
2290
2291
2292   ods latex path="&outputpath"  file='Foreign_rec_exc1O_model_summary_report.tex' style=journal;
NOTE: Writing LATEX Body file: Foreign_rec_exc1O_model_summary_report.tex
2293   Title 'Summary report of the four models';
2294   options nolabel;
2295   proc report data=allevtdate;
2296     column  model Cret_mean   car_mean  bhar_mean    car_t  scar_t  pat_car n ;
2297     define  model / display;
2298     define  Cret_mean / display;
2299     define  car_mean / display;
2300     define  bhar_mean / display;
2301    define   car_t / display;
2302    define  scar_t / display;
2303    define  pat_car / display;
2304    define n / display "total Obs";
2305
2306   run;

NOTE: Multiple concurrent threads will be used to summarize data.
NOTE: There were 4 observations read from the data set WORK.ALLEVTDATE.
```

```
2307  ods latex close;
2308
2309  title;
2310
2311
2312
2313
2314  /*
2315  Variables in Creation Order
2316  evttime nobs _TYPE_ _FREQ_ ret_Mean cret_Mean
2317  car0_Mean car1_Mean car2_Mean car3_Mean
2318  bhar0_Mean bhar1_Mean bhar2_Mean bhar3_Mean
2319  bhar0win_Mean bhar1win_Mean bhar2win_Mean bhar3win_Mean
2320  cretwin_Mean car0win_Mean car1win_Mean car2win_Mean car3win_Mean
2321  scar0_Mean scar1_Mean scar2_Mean scar3_Mean
2322
2323  abret0_Mean abret1_Mean abret2_Mean abret3_Mean
2324  sar0_Mean sar1_Mean sar2_Mean sar3_Mean
2325  pat_scale_Mean
2326  ret_N cret_N car0_N car1_N car2_N car3_N
2327  bhar0_N bhar1_N bhar2_N bhar3_N
2328  bhar0win_N bhar1win_N bhar2win_N bhar3win_N
2329  cretwin_N car0win_N car1win_N car2win_N car3win_N
2330  scar0_N scar1_N scar2_N scar3_N
2331
2332  abret0_N abret1_N abret2_N abret3_N
```

```
2333   sar0_N sar1_N sar2_N sar3_N
2334   pat_scale_N
2335   ret_t cret_t
2336   car0_t car1_t car2_t car3_t
2337   bhar0_t bhar1_t bhar2_t bhar3_t
2338   bhar0win_t bhar1win_t bhar2win_t bhar3win_t
2339   cretwin_t car0win_t car1win_t car2win_t car3win_t
2340   scar0_t scar1_t scar2_t scar3_t
2341
2342   abret0_t abret1_t abret2_t abret3_t
2343
2344   sar0_t sar1_t sar2_t sar3_t
2345
2346   pat_scale_t
2347
2348   ret_Sum cret_Sum car0_Sum car1_Sum car2_Sum car3_Sum
2349   bhar0_Sum bhar1_Sum bhar2_Sum bhar3_Sum
2350   bhar0win_Sum bhar1win_Sum bhar2win_Sum bhar3win_Sum
2351   cretwin_Sum car0win_Sum car1win_Sum car2win_Sum car3win_Sum scar0_Sum scar1_Sum scar2_Sum scar3_Sum
2352   abret0_Sum abret1_Sum abret2_Sum abret3_Sum sar0_Sum sar1_Sum sar2_Sum sar3_Sum pat_scale_Sum
2353
2354   */
2355
2356
2357   ods latex path="&outputPath" file='Foreign_rec_exc10_ARet_summary_report.tex' style=Journal2;
NOTE: Writing LATEX Body file: Foreign_rec_exc10_ARet_summary_report.tex
2358   Title 'Summary report of abnormal returns';
2359   options nolabel;
2360   proc report data=allstats;
2361     column  evttime abret0_Mean abret1_Mean abret2_Mean abret3_Mean  abret0_t abret1_t abret2_t abret3_t sar0_t
2361! sar1_t sar2_t sar3_t;
2362     define  evttime / display;
2363     define  abret0_Mean / display format=7.5;
2364     define  abret1_Mean / display format=7.5;
2365     define  abret2_Mean / display format=7.5;
2366     define  abret3_Mean / display format=7.5;
2367     define  abret0_t / display format=5.3;
2368     define  abret1_t / display format=5.3;
```

```
2369    define  abret2_t / display format=5.3;
2370    define  abret3_t / display format=5.3;
2371    define  sar0_t / display format=5.3;
2372    define  sar1_t / display format=5.3;
2373    define  sar2_t / display format=5.3;
2374    define  sar3_t / display format=5.3;
2375
2376  where  NOT missing(evttime);
2377
2378  run;
```

```
2379  ods latex close;title;
2380
2381
2382  ods latex path="&outputPath" file='Foreign_rec_exc10_Car_summary_report.tex' style=Journal2;
```
```
2383  Title 'Summary report of CARS from the four models';
2384  options nolabel;
2385  proc report data=allstats;
2386    column  evttime  car0win_Mean  car1win_Mean  car2win_Mean  car3win_Mean
2387                      car0win_t     car1win_t     car2win_t     car3win_t
2388                      scar0_t       scar1_t       scar2_t       scar3_t
2389                      bhar0win_t    bhar1win_t    bhar2win_t    bhar3win_t ;
```

```
2390    define  evttime / display;
2391    define    car0win_mean / display format=7.5;
2392    define    car1win_mean / display format=7.5;
2393    define    car2win_mean / display format=7.5;
2394    define    car3win_mean / display format=7.5;
2395    define    car0win_t / display format=5.3;
2396    define    car1win_t / display format=5.3;
2397    define    car2win_t / display format=5.3;
2398    define    car3win_t / display format=5.3;
2399    define  scar0_t / display format=5.3;
2400    define  scar1_t / display format=5.3;
2401    define  scar2_t / display format=5.3;
2402    define  scar3_t / display format=5.3;
2403     define  bhar0win_t / display format=5.3;
2404     define  bhar1win_t / display format=5.3;
2405     define  bhar2win_t / display format=5.3;
2406     define  bhar3win_t / display format=5.3;
2407
2408  where  NOT missing(evttime);
2409  run;

NOTE: Multiple concurrent threads will be used to summarize data.
NOTE: There were 5 observations read from the data set WORK.ALLSTATS.
      WHERE not MISSING(evttime);
NOTE: PROCEDURE REPORT used (Total process time):
      real time            0.04 seconds
      user cpu time        0.03 seconds
      system cpu time      0.00 seconds
      memory               7449.46k
      OS Memory            60472.00k
      Timestamp            06/18/2024 01:24:54 PM
      Step Count                    131  Switch Count  0


2410  ods latex close; title;
2411  /*
2412  ods latex path=&outputPath file='Foreign_rec_exc10_Car_summary_report.tex' style=Journal2;
2413  Title 'Summary report of CARS from the four models';
```

```
2414  options nolabel;
2415  proc report data=allstats;
2416    column  evttime  car0_Mean car1_Mean car2_Mean car3win_Mean car0_t car1_t car2_t car3_t scar0_t scar1_t
2416! scar2_t scar3_t ;
2417    define  evttime / display;
2418    define   car0_mean / display format=7.5;
2419    define   car1_mean / display format=7.5;
2420    define   car2_mean / display format=7.5;
2421    define   car3_mean / display format=7.5;
2422    define   car0_t / display format=5.3;
2423    define   car1_t / display format=5.3;
2424    define   car2_t / display format=5.3;
2425    define   car3_t / display format=5.3;
2426    define  scar0_t / display format=5.3;
2427    define  scar1_t / display format=5.3;
2428    define  scar2_t / display format=5.3;
2429    define  scar3_t / display format=5.3;
2430
2431  where  NOT missing(evttime);
2432  run;
2433  ods latex close; title;
2434  */

2435   proc options option=autosaveloc;
2436  run;

     SAS (r) Proprietary Software Release 9.4  TS1M7

 AUTOSAVELOC=      Specifies the location of the Program Editor auto-saved file.
NOTE: PROCEDURE OPTIONS used (Total process time):
      real time            0.00 seconds
      user cpu time        0.00 seconds
      system cpu time      0.00 seconds
      memory               20.46k
      OS Memory            54824.00k
      Timestamp            06/18/2024 01:26:40 PM
      Step Count                      132  Switch Count  0
```

```
2437  options nolabel;
2438  * proc report data=allstats;
2439  proc report data = "C:\Users\lihon\OneDrive - Kent State
2439! University\aaaa\event_Study\result\Foreign_all_res\allstats.sas7bdat";
2440    column  evttime  car0win_Mean  car1win_Mean car2win_Mean car3win_Mean
2441                     car0win_t     car1win_t    car2win_t    car3win_t
2442                     scar0_t       scar1_t      scar2_t      scar3_t
2443                     bhar0win_t    bhar1win_t   bhar2win_t   bhar3win_t ;
2444    define  evttime / display;
2445    define   car0win_mean / display format=7.5;
2446    define   car1win_mean / display format=7.5;
2447    define   car2win_mean / display format=7.5;
2448    define   car3win_mean / display format=7.5;
2449    define   car0win_t / display format=5.3;
2450    define   car1win_t / display format=5.3;
2451    define   car2win_t / display format=5.3;
2452    define   car3win_t / display format=5.3;
2453    define  scar0_t / display format=5.3;
2454    define  scar1_t / display format=5.3;
2455    define  scar2_t / display format=5.3;
2456    define  scar3_t / display format=5.3;
2457     define  bhar0win_t / display format=5.3;
2458     define  bhar1win_t / display format=5.3;
2459     define  bhar2win_t / display format=5.3;
2460     define  bhar3win_t / display format=5.3;
2461
2462  where  NOT missing(evttime);
2463  run;

NOTE: Multiple concurrent threads will be used to summarize data.
NOTE: There were 5 observations read from the data set C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\Foreign_all_res\allstats.sas7bdat.
      WHERE not MISSING(evttime);
NOTE: PROCEDURE REPORT used (Total process time):
      real time           0.05 seconds
      user cpu time       0.00 seconds
      system cpu time     0.03 seconds
```

```
2464  ods latex path="C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\result\Foreign_all_res"
2464! file='Foreign_rec_exc10_Car_summary_report.tex' style=Journal2;
NOTE: Writing LATEX Body file: Foreign_rec_exc10_Car_summary_report.tex
2465  Title 'Summary report of CARS from the four models';
2466
2467  options nolabel;
2468  * proc report data=allstats;
2469  proc report data = "C:\Users\lihon\OneDrive - Kent State
2469! University\aaaa\event_Study\result\Foreign_all_res\allstats.sas7bdat";
2470    column  evttime  car0win_Mean   car1win_Mean  car2win_Mean  car3win_Mean
2471                     car0win_t      car1win_t     car2win_t     car3win_t
2472                     scar0_t        scar1_t       scar2_t       scar3_t
2473                     bhar0win_t     bhar1win_t    bhar2win_t    bhar3win_t ;
2474    define  evttime / display;
2475    define   car0win_mean / display format=7.5;
2476    define   car1win_mean / display format=7.5;
2477    define   car2win_mean / display format=7.5;
2478    define   car3win_mean / display format=7.5;
2479    define   car0win_t / display format=5.3;
2480    define   car1win_t / display format=5.3;
2481    define   car2win_t / display format=5.3;
2482    define   car3win_t / display format=5.3;
2483    define  scar0_t / display format=5.3;
2484    define  scar1_t / display format=5.3;
2485    define  scar2_t / display format=5.3;
2486    define  scar3_t / display format=5.3;
2487     define  bhar0win_t / display format=5.3;
2488     define  bhar1win_t / display format=5.3;
2489     define  bhar2win_t / display format=5.3;
2490     define  bhar3win_t / display format=5.3;
2491
2492  where  NOT missing(evttime);
```

```
2493  run;

NOTE: Multiple concurrent threads will be used to summarize data.
NOTE: There were 5 observations read from the data set C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\Foreign_all_res\allstats.sas7bdat.
      WHERE not MISSING(evttime);
NOTE: PROCEDURE REPORT used (Total process time):
      real time            0.05 seconds
      user cpu time        0.03 seconds
      system cpu time      0.01 seconds
      memory               7582.96k
      OS Memory            55572.00k
      Timestamp            06/18/2024 02:22:10 PM
      Step Count                        134  Switch Count  0


2494  ods latex close; title;
2495  %contents(foreign_trans)
MLOGIC(CONTENTS):  Beginning execution.
MLOGIC(CONTENTS):  Parameter TABLE has value foreign_trans
MPRINT(CONTENTS):   Title "Varibales in table foreign_trans";
MPRINT(CONTENTS):   proc contents data= foreign_trans;
MPRINT(CONTENTS):   ods select variables;
MPRINT(CONTENTS):   run;
NOTE: PROCEDURE CONTENTS used (Total process time):
      real time            0.06 seconds
      user cpu time        0.03 seconds
      system cpu time      0.00 seconds
      memory               1052.15k
      OS Memory            47376.00k
      Timestamp            06/18/2024 05:54:46 PM
      Step Count                        135  Switch Count  0


MLOGIC(CONTENTS):  Ending execution.

2496  proc contents data = foreign_trans;
2497  run;
```

```
NOTE: PROCEDURE CONTENTS used (Total process time):
      real time            0.05 seconds
      user cpu time        0.01 seconds
      system cpu time      0.03 seconds
      memory               1053.28k
      OS Memory            47376.00k
      Timestamp            06/18/2024 05:55:28 PM
      Step Count                        136  Switch Count  0


2498  proc contents data = "C:\Users\lihon\OneDrive - Kent State
2498! University\aaaa\event_Study\result\Foreign_all_res\allevtdate.sas7bdat";
2499  run;

NOTE: PROCEDURE CONTENTS used (Total process time):
      real time            0.06 seconds
      user cpu time        0.00 seconds
      system cpu time      0.04 seconds
      memory               788.00k
      OS Memory            47100.00k
      Timestamp            06/18/2024 05:57:08 PM
      Step Count                        137  Switch Count  0


2500  libname evtwindd "C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\result\Foreign_all_res";
NOTE: Libref EVTWINDD refers to the same physical library as TMP3.
NOTE: Libref EVTWINDD was successfully assigned as follows:
      Engine:        V9
      Physical Name: C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\result\Foreign_all_res
2501  data allfor;
2502  set evtwindd.car_evtwin(where=(evttime=2));
2503  run;

NOTE: There were 17200 observations read from the data set EVTWINDD.CAR_EVTWIN.
      WHERE evttime=2;
NOTE: The data set WORK.ALLFOR has 17200 observations and 22 variables.
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
```

```
      format.
NOTE: DATA statement used (Total process time):
      real time            0.06 seconds
      user cpu time        0.01 seconds
      system cpu time      0.00 seconds
      memory               518.46k
      OS Memory            51728.00k
      Timestamp            06/18/2024 05:59:14 PM
      Step Count                        138  Switch Count  0


2504   data oree_compustatAllMy_gvkey;
2505       set  mergback.oree_compustat_gvkey
2506           mergback.oree_compustat_gvkey_extraJune16;
2507  run;

NOTE: There were 211194 observations read from the data set MERGBACK.OREE_COMPUSTAT_GVKEY.
NOTE: There were 2832 observations read from the data set MERGBACK.OREE_COMPUSTAT_GVKEY_EXTRAJUNE16.
NOTE: The data set WORK.OREE_COMPUSTATALLMY_GVKEY has 214026 observations and 981 variables.
NOTE: DATA statement used (Total process time):
      real time            8.54 seconds
      user cpu time        0.73 seconds
      system cpu time      2.59 seconds
      memory               3461.28k
      OS Memory            54048.00k
      Timestamp            06/18/2024 06:04:52 PM
      Step Count                        139  Switch Count  0


2508
2509  data northamerica_comp(keep=gvkey BE year bvcEquity capIntens cashFlow
2510                  cashHoldings costcap
2511                   leverages bleverage market_leverage
2512                  roa roe  TobinsQ at lt  ni ebit );
2513  set oree_compustatAllMy_gvkey;
2514  * 1. Book Value Per Share (bkvlps)
2515  BKVLPS
2516  Market Value - Total - Fiscal (mkvalt)
```

```
2517  * Price Close - Annual - Fiscal (prcc_f) * Common Shares Outstanding (csho);
2518  * bvEquity = PRCC_F *CSHO;
2519    /* Two years of accounting data before 1990 */
2520     /* PS: prefered stock value*/
2521   PS=coalesce(PSTKRV, PSTKL, PSTK, 0);
2522   if missing(TXDITC) then
2523         TXDITC=0;
2524   BE=SEQ + TXDITC - PS;
2525   if BE<0 then
2526     BE=.;
2527   year=year(datadate);
2528   * BE of common equity;
2529   bvcEquity = PRCC_F *CSHO;
2530   capIntens = CAPX/AT;
2531   cashFlow = (IBC+DP)/AT;
2532   cashHoldings = CHE/AT;
2533   costcap = XINT/DLC;
2534   * Debt in Current Liabilities - Total (dlc)  +  Long-Term Debt - Total (dltt) / tockholders Equity - Parent
2534! (seq);
2535   leverages = (DLTT + DLC)/SEQ;
2536
2537   * book leverage;
2538   bleverage = (dltt + dlc )/at;
2539   market_leverage = (dltt + dlc )/(at-ceq + bvcEquity);
2540   * ib, ibcom, ni;
2541   roa = ib/at;
2542   roe = ni/bvcEquity;
2543   cash_assets = che/AT;
2544
2545  * roai = NI/AT;
2546  TobinsQ = (AT +bvEqity - CEQ)/AT;
2547  label BE='Book Value of Equity FYear t-1';
2548  label   LT= "Total Liabilities";
2549  label   AT= "Total Assets";
2550  label   capIntens= "Capital Intensity";
2551  label   cashFlow ="Cash Flow";
2552  label    cashHoldings= "Cash Holdings";
2553  *label variable costcap ="Cost of Capital";
```

```
2554    label    leverages= "Leverage";
2555    label    roa= "ROA";
2556    label    roe= "ROE";
2557    label     TobinsQ= "TobinsQ";
2558    run;
```

NOTE: Variable bvEqity is uninitialized.
NOTE: Division by zero detected at line 2533 column 17.
GVKEY=001004 DATADATE=2018-05-31 FYEAR=2017 ADD1=One AAR Place, 1100 North Wood Dale Road ADD2= ADD3= ADD4=
ADDZIP=60191
BUSDESC=AAR Corp. provides products and services to commercial aviation, government, and defense markets worldwide. It
 operates through Aviation Services and Expeditionary Services segments. CITY=Wood Dale CONML=AAR Corp COUNTY=
DLDTE=. DLRSN= EIN=36-2334820 FAX=630 227 2039 FYRC=5 GGROUP=2010 GIND=201010 GSECTOR=20 GSUBIND=20101010 IDBFLAG=D
INCORP=DE IPODATE=1972-04-24 LOC=USA NAICS=423860 PHONE=630 227 2000 PRICAN= PRIROW= PRIUSA=01 SIC=5080 SPCINDCD=110
SPCSECCD=925 SPCSRC=B STATE=IL STKO=0 WEBURL=www.aarcorp.com CONM=AAR CORP TIC=AIR CUSIP=000361105 CIK=0000001750
EXCHG=11 FYR=5 FIC=USA ACCTCHG= ACCTSTD=DS ACQMETH= ADRR=. AJEX=1.000000000000 AJP=1.000000000000
APDEDATE=2018-05-31 BSPR= COMPST=AZ CURNCD=USD CURRTR=1.000000000000 CURUSCN=. FDATE=2018-07-26 FINAL=Y ISMOD=1
LTCM=1 OGM= PDATE=2018-07-13 PDDUR=12 SCF=7 SRC=5 STALT= UDPL= UPD=3 ACCO=. ACDO=125.0000 ACO=150.2000
ACODO=25.2000 ACOMINC=-32.0000 ACOX=150.2000 ACOXAR=. ACT=942.7000 AEDI=. ALDO=0.0000 AO=100.7000 AOCIDERGL=0.0000
AOCIOTHER=0.0000 AOCIPEN=-32.3000 AOCISECGL=0.0000 AODO=100.7000 AOX=100.7000 AP=170.0000 APB=. APC=. APOFS=. ARB=.
ARC=. ARTFS=. AT=1524.7000 BAST=. BKVLPS=26.9703 CA=. CAPS=470.5000 CB=. CEQ=936.3000 CEQL=936.3000 CEQT=779.2000
CH=31.1000 CHE=41.6000 CHS=. CLD2=0.0000 CLD3=0.0000 CLD4=0.0000 CLD5=0.0000 CLFC=. CLFX=. CLG=. CLIS=. CLL=. CLLC=.
CLO=. CLRLL=. CLT=. CMP=. CRV=. CRVNLI=. CSTK=45.3000 CSTKCV=1.0000 DC=0.0000 DCLO=0.0000 DCOM=0.0000 DCPSTK=0.0000
DCS=. DCVSR=0.0000 DCVSUB=0.0000 DCVT=0.0000 DD=25.0000 DD1=0.0000 DD2=0.0000 DD3=0.0000 DD4=153.9000 DD5=0.0000
DFPAC=. DFS=. DLC=0.0000 DLTO=153.9000 DLTP=. DLTSUB=. DLTT=177.2000 DM=25.0000 DN=0.0000 DPACB=. DPACC=. DPACLI=.
DPACLS=. DPACME=. DPACNR=. DPACO=. DPACRE=. DPACT=214.4000 DPDC=. DPLTB=. DPSC=. DPSTB=. DPTB=. DPTC=. DPTIC=.
DPVIEB=214.4000 DPVIO=. DPVIR=. DRC=1.3000 DRCI=. DRLT=4.7000 DS=0.0000 DUDD=-1.7000 DVPA=0.0000 DVPIBB=. DXD2=0.0000
DXD3=0.0000 DXD4=153.9000 DXD5=0.0000 EA=. ESOPCT=0.0000 ESOPDLT=. ESOPNR=0.0000 ESOPR=0.0000 ESOPT=0.0000 EXCADJ=.
FATB=. FATC=. FATE=. FATL=. FATN=. FATO=. FATP=. FDFR=. FEA=. FEL=. FFS=. GDWL=118.7000 GEQRV=. GOVGR=. IAEQ=.
IAEQCI=. IAEQMI=. IAFICI=. IAFXI=. IAFXMI=. IALI=. IALOI=. IALTI=. IAMLI=. IAOI=. IAPLI=. IAREI=. IASCI=. IASMI=.
IASSI=. IASTI=. IATCI=. IATI=. IATMI=. IAUI=. ICAPT=1113.5000 INTAN=157.1000 INTANO=38.4000 INVFG=. INVO=566.9000
INVOFS=. INVREH=. INVREI=. INVRES=. INVRM=45.1000 INVT=547.9000 INVWIP=32.1000 IP=. IPC=. IPV=. ISEQ=. ISEQC=. ISEQM=.
ISFI=. ISFXC=. ISFXM=. ISLG=. ISLGC=. ISLGM=. ISLT=. ISNG=. ISNGC=. ISNGM=. ISOTC=. ISOTH=. ISOTM=. ISSC=. ISSM=.
ISSU=. IST=. ISTC=. ISTM=. ISUT=. ITCB=0.0000 IVAEQ=0.0000 IVAO=7.6000 IVGOD=. IVPT=. IVST=10.5000 LCABG=. LCACL=.
LCACR=. LCAG=. LCAL=. LCALT=. LCAM=. LCAO=. LCAST=. LCAT=. LCO=163.3000 LCOX=26.3000 LCOXAR=. LCOXDR=25.0000
LCT=333.3000 LCUACU=. LIF=. LIFR=0.0000 LLOML=. LLOO=. LLOT=. LO=62.2000 LOXDR=57.5000 LRV=. LS=. LSE=1524.7000
LT=588.4000 MIB=0.0000 MRC1=17.5000 MRC2=16.3000 MRC3=13.0000 MRC4=10.8000 MRC5=10.0000 MRCT=67.6000 MRCTA=27.2000
MSA=0.0000 MSVRV=. MTL=. NAT=. NP=0.0000 NPANL=. NPAORE=. NPARL=. NPAT=. OB=1053.0000 OPTPRCCA=29.5000
```

OPTPRCEX=20.0400 OPTPRCEY=26.7200 OPTPRCGR=35.3300 OPTPRCWA=23.8100 PPEGT=531.0000 PPENB=. PPENC=. PPENLI=. PPENLS=.
PPENME=. PPENNR=. PPENO=. PPENT=316.6000 PPEVBB=. PPEVEB=531.0000 PPEVO=. PPEVR=. PRC=. PRODV=. PRVT=. PSTK=0.0000
PSTKC=0.0000 PSTKL=0.0000 PSTKN=0.0000 PSTKR=0.0000 PSTKRV=0.0000 PVCL=. PVPL=. PVT=. RADP=. RAGR=. RARI=. RATI=.
RCL=. RDP=. RE=701.2000 REA=0.0000 REAJO=-32.3000 RECCO=0.0000 RECD=7.5000 RECT=203.0000 RECTA=0.3000 RECTR=202.0000
RECUB=. RET=. REUNA=733.2000 REUNR=. RLL=. RLO=. RLP=. RLRI=. RLT=. RPAG=. RREPS=. RVBCI=. RVBPI=. RVBTI=. RVDO=.
RVDT=. RVEQT=. RVLRV=. RVNO=. RVNT=. RVRI=. RVSI=. RVTI=. RVTXR=. RVUPI=. RVUTX=. SAA=. SAL=. SBDC=. SC=. SCO=. SECU=.
SEQ=936.3000 SEQO=0.0000 SRT=. SSNP=. STBO=. STIO=. TDSCD=. TDSCE=. TDSLG=. TDSMM=. TDSNG=. TDSO=. TDSS=. TDST=.
TLCF=0.0000 TRANSA=. TSA=. TSO=. TSTK=280.7000 TSTKC=280.7000 TSTKME=. TSTKP=0.0000 TXDB=15.7000 TXDBA=0.0000
TXDBCA=0.0000 TXDBCL=0.0000 TXDITC=15.7000 TXNDB=-15.7000 TXNDBA=34.7000 TXNDBL=50.4000 TXNDBR=0.0000 TXP=0.0000
TXR=1.0000 UAOX=. UAPT=. UCAPS=. UCCONS=. UCEQ=. UCUSTAD=. UDCOPRES=. UDD=. UDMB=. UDOLT=. UDPCO=. UI=. UINVT=. ULCM=.
ULCO=. UNL=. UNNP=. UNNPL=. UOPRES=. UPMCSTK=. UPMPF=. UPMPFS=. UPMSUBP=. UPSTK=. UPSTKC=. UPSTKSF=. URECT=. URECTR=.
UREVUB=. USUBPSTK=. VPAC=. VPO=. WCAP=609.4000 XACC=137.0000 XPP=0.0000 ACCHG=0.0000 ADPAC=. AM=. AMDC=. AMGW=. AQA=.
AQD=. AQEPS=. AQI=0.0000 AQP=. AQS=0.0000 ARCE=. ARCED=. ARCEEPS=. AUTXR=. BALR=. BANLR=. BATR=. BCEF=. BCLR=.
BCLTBL=. BCNLR=. BCRBL=. BCT=. BCTBL=. BCTR=. BLTBL=. CBI=. CDPAC=. CFBD=. CFERE=. CFO=. CFPDO=. CGA=. CGRI=. CGTI=.
CGUI=. CIBEGNI=15.6000 CICURR=2.0000 CIDERGL=0.0000 CIOTHER=0.0000 CIPEN=5.9000 CISECGL=0.0000 CITOTAL=23.5000
CNLTBL=. COGS=1413.2000 CPCBL=. CPDOI=. CPNLI=. CPPBL=. CPREI=. CSTKE=-0.6000 DBI=. DFXA=. DILADJ=0.0000
DILAVX=73.1000 DO=-58.1000 DONR=. DP=40.5000 DPRET=. DTEA=. DTED=. DTEEPS=. DTEP=. DVC=10.3000 DVDNP=. DVP=0.0000
DVPD=. DVPDP=. DVRPIV=. DVRRE=. DVSCO=. DVT=10.3000 EBIT=86.0000 EBITDA=126.5000 EIEA=. EMOL=. EPSFI=0.4100
EPSFX=2.1100 EPSPI=0.4400 EPSPX=2.1400 ESUB=. FATD=. FCA=. FFO=. GBBL=. GDWLAM=. GDWLIA=. GDWLID=. GDWLIEPS=. GDWLIP=.
GLA=. GLCEA=. GLCED=. GLCEEPS=. GLCEP=. GLD=. GLEPS=. GLP=. GP=335.1000 GPHBL=. GPLBL=. GPOBL=. GPRBL=. GPTBL=. GWO=.
HEDGEGL=. IB=73.7000 IBADJ=73.1000 IBBL=. IBCOM=73.7000 IBKI=. IDIIS=. IDILB=. IDILC=. IDIS=. IDIST=. IDIT=0.1000
IDITS=. IIRE=. INITB=. INTC=0.0000 IOBD=. IOI=. IORE=. IPABL=. IPHBL=. IPLBL=. IPOBL=. IPTBL=. IPTI=. IREI=. IRENT=.
IRII=. IRLI=. IRNLI=. IRSI=. ISGR=. ISGT=. ISGU=. ITCI=0.0000 IVI=. LI=. LLRCI=. LLRCR=. LLWOCI=. LLWOCR=. LST=.
MII=0.0000 NCO=. NFSR=. NI=15.6000 NIADJ=15.0000 NIECI=. NIINT=. NIIT=. NIM=. NIO=. NIT=. NITS=. NOPI=-0.8000
NOPIO=-0.9000 NRTXT=14.1000 NRTXTD=0.4100 NRTXTEPS=0.4100 OIADP=86.0000 OIBDP=126.5000 OPEPS=1.7300 OPILI=. OPINCAR=.
OPINI=. OPIOI=. OPIRI=. OPITI=. OPREPSX=1.7000 PALR=. PANLR=. PATR=. PCL=. PCLR=. PCNLR=. PCTR=. PI=77.2000
PIDOM=58.7000 PIFO=18.5000 PLL=. PLTBL=. PNCA=. PNCAD=. PNCAEPS=. PNCIA=. PNCID=. PNCIEPS=. PNCIP=. PNCWIA=. PNCWID=.
PNCWIEPS=. PNCWIP=. PNLBL=. PNLI=. POBL=. PPCBL=. PPPABL=. PPPHBL=. PPPOBL=. PPPTBL=. PRCA=. PRCAD=. PRCAEPS=. PREBL=.
PRI=. PTBL=. PTRAN=. PVO=. PVON=. PWOI=. RCA=. RCD=. RCEPS=. RCP=. RDIP=0.0000 RDIPA=0.0000 RDIPD=0.0000
RDIPEPS=0.0000 REVT=1748.3000 RIS=. RMUM=. RRA=. RRD=. RRP=. SALE=1748.3000 SETA=. SETD=. SETEPS=. SETP=. SPCE=.
SPCED=. SPCEEPS=. SPI=0.0000 SPID=. SPIEPS=. SPIOA=. SPIOP=. SRET=. STKCO=15.3000 STKCPA=. TDSG=. TF=. TIE=. TII=.
TXC=16.4000 TXDFED=. TXDFO=. TXDI=-12.9000 TXDS=. TXEQA=. TXEQII=. TXFED=14.6000 TXFO=1.7000 TXO=0.0000 TXS=0.1000
TXT=3.5000 TXVA=. TXW=0.0000 UDPFA=. UDVP=. UGI=. UNIAMI=. UNOPINC=. UOPI=. UPDVP=. USPI=. USUBDVP=. UTME=. UTXFED=.
UXINST=. UXINTD=. WDA=. WDD=. WDEPS=. WDP=. XAD=. XAGO=. XAGT=. XCOM=. XCOMI=. XDEPL=. XDP=. XDVRE=. XEQO=. XI=0.0000
XIDO=-58.1000 XINDB=. XINDC=. XINS=. XINST=. XINT=8.0000 XINTD=. XINTOPT=. XIVI=. XIVRE=. XLR=. XNBI=. XNF=. XNINS=.
XNITB=. XOBD=. XOI=. XOPR=1621.8000 XOPRAR=. XOPTD=. XOPTEPS=. XORE=. XPR=11.2000 XRD=. XRENT=23.5000 XS=.
XSGA=208.6000 XSTF=. XSTFO=. XSTFWS=. XT=. XUW=. XUWLI=. XUWNLI=. XUWOI=. XUWREI=. XUWTI=. AFUDCC=. AFUDCI=. AMC=.
AOLOCH=-54.3000 APALCH=. AQC=22.9000 CAPX=22.0000 CAPXV=22.0000 CDVC=. CHECH=31.3000 DEPC=. DLCCH=-1.0000

DLTIS=24.8000 DLTR=. DPC=40.5000 DV=10.3000 ESUBC=. EXRE=-0.1000 FIAO=-2.0000 FINCF=10.0000 FOPO=15.3000 FOPOX=15.3000
FOPT=. FSRCO=. FSRCT=. FUSEO=. FUSET=. IBC=73.7000 INTPN=7.2000 INVCH=-42.4000 ITCC=. IVACO=2.0000 IVCH=0.0000
IVNCF=-42.9000 IVSTCH=. OANCF=64.3000 PDVC=. PRSTKC=13.1000 PRSTKCC=. PRSTKPC=. RECCH=35.9000 SCSTKC=. SIV=0.0000
SPPE=. SPPIV=0.0000 SPSTKC=. SSTK=11.6000 TDC=. TSAFC=. TXACH=. TXBCO=0.0000 TXBCOF=0.0000 TXDC=-12.9000 TXPD=17.0000
UAOLOCH=. UDFCC=. UFRETSD=. UNWCC=. UOIS=. USTDNC=. UTFDOC=. UTFOSC=. UWKCAPC=. WCAPC=. WCAPCH=. XIDOC=8.5000 ACCRT=.
ACQAO=. ACQCSHI=. ACQGDWL=. ACQIC=. ACQINTAN=. ACQINVT=. ACQLNTAL=. ACQNIINTC=. ACQPPE=. ACQSC=. ANO=. AOL2=. AQPL1=.
AU=6 AUL3=. AUOP=1 AUOPIC=1 BASTR=. BILLEXCE=. CAPR1=. CAPR2=. CAPR3=. CAPSFT=. CEIEXBILL=. CEOSO=Y CFOSO=Y CI=23.5000
CIMII=0.0000 CSHFD=34.6000 CSHI=45.3010 CSHO=34.7160 CSHPRI=34.2000 CSHR=0.9000 CSHRC=. CSHRP=. CSHRSO=. CSHRT=.
CSHRW=. DERAC=. DERALT=. DERHEDGL=. DERLC=. DERLLT=. DT=177.2000 DVINTF=. EMP=5.0000 FINACO=. FINAO=. FINCH=. FINDLC=.
FINDLT=. FINIVST=. FINLCO=. FINLTO=. FINNP=. FINRECC=. FINRECLT=. FINREV=. FINXINT=. FINXOPR=. GLIV=. GOVTOWN=.
IBMII=73.7000 LIFRP=0.0000 LNO=. LOL2=. LQPL1=. LUL3=. MIBN=0.0000 MIBT=0.0000 NIINTPFC=. NIINTPFP=. NIPFC=. NIPFP=.
OPTCA=0.0110 OPTDR=0.9000 OPTEX=0.8830 OPTEXD=0.7040 OPTFVGR=9.2900 OPTGR=0.4630 OPTLIFE=4.3000 OPTOSBY=2.3340
OPTOSEY=2.0820 OPTPRCBY=23.0200 OPTRFR=1.8000 OPTVOL=31.7000 PNRSHO=0.0000 PRSHO=0.0000 RANK=1 RSTCHE=10.5000
RSTCHELT=. SALEPFC=. SALEPFP=. TEQ=936.3000 TFVA=. TFVCE=. TFVL=. TSTKN=10.5850 TXTUBADJUST=0.0000 TXTUBBEGIN=4.4000
TXTUBEND=4.4000 TXTUBMAX=. TXTUBMIN=. TXTUBPOSDEC=0.0000 TXTUBPOSINC=0.0000 TXTUBPOSPDEC=0.0000 TXTUBPOSPINC=0.0000
TXTUBSETTLE=0.0000 TXTUBSOFLIMIT=0.0000 TXTUBTXTR=. TXTUBXINTBS=. TXTUBXINTIS=. XRDP=. ADJEX_C=1.000000000000
ADJEX_F=1.000000000000 CSHTR_C=46405257.0000 CSHTR_F=55963727.0000 DVPSP_C=0.3000 DVPSP_F=0.3000 DVPSX_C=0.3000
DVPSX_F=0.3000 MKVALT=1551.4580 NAICSH=423860 PRCC_C=39.290000000000 PRCC_F=44.690000000000 PRCH_C=44.040000000000
PRCH_F=47.970000000000 PRCL_C=31.200000000000 PRCL_F=33.920000000000 SICH=5080 CONSOL=C INDFMT=INDL DATAFMT=STD
POPSRC=D CURCD=USD COSTAT=A PS=0 BE=952 year=2018 bvcEquity=1551.45804 capIntens=0.014429068 cashFlow=0.0748999803
cashHoldings=0.0272840559 costcap=. leverages=0.1892555805 bleverage=0.1162195842 market_leverage=0.0828092316
roa=0.0483373778 roe=0.0100550576 cash_assets=0.0272840559 TobinsQ=. bvEqity=. _ERROR_=1 _N_=41
NOTE: Division by zero detected at line 2533 column 17.
GVKEY=001004 DATADATE=2019-05-31 FYEAR=2018 ADD1=One AAR Place, 1100 North Wood Dale Road ADD2=  ADD3=  ADD4=
ADDZIP=60191
BUSDESC=AAR Corp. provides products and services to commercial aviation, government, and defense markets worldwide. It
 operates through Aviation Services and Expeditionary Services segments. CITY=Wood Dale CONML=AAR Corp COUNTY=
DLDTE=. DLRSN=  EIN=36-2334820 FAX=630 227 2039 FYRC=5 GGROUP=2010 GIND=201010 GSECTOR=20 GSUBIND=20101010 IDBFLAG=D
INCORP=DE IPODATE=1972-04-24 LOC=USA NAICS=423860 PHONE=630 227 2000 PRICAN=  PRIROW=  PRIUSA=01 SIC=5080 SPCINDCD=110
SPCSECCD=925 SPCSRC=B STATE=IL STKO=0 WEBURL=www.aarcorp.com CONM=AAR CORP TIC=AIR CUSIP=000361105 CIK=0000001750
EXCHG=11 FYR=5 FIC=USA ACCTCHG=ASU14-09 ACCTSTD=DS ACQMETH=  ADRR=. AJEX=1.000000000000 AJP=1.000000000000
APDEDATE=2019-05-31 BSPR=  COMPST=  CURNCD=USD CURRTR=1.000000000000 CURUSCN=. FDATE=2019-07-26 FINAL=Y ISMOD=1 LTCM=1
OGM=  PDATE=2019-07-10 PDDUR=12 SCF=7 SRC=5 STALT=  UDPL=  UPD=3 ACCO=. ACDO=29.2000 ACO=64.3000 ACODO=35.1000
ACOMINC=-40.9000 ACOX=64.3000 ACOXAR=. ACT=952.5000 AEDI=. ALDO=0.0000 AO=41.0000 AOCIDERGL=0.0000 AOCIOTHER=0.0000
AOCIPEN=-38.8000 AOCISECGL=0.0000 AODO=41.0000 AOX=41.0000 AP=187.8000 APB=. APC=. APOFS=. ARB=. ARC=. ARTFS=.
AT=1517.2000 BAST=. BKVLPS=26.0406 CA=. CAPS=479.4000 CB=. CEQ=905.9000 CEQL=905.9000 CEQT=760.3000 CH=21.3000
CHE=41.1000 CHS=. CLD2=0.0000 CLD3=0.0000 CLD4=0.0000 CLD5=0.0000 CLFC=. CLFX=. CLG=. CLIS=. CLL=. CLLC=. CLO=.
CLRLL=. CLT=. CMP=. CRV=. CRVNLI=. CSTK=45.3000 CSTKCV=1.0000 DC=0.0000 DCLO=0.0000 DCOM=0.0000 DCPSTK=0.0000 DCS=.

DCVSR=0.0000 DCVSUB=0.0000 DCVT=0.0000 DD=0.0000 DD1=0.0000 DD2=0.0000 DD3=142.9000 DD4=0.0000 DD5=0.0000 DFPAC=.
DFS=. DLC=0.0000 DLTO=142.9000 DLTP=141.7000 DLTSUB=. DLTT=141.7000 DM=120.0000 DN=0.0000 DPACB=. DPACC=. DPACLI=.
DPACLS=. DPACME=. DPACNR=. DPACO=. DPACRE=. DPACT=231.8000 DPDC=. DPLTB=. DPSC=. DPSTB=. DPTB=. DPTC=. DPTIC=.
DPVIEB=231.8000 DPVIO=. DPVIR=. DRC=12.6000 DRCI=. DRLT=83.8000 DS=0.0000 DUDD=-1.2000 DVPA=0.0000 DVPIBB=.
DXD2=0.0000 DXD3=142.9000 DXD4=0.0000 DXD5=0.0000 EA=. ESOPCT=0.0000 ESOPDLT=. ESOPNR=0.0000 ESOPR=0.0000 ESOPT=0.0000
EXCADJ=. FATB=. FATC=. FATE=. FATL=. FATN=. FATO=. FATP=. FDFR=. FEA=. FEL=. FFS=. GDWL=116.2000 GEQRV=. GOVGR=.
IAEQ=. IAEQCI=. IAEQMI=. IAFICI=. IAFXI=. IAFXMI=. IALI=. IALOI=. IALTI=. IAMLI=. IAOI=. IAPLI=. IAREI=. IASCI=.
IASMI=. IASSI=. IASTI=. IATCI=. IATI=. IATMI=. IAUI=. ICAPT=1047.6000 INTAN=145.6000 INTANO=29.4000 INVFG=. INVO=.
INVOFS=. INVREH=. INVREI=. INVRES=. INVRM=41.8000 INVT=589.0000 INVWIP=14.0000 IP=. IPC=. IPV=. ISEQ=. ISEQC=. ISEQM=.
ISFI=. ISFXC=. ISFXM=. ISLG=. ISLGC=. ISLGM=. ISLT=. ISNG=. ISNGC=. ISNGM=. ISOTC=. ISOTH=. ISOTM=. ISSC=. ISSM=.
ISSU=. IST=. ISTC=. ISTM=. ISUT=. ITCB=0.0000 IVAEQ=6.3000 IVAO=23.0000 IVGOD=. IVPT=. IVST=19.8000 LCABG=. LCACL=.
LCACR=. LCAG=. LCAL=. LCALT=. LCAM=. LCAO=. LCAST=. LCAT=. LCO=169.7000 LCOX=41.8000 LCOXAR=. LCOXDR=29.2000
LCT=357.5000 LCUACU=. LIF=. LIFR=0.0000 LLOML=. LLOO=. LLOT=. LO=112.1000 LOXDR=28.3000 LRV=. LS=. LSE=1517.2000
LT=611.3000 MIB=0.0000 MRC1=21.6000 MRC2=19.3000 MRC3=16.5000 MRC4=13.2000 MRC5=11.0000 MRCT=81.6000 MRCTA=39.9000
MSA=0.0000 MSVRV=. MTL=. NAT=. NP=0.0000 NPANL=. NPAORE=. NPARL=. NPAT=. OB=1500.0000 OPTPRCCA=42.0200
OPTPRCEX=25.5600 OPTPRCEY=30.3700 OPTPRCGR=47.8400 OPTPRCWA=25.2800 PPEGT=580.6000 PPENB=. PPENC=. PPENLI=. PPENLS=.
PPENME=. PPENNR=. PPENO=. PPENT=348.8000 PPEVBB=. PPEVEB=580.6000 PPEVO=. PPEVR=. PRC=. PRODV=. PRVT=. PSTK=0.0000
PSTKC=0.0000 PSTKL=0.0000 PSTKN=0.0000 PSTKR=0.0000 PSTKRV=0.0000 PVCL=. PVPL=. PVT=. RADP=. RAGR=. RARI=. RATI=.
RCL=. RDP=. RE=668.9000 REA=0.0000 REAJO=-38.8000 RECCO=0.0000 RECD=16.0000 RECT=258.1000 RECTA=-2.1000 RECTR=257.0000
RECUB=59.2000 RET=. REUNA=709.8000 REUNR=. RLL=. RLO=. RLP=. RLRI=. RLT=. RPAG=. RREPS=. RVBCI=. RVBPI=. RVBTI=.
RVDO=. RVDT=. RVEQT=. RVLRV=. RVNO=. RVNT=. RVRI=. RVSI=. RVTI=. RVTXR=. RVUPI=. RVUTX=. SAA=. SAL=. SBDC=. SC=. SCO=.
SECU=. SEQ=905.9000 SEQO=0.0000 SRT=. SSNP=. STBO=. STIO=. TDSCD=. TDSCE=. TDSLG=. TDSMM=. TDSNG=. TDSO=. TDSS=.
TDST=. TLCF=0.0000 TRANSA=. TSA=. TSO=. TSTK=287.7000 TSTKC=287.7000 TSTKME=. TSTKP=0.0000 TXDB=0.0000 TXDBA=3.1000
TXDBCA=0.0000 TXDBCL=0.0000 TXDITC=0.0000 TXNDB=3.1000 TXNDBA=39.4000 TXNDBL=36.3000 TXNDBR=0.0000 TXP=0.0000
TXR=1.1000 UAOX=. UAPT=. UCAPS=. UCCONS=. UCEQ=. UCUSTAD=. UDCOPRES=. UDD=. UDMB=. UDOLT=. UDPCO=. UI=. UINVT=. ULCM=.
ULCO=. UNL=. UNNP=. UNNPL=. UOPRES=. UPMCSTK=. UPMPF=. UPMPFS=. UPMSUBP=. UPSTK=. UPSTKC=. UPSTKSF=. URECT=. URECTR=.
UREVUB=. USUBPSTK=. VPAC=. VPO=. WCAP=595.0000 XACC=127.9000 XPP=0.0000 ACCHG=0.0000 ADPAC=. AM=. AMDC=. AMGW=. AQA=.
AQD=. AQEPS=. AQI=0.0000 AQP=. AQS=0.0000 ARCE=. ARCED=. ARCEEPS=. AUTXR=. BALR=. BANLR=. BATR=. BCEF=. BCLR=.
BCLTBL=. BCNLR=. BCRBL=. BCT=. BCTBL=. BCTR=. BLTBL=. CBI=. CDPAC=. CFBD=. CFERE=. CFO=. CFPDO=. CGA=. CGRI=. CGTI=.
CGUI=. CIBEGNI=7.5000 CICURR=-2.4000 CIDERGL=0.0000 CIOTHER=0.0000 CIPEN=-6.5000 CISECGL=0.0000 CITOTAL=-1.4000
CNLTBL=. COGS=1679.5000 CPCBL=. CPDOI=. CPNLI=. CPPBL=. CPREI=. CSTKE=-0.4000 DBI=. DFXA=. DILADJ=0.0000
DILAVX=83.7000 DO=-76.6000 DONR=. DP=42.8000 DPRET=. DTEA=. DTED=. DTEEPS=. DTEP=. DVC=10.5000 DVDNP=. DVP=0.0000
DVPD=. DVPDP=. DVRPIV=. DVRRE=. DVSCO=. DVT=10.5000 EBIT=110.7000 EBITDA=153.5000 EIEA=. EMOL=. EPSFI=0.2100
EPSFX=2.4000 EPSPI=0.2000 EPSPX=2.4200 ESUB=0.0000 FATD=. FCA=. FFO=. GBBL=. GDWLAM=. GDWLIA=. GDWLID=. GDWLIEPS=.
GDWLIP=. GLA=. GLCEA=. GLCED=. GLCEEPS=. GLCEP=. GLD=. GLEPS=. GLP=. GP=372.3000 GPHBL=. GPLBL=. GPOBL=. GPRBL=.
GPTBL=. GWO=. HEDGEGL=. IB=84.1000 IBADJ=83.7000 IBBL=. IBCOM=84.1000 IBKI=. IDIIS=. IDILB=. IDILC=. IDIS=. IDIST=.
IDIT=1.0000 IDITS=. IIRE=. INITB=. INTC=0.0000 IOBD=. IOI=. IORE=. IPABL=. IPHBL=. IPLBL=. IPOBL=. IPTBL=. IPTI=.
IREI=. IRENT=. IRII=. IRLI=. IRNLI=. IRSI=. ISGR=. ISGT=. ISGU=. ITCI=0.0000 IVI=. LI=. LLRCI=. LLRCR=. LLWOCI=.

LLWOCR=. LST=. MII=0.0000 NCO=. NFSR=. NI=7.5000 NIADJ=7.1000 NIECI=. NIINT=. NIIT=. NIM=. NIO=. NIT=. NITS=.
NOPI=0.2000 NOPIO=-0.8000 NRTXT=. NRTXTD=. NRTXTEPS=. OIADP=110.7000 OIBDP=153.5000 OPEPS=2.7200 OPILI=. OPINCAR=.
OPINI=. OPIOI=. OPIRI=. OPITI=. OPREPSX=2.6900 PALR=. PANLR=. PATR=. PCL=. PCLR=. PCNLR=. PCTR=. PI=89.0000
PIDOM=68.9000 PIFO=20.1000 PLL=. PLTBL=. PNCA=. PNCAD=. PNCAEPS=. PNCIA=. PNCID=. PNCIEPS=. PNCIP=. PNCWIA=. PNCWID=.
PNCWIEPS=. PNCWIP=. PNLBL=. PNLI=. POBL=. PPCBL=. PPPABL=. PPPHBL=. PPPOBL=. PPPTBL=. PRCA=. PRCAD=. PRCAEPS=. PREBL=.
PRI=. PTBL=. PTRAN=. PVO=. PVON=. PWOI=. RCA=-0.7000 RCD=-0.0200 RCEPS=-0.0200 RCP=-0.9000 RDIP=0.0000 RDIPA=0.0000
RDIPD=0.0000 RDIPEPS=0.0000 REVT=2051.8000 RIS=. RMUM=. RRA=. RRD=. RRP=. SALE=2051.8000 SETA=. SETD=. SETEPS=. SETP=.
SPCE=. SPCED=. SPCEEPS=. SPI=-12.4000 SPID=-0.2700 SPIEPS=-0.2800 SPIOA=-9.6000 SPIOP=-12.4000 SRET=. STKCO=13.5000
STKCPA=. TDSG=. TF=. TIE=. TII=. TXC=9.9000 TXDFED=. TXDFO=. TXDI=-5.0000 TXDS=. TXEQA=. TXEQII=. TXFED=4.8000
TXFO=5.0000 TXO=0.0000 TXS=0.1000 TXT=4.9000 TXVA=. TXW=0.0000 UDPFA=. UDVP=. UGI=. UNIAMI=. UNOPINC=. UOPI=. UPDVP=.
USPI=. USUBDVP=. UTME=. UTXFED=. UXINST=. UXINTD=. WDA=. WDD=. WDEPS=. WDP=. XAD=. XAGO=. XAGT=. XCOM=. XCOMI=.
XDEPL=. XDP=. XDVRE=. XEQO=. XI=0.0000 XIDO=-76.6000 XINDB=. XINDC=. XINS=. XINST=. XINT=9.5000 XINTD=. XINTOPT=.
XIVI=. XIVRE=. XLR=. XNBI=. XNF=. XNINS=. XNITB=. XOBD=. XOI=. XOPR=1898.3000 XOPRAR=. XOPTD=. XOPTEPS=. XORE=.
XPR=12.7000 XRD=. XRENT=25.9000 XS=. XSGA=218.8000 XSTF=. XSTFO=. XSTFWS=. XT=. XUW=. XUWLI=. XUWNLI=. XUWOI=.
XUWREI=. XUWTI=. AFUDCC=. AFUDCI=. AMC=. AOLOCH=12.8000 APALCH=. AQC=2.3000 CAPX=17.4000 CAPXV=17.4000 CDVC=.
CHECH=-0.5000 DEPC=. DLCCH=-10.0000 DLTIS=. DLTR=25.0000 DPC=42.8000 DV=10.5000 ESUBC=. EXRE=-0.2000 FIAO=-1.4000
FINCF=-48.7000 FOPO=29.3000 FOPOX=29.3000 FOPT=. FSRCO=. FSRCT=. FUSEO=. FUSET=. IBC=84.1000 INTPN=8.8000
INVCH=-59.4000 ITCC=. IVACO=0.7000 IVCH=0.0000 IVNCF=-19.0000 IVSTCH=. OANCF=67.4000 PDVC=. PRSTKC=10.3000 PRSTKCC=.
PRSTKPC=. RECCH=-44.1000 SCSTKC=. SIV=0.0000 SPPE=. SPPIV=0.0000 SPSTKC=. SSTK=8.5000 TDC=. TSAFC=. TXACH=.
TXBCO=0.0000 TXBCOF=0.0000 TXDC=-5.0000 TXPD=7.0000 UAOLOCH=. UDFCC=. UFRETSD=. UNWCC=. UOIS=. USTDNC=. UTFDOC=.
UTFOSC=. UWKCAPC=. WCAPC=. WCAPCH=. XIDOC=6.9000 ACCRT=. ACQAO=. ACQCSHI=. ACQGDWL=. ACQIC=. ACQINTAN=. ACQINVT=.
ACQLNTAL=. ACQNIINTC=. ACQPPE=. ACQSC=. ANO=. AOL2=. AQPL1=. AU=6 AUL3=. AUOP=4 AUOPIC=2 BASTR=. BILLEXCE=12.6000
CAPR1=. CAPR2=. CAPR3=. CAPSFT=. CEIEXBILL=59.2000 CEOSO=Y CFOSO=Y CI=-1.4000 CIMII=0.0000 CSHFD=34.9000 CSHI=45.3010
CSHO=34.7880 CSHPRI=34.5000 CSHR=0.9000 CSHRC=. CSHRP=. CSHRSO=. CSHRT=. CSHRW=. DERAC=. DERALT=. DERHEDGL=. DERLC=.
DERLLT=. DT=141.7000 DVINTF=. EMP=5.6500 FINACO=. FINAO=. FINCH=. FINDLC=. FINDLT=. FINIVST=. FINLCO=. FINLTO=.
FINNP=. FINRECC=. FINRECLT=. FINREV=. FINXINT=. FINXOPR=. GLIV=. GOVTOWN=. IBMII=84.1000 LIFRP=0.0000 LNO=. LOL2=.
LQPL1=. LUL3=. MIBN=0.0000 MIBT=0.0000 NIINTPFC=. NIINTPFP=. NIPFC=. NIPFP=. OPTCA=0.0340 OPTDR=0.6000 OPTEX=0.9810
OPTEXD=0.5710 OPTFVGR=13.6000 OPTGR=0.3000 OPTLIFE=4.5000 OPTOSBY=2.0820 OPTOSEY=1.7770 OPTPRCBY=26.7200 OPTRFR=2.7000
OPTVOL=30.8000 PNRSHO=0.0000 PRSHO=0.0000 RANK=1 RSTCHE=19.8000 RSTCHELT=. SALEPFC=. SALEPFP=. TEQ=905.9000 TFVA=.
TFVCE=. TFVL=. TSTKN=10.5130 TXTUBADJUST=0.0000 TXTUBBEGIN=4.4000 TXTUBEND=0.0000 TXTUBMAX=. TXTUBMIN=.
TXTUBPOSDEC=0.0000 TXTUBPOSINC=0.0000 TXTUBPOSPDEC=0.0000 TXTUBPOSPINC=0.0000 TXTUBSETTLE=4.4000 TXTUBSOFLIMIT=0.0000
TXTUBTXTR=. TXTUBXINTBS=. TXTUBXINTIS=. XRDP=. ADJEX_C=1.000000000000 ADJEX_F=1.000000000000 CSHTR_C=63941698.0000
CSHTR_F=68217126.0000 DVPSP_C=0.3000 DVPSP_F=0.3000 DVPSX_C=0.3000 DVPSX_F=0.3000 MKVALT=1046.7709 NAICSH=423860
PRCC_C=37.340000000000 PRCC_F=30.090000000000 PRCH_C=51.520000000000 PRCH_F=51.520000000000 PRCL_C=33.940000000000
PRCL_F=29.840000000000 SICH=5080 CONSOL=C INDFMT=INDL DATAFMT=STD POPSRC=D CURCD=USD COSTAT=A PS=0 BE=905.9 year=2019
bvcEquity=1046.77092 capIntens=0.0114684946 cashFlow=0.0836409175 cashHoldings=0.0270893752 costcap=.
leverages=0.1564190308 bleverage=0.093395729 market_leverage=0.0854607594 roa=0.0554310572 roe=0.0071648914
cash_assets=0.0270893752 TobinsQ=. bvEqity=. _ERROR_=1 _N_=42

NOTE: Division by zero detected at line 2533 column 17.
NOTE: Division by zero detected at line 2542 column 11.
GVKEY=001010 DATADATE=1984-12-31 FYEAR=1984 ADD1=101 Clark Street ADD2=  ADD3=  ADD4=  ADDZIP=63301-2081
BUSDESC=ACF Industries LLC operates as a machinery (construction and heavy trucks) company. It operates as an equipmen
t lender. It was formerly known as ACF Industries, Incorporated and changed its name to ACF Industries LLC in May 2003
. CITY=Saint Charles CONML=ACF Industries Inc COUNTY=  DLDTE=2003-11-14 DLRSN=07 EIN=13-1875943 FAX=636 949 2825
FYRC=12 GGROUP=2030 GIND=203040 GSECTOR=20 GSUBIND=20304010 IDBFLAG=D INCORP=NJ IPODATE=. LOC=USA NAICS=336510
PHONE=636 949 2399 PRICAN=  PRIROW=  PRIUSA=01 SIC=3743 SPCINDCD=610 SPCSECCD=600 SPCSRC=  STATE=MO STKO=2
WEBURL=www.acfindustries.com CONM=ACF INDUSTRIES INC TIC=4165A CUSIP=00099V004 CIK=0000910627 EXCHG=0 FYR=12 FIC=USA
ACCTCHG=  ACCTSTD=DS ACQMETH=AP ADRR=. AJEX=1.000000000000 AJP=1.000000000000 APDEDATE=. BSPR=  COMPST=AR CURNCD=USD
CURRTR=1.000000000000 CURUSCN=. FDATE=. FINAL=Y ISMOD=1 LTCM=  OGM=  PDATE=. PDDUR=12 SCF=3 SRC=53 STALT=  UDPL=
UPD=3 ACCO=. ACDO=. ACO=49.7740 ACODO=. ACOMINC=. ACOX=48.4820 ACOXAR=. ACT=502.0670 AEDI=. ALDO=. AO=34.4100
AOCIDERGL=. AOCIOTHER=. AOCIPEN=. AOCISECGL=. AODO=. AOX=34.4100 AP=11.7420 APB=. APC=. APOFS=. ARB=. ARC=. ARTFS=.
AT=1163.6430 BAST=48.5780 BKVLPS=. CA=. CAPS=0.0000 CB=. CEQ=71.8460 CEQL=71.8460 CEQT=71.8460 CH=13.5380 CHE=367.5390
CHS=. CLD2=0.0000 CLD3=0.0000 CLD4=0.0000 CLD5=0.0000 CLFC=. CLFX=. CLG=. CLIS=. CLL=. CLLC=. CLO=. CLRLL=. CLT=.
CMP=. CRV=. CRVNLI=. CSTK=76.5730 CSTKCV=383.0000 DC=. DCLO=0.0000 DCOM=. DCPSTK=0.0000 DCS=. DCVSR=0.0000
DCVSUB=0.0000 DCVT=0.0000 DD=404.4570 DD1=0.0000 DD2=44.5830 DD3=53.0040 DD4=56.1940 DD5=46.9130 DFPAC=. DFS=.
DLC=0.0000 DLTO=466.5670 DLTP=0.0000 DLTSUB=. DLTT=871.0240 DM=. DN=0.0000 DPACB=2.3480 DPACC=0.0000 DPACLI=0.0000
DPACLS=0.0000 DPACME=15.3790 DPACNR=0.0000 DPACO=0.0000 DPACRE=. DPACT=17.7270 DPDC=. DPLTB=. DPSC=. DPSTB=. DPTB=.
DPTC=. DPTIC=. DPVIEB=17.7270 DPVIO=-425.6970 DPVIR=24.8170 DRC=. DRCI=. DRLT=. DS=0.0000 DUDD=0.0000 DVPA=0.0000
DVPIBB=431.2350 DXD2=44.5830 DXD3=53.0040 DXD4=56.1940 DXD5=46.9130 EA=. ESOPCT=. ESOPDLT=. ESOPNR=. ESOPR=. ESOPT=.
EXCADJ=. FATB=10.8550 FATC=0.9450 FATE=601.7600 FATL=0.0000 FATN=0.0000 FATO=0.0000 FATP=6.8510 FDFR=. FEA=. FEL=.
FFS=. GDWL=. GEQRV=. GOVGR=. IAEQ=. IAEQCI=. IAEQMI=. IAFICI=. IAFXI=. IAFXMI=. IALI=. IALOI=. IALTI=. IAMLI=. IAOI=.
IAPLI=. IAREI=. IASCI=. IASMI=. IASSI=. IASTI=. IATCI=. IATI=. IATMI=. IAUI=. ICAPT=942.8700 INTAN=. INTANO=.
INVFG=4.8360 INVO=0.0000 INVOFS=. INVREH=. INVREI=. INVRES=. INVRM=13.7390 INVT=25.2650 INVWIP=6.6900 IP=. IPC=. IPV=.
ISEQ=. ISEQC=. ISEQM=. ISFI=. ISFXC=. ISFXM=. ISLG=. ISLGC=. ISLGM=. ISLT=. ISNG=. ISNGC=. ISNGM=. ISOTC=. ISOTH=.
ISOTM=. ISSC=. ISSM=. ISSU=. IST=. ISTC=. ISTM=. ISUT=. ITCB=. IVAEQ=0.0000 IVAO=24.4820 IVGOD=. IVPT=. IVST=354.0010
LCABG=. LCACL=. LCACR=. LCAG=. LCAL=. LCALT=. LCAM=. LCAO=. LCAST=. LCAT=. LCO=182.0710 LCOX=103.9500 LCOXAR=.
LCOXDR=. LCT=193.8130 LCUACU=. LIF=. LIFR=0.0000 LLOML=. LLOO=. LLOT=. LO=26.9600 LOXDR=. LRV=. LS=. LSE=1163.6430
LT=1091.7970 MIB=0.0000 MRC1=1.2710 MRC2=1.1720 MRC3=1.1140 MRC4=1.1000 MRC5=0.9050 MRCT=5.5620 MRCTA=. MSA=0.0000
MSVRV=. MTL=. NAT=. NP=0.0000 NPANL=. NPAORE=. NPARL=. NPAT=. OB=. OPTPRCCA=. OPTPRCEX=. OPTPRCEY=. OPTPRCGR=.
OPTPRCWA=. PPEGT=620.4110 PPENB=8.5070 PPENC=0.9450 PPENLI=6.8510 PPENLS=0.0000 PPENME=586.3810 PPENNR=0.0000
PPENO=0.0000 PPENT=602.6840 PPEVBB=1082.5400 PPEVEB=620.4110 PPEVO=-526.6640 PPEVR=50.6790 PRC=. PRODV=. PRVT=.
PSTK=0.0000 PSTKC=0.0000 PSTKL=0.0000 PSTKN=0.0000 PSTKR=0.0000 PSTKRV=0.0000 PVCL=. PVPL=. PVT=. RADP=. RAGR=. RARI=.
RATI=. RCL=. RDP=. RE=-4.7270 REA=0.0000 REAJO=0.0000 RECCO=36.2570 RECD=1.0380 RECT=59.4890 RECTA=0.0000
RECTR=23.2320 RECUB=. RET=. REUNA=-4.7270 REUNR=. RLL=. RLO=. RLP=. RLRI=. RLT=. RPAG=. RREPS=. RVBCI=. RVBPI=.
RVBTI=. RVDO=. RVDT=. RVEQT=. RVLRV=. RVNO=. RVNT=. RVRI=. RVSI=. RVTI=. RVTXR=. RVUPI=. RVUTX=. SAA=. SAL=. SBDC=.
SC=. SCO=. SECU=. SEQ=71.8460 SEQO=. SRT=. SSNP=. STBO=. STIO=. TDSCD=. TDSCE=. TDSLG=. TDSMM=. TDSNG=. TDSO=. TDSS=.

TDST=. TLCF=. TRANSA=. TSA=. TSO=. TSTK=0.0000 TSTKC=0.0000 TSTKME=. TSTKP=0.0000 TXDB=0.0000 TXDBA=. TXDBCA=.
TXDBCL=. TXDITC=0.0000 TXNDB=. TXNDBA=. TXNDBL=. TXNDBR=. TXP=0.0000 TXR=0.0000 UAOX=. UAPT=. UCAPS=. UCCONS=. UCEQ=.
UCUSTAD=. UDCOPRES=. UDD=. UDMB=. UDOLT=. UDPCO=. UI=. UINVT=. ULCM=. ULCO=. UNL=. UNNP=. UNNPL=. UOPRES=. UPMCSTK=.
UPMPF=. UPMPFS=. UPMSUBP=. UPSTK=. UPSTKC=. UPSTKSF=. URECT=. URECTR=. UREVUB=. USUBPSTK=. VPAC=. VPO=. WCAP=308.2540
XACC=78.1210 XPP=1.2920 ACCHG=. ADPAC=. AM=. AMDC=. AMGW=. AQA=. AQD=. AQEPS=. AQI=. AQP=. AQS=. ARCE=. ARCED=.
ARCEEPS=. AUTXR=. BALR=. BANLR=. BATR=. BCEF=. BCLR=. BCLTBL=. BCNLR=. BCRBL=. BCT=. BCTBL=. BCTR=. BLTBL=. CBI=.
CDPAC=. CFBD=. CFERE=. CFO=. CFPDO=. CGA=. CGRI=. CGTI=. CGUI=. CIBEGNI=. CICURR=. CIDERGL=. CIOTHER=. CIPEN=.
CISECGL=. CITOTAL=. CNLTBL=. COGS=92.5130 CPCBL=. CPDOI=. CPNLI=. CPPBL=. CPREI=. CSTKE=0.0000 DBI=. DFXA=37.0060
DILADJ=. DILAVX=. DO=33.4520 DONR=. DP=37.0060 DPRET=. DTEA=. DTED=. DTEEPS=. DTEP=. DVC=32.9370 DVDNP=. DVP=0.0000
DVPD=. DVPDP=. DVRPIV=. DVRRE=. DVSCO=. DVT=32.9370 EBIT=50.8310 EBITDA=87.8370 EIEA=. EMOL=. EPSFI=. EPSFX=. EPSPI=.
EPSPX=. ESUB=. FATD=. FCA=. FFO=. GBBL=. GDWLAM=. GDWLIA=. GDWLID=. GDWLIEPS=. GDWLIP=. GLA=. GLCEA=. GLCED=.
GLCEEPS=. GLCEP=. GLD=. GLEPS=. GLP=. GP=115.4030 GPHBL=. GPLBL=. GPOBL=. GPRBL=. GPTBL=. GWO=. HEDGEGL=. IB=0.3180
IBADJ=0.3180 IBBL=. IBCOM=0.3180 IBKI=. IDIIS=. IDILB=. IDILC=. IDIS=. IDIST=. IDIT=12.7000 IDITS=. IIRE=. INITB=.
INTC=0.0000 IOBD=. IOI=. IORE=. IPABL=. IPHBL=. IPLBL=. IPOBL=. IPTBL=. IPTI=. IREI=. IRENT=. IRII=. IRLI=. IRNLI=.
IRSI=. ISGR=. ISGT=. ISGU=. ITCI=. IVI=. LI=. LLRCI=. LLRCR=. LLWOCI=. LLWOCR=. LST=. MII=0.0000 NCO=. NFSR=.
NI=32.2700 NIADJ=32.2700 NIECI=0.0000 NIINT=. NIIT=. NIM=. NIO=. NIT=. NITS=. NOPI=14.0440 NOPIO=1.3440 NRTXT=.
NRTXTD=. NRTXTEPS=. OIADP=50.8310 OIBDP=87.8370 OPEPS=. OPILI=. OPINCAR=. OPINI=. OPIOI=. OPIRI=. OPITI=. OPREPSX=.
PALR=. PANLR=. PATR=. PCL=. PCLR=. PCNLR=. PCTR=. PI=1.6660 PIDOM=. PIFO=. PLL=. PLTBL=. PNCA=. PNCAD=. PNCAEPS=.
PNCIA=. PNCID=. PNCIEPS=. PNCIP=. PNCWIA=. PNCWID=. PNCWIEPS=. PNCWIP=. PNLBL=. PNLI=. POBL=. PPCBL=. PPPABL=.
PPPHBL=. PPPOBL=. PPPTBL=. PRCA=. PRCAD=. PRCAEPS=. PREBL=. PRI=. PTBL=. PTRAN=. PVO=. PVON=. PWOI=. RCA=. RCD=.
RCEPS=. RCP=. RDIP=. RDIPA=. RDIPD=. RDIPEPS=. REVT=207.9160 RIS=. RMUM=. RRA=. RRD=. RRP=. SALE=207.9160 SETA=.
SETD=. SETEPS=. SETP=. SPCE=. SPCED=. SPCEEPS=. SPI=-4.0000 SPID=. SPIEPS=. SPIOA=. SPIOP=. SRET=. STKCO=. STKCPA=.
TDSG=. TF=. TIE=. TII=. TXC=. TXDFED=. TXDFO=. TXDI=. TXDS=. TXEQA=. TXEQII=. TXFED=. TXFO=. TXO=. TXS=. TXT=1.3480
TXVA=. TXW=0.0000 UDPFA=. UDVP=. UGI=. UNIAMI=. UNOPINC=. UOPI=. UPDVP=. USPI=. USUBDVP=. UTME=. UTXFED=. UXINST=.
UXINTD=. WDA=. WDD=. WDEPS=. WDP=. XAD=0.1600 XAGO=. XAGT=. XCOM=. XCOMI=. XDEPL=0.0000 XDP=37.0060 XDVRE=. XEQO=.
XI=-1.5000 XIDO=31.9520 XINDB=. XINDC=. XINS=. XINST=. XINT=59.2090 XINTD=. XINTOPT=. XIVI=. XIVRE=. XLR=. XNBI=.
XNF=. XNINS=. XNITB=. XOBD=. XOI=. XOPR=120.0790 XOPRAR=. XOPTD=. XOPTEPS=. XORE=. XPR=4.0340 XRD=1.0670 XRENT=2.6210
XS=. XSGA=27.5660 XSTF=. XSTFO=. XSTFWS=. XT=. XUW=. XUWLI=. XUWNLI=. XUWOI=. XUWREI=. XUWTI=. AFUDCC=. AFUDCI=. AMC=.
AOLOCH=. APALCH=. AQC=. CAPX=115.2840 CAPXV=115.2140 CDVC=. CHECH=685.0110 DEPC=. DLCCH=41.6670 DLTIS=747.6560
DLTR=264.4770 DPC=38.4050 DV=32.9370 ESUBC=. EXRE=. FIAO=. FINCF=. FOPO=70.9120 FOPOX=. FOPT=273.6750 FSRCO=-18.1200
FSRCT=. FUSEO=14.7830 FUSET=. IBC=0.3180 INTPN=. INVCH=. ITCC=. IVACO=. IVCH=89.8250 IVNCF=. IVSTCH=. OANCF=. PDVC=.
PRSTKC=0.0000 PRSTKCC=. PRSTKPC=. RECCH=. SCSTKC=. SIV=131.5180 SPPE=25.0220 SPPIV=. SPSTKC=. SSTK=0.9000 TDC=.
TSAFC=. TXACH=. TXBCO=. TXBCOF=. TXDC=3.0000 TXPD=. UAOLOCH=. UDFCC=. UFRETSD=. UNWCC=. UOIS=. USTDNC=. UTFDOC=.
UTFOSC=. UWKCAPC=. WCAPC=. WCAPCH=. XIDOC=161.0420 ACCRT=. ACQAO=. ACQCSHI=. ACQGDWL=. ACQIC=. ACQINTAN=. ACQINVT=.
ACQLNTAL=. ACQNIINTC=. ACQPPE=. ACQSC=. ANO=. AOL2=. AQPL1=. AU=9 AUL3=. AUOP=1 AUOPIC=  BASTR=10.8200 BILLEXCE=.
CAPR1=. CAPR2=. CAPR3=. CAPSFT=. CEIEXBILL=. CEOSO=  CFOSO=  CI=. CIMII=. CSHFD=. CSHI=. CSHO=0.0000 CSHPRI=.
CSHR=0.0010 CSHRC=0.0000 CSHRP=0.0000 CSHRSO=0.0000 CSHRT=0.0000 CSHRW=0.0000 DERAC=. DERALT=. DERHEDGL=. DERLC=.
DERLLT=. DT=. DVINTF=. EMP=3.3300 FINACO=. FINAO=. FINCH=. FINDLC=. FINDLT=. FINIVST=. FINLCO=. FINLTO=. FINNP=.

FINRECC=. FINRECLT=. FINREV=. FINXINT=. FINXOPR=. GLIV=. GOVTOWN=. IBMII=. LIFRP=0.0000 LNO=. LOL2=. LQPL1=. LUL3=.
MIBN=. MIBT=0.0000 NIINTPFC=. NIINTPFP=. NIPFC=. NIPFP=. OPTCA=. OPTDR=. OPTEX=. OPTEXD=. OPTFVGR=. OPTGR=. OPTLIFE=.
OPTOSBY=. OPTOSEY=. OPTPRCBY=. OPTRFR=. OPTVOL=. PNRSHO=. PRSHO=. RANK=1 RSTCHE=. RSTCHELT=. SALEPFC=. SALEPFP=. TEQ=.
TFVA=. TFVCE=. TFVL=. TSTKN=0.0000 TXTUBADJUST=. TXTUBBEGIN=. TXTUBEND=. TXTUBMAX=. TXTUBMIN=. TXTUBPOSDEC=.
TXTUBPOSINC=. TXTUBPOSPDEC=. TXTUBPOSPINC=. TXTUBSETTLE=. TXTUBSOFLIMIT=. TXTUBTXTR=. TXTUBXINTBS=. TXTUBXINTIS=.
XRDP=1.9330 ADJEX_C=1.000000000000 ADJEX_F=1.000000000000 CSHTR_C=7556800.0000 CSHTR_F=7556800.0000 DVPSP_C=0.3500
DVPSP_F=0.3500 DVPSX_C=0.3500 DVPSX_F=0.3500 MKVALT=. NAICSH=. PRCC_C=53.875000000000 PRCC_F=53.875000000000
PRCH_C=54.000000000000 PRCH_F=54.000000000000 PRCL_C=40.750000000000 PRCL_F=40.750000000000 SICH=. CONSOL=C
INDFMT=INDL DATAFMT=STD POPSRC=D CURCD=USD COSTAT=I PS=0 BE=71.846 year=1984 bvcEquity=0 capIntens=0.0990716225
cashFlow=0.0320751296 cashHoldings=0.3158520268 costcap=. leverages=12.123486346 bleverage=0.748531981
market_leverage=0.7977893326 roa=0.0002732797 roe=. cash_assets=0.3158520268 TobinsQ=. bvEqity=. _ERROR_=1 _N_=58
NOTE: Division by zero detected at line 2533 column 17.
GVKEY=001013 DATADATE=2006-10-31 FYEAR=2006 ADD1=13625 Technology Drive ADD2=  ADD3=  ADD4=  ADDZIP=55344-2252
BUSDESC=CommScope Connectivity LLC provides broadband communications network infrastructure products and related servi
ces worldwide. Its products enable the delivery of high-speed Internet, data, video, and voice communications over wir
eline, wireless, cable, enterprise, and broadcast networks. CITY=Eden Prairie CONML=ADC Telecommunications Inc.
COUNTY=  DLDTE=2010-12-10 DLRSN=01 EIN=41-0743912 FAX=952 917 1717 FYRC=9 GGROUP=4520 GIND=452010 GSECTOR=45
GSUBIND=45201020 IDBFLAG=D INCORP=MN IPODATE=1979-03-16 LOC=USA NAICS=334210 PHONE=952 938 8080 PRICAN=  PRIROW=
PRIUSA=01 SIC=3661 SPCINDCD=180 SPCSECCD=940 SPCSRC=B STATE=MN STKO=0 WEBURL=  CONM=ADC TELECOMMUNICATIONS INC
TIC=ADCT.1 CUSIP=000886309 CIK=0000061478 EXCHG=14 FYR=10 FIC=USA ACCTCHG=  ACCTSTD=DS ACQMETH=  ADRR=.
AJEX=1.000000000000 AJP=1.000000000000 APDEDATE=2006-10-31 BSPR=  COMPST=AZ CURNCD=USD CURRTR=1.000000000000 CURUSCN=.
FDATE=2007-01-10 FINAL=Y ISMOD=1 LTCM=  OGM=  PDATE=2006-12-13 PDDUR=12 SCF=7 SRC=8 STALT=  UDPL=  UPD=3 ACCO=.
ACDO=14.9000 ACO=46.4000 ACODO=31.5000 ACOMINC=-10.2000 ACOX=46.4000 ACOXAR=. ACT=942.7000 AEDI=. ALDO=0.3000
AO=69.3000 AOCIDERGL=0.0000 AOCIOTHER=0.0000 AOCIPEN=-4.3000 AOCISECGL=0.0000 AODO=64.0000 AOX=64.3000 AP=88.4000
APB=. APC=. APOFS=. ARB=. ARC=. ARTFS=. AT=1611.4000 BAST=. BKVLPS=7.4531 CA=. CAPS=1417.4000 CB=. CEQ=873.5000
CEQL=873.5000 CEQT=493.0000 CH=142.3000 CHE=537.7000 CHS=. CLD2=0.0000 CLD3=0.0000 CLD4=0.0000 CLD5=0.0000 CLFC=.
CLFX=. CLG=. CLIS=. CLL=. CLLC=. CLO=. CLRLL=. CLT=. CMP=. CRV=. CRVNLI=. CSTK=23.5000 CSTKCV=0.2000 DC=5.0000
DCLO=0.0000 DCOM=0.0000 DCPSTK=400.0000 DCS=. DCVSR=0.0000 DCVSUB=400.0000 DCVT=400.0000 DD=0.0000 DD1=0.0000
DD2=200.0000 DD3=0.0000 DD4=0.0000 DD5=0.0000 DFPAC=. DFS=. DLC=0.0000 DLTO=0.0000 DLTP=200.0000 DLTSUB=.
DLTT=400.0000 DM=0.0000 DN=0.0000 DPACB=. DPACC=. DPACLI=. DPACLS=. DPACME=. DPACNR=. DPACO=. DPACRE=. DPACT=369.8000
DPDC=. DPLTB=. DPSC=. DPSTB=. DPTB=. DPTC=. DPTIC=. DPVIEB=369.8000 DPVIO=. DPVIR=. DRC=2.9000 DRCI=. DRLT=0.0000
DS=0.0000 DUDD=0.0000 DVPA=0.0000 DVPIBB=. DXD2=200.0000 DXD3=0.0000 DXD4=0.0000 DXD5=0.0000 EA=. ESOPCT=0.0000
ESOPDLT=0.0000 ESOPNR=0.0000 ESOPR=0.0000 ESOPT=0.0000 EXCADJ=. FATB=. FATC=10.1000 FATE=425.3000 FATL=0.0000
FATN=0.0000 FATO=0.0000 FATP=. FDFR=. FEA=. FEL=. FFS=. GDWL=238.5000 GEQRV=. GOVGR=. IAEQ=. IAEQCI=. IAEQMI=.
IAFICI=. IAFXI=. IAFXMI=. IALI=. IALOI=. IALTI=. IAMLI=. IAOI=. IAPLI=. IAREI=. IASCI=. IASMI=. IASSI=. IASTI=.
IATCI=. IATI=. IATMI=. IAUI=. ICAPT=1273.5000 INTAN=380.5000 INTANO=142.0000 INVFG=. INVO=0.0000 INVOFS=. INVREH=.
INVREI=. INVRES=. INVRM=. INVT=165.5000 INVWIP=4.5000 IP=. IPC=. IPV=. ISEQ=. ISEQC=. ISEQM=. ISFI=. ISFXC=. ISFXM=.
ISLG=. ISLGC=. ISLGM=. ISLT=. ISNG=. ISNGC=. ISNGM=. ISOTC=. ISOTH=. ISOTM=. ISSC=. ISSM=. ISSU=. IST=. ISTC=. ISTM=.

ISUT=. ITCB=0.0000 IVAEQ=0.0000 IVAO=12.4000 IVGOD=. IVPT=. IVST=395.4000 LCABG=. LCACL=. LCACR=. LCAG=. LCAL=.
LCALT=. LCAM=. LCAO=. LCAST=. LCAT=. LCO=154.0000 LCOX=24.3000 LCOXAR=. LCOXDR=21.4000 LCT=260.1000 LCUACU=. LIF=.
LIFR=0.0000 LLOML=. LLOO=. LLOT=. LO=49.1000 LOXDR=49.1000 LRV=. LS=. LSE=1611.4000 LT=737.9000 MIB=. MRC1=29.9000
MRC2=25.4000 MRC3=21.1000 MRC4=18.9000 MRC5=12.8000 MRCT=108.1000 MRCTA=35.2000 MSA=0.0000 MSVRV=. MTL=. NAT=.
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OPTPRCWA=32.5000 PPEGT=576.3000 PPENB=. PPENC=. PPENLI=. PPENLS=. PPENME=. PPENNR=. PPENO=. PPENT=206.5000 PPEVBB=.
PPEVEB=576.3000 PPEVO=. PPEVR=. PRC=. PRODV=. PRVT=. PSTK=0.0000 PSTKC=0.0000 PSTKL=0.0000 PSTKN=0.0000 PSTKR=0.0000
PSTKRV=0.0000 PVCL=. PVPL=. PVT=. RADP=. RAGR=. RARI=. RATI=. RCL=. RDP=. RE=-567.4000 REA=0.0000 REAJO=-4.3000
RECCO=0.0000 RECD=. RECT=193.1000 RECTA=-5.9000 RECTR=193.1000 RECUB=23.8000 RET=. REUNA=-557.2000 REUNR=. RLL=. RLO=.
RLP=. RLRI=. RLT=. RPAG=. RREPS=0.0200 RVBCI=. RVBPI=. RVBTI=. RVDO=. RVDT=. RVEQT=. RVLRV=. RVNO=. RVNT=. RVRI=.
RVSI=. RVTI=. RVTXR=. RVUPI=. RVUTX=. SAA=. SAL=. SBDC=. SC=. SCO=. SECU=. SEQ=873.5000 SEQO=0.0000 SRT=. SSNP=.
STBO=. STIO=. TDSCD=. TDSCE=. TDSLG=. TDSMM=. TDSNG=. TDSO=. TDSS=. TDST=. TLCF=1095.4000 TRANSA=. TSA=. TSO=.
TSTK=0.0000 TSTKC=0.0000 TSTKME=. TSTKP=0.0000 TXDB=28.7000 TXDBA=. TXDBCA=. TXDBCL=. TXDITC=28.7000 TXNDB=45.6000
TXNDBA=. TXNDBL=. TXNDBR=. TXP=17.7000 TXR=0.0000 UAOX=. UAPT=. UCAPS=. UCCONS=. UCEQ=. UCUSTAD=. UDCOPRES=. UDD=.
UDMB=. UDOLT=. UDPCO=. UI=. UINVT=. ULCM=. ULCO=. UNL=. UNNP=. UNNPL=. UOPRES=. UPMCSTK=. UPMPF=. UPMPFS=. UPMSUBP=.
UPSTK=. UPSTKC=. UPSTKSF=. URECT=. URECTR=. UREVUB=. USUBPSTK=. VPAC=. VPO=. WCAP=682.6000 XACC=129.7000 XPP=.
ACCHG=0.6000 ADPAC=. AM=30.4000 AMDC=. AMGW=. AQA=2.4700 AQD=0.0200 AQEPS=0.0200 AQI=0.0000 AQP=3.8000 AQS=0.0000
ARCE=. ARCED=. ARCEEPS=. AUTXR=. BALR=. BANLR=. BATR=. BCEF=. BCLR=. BCLTBL=. BCNLR=. BCRBL=. BCT=. BCTBL=. BCTR=.
BLTBL=. CBI=. CDPAC=. CFBD=. CFERE=. CFO=. CFPDO=. CGA=. CGRI=. CGTI=. CGUI=. CIBEGNI=65.7000 CICURR=11.8000
CIDERGL=0.0000 CIOTHER=0.0000 CIPEN=2.9000 CISECGL=0.7000 CITOTAL=81.1000 CNLTBL=. COGS=801.1000 CPCBL=. CPDOI=.
CPNLI=. CPPBL=. CPREI=. CSTKE=0.0000 DBI=. DFXA=. DILADJ=0.0000 DILAVX=94.2000 DO=-29.1000 DONR=-22.6000 DP=67.8000
DPRET=. DTEA=. DTED=. DTEEPS=. DTEP=. DVC=0.0000 DVDNP=. DVP=0.0000 DVPD=. DVPDP=. DVRPIV=. DVRRE=. DVSCO=. DVT=0.0000
EBIT=72.6000 EBITDA=140.4000 EIEA=. EMOL=. EPSFI=0.5600 EPSFX=0.8000 EPSPI=0.5600 EPSPX=0.8000 ESUB=0.0000 FATD=.
FCA=0.5000 FFO=. GBBL=. GDWLAM=. GDWLIA=. GDWLID=. GDWLIEPS=. GDWLIP=. GLA=. GLCEA=-2.6650 GLCED=-0.0200
GLCEEPS=-0.0200 GLCEP=-4.1000 GLD=. GLEPS=. GLP=. GP=480.8000 GPHBL=. GPLBL=. GPOBL=. GPRBL=. GPTBL=. GWO=. HEDGEGL=.
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IIRE=. INITB=. INTC=0.0000 IOBD=. IOI=. IORE=. IPABL=. IPHBL=. IPLBL=. IPOBL=. IPTBL=. IPTI=. IREI=. IRENT=. IRII=.
IRLI=. IRNLI=. IRSI=. ISGR=. ISGT=. ISGU=. ITCI=0.0000 IVI=. LI=. LLRCI=. LLRCR=. LLWOCI=. LLWOCR=. LST=. MII=. NCO=.
NFSR=. NI=65.7000 NIADJ=65.7000 NIECI=. NIINT=. NIIT=. NIM=. NIO=. NIT=. NITS=. NOPI=22.1000 NOPIO=-0.7000
NRTXT=49.0000 NRTXTD=0.4200 NRTXTEPS=0.4200 OIADP=72.6000 OIBDP=140.4000 OEPS=0.5100 OPILI=. OPINCAR=. OPINI=.
OPIOI=. OPIRI=. OPITI=. OPREPSX=0.5100 PALR=. PANLR=. PATR=. PCL=. PCLR=. PCNLR=. PCTR=. PI=56.5000 PIDOM=77.1000
PIFO=-20.6000 PLL=. PLTBL=. PNCA=0.0000 PNCAD=0.0000 PNCAEPS=0.0000 PNCIA=. PNCID=. PNCIEPS=. PNCIP=. PNCWIA=1.8850
PNCWID=0.0200 PNCWIEPS=0.0200 PNCWIP=2.9000 PNLBL=. PNLI=. POBL=. PPCBL=. PPPABL=. PPPHBL=. PPPOBL=. PPPTBL=.
PRCA=0.0000 PRCAD=0.0000 PRCAEPS=0.0000 PREBL=. PRI=. PTBL=. PTRAN=. PVO=. PVON=. PWOI=. RCA=-12.7400 RCD=-0.1100
RCEPS=-0.1100 RCP=-19.6000 RDIP=0.0000 RDIPA=0.0000 RDIPD=0.0000 RDIPEPS=0.0000 REVT=1281.9000 RIS=. RMUM=. RRA=2.4700
RRD=0.0200 RRP=3.8000 SALE=1281.9000 SETA=. SETD=. SETEPS=. SETP=. SPCE=94.3950 SPCED=0.8000 SPCEEPS=0.8000
SPI=-22.4000 SPID=-0.0100 SPIEPS=-0.0100 SPIOA=-1.7550 SPIOP=-2.7000 SRET=. STKCO=10.0000 STKCPA=. TDSG=. TF=. TIE=.
TII=. TXC=9.6000 TXDFED=-46.7000 TXDFO=-0.6000 TXDI=-47.3000 TXDS=0.0000 TXEQA=. TXEQII=. TXFED=3.4000 TXFO=5.8000

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TXO=0.0000 TXS=0.4000 TXT=-37.7000 TXVA=. TXW=0.0000 UDPFA=. UDVP=. UGI=. UNIAMI=. UNOPINC=. UOPI=. UPDVP=. USPI=.
USUBDVP=. UTME=. UTXFED=. UXINST=. UXINTD=. WDA=-2.5350 WDD=-0.0200 WDEPS=-0.0200 WDP=-3.9000 XAD=. XAGO=. XAGT=.
XCOM=. XCOMI=. XDEPL=. XDP=. XDVRE=. XEQO=. XI=0.6000 XIDO=-28.5000 XINDB=. XINDC=. XINS=. XINST=. XINT=15.8000
XINTD=. XINTOPT=0.0000 XIVI=. XIVRE=. XLR=. XNBI=. XNF=. XNINS=. XNITB=. XOBD=. XOI=. XOPR=1141.5000 XOPRAR=.
XOPTD=0.0000 XOPTEPS=0.0000 XORE=. XPR=14.5000 XRD=72.4000 XRENT=17.3000 XS=. XSGA=340.4000 XSTF=. XSTFO=. XSTFWS=.
XT=. XUW=. XUWLI=. XUWNLI=. XUWOI=. XUWREI=. XUWTI=. AFUDCC=. AFUDCI=. AMC=. AOLOCH=7.5000 APALCH=-36.5000 AQC=0.0000
CAPX=33.3000 CAPXV=33.3000 CDVC=. CHECH=33.9000 DEPC=. DLCCH=0.0000 DLTIS=0.0000 DLTR=0.0000 DPC=68.0000 DV=0.0000
ESUBC=0.0000 EXRE=4.5000 FIAO=0.0000 FINCF=9.6000 FOPO=15.2000 FOPOX=15.2000 FOPT=. FSRCO=. FSRCT=. FUSEO=. FUSET=.
IBC=94.2000 INTPN=13.3000 INVCH=-23.5000 ITCC=. IVACO=8.7000 IVCH=577.1000 IVNCF=-67.3000 IVSTCH=. OANCF=87.1000
PDVC=. PRSTKC=0.0000 PRSTKCC=. PRSTKPC=. RECCH=15.3000 SCSTKC=. SIV=533.2000 SPPE=1.2000 SPPIV=0.2000 SPSTKC=.
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UNWCC=. UOIS=. USTDNC=. UTFDOC=. UTFOSC=. UWKCAPC=. WCAPC=. WCAPCH=. XIDOC=-6.4000 ACCRT=. ACQAO=. ACQCSHI=. ACQGDWL=.
ACQIC=. ACQINTAN=. ACQINVT=. ACQLNTAL=. ACQNIINTC=. ACQPPE=. ACQSC=. ANO=. AOL2=. AQPL1=. AU=4 AUL3=. AUOP=4 AUOPIC=1
BASTR=. BILLEXCE=. CAPR1=. CAPR2=. CAPR3=. CAPSFT=. CEIEXBILL=. CEOSO=Y CFOSO=Y CI=. CIMII=. CSHFD=117.4000
CSHI=117.2000 CSHO=117.2000 CSHPRI=117.1000 CSHR=7.3930 CSHRC=. CSHRP=. CSHRSO=. CSHRT=. CSHRW=. DERAC=. DERALT=.
DERHEDGL=. DERLC=. DERLLT=. DT=400.0000 DVINTF=. EMP=8.6000 FINACO=. FINAO=. FINCH=. FINDLC=. FINDLT=. FINIVST=.
FINLCO=. FINLTO=. FINNP=. FINRECC=. FINRECLT=. FINREV=. FINXINT=. FINXOPR=. GLIV=. GOVTOWN=. IBMII=. LIFRP=0.0000
LNO=. LOL2=. LQPL1=. LUL3=. MIBN=. MIBT=. NIINTPFC=. NIINTPFP=. NIPFC=. NIPFP=. OPTCA=0.6000 OPTDR=0.0000 OPTEX=4.6000
OPTEXD=0.6000 OPTFVGR=12.6700 OPTGR=1.0000 OPTLIFE=4.9000 OPTOSBY=6.8000 OPTOSEY=6.6000 OPTPRCBY=28.9500 OPTRFR=4.3400
OPTVOL=57.7000 PNRSHO=0.0000 PRSHO=0.0000 RANK=1 RSTCHE=. RSTCHELT=. SALEPFC=. SALEPFP=. TEQ=. TFVA=. TFVCE=. TFVL=.
TSTKN=0.0000 TXTUBADJUST=. TXTUBBEGIN=. TXTUBEND=. TXTUBMAX=. TXTUBMIN=. TXTUBPOSDEC=. TXTUBPOSINC=. TXTUBPOSPDEC=.
TXTUBPOSPINC=. TXTUBSETTLE=. TXTUBSOFLIMIT=. TXTUBTXTR=. TXTUBXINTBS=. TXTUBXINTIS=. XRDP=71.6000
ADJEX_C=1.000000000000 ADJEX_F=1.000000000000 CSHTR_C=535537601.0000 CSHTR_F=501238552.0000 DVPSP_C=0.0000
DVPSP_F=0.0000 DVPSX_C=0.0000 DVPSX_F=0.0000 MKVALT=1677.1320 NAICSH=334210 PRCC_C=14.530000000000
PRCC_F=14.310000000000 PRCH_C=27.900000000000 PRCH_F=27.900000000000 PRCL_C=11.810000000000 PRCL_F=11.810000000000
SICH=3661 CONSOL=C INDFMT=INDL DATAFMT=STD POPSRC=D CURCD=USD COSTAT=I PS=0 BE=902.2 year=2006 bvcEquity=1677.132
capIntens=0.02066526 cashFlow=0.1005336974 cashHoldings=0.3336849944 costcap=. leverages=0.4579278764
bleverage=0.2482313516 market_leverage=0.1656292753 roa=0.0584584833 roe=0.0391740185 cash_assets=0.3336849944
TobinsQ=. bvEqity=. _ERROR_=1 _N_=131
NOTE: Division by zero detected at line 2533 column 17.
GVKEY=001021 DATADATE=2006-06-30 FYEAR=2006 ADD1=8 Westchester Plaza, Suite 112 ADD2=  ADD3=  ADD4=  ADDZIP=10523
BUSDESC=ImageWorks Corporation provides imaging solutions to the dental health professionals. It offers panoramic and
3D imaging products, intraoral X-rays, and digital sensors, as well as dental imaging software. CITY=Elmsford
CONML=AFP Imaging Corp COUNTY=  DLDTE=2014-09-15 DLRSN=07 EIN=13-2956272 FAX=914-592-6148 FYRC=6 GGROUP=3510
GIND=351010 GSECTOR=35 GSUBIND=35101010 IDBFLAG=D INCORP=NY IPODATE=. LOC=USA NAICS=334517 PHONE=914-592-6100 PRICAN=
PRIROW=  PRIUSA=01 SIC=3844 SPCINDCD=403 SPCSECCD=940 SPCSRC=C STATE=NY STKO=3 WEBURL=www.ImageWorksCorporation.com
CONM=AFP IMAGING CORP TIC=IWKS CUSIP=001058205 CIK=0000319126 EXCHG=19 FYR=6 FIC=USA ACCTCHG=  ACCTSTD=DS ACQMETH=
ADRR=. AJEX=0.002000000000 AJP=0.002000000000 APDEDATE=2006-06-30 BSPR=  COMPST=  CURNCD=USD CURRTR=1.000000000000
```

```
CURUSCN=. FDATE=2006-09-19 FINAL=Y ISMOD=1 LTCM=  OGM=  PDATE=. PDDUR=12 SCF=7 SRC=5 STALT=  UDPL=  UPD=3 ACCO=.
ACDO=0.0000 ACO=0.7770 ACODO=0.7770 ACOMINC=0.0000 ACOX=0.7770 ACOXAR=. ACT=13.5820 AEDI=. ALDO=0.0000 AO=0.3810
AOCIDERGL=0.0000 AOCIOTHER=0.0000 AOCIPEN=0.0000 AOCISECGL=0.0000 AODO=0.3810 AOX=0.3810 AP=2.0350 APB=. APC=. APOFS=.
ARB=. ARC=. ARTFS=. AT=14.3410 BAST=. BKVLPS=0.4799 CA=. CAPS=11.8060 CB=. CEQ=5.9250 CEQL=5.9250 CEQT=5.9250
CH=5.2130 CHE=5.2130 CHS=. CLD2=0.0000 CLD3=0.0000 CLD4=0.0000 CLD5=0.0000 CLFC=. CLFX=. CLG=. CLIS=. CLL=. CLLC=.
CLO=. CLRLL=. CLT=. CMP=. CRV=. CRVNLI=. CSTK=0.0960 CSTKCV=0.0100 DC=0.0000 DCLO=0.0000 DCOM=0.0000 DCPSTK=0.0000
DCS=0.0000 DCVSR=0.0000 DCVSUB=0.0000 DCVT=0.0000 DD=0.0000 DD1=0.0000 DD2=0.0000 DD3=0.0000 DD4=0.0000 DD5=0.0000
DFPAC=. DFS=0.0000 DLC=0.0000 DLTO=0.0000 DLTP=0.0000 DLTSUB=. DLTT=0.0000 DM=0.0000 DN=0.0000 DPACB=. DPACC=.
DPACLI=. DPACLS=. DPACME=. DPACNR=. DPACO=. DPACRE=. DPACT=1.4500 DPDC=. DPLTB=. DPSC=. DPSTB=. DPTB=. DPTC=. DPTIC=.
DPVIEB=1.4500 DPVIO=. DPVIR=. DRC=0.0000 DRCI=. DRLT=0.0000 DS=0.0000 DUDD=0.0000 DVPA=0.0000 DVPIBB=. DXD2=0.0000
DXD3=0.0000 DXD4=0.0000 DXD5=0.0000 EA=. ESOPCT=0.0000 ESOPDLT=0.0000 ESOPNR=0.0000 ESOPR=0.0000 ESOPT=0.0000 EXCADJ=.
FATB=0.0000 FATC=0.0000 FATE=1.5890 FATL=0.2390 FATN=0.0000 FATO=0.0000 FATP=0.0000 FDFR=. FEA=. FEL=. FFS=.
GDWL=0.0000 GEQRV=. GOVGR=. IAEQ=. IAEQCI=. IAEQMI=. IAFICI=. IAFXI=. IAFXMI=. IALI=. IALOI=. IALTI=. IAMLI=. IAOI=.
IAPLI=. IAREI=. IASCI=. IASMI=. IASSI=. IASTI=. IATCI=. IATI=. IATMI=. IAUI=. ICAPT=10.6690 INTAN=0.0000 INTANO=0.0000
INVFG=. INVO=0.0000 INVOFS=. INVREH=. INVREI=. INVRES=. INVRM=1.9850 INVT=4.8350 INVWIP=. IP=. IPC=. IPV=. ISEQ=.
ISEQC=. ISEQM=. ISFI=. ISFXC=. ISFXM=. ISLG=. ISLGC=. ISLGM=. ISLT=. ISNG=. ISNGC=. ISNGM=. ISOTC=. ISOTH=. ISOTM=.
ISSC=. ISSM=. ISSU=. IST=. ISTC=. ISTM=. ISUT=. ITCB=0.0000 IVAEQ=0.0000 IVAO=0.0000 IVGOD=. IVPT=. IVST=0.0000
LCABG=. LCACL=. LCACR=. LCAG=. LCAL=. LCALT=. LCAM=. LCAO=. LCAST=. LCAT=. LCO=1.5650 LCOX=0.0000 LCOXAR=.
LCOXDR=0.0000 LCT=3.6000 LCUACU=. LIF=. LIFR=0.0000 LLOML=. LLOO=. LLOT=. LO=0.0720 LOXDR=0.0720 LRV=. LS=.
LSE=14.3410 LT=3.6720 MIB=0.0000 MRC1=0.5250 MRC2=0.5250 MRC3=0.5250 MRC4=0.2630 MRC5=0.0000 MRCT=1.8380 MRCTA=0.0000
MSA=0.0000 MSVRV=. MTL=. NAT=. NP=0.0000 NPANL=. NPAORE=. NPARL=. NPAT=. OB=1.0670 OPTPRCCA=0.0000 OPTPRCEX=0.5200
OPTPRCEY=0.8700 OPTPRCGR=2.1400 OPTPRCWA=0.8700 PPEGT=1.8280 PPENB=. PPENC=. PPENLI=. PPENLS=. PPENME=. PPENNR=.
PPENO=. PPENT=0.3780 PPEVBB=. PPEVEB=1.8280 PPEVO=. PPEVR=. PRC=. PRODV=. PRVT=. PSTK=4.7440 PSTKC=0.0000 PSTKL=4.7440
PSTKN=0.0000 PSTKR=4.7440 PSTKRV=4.7440 PVCL=. PVPL=. PVT=. RADP=. RAGR=. RARI=. RATI=. RCL=. RDP=. RE=-5.9770
REA=0.0000 REAJO=0.1110 RECCO=0.0000 RECD=. RECT=2.7570 RECTA=0.0000 RECTR=2.7570 RECUB=. RET=. REUNA=-6.0880 REUNR=.
RLL=. RLO=. RLP=. RLRI=. RLT=. RPAG=. RREPS=. RVBCI=. RVBPI=. RVBTI=. RVDO=. RVDT=. RVEQT=. RVLRV=. RVNO=. RVNT=.
RVRI=. RVSI=. RVTI=. RVTXR=. RVUPI=. RVUTX=. SAA=. SAL=. SBDC=. SC=. SCO=. SECU=. SEQ=10.6690 SEQO=0.1110 SRT=. SSNP=.
STBO=. STIO=. TDSCD=. TDSCE=. TDSLG=. TDSMM=. TDSNG=. TDSO=. TDSS=. TDST=. TLCF=19.5240 TRANSA=. TSA=. TSO=.
TSTK=0.0000 TSTKC=0.0000 TSTKME=. TSTKP=0.0000 TXDB=0.0000 TXDBA=0.0000 TXDBCA=0.6800 TXDBCL=0.0000 TXDITC=0.0000
TXNDB=0.6800 TXNDBA=0.6800 TXNDBL=0.0000 TXNDBR=0.0000 TXP=0.0000 TXR=0.0000 UAOX=. UAPT=. UCAPS=. UCCONS=. UCEQ=.
UCUSTAD=. UDCOPRES=. UDD=. UDMB=. UDOLT=. UDPCO=. UI=. UINVT=. ULCM=. ULCO=. UNL=. UNNP=. UNNPL=. UOPRES=. UPMCSTK=.
UPMPF=. UPMPFS=. UPMSUBP=. UPSTK=. UPSTKC=. UPSTKSF=. URECT=. URECTR=. UREVUB=. USUBPSTK=. VPAC=. VPO=. WCAP=9.9820
XACC=1.5650 XPP=. ACCHG=0.0000 ADPAC=. AM=0.0000 AMDC=. AMGW=. AQA=. AQD=. AQEPS=. AQI=0.0000 AQP=. AQS=0.0000 ARCE=.
ARCED=. ARCEEPS=. AUTXR=. BALR=. BANLR=. BATR=. BCEF=. BCLR=. BCLTBL=. BCNLR=. BCRBL=. BCT=. BCTBL=. BCTR=. BLTBL=.
CBI=. CDPAC=. CFBD=. CFERE=. CFO=. CFPDO=. CGA=. CGRI=. CGTI=. CGUI=. CIBEGNI=. CICURR=. CIDERGL=. CIOTHER=. CIPEN=.
CISECGL=. CITOTAL=. CNLTBL=. COGS=15.4540 CPCBL=. CPDOI=. CPNLI=. CPPBL=. CPREI=. CSTKE=0.0000 DBI=. DFXA=.
DILADJ=0.0000 DILAVX=1.0050 DO=0.0000 DONR=0.0000 DP=0.2160 DPRET=. DTEA=. DTED=. DTEEPS=. DTEP=. DVC=0.0000 DVDNP=.
DVP=0.0000 DVPD=. DVPDP=. DVRPIV=. DVRRE=. DVSCO=. DVT=0.0000 EBIT=1.0360 EBITDA=1.2520 EIEA=. EMOL=. EPSFI=0.1000
```

EPSFX=0.1000 EPSPI=0.1000 EPSPX=0.1000 ESUB=0.0000 FATD=. FCA=. FFO=. GBBL=. GDWLAM=. GDWLIA=. GDWLID=. GDWLIEPS=.
GDWLIP=. GLA=. GLCEA=. GLCED=. GLCEEPS=. GLCEP=. GLD=. GLEPS=. GLP=. GP=9.5440 GPHBL=. GPLBL=. GPOBL=. GPRBL=. GPTBL=.
GWO=. HEDGEGL=. IB=1.0050 IBADJ=1.0050 IBBL=. IBCOM=1.0050 IBKI=. IDIIS=. IDILB=. IDILC=. IDIS=. IDIST=. IDIT=.
IDITS=. IIRE=. INITB=. INTC=0.0000 IOBD=. IOI=. IORE=. IPABL=. IPHBL=. IPLBL=. IPOBL=. IPTBL=. IPTI=. IREI=. IRENT=.
IRII=. IRLI=. IRNLI=. IRSI=. ISGR=. ISGT=. ISGU=. ITCI=0.0000 IVI=. LI=. LLRCI=. LLRCR=. LLWOCI=. LLWOCR=. LST=.
MII=0.0000 NCO=. NFSR=. NI=1.0050 NIADJ=1.0050 NIECI=. NIINT=. NIIT=. NIM=. NIO=. NIT=. NITS=. NOPI=0.0000
NOPIO=0.0000 NRTXT=. NRTXTD=. NRTXTEPS=. OIADP=1.0360 OIBDP=1.2520 OPEPS=0.1000 OPILI=. OPINCAR=. OPINI=. OPIOI=.
OPIRI=. OPITI=. OPREPSX=0.1000 PALR=. PANLR=. PATR=. PCL=. PCLR=. PCNLR=. PCTR=. PI=1.0020 PIDOM=1.0020 PIFO=0.0000
PLL=. PLTBL=. PNCA=0.0000 PNCAD=0.0000 PNCAEPS=0.0000 PNCIA=. PNCID=. PNCIEPS=. PNCIP=. PNCWIA=. PNCWID=. PNCWIEPS=.
PNCWIP=. PNLBL=. PNLI=. POBL=. PPCBL=. PPPABL=. PPPHBL=. PPPOBL=. PPPTBL=. PRCA=0.0000 PRCAD=0.0000 PRCAEPS=0.0000
PREBL=. PRI=. PTBL=. PTRAN=. PVO=. PVON=. PWOI=. RCA=. RCD=. RCEPS=. RCP=. RDIP=0.0000 RDIPA=0.0000 RDIPD=0.0000
RDIPEPS=0.0000 REVT=24.9980 RIS=. RMUM=. RRA=. RRD=. RRP=. SALE=24.9980 SETA=. SETD=. SETEPS=. SETP=. SPCE=1.0050
SPCED=0.1000 SPCEEPS=0.1000 SPI=0.0000 SPID=. SPIEPS=. SPIOA=. SPIOP=. SRET=. STKCO=0.0820 STKCPA=0.0820 TDSG=. TF=.
TIE=. TII=. TXC=-0.0030 TXDFED=0.0000 TXDFO=0.0000 TXDI=0.0000 TXDS=0.0000 TXEQA=. TXEQII=. TXFED=-0.0020 TXFO=0.0000
TXO=0.0000 TXS=-0.0010 TXT=-0.0030 TXVA=. TXW=0.0000 UDPFA=. UDVP=. UGI=. UNIAMI=. UNOPINC=. UOPI=. UPDVP=. USPI=.
USUBDVP=. UTME=. UTXFED=. UXINST=. UXINTD=. WDA=. WDD=. WDEPS=. WDP=. XAD=0.2880 XAGO=. XAGT=. XCOM=. XCOMI=. XDEPL=.
XDP=. XDVRE=. XEQO=. XI=0.0000 XIDO=0.0000 XINDB=. XINDC=. XINS=. XINST=. XINT=0.0340 XINTD=. XINTOPT=0.0000 XIVI=.
XIVRE=. XLR=. XNBI=. XNF=. XNINS=. XNITB=. XOBD=. XOI=. XOPR=23.7460 XOPRAR=. XOPTD=0.0000 XOPTEPS=0.0000 XORE=.
XPR=0.1270 XRD=0.6970 XRENT=0.5050 XS=. XSGA=8.2920 XSTF=. XSTFO=. XSTFWS=. XT=. XUW=. XUWLI=. XUWNLI=. XUWOI=.
XUWREI=. XUWTI=. AFUDCC=. AFUDCI=. AMC=. AOLOCH=-0.3120 APALCH=0.8990 AQC=0.0000 CAPX=0.2050 CAPXV=0.2050 CDVC=.
CHECH=4.8820 DEPC=. DLCCH=. DLTIS=0.0000 DLTR=0.6750 DPC=0.2250 DV=0.0000 ESUBC=0.0000 EXRE=0.0000 FIAO=-0.2560
FINCF=4.1530 FOPO=0.0990 FOPOX=0.0990 FOPT=. FSRCO=. FSRCT=. FUSEO=. FUSET=. IBC=1.0050 INTPN=0.0810 INVCH=-0.9130
ITCC=. IVACO=0.0000 IVCH=0.0000 IVNCF=-0.2050 IVSTCH=0.0000 OANCF=0.9340 PDVC=. PRSTKC=0.0000 PRSTKCC=. PRSTKPC=.
RECCH=-0.0690 SCSTKC=. SIV=0.0000 SPPE=0.0000 SPPIV=0.0000 SPSTKC=. SSTK=5.0840 TDC=. TSAFC=. TXACH=0.0000
TXBCO=0.0000 TXBCOF=0.0000 TXDC=0.0000 TXPD=0.0100 UAOLOCH=. UDFCC=. UFRETSD=. UNWCC=. UOIS=. USTDNC=. UTFDOC=.
UTFOSC=. UWKCAPC=. WCAPC=. WCAPCH=. XIDOC=0.0000 ACCRT=. ACQAO=. ACQCSHI=. ACQGDWL=. ACQIC=. ACQINTAN=. ACQINVT=.
ACQLNTAL=. ACQNIINTC=. ACQPPE=. ACQSC=. ANO=. AOL2=. AQPL1=. AU=9 AUL3=. AUOP=1 AUOPIC=0 BASTR=. BILLEXCE=. CAPR1=.
CAPR2=. CAPR3=. CAPSFT=. CEIEXBILL=. CEOSO=Y CFOSO=Y CI=. CIMII=. CSHFD=10.5130 CSHI=12.3460 CSHO=12.3460
CSHPRI=10.0100 CSHR=1.4170 CSHRC=. CSHRP=. CSHRSO=. CSHRT=. CSHRW=. DERAC=. DERALT=. DERHEDGL=. DERLC=. DERLLT=.
DT=0.0000 DVINTF=. EMP=0.0830 FINACO=. FINAO=. FINCH=. FINDLC=. FINDLT=. FINIVST=. FINLCO=. FINLTO=. FINNP=. FINRECC=.
FINRECLT=. FINREV=. FINXINT=. FINXOPR=. GLIV=. GOVTOWN=. IBMII=. LIFRP=0.0000 LNO=. LOL2=. LQPL1=. LUL3=. MIBN=.
MIBT=0.0000 NIINTPFC=. NIINTPFP=. NIPFC=. NIPFP=. OPTCA=0.0000 OPTDR=0.0000 OPTEX=0.8280 OPTEXD=0.1610 OPTFVGR=2.1100
OPTGR=0.0400 OPTLIFE=10.0000 OPTOSBY=0.9490 OPTOSEY=0.8280 OPTPRCBY=0.7600 OPTRFR=4.6300 OPTVOL=153.0000 PNRSHO=0.0000
PRSHO=. RANK=1 RSTCHE=. RSTCHELT=. SALEPFC=. SALEPFP=. TEQ=. TFVA=. TFVCE=. TFVL=. TSTKN=0.0000 TXTUBADJUST=.
TXTUBBEGIN=. TXTUBEND=. TXTUBMAX=. TXTUBMIN=. TXTUBPOSDEC=. TXTUBPOSINC=. TXTUBPOSPDEC=. TXTUBPOSPINC=. TXTUBSETTLE=.
TXTUBSOFLIMIT=. TXTUBTXTR=. TXTUBXINTBS=. TXTUBXINTIS=. XRDP=0.4360 ADJEX_C=0.002000000000 ADJEX_F=0.002000000000
CSHTR_C=5039855.0000 CSHTR_F=4192788.0000 DVPSP_C=0.0000 DVPSP_F=0.0000 DVPSX_C=0.0000 DVPSX_F=0.0000 MKVALT=29.0131
NAICSH=333315 PRCC_C=1.400000000000 PRCC_F=2.350000000000 PRCH_C=2.830000000000 PRCH_F=3.500000000000

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PRCL_C=1.200000000000 PRCL_F=1.650000000000 SICH=3861 CONSOL=C INDFMT=INDL DATAFMT=STD POPSRC=D CURCD=USD COSTAT=I
PS=4.744 BE=5.925 year=2006 bvcEquity=29.0131 capIntens=0.0142946796 cashFlow=0.0851405062 cashHoldings=0.3635032425
costcap=. leverages=0 bleverage=0 market_leverage=0 roa=0.0700787951 roe=0.0346395249 cash_assets=0.3635032425
TobinsQ=. bvEqity=. _ERROR_=1 _N_=202
NOTE: Division by zero detected at line 2533 column 17.
GVKEY=001034 DATADATE=2006-12-31 FYEAR=2006 ADD1=440 Route 22 East, P.O. Box 1399 ADD2=  ADD3=  ADD4=  ADDZIP=08807
BUSDESC=Alpharma, LLC manufactures and markets pharmaceutical and nutritional products for animals. The company offers
 medicated feed additive products, water-soluble therapies, and science-based products. CITY=Bridgewater
CONML=Alpharma Inc. COUNTY=  DLDTE=2008-12-31 DLRSN=01 EIN=22-2095212 FAX=  FYRC=12 GGROUP=3520 GIND=352020 GSECTOR=35
GSUBIND=35202010 IDBFLAG=D INCORP=DE IPODATE=. LOC=USA NAICS=325412 PHONE=855 424 7349 PRICAN=  PRIROW=  PRIUSA=01
SIC=2834 SPCINDCD=283 SPCSECCD=905 SPCSRC=B- STATE=NJ STKO=0 WEBURL=  CONM=ALPHARMA INC  -CL A TIC=ALO.2
CUSIP=020813101 CIK=0000730469 EXCHG=11 FYR=12 FIC=USA ACCTCHG=  ACCTSTD=DS ACQMETH=  ADRR=. AJEX=1.000000000000
AJP=1.000000000000 APDEDATE=2006-12-31 BSPR=  COMPST=  CURNCD=USD CURRTR=1.000000000000 CURUSCN=. FDATE=2007-03-26
FINAL=Y ISMOD=1 LTCM=  OGM=  PDATE=. PDDUR=12 SCF=7 SRC=5 STALT=  UDPL=  UPD=3 ACCO=. ACDO=0.0000 ACO=25.5730
ACODO=25.5730 ACOMINC=58.2400 ACOX=25.5730 ACOXAR=. ACT=353.5410 AEDI=. ALDO=0.0000 AO=61.6740 AOCIDERGL=0.0000
AOCIOTHER=0.0000 AOCIPEN=-2.5650 AOCISECGL=0.0000 AODO=60.8360 AOX=60.8360 AP=50.1800 APB=. APC=. APOFS=. ARB=. ARC=.
ARTFS=. AT=927.2390 BAST=. BKVLPS=16.7985 CA=. CAPS=1117.7170 CB=. CEQ=723.9990 CEQL=723.9990 CEQT=445.4220
CH=113.1630 CHE=113.1630 CHS=. CLD2=0.0000 CLD3=0.0000 CLD4=0.0000 CLD5=0.0000 CLFC=. CLFX=. CLG=. CLIS=. CLL=. CLLC=.
CLO=. CLRLL=. CLT=. CMP=. CRV=. CRVNLI=. CSTK=11.0600 CSTKCV=0.2000 DC=0.8380 DCLO=0.0000 DCOM=0.0000 DCPSTK=0.0000
DCS=0.0000 DCVSR=0.0000 DCVSUB=0.0000 DCVT=0.0000 DD=0.0000 DD1=0.0000 DD2=0.0000 DD3=0.0000 DD4=0.0000 DD5=0.0000
DFPAC=. DFS=0.0000 DLC=0.0000 DLTO=0.0000 DLTP=0.0000 DLTSUB=. DLTT=0.0000 DM=0.0000 DN=0.0000 DPACB=. DPACC=.
DPACLI=. DPACLS=. DPACME=. DPACNR=. DPACO=. DPACRE=. DPACT=215.2210 DPDC=. DPLTB=. DPSC=. DPSTB=. DPTB=. DPTC=.
DPTIC=. DPVIEB=215.2210 DPVIO=. DPVIR=. DRC=0.0000 DRCI=. DRLT=0.0000 DS=0.0000 DUDD=0.0000 DVPA=0.0000 DVPIBB=.
DXD2=0.0000 DXD3=0.0000 DXD4=0.0000 DXD5=0.0000 EA=. ESOPCT=0.0000 ESOPDLT=0.0000 ESOPNR=0.0000 ESOPR=0.0000
ESOPT=0.0000 EXCADJ=. FATB=101.5580 FATC=17.8660 FATE=323.6820 FATL=0.0000 FATN=0.0000 FATO=0.0000 FATP=5.5620 FDFR=.
FEA=. FEL=. FFS=. GDWL=117.6550 GEQRV=. GOVGR=. IAEQ=. IAEQCI=. IAEQMI=. IAFICI=. IAFXI=. IAFXMI=. IALI=. IALOI=.
IALTI=. IAMLI=. IAOI=. IAPLI=. IAREI=. IASCI=. IASMI=. IASSI=. IASTI=. IATCI=. IATI=. IATMI=. IAUI=. ICAPT=723.9990
INTAN=278.5770 INTANO=160.9220 INVFG=53.2830 INVO=0.0000 INVOFS=. INVREH=. INVREI=. INVRES=. INVRM=15.8280
INVT=106.9580 INVWIP=37.8470 IP=. IPC=. IPV=. ISEQ=. ISEQC=. ISEQM=. ISFI=. ISFXC=. ISFXM=. ISLG=. ISLGC=. ISLGM=.
ISLT=. ISNG=. ISNGC=. ISNGM=. ISOTC=. ISOTH=. ISOTM=. ISSC=. ISSM=. ISSU=. IST=. ISTC=. ISTM=. ISUT=. ITCB=0.0000
IVAEQ=0.0000 IVAO=0.0000 IVGOD=. IVPT=. IVST=0.0000 LCABG=. LCACL=. LCACR=. LCAG=. LCAL=. LCALT=. LCAM=. LCAO=.
LCAST=. LCAT=. LCO=99.6370 LCOX=3.3340 LCOXAR=. LCOXDR=3.3340 LCT=155.5730 LCUACU=. LIF=. LIFR=0.0000 LLOML=. LLOO=.
LLOT=. LO=19.7820 LOXDR=19.7820 LRV=. LS=. LSE=927.2390 LT=203.2400 MIB=0.0000 MRC1=3.9970 MRC2=2.6650 MRC3=2.4190
MRC4=2.1200 MRC5=2.0760 MRCT=13.2770 MRCTA=9.8160 MSA=0.0000 MSVRV=. MTL=. NAT=. NP=0.0000 NPANL=. NPAORE=. NPARL=.
NPAT=. OB=. OPTPRCCA=26.2000 OPTPRCEX=15.4800 OPTPRCEY=24.7700 OPTPRCGR=28.7200 OPTPRCWA=25.0900 PPEGT=448.6680
PPENB=. PPENC=. PPENLI=. PPENLS=. PPENME=. PPENNR=. PPENO=. PPENT=233.4470 PPEVBB=. PPEVEB=448.6680 PPEVO=. PPEVR=.
PRC=. PRODV=. PRVT=. PSTK=0.0000 PSTKC=0.0000 PSTKL=0.0000 PSTKN=0.0000 PSTKR=0.0000 PSTKRV=0.0000 PVCL=. PVPL=. PVT=.
RADP=. RAGR=. RARI=. RATI=. RCL=. RDP=. RE=-89.7370 REA=0.0000 REAJO=-2.5650 RECCO=11.5880 RECD=0.7780 RECT=107.8470
```

RECTA=60.8050 RECTR=96.2590 RECUB=. RET=. REUNA=-147.9770 REUNR=. RLL=. RLO=. RLP=. RLRI=. RLT=. RPAG=. RREPS=.
RVBCI=. RVBPI=. RVBTI=. RVDO=. RVDT=. RVEQT=. RVLRV=. RVNO=. RVNT=. RVRI=. RVSI=. RVTI=. RVTXR=. RVUPI=. RVUTX=. SAA=.
SAL=. SBDC=. SC=. SCO=. SECU=. SEQ=723.9990 SEQO=0.0000 SRT=. SSNP=. STBO=. STIO=. TDSCD=. TDSCE=. TDSLG=. TDSMM=.
TDSNG=. TDSO=. TDSS=. TDST=. TLCF=592.0940 TRANSA=. TSA=. TSO=. TSTK=315.0410 TSTKC=315.0410 TSTKME=. TSTKP=0.0000
TXDB=27.8850 TXDBA=48.8170 TXDBCA=18.9250 TXDBCL=3.3340 TXDITC=27.8850 TXNDB=36.5230 TXNDBA=63.6250 TXNDBL=27.1020
TXNDBR=0.0000 TXP=5.7560 TXR=0.0000 UAOX=. UAPT=. UCAPS=. UCCONS=. UCEQ=. UCUSTAD=. UDCOPRES=. UDD=. UDMB=. UDOLT=.
UDPCO=. UI=. UINVT=. ULCM=. ULCO=. UNL=. UNNP=. UNNPL=. UOPRES=. UPMCSTK=. UPMPF=. UPMPFS=. UPMSUBP=. UPSTK=. UPSTKC=.
UPSTKSF=. URECT=. URECTR=. UREVUB=. USUBPSTK=. VPAC=. VPO=. WCAP=197.9680 XACC=96.3030 XPP=. ACCHG=0.0000 ADPAC=.
AM=18.9830 AMDC=. AMGW=. AQA=. AQD=. AQEPS=. AQI=0.0000 AQP=. AQS=0.0000 ARCE=. ARCED=. ARCEEPS=. AUTXR=. BALR=.
BANLR=. BATR=. BCEF=. BCLR=. BCLTBL=. BCNLR=. BCRBL=. BCT=. BCTBL=. BCTR=. BLTBL=. CBI=. CDPAC=. CFBD=. CFERE=. CFO=.
CFPDO=. CGA=. CGRI=. CGTI=. CGUI=. CIBEGNI=82.5440 CICURR=8.7140 CIDERGL=0.0000 CIOTHER=0.0000 CIPEN=-2.2730
CISECGL=0.0000 CITOTAL=88.9850 CNLTBL=. COGS=229.1150 CPCBL=. CPDOI=. CPNLI=. CPPBL=. CPREI=. CSTKE=0.0000 DBI=.
DFXA=. DILADJ=0.0000 DILAVX=59.9920 DO=22.5520 DONR=19.2490 DP=42.8730 DPRET=. DTEA=-12.6200 DTED=-0.2300
DTEEPS=-0.2300 DTEP=-19.4150 DVC=7.3840 DVDNP=. DVP=0.0000 DVPD=. DVPDP=. DVRPIV=. DVRRE=. DVSCO=. DVT=7.3840
EBIT=96.0410 EBITDA=138.9140 EIEA=. EMOL=. EPSFI=1.5200 EPSFX=1.1100 EPSPI=1.5400 EPSPX=1.1200 ESUB=0.0000 FATD=.
FCA=0.2960 FFO=. GBBL=. GDWLAM=. GDWLIA=. GDWLID=. GDWLIEPS=. GDWLIP=. GLA=. GLCEA=1.5540 GLCED=0.0300 GLCEEPS=0.0300
GLCEP=2.3910 GLD=. GLEPS=. GLP=. GP=424.7130 GPHBL=. GPLBL=. GPOBL=. GPRBL=. GPTBL=. GWO=. HEDGEGL=. IB=59.9920
IBADJ=59.9920 IBBL=. IBCOM=59.9920 IBKI=. IDIIS=. IDILB=. IDILC=. IDIS=. IDIST=. IDIT=19.3280 IDITS=. IIRE=. INITB=.
INTC=0.0000 IOBD=. IOI=. IORE=. IPABL=. IPHBL=. IPLBL=. IPOBL=. IPTBL=. IPTI=. IREI=. IRENT=. IRII=. IRLI=. IRNLI=.
IRSI=. ISGR=. ISGT=. ISGU=. ITCI=. IVI=. LI=. LLRCI=. LLRCR=. LLWOCI=. LLWOCR=. LST=. MII=0.0000 NCO=. NFSR=.
NI=82.5440 NIADJ=82.5440 NIECI=. NIINT=. NIIT=. NIM=. NIO=. NIT=. NITS=. NOPI=19.1990 NOPIO=-0.1290 NRTXT=. NRTXTD=.
NRTXTEPS=. OIADP=96.0410 OIBDP=138.9140 OPEPS=1.3500 OPILI=. OPINCAR=. OPINI=. OPIOI=. OPIRI=. OPITI=. OPREPSX=1.3400
PALR=. PANLR=. PATR=. PCL=. PCLR=. PCNLR=. PCTR=. PI=92.5090 PIDOM=49.6830 PIFO=42.8260 PLL=. PLTBL=. PNCA=0.5000
PNCAD=0.0100 PNCAEPS=0.0100 PNCIA=0.0000 PNCID=0.0000 PNCIEPS=0.0000 PNCIP=0.0000 PNCWIA=0.5000 PNCWID=0.0100
PNCWIEPS=0.0100 PNCWIP=0.7690 PNLBL=. PNLI=. POBL=. PPCBL=. PPPABL=. PPPHBL=. PPPOBL=. PPPTBL=. PRCA=0.1990
PRCAD=0.0000 PRCAEPS=0.0000 PREBL=. PRI=. PTBL=. PTRAN=. PVO=. PVON=. PWOI=. RCA=. RCD=. RCEPS=. RCP=. RDIP=0.0000
RDIPA=0.0000 RDIPD=0.0000 RDIPEPS=0.0000 REVT=653.8280 RIS=. RMUM=. RRA=. RRD=. RRP=. SALE=653.8280 SETA=1.1000
SETD=0.0200 SETEPS=0.0200 SETP=1.1000 SPCE=58.0370 SPCED=1.0700 SPCEEPS=1.0800 SPI=-19.8560 SPID=-0.0200
SPIEPS=-0.0200 SPIOA=-1.0020 SPIOP=-1.5410 SRET=. STKCO=4.8440 STKCPA=4.0100 TDSG=. TF=. TIE=. TII=. TXC=3.5950
TXDFED=24.4810 TXDFO=3.5960 TXDI=28.9220 TXDS=0.8450 TXEQA=. TXEQII=. TXFED=-6.6610 TXFO=9.6430 TXO=0.0000 TXS=0.6130
TXT=32.5170 TXVA=. TXW=0.0000 UDPFA=. UDVP=. UGI=. UNIAMI=. UNOPINC=. UOPI=. UPDVP=. USPI=. USUBDVP=. UTME=. UTXFED=.
UXINST=. UXINTD=. WDA=. WDD=. WDEPS=. WDP=. XAD=. XAGO=. XAGT=. XCOM=. XCOMI=. XDEPL=. XDP=. XDVRE=. XEQO=. XI=0.0000
XIDO=22.5520 XINDB=. XINDC=. XINS=. XINST=. XINT=2.8750 XINTD=. XINTOPT=0.0000 XIVI=. XIVRE=. XLR=. XNBI=. XNF=.
XNINS=. XNITB=. XOBD=. XOI=. XOPR=514.9140 XOPRAR=. XOPTD=0.0000 XOPTEPS=0.0000 XORE=. XPR=6.3590 XRD=44.4300
XRENT=3.0770 XS=. XSGA=285.7990 XSTF=. XSTFO=. XSTFWS=. XT=. XUW=. XUWLI=. XUWNLI=. XUWOI=. XUWREI=. XUWTI=. AFUDCC=.
AFUDCI=. AMC=. AOLOCH=6.3440 APALCH=-36.1580 AQC=1.0890 CAPX=36.1710 CAPXV=36.1710 CDVC=. CHECH=-687.0350 DEPC=.
DLCCH=. DLTIS=0.0000 DLTR=419.1080 DPC=46.0000 DV=9.8400 ESUBC=0.0000 EXRE=1.7300 FIAO=-18.8940 FINCF=-732.7580
FOPO=17.8100 FOPOX=17.8100 FOPT=. FSRCO=. FSRCT=. FUSEO=. FUSET=. IBC=59.9920 INTPN=5.9520 INVCH=-10.8040 ITCC=.

```
IVACO=38.3200 IVCH=0.0000 IVNCF=1.0600 IVSTCH=0.0000 OANCF=42.9330 PDVC=. PRSTKC=307.3970 PRSTKCC=. PRSTKPC=.
RECCH=-13.2650 SCSTKC=. SIV=0.0000 SPPE=. SPPIV=0.0000 SPSTKC=. SSTK=18.7240 TDC=. TSAFC=. TXACH=-57.4390 TXBCO=0.0000
TXBCOF=3.7570 TXDC=28.9220 TXPD=64.4390 UAOLOCH=. UDFCC=. UFRETSD=. UNWCC=. UOIS=. USTDNC=. UTFDOC=. UTFOSC=.
UWKCAPC=. WCAPC=. WCAPCH=. XIDOC=1.5310 ACCRT=. ACQAO=. ACQCSHI=. ACQGDWL=. ACQIC=. ACQINTAN=. ACQINVT=. ACQLNTAL=.
ACQNIINTC=. ACQPPE=. ACQSC=. ANO=. AOL2=. AQPL1=. AU=11 AUL3=. AUOP=4 AUOPIC=1 BASTR=. BILLEXCE=. CAPR1=. CAPR2=.
CAPR3=. CAPSFT=. CEIEXBILL=. CEOSO=Y CFOSO=Y CI=. CIMII=. CSHFD=54.2210 CSHI=55.3000 CSHO=43.0990 CSHPRI=53.7690
CSHR=1.1330 CSHRC=. CSHRP=. CSHRSO=. CSHRT=. CSHRW=. DERAC=. DERALT=. DERHEDGL=. DERLC=. DERLLT=. DT=0.0000 DVINTF=.
EMP=1.4000 FINACO=. FINAO=. FINCH=. FINDLC=. FINDLT=. FINIVST=. FINLCO=. FINLTO=. FINNP=. FINRECC=. FINRECLT=.
FINREV=. FINXINT=. FINXOPR=. GLIV=. GOVTOWN=. IBMII=. LIFRP=0.0000 LNO=. LOL2=. LQPL1=. LUL3=. MIBN=. MIBT=0.0000
NIINTPFC=. NIINTPFP=. NIPFC=. NIPFP=. OPTCA=0.6870 OPTDR=0.6500 OPTEX=0.8880 OPTEXD=0.7230 OPTFVGR=13.8100
OPTGR=0.3270 OPTLIFE=3.1600 OPTOSBY=2.4270 OPTOSEY=1.3440 OPTPRCBY=21.9000 OPTRFR=4.7000 OPTVOL=60.0000 PNRSHO=0.0000
PRSHO=0.0000 RANK=1 RSTCHE=. RSTCHELT=. SALEPFC=. SALEPFP=. TEQ=. TFVA=. TFVCE=. TFVL=. TSTKN=12.2010 TXTUBADJUST=.
TXTUBBEGIN=. TXTUBEND=. TXTUBMAX=. TXTUBMIN=. TXTUBPOSDEC=. TXTUBPOSINC=. TXTUBPOSPDEC=. TXTUBPOSPINC=. TXTUBSETTLE=.
TXTUBSOFLIMIT=. TXTUBTXTR=. TXTUBXINTBS=. TXTUBXINTIS=. XRDP=26.9360 ADJEX_C=1.000000000000 ADJEX_F=1.000000000000
CSHTR_C=147992000.0000 CSHTR_F=147992000.0000 DVPSP_C=0.1800 DVPSP_F=0.1800 DVPSX_C=0.1800 DVPSX_F=0.1800
MKVALT=1038.6859 NAICSH=325412 PRCC_C=24.100000000000 PRCC_F=24.100000000000 PRCH_C=33.880000000000
PRCH_F=33.880000000000 PRCL_C=19.640000000000 PRCL_F=19.640000000000 SICH=2834 CONSOL=C INDFMT=INDL DATAFMT=STD
POPSRC=D CURCD=USD COSTAT=I PS=O BE=751.884 year=2006 bvcEquity=1038.6859 capIntens=0.03900936 cashFlow=0.1109368782
cashHoldings=0.1220429684 costcap=. leverages=0 bleverage=0 market_leverage=0 roa=0.0646996082 roe=0.0794696453
cash_assets=0.1220429684 TobinsQ=. bvEqity=. _ERROR_=1 _N_=236
NOTE: Division by zero detected at line 2533 column 17.
GVKEY=001037 DATADATE=1988-03-31 FYEAR=1987 ADD1=1900 AM Drive ADD2=  ADD3=  ADD4=  ADDZIP=18951-2107
BUSDESC=As of October 9, 2003, AM Communications, Inc. was acquired by NeSTronix, Inc. AM Communications, Inc.
CITY=Quakertown CONML=AM Communication Inc. COUNTY=  DLDTE=2004-08-16 DLRSN=07 EIN=23-1922958 FAX=215-538-8779 FYRC=3
GGROUP=4520 GIND=452010 GSECTOR=45 GSUBIND=45201020 IDBFLAG=D INCORP=DE IPODATE=. LOC=USA NAICS=334220
PHONE=215-538-8700 PRICAN=  PRIROW=  PRIUSA=01 SIC=3663 SPCINDCD=180 SPCSECCD=940 SPCSRC=  STATE=PA STKO=3 WEBURL=
CONM=AM COMMUNICATIONS INC TIC=AMCM. CUSIP=001674100 CIK=0000318580 EXCHG=19 FYR=3 FIC=USA ACCTCHG=  ACCTSTD=DS
ACQMETH=  ADRR=. AJEX=1.000000000000 AJP=1.000000000000 APDEDATE=. BSPR=  COMPST=  CURNCD=USD CURRTR=1.000000000000
CURUSCN=. FDATE=. FINAL=Y ISMOD=1 LTCM=  OGM=  PDATE=. PDDUR=12 SCF=7 SRC=53 STALT=  UDPL=  UPD=3 ACCO=. ACDO=.
ACO=0.3750 ACODO=. ACOMINC=. ACOX=0.3750 ACOXAR=. ACT=3.4920 AEDI=. ALDO=. AO=0.0750 AOCIDERGL=. AOCIOTHER=. AOCIPEN=.
AOCISECGL=. AODO=. AOX=0.0750 AP=1.6220 APB=. APC=. APOFS=. ARB=. ARC=. ARTFS=. AT=5.8070 BAST=. BKVLPS=-1.4995 CA=.
CAPS=21.1110 CB=. CEQ=-4.3180 CEQL=-9.9780 CEQT=-10.1500 CH=0.0300 CHE=0.0300 CHS=. CLD2=. CLD3=. CLD4=. CLD5=. CLFC=.
CLFX=. CLG=. CLIS=. CLL=. CLLC=. CLO=. CLRLL=. CLT=. CMP=. CRV=. CRVNLI=. CSTK=0.6650 CSTKCV=0.1000 DC=0.0000 DCLO=.
DCOM=. DCPSTK=5.9060 DCS=. DCVSR=5.8560 DCVSUB=0.0000 DCVT=5.8560 DD=0.0000 DD1=0.0000 DD2=. DD3=. DD4=. DD5=. DFPAC=.
DFS=. DLC=0.0000 DLTO=0.0000 DLTP=5.8560 DLTSUB=. DLTT=5.9360 DM=5.8560 DN=0.0800 DPACB=0.0000 DPACC=0.0000
DPACLI=0.0000 DPACLS=0.2270 DPACME=4.7620 DPACNR=0.0000 DPACO=0.0000 DPACRE=. DPACT=4.9890 DPDC=. DPLTB=. DPSC=.
DPSTB=. DPTB=. DPTC=. DPTIC=. DPVIEB=4.9890 DPVIO=0.0000 DPVIR=0.9800 DRC=. DRCI=. DRLT=. DS=0.0000 DUDD=0.0000
DVPA=0.7480 DVPIBB=5.0810 DXD2=. DXD3=. DXD4=. DXD5=. EA=. ESOPCT=. ESOPDLT=. ESOPNR=. ESOPR=. ESOPT=. EXCADJ=.
```

FATB=0.0000 FATC=0.0000 FATE=6.6360 FATL=0.4210 FATN=0.0000 FATO=0.0000 FATP=0.0000 FDFR=. FEA=. FEL=. FFS=. GDWL=.
GEQRV=. GOVGR=. IAEQ=. IAEQCI=. IAEQMI=. IAFICI=. IAFXI=. IAFXMI=. IALI=. IALOI=. IALTI=. IAMLI=. IAOI=. IAPLI=.
IAREI=. IASCI=. IASMI=. IASSI=. IASTI=. IATCI=. IATI=. IATMI=. IAUI=. ICAPT=1.6680 INTAN=0.1720 INTANO=. INVFG=0.1960
INVO=0.0840 INVOFS=. INVREH=. INVREI=. INVRES=. INVRM=0.7070 INVT=1.4080 INVWIP=0.4210 IP=. IPC=. IPV=. ISEQ=. ISEQC=.
ISEQM=. ISFI=. ISFXC=. ISFXM=. ISLG=. ISLGC=. ISLGM=. ISLT=. ISNG=. ISNGC=. ISNGM=. ISOTC=. ISOTH=. ISOTM=. ISSC=.
ISSM=. ISSU=. IST=. ISTC=. ISTM=. ISUT=. ITCB=0.0000 IVAEQ=0.0000 IVAO=0.0000 IVGOD=. IVPT=. IVST=0.0000 LCABG=.
LCACL=. LCACR=. LCAG=. LCAL=. LCALT=. LCAM=. LCAO=. LCAST=. LCAT=. LCO=2.3760 LCOX=0.0000 LCOXAR=. LCOXDR=. LCT=4.1390
LCUACU=. LIF=. LIFR=0.0000 LLOML=. LLOO=. LLOT=. LO=0.0000 LOXDR=. LRV=. LS=. LSE=5.8070 LT=10.0750 MIB=0.0000
MRC1=0.1380 MRC2=0.1920 MRC3=0.2040 MRC4=0.2160 MRC5=0.2290 MRCT=0.9790 MRCTA=. MSA=0.0000 MSVRV=. MTL=. NAT=.
NP=0.0000 NPANL=. NPAORE=. NPARL=. NPAT=. OB=4.1680 OPTPRCCA=. OPTPRCEX=. OPTPRCEY=. OPTPRCGR=. OPTPRCWA=.
PPEGT=7.0570 PPENB=0.0000 PPENC=0.0000 PPENLI=0.0000 PPENLS=0.1940 PPENME=1.8740 PPENNR=0.0000 PPENO=0.0000
PPENT=2.0680 PPEVBB=10.5930 PPEVEB=7.0570 PPEVO=0.0000 PPEVR=3.9100 PRC=. PRODV=. PRVT=. PSTK=0.0500 PSTKC=0.0500
PSTKL=5.7100 PSTKN=0.0500 PSTKR=0.0000 PSTKRV=5.7100 PVCL=. PVPL=. PVT=. RADP=. RAGR=. RARI=. RATI=. RCL=. RDP=.
RE=-26.0940 REA=0.0000 REAJO=0.0000 RECCO=0.0810 RECD=0.6530 RECT=1.6790 RECTA=0.0000 RECTR=1.5980 RECUB=. RET=.
REUNA=-26.0940 REUNR=. RLL=. RLO=. RLP=. RLRI=. RLT=. RPAG=. RREPS=. RVBCI=. RVBPI=. RVBTI=. RVDO=. RVDT=. RVEQT=.
RVLRV=. RVNO=. RVNT=. RVRI=. RVSI=. RVTI=. RVTXR=. RVUPI=. RVUTX=. SAA=. SAL=. SBDC=. SC=. SCO=. SECU=. SEQ=-4.2680
SEQO=. SRT=. SSNP=. STBO=. STIO=. TDSCD=. TDSCE=. TDSLG=. TDSMM=. TDSNG=. TDSO=. TDSS=. TDST=. TLCF=25.7440 TRANSA=.
TSA=. TSO=. TSTK=0.0000 TSTKC=0.0000 TSTKME=. TSTKP=0.0000 TXDB=0.0000 TXDBA=. TXDBCA=. TXDBCL=. TXDITC=0.0000 TXNDB=.
TXNDBA=. TXNDBL=. TXNDBR=. TXP=0.1410 TXR=0.0000 UAOX=. UAPT=. UCAPS=. UCCONS=. UCEQ=. UCUSTAD=. UDCOPRES=. UDD=.
UDMB=. UDOLT=. UDPCO=. UI=. UINVT=. ULCM=. ULCO=. UNL=. UNNP=. UNNPL=. UOPRES=. UPMCSTK=. UPMPF=. UPMPFS=. UPMSUBP=.
UPSTK=. UPSTKC=. UPSTKSF=. URECT=. URECTR=. UREVUB=. USUBPSTK=. VPAC=. VPO=. WCAP=-0.6470 XACC=2.3760 XPP=. ACCHG=.
ADPAC=. AM=0.1000 AMDC=. AMGW=. AQA=. AQD=. AQEPS=. AQI=0.0000 AQP=. AQS=0.0000 ARCE=. ARCED=. ARCEEPS=. AUTXR=.
BALR=. BANLR=. BATR=. BCEF=. BCLR=. BCLTBL=. BCNLR=. BCRBL=. BCT=. BCTBL=. BCTR=. BLTBL=. CBI=. CDPAC=. CFBD=. CFERE=.
CFO=. CFPDO=. CGA=. CGRI=. CGTI=. CGUI=. CIBEGNI=. CICURR=. CIDERGL=. CIOTHER=. CIPEN=. CISECGL=. CITOTAL=. CNLTBL=.
COGS=10.1940 CPCBL=. CPDOI=. CPNLI=. CPPBL=. CPREI=. CSTKE=0.0000 DBI=. DFXA=0.8880 DILADJ=. DILAVX=. DO=0.0000 DONR=.
DP=0.9880 DPRET=. DTEA=. DTED=. DTEEPS=. DTEP=. DVC=0.0000 DVDNP=. DVP=0.6000 DVPD=. DVPDP=. DVRPIV=. DVRRE=. DVSCO=.
DVT=0.6000 EBIT=-9.1250 EBITDA=-8.1370 EIEA=. EMOL=. EPSFI=-1.4100 EPSFX=-1.4100 EPSPI=-1.4100 EPSPX=-1.4100
ESUB=0.0000 FATD=. FCA=. FFO=. GBBL=. GDWLAM=. GDWLIA=. GDWLID=. GDWLIEPS=. GDWLIP=. GLA=. GLCEA=. GLCED=. GLCEEPS=.
GLCEP=. GLD=. GLEPS=. GLP=. GP=-1.8710 GPHBL=. GPLBL=. GPOBL=. GPRBL=. GPTBL=. GWO=. HEDGEGL=. IB=-8.7550
IBADJ=-9.3550 IBBL=. IBCOM=-9.3550 IBKI=. IDIIS=. IDILB=. IDILC=. IDIS=. IDIST=. IDIT=0.0050 IDITS=. IIRE=. INITB=.
INTC=0.0000 IOBD=. IOI=. IORE=. IPABL=. IPHBL=. IPLBL=. IPOBL=. IPTBL=. IPTI=. IREI=. IRENT=. IRII=. IRLI=. IRNLI=.
IRSI=. ISGR=. ISGT=. ISGU=. ITCI=. IVI=. LI=. LLRCI=. LLRCR=. LLWOCI=. LLWOCR=. LST=. MII=0.0000 NCO=. NFSR=.
NI=-8.7550 NIADJ=-9.3550 NIECI=0.0000 NIINT=. NIIT=. NIM=. NIO=. NIT=. NITS=. NOPI=0.0050 NOPIO=0.0000 NRTXT=.
NRTXTD=. NRTXTEPS=. OIADP=-9.1250 OIBDP=-8.1370 OPEPS=-1.5100 OPILI=. OPINCAR=. OPINI=. OPIOI=. OPIRI=. OPITI=.
OPREPSX=. PALR=. PANLR=. PATR=. PCL=. PCLR=. PCNLR=. PCTR=. PI=-8.7550 PIDOM=. PIFO=. PLL=. PLTBL=. PNCA=. PNCAD=.
PNCAEPS=. PNCIA=. PNCID=. PNCIEPS=. PNCIP=. PNCWIA=. PNCWID=. PNCWIEPS=. PNCWIP=. PNLBL=. PNLI=. POBL=. PPCBL=.
PPPABL=. PPPHBL=. PPPOBL=. PPPTBL=. PRCA=. PRCAD=. PRCAEPS=. PREBL=. PRI=. PTBL=. PTRAN=. PVO=. PVON=. PWOI=. RCA=.
RCD=. RCEPS=. RCP=. RDIP=. RDIPA=. RDIPD=. RDIPEPS=. REVT=8.3230 RIS=. RMUM=. RRA=. RRD=. RRP=. SALE=8.3230 SETA=.

SETD=. SETEPS=. SETP=. SPCE=. SPCED=. SPCEEPS=. SPI=0.9700 SPID=. SPIEPS=. SPIOA=. SPIOP=. SRET=. STKCO=. STKCPA=.
TDSG=. TF=. TIE=. TII=. TXC=0.0000 TXDFED=0.0000 TXDFO=0.0000 TXDI=0.0000 TXDS=0.0000 TXEQA=. TXEQII=. TXFED=0.0000
TXFO=0.0000 TXO=0.0000 TXS=0.0000 TXT=0.0000 TXVA=. TXW=0.0000 UDPFA=. UDVP=. UGI=. UNIAMI=. UNOPINC=. UOPI=. UPDVP=.
USPI=. USUBDVP=. UTME=. UTXFED=. UXINST=. UXINTD=. WDA=. WDD=. WDEPS=. WDP=. XAD=. XAGO=. XAGT=. XCOM=. XCOMI=.
XDEPL=0.0000 XDP=0.8880 XDVRE=. XEQO=. XI=0.0000 XIDO=0.0000 XINDB=. XINDC=. XINS=. XINST=. XINT=0.6050 XINTD=.
XINTOPT=. XIVI=. XIVRE=. XLR=. XNBI=. XNF=. XNINS=. XNITB=. XOBD=. XOI=. XOPR=16.4600 XOPRAR=. XOPTD=. XOPTEPS=.
XORE=. XPR=. XRD=0.9030 XRENT=0.8540 XS=. XSGA=6.2660 XSTF=. XSTFO=. XSTFWS=. XT=. XUW=. XUWLI=. XUWNLI=. XUWOI=.
XUWREI=. XUWTI=. AFUDCC=. AFUDCI=. AMC=. AOLOCH=0.7290 APALCH=-0.0340 AQC=0.0000 CAPX=0.3740 CAPXV=0.3740 CDVC=.
CHECH=-1.0950 DEPC=. DLCCH=. DLTIS=5.8750 DLTR=4.6710 DPC=0.9880 DV=0.0000 ESUBC=0.0000 EXRE=0.0000 FIAO=0.0000
FINCF=1.6020 FOPO=0.0000 FOPOX=. FOPT=. FSRCO=. FSRCT=. FUSEO=. FUSET=. IBC=-8.7550 INTPN=0.3960 INVCH=0.5830 ITCC=.
IVACO=0.0000 IVCH=0.0000 IVNCF=3.5260 IVSTCH=0.0000 OANCF=-6.2230 PDVC=. PRSTKC=0.0000 PRSTKCC=. PRSTKPC=.
RECCH=1.2360 SCSTKC=. SIV=0.0000 SPPE=3.9000 SPPIV=-0.9700 SPSTKC=. SSTK=0.3980 TDC=. TSAFC=. TXACH=. TXBCO=. TXBCOF=.
TXDC=0.0000 TXPD=. UAOLOCH=. UDFCC=. UFRETSD=. UNWCC=. UOIS=. USTDNC=. UTFDOC=. UTFOSC=. UWKCAPC=. WCAPC=. WCAPCH=.
XIDOC=0.0000 ACCRT=. ACQAO=. ACQCSHI=. ACQGDWL=. ACQIC=. ACQINTAN=. ACQINVT=. ACQLNTAL=. ACQNIINTC=. ACQPPE=. ACQSC=.
ANO=. AOL2=. AQPL1=. AU=8 AUL3=. AUOP=1 AUOPIC= BASTR=. BILLEXCE=. CAPR1=. CAPR2=. CAPR3=. CAPSFT=. CEIEXBILL=.
CEOSO= CFOSO= CI=. CIMII=. CSHFD=. CSHI=. CSHO=6.6540 CSHPRI=6.6220 CSHR=1.4500 CSHRC=5.8560 CSHRP=. CSHRSO=2.1000
CSHRT=. CSHRW=3.8310 DERAC=. DERALT=. DERHEDGL=. DERLC=. DERLLT=. DT=. DVINTF=. EMP=0.1370 FINACO=. FINAO=. FINCH=.
FINDLC=. FINDLT=. FINIVST=. FINLCO=. FINLTO=. FINNP=. FINRECC=. FINRECLT=. FINREV=. FINXINT=. FINXOPR=. GLIV=.
GOVTOWN=. IBMII=. LIFRP=0.0000 LNO=. LOL2=. LQPL1=. LUL3=. MIBN=. MIBT=0.0000 NIINTPFC=. NIINTPFP=. NIPFC=. NIPFP=.
OPTCA=. OPTDR=. OPTEX=. OPTEXD=. OPTFVGR=. OPTGR=. OPTLIFE=. OPTOSBY=. OPTOSEY=. OPTPRCBY=. OPTRFR=. OPTVOL=. PNRSHO=.
PRSHO=. RANK=1 RSTCHE=. RSTCHELT=. SALEPFC=. SALEPFP=. TEQ=. TFVA=. TFVCE=. TFVL=. TSTKN=0.0000 TXTUBADJUST=.
TXTUBBEGIN=. TXTUBEND=. TXTUBMAX=. TXTUBMIN=. TXTUBPOSDEC=. TXTUBPOSINC=. TXTUBPOSPDEC=. TXTUBPOSPINC=. TXTUBSETTLE=.
TXTUBSOFLIMIT=. TXTUBTXTR=. TXTUBXINTBS=. TXTUBXINTIS=. XRDP=0.9170 ADJEX_C=1.000000000000 ADJEX_F=1.000000000000
CSHTR_C=1049500.0000 CSHTR_F=892000.0000 DVPSP_C=0.0000 DVPSP_F=0.0000 DVPSX_C=0.0000 DVPSX_F=0.0000 MKVALT=.
NAICSH=334220 PRCC_C=0.311999980000 PRCC_F=0.437500000000 PRCH_C=1.750000000000 PRCH_F=1.687500000000
PRCL_C=0.250000000000 PRCL_F=0.250000000000 SICH=1623 CONSOL=C INDFMT=INDL DATAFMT=STD POPSRC=D CURCD=USD COSTAT=I
PS=5.71 BE=. year=1988 bvcEquity=2.911125 capIntens=0.0644050284 cashFlow=-1.337523678 cashHoldings=0.0051661787
costcap=. leverages=-1.39081537 bleverage=1.0222145686 market_leverage=0.4553500369 roa=-1.507663165 roe=-3.0074284
cash_assets=0.0051661787 TobinsQ=. bvEqity=. _ERROR_=1 _N_=269
NOTE: Division by zero detected at line 2533 column 17.
GVKEY=001037 DATADATE=1989-03-31 FYEAR=1988 ADD1=1900 AM Drive ADD2= ADD3= ADD4= ADDZIP=18951-2107
BUSDESC=As of October 9, 2003, AM Communications, Inc. was acquired by NeSTronix, Inc. AM Communications, Inc.
CITY=Quakertown CONML=AM Communication Inc. COUNTY= DLDTE=2004-08-16 DLRSN=07 EIN=23-1922958 FAX=215-538-8779 FYRC=3
GGROUP=4520 GIND=452010 GSECTOR=45 GSUBIND=45201020 IDBFLAG=D INCORP=DE IPODATE=. LOC=USA NAICS=334220
PHONE=215-538-8700 PRICAN= PRIROW= PRIUSA=01 SIC=3663 SPCINDCD=180 SPCSECCD=940 SPCSRC= STATE=PA STKO=3 WEBURL=
CONM=AM COMMUNICATIONS INC TIC=AMCM. CUSIP=001674100 CIK=0000318580 EXCHG=19 FYR=3 FIC=USA ACCTCHG= ACCTSTD=DS
ACQMETH= ADRR=. AJEX=1.000000000000 AJP=1.000000000000 APDEDATE=. BSPR= COMPST= CURNCD=USD CURRTR=1.000000000000
CURUSCN=. FDATE=. FINAL=Y ISMOD=1 LTCM= OGM= PDATE=. PDDUR=12 SCF=7 SRC=53 STALT= UDPL= UPD=3 ACCO=. ACDO=.

ACO=0.3440 ACODO=. ACOMINC=. ACOX=0.3440 ACOXAR=. ACT=3.0360 AEDI=. ALDO=. AO=0.1330 AOCIDERGL=. AOCIOTHER=. AOCIPEN=. AOCISECGL=. AODO=. AOX=0.1330 AP=0.5960 APB=. APC=. APOFS=. ARB=. ARC=. ARTFS=. AT=4.7150 BAST=0.0000 BKVLPS=0.0050 CA=. CAPS=25.1880 CB=. CEQ=0.0980 CEQL=0.0980 CEQT=0.0980 CH=0.0640 CHE=0.0640 CHS=. CLD2=. CLD3=. CLD4=. CLD5=. CLFC=. CLFX=. CLG=. CLIS=. CLL=. CLLC=. CLO=. CLRLL=. CLT=. CMP=. CRV=. CRVNLI=. CSTK=1.9570 CSTKCV=0.1000 DC=0.0000 DCLO=. DCOM=. DCPSTK=1.5410 DCS=. DCVSR=1.5410 DCVSUB=0.0000 DCVT=1.5410 DD=0.0000 DD1=0.0000 DD2=. DD3=. DD4=. DD5=. DFPAC=. DFS=. DLC=0.0000 DLTO=1.0500 DLTP=2.5910 DLTSUB=. DLTT=2.5910 DM=2.5910 DN=0.0000 DPACB=0.0000 DPACC=0.0000 DPACLI=0.0000 DPACLS=0.2780 DPACME=4.6390 DPACNR=0.0000 DPACO=0.0000 DPACRE=. DPACT=4.9170 DPDC=. DPLTB=. DPSC=. DPSTB=. DPTB=. DPTC=. DPTIC=. DPVIEB=4.9170 DPVIO=0.0000 DPVIR=0.7130 DRC=. DRCI=. DRLT=. DS=0.0000 DUDD=0.0000 DVPA=0.0000 DVPIBB=4.9890 DXD2=. DXD3=. DXD4=. DXD5=. EA=. ESOPCT=. ESOPDLT=. ESOPNR=. ESOPR=. ESOPT=. EXCADJ=. FATB=0.0000 FATC=0.0000 FATE=6.0490 FATL=0.4140 FATN=0.0000 FATO=0.0000 FATP=0.0000 FDFR=. FEA=. FEL=. FFS=. GDWL=0.0000 GEQRV=. GOVGR=. IAEQ=. IAEQCI=. IAEQMI=. IAFICI=. IAFXI=. IAFXMI=. IALI=. IALOI=. IALTI=. IAMLI=. IAOI=. IAPLI=. IAREI=. IASCI=. IASMI=. IASSI=. IASTI=. IATCI=. IATI=. IATMI=. IAUI=. ICAPT=2.6890 INTAN=. INTANO=. INVFG=0.0940 INVO=0.1290 INVOFS=. INVREH=. INVREI=. INVRES=. INVRM=0.7260 INVT=1.4240 INVWIP=0.4750 IP=. IPC=. IPV=. ISEQ=. ISEQC=. ISEQM=. ISFI=. ISFXC=. ISFXM=. ISLG=. ISLGC=. ISLGM=. ISLT=. ISNG=. ISNGC=. ISNGM=. ISOTC=. ISOTH=. ISOTM=. ISSC=. ISSM=. ISSU=. IST=. ISTC=. ISTM=. ISUT=. ITCB=0.0000 IVAEQ=0.0000 IVAO=0.0000 IVGOD=. IVPT=. IVST=0.0000 LCABG=. LCACL=. LCACR=. LCAG=. LCAL=. LCALT=. LCAM=. LCAO=. LCAST=. LCAT=. LCO=1.4300 LCOX=0.0000 LCOXAR=. LCOXDR=. LCT=2.0260 LCUACU=. LIF=. LIFR=0.0000 LLOML=. LLOO=. LLOT=. LO=0.0000 LOXDR=. LRV=. LS=. LSE=4.7150 LT=4.6170 MIB=0.0000 MRC1=0.1920 MRC2=0.2040 MRC3=0.2160 MRC4=0.2290 MRC5=0.0000 MRCT=0.8410 MRCTA=. MSA=0.0000 MSVRV=. MTL=. NAT=. NP=0.0000 NPANL=. NPAORE=. NPARL=. NPAT=. OB=3.6290 OPTPRCCA=. OPTPRCEX=. OPTPRCEY=. OPTPRCGR=. OPTPRCWA=. PPEGT=6.4630 PPENB=0.0000 PPENC=0.0000 PPENLI=0.0000 PPENLS=0.1360 PPENME=1.4100 PPENNR=0.0000 PPENO=0.0000 PPENT=1.5460 PPEVBB=7.0570 PPEVEB=6.4630 PPEVO=0.0000 PPEVR=0.8910 PRC=. PRODV=. PRVT=. PSTK=0.0000 PSTKC=0.0000 PSTKL=0.0000 PSTKN=0.0000 PSTKR=0.0000 PSTKRV=0.0000 PVCL=. PVPL=. PVT=. RADP=. RAGR=. RARI=. RATI=. RCL=. RDP=. RE=-27.0470 REA=0.0000 REAJO=0.0000 RECCO=0.0720 RECD=0.5350 RECT=1.2040 RECTA=0.0000 RECTR=1.1320 RECUB=. RET=. REUNA=-27.0470 REUNR=. RLL=. RLO=. RLP=. RLRI=. RLT=. RPAG=. RREPS=. RVBCI=. RVBPI=. RVBTI=. RVDO=. RVDT=. RVEQT=. RVLRV=. RVNO=. RVNT=. RVRI=. RVSI=. RVTI=. RVTXR=. RVUPI=. RVUTX=. SAA=. SAL=. SBDC=. SC=. SCO=. SECU=. SEQ=0.0980 SEQO=. SRT=. SSNP=. STBO=. STIO=. TDSCD=. TDSCE=. TDSLG=. TDSMM=. TDSNG=. TDSO=. TDSS=. TDST=. TLCF=26.6970 TRANSA=. TSA=. TSO=. TSTK=0.0000 TSTKC=0.0000 TSTKME=. TSTKP=0.0000 TXDB=0.0000 TXDBA=. TXDBCA=. TXDBCL=. TXDITC=0.0000 TXNDB=. TXNDBA=. TXNDBL=. TXNDBR=. TXP=0.0000 TXR=0.0000 UAOX=. UAPT=. UCAPS=. UCCONS=. UCEQ=. UCUSTAD=. UDCOPRES=. UDD=. UDMB=. UDOLT=. UDPCO=. UI=. UINVT=. ULCM=. ULCO=. UNL=. UNNP=. UNNPL=. UOPRES=. UPMCSTK=. UPMPF=. UPMPFS=. UPMSUBP=. UPSTK=. UPSTKC=. UPSTKSF=. URECT=. URECTR=. UREVUB=. USUBPSTK=. VPAC=. VPO=. WCAP=1.0100 XACC=1.4300 XPP=. ACCHG=0.0000 ADPAC=. AM=. AMDC=. AMGW=. AQA=. AQD=. AQEPS=. AQI=0.0000 AQP=. AQS=0.0000 ARCE=. ARCED=. ARCEEPS=. AUTXR=. BALR=. BANLR=. BATR=. BCEF=. BCLR=. BCLTBL=. BCNLR=. BCRBL=. BCT=. BCTBL=. BCTR=. BLTBL=. CBI=. CDPAC=. CFBD=. CFERE=. CFO=. CFPDO=. CGA=. CGRI=. CGTI=. CGUI=. CIBEGNI=. CICURR=. CIDERGL=. CIOTHER=. CIPEN=. CISECGL=. CITOTAL=. CNLTBL=. COGS=7.6030 CPCBL=. CPDOI=. CPNLI=. CPPBL=. CPREI=. CSTKE=0.0000 DBI=. DFXA=0.6410 DILADJ=. DILAVX=. DO=0.0000 DONR=. DP=0.6410 DPRET=. DTEA=. DTED=. DTEEPS=. DTEP=. DVC=0.0000 DVDNP=. DVP=0.0000 DVPD=. DVPDP=. DVRPIV=. DVRRE=. DVSCO=. DVT=0.0000 EBIT=-1.2960 EBITDA=-0.6550 EIEA=. EMOL=. EPSFI=-0.0700 EPSFX=-0.1100 EPSPI=-0.0700 EPSPX=-0.1100 ESUB=0.0000 FATD=. FCA=. FFO=. GBBL=. GDWLAM=. GDWLIA=. GDWLID=. GDWLIEPS=. GDWLIP=. GLA=. GLCEA=. GLCED=. GLCEEPS=. GLCEP=. GLD=. GLEPS=. GLP=. GP=0.8990 GPHBL=. GPLBL=. GPOBL=. GPRBL=. GPTBL=. GWO=. HEDGEGL=.

IB=-1.5710 IBADJ=-1.5710 IBBL=. IBCOM=-1.5710 IBKI=. IDIIS=. IDILB=. IDILC=. IDIS=. IDIST=. IDIT=0.0000 IDITS=. IIRE=.
INITB=. INTC=0.0000 IOBD=. IOI=. IORE=. IPABL=. IPHBL=. IPLBL=. IPOBL=. IPTBL=. IPTI=. IREI=. IRENT=. IRII=. IRLI=.
IRNLI=. IRSI=. ISGR=. ISGT=. ISGU=. ITCI=. IVI=. LI=. LLRCI=. LLRCR=. LLWOCI=. LLWOCR=. LST=. MII=0.0000 NCO=. NFSR=.
NI=-0.9530 NIADJ=-0.9530 NIECI=0.0000 NIINT=. NIIT=. NIM=. NIO=. NIT=. NITS=. NOPI=0.0610 NOPIO=0.0610 NRTXT=.
NRTXTD=. NRTXTEPS=. OIADP=-1.2960 OIBDP=-0.6550 OPEPS=-0.1100 OPILI=. OPINCAR=. OPINI=. OPIOI=. OPIRI=. OPITI=.
OPREPSX=. PALR=. PANLR=. PATR=. PCL=. PCLR=. PCNLR=. PCTR=. PI=-1.5710 PIDOM=. PIFO=. PLL=. PLTBL=. PNCA=. PNCAD=.
PNCAEPS=. PNCIA=. PNCID=. PNCIEPS=. PNCIP=. PNCWIA=. PNCWID=. PNCWIEPS=. PNCWIP=. PNLBL=. PNLI=. POBL=. PPCBL=.
PPPABL=. PPPHBL=. PPPOBL=. PPPTBL=. PRCA=. PRCAD=. PRCAEPS=. PREBL=. PRI=. PTBL=. PTRAN=. PVO=. PVON=. PWOI=. RCA=.
RCD=. RCEPS=. RCP=. RDIP=. RDIPA=. RDIPD=. RDIPEPS=. REVT=8.5020 RIS=. RMUM=. RRA=. RRD=. RRP=. SALE=8.5020 SETA=.
SETD=. SETEPS=. SETP=. SPCE=. SPCED=. SPCEEPS=. SPI=0.0600 SPID=. SPIEPS=. SPIOA=. SPIOP=. SRET=. STKCO=. STKCPA=.
TDSG=. TF=. TIE=. TII=. TXC=0.0000 TXDFED=0.0000 TXDFO=0.0000 TXDI=0.0000 TXDS=0.0000 TXEQA=. TXEQII=. TXFED=0.0000
TXFO=0.0000 TXO=0.0000 TXS=0.0000 TXT=0.0000 TXVA=. TXW=0.0000 UDPFA=. UDVP=. UGI=. UNIAMI=. UNOPINC=. UOPI=. UPDVP=.
USPI=. USUBDVP=. UTME=. UTXFED=. UXINST=. UXINTD=. WDA=. WDD=. WDEPS=. WDP=. XAD=. XAGO=. XAGT=. XCOM=. XCOMI=.
XDEPL=0.0000 XDP=0.6410 XDVRE=. XEQO=. XI=0.6180 XIDO=0.6180 XINDB=. XINDC=. XINS=. XINST=. XINT=0.3960 XINTD=0.3960
XINTOPT=. XIVI=. XIVRE=. XLR=. XNBI=. XNF=. XNINS=. XNITB=. XOBD=. XOI=. XOPR=9.1570 XOPRAR=. XOPTD=. XOPTEPS=. XORE=.
XPR=. XRD=0.5260 XRENT=0.1380 XS=. XSGA=1.5540 XSTF=. XSTFO=. XSTFWS=. XT=. XUW=. XUWLI=. XUWNLI=. XUWOI=. XUWREI=.
XUWTI=. AFUDCC=. AFUDCI=. AMC=. AOLOCH=0.0310 APALCH=-2.1130 AQC=0.0000 CAPX=. CAPXV=0.2970 CDVC=. CHECH=0.0340 DEPC=.
DLCCH=. DLTIS=1.2000 DLTR=0.0000 DPC=0.6960 DV=0.0000 ESUBC=0.0000 EXRE=0.0000 FIAO=0.0000 FINCF=1.6500 FOPO=0.4050
FOPOX=. FOPT=. FSRCO=. FSRCT=. FUSEO=. FUSET=. IBC=-1.5710 INTPN=0.0000 INVCH=-0.0160 ITCC=. IVACO=-0.3100 IVCH=0.0000
IVNCF=-0.0720 IVSTCH=0.0000 OANCF=-1.5440 PDVC=. PRSTKC=0.0000 PRSTKCC=. PRSTKPC=. RECCH=0.4660 SCSTKC=. SIV=0.0000
SPPE=0.2380 SPPIV=-0.0600 SPSTKC=. SSTK=0.4500 TDC=. TSAFC=. TXACH=. TXBCO=. TXBCOF=. TXDC=0.0000 TXPD=. UAOLOCH=.
UDFCC=. UFRETSD=. UNWCC=. UOIS=. USTDNC=. UTFDOC=. UTFOSC=. UWKCAPC=. WCAPC=. WCAPCH=. XIDOC=0.6180 ACCRT=. ACQAO=.
ACQCSHI=. ACQGDWL=. ACQIC=. ACQINTAN=. ACQINVT=. ACQLNTAL=. ACQNIINTC=. ACQPPE=. ACQSC=. ANO=. AOL2=. AQPL1=. AU=8
AUL3=. AUOP=1 AUOPIC= BASTR=0.0000 BILLEXCE=. CAPR1=. CAPR2=. CAPR3=. CAPSFT=. CEIEXBILL=. CEOSO= CFOSO= CI=.
CIMII=. CSHFD=. CSHI=. CSHO=19.5690 CSHPRI=14.2170 CSHR=1.2970 CSHRC=. CSHRP=0.0000 CSHRSO=2.1000 CSHRT=. CSHRW=3.8310
DERAC=. DERALT=. DERHEDGL=. DERLC=. DERLLT=. DT=. DVINTF=. EMP=0.1390 FINACO=. FINAO=. FINCH=. FINDLC=. FINDLT=.
FINIVST=. FINLCO=. FINLTO=. FINNP=. FINRECC=. FINRECLT=. FINREV=. FINXINT=. FINXOPR=. GLIV=. GOVTOWN=. IBMII=.
LIFRP=0.0000 LNO=. LOL2=. LQPL1=. LUL3=. MIBN=. MIBT=0.0000 NIINTPFC=. NIINTPFP=. NIPFC=. NIPFP=. OPTCA=. OPTDR=.
OPTEX=. OPTEXD=. OPTFVGR=. OPTGR=. OPTLIFE=. OPTOSBY=. OPTOSEY=. OPTPRCBY=. OPTRFR=. OPTVOL=. PNRSHO=. PRSHO=. RANK=1
RSTCHE=. RSTCHELT=. SALEPFC=. SALEPFP=. TEQ=. TFVA=. TFVCE=. TFVL=. TSTKN=0.0000 TXTUBADJUST=. TXTUBBEGIN=. TXTUBEND=.
TXTUBMAX=. TXTUBMIN=. TXTUBPOSDEC=. TXTUBPOSINC=. TXTUBPOSPDEC=. TXTUBPOSPINC=. TXTUBSETTLE=. TXTUBSOFLIMIT=.
TXTUBTXTR=. TXTUBXINTBS=. TXTUBXINTIS=. XRDP=0.9030 ADJEX_C=1.000000000000 ADJEX_F=1.000000000000 CSHTR_C=430400.0000
CSHTR_F=339100.0000 DVPSP_C=0.0000 DVPSP_F=0.0000 DVPSX_C=0.0000 DVPSX_F=0.0000 MKVALT=. NAICSH=334220
PRCC_C=0.469000000000 PRCC_F=0.468750000000 PRCH_C=0.500000000000 PRCH_F=0.468750000000 PRCL_C=0.312500000000
PRCL_F=0.312500000000 SICH=1623 CONSOL=C INDFMT=INDL DATAFMT=STD POPSRC=D CURCD=USD COSTAT=I PS=0 BE=0.098 year=1989
bvcEquity=9.17296875 capIntens=. cashFlow=-0.197242842 cashHoldings=0.013573701 costcap=. leverages=26.43877551
bleverage=0.5495227996 market_leverage=0.187890201 roa=-0.333191941 roe=-0.10389221 cash_assets=0.013573701 TobinsQ=.
bvEqity=. _ERROR_=1 _N_=270

NOTE: Division by zero detected at line 2533 column 17.
GVKEY=001037 DATADATE=1990-03-31 FYEAR=1989 ADD1=1900 AM Drive ADD2= ADD3= ADD4= ADDZIP=18951-2107
BUSDESC=As of October 9, 2003, AM Communications, Inc. was acquired by NeSTronix, Inc. AM Communications, Inc.
CITY=Quakertown CONML=AM Communication Inc. COUNTY= DLDTE=2004-08-16 DLRSN=07 EIN=23-1922958 FAX=215-538-8779 FYRC=3
GGROUP=4520 GIND=452010 GSECTOR=45 GSUBIND=45201020 IDBFLAG=D INCORP=DE IPODATE=. LOC=USA NAICS=334220
PHONE=215-538-8700 PRICAN= PRIROW= PRIUSA=01 SIC=3663 SPCINDCD=180 SPCSECCD=940 SPCSRC= STATE=PA STKO=3 WEBURL=
CONM=AM COMMUNICATIONS INC TIC=AMCM. CUSIP=001674100 CIK=0000318580 EXCHG=19 FYR=3 FIC=USA ACCTCHG= ACCTSTD=DS
ACQMETH= ADRR=. AJEX=1.000000000000 AJP=1.000000000000 APDEDATE=. BSPR= COMPST=AZ CURNCD=USD CURRTR=1.000000000000
CURUSCN=. FDATE=. FINAL=Y ISMOD=1 LTCM= OGM= PDATE=. PDDUR=12 SCF=7 SRC=53 STALT= UDPL= UPD=3 ACCO=. ACDO=.
ACO=0.0530 ACODO=. ACOMINC=. ACOX=0.0530 ACOXAR=. ACT=2.4700 AEDI=. ALDO=. AO=0.0860 AOCIDERGL=. AOCIOTHER=. AOCIPEN=.
AOCISECGL=. AODO=. AOX=0.0860 AP=0.2530 APB=. APC=. APOFS=. ARB=. ARC=. ARTFS=. AT=3.1250 BAST=0.0000 BKVLPS=-0.1200
CA=. CAPS=25.1880 CB=. CEQ=-2.3490 CEQL=-2.3490 CEQT=-2.4400 CH=0.2760 CHE=0.2760 CHS=. CLD2=. CLD3=. CLD4=. CLD5=.
CLFC=. CLFX=. CLG=. CLIS=. CLL=. CLLC=. CLO=. CLRLL=. CLT=. CMP=. CRV=. CRVNLI=. CSTK=1.9570 CSTKCV=0.1000 DC=0.0000
DCLO=0.0000 DCOM=. DCPSTK=0.0000 DCS=. DCVSR=0.0000 DCVSUB=0.0000 DCVT=0.0000 DD=0.0000 DD1=0.0000 DD2=. DD3=. DD4=.
DD5=. DFPAC=. DFS=. DLC=0.0000 DLTO=0.0000 DLTP=3.4510 DLTSUB=. DLTT=3.4510 DM=0.0000 DN=3.4510 DPACB=0.0000
DPACC=0.0000 DPACLI=0.0000 DPACLS=0.2000 DPACME=2.3450 DPACNR=0.0000 DPACO=0.0000 DPACRE=. DPACT=2.5450 DPDC=. DPLTB=.
DPSC=. DPSTB=. DPTB=. DPTC=. DPTIC=. DPVIEB=2.5450 DPVIO=0.0000 DPVIR=2.6510 DRC=. DRCI=. DRLT=. DS=0.0000 DUDD=0.0000
DVPA=0.0000 DVPIBB=4.9110 DXD2=. DXD3=. DXD4=. DXD5=. EA=. ESOPCT=0.0000 ESOPDLT=0.0000 ESOPNR=. ESOPR=. ESOPT=0.0000
EXCADJ=. FATB=0.0000 FATC=0.0000 FATE=2.7870 FATL=0.2040 FATN=0.0000 FATO=0.0000 FATP=0.0000 FDFR=. FEA=. FEL=. FFS=.
GDWL=0.0000 GEQRV=. GOVGR=. IAEQ=. IAEQCI=. IAEQMI=. IAFICI=. IAFXI=. IAFXMI=. IALI=. IALOI=. IALTI=. IAMLI=. IAOI=.
IAPLI=. IAREI=. IASCI=. IASMI=. IASSI=. IASTI=. IATCI=. IATI=. IATMI=. IAUI=. ICAPT=1.1020 INTAN=0.0910 INTANO=.
INVFG=0.1480 INVO=0.0000 INVOFS=. INVREH=. INVREI=. INVRES=. INVRM=0.6180 INVT=1.6870 INVWIP=0.9210 IP=. IPC=. IPV=.
ISEQ=. ISEQC=. ISEQM=. ISFI=. ISFXC=. ISFXM=. ISLG=. ISLGC=. ISLGM=. ISLT=. ISNG=. ISNGC=. ISNGM=. ISOTC=. ISOTH=.
ISOTM=. ISSC=. ISSM=. ISSU=. IST=. ISTC=. ISTM=. ISUT=. ITCB=0.0000 IVAEQ=0.0000 IVAO=0.0320 IVGOD=. IVPT=.
IVST=0.0000 LCABG=. LCACL=. LCACR=. LCAG=. LCAL=. LCALT=. LCAM=. LCAO=. LCAST=. LCAT=. LCO=1.2200 LCOX=0.8290 LCOXAR=.
LCOXDR=. LCT=1.4730 LCUACU=. LIF=. LIFR=0.0000 LLOML=. LLOO=. LLOT=. LO=0.5500 LOXDR=. LRV=. LS=. LSE=3.1250 LT=5.4740
MIB=0.0000 MRC1=0.2040 MRC2=0.2160 MRC3=0.2290 MRC4=0.0000 MRC5=0.0000 MRCT=0.6490 MRCTA=. MSA=0.0000 MSVRV=. MTL=.
NAT=. NP=0.0000 NPANL=. NPAORE=. NPARL=. NPAT=. OB=0.7300 OPTPRCCA=. OPTPRCEX=. OPTPRCEY=. OPTPRCGR=. OPTPRCWA=.
PPEGT=2.9910 PPENB=0.0000 PPENC=0.0000 PPENLI=0.0000 PPENLS=0.0040 PPENME=0.4420 PPENNR=0.0000 PPENO=0.0000
PPENT=0.4460 PPEVBB=6.3980 PPEVEB=2.9910 PPEVO=0.0000 PPEVR=3.5190 PRC=. PRODV=. PRVT=. PSTK=0.0000 PSTKC=0.0000
PSTKL=0.0000 PSTKN=0.0000 PSTKR=0.0000 PSTKRV=0.0000 PVCL=. PVPL=. PVT=. RADP=. RAGR=. RARI=. RATI=. RCL=. RDP=.
RE=-29.4940 REA=0.0000 REAJO=0.0000 RECCO=0.2010 RECD=0.0280 RECT=0.4540 RECTA=0.0000 RECTR=0.2530 RECUB=. RET=.
REUNA=-29.4940 REUNR=. RLL=. RLO=. RLP=. RLRI=. RLT=. RPAG=. RREPS=. RVBCI=. RVBPI=. RVBTI=. RVDO=. RVDT=. RVEQT=.
RVLRV=. RVNO=. RVNT=. RVRI=. RVSI=. RVTI=. RVTXR=. RVUPI=. RVUTX=. SAA=. SAL=. SBDC=. SC=. SCO=. SECU=. SEQ=-2.3490
SEQO=. SRT=. SSNP=. STBO=. STIO=. TDSCD=. TDSCE=. TDSLG=. TDSMM=. TDSNG=. TDSO=. TDSS=. TDST=. TLCF=25.0000 TRANSA=.
TSA=. TSO=. TSTK=0.0000 TSTKC=0.0000 TSTKME=. TSTKP=0.0000 TXDB=0.0000 TXDBA=. TXDBCA=. TXDBCL=. TXDITC=0.0000 TXNDB=.
TXNDBA=. TXNDBL=. TXNDBR=. TXP=0.0000 TXR=0.0000 UAOX=. UAPT=. UCAPS=. UCCONS=. UCEQ=. UCUSTAD=. UDCOPRES=. UDD=.
UDMB=. UDOLT=. UDPCO=. UI=. UINVT=. ULCM=. ULCO=. UNL=. UNNP=. UNNPL=. UOPRES=. UPMCSTK=. UPMPF=. UPMPFS=. UPMSUBP=.

UPSTK=. UPSTKC=. UPSTKSF=. URECT=. URECTR=. UREVUB=. USUBPSTK=. VPAC=. VPO=. WCAP=0.9970 XACC=0.3910 XPP=.
ACCHG=0.0000 ADPAC=. AM=. AMDC=. AMGW=. AQA=. AQD=. AQEPS=. AQI=0.0000 AQP=. AQS=0.0000 ARCE=. ARCED=. ARCEEPS=.
AUTXR=. BALR=. BANLR=. BATR=. BCEF=. BCLR=. BCLTBL=. BCNLR=. BCRBL=. BCT=. BCTBL=. BCTR=. BLTBL=. CBI=. CDPAC=. CFBD=.
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DO=-1.5570 DONR=. DP=0.2850 DPRET=. DTEA=. DTED=. DTEEPS=. DTEP=. DVC=0.0000 DVDNP=. DVP=0.0000 DVPD=. DVPDP=.
DVRPIV=. DVRRE=. DVSCO=. DVT=0.0000 EBIT=-0.6530 EBITDA=-0.3680 EIEA=. EMOL=. EPSFI=-0.1300 EPSFX=-0.0500
EPSPI=-0.1300 EPSPX=-0.0500 ESUB=0.0000 FATD=. FCA=. FFO=. GBBL=. GDWLAM=. GDWLIA=. GDWLID=. GDWLIEPS=. GDWLIP=. GLA=.
GLCEA=. GLCED=. GLCEEPS=. GLCEP=. GLD=. GLEPS=. GLP=. GP=0.5250 GPHBL=. GPLBL=. GPOBL=. GPRBL=. GPTBL=. GWO=.
HEDGEGL=. IB=-0.8900 IBADJ=-0.8900 IBBL=. IBCOM=-0.8900 IBKI=. IDIIS=. IDILB=. IDILC=. IDIS=. IDIST=. IDIT=0.0020
IDITS=. IIRE=. INITB=. INTC=0.0000 IOBD=. IOI=. IORE=. IPABL=. IPHBL=. IPLBL=. IPOBL=. IPTBL=. IPTI=. IREI=. IRENT=.
IRII=. IRLI=. IRNLI=. IRSI=. ISGR=. ISGT=. ISGU=. ITCI=. IVI=. LI=. LLRCI=. LLRCR=. LLWOCI=. LLWOCR=. LST=. MII=0.0000
NCO=. NFSR=. NI=-2.4470 NIADJ=-2.4470 NIECI=0.0000 NIINT=. NIIT=. NIM=. NIO=. NIT=. NITS=. NOPI=0.0240 NOPIO=0.0220
NRTXT=. NRTXTD=. NRTXTEPS=. OIADP=-0.6530 OIBDP=-0.3680 OPEPS=-0.0500 OPILI=. OPINCAR=. OPINI=. OPIOI=. OPIRI=.
OPITI=. OPREPSX=. PALR=. PANLR=. PATR=. PCL=. PCLR=. PCNLR=. PCTR=. PI=-0.8900 PIDOM=. PIFO=. PLL=. PLTBL=. PNCA=.
PNCAD=. PNCAEPS=. PNCIA=. PNCID=. PNCIEPS=. PNCIP=. PNCWIA=. PNCWID=. PNCWIEPS=. PNCWIP=. PNLBL=. PNLI=. POBL=.
PPCBL=. PPPABL=. PPPHBL=. PPPOBL=. PPPTBL=. PRCA=. PRCAD=. PRCAEPS=. PREBL=. PRI=. PTBL=. PTRAN=. PVO=. PVON=. PWOI=.
RCA=. RCD=. RCEPS=. RCP=. RDIP=. RDIPA=. RDIPD=. RDIPEPS=. REVT=2.3860 RIS=. RMUM=. RRA=. RRD=. RRP=. SALE=2.3860
SETA=. SETD=. SETEPS=. SETP=. SPCE=. SPCED=. SPCEEPS=. SPI=0.0000 SPID=. SPIEPS=. SPIOA=. SPIOP=. SRET=. STKCO=.
STKCPA=. TDSG=. TF=. TIE=. TII=. TXC=0.0000 TXDFED=0.0000 TXDFO=0.0000 TXDI=0.0000 TXDS=0.0000 TXEQA=. TXEQII=.
TXFED=0.0000 TXFO=0.0000 TXO=0.0000 TXS=0.0000 TXT=0.0000 TXVA=. TXW=0.0000 UDPFA=. UDVP=. UGI=. UNIAMI=. UNOPINC=.
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XCOMI=. XDEPL=0.0000 XDP=0.2850 XDVRE=. XEQO=. XI=0.0000 XIDO=-1.5570 XINDB=. XINDC=. XINS=. XINST=. XINT=0.2610
XINTD=0.2610 XINTOPT=. XIVI=. XIVRE=. XLR=. XNBI=. XNF=. XNINS=. XNITB=. XOBD=. XOI=. XOPR=2.7540 XOPRAR=. XOPTD=.
XOPTEPS=. XORE=. XPR=. XRD=0.1690 XRENT=0.1920 XS=. XSGA=0.8930 XSTF=. XSTFO=. XSTFWS=. XT=. XUW=. XUWLI=. XUWNLI=.
XUWOI=. XUWREI=. XUWTI=. AFUDCC=. AFUDCI=. AMC=. AOLOCH=0.3190 APALCH=-1.1780 AQC=0.0000 CAPX=. CAPXV=0.1120 CDVC=.
CHECH=0.2120 DEPC=. DLCCH=0.0000 DLTIS=1.2400 DLTR=0.3800 DPC=0.3650 DV=0.0000 ESUBC=0.0000 EXRE=0.0000 FIAO=0.0000
FINCF=0.8600 FOPO=0.2610 FOPOX=. FOPT=. FSRCO=. FSRCT=. FUSEO=. FUSET=. IBC=-0.8900 INTPN=0.0000 INVCH=-0.2630 ITCC=.
IVACO=0.1110 IVCH=0.0000 IVNCF=0.1110 IVSTCH=0.0000 OANCF=-0.7590 PDVC=. PRSTKC=0.0000 PRSTKCC=. PRSTKPC=.
RECCH=0.7180 SCSTKC=. SIV=0.0000 SPPE=. SPPIV=0.0010 SPSTKC=. SSTK=0.0000 TDC=. TSAFC=. TXACH=0.0000 TXBCO=. TXBCOF=.
TXDC=0.0000 TXPD=. UAOLOCH=. UDFCC=. UFRETSD=. UNWCC=. UOIS=. USTDNC=. UTFDOC=. UTFOSC=. UWKCAPC=. WCAPC=. WCAPCH=.
XIDOC=-0.0920 ACCRT=. ACQAO=. ACQCSHI=. ACQGDWL=. ACQIC=. ACQINTAN=. ACQINVT=. ACQLNTAL=. ACQNIINTC=. ACQPPE=. ACQSC=.
ANO=. AOL2=. AQPL1=. AU=5 AUL3=. AUOP=4 AUOPIC= BASTR=0.0000 BILLEXCE=. CAPR1=. CAPR2=. CAPR3=. CAPSFT=. CEIEXBILL=.
CEOSO= CFOSO= CI=. CIMII=. CSHFD=. CSHI=. CSHO=19.5690 CSHPRI=19.5690 CSHR=1.2670 CSHRC=0.0000 CSHRP=0.0000
CSHRSO=2.1000 CSHRT=5.9060 CSHRW=3.8060 DERAC=. DERALT=. DERHEDGL=. DERLC=. DERLLT=. DT=. DVINTF=. EMP=0.0670 FINACO=.
FINAO=. FINCH=. FINDLC=. FINDLT=. FINIVST=. FINLCO=. FINLTO=. FINNP=. FINRECC=. FINRECLT=. FINREV=. FINXINT=.
FINXOPR=. GLIV=. GOVTOWN=. IBMII=. LIFRP=0.0000 LNO=. LOL2=. LQPL1=. LUL3=. MIBN=. MIBT=0.0000 NIINTPFC=. NIINTPFP=.
NIPFC=. NIPFP=. OPTCA=. OPTDR=. OPTEX=. OPTEXD=. OPTFVGR=. OPTGR=. OPTLIFE=. OPTOSBY=. OPTOSEY=. OPTPRCBY=. OPTRFR=.

OPTVOL=. PNRSHO=. PRSHO=. RANK=1 RSTCHE=. RSTCHELT=. SALEPFC=. SALEPFP=. TEQ=. TFVA=. TFVCE=. TFVL=. TSTKN=0.0000
TXTUBADJUST=. TXTUBBEGIN=. TXTUBEND=. TXTUBMAX=. TXTUBMIN=. TXTUBPOSDEC=. TXTUBPOSINC=. TXTUBPOSPDEC=. TXTUBPOSPINC=.
TXTUBSETTLE=. TXTUBSOFLIMIT=. TXTUBTXTR=. TXTUBXINTBS=. TXTUBXINTIS=. XRDP=0.5260 ADJEX_C=1.000000000000
ADJEX_F=1.000000000000 CSHTR_C=. CSHTR_F=. DVPSP_C=0.0000 DVPSP_F=0.0000 DVPSX_C=0.0000 DVPSX_F=0.0000 MKVALT=.
NAICSH=334220 PRCC_C=. PRCC_F=. PRCH_C=. PRCH_F=. PRCL_C=. PRCL_F=. SICH=3663 CONSOL=C INDFMT=INDL DATAFMT=STD
POPSRC=D CURCD=USD COSTAT=I PS=O BE=. year=1990 bvcEquity=. capIntens=. cashFlow=-0.1936 cashHoldings=0.08832
costcap=. leverages=-1.469135802 bleverage=1.10432 market_leverage=. roa=-0.2848 roe=. cash_assets=0.08832 TobinsQ=.
bvEqity=. _ERROR_=1 _N_=271
NOTE: Division by zero detected at line 2533 column 17.
GVKEY=001037 DATADATE=1991-03-31 FYEAR=1990 ADD1=1900 AM Drive ADD2= ADD3= ADD4= ADDZIP=18951-2107
BUSDESC=As of October 9, 2003, AM Communications, Inc. was acquired by NeSTronix, Inc. AM Communications, Inc.
CITY=Quakertown CONML=AM Communication Inc. COUNTY= DLDTE=2004-08-16 DLRSN=07 EIN=23-1922958 FAX=215-538-8779 FYRC=3
GGROUP=4520 GIND=452010 GSECTOR=45 GSUBIND=45201020 IDBFLAG=D INCORP=DE IPODATE=. LOC=USA NAICS=334220
PHONE=215-538-8700 PRICAN= PRIROW= PRIUSA=01 SIC=3663 SPCINDCD=180 SPCSECCD=940 SPCSRC= STATE=PA STKO=3 WEBURL=
CONM=AM COMMUNICATIONS INC TIC=AMCM. CUSIP=001674100 CIK=0000318580 EXCHG=19 FYR=3 FIC=USA ACCTCHG= ACCTSTD=DS
ACQMETH= ADRR=. AJEX=1.000000000000 AJP=1.000000000000 APDEDATE=. BSPR= COMPST= CURNCD=USD CURRTR=1.000000000000
CURUSCN=. FDATE=. FINAL=Y ISMOD=1 LTCM= OGM= PDATE=. PDDUR=12 SCF=7 SRC=53 STALT= UDPL= UPD=3 ACCO=. ACDO=.
ACO=0.0680 ACODO=. ACOMINC=. ACOX=0.0680 ACOXAR=. ACT=1.7290 AEDI=. ALDO=. AO=0.1140 AOCIDERGL=. AOCIOTHER=. AOCIPEN=.
AOCISECGL=. AODO=. AOX=0.1140 AP=0.2360 APB=. APC=. APOFS=. ARB=. ARC=. ARTFS=. AT=2.2590 BAST=0.0000 BKVLPS=-0.1882
CA=. CAPS=25.1880 CB=. CEQ=-3.6830 CEQL=-3.6830 CEQT=-3.7870 CH=0.1200 CHE=0.1200 CHS=. CLD2=0.0000 CLD3=0.0000
CLD4=0.0000 CLD5=0.0000 CLFC=. CLFX=. CLG=. CLIS=. CLL=. CLLC=. CLO=. CLRLL=. CLT=. CMP=. CRV=. CRVNLI=. CSTK=1.9570
CSTKCV=0.1000 DC=0.0000 DCLO=0.0000 DCOM=. DCPSTK=0.0000 DCS=. DCVSR=0.0000 DCVSUB=0.0000 DCVT=0.0000 DD=0.0000
DD1=0.0000 DD2=. DD3=. DD4=. DD5=. DFPAC=. DFS=. DLC=0.0000 DLTO=0.0000 DLTP=4.1130 DLTSUB=. DLTT=4.1130 DM=0.0000
DN=4.1130 DPACB=. DPACC=. DPACLI=. DPACLS=. DPACME=. DPACNR=. DPACO=. DPACRE=. DPACT=2.6680 DPDC=. DPLTB=. DPSC=.
DPSTB=. DPTB=. DPTC=. DPTIC=. DPVIEB=. DPVIO=. DPVIR=. DRC=. DRCI=. DRLT=. DS=0.0000 DUDD=0.0000 DVPA=0.0000 DVPIBB=.
DXD2=. DXD3=. DXD4=. DXD5=. EA=. ESOPCT=0.0000 ESOPDLT=0.0000 ESOPNR=. ESOPR=. ESOPT=0.0000 EXCADJ=. FATB=. FATC=.
FATE=. FATL=. FATN=. FATO=. FATP=. FDFR=. FEA=. FEL=. FFS=. GDWL=0.0000 GEQRV=. GOVGR=. IAEQ=. IAEQCI=. IAEQMI=.
IAFICI=. IAFXI=. IAFXMI=. IALI=. IALOI=. IALTI=. IAMLI=. IAOI=. IAPLI=. IAREI=. IASCI=. IASMI=. IASSI=. IASTI=.
IATCI=. IATI=. IATMI=. IAUI=. ICAPT=0.4300 INTAN=0.1040 INTANO=. INVFG=0.2880 INVO=0.0000 INVOFS=. INVREH=. INVREI=.
INVRES=. INVRM=0.5380 INVT=1.3090 INVWIP=0.4830 IP=. IPC=. IPV=. ISEQ=. ISEQC=. ISEQM=. ISFI=. ISFXC=. ISFXM=. ISLG=.
ISLGC=. ISLGM=. ISLT=. ISNG=. ISNGC=. ISNGM=. ISOTC=. ISOTH=. ISOTM=. ISSC=. ISSM=. ISSU=. IST=. ISTC=. ISTM=. ISUT=.
ITCB=0.0000 IVAEQ=0.0000 IVAO=0.0000 IVGOD=. IVPT=. IVST=0.0000 LCABG=. LCACL=. LCACR=. LCAG=. LCAL=. LCALT=. LCAM=.
LCAO=. LCAST=. LCAT=. LCO=0.5370 LCOX=0.2670 LCOXAR=. LCOXDR=. LCT=0.7730 LCUACU=. LIF=. LIFR=0.0000 LLOML=. LLOO=.
LLOT=. LO=1.0560 LOXDR=. LRV=. LS=. LSE=2.2590 LT=5.9420 MIB=0.0000 MRC1=0.2160 MRC2=0.2290 MRC3=0.0000 MRC4=0.0000
MRC5=0.0000 MRCT=0.4450 MRCTA=. MSA=0.0000 MSVRV=. MTL=. NAT=. NP=0.0000 NPANL=. NPAORE=. NPARL=. NPAT=. OB=0.1710
OPTPRCCA=. OPTPRCEX=. OPTPRCEY=. OPTPRCGR=. OPTPRCWA=. PPEGT=2.9800 PPENB=. PPENC=. PPENLI=. PPENLS=. PPENME=.
PPENNR=. PPENO=. PPENT=0.3120 PPEVBB=. PPEVEB=. PPEVO=. PPEVR=. PRC=. PRODV=. PRVT=. PSTK=0.0000 PSTKC=0.0000
PSTKL=0.0000 PSTKN=0.0000 PSTKR=0.0000 PSTKRV=0.0000 PVCL=. PVPL=. PVT=. RADP=. RAGR=. RARI=. RATI=. RCL=. RDP=.

RE=-30.8280 REA=0.0000 REAJO=0.0000 RECCO=0.0000 RECD=0.0070 RECT=0.2320 RECTA=0.0000 RECTR=0.2320 RECUB=. RET=.
REUNA=-30.8280 REUNR=. RLL=. RLO=. RLP=. RLRI=. RLT=. RPAG=. RREPS=. RVBCI=. RVBPI=. RVBTI=. RVDO=. RVDT=. RVEQT=.
RVLRV=. RVNO=. RVNT=. RVRI=. RVSI=. RVTI=. RVTXR=. RVUPI=. RVUTX=. SAA=. SAL=. SBDC=. SC=. SCO=. SECU=. SEQ=-3.6830
SEQO=. SRT=. SSNP=. STBO=. STIO=. TDSCD=. TDSCE=. TDSLG=. TDSMM=. TDSNG=. TDSO=. TDSS=. TDST=. TLCF=25.0000 TRANSA=.
TSA=. TSO=. TSTK=0.0000 TSTKC=0.0000 TSTKME=. TSTKP=0.0000 TXDB=0.0000 TXDBA=. TXDBCA=. TXDBCL=. TXDITC=0.0000 TXNDB=.
TXNDBA=. TXNDBL=. TXNDBR=. TXP=0.0000 TXR=0.0000 UAOX=. UAPT=. UCAPS=. UCCONS=. UCEQ=. UCUSTAD=. UDCOPRES=. UDD=.
UDMB=. UDOLT=. UDPCO=. UI=. UINVT=. ULCM=. ULCO=. UNL=. UNNP=. UNNPL=. UOPRES=. UPMCSTK=. UPMPF=. UPMPFS=. UPMSUBP=.
UPSTK=. UPSTKC=. UPSTKSF=. URECT=. URECTR=. UREVUB=. USUBPSTK=. VPAC=. VPO=. WCAP=0.9560 XACC=0.2700 XPP=.
ACCHG=0.0000 ADPAC=. AM=. AMDC=. AMGW=. AQA=. AQD=. AQEPS=. AQI=0.0000 AQP=. AQS=0.0000 ARCE=. ARCED=. ARCEEPS=.
AUTXR=. BALR=. BANLR=. BATR=. BCEF=. BCLR=. BCLTBL=. BCNLR=. BCRBL=. BCT=. BCTBL=. BCTR=. BLTBL=. CBI=. CDPAC=. CFBD=.
CFERE=. CFO=. CFPDO=. CGA=. CGRI=. CGTI=. CGUI=. CIBEGNI=. CICURR=. CIDERGL=. CIOTHER=. CIPEN=. CISECGL=. CITOTAL=.
CNLTBL=. COGS=1.3220 CPCBL=. CPDOI=. CPNLI=. CPPBL=. CPREI=. CSTKE=0.0000 DBI=. DFXA=. DILADJ=. DILAVX=. DO=0.0000
DONR=. DP=0.1960 DPRET=. DTEA=. DTED=. DTEEPS=. DTEP=. DVC=0.0000 DVDNP=. DVP=0.0000 DVPD=. DVPDP=. DVRPIV=. DVRRE=.
DVSCO=. DVT=0.0000 EBIT=-0.6770 EBITDA=-0.4810 EIEA=. EMOL=. EPSFI=-0.0700 EPSFX=-0.0700 EPSPI=-0.0700 EPSPX=-0.0700
ESUB=0.0000 FATD=. FCA=. FFO=. GBBL=. GDWLAM=. GDWLIA=. GDWLID=. GDWLIEPS=. GDWLIP=. GLA=. GLCEA=. GLCED=. GLCEEPS=.
GLCEP=. GLD=. GLEPS=. GLP=. GP=0.7490 GPHBL=. GPLBL=. GPOBL=. GPRBL=. GPTBL=. GWO=. HEDGEGL=. IB=-1.3340 IBADJ=-1.3340
IBBL=. IBCOM=-1.3340 IBKI=. IDIIS=. IDILB=. IDILC=. IDIS=. IDIST=. IDIT=0.0040 IDITS=. IIRE=. INITB=. INTC=0.0000
IOBD=. IOI=. IORE=. IPABL=. IPHBL=. IPLBL=. IPOBL=. IPTBL=. IPTI=. IREI=. IRENT=. IRII=. IRLI=. IRNLI=. IRSI=. ISGR=.
ISGT=. ISGU=. ITCI=. IVI=. LI=. LLRCI=. LLRCR=. LLWOCI=. LLWOCR=. LST=. MII=0.0000 NCO=. NFSR=. NI=-1.3340
NIADJ=-1.3340 NIECI=0.0000 NIINT=. NIIT=. NIM=. NIO=. NIT=. NITS=. NOPI=0.0470 NOPIO=0.0430 NRTXT=. NRTXTD=.
NRTXTEPS=. OIADP=-0.6770 OIBDP=-0.4810 OPEPS=-0.0600 OPILI=. OPINCAR=. OPINI=. OPIOI=. OPIRI=. OPITI=. OPREPSX=.
PALR=. PANLR=. PATR=. PCL=. PCLR=. PCNLR=. PCTR=. PI=-1.3340 PIDOM=. PIFO=. PLL=. PLTBL=. PNCA=. PNCAD=. PNCAEPS=.
PNCIA=. PNCID=. PNCIEPS=. PNCIP=. PNCWIA=. PNCWID=. PNCWIEPS=. PNCWIP=. PNLBL=. PNLI=. POBL=. PPCBL=. PPPABL=.
PPPHBL=. PPPOBL=. PPPTBL=. PRCA=. PRCAD=. PRCAEPS=. PREBL=. PRI=. PTBL=. PTRAN=. PVO=. PVON=. PWOI=. RCA=. RCD=.
RCEPS=. RCP=. RDIP=. RDIPA=. RDIPD=. RDIPEPS=. REVT=2.0710 RIS=. RMUM=. RRA=. RRD=. RRP=. SALE=2.0710 SETA=. SETD=.
SETEPS=. SETP=. SPCE=. SPCED=. SPCEEPS=. SPI=-0.3480 SPID=. SPIEPS=. SPIOA=. SPIOP=. SRET=. STKCO=. STKCPA=. TDSG=.
TF=. TIE=. TII=. TXC=0.0000 TXDFED=0.0000 TXDFO=0.0000 TXDI=0.0000 TXDS=0.0000 TXEQA=. TXEQII=. TXFED=0.0000
TXFO=0.0000 TXO=0.0000 TXS=0.0000 TXT=0.0000 TXVA=. TXW=0.0000 UDPFA=. UDVP=. UGI=. UNIAMI=. UNOPINC=. UOPI=. UPDVP=.
USPI=. USUBDVP=. UTME=. UTXFED=. UXINST=. UXINTD=. WDA=. WDD=. WDEPS=. WDP=. XAD=. XAGO=. XAGT=. XCOM=. XCOMI=.
XDEPL=. XDP=. XDVRE=. XEQO=. XI=0.0000 XIDO=0.0000 XINDB=. XINDC=. XINS=. XINST=. XINT=0.3560 XINTD=0.3560 XINTOPT=.
XIVI=. XIVRE=. XLR=. XNBI=. XNF=. XNINS=. XNITB=. XOBD=. XOI=. XOPR=2.5520 XOPRAR=. XOPTD=. XOPTEPS=. XORE=. XPR=.
XRD=0.4900 XRENT=0.2060 XS=. XSGA=1.2300 XSTF=. XSTFO=. XSTFWS=. XT=. XUW=. XUWLI=. XUWNLI=. XUWOI=. XUWREI=. XUWTI=.
AFUDCC=. AFUDCI=. AMC=. AOLOCH=0.1720 APALCH=-0.1380 AQC=0.0000 CAPX=. CAPXV=. CDVC=. CHECH=-0.1560 DEPC=.
DLCCH=0.0000 DLTIS=0.8660 DLTR=0.2040 DPC=0.2240 DV=0.0000 ESUBC=0.0000 EXRE=0.0000 FIAO=0.0000 FINCF=0.6620
FOPO=0.6540 FOPOX=. FOPT=. FSRCO=. FSRCT=. FUSEO=. FUSET=. IBC=-1.3340 INTPN=0.0570 INVCH=0.0300 ITCC=. IVACO=-0.1370
IVCH=0.0000 IVNCF=-0.1370 IVSTCH=0.0000 OANCF=-0.6810 PDVC=. PRSTKC=0.0000 PRSTKCC=. PRSTKPC=. RECCH=0.0210 SCSTKC=.
SIV=0.0000 SPPE=0.0000 SPPIV=0.0060 SPSTKC=. SSTK=0.0000 TDC=. TSAFC=. TXACH=0.0000 TXBCO=. TXBCOF=. TXDC=0.0000
TXPD=. UAOLOCH=. UDFCC=. UFRETSD=. UNWCC=. UOIS=. USTDNC=. UTFDOC=. UTFOSC=. UWKCAPC=. WCAPC=. WCAPCH=. XIDOC=-0.3160

ACCRT=. ACQAO=. ACQCSHI=. ACQGDWL=. ACQIC=. ACQINTAN=. ACQINVT=. ACQLNTAL=. ACQNIINTC=. ACQPPE=. ACQSC=. ANO=. AOL2=.
AQPL1=. AU=5 AUL3=. AUOP=4 AUOPIC= BASTR=0.0000 BILLEXCE=. CAPR1=. CAPR2=. CAPR3=. CAPSFT=. CEIEXBILL=. CEOSO=
CFOSO= CI=. CIMII=. CSHFD=. CSHI=. CSHO=19.5690 CSHPRI=19.5690 CSHR=1.2790 CSHRC=0.0000 CSHRP=0.0000 CSHRSO=2.1000
CSHRT=11.3640 CSHRW=9.2640 DERAC=. DERALT=. DERHEDGL=. DERLC=. DERLLT=. DT=. DVINTF=. EMP=0.0330 FINACO=. FINAO=.
FINCH=. FINDLC=. FINDLT=. FINIVST=. FINLCO=. FINLTO=. FINNP=. FINRECC=. FINRECLT=. FINREV=. FINXINT=. FINXOPR=. GLIV=.
GOVTOWN=. IBMII=. LIFRP=0.0000 LNO=. LOL2=. LQPL1=. LUL3=. MIBN=. MIBT=0.0000 NIINTPFC=. NIINTPFP=. NIPFC=. NIPFP=.
OPTCA=. OPTDR=. OPTEX=. OPTEXD=. OPTFVGR=. OPTGR=. OPTLIFE=. OPTOSBY=. OPTOSEY=. OPTPRCBY=. OPTRFR=. OPTVOL=. PNRSHO=.
PRSHO=. RANK=1 RSTCHE=. RSTCHELT=. SALEPFC=. SALEPFP=. TEQ=. TFVA=. TFVCE=. TFVL=. TSTKN=0.0000 TXTUBADJUST=.
TXTUBBEGIN=. TXTUBEND=. TXTUBMAX=. TXTUBMIN=. TXTUBPOSDEC=. TXTUBPOSINC=. TXTUBPOSPDEC=. TXTUBPOSPINC=. TXTUBSETTLE=.
TXTUBSOFLIMIT=. TXTUBTXTR=. TXTUBXINTBS=. TXTUBXINTIS=. XRDP=0.4220 ADJEX_C=1.000000000000 ADJEX_F=1.000000000000
CSHTR_C=. CSHTR_F=. DVPSP_C=0.0000 DVPSP_F=0.0000 DVPSX_C=0.0000 DVPSX_F=0.0000 MKVALT=. NAICSH=334220 PRCC_C=.
PRCC_F=. PRCH_C=. PRCH_F=. PRCL_C=. PRCL_F=. SICH=3663 CONSOL=C INDFMT=INDL DATAFMT=STD POPSRC=D CURCD=USD COSTAT=I
PS=0 BE=. year=1991 bvcEquity=. capIntens=. cashFlow=-0.503762727 cashHoldings=0.0531208499 costcap=.
leverages=-1.116752647 bleverage=1.8207171315 market_leverage=. roa=-0.590526782 roe=. cash_assets=0.0531208499
TobinsQ=. bvEqity=. _ERROR_=1 _N_=272
NOTE: Division by zero detected at line 2533 column 17.
GVKEY=001037 DATADATE=1992-03-31 FYEAR=1991 ADD1=1900 AM Drive ADD2= ADD3= ADD4= ADDZIP=18951-2107
BUSDESC=As of October 9, 2003, AM Communications, Inc. was acquired by NeSTronix, Inc. AM Communications, Inc.
CITY=Quakertown CONML=AM Communication Inc. COUNTY= DLDTE=2004-08-16 DLRSN=07 EIN=23-1922958 FAX=215-538-8779 FYRC=3
GGROUP=4520 GIND=452010 GSECTOR=45 GSUBIND=45201020 IDBFLAG=D INCORP=DE IPODATE=. LOC=USA NAICS=334220
PHONE=215-538-8700 PRICAN= PRIROW= PRIUSA=01 SIC=3663 SPCINDCD=180 SPCSECCD=940 SPCSRC= STATE=PA STKO=3 WEBURL=
CONM=AM COMMUNICATIONS INC TIC=AMCM. CUSIP=001674100 CIK=0000318580 EXCHG=19 FYR=3 FIC=USA ACCTCHG= ACCTSTD=DS
ACQMETH= ADRR=. AJEX=1.000000000000 AJP=1.000000000000 APDEDATE=. BSPR= COMPST= CURNCD=USD CURRTR=1.000000000000
CURUSCN=. FDATE=. FINAL=Y ISMOD=1 LTCM= OGM= PDATE=. PDDUR=12 SCF=7 SRC=53 STALT= UDPL= UPD=3 ACCO=. ACDO=.
ACO=0.0620 ACODO=. ACOMINC=. ACOX=0.0620 ACOXAR=. ACT=1.7640 AEDI=. ALDO=. AO=0.1330 AOCIDERGL=. AOCIOTHER=. AOCIPEN=.
AOCISECGL=. AODO=. AOX=0.1330 AP=0.3780 APB=. APC=. APOFS=. ARB=. ARC=. ARTFS=. AT=2.2310 BAST=0.0000 BKVLPS=-0.2253
CA=. CAPS=25.1880 CB=. CEQ=-4.4080 CEQL=-4.4080 CEQT=-4.5180 CH=0.1270 CHE=0.1270 CHS=. CLD2=0.0000 CLD3=0.0000
CLD4=0.0000 CLD5=0.0000 CLFC=. CLFX=. CLG=. CLIS=. CLL=. CLLC=. CLO=. CLRLL=. CLT=. CMP=. CRV=. CRVNLI=. CSTK=1.9570
CSTKCV=0.1000 DC=0.0000 DCLO=0.0000 DCOM=. DCPSTK=0.0000 DCS=. DCVSR=0.0000 DCVSUB=0.0000 DCVT=0.0000 DD=0.0000
DD1=0.0000 DD2=. DD3=. DD4=. DD5=. DFPAC=. DFS=. DLC=0.0000 DLTO=0.0000 DLTP=4.6630 DLTSUB=. DLTT=4.6630 DM=0.0000
DN=4.6630 DPACB=. DPACC=. DPACLI=. DPACLS=. DPACME=. DPACNR=. DPACO=. DPACRE=. DPACT=2.6460 DPDC=. DPLTB=. DPSC=.
DPSTB=. DPTB=. DPTC=. DPTIC=. DPVIEB=. DPVIO=. DPVIR=. DRC=. DRCI=. DRLT=. DS=0.0000 DUDD=0.0000 DVPA=0.0000 DVPIBB=.
DXD2=. DXD3=. DXD4=. DXD5=. EA=. ESOPCT=0.0000 ESOPDLT=0.0000 ESOPNR=. ESOPR=. ESOPT=0.0000 EXCADJ=. FATB=. FATC=.
FATE=. FATL=. FATN=. FATO=. FATP=. FDFR=. FEA=. FEL=. FFS=. GDWL=0.0000 GEQRV=. GOVGR=. IAEQ=. IAEQCI=. IAEQMI=.
IAFICI=. IAFXI=. IAFXMI=. IALI=. IALOI=. IALTI=. IAMLI=. IAOI=. IAPLI=. IAREI=. IASCI=. IASMI=. IASSI=. IASTI=.
IATCI=. IATI=. IATMI=. IAUI=. ICAPT=0.2550 INTAN=0.1100 INTANO=. INVFG=0.3510 INVO=0.0000 INVOFS=. INVREH=. INVREI=.
INVRES=. INVRM=0.4060 INVT=1.2660 INVWIP=0.5090 IP=. IPC=. IPV=. ISEQ=. ISEQC=. ISEQM=. ISFI=. ISFXC=. ISFXM=. ISLG=.
ISLGC=. ISLGM=. ISLT=. ISNG=. ISNGC=. ISNGM=. ISOTC=. ISOTH=. ISOTM=. ISSC=. ISSM=. ISSU=. IST=. ISTC=. ISTM=. ISUT=.

```
ITCB=0.0000 IVAEQ=0.0000 IVAO=0.0000 IVGOD=. IVPT=. IVST=0.0000 LCABG=. LCACL=. LCACR=. LCAG=. LCAL=. LCALT=. LCAM=.
LCAO=. LCAST=. LCAT=. LCO=0.4030 LCOX=0.2870 LCOXAR=. LCOXDR=. LCT=0.7810 LCUACU=. LIF=. LIFR=0.0000 LLOML=. LLOO=.
LLOT=. LO=1.1950 LOXDR=. LRV=. LS=. LSE=2.2310 LT=6.6390 MIB=0.0000 MRC1=0.2330 MRC2=0.0000 MRC3=0.0000 MRC4=0.0000
MRC5=0.0000 MRCT=0.2330 MRCTA=. MSA=0.0000 MSVRV=. MTL=. NAT=. NP=0.0000 NPANL=. NPAORE=. NPARL=. NPAT=. OB=0.2640
OPTPRCCA=. OPTPRCEX=. OPTPRCEY=. OPTPRCGR=. OPTPRCWA=. PPEGT=2.8700 PPENB=. PPENC=. PPENLI=. PPENLS=. PPENME=.
PPENNR=. PPENO=. PPENT=0.2240 PPEVBB=. PPEVEB=. PPEVO=. PPEVR=. PRC=. PRODV=. PRVT=. PSTK=0.0000 PSTKC=0.0000
PSTKL=0.0000 PSTKN=0.0000 PSTKR=0.0000 PSTKRV=0.0000 PVCL=. PVPL=. PVT=. RADP=. RAGR=. RARI=. RATI=. RCL=. RDP=.
RE=-31.5530 REA=0.0000 REAJO=0.0000 RECCO=0.0000 RECD=0.0010 RECT=0.3090 RECTA=0.0000 RECTR=0.3090 RECUB=. RET=.
REUNA=-31.5530 REUNR=. RLL=. RLO=. RLP=. RLRI=. RLT=. RPAG=. RREPS=. RVBCI=. RVBPI=. RVBTI=. RVDO=. RVDT=. RVEQT=.
RVLRV=. RVNO=. RVNT=. RVRI=. RVSI=. RVTI=. RVTXR=. RVUPI=. RVUTX=. SAA=. SAL=. SBDC=. SC=. SCO=. SECU=. SEQ=-4.4080
SEQO=. SRT=. SSNP=. STBO=. STIO=. TDSCD=. TDSCE=. TDSLG=. TDSMM=. TDSNG=. TDSO=. TDSS=. TDST=. TLCF=25.0000 TRANSA=.
TSA=. TSO=. TSTK=0.0000 TSTKC=0.0000 TSTKME=. TSTKP=0.0000 TXDB=0.0000 TXDBA=. TXDBCA=. TXDBCL=. TXDITC=0.0000 TXNDB=.
TXNDBA=. TXNDBL=. TXNDBR=. TXP=0.0000 TXR=0.0000 UAOX=. UAPT=. UCAPS=. UCCONS=. UCEQ=. UCUSTAD=. UDCOPRES=. UDD=.
UDMB=. UDOLT=. UDPCO=. UI=. UINVT=. ULCM=. ULCO=. UNL=. UNNP=. UNNPL=. UOPRES=. UPMCSTK=. UPMPF=. UPMPFS=. UPMSUBP=.
UPSTK=. UPSTKC=. UPSTKSF=. URECT=. URECTR=. UREVUB=. USUBPSTK=. VPAC=. VPO=. WCAP=0.9830 XACC=0.1160 XPP=.
ACCHG=0.0000 ADPAC=. AM=. AMDC=. AMGW=. AQA=. AQD=. AQEPS=. AQI=0.0000 AQP=. AQS=0.0000 ARCE=. ARCED=. ARCEEPS=.
AUTXR=. BALR=. BANLR=. BATR=. BCEF=. BCLR=. BCLTBL=. BCNLR=. BCRBL=. BCT=. BCTBL=. BCTR=. BLTBL=. CBI=. CDPAC=. CFBD=.
CFERE=. CFO=. CFPDO=. CGA=. CGRI=. CGTI=. CGUI=. CIBEGNI=. CICURR=. CIDERGL=. CIOTHER=. CIPEN=. CISECGL=. CITOTAL=.
CNLTBL=. COGS=1.2300 CPCBL=. CPDOI=. CPNLI=. CPPBL=. CPREI=. CSTKE=0.0000 DBI=. DFXA=. DILADJ=. DILAVX=. DO=0.0000
DONR=. DP=0.1410 DPRET=. DTEA=. DTED=. DTEEPS=. DTEP=. DVC=0.0000 DVDNP=. DVP=0.0000 DVPD=. DVPDP=. DVRPIV=. DVRRE=.
DVSCO=. DVT=0.0000 EBIT=-0.3950 EBITDA=-0.2540 EIEA=. EMOL=. EPSFI=-0.0400 EPSFX=-0.0400 EPSPI=-0.0400 EPSPX=-0.0400
ESUB=0.0000 FATD=. FCA=. FFO=. GBBL=. GDWLAM=. GDWLIA=. GDWLID=. GDWLIEPS=. GDWLIP=. GLA=. GLCEA=. GLCED=. GLCEEPS=.
GLCEP=. GLD=. GLEPS=. GLP=. GP=0.8110 GPHBL=. GPLBL=. GPOBL=. GPRBL=. GPTBL=. GWO=. HEDGEGL=. IB=-0.7250 IBADJ=-0.7250
IBBL=. IBCOM=-0.7250 IBKI=. IDIIS=. IDILB=. IDILC=. IDIS=. IDIST=. IDIT=0.0020 IDITS=. IIRE=. INITB=. INTC=0.0000
IOBD=. IOI=. IORE=. IPABL=. IPHBL=. IPLBL=. IPOBL=. IPTBL=. IPTI=. IREI=. IRENT=. IRII=. IRLI=. IRNLI=. IRSI=. ISGR=.
ISGT=. ISGU=. ITCI=. IVI=. LI=. LLRCI=. LLRCR=. LLWOCI=. LLWOCR=. LST=. MII=0.0000 NCO=. NFSR=. NI=-0.7250
NIADJ=-0.7250 NIECI=0.0000 NIINT=. NIIT=. NIM=. NIO=. NIT=. NITS=. NOPI=0.0090 NOPIO=0.0070 NRTXT=. NRTXTD=.
NRTXTEPS=. OIADP=-0.3950 OIBDP=-0.2540 OPEPS=-0.0400 OPILI=. OPINCAR=. OPINI=. OPIOI=. OPIRI=. OPITI=. OPREPSX=.
PALR=. PANLR=. PATR=. PCL=. PCLR=. PCNLR=. PCTR=. PI=-0.7250 PIDOM=. PIFO=. PLL=. PLTBL=. PNCA=. PNCAD=. PNCAEPS=.
PNCIA=. PNCID=. PNCIEPS=. PNCIP=. PNCWIA=. PNCWID=. PNCWIEPS=. PNCWIP=. PNLBL=. PNLI=. POBL=. PPCBL=. PPPABL=.
PPPHBL=. PPPOBL=. PPPTBL=. PRCA=. PRCAD=. PRCAEPS=. PREBL=. PRI=. PTBL=. PTRAN=. PVO=. PVON=. PWOI=. RCA=. RCD=.
RCEPS=. RCP=. RDIP=. RDIPA=. RDIPD=. RDIPEPS=. REVT=2.0410 RIS=. RMUM=. RRA=. RRD=. RRP=. SALE=2.0410 SETA=. SETD=.
SETEPS=. SETP=. SPCE=. SPCED=. SPCEEPS=. SPI=0.0000 SPID=. SPIEPS=. SPIOA=. SPIOP=. SRET=. STKCO=. STKCPA=. TDSG=.
TF=. TIE=. TII=. TXC=0.0000 TXDFED=0.0000 TXDFO=0.0000 TXDI=0.0000 TXDS=0.0000 TXEQA=. TXEQII=. TXFED=0.0000
TXFO=0.0000 TXO=0.0000 TXS=0.0000 TXT=0.0000 TXVA=. TXW=0.0000 UDPFA=. UDVP=. UGI=. UNIAMI=. UNOPINC=. UOPI=. UPDVP=.
USPI=. USUBDVP=. UTME=. UTXFED=. UXINST=. UXINTD=. WDA=. WDD=. WDEPS=. WDP=. XAD=. XAGO=. XAGT=. XCOM=. XCOMI=.
XDEPL=. XDP=. XDVRE=. XEQO=. XI=0.0000 XIDO=0.0000 XINDB=. XINDC=. XINS=. XINST=. XINT=0.3390 XINTD=0.3390 XINTOPT=.
XIVI=. XIVRE=. XLR=. XNBI=. XNF=. XNINS=. XNITB=. XOBD=. XOI=. XOPR=2.2950 XOPRAR=. XOPTD=. XOPTEPS=. XORE=. XPR=.
```

XRD=0.2990 XRENT=0.2250 XS=. XSGA=1.0650 XSTF=. XSTFO=. XSTFWS=. XT=. XUW=. XUWLI=. XUWNLI=. XUWOI=. XUWREI=. XUWTI=.
AFUDCC=. AFUDCI=. AMC=. AOLOCH=-0.1320 APALCH=-0.0120 AQC=0.0000 CAPX=. CAPXV=. CDVC=. CHECH=0.0070 DEPC=.
DLCCH=0.0000 DLTIS=0.5750 DLTR=0.0250 DPC=0.1790 DV=0.0000 ESUBC=0.0000 EXRE=0.0000 FIAO=0.0000 FINCF=0.5500
FOPO=0.3390 FOPOX=. FOPT=. FSRCO=. FSRCT=. FUSEO=. FUSET=. IBC=-0.7250 INTPN=0.0060 INVCH=0.0430 ITCC=. IVACO=-0.1160
IVCH=0.0000 IVNCF=-0.1160 IVSTCH=0.0000 OANCF=-0.4270 PDVC=. PRSTKC=0.0000 PRSTKCC=. PRSTKPC=. RECCH=-0.0770 SCSTKC=.
SIV=0.0000 SPPE=0.0000 SPPIV=0.0000 SPSTKC=. SSTK=0.0000 TDC=. TSAFC=. TXACH=0.0000 TXBCO=. TXBCOF=. TXDC=0.0000
TXPD=. UAOLOCH=. UDFCC=. UFRETSD=. UNWCC=. UOIS=. USTDNC=. UTFDOC=. UTFOSC=. UWKCAPC=. WCAPC=. WCAPCH=. XIDOC=-0.0420
ACCRT=. ACQAO=. ACQCSHI=. ACQGDWL=. ACQIC=. ACQINTAN=. ACQINVT=. ACQLNTAL=. ACQNIINTC=. ACQPPE=. ACQSC=. ANO=. AOL2=.
AQPL1=. AU=5 AUL3=. AUOP=4 AUOPIC= BASTR=0.0000 BILLEXCE=. CAPR1=. CAPR2=. CAPR3=. CAPSFT=. CEIEXBILL=. CEOSO=
CFOSO= CI=. CIMII=. CSHFD=. CSHI=. CSHO=19.5690 CSHPRI=19.5690 CSHR=1.2520 CSHRC=0.0000 CSHRP=0.0000 CSHRSO=3.7910
CSHRT=12.9300 CSHRW=9.1390 DERAC=. DERALT=. DERHEDGL=. DERLC=. DERLLT=. DT=. DVINTF=. EMP=0.0320 FINACO=. FINAO=.
FINCH=. FINDLC=. FINDLT=. FINIVST=. FINLCO=. FINLTO=. FINNP=. FINRECC=. FINRECLT=. FINREV=. FINXINT=. FINXOPR=. GLIV=.
GOVTOWN=. IBMII=. LIFRP=0.0000 LNO=. LOL2=. LQPL1=. LUL3=. MIBN=. MIBT=0.0000 NIINTPFC=. NIINTPFP=. NIPFC=. NIPFP=.
OPTCA=. OPTDR=. OPTEX=. OPTEXD=. OPTFVGR=. OPTGR=. OPTLIFE=. OPTOSBY=. OPTOSEY=. OPTPRCBY=. OPTRFR=. OPTVOL=. PNRSHO=.
PRSHO=. RANK=1 RSTCHE=. RSTCHELT=. SALEPFC=. SALEPFP=. TEQ=. TFVA=. TFVCE=. TFVL=. TSTKN=0.0000 TXTUBADJUST=.
TXTUBBEGIN=. TXTUBEND=. TXTUBMAX=. TXTUBMIN=. TXTUBPOSDEC=. TXTUBPOSINC=. TXTUBPOSPDEC=. TXTUBPOSPINC=. TXTUBSETTLE=.
TXTUBSOFLIMIT=. TXTUBTXTR=. TXTUBXINTBS=. TXTUBXINTIS=. XRDP=0.3200 ADJEX_C=1.000000000000 ADJEX_F=1.000000000000
CSHTR_C=. CSHTR_F=. DVPSP_C=0.0000 DVPSP_F=0.0000 DVPSX_C=0.0000 DVPSX_F=0.0000 MKVALT=. NAICSH=334220 PRCC_C=.
PRCC_F=. PRCH_C=. PRCH_F=. PRCL_C=. PRCL_F=. SICH=3663 CONSOL=C INDFMT=INDL DATAFMT=STD POPSRC=D CURCD=USD COSTAT=I
PS=0 BE=. year=1992 bvcEquity=. capIntens=. cashFlow=-0.261766024 cashHoldings=0.0569251457 costcap=.
leverages=-1.057849365 bleverage=2.0900941282 market_leverage=. roa=-0.324966383 roe=. cash_assets=0.0569251457
TobinsQ=. bvEqity=. _ERROR_=1 _N_=273
NOTE: Division by zero detected at line 2533 column 17.
GVKEY=001037 DATADATE=1994-03-31 FYEAR=1993 ADD1=1900 AM Drive ADD2= ADD3= ADD4= ADDZIP=18951-2107
BUSDESC=As of October 9, 2003, AM Communications, Inc. was acquired by NeSTronix, Inc. AM Communications, Inc.
CITY=Quakertown CONML=AM Communication Inc. COUNTY= DLDTE=2004-08-16 DLRSN=07 EIN=23-1922958 FAX=215-538-8779 FYRC=3
GGROUP=4520 GIND=452010 GSECTOR=45 GSUBIND=45201020 IDBFLAG=D INCORP=DE IPODATE=. LOC=USA NAICS=334220
PHONE=215-538-8700 PRICAN= PRIROW= PRIUSA=01 SIC=3663 SPCINDCD=180 SPCSECCD=940 SPCSRC= STATE=PA STKO=3 WEBURL=
CONM=AM COMMUNICATIONS INC TIC=AMCM. CUSIP=001674100 CIK=0000318580 EXCHG=19 FYR=3 FIC=USA ACCTCHG= ACCTSTD=DS
ACQMETH= ADRR=. AJEX=1.000000000000 AJP=1.000000000000 APDEDATE=. BSPR= COMPST= CURNCD=USD CURRTR=1.000000000000
CURUSCN=. FDATE=. FINAL=Y ISMOD=1 LTCM= OGM= PDATE=. PDDUR=12 SCF=7 SRC=53 STALT= UDPL= UPD=3 ACCO=. ACDO=.
ACO=0.0140 ACODO=. ACOMINC=. ACOX=0.0140 ACOXAR=. ACT=2.2620 AEDI=. ALDO=. AO=0.2190 AOCIDERGL=. AOCIOTHER=. AOCIPEN=.
AOCISECGL=. AODO=. AOX=0.2190 AP=0.2850 APB=. APC=. APOFS=. ARB=. ARC=. ARTFS=. AT=2.6900 BAST=. BKVLPS=-0.0237 CA=.
CAPS=28.6450 CB=. CEQ=-0.5790 CEQL=-0.5790 CEQT=-0.6380 CH=0.1900 CHE=0.1900 CHS=. CLD2=0.0000 CLD3=0.0000 CLD4=0.0000
CLD5=0.0000 CLFC=. CLFX=. CLG=. CLIS=. CLL=. CLLC=. CLO=. CLRLL=. CLT=. CMP=. CRV=. CRVNLI=. CSTK=2.4460 CSTKCV=0.1000
DC=0.0000 DCLO=0.0000 DCOM=. DCPSTK=2.5830 DCS=0.0000 DCVSR=0.0000 DCVSUB=0.0000 DCVT=0.0000 DD=0.0000 DD1=0.0000
DD2=0.0000 DD3=0.0000 DD4=0.0000 DD5=0.0000 DFPAC=. DFS=0.0000 DLC=0.0000 DLTO=0.0000 DLTP=0.0000 DLTSUB=. DLTT=0.0000
DM=0.0000 DN=0.0000 DPACB=0.0000 DPACC=0.0000 DPACLI=0.0000 DPACLS=0.0000 DPACME=2.5060 DPACNR=0.0000 DPACO=0.0000

DPACRE=. DPACT=2.5060 DPDC=. DPLTB=. DPSC=. DPSTB=. DPTB=. DPTC=. DPTIC=. DPVIEB=2.5060 DPVIO=. DPVIR=. DRC=. DRCI=. DRLT=. DS=0.0000 DUDD=0.0000 DVPA=0.0000 DVPIBB=. DXD2=0.0000 DXD3=0.0000 DXD4=0.0000 DXD5=0.0000 EA=. ESOPCT=0.0000 ESOPDLT=0.0000 ESOPNR=. ESOPR=. ESOPT=0.0000 EXCADJ=. FATB=0.0000 FATC=0.0000 FATE=2.6560 FATL=0.0000 FATN=0.0000 FATO=0.0000 FATP=0.0000 FDFR=. FEA=. FEL=. FFS=. GDWL=. GEQRV=. GOVGR=. IAEQ=. IAEQCI=. IAEQMI=. IAFICI=. IAFXI=. IAFXMI=. IALI=. IALOI=. IALTI=. IAMLI=. IAOI=. IAPLI=. IAREI=. IASCI=. IASMI=. IASSI=. IASTI=. IATCI=. IATI=. IATMI=. IAUI=. ICAPT=2.0040 INTAN=0.0590 INTANO=. INVFG=0.1920 INVO=0.0000 INVOFS=. INVREH=. INVREI=. INVRES=. INVRM=0.6560 INVT=1.2660 INVWIP=0.4180 IP=. IPC=. IPV=. ISEQ=. ISEQC=. ISEQM=. ISFI=. ISFXC=. ISFXM=. ISLG=. ISLGC=. ISLGM=. ISLT=. ISNG=. ISNGC=. ISNGM=. ISOTC=. ISOTH=. ISOTM=. ISSC=. ISSM=. ISSU=. IST=. ISTC=. ISTM=. ISUT=. ITCB=0.0000 IVAEQ=0.0000 IVAO=0.0000 IVGOD=. IVPT=. IVST=0.0000 LCABG=. LCACL=. LCACR=. LCAG=. LCAL=. LCALT=. LCAM=. LCAO=. LCAST=. LCAT=. LCO=0.3390 LCOX=0.0000 LCOXAR=. LCOXDR=. LCT=0.6860 LCUACU=. LIF=. LIFR=0.0000 LLOML=. LLOO=. LLOT=. LO=0.0000 LOXDR=. LRV=. LS=. LSE=2.6900 LT=0.6860 MIB=0.0000 MRC1=0.1930 MRC2=0.2040 MRC3=0.0520 MRC4=0.0000 MRC5=0.0000 MRCT=0.4490 MRCTA=. MSA=0.0000 MSVRV=. MTL=. NAT=. NP=0.0000 NPANL=. NPAORE=. NPARL=. NPAT=. OB=2.4220 OPTPRCCA=. OPTPRCEX=. OPTPRCEY=. OPTPRCGR=. OPTPRCWA=. PPEGT=2.6560 PPENB=0.0000 PPENC=0.0000 PPENLI=0.0000 PPENLS=0.0000 PPENME=0.1500 PPENNR=0.0000 PPENO=0.0000 PPENT=0.1500 PPEVBB=. PPEVEB=2.6560 PPEVO=. PPEVR=. PRC=. PRODV=. PRVT=. PSTK=2.5830 PSTKC=2.5830 PSTKL=2.5830 PSTKN=2.5830 PSTKR=0.0000 PSTKRV=2.5830 PVCL=. PVPL=. PVT=. RADP=. RAGR=. RARI=. RATI=. RCL=. RDP=. RE=-31.6700 REA=0.0000 REAJO=0.0000 RECCO=0.0000 RECD=0.0010 RECT=0.7920 RECTA=0.0000 RECTR=0.7920 RECUB=. RET=. REUNA=-31.6700 REUNR=. RLL=. RLO=. RLP=. RLRI=. RLT=. RPAG=. RREPS=. RVBCI=. RVBPI=. RVBTI=. RVDO=. RVDT=. RVEQT=. RVLRV=. RVNO=. RVNT=. RVRI=. RVSI=. RVTI=. RVTXR=. RVUPI=. RVUTX=. SAA=. SAL=. SBDC=. SC=. SCO=. SECU=. SEQ=2.0040 SEQO=. SRT=. SSNP=. STBO=. STIO=. TDSCD=. TDSCE=. TDSLG=. TDSMM=. TDSNG=. TDSO=. TDSS=. TDST=. TLCF=16.3370 TRANSA=. TSA=. TSO=. TSTK=0.0000 TSTKC=0.0000 TSTKME=. TSTKP=0.0000 TXDB=0.0000 TXDBA=. TXDBCA=. TXDBCL=. TXDITC=0.0000 TXNDB=. TXNDBA=. TXNDBL=. TXNDBR=. TXP=0.0620 TXR=0.0000 UAOX=. UAPT=. UCAPS=. UCCONS=. UCEQ=. UCUSTAD=. UDCOPRES=. UDD=. UDMB=. UDOLT=. UDPCO=. UI=. UINVT=. ULCM=. ULCO=. UNL=. UNNP=. UNNPL=. UOPRES=. UPMCSTK=. UPMPF=. UPMPFS=. UPMSUBP=. UPSTK=. UPSTKC=. UPSTKSF=. URECT=. URECTR=. UREVUB=. USUBPSTK=. VPAC=. VPO=. WCAP=1.5760 XACC=0.3390 XPP=. ACCHG=0.0000 ADPAC=. AM=. AMDC=. AMGW=. AQA=. AQD=. AQEPS=. AQI=0.0000 AQP=. AQS=0.0000 ARCE=. ARCED=. ARCEEPS=. AUTXR=. BALR=. BANLR=. BATR=. BCEF=. BCLR=. BCLTBL=. BCNLR=. BCRBL=. BCT=. BCTBL=. BCTR=. BLTBL=. CBI=. CDPAC=. CFBD=. CFERE=. CFO=. CFPDO=. CGA=. CGRI=. CGTI=. CGUI=. CIBEGNI=. CICURR=. CIDERGL=. CIOTHER=. CIPEN=. CISECGL=. CITOTAL=. CNLTBL=. COGS=1.7130 CPCBL=. CPDOI=. CPNLI=. CPPBL=. CPREI=. CSTKE=0.0000 DBI=. DFXA=. DILADJ=. DILAVX=. DO=0.0000 DONR=. DP=0.0880 DPRET=. DTEA=. DTED=. DTEEPS=. DTEP=. DVC=0.0000 DVDNP=. DVP=0.0000 DVPD=. DVPDP=. DVRPIV=. DVRRE=. DVSCO=. DVT=0.0000 EBIT=0.7280 EBITDA=0.8160 EIEA=. EMOL=. EPSFI=0.0200 EPSFX=0.0200 EPSPI=0.0200 EPSPX=0.0200 ESUB=0.0000 FATD=. FCA=. FFO=. GBBL=. GDWLAM=. GDWLIA=. GDWLID=. GDWLIEPS=. GDWLIP=. GLA=. GLCEA=. GLCED=. GLCEEPS=. GLCEP=. GLD=. GLEPS=. GLP=. GP=2.1820 GPHBL=. GPLBL=. GPOBL=. GPRBL=. GPTBL=. GWO=. HEDGEGL=. IB=0.3830 IBADJ=0.3830 IBBL=. IBCOM=0.3830 IBKI=. IDIIS=. IDILB=. IDILC=. IDIS=. IDIST=. IDIT=. IDITS=. IIRE=. INITB=. INTC=0.0000 IOBD=. IOI=. IORE=. IPABL=. IPHBL=. IPLBL=. IPOBL=. IPTBL=. IPTI=. IREI=. IRENT=. IRII=. IRLI=. IRNLI=. IRSI=. ISGR=. ISGT=. ISGU=. ITCI=. IVI=. LI=. LLRCI=. LLRCR=. LLWOCI=. LLWOCR=. LST=. MII=0.0000 NCO=. NFSR=. NI=0.3830 NIADJ=0.3830 NIECI=0.0000 NIINT=. NIIT=. NIM=. NIO=. NIT=. NITS=. NOPI=0.0100 NOPIO=0.0100 NRTXT=. NRTXTD=. NRTXTEPS=. OIADP=0.7280 OIBDP=0.8160 OPEPS=0.0200 OPILI=. OPINCAR=. OPINI=. OPIOI=. OPIRI=. OPITI=. OPREPSX=. PALR=. PANLR=. PATR=. PCL=. PCLR=. PCNLR=. PCTR=. PI=0.4450 PIDOM=. PIFO=. PLL=. PLTBL=. PNCA=. PNCAD=. PNCAEPS=. PNCIA=. PNCID=. PNCIEPS=. PNCIP=. PNCWIA=. PNCWID=. PNCWIEPS=. PNCWIP=. PNLBL=. PNLI=. POBL=. PPCBL=.

PPPABL=. PPPHBL=. PPPOBL=. PPPTBL=. PRCA=. PRCAD=. PRCAEPS=. PREBL=. PRI=. PTBL=. PTRAN=. PVO=. PVON=. PWOI=. RCA=. RCD=. RCEPS=. RCP=. RDIP=. RDIPA=. RDIPD=. RDIPEPS=. REVT=3.8950 RIS=. RMUM=. RRA=. RRD=. RRP=. SALE=3.8950 SETA=. SETD=. SETEPS=. SETP=. SPCE=. SPCED=. SPCEEPS=. SPI=0.0000 SPID=. SPIEPS=. SPIOA=. SPIOP=. SRET=. STKCO=. STKCPA=. TDSG=. TF=. TIE=. TII=. TXC=. TXDFED=. TXDFO=. TXDI=0.0000 TXDS=. TXEQA=. TXEQII=. TXFED=. TXFO=. TXO=0.0000 TXS=. TXT=0.0620 TXVA=. TXW=0.0000 UDPFA=. UDVP=. UGI=. UNIAMI=. UNOPINC=. UOPI=. UPDVP=. USPI=. USUBDVP=. UTME=. UTXFED=. UXINST=. UXINTD=. WDA=. WDD=. WDEPS=. WDP=. XAD=. XAGO=. XAGT=. XCOM=. XCOMI=. XDEPL=. XDP=. XDVRE=. XEQO=. XI=0.0000 XIDO=0.0000 XINDB=. XINDC=. XINS=. XINST=. XINT=0.2930 XINTD=. XINTOPT=. XIVI=. XIVRE=. XLR=. XNBI=. XNF=. XNINS=. XNITB=. XOBD=. XOI=. XOPR=3.0790 XOPRAR=. XOPTD=. XOPTEPS=. XORE=. XPR=. XRD=0.5180 XRENT=0.2000 XS=. XSGA=1.3660 XSTF=. XSTFO=. XSTFWS=. XT=. XUW=. XUWLI=. XUWNLI=. XUWOI=. XUWREI=. XUWTI=. AFUDCC=. AFUDCI=. AMC=. AOLOCH=0.0000 APALCH=0.0100 AQC=0.0000 CAPX=. CAPXV=. CDVC=. CHECH=-0.0340 DEPC=. DLCCH=-0.2000 DLTIS=0.0000 DLTR=0.0000 DPC=0.1560 DV=0.0000 ESUBC=0.0000 EXRE=0.0000 FIAO=0.0000 FINCF=-0.2000 FOPO=0.2840 FOPOX=. FOPT=. FSRCO=. FSRCT=. FUSEO=. FUSET=. IBC=0.3830 INTPN=0.0090 INVCH=-0.1190 ITCC=. IVACO=-0.2470 IVCH=0.0000 IVNCF=-0.2470 IVSTCH=0.0000 OANCF=0.4130 PDVC=. PRSTKC=0.0000 PRSTKCC=. PRSTKPC=. RECCH=-0.3010 SCSTKC=. SIV=0.0000 SPPE=0.0000 SPPIV=0.0000 SPSTKC=. SSTK=0.0000 TDC=. TSAFC=. TXACH=. TXBCO=. TXBCOF=. TXDC=0.0000 TXPD=0.0000 UAOLOCH=. UDFCC=. UFRETSD=. UNWCC=. UOIS=. USTDNC=. UTFDOC=. UTFOSC=. UWKCAPC=. WCAPC=. WCAPCH=. XIDOC=0.0000 ACCRT=. ACQAO=. ACQCSHI=. ACQGDWL=. ACQIC=. ACQINTAN=. ACQINVT=. ACQLNTAL=. ACQNIINTC=. ACQPPE=. ACQSC=. ANO=. AOL2=. AQPL1=. AU=5 AUL3=. AUOP=1 AUOPIC= BASTR=. BILLEXCE=. CAPR1=. CAPR2=. CAPR3=. CAPSFT=. CEIEXBILL=. CEOSO= CFOSO= CI=. CIMII=. CSHFD=28.0110 CSHI=. CSHO=24.4580 CSHPRI=22.5890 CSHR=1.1550 CSHRC=0.0000 CSHRP=2.5830 CSHRSO=5.7730 CSHRT=17.8950 CSHRW=9.5390 DERAC=. DERALT=. DERHEDGL=. DERLC=. DERLLT=. DT=. DVINTF=. EMP=0.0400 FINACO=. FINAO=. FINCH=. FINDLC=. FINDLT=. FINIVST=. FINLCO=. FINLTO=. FINNP=. FINRECC=. FINRECLT=. FINREV=. FINXINT=. FINXOPR=. GLIV=. GOVTOWN=. IBMII=. LIFRP=0.0000 LNO=. LOL2=. LQPL1=. LUL3=. MIBN=. MIBT=0.0000 NIINTPFC=. NIINTPFP=. NIPFC=. NIPFP=. OPTCA=. OPTDR=. OPTEX=. OPTEXD=. OPTFVGR=. OPTGR=. OPTLIFE=. OPTOSBY=. OPTOSEY=. OPTPRCBY=. OPTRFR=. OPTVOL=. PNRSHO=. PRSHO=. RANK=1 RSTCHE=. RSTCHELT=. SALEPFC=. SALEPFP=. TEQ=. TFVA=. TFVCE=. TFVL=. TSTKN=0.0000 TXTUBADJUST=. TXTUBBEGIN=. TXTUBEND=. TXTUBMAX=. TXTUBMIN=. TXTUBPOSDEC=. TXTUBPOSINC=. TXTUBPOSPDEC=. TXTUBPOSPINC=. TXTUBSETTLE=. TXTUBSOFLIMIT=. TXTUBTXTR=. TXTUBXINTBS=. TXTUBXINTIS=. XRDP=0.4400 ADJEX_C=1.000000000000 ADJEX_F=1.000000000000 CSHTR_C=. CSHTR_F=. DVPSP_C=0.0000 DVPSP_F=0.0000 DVPSX_C=0.0000 DVPSX_F=0.0000 MKVALT=. NAICSH=334220 PRCC_C=. PRCC_F=. PRCH_C=. PRCH_F=. PRCL_C=. PRCL_F=. SICH=3663 CONSOL=C INDFMT=INDL DATAFMT=STD POPSRC=D CURCD=USD COSTAT=I PS=2.583 BE=. year=1994 bvcEquity=. capIntens=. cashFlow=0.1750929368 cashHoldings=0.0706319703 costcap=. leverages=0 bleverage=0 market_leverage=. roa=0.1423791822 roe=. cash_assets=0.0706319703 TobinsQ=. bvEqity=. _ERROR_=1 _N_=275
NOTE: Division by zero detected at line 2533 column 17.
GVKEY=001050 DATADATE=1987-05-31 FYEAR=1986 ADD1=14651 North Dallas Parkway, Suite 500 ADD2= ADD3= ADD4=
ADDZIP=75254
BUSDESC=CECO Environmental Corp. provides critical solutions in industrial air quality, industrial water treatment, and energy transition solutions worldwide. It operates in two segments: Engineered Systems and Industrial Process Solutions. CITY=Dallas CONML=CECO Environmental Corp. COUNTY= DLDTE=. DLRSN= EIN=13-2566064 FAX=214 351 0194 FYRC=12
GGROUP=2020 GIND=202010 GSECTOR=20 GSUBIND=20201050 IDBFLAG=D INCORP=DE IPODATE=. LOC=USA NAICS=333413
PHONE=214 357 6181 PRICAN= PRIROW= PRIUSA=01 SIC=3564 SPCINDCD=345 SPCSECCD=925 SPCSRC=B- STATE=TX STKO=0
WEBURL=www.cecoenviro.com CONM=CECO ENVIRONMENTAL CORP TIC=CECO CUSIP=125141101 CIK=0000003197 EXCHG=14 FYR=5 FIC=USA

ACCTCHG= ACCTSTD=DS ACQMETH= ADRR=. AJEX=0.199999990000 AJP=0.199999990000 APDEDATE=. BSPR= COMPST= CURNCD=USD
CURRTR=1.000000000000 CURUSCN=. FDATE=. FINAL=Y ISMOD=1 LTCM= OGM= PDATE=. PDDUR=12 SCF=1 SRC=5 STALT= UDPL= UPD=3
ACCO=. ACDO=. ACO=0.0380 ACODO=. ACOMINC=. ACOX=0.0200 ACOXAR=. ACT=0.0640 AEDI=. ALDO=. AO=0.0030 AOCIDERGL=.
AOCIOTHER=. AOCIPEN=. AOCISECGL=. AODO=. AOX=0.0030 AP=0.0000 APB=. APC=. APOFS=. ARB=. ARC=. ARTFS=. AT=1.3990
BAST=0.0850 BKVLPS=0.1826 CA=. CAPS=1.5840 CB=. CEQ=0.9000 CEQL=0.9000 CEQT=0.9000 CH=0.0260 CHE=0.0260 CHS=. CLD2=.
CLD3=. CLD4=. CLD5=. CLFC=. CLFX=. CLG=. CLIS=. CLL=. CLLC=. CLO=. CLRLL=. CLT=. CMP=. CRV=. CRVNLI=. CSTK=0.0510
CSTKCV=0.0100 DC=0.0000 DCLO=0.0000 DCOM=. DCPSTK=0.0000 DCS=. DCVSR=0.0000 DCVSUB=0.0000 DCVT=0.0000 DD=0.0000
DD1=0.0000 DD2=. DD3=. DD4=. DD5=. DFPAC=. DFS=. DLC=0.0000 DLTO=0.4920 DLTP=. DLTSUB=. DLTT=0.4930 DM=0.0010
DN=0.0010 DPACB=0.0000 DPACC=0.0000 DPACLI=0.0000 DPACLS=0.0000 DPACME=0.0000 DPACNR=0.0000 DPACO=0.0000 DPACRE=.
DPACT=0.0000 DPDC=. DPLTB=. DPSC=. DPSTB=. DPTB=. DPTC=. DPTIC=. DPVIEB=0.0000 DPVIO=-0.0310 DPVIR=0.0530 DRC=. DRCI=.
DRLT=. DS=0.0000 DUDD=0.0000 DVPA=0.0000 DVPIBB=0.0780 DXD2=. DXD3=. DXD4=. DXD5=. EA=. ESOPCT=. ESOPDLT=. ESOPNR=.
ESOPR=. ESOPT=. EXCADJ=. FATB=0.0000 FATC=0.0000 FATE=0.0240 FATL=0.0000 FATN=0.0000 FATO=0.0000 FATP=0.0000 FDFR=.
FEA=. FEL=. FFS=. GDWL=. GEQRV=. GOVGR=. IAEQ=. IAEQCI=. IAEQMI=. IAFICI=. IAFXI=. IAFXMI=. IALI=. IALOI=. IALTI=.
IAMLI=. IAOI=. IAPLI=. IAREI=. IASCI=. IASMI=. IASSI=. IASTI=. IATCI=. IATI=. IATMI=. IAUI=. ICAPT=1.3930 INTAN=0.0000
INTANO=. INVFG=0.0000 INVO=0.0000 INVOFS=. INVREH=. INVREI=. INVRES=. INVRM=0.0000 INVT=0.0000 INVWIP=0.0000 IP=.
IPC=. IPV=. ISEQ=. ISEQC=. ISEQM=. ISFI=. ISFXC=. ISFXM=. ISLG=. ISLGC=. ISLGM=. ISLT=. ISNG=. ISNGC=. ISNGM=. ISOTC=.
ISOTH=. ISOTM=. ISSC=. ISSM=. ISSU=. IST=. ISTC=. ISTM=. ISUT=. ITCB=0.0000 IVAEQ=0.0000 IVAO=1.3080 IVGOD=. IVPT=.
IVST=0.0000 LCABG=. LCACL=. LCACR=. LCAG=. LCAL=. LCALT=. LCAM=. LCAO=. LCAST=. LCAT=. LCO=0.0020 LCOX=0.0000 LCOXAR=.
LCOXDR=. LCT=0.0060 LCUACU=. LIF=. LIFR=0.0000 LLOML=. LLOO=. LLOT=. LO=0.0000 LOXDR=. LRV=. LS=. LSE=1.3990 LT=0.4990
MIB=0.0000 MRC1=0.0000 MRC2=0.0000 MRC3=0.0000 MRC4=0.0000 MRC5=0.0000 MRCT=0.0000 MRCTA=. MSA=0.0000 MSVRV=. MTL=.
NAT=. NP=0.0000 NPANL=. NPAORE=. NPARL=. NPAT=. OB=. OPTPRCCA=. OPTPRCEX=. OPTPRCEY=. OPTPRCGR=. OPTPRCWA=.
PPEGT=0.0240 PPENB=0.0000 PPENC=0.0000 PPENLI=0.0000 PPENLS=0.0000 PPENME=0.0240 PPENNR=0.0000 PPENO=0.0000
PPENT=0.0240 PPEVBB=0.1170 PPEVEB=0.0240 PPEVO=-0.0400 PPEVR=0.0530 PRC=. PRODV=. PRVT=. PSTK=0.0000 PSTKC=0.0000
PSTKL=0.0000 PSTKN=0.0000 PSTKR=0.0000 PSTKRV=0.0000 PVCL=. PVPL=. PVT=. RADP=. RAGR=. RARI=. RATI=. RCL=. RDP=.
RE=-0.6160 REA=0.0000 REAJO=0.0000 RECCO=0.0000 RECD=0.0000 RECT=0.0000 RECTA=0.0000 RECTR=0.0000 RECUB=. RET=.
REUNA=-0.6160 REUNR=. RLL=. RLO=. RLP=. RLRI=. RLT=. RPAG=. RREPS=. RVBCI=. RVBPI=. RVBTI=. RVDO=. RVDT=. RVEQT=.
RVLRV=. RVNO=. RVNT=. RVRI=. RVSI=. RVTI=. RVTXR=. RVUPI=. RVUTX=. SAA=. SAL=. SBDC=. SC=. SCO=. SECU=. SEQ=0.9000
SEQO=. SRT=. SSNP=. STBO=. STIO=. TDSCD=. TDSCE=. TDSLG=. TDSMM=. TDSNG=. TDSO=. TDSS=. TDST=. TLCF=0.0720 TRANSA=.
TSA=. TSO=. TSTK=0.1190 TSTKC=0.1190 TSTKME=. TSTKP=0.0000 TXDB=0.0000 TXDBA=. TXDBCA=. TXDBCL=. TXDITC=0.0000 TXNDB=.
TXNDBA=. TXNDBL=. TXNDBR=. TXP=0.0040 TXR=0.0000 UAOX=. UAPT=. UCAPS=. UCCONS=. UCEQ=. UCUSTAD=. UDCOPRES=. UDD=.
UDMB=. UDOLT=. UDPCO=. UI=. UINVT=. ULCM=. ULCO=. UNL=. UNNP=. UNNPL=. UOPRES=. UPMCSTK=. UPMPF=. UPMPFS=. UPMSUBP=.
UPSTK=. UPSTKC=. UPSTKSF=. URECT=. URECTR=. UREVUB=. USUBPSTK=. VPAC=. VPO=. WCAP=0.0580 XACC=0.0020 XPP=0.0180
ACCHG=. ADPAC=. AM=0.0000 AMDC=. AMGW=. AQA=. AQD=. AQEPS=. AQI=0.0000 AQP=. AQS=0.0000 ARCE=. ARCED=. ARCEEPS=.
AUTXR=. BALR=. BANLR=. BATR=. BCEF=. BCLR=. BCLTBL=. BCNLR=. BCRBL=. BCT=. BCTBL=. BCTR=. BLTBL=. CBI=. CDPAC=. CFBD=.
CFERE=. CFO=. CFPDO=. CGA=. CGRI=. CGTI=. CGUI=. CIBEGNI=. CICURR=. CIDERGL=. CIOTHER=. CIPEN=. CISECGL=. CITOTAL=.
CNLTBL=. COGS=0.5180 CPCBL=. CPDOI=. CPNLI=. CPPBL=. CPREI=. CSTKE=0.0000 DBI=. DFXA=0.0060 DILADJ=. DILAVX=.
DO=0.0000 DONR=. DP=0.0060 DPRET=. DTEA=. DTED=. DTEEPS=. DTEP=. DVC=0.0000 DVDNP=. DVP=0.0000 DVPD=. DVPDP=. DVRPIV=.
DVRRE=. DVSCO=. DVT=0.0000 EBIT=-0.1820 EBITDA=-0.1760 EIEA=. EMOL=. EPSFI=0.0800 EPSFX=0.0800 EPSPI=0.0800

EPSPX=0.0800 ESUB=0.0000 FATD=. FCA=. FFO=. GBBL=. GDWLAM=. GDWLIA=. GDWLID=. GDWLIEPS=. GDWLIP=. GLA=. GLCEA=.
GLCED=. GLCEEPS=. GLCEP=. GLD=. GLEPS=. GLP=. GP=0.1120 GPHBL=. GPLBL=. GPOBL=. GPRBL=. GPTBL=. GWO=. HEDGEGL=.
IB=0.4120 IBADJ=0.4120 IBBL=. IBCOM=0.4120 IBKI=. IDIIS=. IDILB=. IDILC=. IDIS=. IDIST=. IDIT=0.0000 IDITS=. IIRE=.
INITB=. INTC=0.0000 IOBD=. IOI=. IORE=. IPABL=. IPHBL=. IPLBL=. IPOBL=. IPTBL=. IPTI=. IREI=. IRENT=. IRII=. IRLI=.
IRNLI=. IRSI=. ISGR=. ISGT=. ISGU=. ITCI=0.0000 IVI=. LI=. LLRCI=. LLRCR=. LLWOCI=. LLWOCR=. LST=. MII=0.0000 NCO=.
NFSR=. NI=0.4120 NIADJ=0.4120 NIECI=0.0000 NIINT=. NIIT=. NIM=. NIO=. NIT=. NITS=. NOPI=0.0120 NOPIO=0.0120 NRTXT=.
NRTXTD=. NRTXTEPS=. OIADP=-0.1820 OIBDP=-0.1760 OPEPS=0.0100 OPILI=. OPINCAR=. OPINI=. OPIOI=. OPIRI=. OPITI=.
OPREPSX=. PALR=. PANLR=. PATR=. PCL=. PCLR=. PCNLR=. PCTR=. PI=0.4200 PIDOM=. PIFO=. PLL=. PLTBL=. PNCA=. PNCAD=.
PNCAEPS=. PNCIA=. PNCID=. PNCIEPS=. PNCIP=. PNCWIA=. PNCWID=. PNCWIEPS=. PNCWIP=. PNLBL=. PNLI=. POBL=. PPCBL=.
PPPABL=. PPPHBL=. PPPOBL=. PPPTBL=. PRCA=. PRCAD=. PRCAEPS=. PREBL=. PRI=. PTBL=. PTRAN=. PVO=. PVON=. PWOI=. RCA=.
RCD=. RCEPS=. RCP=. RDIP=. RDIPA=. RDIPD=. RDIPEPS=. REVT=0.6300 RIS=. RMUM=. RRA=. RRD=. RRP=. SALE=0.6300 SETA=.
SETD=. SETEPS=. SETP=. SPCE=. SPCED=. SPCEEPS=. SPI=0.6060 SPID=. SPIEPS=. SPIOA=. SPIOP=. SRET=. STKCO=. STKCPA=.
TDSG=. TF=. TIE=. TII=. TXC=0.0080 TXDFED=0.0000 TXDFO=0.0000 TXDI=0.0000 TXDS=0.0000 TXEQA=. TXEQII=. TXFED=0.0000
TXFO=0.0000 TXO=0.0000 TXS=0.0080 TXT=0.0080 TXVA=. TXW=0.0000 UDPFA=. UDVP=. UGI=. UNIAMI=. UNOPINC=. UOPI=. UPDVP=.
USPI=. USUBDVP=. UTME=. UTXFED=. UXINST=. UXINTD=. WDA=. WDD=. WDEPS=. WDP=. XAD=0.0010 XAGO=. XAGT=. XCOM=. XCOMI=.
XDEPL=0.0000 XDP=0.0060 XDVRE=. XEQO=. XI=0.0000 XIDO=0.0000 XINDB=. XINDC=. XINS=. XINST=. XINT=0.0160 XINTD=.
XINTOPT=. XIVI=. XIVRE=. XLR=. XNBI=. XNF=. XNINS=. XNITB=. XOBD=. XOI=. XOPR=0.8060 XOPRAR=. XOPTD=. XOPTEPS=. XORE=.
XPR=0.0000 XRD=. XRENT=0.0430 XS=. XSGA=0.2880 XSTF=. XSTFO=. XSTFWS=. XT=. XUW=. XUWLI=. XUWNLI=. XUWOI=. XUWREI=.
XUWTI=. AFUDCC=. AFUDCI=. AMC=. AOLOCH=. APALCH=. AQC=0.0000 CAPX=0.0000 CAPXV=0.0000 CDVC=. CHECH=0.0080 DEPC=.
DLCCH=0.0950 DLTIS=0.0000 DLTR=0.0520 DPC=0.0070 DV=0.0000 ESUBC=0.0000 EXRE=. FIAO=. FINCF=. FOPO=0.0000 FOPOX=.
FOPT=0.4190 FSRCO=0.0000 FSRCT=0.6980 FUSEO=0.0000 FUSET=0.6750 IBC=0.4120 INTPN=. INVCH=. ITCC=. IVACO=. IVCH=0.6230
IVNCF=. IVSTCH=. OANCF=. PDVC=. PRSTKC=0.0000 PRSTKCC=. PRSTKPC=. RECCH=. SCSTKC=. SIV=0.2700 SPPE=0.0090 SPPIV=.
SPSTKC=. SSTK=0.0000 TDC=. TSAFC=. TXACH=. TXBCO=. TXBCOF=. TXDC=0.0000 TXPD=. UAOLOCH=. UDFCC=. UFRETSD=. UNWCC=.
UOIS=. USTDNC=. UTFDOC=. UTFOSC=. UWKCAPC=. WCAPC=-0.0800 WCAPCH=0.0230 XIDOC=0.0000 ACCRT=. ACQAO=. ACQCSHI=.
ACQGDWL=. ACQIC=. ACQINTAN=. ACQINVT=. ACQLNTAL=. ACQNIINTC=. ACQPPE=. ACQSC=. ANO=. AOL2=. AQPL1=. AU=9 AUL3=. AUOP=1
AUOPIC= BASTR=7.7300 BILLEXCE=. CAPR1=. CAPR2=. CAPR3=. CAPSFT=. CEIEXBILL=. CEOSO= CFOSO= CI=. CIMII=.
CSHFD=4.9280 CSHI=. CSHO=4.9280 CSHPRI=4.9280 CSHR=. CSHRC=0.0000 CSHRP=0.0000 CSHRSO=0.6000 CSHRT=0.6000 CSHRW=0.0000
DERAC=. DERALT=. DERHEDGL=. DERLC=. DERLLT=. DT=. DVINTF=. EMP=0.0150 FINACO=. FINAO=. FINCH=. FINDLC=. FINDLT=.
FINIVST=. FINLCO=. FINLTO=. FINNP=. FINRECC=. FINRECLT=. FINREV=. FINXINT=. FINXOPR=. GLIV=. GOVTOWN=. IBMII=.
LIFRP=0.0000 LNO=. LOL2=. LQPL1=. LUL3=. MIBN=. MIBT=0.0000 NIINTPFC=. NIINTPFP=. NIPFC=. NIPFP=. OPTCA=. OPTDR=.
OPTEX=. OPTEXD=. OPTFVGR=. OPTGR=. OPTLIFE=. OPTOSBY=. OPTOSEY=. OPTPRCBY=. OPTRFR=. OPTVOL=. PNRSHO=. PRSHO=. RANK=1
RSTCHE=. RSTCHELT=. SALEPFC=. SALEPFP=. TEQ=. TFVA=. TFVCE=. TFVL=. TSTKN=0.1900 TXTUBADJUST=. TXTUBBEGIN=. TXTUBEND=.
TXTUBMAX=. TXTUBMIN=. TXTUBPOSDEC=. TXTUBPOSINC=. TXTUBPOSPDEC=. TXTUBPOSPINC=. TXTUBSETTLE=. TXTUBSOFLIMIT=.
TXTUBTXTR=. TXTUBXINTBS=. TXTUBXINTIS=. XRDP=. ADJEX_C=0.199999990000 ADJEX_F=0.199999990000 CSHTR_C=1263700.0000
CSHTR_F=1604900.0000 DVPSP_C=0.0000 DVPSP_F=0.0000 DVPSX_C=0.0000 DVPSX_F=0.0000 MKVALT=. NAICSH=334290
PRCC_C=3.249999810000 PRCC_F=1.124999930000 PRCH_C=4.374999740000 PRCH_F=4.374999740000 PRCL_C=2.749999840000
PRCL_F=0.374999980000 SICH=. CONSOL=C INDFMT=INDL DATAFMT=STD POPSRC=D CURCD=USD COSTAT=A PS=0 BE=0.9 year=1987
bvcEquity=5.543999655 capIntens=0 cashFlow=0.2987848463 cashHoldings=0.0185847034 costcap=. leverages=0.5477777778

bleverage=0.3523945675 market_leverage=0.0815820004 roa=0.2944960686 roe=0.0743145789 cash_assets=0.0185847034
TobinsQ=. bvEqity=. _ERROR_=1 _N_=367
NOTE: Division by zero detected at line 2533 column 17.
GVKEY=001050 DATADATE=2010-12-31 FYEAR=2010 ADD1=14651 North Dallas Parkway, Suite 500 ADD2= ADD3= ADD4=
ADDZIP=75254
BUSDESC=CECO Environmental Corp. provides critical solutions in industrial air quality, industrial water treatment, an
d energy transition solutions worldwide. It operates in two segments: Engineered Systems and Industrial Process Soluti
ons. CITY=Dallas CONML=CECO Environmental Corp. COUNTY= DLDTE=. DLRSN= EIN=13-2566064 FAX=214 351 0194 FYRC=12
GGROUP=2020 GIND=202010 GSECTOR=20 GSUBIND=20201050 IDBFLAG=D INCORP=DE IPODATE=. LOC=USA NAICS=333413
PHONE=214 357 6181 PRICAN= PRIROW= PRIUSA=01 SIC=3564 SPCINDCD=345 SPCSECCD=925 SPCSRC=B- STATE=TX STKO=0
WEBURL=www.cecoenviro.com CONM=CECO ENVIRONMENTAL CORP TIC=CECO CUSIP=125141101 CIK=0000003197 EXCHG=14 FYR=12 FIC=USA
ACCTCHG= ACCTSTD=DS ACQMETH= ADRR=. AJEX=1.000000000000 AJP=1.000000000000 APDEDATE=2010-12-31 BSPR= COMPST=
CURNCD=USD CURRTR=1.000000000000 CURUSCN=. FDATE=2011-04-11 FINAL=Y ISMOD=1 LTCM= OGM= PDATE=. PDDUR=12 SCF=7 SRC=5
STALT= UDPL= UPD=3 ACCO=. ACDO=0.0760 ACO=3.1110 ACODO=3.0350 ACOMINC=-1.6080 ACOX=3.1110 ACOXAR=. ACT=48.4520
AEDI=. ALDO=0.0000 AO=1.5550 AOCIDERGL=0.0000 AOCIOTHER=0.0000 AOCIPEN=-1.5660 AOCISECGL=0.0000 AODO=1.5550 AOX=1.5550
AP=9.7120 APB=. APC=. APOFS=. ARB=. ARC=. ARTFS=. AT=74.7910 BAST=. BKVLPS=2.4565 CA=. CAPS=43.2370 CB=. CEQ=35.1740
CEQL=35.1740 CEQT=16.2700 CH=5.7920 CHE=5.7920 CHS=. CLD2=0.0000 CLD3=0.0000 CLD4=0.0000 CLD5=0.0000 CLFC=. CLFX=.
CLG=. CLIS=. CLL=. CLLC=. CLO=. CLRLL=. CLT=. CMP=. CRV=. CRVNLI=. CSTK=0.1440 CSTKCV=0.0100 DC=. DCLO=0.0000
DCOM=0.0000 DCPSTK=10.8000 DCS=. DCVSR=0.0000 DCVSUB=10.8000 DCVT=10.8000 DD=0.0000 DD1=0.0000 DD2=0.0000 DD3=0.0000
DD4=10.8000 DD5=0.0000 DFPAC=. DFS=0.0000 DLC=0.0000 DLTO=0.0000 DLTP=0.0000 DLTSUB=. DLTT=10.8000 DM=0.0000 DN=0.0000
DPACB=. DPACC=. DPACLI=. DPACLS=. DPACME=. DPACNR=. DPACO=. DPACRE=. DPACT=12.0920 DPDC=. DPLTB=. DPSC=. DPSTB=.
DPTB=. DPTC=. DPTIC=. DPVIEB=12.0920 DPVIO=. DPVIR=. DRC=7.8100 DRCI=. DRLT=0.0000 DS=0.0000 DUDD=0.0000 DVPA=0.0000
DVPIBB=. DXD2=0.0000 DXD3=0.0000 DXD4=10.8000 DXD5=0.0000 EA=. ESOPCT=0.0000 ESOPDLT=0.0000 ESOPNR=0.0000 ESOPR=0.0000
ESOPT=0.0000 EXCADJ=. FATB=2.2480 FATC=0.0000 FATE=15.6490 FATL=0.0000 FATN=0.0000 FATO=0.0000 FATP=0.0750 FDFR=.
FEA=. FEL=. FFS=. GDWL=14.7130 GEQRV=. GOVGR=. IAEQ=. IAEQCI=. IAEQMI=. IAFICI=. IAFXI=. IAFXMI=. IALI=. IALOI=.
IALTI=. IAMLI=. IAOI=. IAPLI=. IAREI=. IASCI=. IASMI=. IASSI=. IASTI=. IATCI=. IATI=. IATMI=. IAUI=. ICAPT=45.9740
INTAN=18.9040 INTANO=4.1910 INVFG=0.8970 INVO=0.5620 INVOFS=. INVREH=. INVREI=. INVRES=. INVRM=2.9730 INVT=12.7770
INVWIP=8.3450 IP=. IPC=. IPV=. ISEQ=. ISEQC=. ISEQM=. ISFI=. ISFXC=. ISFXM=. ISLG=. ISLGC=. ISLGM=. ISLT=. ISNG=.
ISNGC=. ISNGM=. ISOTC=. ISOTH=. ISOTM=. ISSC=. ISSM=. ISSU=. IST=. ISTC=. ISTM=. ISUT=. ITCB=0.0000 IVAEQ=0.0000
IVAO=0.0000 IVGOD=. IVPT=. IVST=0.0000 LCABG=. LCACL=. LCACR=. LCAG=. LCAL=. LCALT=. LCAM=. LCAO=. LCAST=. LCAT=.
LCO=15.1390 LCOX=7.8100 LCOXAR=. LCOXDR=0.0000 LCT=26.4970 LCUACU=. LIF=. LIFR=0.0000 LLOML=. LLOO=. LLOT=. LO=2.3200
LOXDR=2.3200 LRV=. LS=. LSE=74.7910 LT=39.6170 MIB=. MRC1=1.1530 MRC2=0.7270 MRC3=0.5480 MRC4=0.4180 MRC5=0.4160
MRCT=3.2620 MRCTA=0.0000 MSA=0.0000 MSVRV=. MTL=. NAT=. NP=0.0000 NPANL=. NPAORE=. NPARL=. NPAT=. OB=54.3000
OPTPRCCA=8.1800 OPTPRCEX=1.9800 OPTPRCEY=4.6400 OPTPRCGR=4.0400 OPTPRCWA=5.9200 PPEGT=17.9720 PPENB=. PPENC=. PPENLI=.
PPENLS=. PPENME=. PPENNR=. PPENO=. PPENT=5.8800 PPEVBB=. PPEVEB=17.9720 PPEVO=. PPEVR=. PRC=. PRODV=. PRVT=.
PSTK=0.0000 PSTKC=0.0000 PSTKL=0.0000 PSTKN=0.0000 PSTKR=0.0000 PSTKRV=0.0000 PVCL=. PVPL=. PVT=. RADP=. RAGR=. RARI=.
RATI=. RCL=. RDP=. RE=-7.8510 REA=0.0000 REAJO=-1.5660 RECCO=0.0000 RECD=0.4210 RECT=26.7720 RECTA=-0.0420
RECTR=26.7720 RECUB=. RET=. REUNA=-6.2430 REUNR=. RLL=. RLO=. RLP=. RLRI=. RLT=. RPAG=. RREPS=. RVBCI=. RVBPI=.

RVBTI=. RVDO=. RVDT=. RVEQT=. RVLRV=. RVNO=. RVNT=. RVRI=. RVSI=. RVTI=. RVTXR=. RVUPI=. RVUTX=. SAA=. SAL=. SBDC=.
SC=. SCO=. SECU=. SEQ=35.1740 SEQO=0.0000 SRT=. SSNP=. STBO=. STIO=. TDSCD=. TDSCE=. TDSLG=. TDSMM=. TDSNG=. TDSO=.
TDSS=. TDST=. TLCF=0.0000 TRANSA=. TSA=. TSO=. TSTK=0.3560 TSTKC=0.3560 TSTKME=. TSTKP=0.0000 TXDB=0.0000 TXDBA=0.6020
TXDBCA=0.7070 TXDBCL=0.0000 TXDITC=0.0000 TXNDB=1.3090 TXNDBA=2.9090 TXNDBL=1.6000 TXNDBR=0.0000 TXP=1.6460 TXR=0.0000
UAOX=. UAPT=. UCAPS=. UCCONS=. UCEQ=. UCUSTAD=. UDCOPRES=. UDD=. UDMB=. UDOLT=. UDPCO=. UI=. UINVT=. ULCM=. ULCO=.
UNL=. UNNP=. UNNPL=. UOPRES=. UPMCSTK=. UPMPF=. UPMPFS=. UPMSUBP=. UPSTK=. UPSTKC=. UPSTKSF=. URECT=. URECTR=.
UREVUB=. USUBPSTK=. VPAC=. VPO=. WCAP=21.9550 XACC=7.3290 XPP=. ACCHG=0.0000 ADPAC=. AM=0.5010 AMDC=. AMGW=. AQA=.
AQD=. AQEPS=. AQI=0.0000 AQP=. AQS=0.0000 ARCE=. ARCED=. ARCEEPS=. AUTXR=. BALR=. BANLR=. BATR=. BCEF=. BCLR=.
BCLTBL=. BCNLR=. BCRBL=. BCT=. BCTBL=. BCTR=. BLTBL=. CBI=. CDPAC=. CFBD=. CFERE=. CFO=. CFPDO=. CGA=. CGRI=. CGTI=.
CGUI=. CIBEGNI=2.1050 CICURR=0.2870 CIDERGL=0.0000 CIOTHER=0.0000 CIPEN=0.1260 CISECGL=0.0000 CITOTAL=2.5180 CNLTBL=.
COGS=106.6920 CPCBL=. CPDOI=. CPNLI=. CPPBL=. CPREI=. CSTKE=0.0000 DBI=. DFXA=. DILADJ=0.3890 DILAVX=2.6940 DO=-0.2000
DONR=0.0000 DP=1.7580 DPRET=. DTEA=. DTED=. DTEEPS=. DTEP=. DVC=0.0000 DVDNP=. DVP=0.0000 DVPD=. DVPDP=. DVRPIV=.
DVRRE=. DVSCO=. DVT=0.0000 EBIT=4.6400 EBITDA=6.3980 EIEA=. EMOL=. EPSFI=0.1500 EPSFX=0.1600 EPSPI=0.1500 EPSPX=0.1600
ESUB=0.0000 FATD=. FCA=-0.1350 FFO=. GBBL=. GDWLAM=. GDWLIA=. GDWLID=. GDWLIEPS=. GDWLIP=. GLA=0.4680 GLCEA=0.4680
GLCED=0.0300 GLCEEPS=0.0300 GLCEP=0.7200 GLD=0.0300 GLEPS=0.0300 GLP=0.7200 GP=33.9100 GPHBL=. GPLBL=. GPOBL=. GPRBL=.
GPTBL=. GWO=. HEDGEGL=. IB=2.3050 IBADJ=2.3050 IBBL=. IBCOM=2.3050 IBKI=. IDIIS=. IDILB=. IDILC=. IDIS=. IDIST=.
IDIT=. IDITS=. IIRE=. INITB=. INTC=0.0000 IOBD=. IOI=. IORE=. IPABL=. IPHBL=. IPLBL=. IPOBL=. IPTBL=. IPTI=. IREI=.
IRENT=. IRII=. IRLI=. IRNLI=. IRSI=. ISGR=. ISGT=. ISGU=. ITCI=0.0000 IVI=. LI=. LLRCI=. LLRCR=. LLWOCI=. LLWOCR=.
LST=. MII=. NCO=. NFSR=. NI=2.1050 NIADJ=2.1050 NIECI=. NIINT=. NIIT=. NIM=. NIO=. NIT=. NITS=. NOPI=-0.1350
NOPIO=-0.1350 NRTXT=. NRTXTD=. NRTXTEPS=. OIADP=4.6400 OIBDP=6.3980 OPEPS=0.1400 OPILI=. OPINCAR=. OPINI=. OPIOI=.
OPIRI=. OPITI=. OPREPSX=0.1400 PALR=. PANLR=. PATR=. PCL=. PCLR=. PCNLR=. PCTR=. PI=3.6760 PIDOM=1.9780 PIFO=1.6980
PLL=. PLTBL=. PNCA=0.1550 PNCAD=0.0100 PNCAEPS=0.0100 PNCIA=0.0000 PNCID=0.0000 PNCIEPS=0.0000 PNCIP=0.0000
PNCWIA=0.1550 PNCWID=0.0100 PNCWIEPS=0.0100 PNCWIP=0.2390 PNLBL=. PNLI=. POBL=. PPCBL=. PPPABL=. PPPHBL=. PPPOBL=.
PPPTBL=. PRCA=0.0000 PRCAD=0.0000 PRCAEPS=0.0000 PREBL=. PRI=. PTBL=. PTRAN=. PVO=. PVON=. PWOI=. RCA=. RCD=. RCEPS=.
RCP=. RDIP=0.0000 RDIPA=0.0000 RDIPD=0.0000 RDIPEPS=0.0000 REVT=140.6020 RIS=. RMUM=. RRA=. RRD=. RRP=. SALE=140.6020
SETA=. SETD=. SETEPS=. SETP=. SPCE=. SPCED=. SPCEEPS=. SPI=0.3960 SPID=. SPIEPS=. SPIOA=. SPIOP=. SRET=. STKCO=0.8850
STKCPA=. TDSG=. TF=. TIE=. TII=. TXC=1.7700 TXDFED=-0.2090 TXDFO=0.0000 TXDI=-0.3990 TXDS=-0.1900 TXEQA=. TXEQII=.
TXFED=1.2570 TXFO=0.1970 TXO=0.0000 TXS=0.3160 TXT=1.3710 TXVA=. TXW=0.0000 UDPFA=. UDVP=. UGI=. UNIAMI=. UNOPINC=.
UOPI=. UPDVP=. USPI=. USUBDVP=. UTME=. UTXFED=. UXINST=. UXINTD=. WDA=-0.2110 WDD=-0.0100 WDEPS=-0.0100 WDP=-0.3240
XAD=0.3240 XAGO=. XAGT=. XCOM=. XCOMI=. XDEPL=. XDP=. XDVRE=. XEQO=. XI=0.0000 XIDO=-0.2000 XINDB=. XINDC=. XINS=.
XINST=. XINT=1.2250 XINTD=. XINTOPT=0.0000 XIVI=. XIVRE=. XLR=. XNBI=. XNF=. XNINS=. XNITB=. XOBD=. XOI=.
XOPR=134.2040 XOPRAR=. XOPTD=0.0000 XOPTEPS=0.0000 XORE=. XPR=3.0620 XRD=0.0530 XRENT=1.5000 XS=. XSGA=27.5120 XSTF=.
XSTFO=. XSTFWS=. XT=. XUW=. XUWLI=. XUWNLI=. XUWOI=. XUWREI=. XUWTI=. AFUDCC=. AFUDCI=. AMC=. AOLOCH=-1.4460
APALCH=-1.9050 AQC=0.0000 CAPX=0.6540 CAPXV=0.6540 CDVC=. CHECH=4.3990 DEPC=. DLCCH=. DLTIS=. DLTR=2.7070 DPC=1.7580
DV=0.0000 ESUBC=0.0000 EXRE=0.0000 FIAO=-0.3470 FINCF=-3.0430 FOPO=1.1140 FOPOX=1.1140 FOPT=. FSRCO=. FSRCT=. FUSEO=.
FUSET=. IBC=2.3050 INTPN=1.0970 INVCH=2.2010 ITCC=. IVACO=0.0570 IVCH=0.0000 IVNCF=4.5040 IVSTCH=0.0000 OANCF=2.9380
PDVC=. PRSTKC=0.0000 PRSTKCC=. PRSTKPC=. RECCH=-2.9500 SCSTKC=. SIV=0.0000 SPPE=5.1010 SPPIV=-0.3960 SPSTKC=.
SSTK=0.0110 TDC=. TSAFC=. TXACH=1.6460 TXBCO=0.0000 TXBCOF=0.0000 TXDC=-0.3990 TXPD=-0.2470 UAOLOCH=. UDFCC=.

UFRETSD=. UNWCC=. UOIS=. USTDNC=. UTFDOC=. UTFOSC=. UWKCAPC=. WCAPC=. WCAPCH=. XIDOC=1.0100 ACCRT=. ACQAO=. ACQCSHI=. ACQGDWL=. ACQIC=. ACQINTAN=. ACQINVT=. ACQLNTAL=. ACQNIINTC=. ACQPPE=. ACQSC=. ANO=. AOL2=. AQPL1=. AU=11 AUL3=. AUOP=1 AUOPIC=0 BASTR=. BILLEXCE=. CAPR1=. CAPR2=. CAPR3=. CAPSFT=. CEIEXBILL=. CEOSO=Y CFOSO=Y CI=2.5180 CIMII=0.0000 CSHFD=17.1020 CSHI=14.4570 CSHO=14.3190 CSHPRI=14.3080 CSHR=0.1410 CSHRC=. CSHRP=. CSHRSO=. CSHRT=. CSHRW=. DERAC=. DERALT=. DERHEDGL=. DERLC=. DERLLT=. DT=10.8000 DVINTF=. EMP=0.5560 FINACO=. FINAO=. FINCH=. FINDLC=. FINDLT=. FINIVST=. FINLCO=. FINLTO=. FINNP=. FINRECC=. FINRECLT=. FINREV=. FINXINT=. FINXOPR=. GLIV=. GOVTOWN=. IBMII=2.3050 LIFRP=0.0000 LNO=. LOL2=. LQPL1=. LUL3=. MIBN=. MIBT=. NIINTPFC=. NIINTPFP=. NIPFC=. NIPFP=. OPTCA=0.1370 OPTDR=0.0000 OPTEX=0.3300 OPTEXD=0.0050 OPTFVGR=2.6400 OPTGR=0.7270 OPTLIFE=7.3000 OPTOSBY=0.5980 OPTOSEY=1.1830 OPTPRCBY=6.1300 OPTRFR=3.1100 OPTVOL=62.6000 PNRSHO=0.0000 PRSHO=0.0000 RANK=1 RSTCHE=. RSTCHELT=. SALEPFC=. SALEPFP=. TEQ=35.1740 TFVA=. TFVCE=0.0000 TFVL=. TSTKN=0.1380 TXTUBADJUST=0.0000 TXTUBBEGIN=0.3370 TXTUBEND=0.0830 TXTUBMAX=. TXTUBMIN=. TXTUBPOSDEC=0.0000 TXTUBPOSINC=0.0000 TXTUBPOSPDEC=0.0000 TXTUBPOSPINC=0.0000 TXTUBSETTLE=0.0000 TXTUBSOFLIMIT=0.2540 TXTUBTXTR=. TXTUBXINTBS=0.0030 TXTUBXINTIS=0.0140 XRDP=0.0220 ADJEX_C=1.000000000000 ADJEX_F=1.000000000000 CSHTR_C=8097689.0000 CSHTR_F=8097689.0000 DVPSP_C=0.0000 DVPSP_F=0.0000 DVPSX_C=0.0000 DVPSX_F=0.0000 MKVALT=85.3412 NAICSH=333411 PRCC_C=5.960000000000 PRCC_F=5.960000000000 PRCH_C=6.300000000000 PRCH_F=6.300000000000 PRCL_C=3.310000000000 PRCL_F=3.310000000000 SICH=3564 CONSOL=C INDFMT=INDL DATAFMT=STD POPSRC=D CURCD=USD COSTAT=A PS=0 BE=35.174 year=2010 bvcEquity=85.34124 capIntens=0.0087443676 cashFlow=0.0543247182 cashHoldings=0.077442473 costcap=. leverages=0.3070449764 bleverage=0.1444024014 market_leverage=0.0864288742 roa=0.0308192162 roe=0.0246656833 cash_assets=0.077442473 TobinsQ=. bvEqity=. _ERROR_=1 _N_=391
NOTE: Division by zero detected at line 2533 column 17.
GVKEY=001050 DATADATE=2011-12-31 FYEAR=2011 ADD1=14651 North Dallas Parkway, Suite 500 ADD2= ADD3= ADD4=
ADDZIP=75254
BUSDESC=CECO Environmental Corp. provides critical solutions in industrial air quality, industrial water treatment, and energy transition solutions worldwide. It operates in two segments: Engineered Systems and Industrial Process Solutions. CITY=Dallas CONML=CECO Environmental Corp. COUNTY= DLDTE=. DLRSN= EIN=13-2566064 FAX=214 351 0194 FYRC=12 GGROUP=2020 GIND=202010 GSECTOR=20 GSUBIND=20201050 IDBFLAG=D INCORP=DE IPODATE=. LOC=USA NAICS=333413 PHONE=214 357 6181 PRICAN= PRIROW= PRIUSA=01 SIC=3564 SPCINDCD=345 SPCSECCD=925 SPCSRC=B- STATE=TX STKO=0 WEBURL=www.cecoenviro.com CONM=CECO ENVIRONMENTAL CORP TIC=CECO CUSIP=125141101 CIK=0000003197 EXCHG=14 FYR=12 FIC=USA ACCTCHG= ACCTSTD=DS ACQMETH= ADRR=. AJEX=1.000000000000 AJP=1.000000000000 APDEDATE=2011-12-31 BSPR= COMPST= CURNCD=USD CURRTR=1.000000000000 CURUSCN=. FDATE=2012-04-13 FINAL=Y ISMOD=1 LTCM=1 OGM= PDATE=2012-03-08 PDDUR=12 SCF=7 SRC=5 STALT= UDPL= UPD=3 ACCO=. ACDO=0.0000 ACO=2.6500 ACODO=2.6500 ACOMINC=-2.3500 ACOX=2.6500 ACOXAR=. ACT=53.4700 AEDI=. ALDO=0.0000 AO=1.8190 AOCIDERGL=0.0000 AOCIOTHER=0.0000 AOCIPEN=-2.1670 AOCISECGL=0.0000 AODO=1.8190 AOX=1.8190 AP=8.2150 APB=. APC=. APOFS=. ARB=. ARC=. ARTFS=. AT=79.3450 BAST=. BKVLPS=2.9616 CA=. CAPS=44.2490 CB=. CEQ=42.9900 CEQL=42.9900 CEQT=24.5850 CH=12.7240 CHE=12.7240 CHS=. CLD2=0.0000 CLD3=0.0000 CLD4=0.0000 CLD5=0.0000 CLFC=. CLFX=. CLG=. CLIS=. CLL=. CLLC=. CLO=. CLRLL=. CLT=. CMP=. CRV=. CRVNLI=. CSTK=0.1460 CSTKCV=0.0100 DC=. DCLO=0.0000 DCOM=0.0000 DCPSTK=9.6000 DCS=. DCVSR=0.0000 DCVSUB=9.6000 DCVT=9.6000 DD=0.0000 DD1=0.0000 DD2=0.0000 DD3=9.6000 DD4=0.0000 DD5=0.0000 DFPAC=. DFS=0.0000 DLC=0.0000 DLTO=0.0000 DLTP=0.0000 DLTSUB=. DLTT=9.6000 DM=0.0000 DN=0.0000 DPACB=. DPACC=. DPACLI=. DPACLS=. DPACME=. DPACNR=. DPACO=. DPACRE=. DPACT=9.9610 DPDC=. DPLTB=. DPSC=. DPSTB=. DPTB=. DPTC=. DPTIC=. DPVIEB=9.9610 DPVIO=. DPVIR=. DRC=9.6470 DRCI=. DRLT=0.0000

DS=0.0000 DUDD=0.0000 DVPA=0.0000 DVPIBB=. DXD2=0.0000 DXD3=9.6000 DXD4=0.0000 DXD5=0.0000 EA=. ESOPCT=0.0000
ESOPDLT=0.0000 ESOPNR=0.0000 ESOPR=0.0000 ESOPT=0.0000 EXCADJ=. FATB=2.3260 FATC=0.0000 FATE=13.2110 FATL=0.0000
FATN=0.0000 FATO=0.0000 FATP=0.0750 FDFR=. FEA=. FEL=. FFS=. GDWL=14.6610 GEQRV=. GOVGR=. IAEQ=. IAEQCI=. IAEQMI=.
IAFICI=. IAFXI=. IAFXMI=. IALI=. IALOI=. IALTI=. IAMLI=. IAOI=. IAPLI=. IAREI=. IASCI=. IASMI=. IASSI=. IASTI=.
IATCI=. IATI=. IATMI=. IAUI=. ICAPT=52.5900 INTAN=18.4050 INTANO=3.7440 INVFG=0.7470 INVO=0.5800 INVOFS=. INVREH=.
INVREI=. INVRES=. INVRM=3.0170 INVT=14.9870 INVWIP=10.6430 IP=. IPC=. IPV=. ISEQ=. ISEQC=. ISEQM=. ISFI=. ISFXC=.
ISFXM=. ISLG=. ISLGC=. ISLGM=. ISLT=. ISNG=. ISNGC=. ISNGM=. ISOTC=. ISOTH=. ISOTM=. ISSC=. ISSM=. ISSU=. IST=. ISTC=.
ISTM=. ISUT=. ITCB=0.0000 IVAEQ=0.0000 IVAO=0.0000 IVGOD=. IVPT=. IVST=0.0000 LCABG=. LCACL=. LCACR=. LCAG=. LCAL=.
LCALT=. LCAM=. LCAO=. LCAST=. LCAT=. LCO=15.0010 LCOX=9.8180 LCOXAR=. LCOXDR=0.1710 LCT=23.6090 LCUACU=. LIF=.
LIFR=0.0000 LLOML=. LLOO=. LLOT=. LO=3.1460 LOXDR=3.1460 LRV=. LS=. LSE=79.3450 LT=36.3550 MIB=. MRC1=1.5230
MRC2=1.2250 MRC3=0.9000 MRC4=0.7560 MRC5=0.7080 MRCT=5.1120 MRCTA=0.4870 MSA=0.0000 MSVRV=. MTL=. NAT=. NP=0.0000
NPANL=. NPAORE=. NPARL=. NPAT=. OB=54.9000 OPTPRCCA=5.8600 OPTPRCEX=2.5100 OPTPRCEY=4.7400 OPTPRCGR=5.4800
OPTPRCWA=5.7300 PPEGT=15.6120 PPENB=. PPENC=. PPENLI=. PPENLS=. PPENME=. PPENNR=. PPENO=. PPENT=5.6510 PPEVBB=.
PPEVEB=15.6120 PPEVO=. PPEVR=. PRC=. PRODV=. PRVT=. PSTK=0.0000 PSTKC=0.0000 PSTKL=0.0000 PSTKN=0.0000 PSTKR=0.0000
PSTKRV=0.0000 PVCL=. PVPL=. PVT=. RADP=. RAGR=. RARI=. RATI=. RCL=. RDP=. RE=-1.0490 REA=0.0000 REAJO=-2.1670
RECCO=0.0000 RECD=0.5540 RECT=23.1090 RECTA=-0.1830 RECTR=23.1090 RECUB=. RET=. REUNA=1.3010 REUNR=. RLL=. RLO=. RLP=.
RLRI=. RLT=. RPAG=. RREPS=. RVBCI=. RVBPI=. RVBTI=. RVDO=. RVDT=. RVEQT=. RVLRV=. RVNO=. RVNT=. RVRI=. RVSI=. RVTI=.
RVTXR=. RVUPI=. RVUTX=. SAA=. SAL=. SBDC=. SC=. SCO=. SECU=. SEQ=42.9900 SEQO=0.0000 SRT=. SSNP=. STBO=. STIO=.
TDSCD=. TDSCE=. TDSLG=. TDSMM=. TDSNG=. TDSO=. TDSS=. TDST=. TLCF=2.9000 TRANSA=. TSA=. TSO=. TSTK=0.3560 TSTKC=0.3560
TSTKME=. TSTKP=0.0000 TXDB=0.0000 TXDBA=0.8480 TXDBCA=0.5170 TXDBCL=0.1710 TXDITC=0.0000 TXNDB=1.1940 TXNDBA=3.1600
TXNDBL=1.9660 TXNDBR=0.0000 TXP=0.3930 TXR=0.0000 UAOX=. UAPT=. UCAPS=. UCCONS=. UCEQ=. UCUSTAD=. UDCOPRES=. UDD=.
UDMB=. UDOLT=. UDPCO=. UI=. UINVT=. ULCM=. ULCO=. UNL=. UNNP=. UNNPL=. UOPRES=. UPMCSTK=. UPMPF=. UPMPFS=. UPMSUBP=.
UPSTK=. UPSTKC=. UPSTKSF=. URECT=. URECTR=. UREVUB=. USUBPSTK=. VPAC=. VPO=. WCAP=29.8610 XACC=5.1830 XPP=.
ACCHG=0.0000 ADPAC=. AM=0.4410 AMDC=. AMGW=. AQA=. AQD=. AQEPS=. AQI=. AQP=. AQS=. ARCE=. ARCED=. ARCEEPS=. AUTXR=.
BALR=. BANLR=. BATR=. BCEF=. BCLR=. BCLTBL=. BCNLR=. BCRBL=. BCT=. BCTBL=. BCTR=. BLTBL=. CBI=. CDPAC=. CFBD=. CFERE=.
CFO=. CFPDO=. CGA=. CGRI=. CGTI=. CGUI=. CIBEGNI=8.2720 CICURR=-0.1410 CIDERGL=0.0000 CIOTHER=0.0000 CIPEN=-0.6010
CISECGL=0.0000 CITOTAL=7.5300 CNLTBL=. COGS=100.0660 CPCBL=. CPDOI=. CPNLI=. CPPBL=. CPREI=. CSTKE=0.0000 DBI=. DFXA=.
DILADJ=0.3750 DILAVX=8.6870 DO=-0.0400 DONR=0.0000 DP=1.3990 DPRET=. DTEA=. DTED=. DTEEPS=. DTEP=. DVC=0.7280 DVDNP=.
DVP=0.0000 DVPD=. DVPDP=. DVRPIV=. DVRRE=. DVSCO=. DVT=0.7280 EBIT=12.3680 EBITDA=13.7670 EIEA=. EMOL=. EPSFI=0.5100
EPSFX=0.5100 EPSPI=0.5800 EPSPX=0.5800 ESUB=0.0000 FATD=. FCA=0.1150 FFO=. GBBL=. GDWLAM=. GDWLIA=. GDWLID=.
GDWLIEPS=. GDWLIP=. GLA=. GLCEA=. GLCED=. GLCEEPS=. GLCEP=. GLD=. GLEPS=. GLP=. GP=39.1260 GPHBL=. GPLBL=. GPOBL=.
GPRBL=. GPTBL=. GWO=. HEDGEGL=. IB=8.3120 IBADJ=8.3120 IBBL=. IBCOM=8.3120 IBKI=. IDIIS=. IDILB=. IDILC=. IDIS=.
IDIST=. IDIT=. IDITS=. IIRE=. INITB=. INTC=0.0000 IOBD=. IOI=. IORE=. IPABL=. IPHBL=. IPLBL=. IPOBL=. IPTBL=. IPTI=.
IREI=. IRENT=. IRII=. IRLI=. IRNLI=. IRSI=. ISGR=. ISGT=. ISGU=. ITCI=0.1340 IVI=. LI=. LLRCI=. LLRCR=. LLWOCI=.
LLWOCR=. LST=. MII=. NCO=. NFSR=. NI=8.2720 NIADJ=8.2720 NIECI=. NIINT=. NIIT=. NIM=. NIO=. NIT=. NITS=. NOPI=0.4920
NOPIO=0.4920 NRTXT=. NRTXTD=. NRTXTEPS=. OIADP=12.3680 OIBDP=13.7670 OPEPS=0.5800 OPILI=. OPINCAR=. OPINI=. OPIOI=.
OPIRI=. OPITI=. OPREPSX=0.5100 PALR=. PANLR=. PATR=. PCL=. PCLR=. PCNLR=. PCTR=. PI=11.7230 PIDOM=8.8100 PIFO=2.9130
PLL=. PLTBL=. PNCA=-0.0890 PNCAD=-0.0100 PNCAEPS=-0.0100 PNCIA=-0.2390 PNCID=-0.0100 PNCIEPS=-0.0200 PNCIP=-0.3670

PNCWIA=0.1500 PNCWID=0.0100 PNCWIEPS=0.0100 PNCWIP=0.2310 PNLBL=. PNLI=. POBL=. PPCBL=. PPPABL=. PPPHBL=. PPPOBL=.
PPPTBL=. PRCA=0.0000 PRCAD=0.0000 PRCAEPS=0.0000 PREBL=. PRI=. PTBL=. PTRAN=. PVO=. PVON=. PWOI=. RCA=. RCD=. RCEPS=.
RCP=. RDIP=0.0000 RDIPA=0.0000 RDIPD=0.0000 RDIPEPS=0.0000 REVT=139.1920 RIS=. RMUM=. RRA=. RRD=. RRP=. SALE=139.1920
SETA=. SETD=. SETEPS=. SETP=. SPCE=. SPCED=. SPCEEPS=. SPI=0.0000 SPID=. SPIEPS=. SPIOA=. SPIOP=. SRET=. STKCO=0.6930
STKCPA=. TDSG=. TF=. TIE=. TII=. TXC=2.8980 TXDFED=0.2130 TXDFO=0.1710 TXDI=0.5130 TXDS=0.1290 TXEQA=. TXEQII=.
TXFED=2.2800 TXFO=0.2270 TXO=0.0000 TXS=0.3910 TXT=3.4110 TXVA=. TXW=0.0000 UDPFA=. UDVP=. UGI=. UNIAMI=. UNOPINC=.
UOPI=. UPDVP=. USPI=. USUBDVP=. UTME=. UTXFED=. UXINST=. UXINTD=. WDA=. WDD=. WDEPS=. WDP=. XAD=0.2050 XAGO=. XAGT=.
XCOM=. XCOMI=. XDEPL=. XDP=. XDVRE=. XEQO=. XI=0.0000 XIDO=-0.0400 XINDB=. XINDC=. XINS=. XINST=. XINT=1.1370 XINTD=.
XINTOPT=0.0000 XIVI=. XIVRE=. XLR=. XNBI=. XNF=. XNINS=. XNITB=. XOBD=. XOI=. XOPR=125.4250 XOPRAR=. XOPTD=0.0000
XOPTEPS=0.0000 XORE=. XPR=1.9530 XRD=. XRENT=1.7000 XS=. XSGA=25.3590 XSTF=. XSTFO=. XSTFWS=. XT=. XUW=. XUWLI=.
XUWNLI=. XUWOI=. XUWREI=. XUWTI=. AFUDCC=. AFUDCI=. AMC=. AOLOCH=1.1700 APALCH=-3.6760 AQC=0.0000 CAPX=0.9130
CAPXV=0.9130 CDVC=. CHECH=6.9320 DEPC=. DLCCH=0.0000 DLTIS=0.0000 DLTR=0.0000 DPC=1.3990 DV=0.7280 ESUBC=0.0000
EXRE=0.0000 FIAO=0.0000 FINCF=-1.6070 FOPO=1.4550 FOPOX=1.4550 FOPT=. FSRCO=. FSRCT=. FUSEO=. FUSET=. IBC=8.3120
INTPN=1.0470 INVCH=-2.4790 ITCC=. IVACO=0.0000 IVCH=0.0000 IVNCF=-0.1990 IVSTCH=0.0000 OANCF=8.7380 PDVC=.
PRSTKC=0.9910 PRSTKCC=. PRSTKPC=. RECCH=3.2610 SCSTKC=. SIV=0.0000 SPPE=0.7140 SPPIV=0.0000 SPSTKC=. SSTK=0.1120 TDC=.
TSAFC=. TXACH=-1.2530 TXBCO=0.0000 TXBCOF=0.0000 TXDC=0.5130 TXPD=4.7930 UAOLOCH=. UDFCC=. UFRETSD=. UNWCC=. UOIS=.
USTDNC=. UTFDOC=. UTFOSC=. UWKCAPC=. WCAPC=. WCAPCH=. XIDOC=0.0360 ACCRT=. ACQAO=. ACQCSHI=. ACQGDWL=. ACQIC=.
ACQINTAN=. ACQINVT=. ACQLNTAL=. ACQNIINTC=. ACQPPE=. ACQSC=. ANO=. AOL2=. AQPL1=. AU=11 AUL3=. AUOP=1 AUOPIC=0 BASTR=.
BILLEXCE=. CAPR1=. CAPR2=. CAPR3=. CAPSFT=. CEIEXBILL=. CEOSO=Y CFOSO=Y CI=7.5300 CIMII=0.0000 CSHFD=17.1150
CSHI=14.6540 CSHO=14.5160 CSHPRI=14.3860 CSHR=0.1700 CSHRC=. CSHRP=. CSHRSO=. CSHRT=. CSHRW=. DERAC=. DERALT=.
DERHEDGL=. DERLC=. DERLLT=. DT=9.6000 DVINTF=. EMP=0.5240 FINACO=. FINAO=. FINCH=. FINDLC=. FINDLT=. FINIVST=.
FINLCO=. FINLTO=. FINNP=. FINRECC=. FINRECLT=. FINREV=. FINXINT=. FINXOPR=. GLIV=. GOVTOWN=. IBMII=8.3120 LIFRP=0.0000
LNO=. LOL2=. LQPL1=. LUL3=. MIBN=. MIBT=. NIINTPFC=. NIINTPFP=. NIPFC=. NIPFP=. OPTCA=0.0560 OPTDR=0.0000 OPTEX=0.4800
OPTEXD=0.0480 OPTFVGR=3.4000 OPTGR=0.0950 OPTLIFE=6.8000 OPTOSBY=1.1830 OPTOSEY=1.1740 OPTPRCBY=4.6400 OPTRFR=2.6500
OPTVOL=62.0000 PNRSHO=0.0000 PRSHO=0.0000 RANK=1 RSTCHE=. RSTCHELT=. SALEPFC=. SALEPFP=. TEQ=42.9900 TFVA=.
TFVCE=0.0000 TFVL=. TSTKN=0.1380 TXTUBADJUST=0.0000 TXTUBBEGIN=0.0830 TXTUBEND=0.0490 TXTUBMAX=. TXTUBMIN=.
TXTUBPOSDEC=0.0000 TXTUBPOSINC=0.0000 TXTUBPOSPDEC=0.0000 TXTUBPOSPINC=0.0000 TXTUBSETTLE=0.0000 TXTUBSOFLIMIT=0.0340
TXTUBTXTR=. TXTUBXINTBS=. TXTUBXINTIS=0.0020 XRDP=. ADJEX_C=1.000000000000 ADJEX_F=1.000000000000 CSHTR_C=6456607.0000
CSHTR_F=6456607.0000 DVPSP_C=0.0500 DVPSP_F=0.0500 DVPSX_C=0.0500 DVPSX_F=0.0500 MKVALT=80.5638 NAICSH=333411
PRCC_C=5.550000000000 PRCC_F=5.550000000000 PRCH_C=8.050000000000 PRCH_F=8.050000000000 PRCL_C=4.980000000000
PRCL_F=4.980000000000 SICH=3564 CONSOL=C INDFMT=INDL DATAFMT=STD POPSRC=D CURCD=USD COSTAT=A PS=0 BE=42.99 year=2011
bvcEquity=80.5638 capIntens=0.0115067112 cashFlow=0.1223895646 cashHoldings=0.1603629718 costcap=.
leverages=0.223307746 bleverage=0.1209906106 market_leverage=0.0821082666 roa=0.1047577037 roe=0.1026763882
cash_assets=0.1603629718 TobinsQ=. bvEqity=. _ERROR_=1 _N_=392
NOTE: Division by zero detected at line 2533 column 17.
GVKEY=001050 DATADATE=2012-12-31 FYEAR=2012 ADD1=14651 North Dallas Parkway, Suite 500 ADD2= ADD3= ADD4=
ADDZIP=75254
BUSDESC=CECO Environmental Corp. provides critical solutions in industrial air quality, industrial water treatment, an

d energy transition solutions worldwide. It operates in two segments: Engineered Systems and Industrial Process Solutions. CITY=Dallas CONML=CECO Environmental Corp. COUNTY= DLDTE=. DLRSN= EIN=13-2566064 FAX=214 351 0194 FYRC=12 GGROUP=2020 GIND=202010 GSECTOR=20 GSUBIND=20201050 IDBFLAG=D INCORP=DE IPODATE=. LOC=USA NAICS=333413 PHONE=214 357 6181 PRICAN= PRIROW= PRIUSA=01 SIC=3564 SPCINDCD=345 SPCSECCD=925 SPCSRC=B- STATE=TX STKO=0 WEBURL=www.cecoenviro.com CONM=CECO ENVIRONMENTAL CORP TIC=CECO CUSIP=125141101 CIK=0000003197 EXCHG=14 FYR=12 FIC=USA ACCTCHG= ACCTSTD=DS ACQMETH= ADRR=. AJEX=1.000000000000 AJP=1.000000000000 APDEDATE=2012-12-31 BSPR= COMPST= CURNCD=USD CURRTR=1.000000000000 CURUSCN=. FDATE=2013-04-05 FINAL=Y ISMOD=1 LTCM=1 OGM= PDATE=2013-03-07 PDDUR=12 SCF=7 SRC=5 STALT= UDPL= UPD=3 ACCO=. ACDO=0.0000 ACO=2.1830 ACODO=2.1830 ACOMINC=-2.3120 ACOX=2.1830 ACOXAR=. ACT=64.3210 AEDI=. ALDO=0.0000 AO=0.5410 AOCIDERGL=0.0000 AOCIOTHER=0.0000 AOCIPEN=-2.1880 AOCISECGL=0.0000 AODO=0.5410 AOX=0.5410 AP=11.0980 APB=. APC=. APOFS=. ARB=. ARC=. ARTFS=. AT=94.1040 BAST=. BKVLPS=3.6555 CA=. CAPS=54.8000 CB=. CEQ=61.9940 CEQL=61.9940 CEQT=37.6370 CH=22.9940 CHE=22.9940 CHS=. CLD2=0.0000 CLD3=0.0000 CLD4=0.0000 CLD5=0.0000 CLFC=. CLFX=. CLG=. CLIS=. CLL=. CLLC=. CLO=. CLRLL=. CLT=. CMP=. CRV=. CRVNLI=. CSTK=0.1710 CSTKCV=0.0100 DC=. DCLO=0.0000 DCOM=0.0000 DCPSTK=0.0000 DCS=0.0000 DCVSR=0.0000 DCVSUB=0.0000 DCVT=0.0000 DD=0.0000 DD1=0.0000 DD2=0.0000 DD3=0.0000 DD4=0.0000 DD5=0.0000 DFPAC=. DFS=. DLC=0.0000 DLTO=0.0000 DLTP=0.0000 DLTSUB=. DLTT=0.0000 DM=0.0000 DN=0.0000 DPACB=. DPACC=. DPACLI=. DPACLS=. DPACME=. DPACNR=. DPACO=. DPACRE=. DPACT=10.3110 DPDC=. DPLTB=. DPSC=. DPSTB=. DPTB=. DPTC=. DPTIC=. DPVIEB=10.3110 DPVIO=. DPVIR=. DRC=11.3680 DRCI=. DRLT=0.0000 DS=0.0000 DUDD=0.0000 DVPA=0.0000 DVPIBB=. DXD2=0.0000 DXD3=0.0000 DXD4=0.0000 DXD5=0.0000 EA=. ESOPCT=0.0000 ESOPDLT=. ESOPNR=0.0000 ESOPR=0.0000 ESOPT=0.0000 EXCADJ=. FATB=2.3500 FATC=0.0000 FATE=12.7710 FATL=0.0000 FATN=0.0000 FATO=0.0000 FATP=0.0750 FDFR=. FEA=. FEL=. FFS=. GDWL=19.5480 GEQRV=. GOVGR=. IAEQ=. IAEQCI=. IAEQMI=. IAFICI=. IAFXI=. IAFXMI=. IALI=. IALOI=. IALTI=. IAMLI=. IAOI=. IAPLI=. IAREI=. IASCI=. IASMI=. IASSI=. IASTI=. IATCI=. IATI=. IATMI=. IAUI=. ICAPT=61.9940 INTAN=24.3570 INTANO=4.8090 INVFG=0.7060 INVO=0.6840 INVOFS=. INVREH=. INVREI=. INVRES=. INVRM=2.5080 INVT=9.6450 INVWIP=5.7470 IP=. IPC=. IPV=. ISEQ=. ISEQC=. ISEQM=. ISFI=. ISFXC=. ISFXM=. ISLG=. ISLGC=. ISLGM=. ISLT=. ISNG=. ISNGC=. ISNGM=. ISOTC=. ISOTH=. ISOTM=. ISSC=. ISSM=. ISSU=. IST=. ISTC=. ISTM=. ISUT=. ITCB=0.0000 IVAEQ=0.0000 IVAO=0.0000 IVGOD=. IVPT=. IVST=0.0000 LCABG=. LCACL=. LCACR=. LCAG=. LCAL=. LCALT=. LCAM=. LCAO=. LCAST=. LCAT=. LCO=15.3630 LCOX=11.5060 LCOXAR=. LCOXDR=0.1380 LCT=27.5400 LCUACU=. LIF=. LIFR=0.0000 LLOML=. LLOO=. LLOT=. LO=4.4420 LOXDR=4.4420 LRV=. LS=. LSE=94.1040 LT=32.1100 MIB=. MRC1=2.0810 MRC2=1.6980 MRC3=1.5180 MRC4=1.4820 MRC5=0.4640 MRCT=7.2430 MRCTA=0.1620 MSA=0.0000 MSVRV=. MTL=. NAT=. NP=0.0000 NPANL=. NPAORE=. NPARL=. NPAT=. OB=59.5000 OPTPRCCA=5.8700 OPTPRCEX=5.9500 OPTPRCEY=5.1800 OPTPRCGR=7.9600 OPTPRCWA=5.3600 PPEGT=15.1960 PPENB=. PPENC=. PPENLI=. PPENLS=. PPENME=. PPENNR=. PPENO=. PPENT=4.8850 PPEVBB=. PPEVEB=15.1960 PPEVO=. PPEVR=. PRC=. PRODV=. PRVT=. PSTK=0.0000 PSTKC=0.0000 PSTKL=0.0000 PSTKN=0.0000 PSTKR=0.0000 PSTKRV=0.0000 PVCL=. PVPL=. PVT=. RADP=. RAGR=. RARI=. RATI=. RCL=. RDP=. RE=7.3790 REA=0.0000 REAJO=-2.1880 RECCO=0.0000 RECD=0.5650 RECT=29.4990 RECTA=-0.1240 RECTR=29.4990 RECUB=. RET=. REUNA=9.6910 REUNR=9.6910 RLL=. RLO=. RLP=. RLRI=. RLT=. RPAG=. RREPS=. RVBCI=. RVBPI=. RVBTI=. RVDO=. RVDT=. RVEQT=. RVLRV=. RVNO=. RVNT=. RVRI=. RVSI=. RVTI=. RVTXR=. RVUPI=. RVUTX=. SAA=. SAL=. SBDC=. SC=. SCO=. SECU=. SEQ=61.9940 SEQO=0.0000 SRT=. SSNP=. STBO=. STIO=. TDSCD=. TDSCE=. TDSLG=. TDSMM=. TDSNG=. TDSO=. TDSS=. TDST=. TLCF=2.3000 TRANSA=. TSA=. TSO=. TSTK=0.3560 TSTKC=0.3560 TSTKME=. TSTKP=0.0000 TXDB=0.1280 TXDBA=0.0000 TXDBCA=0.4750 TXDBCL=0.1380 TXDITC=0.1280 TXNDB=0.2090 TXNDBA=2.6040 TXNDBL=2.3950 TXNDBR=0.0000 TXP=1.0790 TXR=0.0000 UAOX=. UAPT=. UCAPS=. UCCONS=. UCEQ=. UCUSTAD=. UDCOPRES=. UDD=. UDMB=. UDOLT=. UDPCO=. UI=. UINVT=. ULCM=. ULCO=. UNL=. UNNP=. UNNPL=. UOPRES=. UPMCSTK=. UPMPF=. UPMPFS=. UPMSUBP=.

UPSTK=. UPSTKC=. UPSTKSF=. URECT=. URECTR=. UREVUB=. USUBPSTK=. VPAC=. VPO=. WCAP=36.7810 XACC=3.8570 XPP=.
ACCHG=0.0000 ADPAC=. AM=0.3310 AMDC=. AMGW=. AQA=. AQD=. AQEPS=. AQI=. AQP=. AQS=. ARCE=. ARCED=. ARCEEPS=. AUTXR=.
BALR=. BANLR=. BATR=. BCEF=. BCLR=. BCLTBL=. BCNLR=. BCRBL=. BCT=. BCTBL=. BCTR=. BLTBL=. CBI=. CDPAC=. CFBD=. CFERE=.
CFO=. CFPDO=. CGA=. CGRI=. CGTI=. CGUI=. CIBEGNI=10.8500 CICURR=0.0590 CIDERGL=0.0000 CIOTHER=0.0000 CIPEN=-0.0210
CISECGL=0.0000 CITOTAL=10.8880 CNLTBL=. COGS=91.6900 CPCBL=. CPDOI=. CPNLI=. CPPBL=. CPREI=. CSTKE=0.0000 DBI=. DFXA=.
DILADJ=0.3030 DILAVX=11.1530 DO=0.0000 DONR=0.0000 DP=1.2500 DPRET=. DTEA=-0.0920 DTED=-0.0100 DTEEPS=-0.0100
DTEP=-0.1410 DVC=2.4600 DVDNP=. DVP=0.0000 DVPD=. DVPDP=. DVRPIV=. DVRRE=. DVSCO=. DVT=2.4600 EBIT=16.6830
EBITDA=17.9330 EIEA=. EMOL=. EPSFI=0.6500 EPSFX=0.6500 EPSPI=0.7300 EPSPX=0.7300 ESUB=0.0000 FATD=. FCA=-0.1490 FFO=.
GBBL=. GDWLAM=. GDWLIA=. GDWLID=. GDWLIEPS=. GDWLIP=. GLA=. GLCEA=. GLCED=. GLCEEPS=. GLCEP=. GLD=. GLEPS=. GLP=.
GP=43.3620 GPHBL=. GPLBL=. GPOBL=. GPRBL=. GPTBL=. GWO=. HEDGEGL=. IB=10.8500 IBADJ=10.8500 IBBL=. IBCOM=10.8500
IBKI=. IDIIS=. IDILB=. IDILC=. IDIS=. IDIST=. IDIT=. IDITS=. IIRE=. INITB=. INTC=0.0000 IOBD=. IOI=. IORE=. IPABL=.
IPHBL=. IPLBL=. IPOBL=. IPTBL=. IPTI=. IREI=. IRENT=. IRII=. IRLI=. IRNLI=. IRSI=. ISGR=. ISGT=. ISGU=. ITCI=1.5150
IVI=. LI=. LLRCI=. LLRCR=. LLWOCI=. LLWOCR=. LST=. MII=. NCO=. NFSR=. NI=10.8500 NIADJ=10.8500 NIECI=. NIINT=. NIIT=.
NIM=. NIO=. NIT=. NITS=. NOPI=-0.1520 NOPIO=-0.1520 NRTXT=. NRTXTD=. NRTXTEPS=. OIADP=16.6830 OIBDP=17.9330
OPEPS=0.7400 OPILI=. OPINCAR=. OPINI=. OPIOI=. OPIRI=. OPITI=. OPREPSX=0.6500 PALR=. PANLR=. PATR=. PCL=. PCLR=.
PCNLR=. PCTR=. PI=15.3630 PIDOM=13.7450 PIFO=1.6180 PLL=. PLTBL=. PNCA=0.1850 PNCAD=0.0100 PNCAEPS=0.0100 PNCIA=0.0000
PNCID=0.0000 PNCIEPS=0.0000 PNCIP=0.0000 PNCWIA=0.1850 PNCWID=0.0100 PNCWIEPS=0.0100 PNCWIP=0.2840 PNLBL=. PNLI=.
POBL=. PPCBL=. PPPABL=. PPPHBL=. PPPOBL=. PPPTBL=. PRCA=0.0000 PRCAD=0.0000 PRCAEPS=0.0000 PREBL=. PRI=. PTBL=.
PTRAN=. PVO=. PVON=. PWOI=. RCA=. RCD=. RCEPS=. RCP=. RDIP=0.0000 RDIPA=0.0000 RDIPD=0.0000 RDIPEPS=0.0000
REVT=135.0520 RIS=. RMUM=. RRA=. RRD=. RRP=. SALE=135.0520 SETA=. SETD=. SETEPS=. SETP=. SPCE=. SPCED=. SPCEEPS=.
SPI=-0.1410 SPID=. SPIEPS=. SPIOA=. SPIOP=. SRET=. STKCO=0.6620 STKCPA=. TDSG=. TF=. TIE=. TII=. TXC=4.0590
TXDFED=0.3770 TXDFO=-0.0330 TXDI=0.4540 TXDS=0.1100 TXEQA=. TXEQII=. TXFED=2.7650 TXFO=0.4890 TXO=0.0000 TXS=0.8050
TXT=4.5130 TXVA=. TXW=0.0000 UDPFA=. UDVP=. UGI=. UNIAMI=. UNOPINC=. UOPI=. UPDVP=. USPI=. USUBDVP=. UTME=. UTXFED=.
UXINST=. UXINTD=. WDA=. WDD=. WDEPS=. WDP=. XAD=0.1890 XAGO=. XAGT=. XCOM=. XCOMI=. XDEPL=. XDP=. XDVRE=. XEQO=.
XI=0.0000 XIDO=0.0000 XINDB=. XINDC=. XINS=. XINST=. XINT=1.0270 XINTD=. XINTOPT=0.0000 XIVI=. XIVRE=. XLR=. XNBI=.
XNF=. XNINS=. XNITB=. XOBD=. XOI=. XOPR=117.1190 XOPRAR=. XOPTD=0.0000 XOPTEPS=0.0000 XORE=. XPR=2.5440 XRD=.
XRENT=1.8000 XS=. XSGA=25.4290 XSTF=. XSTFO=. XSTFWS=. XT=. XUW=. XUWLI=. XUWNLI=. XUWOI=. XUWREI=. XUWTI=. AFUDCC=.
AFUDCI=. AMC=. AOLOCH=2.2020 APALCH=0.3190 AQC=4.0000 CAPX=0.2730 CAPXV=0.2730 CDVC=. CHECH=10.2700 DEPC=.
DLCCH=0.0000 DLTIS=0.0000 DLTR=0.0000 DPC=1.2500 DV=2.4600 ESUBC=0.0000 EXRE=0.0000 FIAO=0.0000 FINCF=-2.6680
FOPO=1.1670 FOPOX=1.1670 FOPT=. FSRCO=. FSRCT=. FUSEO=. FUSET=. IBC=10.8500 INTPN=0.9460 INVCH=5.2810 ITCC=.
IVACO=0.0000 IVCH=0.0000 IVNCF=-3.8910 IVSTCH=0.0000 OANCF=16.8290 PDVC=. PRSTKC=0.4560 PRSTKCC=. PRSTKPC=.
RECCH=-5.0890 SCSTKC=. SIV=0.0000 SPPE=0.3820 SPPIV=-0.0700 SPSTKC=. SSTK=0.2480 TDC=. TSAFC=. TXACH=0.4650
TXBCO=0.0000 TXBCOF=0.0000 TXDC=0.4540 TXPD=2.6370 UAOLOCH=. UDFCC=. UFRETSD=. UNWCC=. UOIS=. USTDNC=. UTFDOC=.
UTFOSC=. UWKCAPC=. WCAPC=. WCAPCH=. XIDOC=0.0000 ACCRT=. ACQAO=. ACQCSHI=0.0530 ACQGDWL=4.8060 ACQIC=. ACQINTAN=1.3900
ACQINVT=. ACQLNTAL=. ACQNIINTC=. ACQPPE=0.0230 ACQSC=. ANO=. AOL2=. AQPL1=. AU=11 AUL3=. AUOP=1 AUOPIC=0 BASTR=.
BILLEXCE=. CAPR1=. CAPR2=. CAPR3=. CAPSFT=. CEIEXBILL=. CEOSO=Y CFOSO=Y CI=10.8880 CIMII=0.0000 CSHFD=17.2460
CSHI=17.0970 CSHO=16.9590 CSHPRI=14.8130 CSHR=0.1460 CSHRC=. CSHRP=. CSHRSO=. CSHRT=. CSHRW=. DERAC=. DERALT=.
DERHEDGL=. DERLC=. DERLLT=. DT=0.0000 DVINTF=. EMP=0.4520 FINACO=. FINAO=. FINCH=. FINDLC=. FINDLT=. FINIVST=.

FINLCO=. FINLTO=. FINNP=. FINRECC=. FINRECLT=. FINREV=. FINXINT=. FINXOPR=. GLIV=. GOVTOWN=. IBMII=10.8500
LIFRP=0.0000 LNO=. LOL2=. LQPL1=. LUL3=. MIBN=. MIBT=. NIINTPFC=. NIINTPFP=. NIPFC=. NIPFP=. OPTCA=0.0520 OPTDR=1.9000
OPTEX=0.6140 OPTEXD=0.0410 OPTFVGR=3.8100 OPTGR=0.1630 OPTLIFE=6.2000 OPTOSBY=1.1740 OPTOSEY=1.2440 OPTPRCBY=4.7400
OPTRFR=1.2000 OPTVOL=60.0000 PNRSHO=0.0000 PRSHO=0.0000 RANK=1 RSTCHE=. RSTCHELT=. SALEPFC=. SALEPFP=. TEQ=61.9940
TFVA=. TFVCE=0.0000 TFVL=. TSTKN=0.1380 TXTUBADJUST=0.0000 TXTUBBEGIN=0.0490 TXTUBEND=0.1620 TXTUBMAX=. TXTUBMIN=.
TXTUBPOSDEC=0.0000 TXTUBPOSINC=0.1340 TXTUBPOSPDEC=0.0000 TXTUBPOSPINC=0.0000 TXTUBSETTLE=0.0000 TXTUBSOFLIMIT=0.0210
TXTUBTXTR=. TXTUBXINTBS=. TXTUBXINTIS=0.0060 XRDP=. ADJEX_C=1.000000000000 ADJEX_F=1.000000000000
CSHTR_C=11055266.0000 CSHTR_F=11055266.0000 DVPSP_C=0.1600 DVPSP_F=0.1600 DVPSX_C=0.1600 DVPSX_F=0.1600
MKVALT=168.7421 NAICSH=333413 PRCC_C=9.950000000000 PRCC_F=9.950000000000 PRCH_C=10.200000000000
PRCH_F=10.200000000000 PRCL_C=5.460000000000 PRCL_F=5.460000000000 SICH=3564 CONSOL=C INDFMT=INDL DATAFMT=STD POPSRC=D
CURCD=USD COSTAT=A PS=0 BE=62.122 year=2012 bvcEquity=168.74205 capIntens=0.0029010457 cashFlow=0.1285811443
cashHoldings=0.2443466803 costcap=. leverages=0 bleverage=0 market_leverage=0 roa=0.1152979682 roe=0.0642993255
cash_assets=0.2443466803 TobinsQ=. bvEqity=. _ERROR_=1 _N_=393
NOTE: Division by zero detected at line 2533 column 17.
GVKEY=001072 DATADATE=1982-12-31 FYEAR=1982 ADD1=One AVX Boulevard ADD2= ADD3= ADD4= ADDZIP=29644
BUSDESC=KYOCERA AVX Components Corporation, together with its subsidiaries, manufactures, supplies, and resells variou
s electronic components, interconnect devices, sensing and control devices, and related products worldwide.
CITY=Fountain Inn CONML=AVX Corp. COUNTY= DLDTE=2020-03-31 DLRSN=01 EIN=33-0379007 FAX= FYRC=3 GGROUP=4520
GIND=452030 GSECTOR=45 GSUBIND=45203015 IDBFLAG=D INCORP=DE IPODATE=1973-03-01 LOC=USA NAICS=334416 PHONE=864 967 2150
PRICAN= PRIROW= PRIUSA=01 SIC=3670 SPCINDCD=220 SPCSECCD=925 SPCSRC=B- STATE=SC STKO=0 WEBURL=www.kyocera-avx.com
CONM=AVX CORP TIC=AVX CUSIP=002444107 CIK=0000859163 EXCHG=11 FYR=12 FIC=USA ACCTCHG= ACCTSTD=DS ACQMETH= ADRR=.
AJEX=3.000000000000 AJP=3.000000000000 APDEDATE=. BSPR= COMPST= CURNCD=USD CURRTR=1.000000000000 CURUSCN=. FDATE=.
FINAL=Y ISMOD=1 LTCM= OGM= PDATE=. PDDUR=12 SCF=1 SRC=53 STALT= UDPL= UPD=3 ACCO=. ACDO=. ACO=1.9840 ACODO=.
ACOMINC=. ACOX=1.9840 ACOXAR=. ACT=80.5790 AEDI=. ALDO=. AO=4.3520 AOCIDERGL=. AOCIOTHER=. AOCIPEN=. AOCISECGL=.
AODO=. AOX=4.3520 AP=3.0480 APB=. APC=. APOFS=. ARB=. ARC=. ARTFS=. AT=150.1740 BAST=0.9000 BKVLPS=14.0662 CA=.
CAPS=39.1690 CB=. CEQ=66.7580 CEQL=66.7580 CEQT=66.7580 CH=. CHE=18.0360 CHS=. CLD2=. CLD3=. CLD4=. CLD5=. CLFC=.
CLFX=. CLG=. CLIS=. CLL=. CLLC=. CLO=. CLRLL=. CLT=. CMP=. CRV=. CRVNLI=. CSTK=4.7460 CSTKCV=1.0000 DC=0.0000 DCLO=.
DCOM=. DCPSTK=0.0000 DCS=. DCVSR=0.0000 DCVSUB=0.0000 DCVT=0.0000 DD=0.0000 DD1=0.0000 DD2=2.0370 DD3=2.6470
DD4=4.5270 DD5=4.6270 DFPAC=. DFS=. DLC=0.0000 DLTO=2.1780 DLTP=0.0000 DLTSUB=. DLTT=65.5740 DM=. DN=33.5590 DPACB=.
DPACC=. DPACLI=. DPACLS=. DPACME=. DPACNR=. DPACO=. DPACRE=. DPACT=21.2980 DPDC=. DPLTB=. DPSC=. DPSTB=. DPTB=. DPTC=.
DPTIC=. DPVIEB=21.2980 DPVIO=0.0000 DPVIR=1.1660 DRC=. DRCI=. DRLT=. DS=30.0000 DUDD=. DVPA=0.0000 DVPIBB=16.5760
DXD2=. DXD3=. DXD4=. DXD5=. EA=. ESOPCT=. ESOPDLT=. ESOPNR=. ESOPR=. ESOPT=. EXCADJ=. FATB=. FATC=. FATE=. FATL=.
FATN=. FATO=. FATP=. FDFR=. FEA=. FEL=. FFS=. GDWL=. GEQRV=. GOVGR=. IAEQ=. IAEQCI=. IAEQMI=. IAFICI=. IAFXI=.
IAFXMI=. IALI=. IALOI=. IALTI=. IAMLI=. IAOI=. IAPLI=. IAREI=. IASCI=. IASMI=. IASSI=. IASTI=. IATCI=. IATI=. IATMI=.
IAUI=. ICAPT=132.3320 INTAN=. INTANO=. INVFG=14.8250 INVO=. INVOFS=. INVREH=. INVREI=. INVRES=. INVRM=9.9600
INVT=39.3580 INVWIP=14.5730 IP=. IPC=. IPV=. ISEQ=. ISEQC=. ISEQM=. ISFI=. ISFXC=. ISFXM=. ISLG=. ISLGC=. ISLGM=.
ISLT=. ISNG=. ISNGC=. ISNGM=. ISOTC=. ISOTH=. ISOTM=. ISSC=. ISSM=. ISSU=. IST=. ISTC=. ISTM=. ISUT=. ITCB=0.0000
IVAEQ=0.0000 IVAO=0.0000 IVGOD=. IVPT=. IVST=. LCABG=. LCACL=. LCACR=. LCAG=. LCAL=. LCALT=. LCAM=. LCAO=. LCAST=.

LCAT=. LCO=6.8430 LCOX=0.0000 LCOXAR=. LCOXDR=. LCT=10.8670 LCUACU=. LIF=. LIFR=0.0000 LLOML=. LLOO=. LLOT=. LO=0.2100 LOXDR=. LRV=. LS=. LSE=150.1740 LT=83.4160 MIB=. MRC1=1.0350 MRC2=0.9720 MRC3=0.9680 MRC4=0.9630 MRC5=0.4970 MRCT=4.4350 MRCTA=. MSA=0.0000 MSVRV=. MTL=. NAT=. NP=0.0000 NPANL=. NPAORE=. NPARL=. NPAT=. OB=35.7000 OPTPRCCA=. OPTPRCEX=. OPTPRCEY=. OPTPRCGR=. OPTPRCWA=. PPEGT=86.5410 PPENB=7.9720 PPENC=4.7400 PPENLI=0.1930 PPENLS=6.1700 PPENME=46.1680 PPENNR=0.0000 PPENO=0.0000 PPENT=65.2430 PPEVBB=73.1920 PPEVEB=86.5410 PPEVO=0.0000 PPEVR=3.0950 PRC=. PRODV=. PRVT=. PSTK=0.0000 PSTKC=0.0000 PSTKL=0.0000 PSTKN=0.0000 PSTKR=0.0000 PSTKRV=0.0000 PVCL=. PVPL=. PVT=. RADP=. RAGR=. RARI=. RATI=. RCL=. RDP=. RE=22.8430 REA=0.0000 REAJO=0.0000 RECCO=3.8190 RECD=0.2390 RECT=21.2010 RECTA=0.0000 RECTR=15.9630 RECUB=. RET=. REUNA=22.8430 REUNR=0.6000 RLL=. RLO=. RLP=. RLRI=. RLT=. RPAG=. RREPS=. RVBCI=. RVBPI=. RVBTI=. RVDO=. RVDT=. RVEQT=. RVLRV=. RVNO=. RVNT=. RVRI=. RVSI=. RVTI=. RVTXR=. RVUPI=. RVUTX=. SAA=. SAL=. SBDC=. SC=. SCO=. SECU=. SEQ=66.7580 SEQO=. SRT=. SSNP=. STBO=. STIO=. TDSCD=. TDSCE=. TDSLG=. TDSMM=. TDSNG=. TDSO=. TDSS=. TDST=. TLCF=. TRANSA=. TSA=. TSO=. TSTK=0.0000 TSTKC=0.0000 TSTKME=. TSTKP=0.0000 TXDB=6.7650 TXDBA=. TXDBCA=. TXDBCL=. TXDITC=6.7650 TXNDB=. TXNDBA=. TXNDBL=. TXNDBR=. TXP=0.9760 TXR=1.4190 UAOX=. UAPT=. UCAPS=. UCCONS=. UCEQ=. UCUSTAD=. UDCOPRES=. UDD=. UDMB=. UDOLT=. UDPCO=. UI=. UINVT=. ULCM=. ULCO=. UNL=. UNNP=. UNNPL=. UOPRES=. UPMCSTK=. UPMPF=. UPMPFS=. UPMSUBP=. UPSTK=. UPSTKC=. UPSTKSF=. URECT=. URECTR=. UREVUB=. USUBPSTK=. VPAC=. VPO=. WCAP=69.7120 XACC=6.8430 XPP=0.0000 ACCHG=. ADPAC=. AM=. AMDC=. AMGW=. AQA=. AQD=. AQEPS=. AQI=0.0000 AQP=. AQS=0.0000 ARCE=. ARCED=. ARCEEPS=. AUTXR=. BALR=. BANLR=. BATR=. BCEF=. BCLR=. BCLTBL=. BCNLR=. BCRBL=. BCT=. BCTBL=. BCTR=. BLTBL=. CBI=. CDPAC=. CFBD=. CFERE=. CFO=. CFPDO=. CGA=. CGRI=. CGTI=. CGUI=. CIBEGNI=. CICURR=. CIDERGL=. CIOTHER=. CIPEN=. CISECGL=. CITOTAL=. CNLTBL=. COGS=85.1820 CPCBL=. CPDOI=. CPNLI=. CPPBL=. CPREI=. CSTKE=0.0000 DBI=. DFXA=5.8880 DILADJ=. DILAVX=. DO=0.6020 DONR=. DP=5.8880 DPRET=. DTEA=. DTED=. DTEEPS=. DTEP=. DVC=1.1380 DVDNP=. DVP=0.0000 DVPD=. DVPDP=. DVRPIV=. DVRRE=. DVSCO=. DVT=1.1380 EBIT=7.5440 EBITDA=13.4320 EIEA=. EMOL=. EPSFI=0.7600 EPSFX=0.6400 EPSPI=0.7600 EPSPX=0.6400 ESUB=0.0000 FATD=. FCA=. FFO=. GBBL=. GDWLAM=. GDWLIA=. GDWLID=. GDWLIEPS=. GDWLIP=. GLA=. GLCEA=. GLCED=. GLCEEPS=. GLCEP=. GLD=. GLEPS=. GLP=. GP=35.1270 GPHBL=. GPLBL=. GPOBL=. GPRBL=. GPTBL=. GWO=. HEDGEGL=. IB=3.0660 IBADJ=3.0660 IBBL=. IBCOM=3.0660 IBKI=. IDIIS=. IDILB=. IDILC=. IDIS=. IDIST=. IDIT=3.3250 IDITS=. IIRE=. INITB=. INTC=. IOBD=. IOI=. IORE=. IPABL=. IPHBL=. IPLBL=. IPOBL=. IPTBL=. IPTI=. IREI=. IRENT=. IRII=. IRLI=. IRNLI=. IRSI=. ISGR=. ISGT=. ISGU=. ITCI=1.0000 IVI=. LI=. LLRCI=. LLRCR=. LLWOCI=. LLWOCR=. LST=. MII=. NCO=. NFSR=. NI=3.6680 NIADJ=3.6680 NIECI=. NIINT=. NIIT=. NIM=. NIO=. NIT=. NITS=. NOPI=3.0910 NOPIO=-0.2340 NRTXT=. NRTXTD=. NRTXTEPS=. OIADP=7.5440 OIBDP=13.4320 OPEPS=. OPILI=. OPINCAR=. OPINI=. OPIOI=. OPIRI=. OPITI=. OPREPSX=. PALR=. PANLR=. PATR=. PCL=. PCLR=. PCNLR=. PCTR=. PI=3.3090 PIDOM=. PIFO=. PLL=. PLTBL=. PNCA=. PNCAD=. PNCAEPS=. PNCIA=. PNCID=. PNCIEPS=. PNCIP=. PNCWIA=. PNCWID=. PNCWIEPS=. PNCWIP=. PNLBL=. PNLI=. POBL=. PPCBL=. PPPABL=. PPPHBL=. PPPOBL=. PPPTBL=. PRCA=. PRCAD=. PRCAEPS=. PREBL=. PRI=. PTBL=. PTRAN=. PVO=. PVON=. PWOI=. RCA=. RCD=. RCEPS=. RCP=. RDIP=. RDIPA=. RDIPD=. RDIPEPS=. REVT=120.3090 RIS=. RMUM=. RRA=. RRD=. RRP=. SALE=120.3090 SETA=. SETD=. SETEPS=. SETP=. SPCE=. SPCED=. SPCEEPS=. SPI=0.0000 SPID=. SPIEPS=. SPIOA=. SPIOP=. SRET=. STKCO=. STKCPA=. TDSG=. TF=. TIE=. TII=. TXC=-0.4640 TXDFED=. TXDFO=. TXDI=0.7070 TXDS=. TXEQA=. TXEQII=. TXFED=-0.5980 TXFO=0.0000 TXO=. TXS=0.1340 TXT=0.2430 TXVA=. TXW=0.0000 UDPFA=. UDVP=. UGI=. UNIAMI=. UNOPINC=. UOPI=. UPDVP=. USPI=. USUBDVP=. UTME=. UTXFED=. UXINST=. UXINTD=. WDA=. WDD=. WDEPS=. WDP=. XAD=. XAGO=. XAGT=. XCOM=. XCOMI=. XDEPL=0.0000 XDP=5.8880 XDVRE=. XEQO=. XI=0.0000 XIDO=0.6020 XINDB=. XINDC=. XINS=. XINST=. XINT=7.3260 XINTD=. XINTOPT=. XIVI=. XIVRE=. XLR=. XNBI=. XNF=. XNINS=. XNITB=. XOBD=. XOI=. XOPR=106.8770 XOPRAR=. XOPTD=. XOPTEPS=. XORE=. XPR=0.5230 XRD=5.4000 XRENT=2.5370 XS=. XSGA=21.6950 XSTF=. XSTFO=. XSTFWS=. XT=. XUW=. XUWLI=. XUWNLI=.

XUWOI=. XUWREI=. XUWTI=. AFUDCC=. AFUDCI=. AMC=. AOLOCH=. APALCH=. AQC=0.0000 CAPX=16.4440 CAPXV=16.4440 CDVC=.
CHECH=. DEPC=. DLCCH=. DLTIS=8.1350 DLTR=0.1000 DPC=5.9760 DV=1.1380 ESUBC=0.0000 EXRE=. FIAO=. FINCF=. FOPO=0.0000
FOPOX=. FOPT=10.9780 FSRCO=-2.7710 FSRCT=18.3270 FUSEO=0.0080 FUSET=17.6900 IBC=3.0660 INTPN=. INVCH=. ITCC=. IVACO=.
IVCH=0.0000 IVNCF=. IVSTCH=. OANCF=. PDVC=. PRSTKC=0.0000 PRSTKCC=. PRSTKPC=. RECCH=. SCSTKC=. SIV=0.0000 SPPE=1.9290
SPPIV=. SPSTKC=. SSTK=0.0560 TDC=. TSAFC=. TXACH=. TXBCO=. TXBCOF=. TXDC=1.3340 TXPD=. UAOLOCH=. UDFCC=. UFRETSD=.
UNWCC=. UOIS=. USTDNC=. UTFDOC=. UTFOSC=. UWKCAPC=. WCAPC=0.6370 WCAPCH=0.6370 XIDOC=0.6020 ACCRT=. ACQAO=. ACQCSHI=.
ACQGDWL=. ACQIC=. ACQINTAN=. ACQINVT=. ACQLNTAL=. ACQNIINTC=. ACQPPE=. ACQSC=. ANO=. AOL2=. AQPL1=. AU=3 AUL3=. AUOP=1
AUOPIC= BASTR=12.5000 BILLEXCE=. CAPR1=. CAPR2=. CAPR3=. CAPSFT=. CEIEXBILL=. CEOSO= CFOSO= CI=. CIMII=.
CSHFD=4.8540 CSHI=. CSHO=4.7460 CSHPRI=4.8040 CSHR=2.7000 CSHRC=. CSHRP=. CSHRSO=. CSHRT=0.5380 CSHRW=. DERAC=.
DERALT=. DERHEDGL=. DERLC=. DERLLT=. DT=. DVINTF=. EMP=3.8000 FINACO=. FINAO=. FINCH=. FINDLC=. FINDLT=. FINIVST=.
FINLCO=. FINLTO=. FINNP=. FINRECC=. FINRECLT=. FINREV=. FINXINT=. FINXOPR=. GLIV=. GOVTOWN=. IBMII=. LIFRP=0.0000
LNO=. LOL2=. LQPL1=. LUL3=. MIBN=. MIBT=. NIINTPFC=. NIINTPFP=. NIPFC=. NIPFP=. OPTCA=. OPTDR=. OPTEX=. OPTEXD=.
OPTFVGR=. OPTGR=. OPTLIFE=. OPTOSBY=. OPTOSEY=. OPTPRCBY=. OPTRFR=. OPTVOL=. PNRSHO=. PRSHO=. RANK=1 RSTCHE=.
RSTCHELT=. SALEPFC=. SALEPFP=. TEQ=. TFVA=. TFVCE=. TFVL=. TSTKN=0.0000 TXTUBADJUST=. TXTUBBEGIN=. TXTUBEND=.
TXTUBMAX=. TXTUBMIN=. TXTUBPOSDEC=. TXTUBPOSINC=. TXTUBPOSPDEC=. TXTUBPOSPINC=. TXTUBSETTLE=. TXTUBSOFLIMIT=.
TXTUBTXTR=. TXTUBXINTBS=. TXTUBXINTIS=. XRDP=5.1000 ADJEX_C=3.000000000000 ADJEX_F=3.000000000000 CSHTR_C=3086600.0000
CSHTR_F=3086600.0000 DVPSP_C=0.3200 DVPSP_F=0.3200 DVPSX_C=0.2400 DVPSX_F=0.2400 MKVALT=. NAICSH=.
PRCC_C=21.499998090000 PRCC_F=21.499998090000 PRCH_C=26.874984740000 PRCH_F=26.874984740000 PRCL_C=11.749998090000
PRCL_F=11.749998090000 SICH=. CONSOL=C INDFMT=INDL DATAFMT=STD POPSRC=D CURCD=USD COSTAT=I PS=0 BE=73.523 year=1982
bvcEquity=102.03899094 capIntens=0.1094996471 cashFlow=0.0596241693 cashHoldings=0.1201006832 costcap=.
leverages=0.9822642979 bleverage=0.436653482 market_leverage=0.3535844448 roa=0.0204163171 roe=0.0359470431
cash_assets=0.1201006832 TobinsQ=. bvEqity=. _ERROR_=1 _N_=480
NOTE: Division by zero detected at line 2533 column 17.
GVKEY=001072 DATADATE=2005-03-31 FYEAR=2004 ADD1=One AVX Boulevard ADD2= ADD3= ADD4= ADDZIP=29644
BUSDESC=KYOCERA AVX Components Corporation, together with its subsidiaries, manufactures, supplies, and resells variou
s electronic components, interconnect devices, sensing and control devices, and related products worldwide.
CITY=Fountain Inn CONML=AVX Corp. COUNTY= DLDTE=2020-03-31 DLRSN=01 EIN=33-0379007 FAX= FYRC=3 GGROUP=4520
GIND=452030 GSECTOR=45 GSUBIND=45203015 IDBFLAG=D INCORP=DE IPODATE=1973-03-01 LOC=USA NAICS=334416 PHONE=864 967 2150
PRICAN= PRIROW= PRIUSA=01 SIC=3670 SPCINDCD=220 SPCSECCD=925 SPCSRC=B- STATE=SC STKO=0 WEBURL=www.kyocera-avx.com
CONM=AVX CORP TIC=AVX CUSIP=002444107 CIK=0000859163 EXCHG=11 FYR=3 FIC=USA ACCTCHG= ACCTSTD=DS ACQMETH= ADRR=.
AJEX=1.000000000000 AJP=1.000000000000 APDEDATE=2005-03-31 BSPR= COMPST=AA CURNCD=USD CURRTR=1.000000000000 CURUSCN=.
FDATE=. FINAL=Y ISMOD=1 LTCM= OGM= PDATE=. PDDUR=12 SCF=7 SRC=5 STALT= UDPL= UPD=3 ACCO=. ACDO=0.0000 ACO=55.9710
ACODO=55.9710 ACOMINC=99.5840 ACOX=55.9710 ACOXAR=. ACT=1118.1360 AEDI=. ALDO=0.0000 AO=41.5380 AOCIDERGL=-0.3150
AOCIOTHER=0.0000 AOCIPEN=-21.9380 AOCISECGL=0.0000 AODO=41.5380 AOX=41.5380 AP=116.4520 APB=. APC=. APOFS=. ARB=.
ARC=. ARTFS=. AT=1689.7490 BAST=. BKVLPS=8.3215 CA=. CAPS=339.3580 CB=. CEQ=1439.2510 CEQL=1439.2510 CEQT=1369.0650
CH=490.4700 CHE=526.4700 CHS=. CLD2=0.0000 CLD3=0.0000 CLD4=0.0000 CLD5=0.0000 CLFC=. CLFX=. CLG=. CLIS=. CLL=. CLLC=.
CLO=. CLRLL=. CLT=. CMP=. CRV=. CRVNLI=. CSTK=1.7640 CSTKCV=0.0100 DC=0.0000 DCLO=0.0000 DCOM=0.0000 DCPSTK=0.0000
DCS=0.0000 DCVSR=0.0000 DCVSUB=0.0000 DCVT=0.0000 DD=0.0000 DD1=0.0000 DD2=0.0000 DD3=0.0000 DD4=0.0000 DD5=0.0000

DFPAC=. DFS=0.0000 DLC=0.0000 DLTO=0.0000 DLTP=0.0000 DLTSUB=. DLTT=0.0000 DM=0.0000 DN=0.0000 DPACB=. DPACC=.
DPACLI=. DPACLS=. DPACME=. DPACNR=. DPACO=. DPACRE=. DPACT=1239.4910 DPDC=. DPLTB=. DPSC=. DPSTB=. DPTB=. DPTC=.
DPTIC=. DPVIEB=1239.4910 DPVIO=. DPVIR=. DRC=0.0000 DRCI=. DRLT=0.0000 DS=0.0000 DUDD=0.0000 DVPA=0.0000 DVPIBB=.
DXD2=0.0000 DXD3=0.0000 DXD4=0.0000 DXD5=0.0000 EA=. ESOPCT=0.0000 ESOPDLT=0.0000 ESOPNR=0.0000 ESOPR=0.0000
ESOPT=0.0000 EXCADJ=. FATB=250.4970 FATC=9.0100 FATE=1224.6600 FATL=0.0000 FATN=0.0000 FATO=0.0000 FATP=21.2160 FDFR=.
FEA=. FEL=. FFS=. GDWL=70.1860 GEQRV=. GOVGR=. IAEQ=. IAEQCI=. IAEQMI=. IAFICI=. IAFXI=. IAFXMI=. IALI=. IALOI=.
IALTI=. IAMLI=. IAOI=. IAPLI=. IAREI=. IASCI=. IASMI=. IASSI=. IASTI=. IATCI=. IATI=. IATMI=. IAUI=. ICAPT=1439.2510
INTAN=70.1860 INTANO=0.0000 INVFG=139.6760 INVO=0.0000 INVOFS=. INVREH=. INVREI=. INVRES=. INVRM=147.3870
INVT=379.6300 INVWIP=92.5670 IP=. IPC=. IPV=. ISEQ=. ISEQC=. ISEQM=. ISFI=. ISFXC=. ISFXM=. ISLG=. ISLGC=. ISLGM=.
ISLT=. ISNG=. ISNGC=. ISNGM=. ISOTC=. ISOTH=. ISOTM=. ISSC=. ISSM=. ISSU=. IST=. ISTC=. ISTM=. ISUT=. ITCB=0.0000
IVAEQ=0.0000 IVAO=193.9970 IVGOD=. IVPT=. IVST=36.0000 LCABG=. LCACL=. LCACR=. LCAG=. LCAL=. LCALT=. LCAM=. LCAO=.
LCAST=. LCAT=. LCO=71.6880 LCOX=0.0000 LCOXAR=. LCOXDR=0.0000 LCT=196.5720 LCUACU=. LIF=. LIFR=0.0000 LLOML=. LLOO=.
LLOT=. LO=53.9260 LOXDR=53.9260 LRV=. LS=. LSE=1689.7490 LT=250.4980 MIB=0.0000 MRC1=6.5600 MRC2=3.5950 MRC3=2.9000
MRC4=1.5990 MRC5=1.5340 MRCT=16.1880 MRCTA=2.3730 MSA=0.0000 MSVRV=. MTL=. NAT=. NP=0.0000 NPANL=. NPAORE=. NPARL=.
NPAT=. OB=155.0000 OPTPRCCA=16.4100 OPTPRCEX=9.2300 OPTPRCEY=15.0100 OPTPRCGR=14.0300 OPTPRCWA=15.3600 PPEGT=1505.3830
PPENB=. PPENC=. PPENLI=. PPENLS=. PPENME=. PPENNR=. PPENO=. PPENT=265.8920 PPEVBB=. PPEVEB=1505.3830 PPEVO=. PPEVR=.
PRC=. PRODV=. PRVT=. PSTK=0.0000 PSTKC=0.0000 PSTKL=0.0000 PSTKN=0.0000 PSTKR=0.0000 PSTKRV=0.0000 PVCL=. PVPL=. PVT=.
RADP=. RAGR=. RARI=. RATI=. RCL=. RDP=. RE=1141.9310 REA=0.0000 REAJO=-22.2530 RECCO=4.0540 RECD=3.4260 RECT=156.0650
RECTA=121.8370 RECTR=152.0110 RECUB=. RET=. REUNA=1042.3470 REUNR=1042.3470 RLL=. RLO=. RLP=. RLRI=. RLT=. RPAG=.
RREPS=. RVBCI=. RVBPI=. RVBTI=. RVDO=. RVDT=. RVEQT=. RVLRV=. RVNO=. RVNT=. RVRI=. RVSI=. RVTI=. RVTXR=. RVUPI=.
RVUTX=. SAA=. SAL=. SBDC=. SC=. SCO=. SECU=. SEQ=1439.2510 SEQO=0.0000 SRT=. SSNP=. STBO=. STIO=. TDSCD=. TDSCE=.
TDSLG=. TDSMM=. TDSNG=. TDSO=. TDSS=. TDST=. TLCF=321.2790 TRANSA=. TSA=. TSO=. TSTK=43.8020 TSTKC=43.8020 TSTKME=.
TSTKP=0.0000 TXDB=0.0000 TXDBA=. TXDBCA=24.4410 TXDBCL=. TXDITC=0.0000 TXNDB=32.6570 TXNDBA=81.4710 TXNDBL=48.8140
TXNDBR=0.0000 TXP=8.4320 TXR=0.0000 UAOX=. UAPT=. UCAPS=. UCCONS=. UCEQ=. UCUSTAD=. UDCOPRES=. UDD=. UDMB=. UDOLT=.
UDPCO=. UI=. UINVT=. ULCM=. ULCO=. UNL=. UNNP=. UNNPL=. UOPRES=. UPMCSTK=. UPMPF=. UPMPFS=. UPMSUBP=. UPSTK=. UPSTKC=.
UPSTKSF=. URECT=. URECTR=. UREVUB=. USUBPSTK=. VPAC=. VPO=. WCAP=921.5640 XACC=71.6880 XPP=. ACCHG=0.0000 ADPAC=. AM=.
AMDC=. AMGW=. AQA=. AQD=. AQEPS=. AQI=. AQP=. AQS=. ARCE=. ARCED=. ARCEEPS=. AUTXR=. BALR=. BANLR=. BATR=. BCEF=.
BCLR=. BCLTBL=. BCNLR=. BCRBL=. BCT=. BCTBL=. BCTR=. BLTBL=. CBI=. CDPAC=. CFBD=. CFERE=. CFO=. CFPDO=. CGA=. CGRI=.
CGTI=. CGUI=. CIBEGNI=55.7320 CICURR=37.2590 CIDERGL=-0.5280 CIOTHER=0.0000 CIPEN=-1.7640 CISECGL=0.0000
CITOTAL=90.6990 CNLTBL=. COGS=1024.4300 CPCBL=. CPDOI=. CPNLI=. CPPBL=. CPREI=. CSTKE=0.0000 DBI=. DFXA=.
DILADJ=0.0000 DILAVX=55.7320 DO=0.0000 DONR=0.0000 DP=80.7340 DPRET=. DTEA=. DTED=. DTEEPS=. DTEP=. DVC=26.0220
DVDNP=. DVP=0.0000 DVPD=. DVPDP=. DVRPIV=. DVRRE=. DVSCO=. DVT=26.0220 EBIT=70.6090 EBITDA=151.3430 EIEA=. EMOL=.
EPSFI=0.3200 EPSFX=0.3200 EPSPI=0.3200 EPSPX=0.3200 ESUB=0.0000 FATD=. FCA=. FFO=. GBBL=. GDWLAM=. GDWLIA=. GDWLID=.
GDWLIEPS=. GDWLIP=. GLA=2.8000 GLCEA=2.8000 GLCED=0.0200 GLCEEPS=0.0200 GLCEP=2.8000 GLD=0.0200 GLEPS=0.0200
GLP=2.8000 GP=258.7720 GPHBL=. GPLBL=. GPOBL=. GPRBL=. GPTBL=. GWO=. HEDGEGL=. IB=55.7320 IBADJ=55.7320 IBBL=.
IBCOM=55.7320 IBKI=. IDIIS=. IDILB=. IDILC=. IDIS=. IDIST=. IDIT=12.7390 IDITS=. IIRE=. INITB=. INTC=0.0000 IOBD=.
IOI=. IORE=. IPABL=. IPHBL=. IPLBL=. IPOBL=. IPTBL=. IPTI=. IREI=. IRENT=. IRII=. IRLI=. IRNLI=. IRSI=. ISGR=. ISGT=.
ISGU=. ITCI=0.0000 IVI=. LI=. LLRCI=. LLRCR=. LLWOCI=. LLWOCR=. LST=. MII=0.0000 NCO=. NFSR=. NI=55.7320 NIADJ=55.7320

NIECI=. NIINT=. NIIT=. NIM=. NIO=. NIT=. NITS=. NOPI=15.0110 NOPIO=2.2720 NRTXT=. NRTXTD=. NRTXTEPS=. OIADP=70.6090
OIBDP=151.3430 OPEPS=0.3100 OPILI=. OPINCAR=. OPINI=. OPIOI=. OPIRI=. OPITI=. OPREPSX=0.3000 PALR=. PANLR=. PATR=.
PCL=. PCLR=. PCNLR=. PCTR=. PI=88.0440 PIDOM=57.6020 PIFO=30.4420 PLL=. PLTBL=. PNCA=1.7000 PNCAD=0.0100
PNCAEPS=0.0100 PNCIA=0.0000 PNCID=0.0000 PNCIEPS=0.0000 PNCIP=0.0000 PNCWIA=1.7000 PNCWID=0.0100 PNCWIEPS=0.0100
PNCWIP=2.6160 PNLBL=. PNLI=. POBL=. PPCBL=. PPPABL=. PPPHBL=. PPPOBL=. PPPTBL=. PRCA=0.0000 PRCAD=0.0000
PRCAEPS=0.0000 PREBL=. PRI=. PTBL=. PTRAN=. PVO=. PVON=. PWOI=. RCA=. RCD=. RCEPS=. RCP=. RDIP=0.0000 RDIPA=0.0000
RDIPD=0.0000 RDIPEPS=0.0000 REVT=1283.2020 RIS=. RMUM=. RRA=. RRD=. RRP=. SALE=1283.2020 SETA=. SETD=. SETEPS=. SETP=.
SPCE=50.5930 SPCED=0.2900 SPCEEPS=0.2900 SPI=2.8000 SPID=. SPIEPS=. SPIOA=. SPIOP=. SRET=. STKCO=0.0000 STKCPA=0.0000
TDSG=. TF=. TIE=. TII=. TXC=. TXDFED=. TXDFO=1.5480 TXDI=12.9330 TXDS=. TXEQA=. TXEQII=. TXFED=. TXFO=7.9820
TXO=0.0000 TXS=. TXT=32.3120 TXVA=. TXW=0.0000 UDPFA=. UDVP=. UGI=. UNIAMI=. UNOPINC=. UOPI=. UPDVP=. USPI=. USUBDVP=.
UTME=. UTXFED=. UXINST=. UXINTD=. WDA=. WDD=. WDEPS=. WDP=. XAD=. XAGO=. XAGT=. XCOM=. XCOMI=. XDEPL=. XDP=. XDVRE=.
XEQO=. XI=0.0000 XIDO=0.0000 XINDB=. XINDC=. XINS=. XINST=. XINT=0.3760 XINTD=0.0000 XINTOPT=4.0390 XIVI=. XIVRE=.
XLR=. XNBI=. XNF=. XNINS=. XNITB=. XOBD=. XOI=. XOPR=1131.8590 XOPRAR=. XOPTD=0.0200 XOPTEPS=0.0200 XORE=. XPR=9.6600
XRD=11.0490 XRENT=8.7400 XS=. XSGA=107.4290 XSTF=. XSTFO=. XSTFWS=. XT=. XUW=. XUWLI=. XUWNLI=. XUWOI=. XUWREI=.
XUWTI=. AFUDCC=. AFUDCI=. AMC=. AOLOCH=12.1020 APALCH=-43.0060 AQC=-3.2470 CAPX=48.3240 CAPXV=48.3240 CDVC=.
CHECH=-39.2600 DEPC=. DLCCH=-0.0260 DLTIS=0.0000 DLTR=0.0000 DPC=80.7340 DV=26.0220 ESUBC=0.0000 EXRE=3.6820
FIAO=0.0000 FINCF=-34.6830 FOPO=0.0000 FOPOX=0.0000 FOPT=. FSRCO=. FSRCT=. FUSEO=. FUSET=. IBC=55.7320 INTPN=0.0370
INVCH=-72.0440 ITCC=. IVACO=-0.0610 IVCH=106.0000 IVNCF=-65.3590 IVSTCH=. OANCF=57.1000 PDVC=. PRSTKC=8.9260 PRSTKCC=.
PRSTKPC=. RECCH=20.2030 SCSTKC=. SIV=79.9890 SPPE=5.7900 SPPIV=-3.5660 SPSTKC=. SSTK=0.2910 TDC=. TSAFC=.
TXACH=-5.9880 TXBCO=0.0000 TXBCOF=. TXDC=12.9330 TXPD=25.7550 UAOLOCH=. UDFCC=. UFRETSD=. UNWCC=. UOIS=. USTDNC=.
UTFDOC=. UTFOSC=. UWKCAPC=. WCAPC=. WCAPCH=. XIDOC=0.0000 ACCRT=. ACQAO=. ACQCSHI=. ACQGDWL=. ACQIC=. ACQINTAN=.
ACQINVT=. ACQLNTAL=. ACQNIINTC=. ACQPPE=. ACQSC=. ANO=. AOL2=. AQPL1=. AU=7 AUL3=. AUOP=4 AUOPIC=2 BASTR=. BILLEXCE=.
CAPR1=. CAPR2=. CAPR3=. CAPSFT=. CEIEXBILL=. CEOSO=Y CFOSO=Y CI=. CIMII=. CSHFD=173.9060 CSHI=176.3680 CSHO=172.9550
CSHPRI=173.4500 CSHR=0.5200 CSHRC=. CSHRP=. CSHRSO=. CSHRT=. CSHRW=. DERAC=. DERALT=. DERHEDGL=. DERLC=. DERLLT=.
DT=0.0000 DVINTF=. EMP=12.0000 FINACO=. FINAO=. FINCH=. FINDLC=. FINDLT=. FINIVST=. FINLCO=. FINLTO=. FINNP=.
FINRECC=. FINRECLT=. FINREV=. FINXINT=. FINXOPR=. GLIV=. GOVTOWN=. IBMII=. LIFRP=0.0000 LNO=. LOL2=. LQPL1=. LUL3=.
MIBN=. MIBT=0.0000 NIINTPFC=. NIINTPFP=. NIPFC=. NIPFP=. OPTCA=0.2740 OPTDR=1.0700 OPTEX=3.5150 OPTEXD=0.0320
OPTFVGR=. OPTGR=0.6200 OPTLIFE=4.0000 OPTOSBY=4.5940 OPTOSEY=4.9080 OPTPRCBY=15.1500 OPTRFR=3.5300 OPTVOL=55.9700
PNRSHO=0.0000 PRSHO=0.0000 RANK=1 RSTCHE=. RSTCHELT=. SALEPFC=. SALEPFP=. TEQ=1439.2510 TFVA=. TFVCE=. TFVL=.
TSTKN=3.4130 TXTUBADJUST=. TXTUBBEGIN=. TXTUBEND=. TXTUBMAX=. TXTUBMIN=. TXTUBPOSDEC=. TXTUBPOSINC=. TXTUBPOSPDEC=.
TXTUBPOSPINC=. TXTUBSETTLE=. TXTUBSOFLIMIT=. TXTUBTXTR=. TXTUBXINTBS=. TXTUBXINTIS=. XRDP=13.8770
ADJEX_C=1.000000000000 ADJEX_F=1.000000000000 CSHTR_C=76392000.0000 CSHTR_F=74447100.0000 DVPSP_C=0.1500
DVPSP_F=0.1500 DVPSX_C=0.1500 DVPSX_F=0.1500 MKVALT=2118.6988 NAICSH=334414 PRCC_C=12.600000000000
PRCC_F=12.250000000000 PRCH_C=19.120000000000 PRCH_F=17.390000000000 PRCL_C=11.110000000000 PRCL_F=11.110000000000
SICH=3670 CONSOL=C INDFMT=INDL DATAFMT=STD POPSRC=D CURCD=USD COSTAT=I PS=0 BE=1439.251 year=2005 bvcEquity=2118.69875
capIntens=0.0285983303 cashFlow=0.0807611071 cashHoldings=0.3115669842 costcap=. leverages=0 bleverage=0
market_leverage=0 roa=0.0329824134 roe=0.0263048251 cash_assets=0.3115669842 TobinsQ=. bvEqity=. _ERROR_=1 _N_=502
NOTE: Division by zero detected at line 2533 column 17.

GVKEY=001072 DATADATE=2006-03-31 FYEAR=2005 ADD1=One AVX Boulevard ADD2= ADD3= ADD4= ADDZIP=29644
BUSDESC=KYOCERA AVX Components Corporation, together with its subsidiaries, manufactures, supplies, and resells variou
s electronic components, interconnect devices, sensing and control devices, and related products worldwide.
CITY=Fountain Inn CONML=AVX Corp. COUNTY= DLDTE=2020-03-31 DLRSN=01 EIN=33-0379007 FAX= FYRC=3 GGROUP=4520
GIND=452030 GSECTOR=45 GSUBIND=45203015 IDBFLAG=D INCORP=DE IPODATE=1973-03-01 LOC=USA NAICS=334416 PHONE=864 967 2150
PRICAN= PRIROW= PRIUSA=01 SIC=3670 SPCINDCD=220 SPCSECCD=925 SPCSRC=B- STATE=SC STKO=0 WEBURL=www.kyocera-avx.com
CONM=AVX CORP TIC=AVX CUSIP=002444107 CIK=0000859163 EXCHG=11 FYR=3 FIC=USA ACCTCHG= ACCTSTD=DS ACQMETH= ADRR=.
AJEX=1.000000000000 AJP=1.000000000000 APDEDATE=2006-03-31 BSPR= COMPST= CURNCD=USD CURRTR=1.000000000000 CURUSCN=.
FDATE=. FINAL=Y ISMOD=1 LTCM= OGM= PDATE=. PDDUR=12 SCF=7 SRC=5 STALT= UDPL= UPD=3 ACCO=. ACDO=0.0000 ACO=54.3500
ACODO=54.3500 ACOMINC=62.5890 ACOX=54.3500 ACOXAR=. ACT=1203.7720 AEDI=. ALDO=0.0000 AO=33.9990 AOCIDERGL=-0.0950
AOCIOTHER=0.0000 AOCIPEN=-24.6470 AOCISECGL=0.0000 AODO=33.9990 AOX=33.9990 AP=105.0110 APB=. APC=. APOFS=. ARB=.
ARC=. ARTFS=. AT=1675.2080 BAST=. BKVLPS=8.4087 CA=. CAPS=338.7840 CB=. CEQ=1448.1090 CEQL=1448.1090 CEQT=1378.6260
CH=505.3260 CHE=664.3210 CHS=. CLD2=0.0000 CLD3=0.0000 CLD4=0.0000 CLD5=0.0000 CLFC=. CLFX=. CLG=. CLIS=. CLL=. CLLC=.
CLO=. CLRLL=. CLT=. CMP=. CRV=. CRVNLI=. CSTK=1.7640 CSTKCV=0.0100 DC=0.0000 DCLO=0.0000 DCOM=0.0000 DCPSTK=0.0000
DCS=0.0000 DCVSR=0.0000 DCVSUB=0.0000 DCVT=0.0000 DD=0.0000 DD1=0.0000 DD2=0.0000 DD3=0.0000 DD4=0.0000 DD5=0.0000
DFPAC=. DFS=0.0000 DLC=0.0000 DLTO=0.0000 DLTP=0.0000 DLTSUB=. DLTT=0.0000 DM=0.0000 DN=0.0000 DPACB=. DPACC=.
DPACLI=. DPACLS=. DPACME=. DPACNR=. DPACO=. DPACRE=. DPACT=1235.4360 DPDC=. DPLTB=. DPSC=. DPSTB=. DPTB=. DPTC=.
DPTIC=. DPVIEB=1235.4360 DPVIO=. DPVIR=. DRC=0.0000 DRCI=. DRLT=0.0000 DS=0.0000 DUDD=0.0000 DVPA=0.0000 DVPIBB=.
DXD2=0.0000 DXD3=0.0000 DXD4=0.0000 DXD5=0.0000 EA=. ESOPCT=0.0000 ESOPDLT=0.0000 ESOPNR=0.0000 ESOPR=0.0000
ESOPT=0.0000 EXCADJ=. FATB=249.1930 FATC=17.3930 FATE=1181.3290 FATL=0.0000 FATN=0.0000 FATO=0.0000 FATP=20.4710
FDFR=. FEA=. FEL=. FFS=. GDWL=69.4830 GEQRV=. GOVGR=. IAEQ=. IAEQCI=. IAEQMI=. IAFICI=. IAFXI=. IAFXMI=. IALI=.
IALOI=. IALTI=. IAMLI=. IAOI=. IAPLI=. IAREI=. IASCI=. IASMI=. IASSI=. IASTI=. IATCI=. IATI=. IATMI=. IAUI=.
ICAPT=1448.1090 INTAN=69.4830 INTANO=. INVFG=97.9630 INVO=0.0000 INVOFS=. INVREH=. INVREI=. INVRES=. INVRM=128.6350
INVT=307.6530 INVWIP=81.0550 IP=. IPC=. IPV=. ISEQ=. ISEQC=. ISEQM=. ISFI=. ISFXC=. ISFXM=. ISLG=. ISLGC=. ISLGM=.
ISLT=. ISNG=. ISNGC=. ISNGM=. ISOTC=. ISOTH=. ISOTM=. ISSC=. ISSM=. ISSU=. IST=. ISTC=. ISTM=. ISUT=. ITCB=0.0000
IVAEQ=0.0000 IVAO=135.0040 IVGOD=. IVPT=. IVST=158.9950 LCABG=. LCACL=. LCACR=. LCAG=. LCAL=. LCALT=. LCAM=. LCAO=.
LCAST=. LCAT=. LCO=56.8400 LCOX=0.0000 LCOXAR=. LCOXDR=0.0000 LCT=171.0300 LCUACU=. LIF=. LIFR=0.0000 LLOML=. LLOO=.
LLOT=. LO=56.0690 LOXDR=56.0690 LRV=. LS=. LSE=1675.2080 LT=227.0990 MIB=0.0000 MRC1=6.5260 MRC2=4.7750 MRC3=3.9900
MRC4=3.1120 MRC5=1.9130 MRCT=20.3160 MRCTA=1.4780 MSA=0.0000 MSVRV=. MTL=. NAT=. NP=0.0000 NPANL=. NPAORE=. NPARL=.
NPAT=. OB=194.0000 OPTPRCCA=23.9000 OPTPRCEX=11.4800 OPTPRCEY=14.7200 OPTPRCGR=11.4300 OPTPRCWA=15.4300
PPEGT=1468.3860 PPENB=. PPENC=. PPENLI=. PPENLS=. PPENME=. PPENNR=. PPENO=. PPENT=232.9500 PPEVBB=. PPEVEB=1468.3860
PPEVO=. PPEVR=. PRC=. PRODV=. PRVT=. PSTK=0.0000 PSTKC=0.0000 PSTKL=0.0000 PSTKN=0.0000 PSTKR=0.0000 PSTKRV=0.0000
PVCL=. PVPL=. PVT=. RADP=. RAGR=. RARI=. RATI=. RCL=. RDP=. RE=1160.8260 REA=0.0000 REAJO=-24.7420 RECCO=2.9180
RECD=1.7720 RECT=177.4480 RECTA=87.3310 RECTR=174.5300 RECUB=. RET=. REUNA=1098.2370 REUNR=1098.2370 RLL=. RLO=. RLP=.
RLRI=. RLT=. RPAG=. RREPS=. RVBCI=. RVBPI=. RVBTI=. RVDO=. RVDT=. RVEQT=. RVLRV=. RVNO=. RVNT=. RVRI=. RVSI=. RVTI=.
RVTXR=. RVUPI=. RVUTX=. SAA=. SAL=. SBDC=. SC=. SCO=. SECU=. SEQ=1448.1090 SEQO=0.0000 SRT=. SSNP=. STBO=. STIO=.
TDSCD=. TDSCE=. TDSLG=. TDSMM=. TDSNG=. TDSO=. TDSS=. TDST=. TLCF=327.2410 TRANSA=. TSA=. TSO=. TSTK=53.2650
TSTKC=53.2650 TSTKME=. TSTKP=0.0000 TXDB=. TXDBA=. TXDBCA=25.1960 TXDBCL=. TXDITC=0.0000 TXNDB=50.4690 TXNDBA=104.2620

TXNDBL=53.7930 TXNDBR=0.0000 TXP=9.1790 TXR=0.0000 UAOX=. UAPT=. UCAPS=. UCCONS=. UCEQ=. UCUSTAD=. UDCOPRES=. UDD=.
UDMB=. UDOLT=. UDPCO=. UI=. UINVT=. ULCM=. ULCO=. UNL=. UNNP=. UNNPL=. UOPRES=. UPMCSTK=. UPMPF=. UPMPFS=. UPMSUBP=.
UPSTK=. UPSTKC=. UPSTKSF=. URECT=. URECTR=. UREVUB=. USUBPSTK=. VPAC=. VPO=. WCAP=1032.7420 XACC=56.8400 XPP=.
ACCHG=0.0000 ADPAC=. AM=0.0000 AMDC=. AMGW=. AQA=. AQD=. AQEPS=. AQI=0.0000 AQP=. AQS=0.0000 ARCE=. ARCED=. ARCEEPS=.
AUTXR=. BALR=. BANLR=. BATR=. BCEF=. BCLR=. BCLTBL=. BCNLR=. BCRBL=. BCT=. BCTBL=. BCTR=. BLTBL=. CBI=. CDPAC=. CFBD=.
CFERE=. CFO=. CFPDO=. CGA=. CGRI=. CGTI=. CGUI=. CIBEGNI=81.7520 CICURR=-34.5600 CIDERGL=0.2740 CIOTHER=0.0000
CIPEN=-2.7090 CISECGL=0.0000 CITOTAL=44.7570 CNLTBL=. COGS=1060.9510 CPCBL=. CPDOI=. CPNLI=. CPPBL=. CPREI=.
CSTKE=0.0000 DBI=. DFXA=. DILADJ=0.0000 DILAVX=81.7520 DO=0.0000 DONR=0.0000 DP=64.9660 DPRET=. DTEA=. DTED=. DTEEPS=.
DTEP=. DVC=25.8620 DVDNP=. DVP=0.0000 DVPD=. DVPDP=. DVRPIV=. DVRRE=. DVSCO=. DVT=25.8620 EBIT=96.1810 EBITDA=161.1470
EIEA=. EMOL=. EPSFI=0.4700 EPSFX=0.4700 EPSPI=0.4700 EPSPX=0.4700 ESUB=0.0000 FATD=. FCA=. FFO=. GBBL=. GDWLAM=.
GDWLIA=. GDWLID=. GDWLIEPS=. GDWLIP=. GLA=. GLCEA=. GLCED=. GLCEEPS=. GLCEP=. GLD=. GLEPS=. GLP=. GP=272.2570 GPHBL=.
GPLBL=. GPOBL=. GPRBL=. GPTBL=. GWO=. HEDGEGL=0.0000 IB=81.7520 IBADJ=81.7520 IBBL=. IBCOM=81.7520 IBKI=. IDIIS=.
IDILB=. IDILC=. IDIS=. IDIST=. IDIT=22.9990 IDITS=. IIRE=. INITB=. INTC=0.0000 IOBD=. IOI=. IORE=. IPABL=. IPHBL=.
IPLBL=. IPOBL=. IPTBL=. IPTI=. IREI=. IRENT=. IRII=. IRLI=. IRNLI=. IRSI=. ISGR=. ISGT=. ISGU=. ITCI=0.0000 IVI=. LI=.
LLRCI=. LLRCR=. LLWOCI=. LLWOCR=. LST=. MII=0.0000 NCO=. NFSR=. NI=81.7520 NIADJ=81.7520 NIECI=. NIINT=. NIIT=. NIM=.
NIO=. NIT=. NITS=. NOPI=24.8930 NOPIO=1.8940 NRTXT=3.3150 NRTXTD=0.0200 NRTXTEPS=0.0200 OIADP=96.1810 OIBDP=161.1470
OPEPS=0.4500 OPILI=. OPINCAR=. OPINI=. OPIOI=. OPIRI=. OPITI=. OPREPSX=0.4500 PALR=. PANLR=. PATR=. PCL=. PCLR=.
PCNLR=. PCTR=. PI=119.6200 PIDOM=58.1330 PIFO=61.4870 PLL=. PLTBL=. PNCA=1.6010 PNCAD=0.0100 PNCAEPS=0.0100
PNCIA=0.0000 PNCID=0.0000 PNCIEPS=0.0000 PNCIP=0.0000 PNCWIA=1.6010 PNCWID=0.0100 PNCWIEPS=0.0100 PNCWIP=2.4630
PNLBL=. PNLI=. POBL=. PPCBL=. PPPABL=. PPPHBL=. PPPOBL=. PPPTBL=. PRCA=0.0000 PRCAD=0.0000 PRCAEPS=0.0000 PREBL=.
PRI=. PTBL=. PTRAN=. PVO=. PVON=. PWOI=. RCA=. RCD=. RCEPS=. RCP=. RDIP=0.0000 RDIPA=0.0000 RDIPD=0.0000
RDIPEPS=0.0000 REVT=1333.2080 RIS=. RMUM=. RRA=. RRD=. RRP=. SALE=1333.2080 SETA=. SETD=. SETEPS=. SETP=. SPCE=80.2020
SPCED=0.4600 SPCEEPS=0.4700 SPI=0.0000 SPID=. SPIEPS=. SPIOA=. SPIOP=. SRET=. STKCO=0.0000 STKCPA=0.0000 TDSG=. TF=.
TIE=. TII=. TXC=. TXDFED=. TXDFO=7.6510 TXDI=6.5710 TXDS=. TXEQA=. TXEQII=. TXFED=. TXFO=6.3370 TXO=0.0000 TXS=.
TXT=37.8680 TXVA=. TXW=0.0000 UDPFA=. UDVP=. UGI=. UNIAMI=. UNOPINC=. UOPI=. UPDVP=. USPI=. USUBDVP=. UTME=. UTXFED=.
UXINST=. UXINTD=. WDA=. WDD=. WDEPS=. WDP=. XAD=. XAGO=. XAGT=. XCOM=. XCOMI=. XDEPL=. XDP=. XDVRE=. XEQO=. XI=0.0000
XIDO=0.0000 XINDB=. XINDC=. XINS=. XINST=. XINT=1.4540 XINTD=0.0000 XINTOPT=3.1510 XIVI=. XIVRE=. XLR=. XNBI=. XNF=.
XNINS=. XNITB=. XOBD=. XOI=. XOPR=1172.0610 XOPRAR=. XOPTD=0.0200 XOPTEPS=0.0100 XORE=. XPR=9.1900 XRD=10.8920
XRENT=8.3790 XS=. XSGA=111.1100 XSTF=. XSTFO=. XSTFWS=. XT=. XUW=. XUWLI=. XUWNLI=. XUWOI=. XUWREI=. XUWTI=. AFUDCC=.
AFUDCI=. AMC=. AOLOCH=2.8850 APALCH=-30.2630 AQC=0.0000 CAPX=41.3280 CAPXV=41.3280 CDVC=. CHECH=14.8560 DEPC=.
DLCCH=0.0000 DLTIS=0.0000 DLTR=0.0000 DPC=64.9660 DV=25.8620 ESUBC=0.0000 EXRE=-5.2010 FIAO=0.0000 FINCF=-35.9350
FOPO=0.0000 FOPOX=0.0000 FOPT=. FSRCO=. FSRCT=. FUSEO=. FUSET=. IBC=81.7520 INTPN=. INVCH=61.9480 ITCC=. IVACO=0.5280
IVCH=100.0000 IVNCF=-104.3630 IVSTCH=. OANCF=160.3550 PDVC=. PRSTKC=15.7880 PRSTKCC=. PRSTKPC=. RECCH=-25.8550
SCSTKC=. SIV=36.0000 SPPE=0.4370 SPPIV=-0.9100 SPSTKC=. SSTK=5.7150 TDC=. TSAFC=. TXACH=-0.7400 TXBCO=0.0000
TXBCOF=0.0000 TXDC=6.5720 TXPD=31.7740 UAOLOCH=. UDFCC=. UFRETSD=. UNWCC=. UOIS=. USTDNC=. UTFDOC=. UTFOSC=. UWKCAPC=.
WCAPC=. WCAPCH=. XIDOC=0.0000 ACCRT=. ACQAO=. ACQCSHI=. ACQGDWL=. ACQIC=. ACQINTAN=. ACQINVT=. ACQLNTAL=. ACQNIINTC=.
ACQPPE=. ACQSC=. ANO=. AOL2=. AQPL1=. AU=7 AUL3=. AUOP=1 AUOPIC=1 BASTR=. BILLEXCE=. CAPR1=. CAPR2=. CAPR3=. CAPSFT=.
CEIEXBILL=. CEOSO=Y CFOSO=Y CI=. CIMII=. CSHFD=173.0530 CSHI=176.3680 CSHO=172.2160 CSHPRI=172.5320 CSHR=0.5220

CSHRC=. CSHRP=. CSHRSO=. CSHRT=. CSHRW=. DERAC=. DERALT=. DERHEDGL=. DERLC=. DERLLT=. DT=0.0000 DVINTF=. EMP=12.1000
FINACO=. FINAO=. FINCH=. FINDLC=. FINDLT=. FINIVST=. FINLCO=. FINLTO=. FINNP=. FINRECC=. FINRECLT=. FINREV=. FINXINT=.
FINXOPR=. GLIV=. GOVTOWN=. IBMII=. LIFRP=0.0000 LNO=. LOL2=. LQPL1=. LUL3=. MIBN=. MIBT=0.0000 NIINTPFC=. NIINTPFP=.
NIPFC=. NIPFP=. OPTCA=0.1270 OPTDR=1.3100 OPTEX=3.4230 OPTEXD=0.5010 OPTFVGR=4.9100 OPTGR=0.5250 OPTLIFE=4.0000
OPTOSBY=4.9080 OPTOSEY=4.8050 OPTPRCBY=15.0100 OPTRFR=4.0000 OPTVOL=55.7400 PNRSHO=0.0000 PRSHO=0.0000 RANK=1 RSTCHE=.
RSTCHELT=. SALEPFC=. SALEPFP=. TEQ=. TFVA=. TFVCE=. TFVL=. TSTKN=4.1520 TXTUBADJUST=. TXTUBBEGIN=. TXTUBEND=.
TXTUBMAX=. TXTUBMIN=. TXTUBPOSDEC=. TXTUBPOSINC=. TXTUBPOSPDEC=. TXTUBPOSPINC=. TXTUBSETTLE=. TXTUBSOFLIMIT=.
TXTUBTXTR=. TXTUBXINTBS=. TXTUBXINTIS=. XRDP=11.0490 ADJEX_C=1.000000000000 ADJEX_F=1.000000000000
CSHTR_C=74501700.0000 CSHTR_F=80525000.0000 DVPSP_C=0.1500 DVPSP_F=0.1500 DVPSX_C=0.1500 DVPSX_F=0.1500
MKVALT=3048.2232 NAICSH=334414 PRCC_C=14.480000000000 PRCC_F=17.700000000000 PRCH_C=14.800000000000
PRCH_F=17.830000000000 PRCL_C=10.550000000000 PRCL_F=10.550000000000 SICH=3670 CONSOL=C INDFMT=INDL DATAFMT=STD
POPSRC=D CURCD=USD COSTAT=I PS=0 BE=1448.109 year=2006 bvcEquity=3048.2232 capIntens=0.0246703693 cashFlow=0.08758196
cashHoldings=0.3965603077 costcap=. leverages=0 bleverage=0 market_leverage=0 roa=0.0488011041 roe=0.0268195584
cash_assets=0.3965603077 TobinsQ=. bvEqity=. _ERROR_=1 _N_=503
NOTE: Division by zero detected at line 2533 column 17.
WARNING: Limit set by ERRORS= option reached. Further errors of this type will not be printed.
GVKEY=001072 DATADATE=2007-03-31 FYEAR=2006 ADD1=One AVX Boulevard ADD2= ADD3= ADD4= ADDZIP=29644
BUSDESC=KYOCERA AVX Components Corporation, together with its subsidiaries, manufactures, supplies, and resells variou
s electronic components, interconnect devices, sensing and control devices, and related products worldwide.
CITY=Fountain Inn CONML=AVX Corp. COUNTY= DLDTE=2020-03-31 DLRSN=01 EIN=33-0379007 FAX= FYRC=3 GGROUP=4520
GIND=452030 GSECTOR=45 GSUBIND=45203015 IDBFLAG=D INCORP=DE IPODATE=1973-03-01 LOC=USA NAICS=334416 PHONE=864 967 2150
PRICAN= PRIROW= PRIUSA=01 SIC=3670 SPCINDCD=220 SPCSECCD=925 SPCSRC=B- STATE=SC STKO=0 WEBURL=www.kyocera-avx.com
CONM=AVX CORP TIC=AVX CUSIP=002444107 CIK=0000859163 EXCHG=11 FYR=3 FIC=USA ACCTCHG= ACCTSTD=DS ACQMETH= ADRR=.
AJEX=1.000000000000 AJP=1.000000000000 APDEDATE=2007-03-31 BSPR= COMPST= CURNCD=USD CURRTR=1.000000000000 CURUSCN=.
FDATE=2007-06-07 FINAL=Y ISMOD=1 LTCM= OGM= PDATE=2007-04-25 PDDUR=12 SCF=7 SRC=5 STALT= UDPL= UPD=3 ACCO=.
ACDO=0.0000 ACO=65.7070 ACODO=65.7070 ACOMINC=128.8120 ACOX=65.7070 ACOXAR=. ACT=1421.3950 AEDI=. ALDO=0.0000
AO=24.1020 AOCIDERGL=0.8510 AOCIOTHER=0.0000 AOCIPEN=-28.9680 AOCISECGL=0.0000 AODO=24.1020 AOX=24.1020 AP=126.6890
APB=. APC=. APOFS=. ARB=. ARC=. ARTFS=. AT=1899.5360 BAST=0.0000 BKVLPS=9.5255 CA=. CAPS=340.9110 CB=. CEQ=1635.2790
CEQL=1635.2790 CEQT=1564.1130 CH=684.3820 CHE=829.3820 CHS=. CLD2=0.0000 CLD3=0.0000 CLD4=0.0000 CLD5=0.0000 CLFC=.
CLFX=. CLG=. CLIS=. CLL=. CLLC=. CLO=. CLRLL=. CLT=. CMP=. CRV=. CRVNLI=. CSTK=1.7640 CSTKCV=0.0100 DC=0.0000
DCLO=0.0000 DCOM=0.0000 DCPSTK=0.0000 DCS=0.0000 DCVSR=0.0000 DCVSUB=0.0000 DCVT=0.0000 DD=0.0000 DD1=0.0000
DD2=0.0000 DD3=0.0000 DD4=0.0000 DD5=0.0000 DFPAC=. DFS=0.0000 DLC=0.0000 DLTO=0.0000 DLTP=0.0000 DLTSUB=. DLTT=0.0000
DM=0.0000 DN=0.0000 DPACB=. DPACC=. DPACLI=. DPACLS=. DPACME=. DPACNR=. DPACO=. DPACRE=. DPACT=1349.4090 DPDC=.
DPLTB=. DPSC=. DPSTB=. DPTB=. DPTC=. DPTIC=. DPVIEB=1349.4090 DPVIO=. DPVIR=. DRC=0.0000 DRCI=. DRLT=0.0000 DS=0.0000
DUDD=0.0000 DVPA=0.0000 DVPIBB=. DXD2=0.0000 DXD3=0.0000 DXD4=0.0000 DXD5=0.0000 EA=. ESOPCT=0.0000 ESOPDLT=0.0000
ESOPNR=0.0000 ESOPR=0.0000 ESOPT=0.0000 EXCADJ=. FATB=276.4970 FATC=14.2570 FATE=1281.9850 FATL=0.0000 FATN=0.0000
FATO=0.0000 FATP=20.5430 FDFR=. FEA=. FEL=. FFS=. GDWL=71.1660 GEQRV=. GOVGR=. IAEQ=. IAEQCI=. IAEQMI=. IAFICI=.
IAFXI=. IAFXMI=. IALI=. IALOI=. IALTI=. IAMLI=. IAOI=. IAPLI=. IAREI=. IASCI=. IASMI=. IASSI=. IASTI=. IATCI=. IATI=.

IATMI=. IAUI=. ICAPT=1635.2790 INTAN=71.1660 INTANO=0.0000 INVFG=100.2660 INVO=0.0000 INVOFS=. INVREH=. INVREI=. INVRES=. INVRM=131.7280 INVT=330.1410 INVWIP=98.1470 IP=. IPC=. IPV=. ISEQ=. ISEQC=. ISEQM=. ISFI=. ISFXC=. ISFXM=. ISLG=. ISLGC=. ISLGM=. ISLT=. ISNG=. ISNGC=. ISNGM=. ISOTC=. ISOTH=. ISOTM=. ISSC=. ISSM=. ISSU=. IST=. ISTC=. ISTM=. ISUT=. ITCB=0.0000 IVAEQ=0.0000 IVAO=139.0000 IVGOD=. IVPT=. IVST=145.0000 LCABG=. LCACL=. LCACR=. LCAG=. LCAL=. LCALT=. LCAM=. LCAO=. LCAST=. LCAT=. LCO=66.0030 LCOX=0.0000 LCOXAR=. LCOXDR=0.0000 LCT=207.3600 LCUACU=. LIF=. LIFR=0.0000 LLOML=. LLOO=. LLOT=. LO=56.8970 LOXDR=56.8970 LRV=. LS=. LSE=1899.5360 LT=264.2570 MIB=0.0000 MRC1=6.6170 MRC2=4.8150 MRC3=3.2730 MRC4=3.2520 MRC5=1.3230 MRCT=19.2800 MRCTA=0.8330 MSA=0.0000 MSVRV=. MTL=. NAT=. NP=0.0000 NPANL=. NPAORE=. NPARL=. NPAT=. OB=238.0000 OPTPRCCA=18.6200 OPTPRCEX=10.2700 OPTPRCEY=15.1400 OPTPRCGR=15.2700 OPTPRCWA=15.6900 PPEGT=1593.2820 PPENB=. PPENC=. PPENLI=. PPENLS=. PPENME=. PPENNR=. PPENO=. PPENT=243.8730 PPEVBB=. PPEVEB=1593.2820 PPEVO=. PPEVR=. PRC=. PRODV=. PRVT=. PSTK=0.0000 PSTKC=0.0000 PSTKL=0.0000 PSTKN=0.0000 PSTKR=0.0000 PSTKRV=0.0000 PVCL=. PVPL=. PVT=. RADP=. RAGR=. RARI=. RATI=. RCL=. RDP=. RE=1355.0950 REA=0.0000 REAJO=-28.1170 RECCO=5.0590 RECD=1.7050 RECT=196.1650 RECTA=156.9290 RECTR=191.1060 RECUB=. RET=. REUNA=1226.2830 REUNR=1226.2830 RLL=. RLO=. RLP=. RLRI=. RLT=. RPAG=. RREPS=. RVBCI=. RVBPI=. RVBTI=. RVDO=. RVDT=. RVEQT=. RVLRV=. RVNO=. RVNT=. RVRI=. RVSI=. RVTI=. RVTXR=. RVUPI=. RVUTX=. SAA=. SAL=. SBDC=. SC=. SCO=. SECU=. SEQ=1635.2790 SEQO=0.0000 SRT=. SSNP=. STBO=. STIO=. TDSCD=. TDSCE=. TDSLG=. TDSMM=. TDSNG=. TDSO=. TDSS=. TDST=. TLCF=333.3410 TRANSA=. TSA=. TSO=. TSTK=62.4910 TSTKC=62.4910 TSTKME=. TSTKP=0.0000 TXDB=. TXDBA=. TXDBCA=26.9410 TXDBCL=. TXDITC=0.0000 TXNDB=41.9610 TXNDBA=94.1760 TXNDBL=52.2150 TXNDBR=0.0000 TXP=14.6680 TXR=0.0000 UAOX=. UAPT=. UCAPS=. UCCONS=. UCEQ=. UCUSTAD=. UDCOPRES=. UDD=. UDMB=. UDOLT=. UDPCO=. UI=. UINVT=. ULCM=. ULCO=. UNL=. UNNP=. UNNPL=. UOPRES=. UPMCSTK=. UPMPF=. UPMPFS=. UPMSUBP=. UPSTK=. UPSTKC=. UPSTKSF=. URECT=. URECTR=. UREVUB=. USUBPSTK=. VPAC=. VPO=. WCAP=1214.0350 XACC=66.0030 XPP=. ACCHG=0.0000 ADPAC=. AM=0.0000 AMDC=. AMGW=. AQA=. AQD=. AQEPS=. AQI=0.0000 AQP=. AQS=0.0000 ARCE=. ARCED=. ARCEEPS=. AUTXR=. BALR=. BANLR=. BATR=. BCEF=. BCLR=. BCLTBL=. BCNLR=. BCRBL=. BCT=. BCTBL=. BCTR=. BLTBL=. CBI=. CDPAC=. CFBD=. CFERE=. CFO=. CFPDO=. CGA=. CGRI=. CGTI=. CGUI=. CIBEGNI=153.8650 CICURR=69.5970 CIDERGL=0.9470 CIOTHER=0.0000 CIPEN=-1.4640 CISECGL=0.0000 CITOTAL=222.9450 CNLTBL=. COGS=1146.4410 CPCBL=. CPDOI=. CPNLI=. CPPBL=. CPREI=. CSTKE=0.0000 DBI=. DFXA=. DILADJ=0.0000 DILAVX=153.8650 DO=0.0000 DONR=0.0000 DP=53.8590 DPRET=. DTEA=. DTED=. DTEEPS=. DTEP=. DVC=25.8190 DVDNP=. DVP=0.0000 DVPD=. DVPDP=. DVRPIV=. DVRRE=. DVSCO=. DVT=25.8190 EBIT=182.2130 EBITDA=236.0720 EIEA=. EMOL=. EPSFI=0.8900 EPSFX=0.8900 EPSPI=0.8900 EPSPX=0.8900 ESUB=0.0000 FATD=. FCA=. FFO=. GBBL=. GDWLAM=. GDWLIA=. GDWLID=. GDWLIEPS=. GDWLIP=. GLA=. GLCEA=. GLCED=. GLCEEPS=. GLCEP=. GLD=. GLEPS=. GLP=. GP=352.0540 GPHBL=. GPLBL=. GPOBL=. GPRBL=. GPTBL=. GWO=. HEDGEGL=. IB=153.8650 IBADJ=153.8650 IBBL=. IBCOM=153.8650 IBKI=. IDIIS=. IDILB=. IDILC=. IDIS=. IDIST=. IDIT=40.0330 IDITS=. IIRE=. INITB=. INTC=0.0000 IOBD=. IOI=. IORE=. IPABL=. IPHBL=. IPLBL=. IPOBL=. IPTBL=. IPTI=. IREI=. IRENT=. IRII=. IRLI=. IRNLI=. IRSI=. ISGR=. ISGT=. ISGU=. ITCI=. IVI=. LI=. LLRCI=. LLRCR=. LLWOCI=. LLWOCR=. LST=. MII=0.0000 NCO=. NFSR=. NI=153.8650 NIADJ=153.8650 NIECI=. NIINT=. NIIT=. NIM=. NIO=. NIT=. NITS=. NOPI=36.8900 NOPIO=-3.1430 NRTXT=3.3610 NRTXTD=0.0200 NRTXTEPS=0.0200 OIADP=182.2130 OIBDP=236.0720 OPEPS=0.8800 OPILI=. OPINCAR=. OPINI=. OPIOI=. OPIRI=. OPITI=. OPREPSX=0.8800 PALR=. PANLR=. PATR=. PCL=. PCLR=. PCNLR=. PCTR=. PI=217.5660 PIDOM=90.2750 PIFO=127.2910 PLL=. PLTBL=. PNCA=1.5740 PNCAD=0.0100 PNCAEPS=0.0100 PNCIA=0.0000 PNCID=0.0000 PNCIEPS=0.0000 PNCIP=0.0000 PNCWIA=1.5740 PNCWID=0.0100 PNCWIEPS=0.0100 PNCWIP=2.4220 PNLBL=. PNLI=. POBL=. PPCBL=. PPPABL=. PPPHBL=. PPPOBL=. PPPTBL=. PRCA=0.0000 PRCAD=0.0000 PRCAEPS=0.0000 PREBL=. PRI=. PTBL=. PTRAN=. PVO=. PVON=. PWOI=. RCA=-0.6740 RCD=0.0000 RCEPS=0.0000 RCP=-1.0370 RDIP=0.0000 RDIPA=0.0000 RDIPD=0.0000 RDIPEPS=0.0000 REVT=1498.4950 RIS=. RMUM=. RRA=. RRD=. RRP=. SALE=1498.4950

SETA=. SETD=. SETEPS=. SETP=. SPCE=. SPCED=. SPCEEPS=. SPI=-1.5370 SPID=0.0000 SPIEPS=0.0000 SPIOA=-0.3250
SPIOP=-0.5000 SRET=. STKCO=2.6290 STKCPA=2.2460 TDSG=. TF=. TIE=. TII=. TXC=. TXDFED=. TXDFO=8.6360 TXDI=11.2450
TXDS=. TXEQA=. TXEQII=. TXFED=. TXFO=20.9360 TXO=0.0000 TXS=. TXT=63.7010 TXVA=. TXW=0.0000 UDPFA=. UDVP=. UGI=.
UNIAMI=. UNOPINC=. UOPI=. UPDVP=. USPI=. USUBDVP=. UTME=. UTXFED=. UXINST=. UXINTD=. WDA=. WDD=. WDEPS=. WDP=. XAD=.
XAGO=. XAGT=. XCOM=. XCOMI=. XDEPL=. XDP=. XDVRE=. XEQO=. XI=0.0000 XIDO=0.0000 XINDB=. XINDC=. XINS=. XINST=.
XINT=0.0000 XINTD=0.0000 XINTOPT=0.0000 XIVI=. XIVRE=. XLR=. XNBI=. XNF=. XNINS=. XNITB=. XOBD=. XOI=. XOPR=1262.4230
XOPRAR=. XOPTD=0.0000 XOPTEPS=0.0000 XORE=. XPR=10.3150 XRD=11.2850 XRENT=8.7390 XS=. XSGA=115.9820 XSTF=. XSTFO=.
XSTFWS=. XT=. XUW=. XUWLI=. XUWNLI=. XUWOI=. XUWREI=. XUWTI=. AFUDCC=. AFUDCI=. AMC=. AOLOCH=-6.4950 APALCH=42.9980
AQC=0.0000 CAPX=51.8810 CAPXV=51.8810 CDVC=. CHECH=179.0560 DEPC=. DLCCH=0.0000 DLTIS=0.0000 DLTR=0.0000 DPC=53.8590
DV=25.8190 ESUBC=0.0000 EXRE=11.1860 FIAO=0.0000 FINCF=-35.5470 FOPO=2.6290 FOPOX=2.6290 FOPT=. FSRCO=. FSRCT=.
FUSEO=. FUSET=. IBC=153.8650 INTPN=. INVCH=-6.7210 ITCC=. IVACO=0.0000 IVCH=228.0000 IVNCF=-41.6120 IVSTCH=.
OANCF=245.0290 PDVC=. PRSTKC=14.8070 PRSTKCC=. PRSTKPC=. RECCH=-12.4020 SCSTKC=. SIV=238.1810 SPPE=0.0880
SPPIV=-0.0880 SPSTKC=. SSTK=4.4120 TDC=. TSAFC=. TXACH=6.1390 TXBCO=0.0000 TXBCOF=0.6670 TXDC=11.2450 TXPD=47.3460
UAOLOCH=. UDFCC=. UFRETSD=. UNWCC=. UOIS=. USTDNC=. UTFDOC=. UTFOSC=. UWKCAPC=. WCAPC=. WCAPCH=. XIDOC=0.0000 ACCRT=.
ACQAO=. ACQCSHI=. ACQGDWL=. ACQIC=. ACQINTAN=. ACQINVT=. ACQLNTAL=. ACQNIINTC=. ACQPPE=. ACQSC=. ANO=. AOL2=. AQPL1=.
AU=7 AUL3=. AUOP=4 AUOPIC=1 BASTR=0.0000 BILLEXCE=. CAPR1=. CAPR2=. CAPR3=. CAPSFT=. CEIEXBILL=. CEOSO=Y CFOSO=Y CI=.
CIMII=. CSHFD=172.7510 CSHI=176.3680 CSHO=171.6740 CSHPRI=172.0470 CSHR=0.4650 CSHRC=. CSHRP=. CSHRSO=. CSHRT=.
CSHRW=. DERAC=. DERALT=. DERHEDGL=. DERLC=. DERLLT=. DT=0.0000 DVINTF=. EMP=13.0000 FINACO=. FINAO=. FINCH=. FINDLC=.
FINDLT=. FINIVST=. FINLCO=. FINLTO=. FINNP=. FINRECC=. FINRECLT=. FINREV=. FINXINT=. FINXOPR=. GLIV=. GOVTOWN=.
IBMII=. LIFRP=0.0000 LNO=. LOL2=. LQPL1=. LUL3=. MIBN=. MIBT=0.0000 NIINTPFC=. NIINTPFP=. NIPFC=. NIPFP=. OPTCA=0.0750
OPTDR=0.9800 OPTEX=3.5640 OPTEXD=0.4300 OPTFVGR=5.4400 OPTGR=0.5130 OPTLIFE=5.0000 OPTOSBY=4.8130 OPTOSEY=4.8210
OPTPRCBY=14.7200 OPTRFR=4.9000 OPTVOL=35.2500 PNRSHO=0.0000 PRSHO=0.0000 RANK=1 RSTCHE=. RSTCHELT=. SALEPFC=.
SALEPFP=. TEQ=1635.2790 TFVA=. TFVCE=. TFVL=. TSTKN=4.6940 TXTUBADJUST=. TXTUBBEGIN=. TXTUBEND=. TXTUBMAX=. TXTUBMIN=.
TXTUBPOSDEC=. TXTUBPOSINC=. TXTUBPOSPDEC=. TXTUBPOSPINC=. TXTUBSETTLE=. TXTUBSOFLIMIT=. TXTUBTXTR=. TXTUBXINTBS=.
TXTUBXINTIS=. XRDP=10.8920 ADJEX_C=1.000000000000 ADJEX_F=1.000000000000 CSHTR_C=121595700.0000 CSHTR_F=130657637.0000
DVPSP_C=0.1500 DVPSP_F=0.1500 DVPSX_C=0.1500 DVPSX_F=0.1500 MKVALT=2609.4448 NAICSH=334414 PRCC_C=14.790000000000
PRCC_F=15.200000000000 PRCH_C=19.900000000000 PRCH_F=19.900000000000 PRCL_C=13.090000000000 PRCL_F=13.090000000000
SICH=3670 CONSOL=C INDFMT=INDL DATAFMT=STD POPSRC=D CURCD=USD COSTAT=I PS=0 BE=1635.279 year=2007 bvcEquity=2609.4448
capIntens=0.0273124595 cashFlow=0.1093551267 cashHoldings=0.4366234702 costcap=. leverages=0 bleverage=0
market_leverage=0 roa=0.0810013603 roe=0.0589646503 cash_assets=0.4366234702 TobinsQ=. bvEqity=. _ERROR_=1 _N_=504
NOTE: Missing values were generated as a result of performing an operation on missing values.
      Each place is given by: (Number of times) at (Line):(Column).
      8604 at 2524:10   42937 at 2529:22   26563 at 2530:19   28538 at 2531:18   18 at 2531:22
      20831 at 2532:21   26519 at 2533:17   10278 at 2535:21   14 at 2535:27   10278 at 2538:21
      10278 at 2539:27   169 at 2539:38   33871 at 2539:43   9233 at 2541:11   43882 at 2542:11
      20831 at 2543:20   214026 at 2546:16
NOTE: Mathematical operations could not be performed at the following places. The results of the operations have been
      set to missing values.

2559
2560
2561   data global_comp(keep=gvkey BE year bvcEquity capIntens cashFlow
2562   cashHoldings costcap
2563   leverages bleverage market_leverage
2564   roa roe TobinsQ at lt ni ebit);
2565   set mergback.gvkey_in_comp_global;
2566   * 1. Book Value Per Share (bkvlps)
2567   BKVLPS
2568   Market Value - Total - Fiscal (mkvalt)
2569   ** Price Close - Annual - Fiscal (prcc_f) * Common Shares Outstanding (csho);
2570   ** bvEquity = PRCC_F *CSHO;
2571   /* Two years of accounting data before 1990 */
2572   /* PS: prefered stock value*/
2573   PS=coalesce(PSTKRV, PSTKL, PSTK, 0);
2574   if missing(TXDITC) then
2575   TXDITC=0;
2576   BE=SEQ + TXDITC - PS;
2577   if BE<0 then
2578   BE=.;
2579   year=year(datadate);
2580   * BE of common equity;
2581   bvcEquity = PRCC_F *CSHO;

```
2582    capIntens = CAPX/AT;
2583    cashFlow = (IBC+DP)/AT;
2584    cashHoldings = CHE/AT;
2585    costcap = XINT/DLC;
2586    * Debt in Current Liabilities - Total (dlc)  +  Long-Term Debt - Total (dltt) / tockholders Equity - Parent
2586! (seq);
2587    leverages = (DLTT + DLC)/SEQ;
2588
2589    * book leverage;
2590    bleverage = (dltt + dlc )/at;
2591    market_leverage = (dltt + dlc )/(at-ceq + bvcEquity);
2592    * ib, ibcom, ni;
2593    roa = ib/at;
2594    roe = ni/bvcEquity;
2595    cash_assets = che/AT;
2596
2597    * roai = NI/AT;
2598    TobinsQ = (AT +bvEqity - CEQ)/AT;
2599    label BE='Book Value of Equity FYear t-1';
2600    label LT= "Total Liabilities";
2601    label AT= "Total Assets";
2602    label capIntens= "Capital Intensity";
2603    label cashFlow ="Cash Flow";
2604    label cashHoldings= "Cash Holdings";
2605    label bleverage= "book leverage";
2606    label market_leverage = "Market Leverage";
2607    *label variable costcap ="Cost of Capital";
2608    label   leverages= "Leverage";
2609    label   roa= "ROA";
2610    label   roe= "ROE";
2611    label    TobinsQ= "TobinsQ";
2612    run;

NOTE: Variable PSTKRV is uninitialized.
NOTE: Variable PSTKL is uninitialized.
NOTE: Variable CSHO is uninitialized.
NOTE: Variable PRCC_F is uninitialized.
NOTE: Variable ni is uninitialized.
```

NOTE: Variable bvEqity is uninitialized.
NOTE: Division by zero detected at line 2585 column 17.
GVKEY=001166 DATADATE=2013-12-31 FYEAR=2013 ADD1=Versterkerstraat 8 ADD2= ADD3= ADD4= ADDZIP=1322 AP
BUSDESC=ASM International NV, together with its subsidiaries, engages in the research, development, manufacture, marke
ting, and servicing of equipment and materials used to produce semiconductor devices in Europe, the United States, and
 Asia. CIK=0000351483 CITY=Almere CONML=ASM International NV COUNTY= DLRSN= EIN= FAX=31 88 100 8830 FYRC=12
GGROUP=4530 GIND=453010 GSECTOR=45 GSUBIND=45301010 IDBFLAG=B INCORP= LOC=NLD NAICS=333242 PHONE=31 88 100 8810
PRICAN= PRIROW=01W PRIUSA=90 SIC=3559 SPCINDCD=247 SPCSECCD=940 SPCSRC=C STATE= STKO=3 WEBURL=www.asm.com DLDTE=.
IPODATE=. CONM=ASM INTERNATIONAL NV ISIN=NL0000334118 SEDOL=5165294 EXCHG=104 FYR=12 FIC=NLD ACCTSTD=US ACQMETH=
BSPR=GO COMPST= CURCD=EUR FINAL=Y ISMOD=1 PDDUR=12 SCF=10 SRC=5 STALT= UPD=3 FDATE=2014-04-12 PDATE=2014-03-02
ACCLI=. ACCO=. ACO=16.8940 ACOFS=. ACOX=16.8940 ACOXFS=. ACQDISN=. ACQDISO=. ACT=518.0400 ADPAC=. AM=21.0340 AMDC=.
AO=15.6660 AOLOCH=8.8310 AOX=15.3900 AP=44.8370 APALCH=. APCH=9.9630 APDPFS=. APFS=. APO=0.0000 APOFS=. AQC=. ARTFS=.
ASDIS=. ASINV=. AT=1551.2490 ATOCH=. AU=5 AUOP=1 AUTXR=0.0000 BCEF=. BCT=. CA=. CAPCST=. CAPFL=. CAPR1=. CAPR2=.
CAPR3=. CAPRT=. CAPS=250.9710 CAPX=17.0630 CAPXFI=. CEQ=1447.2490 CFBD=. CFERE=. CFLAOTH=. CFO=. CFPDO=. CGA=.
CH=312.4370 CHE=312.4370 CHEB=290.4750 CHECH=21.9620 CHEE=312.4370 CHEFS=. CHENFD=. CHFS=. CHS=. CMP=. COGS=409.7640
CRVNLI=. CSHR=0.1130 CSTK=2.5390 CUSTADV=. DBTB=. DBTE=. DC=0.2760 DCSFD=. DCUFD=. DD1=0.0000 DD1FS=. DFPAC=.
DFXA=24.2770 DISPOCH=. DLC=0.0000 DLCCH=. DLCFS=. DLTIS=. DLTR=. DLTT=0.0000 DO=0.0000 DOC=. DP=45.3110 DPACT=114.2750
DPC=45.3110 DPDC=. DPLTB=. DPSC=. DPSTB=. DPTB=. DPTC=. DPTIC=. DV=31.6660 DVC=. DVP=. DVPDP=. DVREC=. DVRRE=. DVSCO=.
DVT=. EA=0.0000 EBIT=-12.9650 EBITDA=32.3460 EIEA=. EIEAC=-23.7270 EMP=1.5030 EQDIVP=. ERO=-88.1220 EXRE=-4.1680
EXRES=. EXREU=. FATB=. FATE=. FATL=. FATP=. FCA=-8.1580 FDFR=. FEA=. FEL=. FFS=. FIAO=10.1710 FINCF=-307.1050 FININC=.
FINLE=. FINRE=. FINVAO=. FOPO=381.3990 FSRCO=. FSRCOPO=. FSRCOPT=. FSRCT=. FUSEO=. FUSET=. GDWL=11.4210 IAEQ=. IAFXI=.
IALOI=. IALTI=. IAMLI=. IAOI=. IAPLI=. IAREI=. IASSI=. IASTI=. IATI=. IB=1051.8930 IBC=1049.3000 IBKI=. IBMII=.
ICAPT=1447.2490 IDIIS=. IDILB=. IDILC=. IDIS=. IDIST=. IDIT=0.9720 IDITS=. IIRE=. INITB=. INTAN=17.0580 INTAND=.
INTANP=0.4700 INTC=. INTFACT=. INTFL=. INTIACT=. INTOACT=. INTPD=. INTPN=2.9330 INTRC=. INVCH=-20.2200 INVDSP=.
INVFG=20.0730 INVO=-25.6270 INVRM=78.5790 INVSVC=. INVT=104.4670 INVTFS=. INVWIP=31.4420 IOBD=. IOI=. IORE=. IP=.
IPTI=. ISGR=. ISGT=. ISGU=. ISOTH=. IST=. IVACO=. IVAEQ=943.9540 IVAO=0.0000 IVCH=. IVGOD=. IVI=. IVNCF=284.6900
IVPT=. IVST=0.0000 IVSTCH=. IVSTFS=. LCABG=. LCACL=. LCACR=. LCAG=. LCAL=. LCALT=. LCAM=. LCAO=. LCAST=. LCAT=.
LCO=56.7130 LCOFS=. LCOX=10.3470 LCT=101.5500 LCTFS=. LCUACU=. LIQRESN=. LIQRESO=. LNDEP=. LNINC=. LNMD=. LNREP=.
LO=2.4150 LSE=1551.2490 LT=104.0000 LTDCH=-21.9090 LTDLCH=. LTLO=. MIB=. MIBN=. MIBT=. MIC=. MII=-2.5930 MISEQ=. MTL=.
NCFLIQ=. NEQMI=. NIO=. NIT=. NOASUB=. NOPI=1076.3290 NP=0.0000 NPANL=. NPAORE=. NPARL=. NPAT=. NPFS=. OANCF=48.5450
OANCFC=. OANCFD=. OIADP=-12.9650 OIBDP=32.3460 ONBALB=. ONBALE=. OPPRFT=. PACQP=. PCL=. PI=1060.4210 PLIACH=.
PPEGT=170.8060 PPENT=56.5310 PRC=0.0000 PRODV=. PROSAI=. PRSTKC=. PRV=. PSFIX=3.9690 PSTK=0.0000 PSTKN=0.0000
PSTKR=0.0000 PTRAN=. PURTSHR=269.5420 PVON=. PVT=. RADP=. RAGR=. RARI=. RATI=. RAWMSM=. RCL=. RE=1281.8610
RECCH=-8.4770 RECCO=1.2260 RECCOFS=. RECT=84.2420 RECTFS=. RECTR=83.0160 RECTRFS=. REVT=612.2770 RIS=. RLRI=. RLT=.
RPAG=. RV=. RVBCI=. RVBPI=. RVBTI=. RVEQT=. RVLRV=0.0000 RVRI=. RVSI=. RVTI=. RVUPI=. RVUTX=0.0000 SAA=. SAL=.
SALE=612.2770 SBDC=. SC=. SCO=0.0000 SEQ=1447.2490 SHRCAP=. SIV=298.2540 SPI=239.5690 SPPCH=. SPPIV=-1398.4630 SSNP=.
SSTK=5.8410 STBO=. STFIXA=. STINV=. STIO=. STKCH=. SUBDIS=. SUBPUR=. TDSG=. TDST=. TEQ=1447.2490 TRANSA=0.0000
TSCA=0.0000 TSTK=0.0000 TSTLTA=0.0000 TX=. TXC=-11.4170 TXDB=0.0350 TXDC=-0.2960 TXDI=-0.2960 TXDITC=0.0350

TXO=22.8340 TXOP=-4.9240 TXP=10.0870 TXPD=6.4930 TXPFS=. TXT=11.1210 TXW=0.0000 UI=. UNL=0.0000 UNNP=0.0000 VPAC=.
VPO=. WCAP=416.4900 WCAPCH=. WCAPCHC=. WCAPOPC=-9.9030 WCAPS=. WCAPSA=. WCAPSU=. WCAPT=. WCAPU=. XACC=36.2790 XACCFS=.
XAGO=. XAGT=. XCOM=. XCOMI=. XDVRE=. XEQO=. XI=. XIDO=0.0000 XIDOC=. XINDB=. XINDC=. XINS=. XINST=. XINT=2.9430
XINTD=. XIVI=. XIVRE=. XLR=160.5240 XNITB=. XOBD=. XOI=. XOPR=579.9310 XOPRO=75.3910 XORE=. XPP=0.0000 XPPFS=. XPR=.
XRD=76.4270 XRENT=9.5290 XS=. XSGA=94.7760 XSTF=. XSTFO=. XSTFWS=160.5240 XT=. AJEXI=1.00000000 CSHOI=63.46800
CSHPRIA=63.20200 EPSEXCON=16.64340 EPSEXNC=. EPSINCON=16.64340 EPSINNC=. ICAPI=. NAICSH=333242 NICON=1051.89300 NINC=.
PV=. SICH=3559 TSTKNI=. PS=0 PSTKRV=. PSTKL=. BE=1447.284 year=2013 bvcEquity=. CSHO=. PRCC_F=. capIntens=0.0109995236
cashFlow=0.7056320423 cashHoldings=0.2014099606 costcap=. leverages=0 bleverage=0 market_leverage=. roa=0.6780942325
roe=. ni=. cash_assets=0.2014099606 TobinsQ=. bvEqity=. _ERROR_=1 _N_=18
NOTE: Division by zero detected at line 2585 column 17.
GVKEY=001166 DATADATE=2014-12-31 FYEAR=2014 ADD1=Versterkerstraat 8 ADD2= ADD3= ADD4= ADDZIP=1322 AP
BUSDESC=ASM International NV, together with its subsidiaries, engages in the research, development, manufacture, marke
ting, and servicing of equipment and materials used to produce semiconductor devices in Europe, the United States, and
 Asia. CIK=0000351483 CITY=Almere CONML=ASM International NV COUNTY= DLRSN= EIN= FAX=31 88 100 8830 FYRC=12
GGROUP=4530 GIND=453010 GSECTOR=45 GSUBIND=45301010 IDBFLAG=B INCORP= LOC=NLD NAICS=333242 PHONE=31 88 100 8810
PRICAN= PRIROW=01W PRIUSA=90 SIC=3559 SPCINDCD=247 SPCSECCD=940 SPCSRC=C STATE= STKO=3 WEBURL=www.asm.com DLDTE=.
IPODATE=. CONM=ASM INTERNATIONAL NV ISIN=NL0000334118 SEDOL=5165294 EXCHG=104 FYR=12 FIC=NLD ACCTSTD=US ACQMETH=
BSPR=GO COMPST= CURCD=EUR FINAL=Y ISMOD=1 PDDUR=12 SCF=10 SRC=5 STALT= UPD=3 FDATE=2015-04-11 PDATE=2015-03-09
ACCLI=. ACCO=. ACO=23.9210 ACOFS=. ACOX=23.9210 ACOXFS=. ACQDISN=. ACQDISO=. ACT=618.0000 ADPAC=. AM=27.2450 AMDC=.
AO=21.5360 AOLOCH=-7.5310 AOX=20.3000 AP=61.0530 APALCH=. APCH=20.9790 APDPFS=. APFS=. APO=0.0000 APOFS=. AQC=.
ARTFS=. ASDIS=. ASINV=. AT=1826.9330 ATOCH=. AU=5 AUOP=1 AUTXR=0.0000 BCEF=. BCT=. CA=. CAPCST=. CAPFL=. CAPR1=.
CAPR2=. CAPR3=. CAPRT=. CAPS=261.5860 CAPX=30.6470 CAPXFI=. CEQ=1690.2000 CFBD=. CFERE=. CFLAOTH=. CFO=. CFPDO=. CGA=.
CH=385.7770 CHE=385.7770 CHEB=312.4370 CHECH=73.3400 CHEE=385.7770 CHEFS=. CHENFD=. CHFS=. CHS=. CMP=. COGS=289.9390
CRVNLI=. CSHR=0.1000 CSTK=2.5530 CUSTADV=. DBTB=. DBTE=. DC=1.2360 DCSFD=. DCUFD=. DD1=0.0000 DD1FS=. DFPAC=.
DFXA=16.4820 DISPOCH=. DLC=0.0000 DLCCH=. DLCFS=. DLTIS=. DLTR=. DLTT=0.0000 DO=0.0000 DOC=. DP=43.7270 DPACT=117.1020
DPC=43.7270 DPDC=. DPLTB=. DPSC=. DPSTB=. DPTB=. DPTC=. DPTIC=. DV=31.8280 DVC=. DVP=. DVPDP=. DVREC=. DVRRE=. DVSCO=.
DVT=. EA=0.0000 EBIT=68.0980 EBITDA=111.8250 EIEA=. EIEAC=-61.1490 EMP=1.6350 EQDIVP=. ERO=52.9450 EXRE=32.5840
EXRES=. EXREU=. FATB=. FATE=. FATL=. FATP=. FCA=26.4390 FDFR=. FEA=. FEL=. FFS=. FIAO=-1.4160 FINCF=-37.8500 FININC=.
FINLE=. FINRE=. FINVAO=. FOPO=-15.7490 FSRCO=. FSRCOPO=. FSRCOPT=. FSRCT=. FUSEO=. FUSET=. GDWL=12.1040 IAEQ=. IAFXI=.
IALOI=. IALTI=. IAMLI=. IAOI=. IAPLI=. IAREI=. IASSI=. IASTI=. IATI=. IB=137.3080 IBC=137.3080 IBKI=. IBMII=.
ICAPT=1690.2000 IDIIS=. IDILB=. IDILC=. IDIS=. IDIST=. IDIT=1.5830 IDITS=. IIRE=. INITB=. INTAN=16.0640 INTAND=.
INTANP=1.4960 INTC=. INTFACT=19.9740 INTFL=. INTIACT=. INTOACT=. INTPD=. INTPN=. INTRC=. INVCH=-19.7430 INVDSP=.
INVFG=45.0640 INVO=-21.3500 INVRM=69.7090 INVSVC=. INVT=123.4630 INVTFS=. INVWIP=30.0400 IOBD=. IOI=. IORE=. IP=.
IPTI=. ISGR=. ISGT=. ISGU=. ISOTH=. IST=. IVACO=. IVAEQ=1092.0970 IVAO=0.0000 IVCH=. IVGOD=. IVI=. IVNCF=-31.7840
IVPT=. IVST=0.0000 IVSTCH=. IVSTFS=. LCABG=. LCACL=. LCACR=. LCAG=. LCAL=. LCALT=. LCAM=. LCAO=. LCAST=. LCAT=.
LCO=73.8550 LCOFS=. LCOX=17.2650 LCT=134.9080 LCTFS=. LCUACU=. LIQRESN=. LIQRESO=. LNDEP=. LNINC=. LNMD=. LNREP=.
LO=1.8250 LSE=1826.9330 LT=136.7330 LTDCH=. LTDLCH=. LTLO=. MIB=. MIBN=. MIBT=. MIC=. MII=0.0000 MISEQ=. MTL=.
NCFLIQ=. NEQMI=. NIO=. NIT=. NOASUB=. NOPI=89.0910 NP=0.0000 NPANL=. NPAORE=. NPARL=. NPAT=. NPFS=. OANCF=110.3900

OANCFC=. OANCFD=. OIADP=68.0980 OIBDP=111.8250 ONBALB=. ONBALE=. OPPRFT=. PACQP=. PCL=. PI=154.8770 PLIACH=.
PPEGT=196.3380 PPENT=79.2360 PRC=0.0000 PRODV=. PROSAI=. PRSTKC=. PRV=. PSFIX=0.3590 PSTK=0.0000 PSTKN=0.0000
PSTKR=0.0000 PTRAN=. PURTSHR=29.3380 PVON=. PVT=. RADP=. RAGR=. RARI=. RATI=. RAWMSM=. RCL=. RE=1400.8490 RECCH=6.7560
RECCO=2.8680 RECCOFS=. RECT=84.8390 RECTFS=. RECTR=81.9710 RECTRFS=. REVT=545.6040 RIS=. RLRI=. RLT=. RPAG=. RV=.
RVBCI=. RVBPI=. RVBTI=. RVEQT=. RVLRV=0.0000 RVRI=. RVSI=. RVTI=. RVUPI=. RVUTX=0.0000 SAA=. SAL=. SALE=545.6040
SBDC=. SC=. SCO=0.0000 SEQ=1690.2000 SHRCAP=. SIV=. SPI=-0.0800 SPPCH=. SPPIV=0.0120 SSNP=. SSTK=4.7580 STBO=.
STFIXA=. STINV=. STIO=. STKCH=. SUBDIS=. SUBPUR=. TDSG=. TDST=. TEQ=1690.2000 TRANSA=0.0000 TSCA=0.0000 TSTK=27.7330
TSTLTA=0.0000 TX=. TXC=14.5270 TXDB=0.0000 TXDC=3.0420 TXDI=3.0420 TXDITC=0.0000 TXO=0.0000 TXOP=-2.7380 TXP=15.9520
TXPD=11.7890 TXPFS=. TXT=17.5690 TXW=0.0000 UI=. UNL=0.0000 UNNP=0.0000 VPAC=. VPO=. WCAP=483.0920 WCAPCH=. WCAPCHC=.
WCAPOPC=0.4610 WCAPS=. WCAPSA=. WCAPSU=. WCAPT=. WCAPU=. XACC=40.6380 XACCFS=. XAGO=. XAGT=. XCOM=. XCOMI=. XDVRE=.
XEQO=. XI=. XIDO=0.0000 XIDOC=. XINDB=. XINDC=. XINS=. XINST=. XINT=2.3120 XINTD=. XIVI=. XIVRE=. XLR=. XNITB=. XOBD=.
XOI=. XOPR=433.7790 XOPRO=63.8580 XORE=. XPP=0.0000 XPPFS=. XPR=. XRD=64.7630 XRENT=5.9640 XS=. XSGA=79.9820 XSTF=.
XSTFO=. XSTFWS=. XT=. AJEXI=1.00000000 CSHOI=62.96800 CSHPRIA=63.51000 EPSEXCON=2.16200 EPSEXNC=. EPSINCON=2.16200
EPSINNC=. ICAPI=. NAICSH=333242 NICON=137.30800 NINC=. PV=. SICH=3559 TSTKNI=0.82900 PS=0 PSTKRV=. PSTKL=. BE=1690.2
year=2014 bvcEquity=. CSHO=. PRCC_F=. capIntens=0.0167751089 cashFlow=0.0990923039 cashHoldings=0.2111610004 costcap=.
leverages=0 bleverage=0 market_leverage=. roa=0.0751576549 roe=. ni=. cash_assets=0.2111610004 TobinsQ=. bvEqity=.
ERROR=1 _N_=19
NOTE: Division by zero detected at line 2585 column 17.
GVKEY=001166 DATADATE=2015-12-31 FYEAR=2015 ADD1=Versterkerstraat 8 ADD2= ADD3= ADD4= ADDZIP=1322 AP
BUSDESC=ASM International NV, together with its subsidiaries, engages in the research, development, manufacture, marke
ting, and servicing of equipment and materials used to produce semiconductor devices in Europe, the United States, and
 Asia. CIK=0000351483 CITY=Almere CONML=ASM International NV COUNTY= DLRSN= EIN= FAX=31 88 100 8830 FYRC=12
GGROUP=4530 GIND=453010 GSECTOR=45 GSUBIND=45301010 IDBFLAG=B INCORP= LOC=NLD NAICS=333242 PHONE=31 88 100 8810
PRICAN= PRIROW=01W PRIUSA=90 SIC=3559 SPCINDCD=247 SPCSECCD=940 SPCSRC=C STATE= STKO=3 WEBURL=www.asm.com DLDTE=.
IPODATE=. CONM=ASM INTERNATIONAL NV ISIN=NL0000334118 SEDOL=5165294 EXCHG=104 FYR=12 FIC=NLD ACCTSTD=DI ACQMETH=
BSPR=GO COMPST= CURCD=EUR FINAL=Y ISMOD=1 PDDUR=12 SCF=10 SRC=5 STALT= UPD=3 FDATE=2016-04-26 PDATE=2016-02-26
ACCLI=. ACCO=. ACO=18.8550 ACOFS=. ACOX=18.8550 ACOXFS=. ACQDISN=. ACQDISO=. ACT=669.9770 ADPAC=. AM=29.6640 AMDC=.
AO=113.0400 AOLOCH=-4.8600 AOX=40.5620 AP=54.4410 APALCH=. APCH=-2.9760 APDPFS=. APFS=. APO=0.0000 APOFS=. AQC=.
ARTFS=. ASDIS=. ASINV=. AT=2075.9770 ATOCH=. AU=6 AUOP=1 AUTXR=0.0000 BCEF=. BCT=. CA=. CAPCST=. CAPFL=. CAPR1=.
CAPR2=. CAPR3=. CAPRT=. CAPS=221.8680 CAPX=33.5760 CAPXFI=. CEQ=1948.3790 CFBD=. CFERE=. CFLAOTH=. CFO=. CFPDO=. CGA=.
CH=446.9150 CHE=446.9150 CHEB=385.7770 CHECH=61.1380 CHEE=446.9150 CHEFS=. CHENFD=. CHFS=. CHS=. CMP=. COGS=346.8300
CRVNLI=. CSHR=. CSTK=2.5530 CUSTADV=. DBTB=. DBTE=. DC=72.4780 DCSFD=. DCUFD=. DD1=0.0000 DD1FS=. DFPAC=. DFXA=24.7510
DISPOCH=. DLC=0.0000 DLCCH=. DLCFS=. DLTIS=. DLTR=. DLTT=0.0000 DO=0.0000 DOC=. DP=54.4150 DPACT=144.6260 DPC=66.2090
DPDC=. DPLTB=. DPSC=. DPSTB=. DPTB=. DPTC=. DPTIC=. DV=37.1580 DVC=. DVP=. DVPDP=. DVREC=. DVRRE=. DVSCO=. DVT=.
EA=0.0000 EBIT=101.7760 EBITDA=156.1910 EIEA=. EIEAC=-44.1580 EMP=1.5970 EQDIVP=. ERO=192.0810 EXRE=19.8250 EXRES=.
EXREU=. FATB=. FATE=. FATL=. FATP=. FCA=25.2640 FDFR=. FEA=. FEL=. FFS=. FIAO=. FINCF=-104.9110 FININC=. FINLE=.
FINRE=. FINVAO=. FOPO=1.8890 FSRCO=. FSRCOPO=. FSRCOPT=. FSRCT=. FUSEO=. FUSET=. GDWL=11.2700 IAEQ=. IAFXI=. IALOI=.
IALTI=. IAMLI=. IAOI=. IAPLI=. IAREI=. IASSI=. IASTI=. IATI=. IB=157.2770 IBC=157.2770 IBKI=. IBMII=. ICAPT=1948.3790

IDIIS=. IDILB=. IDILC=. IDIS=. IDIST=. IDIT=1.1120 IDITS=. IIRE=. INITB=. INTAN=20.3270 INTAND=. INTANP=37.3930 INTC=.
INTFACT=. INTFL=. INTIACT=42.8650 INTOACT=. INTPD=. INTPN=. INTRC=. INVCH=13.4360 INVDSP=. INVFG=27.8630 INVO=-19.3500
INVRM=74.3620 INVSVC=. INVT=113.5020 INVTFS=. INVWIP=30.6270 IOBD=. IOI=. IORE=. IP=. IPTI=. ISGR=. ISGT=. ISGU=.
ISOTH=. IST=. IVACO=0.0000 IVAEQ=1180.8390 IVAO=0.0000 IVCH=0.9000 IVGOD=. IVI=. IVNCF=-28.5930 IVPT=. IVST=0.0000
IVSTCH=. IVSTFS=. LCABG=. LCACL=. LCACR=. LCAG=. LCAL=. LCALT=. LCAM=. LCAO=. LCAST=. LCAT=. LCO=60.6550 LCOFS=.
LCOX=14.9360 LCT=115.0960 LCTFS=. LCUACU=. LIQRESN=. LIQRESO=. LNDEP=. LNINC=. LNMD=. LNREP=. LO=1.1700 LSE=2075.9770
LT=127.5980 LTDCH=. LTDLCH=. LTLO=. MIB=. MIBN=. MIBT=. MIC=. MII=0.0000 MISEQ=. MTL=. NCFLIQ=. NEQMI=. NIO=. NIT=.
NOASUB=. NOPI=51.7710 NP=0.0000 NPANL=. NPAORE=. NPARL=. NPAT=. NPFS=. OANCF=174.8170 OANCFC=. OANCFD=. OIADP=101.7760
OIBDP=156.1910 ONBALB=. ONBALE=. OPPRFT=. PACQP=. PCL=. PI=151.9270 PLIACH=. PPEGT=236.4200 PPENT=91.7940 PRC=0.0000
PRODV=. PROSAI=. PRSTKC=. PRV=. PSFIX=0.4110 PSTK=0.0000 PSTKN=0.0000 PSTKR=0.0000 PTRAN=. PURTSHR=79.0760 PVON=.
PVT=. RADP=. RAGR=. RARI=. RATI=. RAWMSM=. RCL=. RE=1615.8770 RECCH=-2.8350 RECCO=0.5150 RECCOFS=. RECT=90.7050
RECTFS=. RECTR=90.1900 RECTRFS=. REVT=669.6210 RIS=. RLRI=. RLT=. RPAG=. RV=. RVBCI=. RVBPI=. RVBTI=. RVEQT=.
RVLRV=0.0000 RVRI=. RVSI=. RVTI=. RVUPI=. RVUTX=0.0000 SAA=. SAL=. SALE=669.6210 SBDC=. SC=. SCO=0.0000 SEQ=1948.3790
SHRCAP=. SIV=. SPI=-17.8640 SPPCH=. SPPIV=. SSNP=. SSTK=11.3230 STBO=. STFIXA=. STINV=. STIO=. STKCH=. SUBDIS=.
SUBPUR=. TDSG=. TDST=. TEQ=1948.3790 TRANSA=0.0000 TSCA=0.0000 TSTK=84.0000 TSTLTA=0.0000 TX=. TXC=-2.1140
TXDB=11.3320 TXDC=. TXDI=-7.4640 TXDITC=11.3320 TXO=4.2280 TXOP=9.1650 TXP=6.8410 TXPD=9.1650 TXPFS=. TXT=-5.3500
TXW=0.0000 UI=. UNL=0.0000 UNNP=0.0000 VPAC=. VPO=. WCAP=554.8810 WCAPCH=. WCAPCHC=. WCAPOPC=2.7650 WCAPS=. WCAPSA=.
WCAPSU=. WCAPT=. WCAPU=. XACC=38.8780 XACCFS=. XAGO=. XAGT=. XCOM=. XCOMI=. XDVRE=. XEQO=. XI=. XIDO=0.0000 XIDOC=.
XINDB=. XINDC=. XINS=. XINST=. XINT=1.6200 XINTD=. XIVI=. XIVRE=. XLR=145.8530 XNITB=. XOBD=. XOI=. XOPR=513.4300
XOPRO=73.5810 XORE=. XPP=0.0000 XPPFS=. XPR=. XRD=90.7200 XRENT=6.8860 XS=. XSGA=93.0190 XSTF=. XSTFO=.
XSTFWS=145.8530 XT=. AJEXI=1.00000000 CSHOI=61.70600 CSHPRIA=62.11400 EPSEXCON=2.53210 EPSEXNC=. EPSINCON=2.53210
EPSINNC=. ICAPI=. NAICSH=333242 NICON=157.27700 NINC=. PV=. SICH=3559 TSTKNI=2.09100 PS=0 PSTKRV=. PSTKL=. BE=1959.711
year=2015 bvcEquity=. CSHO=. PRCC_F=. capIntens=0.0161735896 cashFlow=0.101972228 cashHoldings=0.21527936 costcap=.
leverages=0 bleverage=0 market_leverage=. roa=0.0757604733 roe=. ni=. cash_assets=0.21527936 TobinsQ=. bvEqity=.
ERROR=1 _N_=20
NOTE: Division by zero detected at line 2585 column 17.
GVKEY=001166 DATADATE=2016-12-31 FYEAR=2016 ADD1=Versterkerstraat 8 ADD2= ADD3= ADD4= ADDZIP=1322 AP
BUSDESC=ASM International NV, together with its subsidiaries, engages in the research, development, manufacture, marke
ting, and servicing of equipment and materials used to produce semiconductor devices in Europe, the United States, and
 Asia. CIK=0000351483 CITY=Almere CONML=ASM International NV COUNTY= DLRSN= EIN= FAX=31 88 100 8830 FYRC=12
GGROUP=4530 GIND=453010 GSECTOR=45 GSUBIND=45301010 IDBFLAG=B INCORP= LOC=NLD NAICS=333242 PHONE=31 88 100 8810
PRICAN= PRIROW=01W PRIUSA=90 SIC=3559 SPCINDCD=247 SPCSECCD=940 SPCSRC=C STATE= STKO=3 WEBURL=www.asm.com DLDTE=.
IPODATE=. CONM=ASM INTERNATIONAL NV ISIN=NL0000334118 SEDOL=5165294 EXCHG=104 FYR=12 FIC=NLD ACCTSTD=DI ACQMETH=
BSPR=GO COMPST= CURCD=EUR FINAL=Y ISMOD=1 PDDUR=12 SCF=10 SRC=5 STALT= UPD=3 FDATE=2017-03-12 PDATE=2017-03-10
ACCLI=. ACCO=. ACO=22.8490 ACOFS=. ACOX=22.8490 ACOXFS=. ACQDISN=. ACQDISO=. ACT=650.7350 ADPAC=. AM=29.0820 AMDC=.
AO=141.2630 AOLOCH=-10.2120 AOX=55.3370 AP=60.9100 APALCH=. APCH=7.0450 APDPFS=. APFS=. APO=0.0000 APOFS=. AQC=.
ARTFS=. ASDIS=. ASINV=. AT=2148.2630 ATOCH=. AU=6 AUOP=1 AUTXR=0.0000 BCEF=. BCT=. CA=. CAPCST=. CAPFL=. CAPR1=.
CAPR2=. CAPR3=. CAPRT=. CAPS=225.8370 CAPX=26.8900 CAPXFI=. CEQ=2015.8560 CFBD=. CFERE=. CFLAOTH=. CFO=. CFPDO=. CGA=.

CH=378.1570 CHE=378.1570 CHEB=446.9150 CHECH=-68.7580 CHEE=378.1570 CHEFS=. CHENFD=. CHFS=. CHS=. CMP=. COGS=298.6600
CRVNLI=. CSHR=. CSTK=2.5530 CUSTADV=. DBTB=. DBTE=. DC=85.9260 DCSFD=. DCUFD=. DD1=0.0000 DD1FS=. DFPAC=. DFXA=31.1660
DISPOCH=. DLC=0.0000 DLCCH=. DLCFS=. DLTIS=. DLTR=. DLTT=0.0000 DO=0.0000 DOC=. DP=60.2480 DPACT=167.1360 DPC=73.5930
DPDC=. DPLTB=. DPSC=. DPSTB=. DPTB=. DPTC=. DPTIC=. DV=42.6730 DVC=. DVP=. DVPDP=. DVREC=. DVRRE=. DVSCO=. DVT=.
EA=0.0000 EBIT=63.4700 EBITDA=123.7180 EIEA=. EIEAC=-67.7110 EMP=1.6700 EQDIVP=. ERO=231.4680 EXRE=3.6390 EXRES=.
EXREU=. FATB=. FATE=. FATL=. FATP=. FCA=13.0320 FDFR=. FEA=. FEL=. FFS=. FIAO=-0.8100 FINCF=-125.7980 FININC=. FINLE=.
FINRE=. FINVAO=. FOPO=13.5130 FSRCO=. FSRCOPO=. FSRCOPT=. FSRCT=. FUSEO=. FUSET=. GDWL=11.2700 IAEQ=. IAFXI=. IALOI=.
IALTI=. IAMLI=. IAOI=. IAPLI=. IAREI=. IASSI=. IASTI=. IATI=. IB=135.4710 IBC=135.4710 IBKI=. IBMII=. ICAPT=2015.8560
IDIIS=. IDILB=. IDILC=. IDIS=. IDIST=. IDIT=3.0950 IDITS=. IIRE=. INITB=. INTAN=25.5230 INTAND=. INTANP=34.3510 INTC=.
INTFACT=. INTFL=. INTIACT=22.0830 INTOACT=. INTPD=. INTPN=. INTRC=. INVCH=-9.5100 INVDSP=. INVFG=12.6180 INVO=-15.5270
INVRM=84.6340 INVSVC=. INVT=112.3390 INVTFS=. INVWIP=30.6140 IOBD=. IOI=. IORE=. IP=. IPTI=. ISGR=. ISGT=. ISGU=.
ISOTH=. IST=. IVACO=0.0000 IVAEQ=1235.7380 IVAO=0.0000 IVCH=. IVGOD=. IVI=. IVNCF=-38.0110 IVPT=. IVST=0.0000 IVSTCH=.
IVSTFS=. LCABG=. LCACL=. LCACR=. LCAG=. LCAL=. LCALT=. LCAM=. LCAO=. LCAST=. LCAT=. LCO=56.9610 LCOFS=. LCOX=15.2540
LCT=117.8710 LCTFS=. LCUACU=. LIQRESN=. LIQRESO=. LNDEP=. LNINC=. LNMD=. LNREP=. LO=1.4180 LSE=2148.2630 LT=132.4070
LTDCH=. LTDLCH=. LTLO=. MIB=. MIBN=. MIBT=. MIC=. MII=0.0000 MISEQ=. MTL=. NCFLIQ=. NEQMI=. NIO=. NIT=. NOASUB=.
NOPI=75.3860 NP=0.0000 NPANL=. NPAORE=. NPARL=. NPAT=. NPFS=. OANCF=91.4120 OANCFC=. OANCFD=. OIADP=63.4700
OIBDP=123.7180 ONBALB=. ONBALE=. OPPRFT=. PACQP=. PCL=. PI=137.7600 PLIACH=. PPEGT=262.1400 PPENT=95.0040 PRC=0.0000
PRODV=. PROSAI=. PRSTKC=. PRV=. PSFIX=1.1470 PSTK=0.0000 PSTKN=0.0000 PSTKR=0.0000 PTRAN=. PURTSHR=97.0240 PVON=.
PVT=. RADP=. RAGR=. RARI=. RATI=. RAWMSM=. RCL=. RE=1707.4750 RECCH=-43.3520 RECCO=0.3700 RECCOFS=. RECT=137.3900
RECTFS=. RECTR=137.0200 RECTRFS=. REVT=597.9300 RIS=. RLRI=. RLT=. RPAG=. RV=. RVBCI=. RVBPI=. RVBTI=. RVEQT=.
RVLRV=0.0000 RVRI=. RVSI=. RVTI=. RVUPI=. RVUTX=0.0000 SAA=. SAL=. SALE=597.9300 SBDC=. SC=. SCO=0.0000 SEQ=2015.8560
SHRCAP=. SIV=. SPI=-8.4520 SPPCH=. SPPIV=. SSNP=. SSTK=14.7090 STBO=. STFIXA=. STINV=. STIO=. STKCH=. SUBDIS=.
SUBPUR=. TDSG=. TDST=. TEQ=2015.8560 TRANSA=0.0000 TSCA=0.0000 TSTK=151.4770 TSTLTA=0.0000 TX=. TXC=3.1800
TXDB=13.1180 TXDC=. TXDI=-0.8910 TXDITC=13.1180 TXO=0.0000 TXOP=7.4250 TXP=2.4670 TXPD=7.4250 TXPFS=. TXT=2.2890
TXW=0.0000 UI=. UNL=0.0000 UNNP=0.0000 VPAC=. VPO=. WCAP=532.8640 WCAPCH=. WCAPCHC=. WCAPOPC=-56.0290 WCAPS=. WCAPSA=.
WCAPSU=. WCAPT=. WCAPU=. XACC=39.2400 XACCFS=. XAGO=. XAGT=. XCOM=. XCOMI=. XDVRE=. XEQO=. XI=. XIDO=0.0000 XIDOC=.
XINDB=. XINDC=. XINS=. XINST=. XINT=1.0960 XINTD=. XIVI=. XIVRE=. XLR=. XNITB=. XOBD=. XOI=. XOPR=474.2120
XOPRO=87.5540 XORE=. XPP=0.0000 XPPFS=. XPR=. XRD=91.9720 XRENT=6.9130 XS=. XSGA=87.9980 XSTF=. XSTFO=. XSTFWS=. XT=.
AJEXI=1.00000000 CSHOI=59.81600 CSHPRIA=60.61600 EPSEXCON=2.23490 EPSEXNC=. EPSINCON=2.23490 EPSINNC=. ICAPI=.
NAICSH=333242 NICON=135.47100 NINC=. PV=. SICH=3559 TSTKNI=3.98200 PS=0 PSTKRV=. PSTKL=. BE=2028.974 year=2016
bvcEquity=. CSHO=. PRCC_F=. capIntens=0.0125170894 cashFlow=0.091105698 cashHoldings=0.176029192 costcap=. leverages=0
bleverage=0 market_leverage=. roa=0.0630607146 roe=. ni=. cash_assets=0.176029192 TobinsQ=. bvEqity=. _ERROR_=1 _N_=21
NOTE: Division by zero detected at line 2585 column 17.
GVKEY=001166 DATADATE=2017-12-31 FYEAR=2017 ADD1=Versterkerstraat 8 ADD2= ADD3= ADD4= ADDZIP=1322 AP
BUSDESC=ASM International NV, together with its subsidiaries, engages in the research, development, manufacture, marke
ting, and servicing of equipment and materials used to produce semiconductor devices in Europe, the United States, and
 Asia. CIK=0000351483 CITY=Almere CONML=ASM International NV COUNTY= DLRSN= EIN= FAX=31 88 100 8830 FYRC=12
GGROUP=4530 GIND=453010 GSECTOR=45 GSUBIND=45301010 IDBFLAG=B INCORP= LOC=NLD NAICS=333242 PHONE=31 88 100 8810

PRICAN= PRIROW=01W PRIUSA=90 SIC=3559 SPCINDCD=247 SPCSECCD=940 SPCSRC=C STATE= STKO=3 WEBURL=www.asm.com DLDTE=.
IPODATE=. CONM=ASM INTERNATIONAL NV ISIN=NL0000334118 SEDOL=5165294 EXCHG=104 FYR=12 FIC=NLD ACCTSTD=DI ACQMETH=
BSPR=GO COMPST= CURCD=EUR FINAL=Y ISMOD=1 PDDUR=12 SCF=10 SRC=5 STALT= UPD=3 FDATE=2018-03-24 PDATE=2018-03-11
ACCLI=. ACCO=. ACO=9.2830 ACOFS=. ACOX=0.9610 ACOXFS=. ACQDISN=. ACQDISO=. ACT=1162.7820 ADPAC=. AM=24.9820 AMDC=.
AO=151.5920 AOLOCH=2.5400 AOX=52.6710 AP=79.3490 APALCH=. APCH=28.4490 APDPFS=. APFS=. APO=0.0000 APOFS=. AQC=.
ARTFS=. ASDIS=. ASINV=. AT=2177.2020 ATOCH=. AU=6 AUOP=1 AUTXR=0.0000 BCEF=. BCT=. CA=. CAPCST=. CAPFL=. CAPR1=.
CAPR2=. CAPR3=. CAPRT=. CAPS=218.5250 CAPX=44.1710 CAPXFI=. CEQ=2011.5120 CFBD=. CFERE=. CFLAOTH=. CFO=. CFPDO=. CGA=.
CH=836.4610 CHE=836.4610 CHEB=378.1570 CHECH=458.3040 CHEE=836.4610 CHEFS=. CHENFD=. CHFS=. CHS=. CMP=. COGS=397.0340
CRVNLI=. CSHR=. CSTK=2.4920 CUSTADV=. DBTB=. DBTE=. DC=98.9210 DCSFD=. DCUFD=. DD1=0.0000 DD1FS=. DFPAC=. DFXA=32.3010
DISPOCH=. DLC=0.0000 DLCCH=. DLCFS=. DLTIS=. DLTR=. DLTT=0.0000 DO=0.0000 DOC=. DP=57.2830 DPACT=163.9810 DPC=70.5710
DPDC=. DPLTB=. DPSC=. DPSTB=. DPTB=. DPTC=. DPTIC=. DV=41.4700 DVC=. DVP=. DVPDP=. DVREC=. DVRRE=. DVSCO=. DVT=.
EA=0.0000 EBIT=95.4950 EBITDA=152.7780 EIEA=. EIEAC=-112.4240 EMP=1.9000 EQDIVP=. ERO=53.7540 EXRE=-32.6530 EXRES=.
EXREU=. FATB=. FATE=. FATL=. FATP=. FCA=-30.5460 FDFR=. FEA=. FEL=. FFS=. FIAO=-0.1320 FINCF=-267.8650 FININC=.
FINLE=. FINRE=. FINVAO=. FOPO=46.3810 FSRCO=. FSRCOPO=. FSRCOPT=. FSRCT=. FUSEO=. FUSET=. GDWL=11.2700 IAEQ=. IAFXI=.
IALOI=. IALTI=. IAMLI=. IAOI=. IAPLI=. IAREI=. IASSI=. IASTI=. IATI=. IB=452.4020 IBC=452.4020 IBKI=. IBMII=.
ICAPT=2011.5120 IDIIS=. IDILB=. IDILC=. IDIS=. IDIST=. IDIT=1.6830 IDITS=. IIRE=. INITB=. INTAN=25.6440 INTAND=.
INTANP=41.0080 INTC=. INTFACT=. INTFL=. INTIACT=36.4580 INTOACT=. INTPD=. INTPN=. INTRC=. INVCH=-45.1610 INVDSP=.
INVFG=14.2180 INVO=-12.7490 INVRM=104.3330 INVSVC=. INVT=142.8490 INVTFS=. INVWIP=37.0470 IOBD=. IOI=. IORE=. IP=.
IPTI=. ISGR=. ISGT=. ISGU=. ISOTH=. IST=. IVACO=0.0000 IVAEQ=730.5520 IVAO=0.0000 IVCH=. IVGOD=. IVI=. IVNCF=642.7620
IVPT=. IVST=0.0000 IVSTCH=. IVSTFS=. LCABG=. LCACL=. LCACR=. LCAG=. LCAL=. LCALT=. LCAM=. LCAO=. LCAST=. LCAT=.
LCO=72.0910 LCOFS=. LCOX=19.6190 LCT=151.4400 LCTFS=. LCUACU=. LIQRESN=. LIQRESO=. LNDEP=. LNINC=. LNMD=. LNREP=.
LO=0.3860 LSE=2177.2020 LT=165.6900 LTDCH=. LTDLCH=. LTLO=. MIB=. MIBN=. MIBT=. MIC=. MII=0.0000 MISEQ=. MTL=.
NCFLIQ=. NEQMI=. NIO=. NIT=. NOASUB=. NOPI=363.3410 NP=0.0000 NPANL=. NPAORE=. NPARL=. NPAT=. NPFS=. OANCF=116.0600
OANCFC=. OANCFD=. OIADP=95.4950 OIBDP=152.7780 ONBALB=. ONBALE=. OPPRFT=. PACQP=. PCL=. PI=457.0370 PLIACH=.
PPEGT=270.6130 PPENT=106.6320 PRC=0.0000 PRODV=. PROSAI=. PRSTKC=. PRV=. PSFIX=0.8230 PSTK=0.0000 PSTKN=0.0000
PSTKR=0.0000 PTRAN=. PURTSHR=239.5550 PVON=. PVT=. RADP=. RAGR=. RARI=. RATI=. RAWMSM=. RCL=. RE=2041.3950
RECCH=-37.9300 RECCO=6.9220 RECCOFS=. RECT=174.1890 RECTFS=. RECTR=167.2670 RECTRFS=. REVT=737.4010 RIS=. RLRI=. RLT=.
RPAG=. RV=. RVBCI=. RVBPI=. RVBTI=. RVEQT=. RVLRV=0.0000 RVRI=. RVSI=. RVTI=. RVUPI=. RVUTX=0.0000 SAA=. SAL=.
SALE=737.4010 SBDC=. SC=. SCO=0.0000 SEQ=2011.5120 SHRCAP=. SIV=690.6600 SPI=-5.1190 SPPCH=. SPPIV=-284.8980 SSNP=.
SSTK=13.2920 STBO=. STFIXA=. STINV=. STIO=. STKCH=. SUBDIS=. SUBPUR=. TDSG=. TDST=. TEQ=2011.5120 TRANSA=0.0000
TSCA=0.0000 TSTK=304.6540 TSTLTA=0.0000 TX=. TXC=7.3170 TXDB=13.8640 TXDC=. TXDI=-2.6820 TXDITC=13.8640 TXO=0.0000
TXOP=3.8700 TXP=6.5750 TXPD=3.8700 TXPFS=. TXT=4.6350 TXW=0.0000 UI=. UNL=0.0000 UNNP=0.0000 VPAC=. VPO=.
WCAP=1011.3420 WCAPCH=. WCAPCHC=. WCAPOPC=-52.1020 WCAPS=. WCAPSA=. WCAPSU=. WCAPT=. WCAPU=. XACC=45.8970 XACCFS=.
XAGO=. XAGT=. XCOM=. XCOMI=. XDVRE=. XEQO=. XI=. XIDO=0.0000 XIDOC=. XINDB=. XINDC=. XINS=. XINST=. XINT=1.7990
XINTD=. XIVI=. XIVRE=. XLR=. XNITB=. XOBD=. XOI=. XOPR=584.6230 XOPRO=88.4400 XORE=. XPP=8.3220 XPPFS=. XPR=.
XRD=93.1030 XRENT=7.1790 XS=. XSGA=99.1490 XSTF=. XSTFO=. XSTFWS=. XT=. AJEXI=1.00000000 CSHOI=56.14000
CSHPRIA=58.57300 EPSEXCON=7.72370 EPSEXNC=. EPSINCON=7.72370 EPSINNC=. ICAPI=. NAICSH=333242 NICON=452.40200 NINC=.
PV=. SICH=3559 TSTKNI=6.15700 PS=0 PSTKRV=. PSTKL=. BE=2025.376 year=2017 bvcEquity=. CSHO=. PRCC_F=.

capIntens=0.0202879659 cashFlow=0.234100924 cashHoldings=0.38419081 costcap=. leverages=0 bleverage=0
market_leverage=. roa=0.2077905495 roe=. ni=. cash_assets=0.38419081 TobinsQ=. bvEqity=. _ERROR_=1 _N_=22
NOTE: Division by zero detected at line 2585 column 17.
GVKEY=001166 DATADATE=2018-12-31 FYEAR=2018 ADD1=Versterkerstraat 8 ADD2= ADD3= ADD4= ADDZIP=1322 AP
BUSDESC=ASM International NV, together with its subsidiaries, engages in the research, development, manufacture, marke
ting, and servicing of equipment and materials used to produce semiconductor devices in Europe, the United States, and
 Asia. CIK=0000351483 CITY=Almere CONML=ASM International NV COUNTY= DLRSN= EIN= FAX=31 88 100 8830 FYRC=12
GGROUP=4530 GIND=453010 GSECTOR=45 GSUBIND=45301010 IDBFLAG=B INCORP= LOC=NLD NAICS=333242 PHONE=31 88 100 8810
PRICAN= PRIROW=01W PRIUSA=90 SIC=3559 SPCINDCD=247 SPCSECCD=940 SPCSRC=C STATE= STKO=3 WEBURL=www.asm.com DLDTE=.
IPODATE=. CONM=ASM INTERNATIONAL NV ISIN=NL0000334118 SEDOL=5165294 EXCHG=104 FYR=12 FIC=NLD ACCTSTD=DI ACQMETH=
BSPR=GO COMPST= CURCD=EUR FINAL=Y ISMOD=1 PDDUR=12 SCF=10 SRC=5 STALT= UPD=3 FDATE=2019-03-19 PDATE=2019-02-23
ACCLI=. ACCO=. ACO=12.8460 ACOFS=. ACOX=0.2610 ACOXFS=. ACQDISN=. ACQDISO=. ACT=680.6230 ADPAC=. AM=18.2430 AMDC=.
AO=208.1970 AOLOCH=-47.9760 AOX=67.8150 AP=82.4680 APALCH=. APCH=48.7920 APDPFS=. APFS=. APO=0.0000 APOFS=. AQC=.
ARTFS=. ASDIS=. ASINV=. AT=1847.9720 ATOCH=. AU=6 AUOP=1 AUTXR=0.0000 BCEF=. BCT=. CA=. CAPCST=. CAPFL=. CAPR1=.
CAPR2=. CAPR3=. CAPRT=. CAPS=50.9020 CAPX=67.0620 CAPXFI=. CEQ=1641.5510 CFBD=. CFERE=. CFLAOTH=. CFO=. CFPDO=. CGA=.
CH=285.9070 CHE=285.9070 CHEB=836.4610 CHECH=-550.5540 CHEE=285.9070 CHEFS=. CHENFD=. CHFS=. CHS=. CMP=. COGS=441.7490
CRVNLI=. CSHR=. CSTK=2.2520 CUSTADV=. DBTB=. DBTE=. DC=140.3820 DCSFD=. DCUFD=. DD1=0.0000 DD1FS=. DFPAC=.
DFXA=36.1250 DISPOCH=. DLC=0.0000 DLCCH=. DLCFS=. DLTIS=. DLTR=. DLTT=0.0000 DO=0.0000 DOC=. DP=54.3680 DPACT=185.6630
DPC=66.4070 DPDC=. DPLTB=. DPSC=. DPSTB=. DPTB=. DPTC=. DPTIC=. DV=252.4180 DVC=. DVP=. DVPDP=. DVREC=. DVRRE=.
DVSCO=. DVT=. EA=0.0000 EBIT=113.3900 EBITDA=167.7580 EIEA=. EIEAC=-60.7690 EMP=2.1810 EQDIVP=. ERO=99.6070
EXRE=0.1300 EXRES=. EXREU=. FATB=. FATE=. FATL=. FATP=. FCA=1.2760 FDFR=. FEA=. FEL=. FFS=. FIAO=. FINCF=-602.5640
FININC=. FINLE=. FINRE=. FINVAO=. FOPO=24.8480 FSRCO=. FSRCOPO=. FSRCOPT=. FSRCT=. FUSEO=. FUSET=. GDWL=11.2700 IAEQ=.
IAFXI=. IALOI=. IALTI=. IAMLI=. IAOI=. IAPLI=. IAREI=. IASSI=. IASTI=. IATI=. IB=157.1330 IBC=157.1330 IBKI=. IBMII=.
ICAPT=1641.5510 IDIIS=. IDILB=. IDILC=. IDIS=. IDIST=. IDIT=61.8250 IDITS=. IIRE=. INITB=. INTAN=20.8150 INTAND=.
INTANP=50.7460 INTC=. INTFACT=. INTFL=. INTIACT=29.1200 INTOACT=. INTPD=. INTPN=. INTRC=. INVCH=-22.9770 INVDSP=.
INVFG=22.0130 INVO=-13.3640 INVRM=127.1130 INVSVC=. INVT=171.8260 INVTFS=. INVWIP=36.0640 IOBD=. IOI=. IORE=. IP=.
IPTI=. ISGR=. ISGT=. ISGU=. ISOTH=. IST=. IVACO=0.0000 IVAEQ=789.5880 IVAO=0.0000 IVCH=. IVGOD=. IVI=. IVNCF=-84.9300
IVPT=. IVST=0.0000 IVSTCH=. IVSTFS=. LCABG=. LCACL=. LCACR=. LCAG=. LCAL=. LCALT=. LCAM=. LCAO=. LCAST=. LCAT=.
LCO=111.7830 LCOFS=. LCOX=35.2250 LCT=194.2510 LCTFS=. LCUACU=. LIQRESN=. LIQRESO=. LNDEP=. LNINC=. LNMD=. LNREP=.
LO=0.0000 LSE=1847.9720 LT=206.4210 LTDCH=. LTDLCH=. LTLO=. MIB=. MIBN=. MIBT=. MIC=. MII=0.0000 MISEQ=. MTL=.
NCFLIQ=. NEQMI=. NIO=. NIT=. NOASUB=. NOPI=61.6450 NP=0.0000 NPANL=. NPAORE=. NPARL=. NPAT=. NPFS=. OANCF=136.8100
OANCFC=. OANCFD=. OIADP=113.3900 OIBDP=167.7580 ONBALB=. ONBALE=. OPPRFT=. PACQP=. PCL=. PI=172.5690 PLIACH=.
PPEGT=334.4120 PPENT=148.7490 PRC=0.0000 PRODV=. PROSAI=. PRSTKC=. PRV=. PSFIX=3.7580 PSTK=0.0000 PSTKN=0.0000
PSTKR=0.0000 PTRAN=. PURTSHR=354.9630 PVON=. PVT=. RADP=. RAGR=. RARI=. RATI=. RAWMSM=. RCL=. RE=1816.8000
RECCH=-9.1890 RECCO=12.2280 RECCOFS=. RECT=210.0440 RECTFS=. RECTR=197.8160 RECTRFS=. REVT=818.0810 RIS=. RLRI=. RLT=.
RPAG=. RV=. RVBCI=. RVBPI=. RVBTI=. RVEQT=. RVLRV=0.0000 RVRI=. RVSI=. RVTI=. RVUPI=. RVUTX=0.0000 SAA=. SAL=.
SALE=818.0810 SBDC=. SC=. SCO=0.0000 SEQ=1641.5510 SHRCAP=. SIV=. SPI=-1.4560 SPPCH=. SPPIV=. SSNP=. SSTK=4.8170
STBO=. STFIXA=. STINV=. STIO=. STKCH=. SUBDIS=. SUBPUR=. TDSG=. TDST=. TEQ=1641.5510 TRANSA=0.0000 TSCA=0.0000

TSTK=328.0100 TSTLTA=0.0000 TX=. TXC=10.5020 TXDB=12.1700 TXDC=. TXDI=4.9340 TXDITC=12.1700 TXO=0.0000 TXOP=19.4590
TXP=6.6630 TXPD=19.4590 TXPFS=. TXT=15.4360 TXW=0.0000 UI=. UNL=0.0000 UNNP=0.0000 VPAC=. VPO=. WCAP=486.3720 WCAPCH=.
WCAPCHC=. WCAPOPC=-31.3500 WCAPS=. WCAPSA=. WCAPSU=. WCAPT=. WCAPU=. XACC=69.8950 XACCFS=. XAGO=. XAGT=. XCOM=.
XCOMI=. XDVRE=. XEQO=. XI=. XIDO=0.0000 XIDOC=. XINDB=. XINDC=. XINS=. XINST=. XINT=2.4660 XINTD=. XIVI=. XIVRE=.
XLR=. XNITB=. XOBD=. XOI=. XOPR=650.3230 XOPRO=87.3100 XORE=. XPP=12.5850 XPPFS=. XPR=. XRD=88.9090 XRENT=. XS=.
XSGA=121.2640 XSTF=. XSTFO=. XSTFWS=. XT=. AJEXI=1.00000000 CSHOI=49.31900 CSHPRIA=52.43200 EPSEXCON=2.99690 EPSEXNC=.
EPSINCON=2.99690 EPSINNC=. ICAPI=. NAICSH=333242 NICON=157.13300 NINC=. PV=. SICH=3559 TSTKNI=6.97800 PS=0 PSTKRV=.
PSTKL=. BE=1653.721 year=2018 bvcEquity=. CSHO=. PRCC_F=. capIntens=0.0362895109 cashFlow=0.1144503272
cashHoldings=0.1547139242 costcap=. leverages=0 bleverage=0 market_leverage=. roa=0.085029968 roe=. ni=.
cash_assets=0.1547139242 TobinsQ=. bvEqity=. _ERROR_=1 _N_=23
NOTE: Division by zero detected at line 2585 column 17.
GVKEY=004245 DATADATE=1996-03-31 FYEAR=1995 ADD1=Treasury Building, Lower Grand Canal Street ADD2= ADD3= ADD4=
ADDZIP=2
BUSDESC=As of December 18, 2013, Elan Corporation Limited was acquired by Perrigo Company Public Limited Company. Elan
 Corporation Limited is a biotechnology company in the United States, Ireland, and internationally. CIK=0000737572
CITY=Dublin CONML=Elan Corp PLC COUNTY= DLRSN=01 EIN= FAX=353 1 709 4700 FYRC=12 GGROUP=3520 GIND=352010 GSECTOR=35
GSUBIND=35201010 IDBFLAG=B INCORP= LOC=IRL NAICS=325412 PHONE=353 1 709 4000 PRICAN= PRIROW=02W PRIUSA=90 SIC=2834
SPCINDCD=285 SPCSECCD=905 SPCSRC= STATE= STKO=0 WEBURL=elan.com DLDTE=2013-12-19 IPODATE=. CONM=ELAN CORP PLC
ISIN=IE0003072950 SEDOL=4305507 EXCHG=172 FYR=3 FIC=IRL ACCTSTD=DS ACQMETH=AP BSPR=GO COMPST=AA CURCD=IEP FINAL=Y
ISMOD=1 PDDUR=12 SCF=. SRC=3 STALT= UPD=3 FDATE=. PDATE=. ACCLI=. ACCO=. ACO=1.9710 ACOFS=. ACOX=0.0000 ACOXFS=.
ACQDISN=. ACQDISO=. ACT=291.2230 ADPAC=. AM=3.2510 AMDC=. AO=2.8590 AOLOCH=. AOX=0.0000 AP=7.6940 APALCH=. APCH=.
APDPFS=. APFS=. APO=1.4000 APOFS=. AQC=. ARTFS=. ASDIS=. ASINV=. AT=437.9560 ATOCH=. AU=6 AUOP=1 AUTXR=0.0000 BCEF=.
BCT=. CA=. CAPCST=. CAPFL=. CAPR1=. CAPR2=. CAPR3=. CAPRT=. CAPS=225.9790 CAPX=. CAPXFI=. CEQ=314.3830 CFBD=. CFERE=.
CFLAOTH=. CFO=. CFPDO=. CGA=. CH=64.2630 CHE=145.0780 CHEB=. CHECH=. CHEE=. CHEFS=. CHENFD=. CHFS=. CHS=. CMP=.
COGS=41.8550 CRVNLI=. CSHR=0.0000 CSTK=1.5370 CUSTADV=. DBTB=. DBTE=. DC=2.8590 DCSFD=. DCUFD=. DD1=. DD1FS=. DFPAC=.
DFXA=6.5820 DISPOCH=. DLC=0.0000 DLCCH=. DLCFS=. DLTIS=. DLTR=. DLTT=103.1280 DO=0.0000 DOC=. DP=9.8330 DPACT=25.9270
DPC=. DPDC=. DPLTB=. DPSC=. DPSTB=. DPTB=. DPTC=. DPTIC=. DV=. DVC=. DVP=. DVPDP=. DVREC=. DVRRE=. DVSCO=. DVT=.
EA=0.0000 EBIT=48.8350 EBITDA=58.6680 EIEA=0.0000 EIEAC=. EMP=1.0170 EQDIVP=. ERO=0.0000 EXRE=. EXRES=. EXREU=. FATB=.
FATE=. FATL=. FATP=. FCA=0.0000 FDFR=. FEA=. FEL=. FFS=. FIAO=. FINCF=. FININC=. FINLE=. FINRE=. FINVAO=. FOPO=.
FSRCO=. FSRCOPO=. FSRCOPT=. FSRCT=. FUSEO=. FUSET=. GDWL=19.4350 IAEQ=. IAFXI=. IALOI=. IALTI=. IAMLI=. IAOI=. IAPLI=.
IAREI=. IASSI=. IASTI=. IATI=. IB=56.4440 IBC=. IBKI=. IBMII=. ICAPT=419.6750 IDIIS=. IDILB=. IDILC=. IDIS=. IDIST=.
IDIT=16.5640 IDITS=. IIRE=. INITB=. INTAN=46.5750 INTAND=. INTANP=. INTC=0.0000 INTFACT=. INTFL=. INTIACT=. INTOACT=.
INTPD=. INTPN=. INTRC=. INVCH=. INVDSP=. INVFG=2.4510 INVO=3.8350 INVRM=3.2650 INVSVC=. INVT=14.0330 INVTFS=.
INVWIP=4.4820 IOBD=. IOI=. IORE=. IP=. IPTI=. ISGR=. ISGT=. ISGU=. ISOTH=. IST=. IVACO=. IVAEQ=7.6260 IVAO=29.2360
IVCH=. IVGOD=. IVI=. IVNCF=. IVPT=. IVST=80.8150 IVSTCH=. IVSTFS=. LCABG=. LCACL=. LCACR=. LCAG=. LCAL=. LCALT=.
LCAM=. LCAO=. LCAST=. LCAT=. LCO=10.5870 LCOFS=. LCOX=0.0000 LCT=18.2810 LCTFS=. LCUACU=. LIQRESN=. LIQRESO=. LNDEP=.
LNINC=. LNMD=. LNREP=. LO=1.6000 LSE=437.9560 LT=123.0090 LTDCH=. LTDLCH=. LTLO=. MIB=0.5620 MIBN=. MIBT=0.5620 MIC=.
MII=0.2030 MISEQ=. MTL=. NCFLIQ=. NEQMI=. NIO=0.0000 NIT=. NOASUB=. NOPI=16.5640 NP=0.0000 NPANL=. NPAORE=. NPARL=.

NPAT=. NPFS=. OANCF=. OANCFC=. OANCFD=. OIADP=48.8350 OIBDP=58.6680 ONBALB=. ONBALE=. OPPRFT=. PACQP=0.0000 PCL=.
PI=56.9870 PLIACH=. PPEGT=86.3640 PPENT=60.4370 PRC=0.0000 PRODV=0.0000 PROSAI=. PRSTKC=. PRV=. PSFIX=. PSTK=0.0000
PSTKN=0.0000 PSTKR=0.0000 PTRAN=. PURTSHR=. PVON=. PVT=. RADP=. RAGR=. RARI=. RATI=. RAWMSM=. RCL=. RE=91.3150 RECCH=.
RECCO=99.0740 RECCOFS=. RECT=130.1410 RECTFS=. RECTR=31.0670 RECTRFS=. REVT=141.6860 RIS=. RLRI=. RLT=. RPAG=. RV=.
RVBCI=. RVBPI=. RVBTI=. RVEQT=. RVLRV=0.0000 RVRI=. RVSI=. RVTI=. RVUPI=. RVUTX=0.0000 SAA=. SAL=. SALE=141.6860
SBDC=. SC=. SCO=0.0020 SEQ=314.3850 SHRCAP=. SIV=. SPI=0.0000 SPPCH=. SPPIV=. SSNP=. SSTK=. STBO=. STFIXA=. STINV=.
STIO=. STKCH=. SUBDIS=. SUBPUR=. TDSG=. TDST=. TEQ=. TRANSA=-4.4480 TSCA=0.0000 TSTK=0.0000 TSTLTA=0.0000 TX=.
TXC=0.3400 TXDB=0.0000 TXDC=. TXDI=0.0000 TXDITC=0.0000 TXO=0.0000 TXOP=. TXP=0.9160 TXPD=. TXPFS=. TXT=0.3400
TXW=0.0000 UI=. UNL=0.0000 UNNP=0.0000 VPAC=. VPO=. WCAP=272.9420 WCAPCH=. WCAPCHC=. WCAPOPC=. WCAPS=. WCAPSA=.
WCAPSU=. WCAPT=. WCAPU=. XACC=8.2710 XACCFS=. XAGO=. XAGT=. XCOM=. XCOMI=. XDVRE=. XEQO=. XI=. XIDO=0.0000 XIDOC=.
XINDB=. XINDC=. XINS=. XINST=. XINT=5.8010 XINTD=. XIVI=. XIVRE=. XLR=2.8450 XNITB=. XOBD=. XOI=. XOPR=83.0180
XOPRO=20.3110 XORE=. XPP=1.9710 XPPFS=. XPR=. XRD=20.3110 XRENT=. XS=. XSGA=20.8520 XSTF=. XSTFO=2.8450 XSTFWS=. XT=.
AJEXI=4.00000000 CSHOI=38.41900 CSHPRIA=37.32900 EPSEXCON=1.51000 EPSEXNC=. EPSINCON=1.51000 EPSINNC=. ICAPI=1.53700
NAICSH=3254 NICON=56.44400 NINC=. PV=0.04000 SICH=2834 TSTKNI=. PS=0 PSTKRV=. PSTKL=. BE=314.385 year=1996 bvcEquity=.
CSHO=. PRCC_F=. capIntens=. cashFlow=. cashHoldings=0.3312615879 costcap=. leverages=0.3280309175
bleverage=0.2354757099 market_leverage=. roa=0.1288805268 roe=. ni=. cash_assets=0.3312615879 TobinsQ=. bvEqity=.
ERROR=1 _N_=255
NOTE: Division by zero detected at line 2585 column 17.
GVKEY=004245 DATADATE=1996-12-31 FYEAR=1996 ADD1=Treasury Building, Lower Grand Canal Street ADD2= ADD3= ADD4=
ADDZIP=2
BUSDESC=As of December 18, 2013, Elan Corporation Limited was acquired by Perrigo Company Public Limited Company. Elan
 Corporation Limited is a biotechnology company in the United States, Ireland, and internationally. CIK=0000737572
CITY=Dublin CONML=Elan Corp PLC COUNTY= DLRSN=01 EIN= FAX=353 1 709 4700 FYRC=12 GGROUP=3520 GIND=352010 GSECTOR=35
GSUBIND=35201010 IDBFLAG=B INCORP= LOC=IRL NAICS=325412 PHONE=353 1 709 4000 PRICAN= PRIROW=02W PRIUSA=90 SIC=2834
SPCINDCD=285 SPCSECCD=905 SPCSRC= STATE= STKO=0 WEBURL=elan.com DLDTE=2013-12-19 IPODATE=. CONM=ELAN CORP PLC
ISIN=IE0003072950 SEDOL=4305507 EXCHG=172 FYR=12 FIC=IRL ACCTSTD=DS ACQMETH= BSPR=GO COMPST=AA CURCD=USD FINAL=Y
ISMOD=1 PDDUR=9 SCF=12 SRC=3 STALT= UPD=3 FDATE=. PDATE=. ACCLI=. ACCO=. ACO=4.1600 ACOFS=. ACOX=0.0000 ACOXFS=.
ACQDISN=0.0000 ACQDISO=. ACT=311.2400 ADPAC=. AM=7.3360 AMDC=. AO=3.8350 AOLOCH=0.0000 AOX=0.0000 AP=23.1660 APALCH=.
APCH=-4.0160 APDPFS=. APFS=. APO=13.2150 APOFS=. AQC=. ARTFS=. ASDIS=0.0000 ASINV=0.0000 AT=718.7800 ATOCH=. AU=6
AUOP=4 AUTXR=0.0000 BCEF=. BCT=. CA=. CAPCST=. CAPFL=0.0000 CAPR1=. CAPR2=. CAPR3=. CAPRT=. CAPS=904.2400 CAPX=20.9260
CAPXFI=-120.7060 CEQ=464.0710 CFBD=. CFERE=. CFLAOTH=. CFO=. CFPDO=. CGA=. CH=71.4790 CHE=224.1500 CHEB=.
CHECH=-29.7290 CHEE=. CHEFS=. CHENFD=. CHFS=. CHS=. CMP=. COGS=82.2150 CRVNLI=. CSHR=0.0000 CSTK=6.0820 CUSTADV=.
DBTB=. DBTE=. DC=3.8350 DCSFD=. DCUFD=. DD1=. DD1FS=. DFPAC=. DFXA=10.1220 DISPOCH=0.0000 DLC=0.0000 DLCCH=. DLCFS=.
DLTIS=. DLTR=. DLTT=138.2650 DO=0.0000 DOC=0.0000 DP=17.4580 DPACT=36.7730 DPC=17.6650 DPDC=. DPLTB=. DPSC=. DPSTB=.
DPTB=. DPTC=. DPTIC=. DV=. DVC=. DVP=. DVPDP=. DVREC=0.0000 DVRRE=. DVSCO=. DVT=. EA=0.0000 EBIT=7.0430 EBITDA=24.5010
EIEA=0.0000 EIEAC=0.0000 EMP=1.3830 EQDIVP=0.0000 ERO=-581.2450 EXRE=0.0000 EXRES=. EXREU=. FATB=. FATE=. FATL=.
FATP=. FCA=0.0000 FDFR=. FEA=. FEL=. FFS=. FIAO=1.3770 FINCF=1.3290 FININC=0.0000 FINLE=0.0000 FINRE=3.8800
FINVAO=0.0000 FOPO=2.6740 FSRCO=. FSRCOPO=. FSRCOPT=. FSRCT=. FUSEO=. FUSET=. GDWL=29.3080 IAEQ=. IAFXI=. IALOI=.

IALTI=. IAMLI=. IAOI=. IAPLI=. IAREI=. IASSI=. IASTI=. IATI=. IB=-0.7880 IBC=. IBKI=. IBMII=. ICAPT=604.8000 IDIIS=.
IDILB=. IDILC=. IDIS=. IDIST=. IDIT=22.5210 IDITS=. IIRE=. INITB=. INTAN=189.4480 INTAND=0.0000 INTANP=131.7280
INTC=0.0000 INTFACT=. INTFL=0.0000 INTIACT=. INTOACT=. INTPD=1.1110 INTPN=. INTRC=22.3670 INVCH=1.0850 INVDSP=166.3700
INVFG=5.7690 INVO=6.5010 INVRM=5.6570 INVSVC=20.6710 INVT=25.2900 INVTFS=. INVWIP=7.3630 IOBD=. IOI=. IORE=. IP=.
IPTI=. ISGR=. ISGT=. ISGU=. ISOTH=. IST=. IVACO=0.0000 IVAEQ=42.6180 IVAO=71.4270 IVCH=282.9650 IVGOD=. IVI=. IVNCF=.
IVPT=. IVST=152.6710 IVSTCH=. IVSTFS=. LCABG=. LCACL=. LCACR=. LCAG=. LCAL=. LCALT=. LCAM=. LCAO=. LCAST=. LCAT=.
LCO=41.0550 LCOFS=. LCOX=7.7470 LCT=64.2210 LCTFS=. LCUACU=. LIQRESN=. LIQRESO=. LNDEP=. LNINC=0.0000 LNMD=144.3700
LNREP=3.8800 LO=52.2590 LSE=718.7800 LT=254.7450 LTDCH=. LTDLCH=. LTLO=. MIB=-0.0400 MIBN=. MIBT=-0.0400 MIC=.
MII=-0.3380 MISEQ=. MTL=. NCFLIQ=-31.0580 NEQMI=0.5850 NIO=0.0000 NIT=. NOASUB=. NOPI=4.4950 NP=0.0000 NPANL=.
NPAORE=. NPARL=. NPAT=. NPFS=. OANCF=69.4430 OANCFC=. OANCFD=. OIADP=7.0430 OIBDP=24.5010 ONBALB=. ONBALE=.
OPPRFT=7.0430 PACQP=0.0000 PCL=. PI=-0.3520 PLIACH=. PPEGT=136.9850 PPENT=100.2120 PRC=0.0000 PRODV=0.0000 PROSAI=.
PRSTKC=0.0000 PRV=37.7190 PSFIX=. PSTK=0.0000 PSTKN=0.0000 PSTKR=0.0000 PTRAN=. PURTSHR=. PVON=. PVT=. RADP=. RAGR=.
RARI=. RATI=. RAWMSM=. RCL=. RE=144.3630 RECCH=7.2930 RECCO=10.5600 RECCOFS=. RECT=57.6400 RECTFS=. RECTR=47.0800
RECTRFS=. REVT=235.5590 RIS=. RLRI=. RLT=. RPAG=. RV=. RVBCI=. RVBPI=. RVBTI=. RVEQT=. RVLRV=0.0000 RVRI=. RVSI=.
RVTI=. RVUPI=. RVUTX=0.0000 SAA=. SAL=. SALE=235.5590 SBDC=. SC=. SCO=0.0040 SEQ=464.0750 SHRCAP=0.0000 SIV=.
SPI=0.0000 SPPCH=-0.0200 SPPIV=. SSNP=. SSTK=3.8320 STBO=. STFIXA=4.1730 STINV=. STIO=. STKCH=. SUBDIS=0.0000
SUBPUR=0.0000 TDSG=. TDST=. TEQ=. TRANSA=-9.3690 TSCA=0.0000 TSTK=0.0000 TSTLTA=0.0000 TX=0.4660 TXC=0.7740
TXDB=0.0000 TXDC=. TXDI=0.0000 TXDITC=0.0000 TXO=0.0000 TXOP=. TXP=1.7510 TXPD=. TXPFS=. TXT=0.7740 TXW=0.0000 UI=.
UNL=0.0000 UNNP=0.0000 VPAC=. VPO=. WCAP=247.0190 WCAPCH=. WCAPCHC=4.3620 WCAPOPC=. WCAPS=. WCAPSA=. WCAPSU=. WCAPT=.
WCAPU=. XACC=18.3420 XACCFS=. XAGO=. XAGT=. XCOM=. XCOMI=. XDVRE=. XEQO=. XI=. XIDO=0.0000 XIDOC=0.0000 XINDB=.
XINDC=. XINS=. XINST=. XINT=6.7430 XINTD=. XIVI=. XIVRE=. XLR=44.1390 XNITB=. XOBD=. XOI=. XOPR=211.0580 XOPRO=77.8520
XORE=. XPP=4.1600 XPPFS=. XPR=. XRD=77.6450 XRENT=. XS=. XSGA=50.9910 XSTF=. XSTFO=4.7410 XSTFWS=39.3980 XT=.
AJEXI=2.00000000 CSHOI=95.75400 CSHPRIA=89.16500 EPSEXCON=-0.01000 EPSEXNC=. EPSINCON=-0.01000 EPSINNC=. ICAPI=6.08200
NAICSH=325412 NICON=. NINC=. PV=0.06000 SICH=2834 TSTKNI=0.00000 PS=0 PSTKRV=. PSTKL=. BE=464.075 year=1996
bvcEquity=. CSHO=. PRCC_F=. capIntens=0.0291132196 cashFlow=. cashHoldings=0.3118478533 costcap=.
leverages=0.2979367559 bleverage=0.1923606667 market_leverage=. roa=-0.001096302 roe=. ni=. cash_assets=0.3118478533
TobinsQ=. bvEqity=. _ERROR_=1 _N_=256
NOTE: Division by zero detected at line 2585 column 17.
GVKEY=004245 DATADATE=1997-12-31 FYEAR=1997 ADD1=Treasury Building, Lower Grand Canal Street ADD2= ADD3= ADD4=
ADDZIP=2
BUSDESC=As of December 18, 2013, Elan Corporation Limited was acquired by Perrigo Company Public Limited Company. Elan
 Corporation Limited is a biotechnology company in the United States, Ireland, and internationally. CIK=0000737572
CITY=Dublin CONML=Elan Corp PLC COUNTY= DLRSN=01 EIN= FAX=353 1 709 4700 FYRC=12 GGROUP=3520 GIND=352010 GSECTOR=35
GSUBIND=35201010 IDBFLAG=B INCORP= LOC=IRL NAICS=325412 PHONE=353 1 709 4000 PRICAN= PRIROW=02W PRIUSA=90 SIC=2834
SPCINDCD=285 SPCSECCD=905 SPCSRC= STATE= STKO=0 WEBURL=elan.com DLDTE=2013-12-19 IPODATE=. CONM=ELAN CORP PLC
ISIN=IE0003072950 SEDOL=4305507 EXCHG=172 FYR=12 FIC=IRL ACCTSTD=DS ACQMETH= BSPR=GO COMPST= CURCD=USD FINAL=Y
ISMOD=1 PDDUR=12 SCF=12 SRC=3 STALT= UPD=3 FDATE=. PDATE=. ACCLI=. ACCO=. ACO=8.8310 ACOFS=. ACOX=0.0000 ACOXFS=.
ACQDISN=0.0000 ACQDISO=0.0000 ACT=616.8960 ADPAC=. AM=12.4570 AMDC=. AO=0.0000 AOLOCH=0.0000 AOX=0.0000 AP=30.0430

APALCH=. APCH=-7.1620 APDPFS=. APFS=. APO=6.3650 APOFS=. AQC=. ARTFS=. ASDIS=0.0000 ASINV=0.0000 AT=1152.8410 ATOCH=.
AU=6 AUOP=1 AUTXR=0.0000 BCEF=. BCT=. CA=. CAPCST=. CAPFL=0.0000 CAPR1=. CAPR2=. CAPR3=. CAPRT=. CAPS=1051.3570
CAPX=37.6850 CAPXFI=-177.0220 CEQ=770.4400 CFBD=. CFERE=. CFLAOTH=. CFO=. CFPDO=. CGA=. CH=316.7390 CHE=480.7110
CHEB=. CHECH=27.9820 CHEE=. CHEFS=. CHENFD=. CHFS=. CHS=. CMP=. COGS=83.1980 CRVNLI=. CSHR=. CSTK=6.5850 CUSTADV=.
DBTB=. DBTE=. DC=0.0000 DCSFD=. DCUFD=. DD1=. DD1FS=. DFPAC=. DFXA=10.5270 DISPOCH=-10.0660 DLC=0.0000 DLCCH=. DLCFS=.
DLTIS=. DLTR=. DLTT=319.1110 DO=0.0000 DOC=0.0000 DP=22.9840 DPACT=44.4920 DPC=22.9840 DPDC=. DPLTB=. DPSC=. DPSTB=.
DPTB=. DPTC=. DPTIC=. DV=. DVC=. DVP=. DVPDP=. DVREC=0.0000 DVRRE=. DVSCO=. DVT=. EA=0.0000 EBIT=140.5650
EBITDA=163.5490 EIEA=0.0000 EIEAC=0.0000 EMP=1.6000 EQDIVP=0.0000 ERO=-582.2880 EXRE=0.0000 EXRES=. EXREU=. FATB=.
FATE=. FATL=. FATP=. FCA=14.3130 FDFR=. FEA=. FEL=. FFS=. FIAO=0.0000 FINCF=325.7540 FININC=316.8750 FINLE=0.0000
FINRE=5.0260 FINVAO=0.0000 FOPO=-0.2910 FSRCO=. FSRCOPO=. FSRCOPT=. FSRCT=. FUSEO=. FUSET=. GDWL=13.0180 IAEQ=.
IAFXI=. IALOI=. IALTI=. IAMLI=. IAOI=. IAPLI=. IAREI=. IASSI=. IASTI=. IATI=. IB=179.6290 IBC=. IBKI=. IBMII=.
ICAPT=1089.5550 IDIIS=. IDILB=. IDILC=. IDIS=. IDIST=. IDIT=19.5000 IDITS=. IIRE=. INITB=. INTAN=174.5230
INTAND=2.4870 INTANP=23.9700 INTC=0.0000 INTFACT=. INTFL=0.0000 INTIACT=. INTOACT=. INTPD=0.6420 INTPN=. INTRC=39.8700
INVCH=-22.6490 INVDSP=282.5220 INVFG=10.3490 INVO=13.5620 INVRM=8.3600 INVSVC=39.2280 INVT=40.8890 INVTFS=.
INVWIP=8.6180 IOBD=. IOI=. IORE=. IP=. IPTI=. ISGR=. ISGT=. ISGU=. ISOTH=. IST=. IVACO=0.0000 IVAEQ=36.2730
IVAO=206.7770 IVCH=404.9900 IVGOD=. IVI=. IVNCF=. IVPT=. IVST=163.9720 IVSTCH=. IVSTFS=. LCABG=. LCACL=. LCACR=.
LCAG=. LCAL=. LCALT=. LCAM=. LCAO=. LCAST=. LCAT=. LCO=33.2430 LCOFS=. LCOX=0.3400 LCT=63.2860 LCTFS=. LCUACU=.
LIQRESN=-218.5440 LIQRESO=. LNDEP=. LNINC=316.8750 LNMD=0.0000 LNREP=5.0260 LO=0.0000 LSE=1152.8410 LT=382.3970
LTDCH=. LTDLCH=. LTLO=. MIB=0.0000 MIBN=. MIBT=0.0000 MIC=. MII=-0.2600 MISEQ=. MTL=. NCFLIQ=-79.2280 NEQMI=0.0000
NIO=0.0000 NIT=. NOASUB=0.0000 NOPI=53.2910 NP=0.0000 NPANL=. NPAORE=. NPARL=. NPAT=. NPFS=. OANCF=60.2150 OANCFC=.
OANCFD=. OIADP=140.5650 OIBDP=163.5490 ONBALB=. ONBALE=. OPPRFT=140.5650 PACQP=0.0000 PCL=. PI=180.5550 PLIACH=.
PPEGT=162.8640 PPENT=118.3720 PRC=0.0000 PRODV=0.0000 PROSAI=. PRSTKC=0.0000 PRV=-32.2970 PSFIX=. PSTK=0.0000
PSTKN=0.0000 PSTKR=0.0000 PTRAN=. PURTSHR=. PVON=. PVT=. RADP=. RAGR=. RARI=. RATI=. RAWMSM=. RCL=. RE=323.9920
RECCH=-30.8690 RECCO=14.8060 RECCOFS=. RECT=86.4650 RECTFS=. RECTR=71.6590 RECTRFS=. REVT=389.1560 RIS=. RLRI=. RLT=.
RPAG=. RV=. RVBCI=. RVBPI=. RVBTI=. RVEQT=. RVLRV=0.0000 RVRI=. RVSI=. RVTI=. RVUPI=. RVUTX=0.0000 SAA=. SAL=.
SALE=389.1560 SBDC=. SC=. SCO=0.0040 SEQ=770.4440 SHRCAP=0.0000 SIV=. SPI=0.0000 SPPCH=0.0000 SPPIV=. SSNP=.
SSTK=13.9050 STBO=. STFIXA=4.6140 STINV=. STIO=. STKCH=. SUBDIS=0.0000 SUBPUR=0.0000 TDSG=. TDST=. TEQ=.
TRANSA=-29.2060 TSCA=0.0000 TSTK=0.0000 TSTLTA=0.0000 TX=1.6490 TXC=1.1860 TXDB=0.0000 TXDC=. TXDI=0.0000
TXDITC=0.0000 TXO=0.0000 TXOP=. TXP=1.2880 TXPD=. TXPFS=. TXT=1.1860 TXW=0.0000 UI=. UNL=0.0000 UNNP=0.0000 VPAC=.
VPO=. WCAP=553.6100 WCAPCH=. WCAPCHC=-60.6800 WCAPOPC=. WCAPS=. WCAPSA=. WCAPSU=. WCAPT=. WCAPU=. XACC=25.2500
XACCFS=. XAGO=. XAGT=. XCOM=. XCOMI=. XDVRE=. XEQO=. XI=. XIDO=0.0000 XIDOC=0.0000 XINDB=. XINDC=. XINS=. XINST=.
XINT=5.8430 XINTD=. XIVI=. XIVRE=. XLR=79.5220 XNITB=. XOBD=. XOI=. XOPR=225.6070 XOPRO=69.8450 XORE=. XPP=8.8310
XPPFS=. XPR=. XRD=69.8450 XRENT=. XS=. XSGA=72.5640 XSTF=. XSTFO=7.7090 XSTFWS=71.8130 XT=. AJEXI=2.00000000
CSHOI=104.14100 CSHPRIA=99.35200 EPSEXCON=1.81000 EPSEXNC=. EPSINCON=1.81000 EPSINNC=. ICAPI=6.58500 NAICSH=3254
NICON=179.62900 NINC=. PV=0.06000 SICH=2834 TSTKNI=0.00000 PS=0 PSTKRV=. PSTKL=. BE=770.444 year=1997 bvcEquity=.
CSHO=. PRCC_F=. capIntens=0.0326888096 cashFlow=. cashHoldings=0.4169794447 costcap=. leverages=0.4141910379
bleverage=0.2768039999 market_leverage=. roa=0.1558142016 roe=. ni=. cash_assets=0.4169794447 TobinsQ=. bvEqity=.
ERROR=1 _N_=257

NOTE: Division by zero detected at line 2585 column 17.
GVKEY=004245 DATADATE=2007-12-31 FYEAR=2007 ADD1=Treasury Building, Lower Grand Canal Street ADD2= ADD3= ADD4=
ADDZIP=2
BUSDESC=As of December 18, 2013, Elan Corporation Limited was acquired by Perrigo Company Public Limited Company. Elan
 Corporation Limited is a biotechnology company in the United States, Ireland, and internationally. CIK=0000737572
CITY=Dublin CONML=Elan Corp PLC COUNTY= DLRSN=01 EIN= FAX=353 1 709 4700 FYRC=12 GGROUP=3520 GIND=352010 GSECTOR=35
GSUBIND=35201010 IDBFLAG=B INCORP= LOC=IRL NAICS=325412 PHONE=353 1 709 4000 PRICAN= PRIROW=02W PRIUSA=90 SIC=2834
SPCINDCD=285 SPCSECCD=905 SPCSRC= STATE= STKO=0 WEBURL=elan.com DLDTE=2013-12-19 IPODATE=. CONM=ELAN CORP PLC
ISIN=IE0003072950 SEDOL=4305507 EXCHG=172 FYR=12 FIC=IRL ACCTSTD=US ACQMETH= BSPR=GO COMPST= CURCD=USD FINAL=Y
ISMOD=1 PDDUR=12 SCF=10 SRC=5 STALT= UPD=3 FDATE=2008-03-05 PDATE=2008-02-18 ACCLI=. ACCO=. ACO=21.8000 ACOFS=.
ACOX=12.4000 ACOXFS=. ACQDISN=. ACQDISO=. ACT=916.4000 ADPAC=. AM=80.9000 AMDC=. AO=46.5000 AOLOCH=60.3000 AOX=19.9000
AP=27.3000 APALCH=. APCH=-7.3000 APDPFS=. APFS=. APO=0.0000 APOFS=. AQC=. ARTFS=. ASDIS=. ASINV=. AT=1781.4000 ATOCH=.
AU=6 AUOP=4 AUTXR=0.0000 BCEF=. BCT=. CA=. CAPCST=. CAPFL=. CAPR1=. CAPR2=. CAPR3=. CAPRT=. CAPS=5421.1000
CAPX=26.1000 CAPXFI=. CEQ=-234.7000 CFBD=. CFERE=. CFLAOTH=. CFO=. CFPDO=. CGA=. CH=423.5000 CHE=720.5000
CHEB=1510.6000 CHECH=-1087.1000 CHEE=423.5000 CHEFS=. CHENFD=. CHFS=. CHS=. CMP=. COGS=219.6000 CRVNLI=. CSHR=3.9630
CSTK=27.4000 CUSTADV=. DBTB=. DBTE=. DC=26.6000 DCSFD=. DCUFD=. DD1=. DD1FS=. DFPAC=. DFXA=37.4000 DISPOCH=.
DLC=0.0000 DLCCH=. DLCFS=. DLTIS=. DLTR=. DLTT=1765.0000 DO=0.0000 DOC=. DP=118.3000 DPACT=254.1000 DPC=123.1000
DPDC=. DPLTB=. DPSC=. DPSTB=. DPTB=. DPTC=. DPTIC=. DV=. DVC=. DVP=. DVPDP=. DVREC=. DVRRE=. DVSCO=. DVT=. EA=0.0000
EBIT=-182.4000 EBITDA=-64.1000 EIEA=0.0000 EIEAC=. EMP=1.6100 EQDIVP=. ERO=-11.7000 EXRE=-1.8000 EXRES=. EXREU=.
FATB=. FATE=. FATL=. FATP=. FCA=-0.3000 FDFR=. FEA=. FEL=. FFS=. FIAO=1.8000 FINCF=-599.7000 FININC=. FINLE=. FINRE=.
FINVAO=. FOPO=99.4000 FSRCO=. FSRCOPO=. FSRCOPT=. FSRCT=. FUSEO=. FUSET=. GDWL=268.0000 IAEQ=. IAFXI=. IALOI=. IALTI=.
IAMLI=. IAOI=. IAPLI=. IAREI=. IASSI=. IASTI=. IATI=. IB=-405.0000 IBC=-405.0000 IBKI=. IBMII=. ICAPT=1530.3000
IDIIS=. IDILB=. IDILC=. IDIS=. IDIST=. IDIT=42.3000 IDITS=. IIRE=. INITB=. INTAN=457.6000 INTAND=. INTANP=2.5000
INTC=0.0000 INTFACT=. INTFL=. INTIACT=. INTOACT=. INTPD=. INTPN=169.2000 INTRC=. INVCH=-7.4000 INVDSP=. INVFG=22.0000
INVO=0.0000 INVRM=8.9000 INVSVC=. INVT=36.7000 INVTFS=. INVWIP=5.8000 IOBD=. IOI=. IORE=. IP=. IPTI=. ISGR=. ISGT=.
ISGU=. ISOTH=. IST=. IVACO=-312.7000 IVAEQ=0.0000 IVAO=32.0000 IVCH=4.9000 IVGOD=. IVI=. IVNCF=-318.1000 IVPT=.
IVST=297.0000 IVSTCH=27.9000 IVSTFS=. LCABG=. LCACL=. LCACR=. LCAG=. LCAL=. LCALT=. LCAM=. LCAO=. LCAST=. LCAT=.
LCO=183.5000 LCOFS=. LCOX=2.3000 LCT=210.8000 LCTFS=. LCUACU=. LIQRESN=. LIQRESO=. LNDEP=. LNINC=. LNMD=. LNREP=.
LO=40.3000 LSE=1781.4000 LT=2016.1000 LTDCH=-629.7000 LTDLCH=. LTLO=. MIB=0.0000 MIBN=. MIBT=0.0000 MIC=. MII=0.0000
MISEQ=. MTL=. NCFLIQ=. NEQMI=. NIO=0.0000 NIT=. NOASUB=. NOPI=-59.2000 NP=0.0000 NPANL=. NPAORE=. NPARL=. NPAT=.
NPFS=. OANCF=-167.5000 OANCFC=. OANCFD=. OIADP=-182.4000 OIBDP=-64.1000 ONBALB=. ONBALE=. OPPRFT=. PACQP=0.0000 PCL=.
PI=-398.1000 PLIACH=. PPEGT=583.0000 PPENT=328.9000 PRC=0.0000 PRODV=0.0000 PROSAI=. PRSTKC=. PRV=. PSFIX=0.2000
PSTK=0.0000 PSTKN=0.0000 PSTKR=0.0000 PTRAN=. PURTSHR=. PVON=. PVT=. RADP=. RAGR=. RARI=. RATI=. RAWMSM=. RCL=.
RE=-5671.5000 RECCH=-30.1000 RECCO=0.0000 RECCOFS=. RECT=137.4000 RECTFS=. RECTR=137.4000 RECTRFS=. REVT=759.4000
RIS=. RLRI=. RLT=. RPAG=. RV=. RVBCI=. RVBPI=. RVBTI=. RVEQT=. RVLRV=0.0000 RVRI=. RVSI=. RVTI=. RVUPI=. RVUTX=0.0000
SAA=. SAL=. SALE=759.4000 SBDC=. SC=. SCO=0.0000 SEQ=-234.7000 SHRCAP=. SIV=. SPI=-101.7000 SPPCH=. SPPIV=-0.5000
SSNP=. SSTK=28.2000 STBO=. STFIXA=. STINV=. STIO=. STKCH=. SUBDIS=. SUBPUR=. TDSG=. TDST=. TEQ=. TRANSA=0.0000
TSCA=0.0000 TSTK=0.0000 TSTLTA=0.0000 TX=. TXC=-8.2000 TXDB=0.0000 TXDC=. TXDI=-1.3000 TXDITC=0.0000 TXO=16.4000

TXOP=. TXP=6.8000 TXPD=5.2000 TXPFS=. TXT=6.9000 TXW=0.0000 UI=. UNL=0.0000 UNNP=0.0000 VPAC=. VPO=. WCAP=705.6000
WCAPCH=. WCAPCHC=. WCAPOPC=15.5000 WCAPS=. WCAPSA=. WCAPSU=. WCAPT=. WCAPU=. XACC=174.4000 XACCFS=. XAGO=. XAGT=.
XCOM=. XCOMI=. XDVRE=. XEQO=. XI=. XIDO=0.0000 XIDOC=. XINDB=. XINDC=. XINS=. XINST=. XINT=156.5000 XINTD=. XIVI=.
XIVRE=. XLR=46.8000 XNITB=. XOBD=. XOI=. XOPR=823.5000 XOPRO=260.4000 XORE=. XPP=9.4000 XPPFS=. XPR=. XRD=260.4000
XRENT=22.7000 XS=. XSGA=343.5000 XSTF=. XSTFO=. XSTFWS=46.8000 XT=. AJEXI=1.00000000 CSHOI=470.19500 CSHPRIA=468.30000
EPSEXCON=-0.86483 EPSEXNC=. EPSINCON=-0.86000 EPSINNC=. ICAPI=. NAICSH=325412 NICON=-405.00000 NINC=. PV=. SICH=2834
TSTKNI=. PS=O PSTKRV=. PSTKL=. BE=. year=2007 bvcEquity=. CSHO=. PRCC_F=. capIntens=0.0146513978 cashFlow=-0.160940833
cashHoldings=0.4044571685 costcap=. leverages=-7.520238602 bleverage=0.9907937577 market_leverage=. roa=-0.227349276
roe=. ni=. cash_assets=0.4044571685 TobinsQ=. bvEqity=. _ERROR_=1 _N_=267
NOTE: Division by zero detected at line 2585 column 17.
GVKEY=004245 DATADATE=2008-12-31 FYEAR=2008 ADD1=Treasury Building, Lower Grand Canal Street ADD2= ADD3= ADD4=
ADDZIP=2
BUSDESC=As of December 18, 2013, Elan Corporation Limited was acquired by Perrigo Company Public Limited Company. Elan
 Corporation Limited is a biotechnology company in the United States, Ireland, and internationally. CIK=0000737572
CITY=Dublin CONML=Elan Corp PLC COUNTY= DLRSN=01 EIN= FAX=353 1 709 4700 FYRC=12 GGROUP=3520 GIND=352010 GSECTOR=35
GSUBIND=35201010 IDBFLAG=B INCORP= LOC=IRL NAICS=325412 PHONE=353 1 709 4000 PRICAN= PRIROW=02W PRIUSA=90 SIC=2834
SPCINDCD=285 SPCSECCD=905 SPCSRC= STATE= STKO=0 WEBURL=elan.com DLDTE=2013-12-19 IPODATE=. CONM=ELAN CORP PLC
ISIN=IE0003072950 SEDOL=4305507 EXCHG=172 FYR=12 FIC=IRL ACCTSTD=US ACQMETH= BSPR=GO COMPST= CURCD=USD FINAL=Y
ISMOD=1 PDDUR=12 SCF=10 SRC=5 STALT= UPD=3 FDATE=2009-03-04 PDATE=2009-02-13 ACCLI=. ACCO=. ACO=110.2000 ACOFS=.
ACOX=96.8000 ACOXFS=. ACQDISN=. ACQDISO=. ACT=762.0000 ADPAC=. AM=35.4000 AMDC=. AO=176.8000 AOLOCH=-2.7000
AOX=154.8000 AP=37.7000 APALCH=. APCH=22.7000 APDPFS=. APFS=. APO=0.0000 APOFS=. AQC=. ARTFS=. ASDIS=. ASINV=.
AT=1867.6000 ATOCH=. AU=6 AUOP=4 AUTXR=0.0000 BCEF=. BCT=. CA=. CAPCST=. CAPFL=. CAPR1=. CAPR2=. CAPR3=. CAPRT=.
CAPS=5521.5000 CAPX=58.8000 CAPXFI=. CEQ=-232.2000 CFBD=. CFERE=. CFLAOTH=. CFO=. CFPDO=. CGA=. CH=375.3000
CHE=425.9000 CHEB=423.5000 CHECH=-48.2000 CHEE=375.3000 CHEFS=. CHENFD=. CHFS=. CHS=. CMP=. COGS=423.3000 CRVNLI=.
CSHR=8.5360 CSTK=27.6000 CUSTADV=. DBTB=. DBTE=. DC=22.0000 DCSFD=. DCUFD=. DD1=. DD1FS=. DFPAC=. DFXA=34.7000
DISPOCH=. DLC=0.0000 DLCCH=. DLCFS=. DLTIS=. DLTR=. DLTT=1765.0000 DO=0.0000 DOC=. DP=70.1000 DPACT=285.4000
DPC=75.2000 DPDC=. DPLTB=. DPSC=. DPSTB=. DPTB=. DPTC=. DPTIC=. DV=. DVC=. DVP=. DVPDP=. DVREC=. DVRRE=. DVSCO=. DVT=.
EA=0.0000 EBIT=-118.0000 EBITDA=-47.9000 EIEA=. EIEAC=. EMP=1.6870 EQDIVP=. ERO=-38.8000 EXRE=0.1000 EXRES=. EXREU=.
FATB=. FATE=. FATL=. FATP=. FCA=2.4000 FDFR=. FEA=. FEL=. FFS=. FIAO=2.4000 FINCF=51.5000 FININC=. FINLE=. FINRE=.
FINVAO=. FOPO=48.7000 FSRCO=. FSRCOPO=. FSRCOPT=. FSRCT=. FUSEO=. FUSET=. GDWL=268.0000 IAEQ=. IAFXI=. IALOI=. IALTI=.
IAMLI=. IAOI=. IAPLI=. IAREI=. IASSI=. IASTI=. IATI=. IB=-71.0000 IBC=-71.0000 IBKI=. IBMII=. ICAPT=1532.8000 IDIIS=.
IDILB=. IDILC=. IDIS=. IDIST=. IDIT=11.2000 IDITS=. IIRE=. INITB=. INTAN=553.9000 INTAND=. INTANP=79.1000 INTC=.
INTFACT=. INTFL=. INTIACT=. INTOACT=. INTPD=. INTPN=141.0000 INTRC=. INVCH=6.9000 INVDSP=. INVFG=12.5000 INVO=0.0000
INVRM=9.6000 INVSVC=. INVT=29.8000 INVTFS=. INVWIP=7.7000 IOBD=. IOI=. IORE=. IP=. IPTI=. ISGR=. ISGT=. ISGU=. ISOTH=.
IST=. IVACO=-5.6000 IVAEQ=0.0000 IVAO=23.1000 IVCH=. IVGOD=. IVI=. IVNCF=94.5000 IVPT=. IVST=50.6000 IVSTCH=232.6000
IVSTFS=. LCABG=. LCACL=. LCACR=. LCAG=. LCAL=. LCALT=. LCAM=. LCAO=. LCAST=. LCAT=. LCO=242.6000 LCOFS=. LCOX=61.4000
LCT=280.3000 LCTFS=. LCUACU=. LIQRESN=. LIQRESO=. LNDEP=. LNINC=. LNMD=. LNREP=. LO=54.5000 LSE=1867.6000 LT=2099.8000
LTDCH=-0.9000 LTDLCH=. LTLO=. MIB=0.0000 MIBN=. MIBT=0.0000 MIC=. MII=0.0000 MISEQ=. MTL=. NCFLIQ=. NEQMI=. NIO=.

NIT=. NOASUB=. NOPI=-34.4000 NP=0.0000 NPANL=. NPAORE=. NPARL=. NPAT=. NPFS=. OANCF=-194.3000 OANCFC=. OANCFD=.
OIADP=-118.0000 OIBDP=-47.9000 ONBALB=. ONBALE=. OPPRFT=. PACQP=. PCL=. PI=-297.3000 PLIACH=. PPEGT=637.2000
PPENT=351.8000 PRC=0.0000 PRODV=. PROSAI=. PRSTKC=. PRV=. PSFIX=. PSTK=0.0000 PSTKN=0.0000 PSTKR=0.0000 PTRAN=.
PURTSHR=. PVON=. PVT=. RADP=. RAGR=. RARI=. RATI=. RAWMSM=. RCL=. RE=-5742.5000 RECCH=-58.7000 RECCO=0.0000 RECCOFS=.
RECT=196.1000 RECTFS=. RECTR=196.1000 RECTRFS=. REVT=1000.2000 RIS=. RLRI=. RLT=. RPAG=. RV=. RVBCI=. RVBPI=. RVBTI=.
RVEQT=. RVLRV=0.0000 RVRI=. RVSI=. RVTI=. RVUPI=. RVUTX=0.0000 SAA=. SAL=. SALE=1000.2000 SBDC=. SC=. SCO=0.0000
SEQ=-232.2000 SHRCAP=. SIV=5.4000 SPI=-25.5000 SPPCH=. SPPIV=21.2000 SSNP=. SSTK=50.0000 STBO=. STFIXA=. STINV=.
STIO=. STKCH=. SUBDIS=. SUBPUR=. TDSG=. TDST=. TEQ=. TRANSA=0.0000 TSCA=0.0000 TSTK=0.0000 TSTLTA=0.0000 TX=.
TXC=-10.3000 TXDB=0.0000 TXDC=-236.6000 TXDI=-236.6000 TXDITC=0.0000 TXO=20.6000 TXOP=. TXP=0.0000 TXPD=7.4000 TXPFS=.
TXT=-226.3000 TXW=0.0000 UI=. UNL=0.0000 UNNP=0.0000 VPAC=. VPO=. WCAP=481.7000 WCAPCH=. WCAPCHC=. WCAPOPC=-31.8000
WCAPS=. WCAPSA=. WCAPSU=. WCAPT=. WCAPU=. XACC=181.2000 XACCFS=. XAGO=. XAGT=. XCOM=. XCOMI=. XDVRE=. XEQO=. XI=.
XIDO=0.0000 XIDOC=. XINDB=. XINDC=. XINS=. XINST=. XINT=144.9000 XINTD=. XIVI=. XIVRE=. XLR=48.4000 XNITB=. XOBD=.
XOI=. XOPR=1048.1000 XOPRO=330.9000 XORE=. XPP=13.4000 XPPFS=. XPR=. XRD=323.4000 XRENT=19.4000 XS=. XSGA=293.9000
XSTF=. XSTFO=. XSTFWS=48.4000 XT=. AJEXI=1.00000000 CSHOI=474.72800 CSHPRIA=473.50000 EPSEXCON=-0.14995 EPSEXNC=.
EPSINCON=-0.14995 EPSINNC=. ICAPI=. NAICSH=325412 NICON=-71.00000 NINC=. PV=. SICH=2834 TSTKNI=. PS=0 PSTKRV=. PSTKL=.
BE=. year=2008 bvcEquity=. CSHO=. PRCC_F=. capIntens=0.0314842579 cashFlow=-0.000481902 cashHoldings=0.2280466909
costcap=. leverages=-7.601205857 bleverage=0.9450631827 market_leverage=. roa=-0.038016706 roe=. ni=.
cash_assets=0.2280466909 TobinsQ=. bvEqity=. _ERROR_=1 _N_=268
NOTE: Division by zero detected at line 2585 column 17.
GVKEY=004245 DATADATE=2009-12-31 FYEAR=2009 ADD1=Treasury Building, Lower Grand Canal Street ADD2= ADD3= ADD4=
ADDZIP=2
BUSDESC=As of December 18, 2013, Elan Corporation Limited was acquired by Perrigo Company Public Limited Company. Elan
 Corporation Limited is a biotechnology company in the United States, Ireland, and internationally. CIK=0000737572
CITY=Dublin CONML=Elan Corp PLC COUNTY= DLRSN=01 EIN= FAX=353 1 709 4700 FYRC=12 GGROUP=3520 GIND=352010 GSECTOR=35
GSUBIND=35201010 IDBFLAG=B INCORP= LOC=IRL NAICS=325412 PHONE=353 1 709 4000 PRICAN= PRIROW=02W PRIUSA=90 SIC=2834
SPCINDCD=285 SPCSECCD=905 SPCSRC= STATE= STKO=0 WEBURL=elan.com DLDTE=2013-12-19 IPODATE=. CONM=ELAN CORP PLC
ISIN=IE0003072950 SEDOL=4305507 EXCHG=172 FYR=12 FIC=IRL ACCTSTD=US ACQMETH= BSPR=GO COMPST= CURCD=USD FINAL=Y
ISMOD=1 PDDUR=12 SCF=10 SRC=5 STALT= UPD=3 FDATE=2010-03-11 PDATE=2010-02-15 ACCLI=. ACCO=. ACO=39.9000 ACOFS=.
ACOX=28.6000 ACOXFS=. ACQDISN=. ACQDISO=. ACT=1159.2000 ADPAC=. AM=40.5000 AMDC=. AO=217.7000 AOLOCH=-12.5000
AOX=186.3000 AP=52.4000 APALCH=. APCH=29.9000 APDPFS=. APFS=. APO=0.0000 APOFS=. AQC=. ARTFS=. ASDIS=. ASINV=.
AT=2345.7000 ATOCH=. AU=6 AUOP=4 AUTXR=0.0000 BCEF=. BCT=. CA=. CAPCST=. CAPFL=. CAPR1=. CAPR2=. CAPR3=. CAPRT=.
CAPS=6413.2000 CAPX=43.5000 CAPXFI=. CEQ=494.2000 CFBD=. CFERE=. CFLAOTH=. CFO=. CFPDO=. CGA=. CH=836.5000
CHE=860.0000 CHEB=375.3000 CHECH=461.2000 CHEE=836.5000 CHEFS=. CHENFD=. CHFS=. CHS=. CMP=. COGS=485.7000 CRVNLI=.
CSHR=8.6600 CSTK=35.8000 CUSTADV=. DBTB=. DBTE=. DC=31.4000 DCSFD=. DCUFD=. DD1=. DD1FS=. DFPAC=. DFXA=34.5000
DISPOCH=. DLC=0.0000 DLCCH=. DLCFS=. DLTIS=. DLTR=. DLTT=1540.0000 DO=0.0000 DOC=. DP=75.0000 DPACT=364.7000
DPC=80.5000 DPDC=. DPLTB=. DPSC=. DPSTB=. DPTB=. DPTC=. DPTIC=. DV=. DVC=. DVP=. DVPDP=. DVREC=. DVRRE=. DVSCO=. DVT=.
EA=0.0000 EBIT=-9.5000 EBITDA=65.5000 EIEA=. EIEAC=. EMP=1.3210 EQDIVP=. ERO=-36.1000 EXRE=0.2000 EXRES=. EXREU=.
FATB=. FATE=. FATL=. FATP=. FCA=-2.4000 FDFR=. FEA=. FEL=. FFS=. FIAO=-20.1000 FINCF=604.1000 FININC=. FINLE=. FINRE=.

FINVAO=. FOPO=103.0000 FSRCO=. FSRCOPO=. FSRCOPT=. FSRCT=. FUSEO=. FUSET=. GDWL=257.7000 IAEQ=. IAFXI=. IALOI=.
IALTI=. IAMLI=. IAOI=. IAPLI=. IAREI=. IASSI=. IASTI=. IATI=. IB=-176.2000 IBC=-176.2000 IBKI=. IBMII=.
ICAPT=2034.2000 IDIIS=. IDILB=. IDILC=. IDIS=. IDIST=. IDIT=1.3000 IDITS=. IIRE=. INITB=. INTAN=417.4000 INTAND=.
INTANP=52.4000 INTC=. INTFACT=. INTFL=. INTIACT=. INTOACT=. INTPD=. INTPN=126.1000 INTRC=. INVCH=-24.3000 INVDSP=.
INVFG=34.5000 INVO=0.0000 INVRM=10.9000 INVSVC=. INVT=53.5000 INVTFS=. INVWIP=8.1000 IOBD=. IOI=. IORE=. IP=. IPTI=.
ISGR=. ISGT=. ISGU=. ISOTH=. IST=. IVACO=3.5000 IVAEQ=235.0000 IVAO=23.6000 IVCH=0.6000 IVGOD=. IVI=. IVNCF=-56.8000
IVPT=. IVST=23.5000 IVSTCH=28.9000 IVSTFS=. LCABG=. LCACL=. LCACR=. LCAG=. LCAL=. LCALT=. LCAM=. LCAO=. LCAST=. LCAT=.
LCO=198.1000 LCOFS=. LCOX=10.1000 LCT=250.5000 LCTFS=. LCUACU=. LIQRESN=. LIQRESO=. LNDEP=. LNINC=. LNMD=. LNREP=.
LO=61.0000 LSE=2345.7000 LT=1851.5000 LTDCH=-264.8000 LTDLCH=. LTLO=. MIB=0.0000 MIBN=. MIBT=0.0000 MIC=. MII=0.0000
MISEQ=. MTL=. NCFLIQ=. NEQMI=. NIO=. NIT=. NOASUB=. NOPI=16.5000 NP=0.0000 NPANL=. NPAORE=. NPARL=. NPAT=. NPFS=.
OANCF=-86.3000 OANCFC=. OANCFD=. OIADP=-9.5000 OIBDP=65.5000 ONBALB=. ONBALE=. OPPRFT=. PACQP=. PCL=. PI=-129.8000
PLIACH=. PPEGT=657.5000 PPENT=292.8000 PRC=0.0000 PRODV=. PROSAI=. PRSTKC=. PRV=. PSFIX=7.3000 PSTK=0.0000
PSTKN=0.0000 PSTKR=0.0000 PTRAN=. PURTSHR=. PVON=. PVT=. RADP=. RAGR=. RARI=. RATI=. RAWMSM=. RCL=. RE=-5918.7000
RECCH=3.7000 RECCO=13.4000 RECCOFS=. RECT=205.8000 RECTFS=. RECTR=192.4000 RECTRFS=. REVT=1113.0000 RIS=. RLRI=. RLT=.
RPAG=. RV=. RVBCI=. RVBPI=. RVBTI=. RVEQT=. RVLRV=0.0000 RVRI=. RVSI=. RVTI=. RVUPI=. RVUTX=0.0000 SAA=. SAL=.
SALE=1113.0000 SBDC=. SC=. SCO=0.0000 SEQ=494.2000 SHRCAP=. SIV=. SPI=17.0000 SPPCH=. SPPIV=-127.2000 SSNP=.
SSTK=889.0000 STBO=. STFIXA=. STINV=. STIO=. STKCH=. SUBDIS=. SUBPUR=. TDSG=. TDST=. TEQ=. TRANSA=0.0000 TSCA=0.0000
TSTK=0.0000 TSTLTA=0.0000 TX=. TXC=9.6000 TXDB=0.0000 TXDC=36.8000 TXDI=1.0000 TXDITC=0.0000 TXO=35.8000 TXOP=.
TXP=0.0000 TXPD=4.2000 TXPFS=. TXT=46.4000 TXW=0.0000 UI=. UNL=0.0000 UNNP=0.0000 VPAC=. VPO=. WCAP=908.7000 WCAPCH=.
WCAPCHC=. WCAPOPC=-3.2000 WCAPS=. WCAPSA=. WCAPSU=. WCAPT=. WCAPU=. XACC=188.0000 XACCFS=. XAGO=. XAGT=. XCOM=.
XCOMI=. XDVRE=. XEQO=. XI=. XIDO=0.0000 XIDOC=. XINDB=. XINDC=. XINS=. XINST=. XINT=136.8000 XINTD=. XIVI=. XIVRE=.
XLR=1.7000 XNITB=. XOBD=. XOI=. XOPR=1047.5000 XOPRO=291.9000 XORE=. XPP=11.3000 XPPFS=. XPR=. XRD=298.6000
XRENT=23.2000 XS=. XSGA=269.9000 XSTF=. XSTFO=. XSTFWS=1.7000 XT=. AJEXI=1.00000000 CSHOI=583.90100 CSHPRIA=506.80000
EPSEXCON=-0.34767 EPSEXNC=. EPSINCON=-0.34767 EPSINNC=. ICAPI=. NAICSH=325412 NICON=-176.20000 NINC=. PV=. SICH=2834
TSTKNI=. PS=0 PSTKRV=. PSTKL=. BE=494.2 year=2009 bvcEquity=. CSHO=. PRCC_F=. capIntens=0.0185445709
cashFlow=-0.043142772 cashHoldings=0.3666282986 costcap=. leverages=3.1161473088 bleverage=0.6565204417
market_leverage=. roa=-0.07511617 roe=. ni=. cash_assets=0.3666282986 TobinsQ=. bvEqity=. _ERROR_=1 _N_=269
NOTE: Division by zero detected at line 2585 column 17.
GVKEY=004245 DATADATE=2010-12-31 FYEAR=2010 ADD1=Treasury Building, Lower Grand Canal Street ADD2= ADD3= ADD4=
ADDZIP=2
BUSDESC=As of December 18, 2013, Elan Corporation Limited was acquired by Perrigo Company Public Limited Company. Elan
 Corporation Limited is a biotechnology company in the United States, Ireland, and internationally. CIK=0000737572
CITY=Dublin CONML=Elan Corp PLC COUNTY= DLRSN=01 EIN= FAX=353 1 709 4700 FYRC=12 GGROUP=3520 GIND=352010 GSECTOR=35
GSUBIND=35201010 IDBFLAG=B INCORP= LOC=IRL NAICS=325412 PHONE=353 1 709 4000 PRICAN= PRIROW=02W PRIUSA=90 SIC=2834
SPCINDCD=285 SPCSECCD=905 SPCSRC= STATE= STKO=0 WEBURL=elan.com DLDTE=2013-12-19 IPODATE=. CONM=ELAN CORP PLC
ISIN=IE0003072950 SEDOL=4305507 EXCHG=172 FYR=12 FIC=IRL ACCTSTD=US ACQMETH= BSPR=GO COMPST= CURCD=USD FINAL=Y
ISMOD=1 PDDUR=12 SCF=10 SRC=5 STALT= UPD=3 FDATE=2011-04-27 PDATE=2011-02-10 ACCLI=. ACCO=. ACO=57.0000 ACOFS=.
ACOX=45.4000 ACOXFS=. ACQDISN=. ACQDISO=. ACT=920.5000 ADPAC=. AM=28.4000 AMDC=. AO=199.7000 AOLOCH=10.0000

AOX=178.4000 AP=39.2000 APALCH=. APCH=33.0000 APDPFS=. APFS=. APO=0.0000 APOFS=. AQC=. ARTFS=. ASDIS=. ASINV=.
AT=2017.5000 ATOCH=. AU=6 AUOP=1 AUTXR=0.0000 BCEF=. BCT=. CA=. CAPCST=. CAPFL=. CAPR1=. CAPR2=. CAPR3=. CAPRT=.
CAPS=6444.9000 CAPX=40.9000 CAPXFI=. CEQ=194.3000 CFBD=. CFERE=. CFLAOTH=. CFO=. CFPDO=. CGA=. CH=422.5000
CHE=632.7000 CHEB=836.5000 CHECH=-414.0000 CHEE=422.5000 CHEFS=. CHENFD=. CHFS=. CHS=. CMP=. COGS=520.0000 CRVNLI=.
CSHR=8.1150 CSTK=35.9000 CUSTADV=. DBTB=. DBTE=. DC=21.3000 DCSFD=. DCUFD=. DD1=. DD1FS=. DFPAC=. DFXA=34.9000
DISPOCH=. DLC=0.0000 DLCCH=. DLCFS=. DLTIS=. DLTR=. DLTT=1270.4000 DO=0.0000 DOC=. DP=63.3000 DPACT=408.3000
DPC=68.7000 DPDC=. DPLTB=. DPSC=. DPSTB=. DPTB=. DPTC=. DPTIC=. DV=. DVC=. DVP=. DVPDP=. DVREC=. DVRRE=. DVSCO=. DVT=.
EA=0.0000 EBIT=73.0000 EBITDA=136.3000 EIEA=. EIEAC=26.0000 EMP=1.2190 EQDIVP=. ERO=-43.1000 EXRE=-0.1000 EXRES=.
EXREU=. FATB=. FATE=. FATL=. FATP=. FCA=3.1000 FDFR=. FEA=. FEL=. FFS=. FIAO=. FINCF=-266.1000 FININC=. FINLE=.
FINRE=. FINVAO=. FOPO=252.9000 FSRCO=. FSRCOPO=. FSRCOPT=. FSRCT=. FUSEO=. FUSET=. GDWL=257.1000 IAEQ=. IAFXI=.
IALOI=. IALTI=. IAMLI=. IAOI=. IAPLI=. IAREI=. IASSI=. IASTI=. IATI=. IB=-324.7000 IBC=-324.7000 IBKI=. IBMII=.
ICAPT=1464.7000 IDIIS=. IDILB=. IDILC=. IDIS=. IDIST=. IDIT=1.2000 IDITS=. IIRE=. INITB=. INTAN=376.5000 INTAND=.
INTANP=3.6000 INTC=. INTFACT=. INTFL=. INTIACT=. INTOACT=. INTPD=. INTPN=117.2000 INTRC=. INVCH=14.2000 INVDSP=.
INVFG=23.0000 INVO=0.0000 INVRM=10.0000 INVSVC=. INVT=39.0000 INVTFS=. INVWIP=6.0000 IOBD=. IOI=. IORE=. IP=. IPTI=.
ISGR=. ISGT=. ISGU=. ISOTH=. IST=. IVACO=-191.4000 IVAEQ=209.0000 IVAO=24.3000 IVCH=. IVGOD=. IVI=. IVNCF=-216.0000
IVPT=. IVST=210.2000 IVSTCH=8.5000 IVSTFS=. LCABG=. LCACL=. LCACR=. LCAG=. LCAL=. LCALT=. LCAM=. LCAO=. LCAST=. LCAT=.
LCO=442.5000 LCOFS=. LCOX=223.4000 LCT=481.7000 LCTFS=. LCUACU=. LIQRESN=. LIQRESO=. LNDEP=. LNINC=. LNMD=. LNREP=.
LO=71.1000 LSE=2017.5000 LT=1823.2000 LTDCH=-267.9000 LTDLCH=. LTLO=. MIB=. MIBN=. MIBT=. MIC=. MII=0.0000 MISEQ=.
MTL=. NCFLIQ=. NEQMI=. NIO=. NIT=. NOASUB=. NOPI=-273.5000 NP=0.0000 NPANL=. NPAORE=. NPARL=. NPAT=. NPFS=.
OANCF=68.2000 OANCFC=. OANCFD=. OIADP=73.0000 OIBDP=136.3000 ONBALB=. ONBALE=. OPPRFT=. PACQP=. PCL=. PI=-322.6000
PLIACH=. PPEGT=695.8000 PPENT=287.5000 PRC=0.0000 PRODV=. PROSAI=. PRSTKC=. PRV=. PSFIX=0.1000 PSTK=0.0000
PSTKN=0.0000 PSTKR=0.0000 PTRAN=. PURTSHR=. PVON=. PVT=. RADP=. RAGR=. RARI=. RATI=. RAWMSM=. RCL=. RE=-6243.4000
RECCH=0.8000 RECCO=0.2000 RECCOFS=. RECT=191.8000 RECTFS=. RECTR=191.6000 RECTRFS=. REVT=1169.7000 RIS=. RLRI=. RLT=.
RPAG=. RV=. RVBCI=. RVBPI=. RVBTI=. RVEQT=. RVLRV=0.0000 RVRI=. RVSI=. RVTI=. RVUPI=. RVUTX=0.0000 SAA=. SAL=.
SALE=1169.7000 SBDC=. SC=. SCO=0.0000 SEQ=194.3000 SHRCAP=. SIV=11.3000 SPI=-264.6000 SPPCH=. SPPIV=-12.8000 SSNP=.
SSTK=1.8000 STBO=. STFIXA=. STINV=. STIO=. STKCH=. SUBDIS=. SUBPUR=. TDSG=. TDST=. TEQ=194.3000 TRANSA=0.0000
TSCA=0.0000 TSTK=0.0000 TSTLTA=0.0000 TX=. TXC=2.0000 TXDB=0.0000 TXDC=0.1000 TXDI=0.3000 TXDITC=0.0000 TXO=-0.2000
TXOP=. TXP=0.0000 TXPD=0.4000 TXPFS=. TXT=2.1000 TXW=0.0000 UI=. UNL=0.0000 UNNP=0.0000 VPAC=. VPO=. WCAP=438.8000
WCAPCH=. WCAPCHC=. WCAPOPC=58.0000 WCAPS=. WCAPSA=. WCAPSU=. WCAPT=. WCAPU=. XACC=219.1000 XACCFS=. XAGO=. XAGT=.
XCOM=. XCOMI=. XDVRE=. XEQO=. XI=. XIDO=0.0000 XIDOC=. XINDB=. XINDC=. XINS=. XINST=. XINT=122.1000 XINTD=. XIVI=.
XIVRE=. XLR=. XNITB=. XOBD=. XOI=. XOPR=1033.4000 XOPRO=258.7000 XORE=. XPP=11.6000 XPPFS=. XPR=. XRD=264.7000
XRENT=25.6000 XS=. XSGA=254.7000 XSTF=. XSTFO=. XSTFWS=. XT=. AJEXI=1.00000000 CSHOI=585.20200 CSHPRIA=584.90000
EPSEXCON=-0.55510 EPSEXNC=. EPSINCON=-0.55510 EPSINNC=. ICAPI=. NAICSH=325412 NICON=-324.70000 NINC=. PV=. SICH=2834
TSTKNI=. PS=0 PSTKRV=. PSTKL=. BE=194.3 year=2010 bvcEquity=. CSHO=. PRCC_F=. capIntens=0.0202726146
cashFlow=-0.129566295 cashHoldings=0.313605948 costcap=. leverages=6.5383427689 bleverage=0.6296902107
market_leverage=. roa=-0.16094176 roe=. ni=. cash_assets=0.313605948 TobinsQ=. bvEqity=. _ERROR_=1 _N_=270
NOTE: Division by zero detected at line 2585 column 17.
GVKEY=004245 DATADATE=2011-12-31 FYEAR=2011 ADD1=Treasury Building, Lower Grand Canal Street ADD2= ADD3= ADD4=

ADDZIP=2

BUSDESC=As of December 18, 2013, Elan Corporation Limited was acquired by Perrigo Company Public Limited Company. Elan Corporation Limited is a biotechnology company in the United States, Ireland, and internationally. CIK=0000737572

CITY=Dublin CONML=Elan Corp PLC COUNTY= DLRSN=01 EIN= FAX=353 1 709 4700 FYRC=12 GGROUP=3520 GIND=352010 GSECTOR=35

GSUBIND=35201010 IDBFLAG=B INCORP= LOC=IRL NAICS=325412 PHONE=353 1 709 4000 PRICAN= PRIROW=02W PRIUSA=90 SIC=2834

SPCINDCD=285 SPCSECCD=905 SPCSRC= STATE= STKO=0 WEBURL=elan.com DLDTE=2013-12-19 IPODATE=. CONM=ELAN CORP PLC

ISIN=IE0003072950 SEDOL=4305507 EXCHG=172 FYR=12 FIC=IRL ACCTSTD=US ACQMETH= BSPR=GO COMPST= CURCD=USD FINAL=Y

ISMOD=1 PDDUR=12 SCF=10 SRC=5 STALT= UPD=3 FDATE=2012-03-26 PDATE=2012-02-15 ACCLI=. ACCO=. ACO=40.5000 ACOFS=.

ACOX=29.7000 ACOXFS=. ACQDISN=. ACQDISO=. ACT=518.0000 ADPAC=. AM=15.9000 AMDC=. AO=143.4000 AOLOCH=-80.0000

AOX=132.3000 AP=46.4000 APALCH=. APCH=-213.5000 APDPFS=. APFS=. APO=0.0000 APOFS=. AQC=. ARTFS=. ASDIS=. ASINV=.

AT=1753.8000 ATOCH=. AU=6 AUOP=1 AUTXR=0.0000 BCEF=. BCT=. CA=. CAPCST=. CAPFL=. CAPR1=. CAPR2=. CAPR3=. CAPRT=.

CAPS=6485.9000 CAPX=27.3000 CAPXFI=. CEQ=801.8000 CFBD=. CFERE=. CFLAOTH=. CFO=. CFPDO=. CGA=. CH=271.7000

CHE=274.6000 CHEB=422.5000 CHECH=-150.8000 CHEE=271.7000 CHEFS=. CHENFD=. CHFS=. CHS=. CMP=. COGS=603.9000 CRVNLI=.

CSHR=7.4740 CSTK=36.2000 CUSTADV=. DBTB=. DBTE=. DC=11.1000 DCSFD=. DCUFD=. DD1=. DD1FS=. DFPAC=. DFXA=19.9000

DISPOCH=. DLC=0.0000 DLCCH=. DLCFS=. DLTIS=. DLTR=. DLTT=615.0000 DO=0.0000 DOC=. DP=35.8000 DPACT=62.9000 DPC=41.1000

DPDC=. DPLTB=. DPSC=. DPSTB=. DPTB=. DPTC=. DPTIC=. DV=. DVC=. DVP=. DVPDP=. DVREC=. DVRRE=. DVSCO=. DVT=. EA=0.0000

EBIT=145.1000 EBITDA=180.9000 EIEA=. EIEAC=81.8000 EMP=0.4120 EQDIVP=. ERO=-37.4000 EXRE=-0.1000 EXRES=. EXREU=.

FATB=. FATE=. FATL=. FATP=. FCA=1.0000 FDFR=. FEA=. FEL=. FFS=. FIAO=. FINCF=-691.0000 FININC=. FINLE=. FINRE=.

FINVAO=. FOPO=56.9000 FSRCO=. FSRCOPO=. FSRCOPT=. FSRCT=. FUSEO=. FUSET=. GDWL=207.4000 IAEQ=. IAFXI=. IALOI=. IALTI=.

IAMLI=. IAOI=. IAPLI=. IAREI=. IASSI=. IASTI=. IATI=. IB=560.5000 IBC=560.5000 IBKI=. IBMII=. ICAPT=1416.8000 IDIIS=.

IDILB=. IDILC=. IDIS=. IDIST=. IDIT=0.9000 IDITS=. IIRE=. INITB=. INTAN=309.9000 INTAND=. INTANP=2.5000 INTC=.

INTFACT=. INTFL=. INTIACT=. INTOACT=. INTPD=. INTPN=108.1000 INTRC=. INVCH=15.2000 INVDSP=. INVFG=23.8000 INVO=0.0000

INVRM=0.0000 INVSVC=. INVT=23.8000 INVTFS=. INVWIP=0.0000 IOBD=. IOI=. IORE=. IP=. IPTI=. ISGR=. ISGT=. ISGU=. ISOTH=.

IST=. IVACO=206.8000 IVAEQ=675.8000 IVAO=23.5000 IVCH=. IVGOD=. IVI=. IVNCF=660.5000 IVPT=. IVST=2.9000 IVSTCH=0.3000

IVSTFS=. LCABG=. LCACL=. LCACR=. LCAG=. LCAL=. LCALT=. LCAM=. LCAO=. LCAST=. LCAT=. LCO=229.9000 LCOFS=. LCOX=12.3000

LCT=276.3000 LCTFS=. LCUACU=. LIQRESN=. LIQRESO=. LNDEP=. LNINC=. LNMD=. LNREP=. LO=60.7000 LSE=1753.8000 LT=952.0000

LTDCH=-697.3000 LTDLCH=. LTLO=. MIB=. MIBN=. MIBT=. MIC=. MII=0.0000 MISEQ=. MTL=. NCFLIQ=. NEQMI=. NIO=. NIT=.

NOASUB=. NOPI=570.8000 NP=0.0000 NPANL=. NPAORE=. NPARL=. NPAT=. NPFS=. OANCF=-120.2000 OANCFC=. OANCFD=.

OIADP=145.1000 OIBDP=180.9000 ONBALB=. ONBALE=. OPPRFT=. PACQP=. PCL=. PI=608.1000 PLIACH=. PPEGT=146.1000

PPENT=83.2000 PRC=0.0000 PRODV=. PROSAI=. PRSTKC=. PRV=. PSFIX=1.3000 PSTK=0.0000 PSTKN=0.0000 PSTKR=0.0000 PTRAN=.

PURTSHR=. PVON=. PVT=. RADP=. RAGR=. RARI=. RATI=. RAWMSM=. RCL=. RE=-5682.9000 RECCH=23.9000 RECCO=11.4000 RECCOFS=.

RECT=179.1000 RECTFS=. RECTR=167.7000 RECTRFS=. REVT=1246.0000 RIS=. RLRI=. RLT=. RPAG=. RV=. RVBCI=. RVBPI=. RVBTI=.

RVEQT=. RVLRV=0.0000 RVRI=. RVSI=. RVTI=. RVUPI=. RVUTX=0.0000 SAA=. SAL=. SALE=1246.0000 SBDC=. SC=. SCO=0.0000

SEQ=801.8000 SHRCAP=. SIV=481.9000 SPI=648.1000 SPPCH=. SPPIV=-657.1000 SSNP=. SSTK=6.3000 STBO=. STFIXA=. STINV=.

STIO=. STKCH=. SUBDIS=. SUBPUR=. TDSG=. TDST=. TEQ=801.8000 TRANSA=0.0000 TSCA=0.0000 TSTK=0.0000 TSTLTA=0.0000 TX=.

TXC=3.4000 TXDB=0.0000 TXDC=51.0000 TXDI=51.0000 TXDITC=0.0000 TXO=-6.8000 TXOP=. TXP=0.0000 TXPD=1.5000 TXPFS=.

TXT=47.6000 TXW=0.0000 UI=. UNL=0.0000 UNNP=0.0000 VPAC=. VPO=. WCAP=241.7000 WCAPCH=. WCAPCHC=. WCAPOPC=-254.4000

WCAPS=. WCAPSA=. WCAPSU=. WCAPT=. WCAPU=. XACC=217.6000 XACCFS=. XAGO=. XAGT=. XCOM=. XCOMI=. XDVRE=. XEQO=. XI=.

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XIDO=0.0000 XIDOC=. XINDB=. XINDC=. XINS=. XINST=. XINT=107.8000 XINTD=. XIVI=. XIVRE=. XLR=33.7000 XNITB=. XOBD=.
XOI=. XOPR=1065.1000 XOPRO=232.5000 XORE=. XPP=10.8000 XPPFS=. XPR=. XRD=232.5000 XRENT=21.0000 XS=. XSGA=228.7000
XSTF=. XSTFO=. XSTFWS=33.7000 XT=. AJEXI=1.00000000 CSHOI=589.34600 CSHPRIA=587.60000 EPSEXCON=0.95000 EPSEXNC=.
EPSINCON=0.95000 EPSINNC=. ICAPI=. NAICSH=325412 NICON=560.50000 NINC=. PV=. SICH=2834 TSTKNI=. PS=0 PSTKRV=. PSTKL=.
BE=801.8 year=2011 bvcEquity=. CSHO=. PRCC_F=. capIntens=0.0155661991 cashFlow=0.3400045615 cashHoldings=0.1565742958
costcap=. leverages=0.7670241956 bleverage=0.3506671228 market_leverage=. roa=0.3195917436 roe=. ni=.
cash_assets=0.1565742958 TobinsQ=. bvEqity=. _ERROR_=1 _N_=271
NOTE: Division by zero detected at line 2585 column 17.
GVKEY=004245 DATADATE=2012-12-31 FYEAR=2012 ADD1=Treasury Building, Lower Grand Canal Street ADD2=  ADD3=  ADD4=
ADDZIP=2
BUSDESC=As of December 18, 2013, Elan Corporation Limited was acquired by Perrigo Company Public Limited Company. Elan
 Corporation Limited is a biotechnology company in the United States, Ireland, and internationally. CIK=0000737572
CITY=Dublin CONML=Elan Corp PLC COUNTY=  DLRSN=01 EIN=  FAX=353 1 709 4700 FYRC=12 GGROUP=3520 GIND=352010 GSECTOR=35
GSUBIND=35201010 IDBFLAG=B INCORP=  LOC=IRL NAICS=325412 PHONE=353 1 709 4000 PRICAN=  PRIROW=02W PRIUSA=90 SIC=2834
SPCINDCD=285 SPCSECCD=905 SPCSRC=  STATE=  STKO=0 WEBURL=elan.com DLDTE=2013-12-19 IPODATE=. CONM=ELAN CORP PLC
ISIN=IE0003072950 SEDOL=4305507 EXCHG=172 FYR=12 FIC=IRL ACCTSTD=US ACQMETH=  BSPR=GO COMPST=  CURCD=USD FINAL=Y
ISMOD=1 PDDUR=12 SCF=10 SRC=5 STALT=  UPD=3 FDATE=2013-04-05 PDATE=2013-02-09 ACCLI=. ACCO=. ACO=614.2000 ACOFS=.
ACOX=603.7000 ACOXFS=. ACQDISN=. ACQDISO=. ACT=1409.5000 ADPAC=. AM=. AMDC=. AO=82.7000 AOLOCH=4.4000 AOX=70.9000
AP=45.6000 APALCH=. APCH=42.1000 APDPFS=. APFS=. APO=0.0000 APOFS=. AQC=. ARTFS=. ASDIS=. ASINV=. AT=1640.2000 ATOCH=.
AU=6 AUOP=1 AUTXR=0.0000 BCEF=. BCT=. CA=. CAPCST=. CAPFL=. CAPR1=. CAPR2=. CAPR3=. CAPRT=. CAPS=352.4000 CAPX=10.3000
CAPXFI=. CEQ=618.2000 CFBD=. CFERE=. CFLAOTH=. CFO=. CFPDO=. CGA=. CH=431.3000 CHE=601.8000 CHEB=271.7000
CHECH=159.6000 CHEE=431.3000 CHEFS=. CHENFD=. CHFS=. CHS=. CMP=. COGS=0.2000 CRVNLI=. CSHR=7.0820 CSTK=36.5000
CUSTADV=. DBTB=. DBTE=. DC=11.8000 DCSFD=. DCUFD=. DD1=. DD1FS=. DFPAC=. DFXA=. DISPOCH=. DLC=0.0000 DLCCH=. DLCFS=.
DLTIS=. DLTR=. DLTT=600.0000 DO=235.3000 DOC=. DP=. DPACT=125.3000 DPC=27.9000 DPDC=. DPLTB=. DPSC=. DPSTB=. DPTB=.
DPTC=. DPTIC=. DV=125.0000 DVC=. DVP=. DVPDP=. DVREC=. DVRRE=. DVSCO=. DVT=. EA=0.0000 EBIT=-208.6000 EBITDA=-208.6000
EIEA=. EIEAC=229.0000 EMP=0.2450 EQDIVP=. ERO=-44.6000 EXRE=-0.1000 EXRES=. EXREU=. FATB=. FATE=. FATL=. FATP=.
FCA=-1.2000 FDFR=. FEA=. FEL=. FFS=. FIAO=. FINCF=-198.8000 FININC=. FINLE=. FINRE=. FINVAO=. FOPO=438.6000 FSRCO=.
FSRCOPO=. FSRCOPT=. FSRCT=. FUSEO=. FUSET=. GDWL=96.0000 IAEQ=. IAFXI=. IALOI=. IALTI=. IAMLI=. IAOI=. IAPLI=. IAREI=.
IASSI=. IASTI=. IATI=. IB=-372.7000 IBC=-372.7000 IBKI=. IBMII=. ICAPT=1218.2000 IDIIS=. IDILB=. IDILC=. IDIS=.
IDIST=. IDIT=0.6000 IDITS=. IIRE=. INITB=. INTAN=99.0000 INTAND=. INTANP=1.8000 INTC=. INTFACT=. INTFL=. INTIACT=.
INTOACT=. INTPD=. INTPN=54.0000 INTRC=. INVCH=-1.1000 INVDSP=. INVFG=0.0000 INVO=0.0000 INVRM=0.0000 INVSVC=.
INVT=0.0000 INVTFS=. INVWIP=0.0000 IOBD=. IOI=. IORE=. IP=. IPTI=. ISGR=. ISGT=. ISGU=. ISOTH=. IST=. IVACO=.
IVAEQ=14.0000 IVAO=22.3000 IVCH=. IVGOD=. IVI=. IVNCF=303.2000 IVPT=. IVST=170.5000 IVSTCH=. IVSTFS=. LCABG=. LCACL=.
LCACR=. LCAG=. LCAL=. LCALT=. LCAM=. LCAO=. LCAST=. LCAT=. LCO=314.1000 LCOFS=. LCOX=47.6000 LCT=359.7000 LCTFS=.
LCUACU=. LIQRESN=. LIQRESO=. LNDEP=. LNINC=. LNMD=. LNREP=. LO=62.3000 LSE=1640.2000 LT=1022.0000 LTDCH=-94.6000
LTDLCH=. LTLO=. MIB=. MIBN=. MIBT=. MIC=. MII=0.0000 MISEQ=. MTL=. NCFLIQ=. NEQMI=. NIO=. NIT=. NOASUB=.
NOPI=-468.6000 NP=0.0000 NPANL=. NPAORE=. NPARL=. NPAT=. NPFS=. OANCF=55.3000 OANCFC=. OANCFD=. OIADP=-208.6000
OIBDP=-208.6000 ONBALB=. ONBALE=. OPPRFT=. PACQP=. PCL=. PI=-733.2000 PLIACH=. PPEGT=138.0000 PPENT=12.7000 PRC=0.0000
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PRODV=. PROSAI=. PRSTKC=. PRV=. PSFIX=. PSTK=0.0000 PSTKN=0.0000 PSTKR=0.0000 PTRAN=. PURTSHR=. PVON=. PVT=. RADP=.
RAGR=. RARI=. RATI=. RAWMSM=. RCL=. RE=273.9000 RECCH=-25.8000 RECCO=0.0000 RECCOFS=. RECT=193.5000 RECTFS=.
RECTR=193.5000 RECTRFS=. REVT=0.2000 RIS=. RLRI=. RLT=. RPAG=. RV=. RVBCI=. RVBPI=. RVBTI=. RVEQT=. RVLRV=0.0000
RVRI=. RVSI=. RVTI=. RVUPI=. RVUTX=0.0000 SAA=. SAL=. SALE=0.2000 SBDC=. SC=. SCO=0.0000 SEQ=618.2000 SHRCAP=.
SIV=315.3000 SPI=-245.0000 SPPCH=. SPPIV=13.3000 SSNP=. SSTK=20.8000 STBO=. STFIXA=. STINV=. STIO=. STKCH=. SUBDIS=.
SUBPUR=. TDSG=. TDST=. TEQ=618.2000 TRANSA=0.0000 TSCA=0.0000 TSTK=0.0000 TSTLTA=0.0000 TX=. TXC=-0.6000 TXDB=0.0000
TXDC=-300.4000 TXDI=-361.1000 TXDITC=0.0000 TXO=1.2000 TXOP=. TXP=0.0000 TXPD=0.8000 TXPFS=. TXT=-360.5000 TXW=0.0000
UI=. UNL=0.0000 UNNP=0.0000 VPAC=. VPO=. WCAP=1049.8000 WCAPCH=. WCAPCHC=. WCAPOPC=19.6000 WCAPS=. WCAPSA=. WCAPSU=.
WCAPT=. WCAPU=. XACC=266.5000 XACCFS=. XAGO=. XAGT=. XCOM=. XCOMI=. XDVRE=. XEQO=. XI=. XIDO=235.3000 XIDOC=. XINDB=.
XINDC=. XINS=. XINST=. XINT=56.0000 XINTD=. XIVI=. XIVRE=. XLR=35.3000 XNITB=. XOBD=. XOI=. XOPR=208.8000
XOPRO=95.0000 XORE=. XPP=10.5000 XPPFS=. XPR=. XRD=95.0000 XRENT=16.4000 XS=. XSGA=113.6000 XSTF=. XSTFO=.
XSTFWS=35.3000 XT=. AJEXI=1.00000000 CSHOI=594.95000 CSHPRIA=592.40000 EPSEXCON=-0.63000 EPSEXNC=. EPSINCON=-0.23000
EPSINNC=. ICAPI=. NAICSH=325412 NICON=-137.40000 NINC=. PV=. SICH=2834 TSTKNI=. PS=0 PSTKRV=. PSTKL=. BE=618.2
year=2012 bvcEquity=. CSHO=. PRCC_F=. capIntens=0.006279722 cashFlow=. cashHoldings=0.3669064748 costcap=.
leverages=0.9705596894 bleverage=0.3658090477 market_leverage=. roa=-0.227228387 roe=. ni=. cash_assets=0.3669064748
TobinsQ=. bvEqity=. _ERROR_=1 _N_=272
NOTE: Division by zero detected at line 2584 column 21.
NOTE: Division by zero detected at line 2587 column 27.
NOTE: Division by zero detected at line 2590 column 28.
NOTE: Division by zero detected at line 2593 column 11.
NOTE: Division by zero detected at line 2595 column 20.
GVKEY=004248 DATADATE=2001-12-31 FYEAR=2001 ADD1=P.O.B. 286 ADD2= ADD3= ADD4= ADDZIP=60990
BUSDESC=Elbit Ltd. is out of business. It is an Israel-based incubator, which develops e-business solutions by support
ing technology start-ups. CIK=0000724138 CITY=Herzliya CONML=ELBIT Ltd COUNTY= DLRSN=01 EIN= FAX= FYRC=12
GGROUP=2010 GIND=201040 GSECTOR=20 GSUBIND=20104010 IDBFLAG=B INCORP= LOC=ISR NAICS=335999 PHONE= PRICAN=
PRIROW=01W PRIUSA=01 SIC=3690 SPCINDCD=220 SPCSECCD=925 SPCSRC= STATE= STKO=0 WEBURL= DLDTE=2002-05-17 IPODATE=.
CONM=ELBIT LTD ISIN=IL0007680510 SEDOL=6310811 EXCHG=262 FYR=12 FIC=ISR ACCTSTD= ACQMETH= BSPR= COMPST= CURCD=USD
FINAL=Y ISMOD=1 PDDUR=12 SCF=. SRC=20 STALT= UPD=3 FDATE=. PDATE=. ACCLI=. ACCO=. ACO=0.0000 ACOFS=. ACOX=0.0000
ACOXFS=. ACQDISN=. ACQDISO=. ACT=0.0000 ADPAC=. AM=0.0000 AMDC=. AO=0.0000 AOLOCH=. AOX=0.0000 AP=0.0000 APALCH=.
APCH=. APDPFS=. APFS=. APO=0.0000 APOFS=. AQC=. ARTFS=. ASDIS=. ASINV=. AT=0.0000 ATOCH=. AU= AUOP= AUTXR=0.0000
BCEF=. BCT=. CA=. CAPCST=. CAPFL=. CAPR1=. CAPR2=. CAPR3=. CAPRT=. CAPS=0.0000 CAPX=. CAPXFI=. CEQ=0.0000 CFBD=.
CFERE=. CFLAOTH=. CFO=. CFPDO=. CGA=. CH=0.0000 CHE=0.0000 CHEB=. CHECH=. CHEE=. CHEFS=. CHENFD=. CHFS=. CHS=. CMP=.
COGS=0.0000 CRVNLI=. CSHR=. CSTK=0.0000 CUSTADV=. DBTB=. DBTE=. DC=0.0000 DCSFD=. DCUFD=. DD1=0.0000 DD1FS=. DFPAC=.
DFXA=0.0000 DISPOCH=. DLC=0.0000 DLCCH=. DLCFS=. DLTIS=. DLTR=. DLTT=0.0000 DO=0.0000 DOC=. DP=0.0000 DPACT=0.0000
DPC=. DPDC=. DPLTB=. DPSC=. DPSTB=. DPTB=. DPTC=. DPTIC=. DV=. DVC=. DVP=. DVPDP=. DVREC=. DVRRE=. DVSCO=. DVT=.
EA=0.0000 EBIT=0.0000 EBITDA=0.0000 EIEA=. EIEAC=. EMP=. EQDIVP=. ERO=0.0000 EXRE=. EXRES=. EXREU=. FATB=. FATE=.
FATL=. FATP=. FCA=0.0000 FDFR=. FEA=. FEL=. FFS=. FIAO=. FINCF=. FININC=. FINLE=. FINRE=. FINVAO=. FOPO=. FSRCO=.
FSRCOPO=. FSRCOPT=. FSRCT=. FUSEO=. FUSET=. GDWL=0.0000 IAEQ=. IAFXI=. IALOI=. IALTI=. IAMLI=. IAOI=. IAPLI=. IAREI=.

IASSI=. IASTI=. IATI=. IB=-30.6000 IBC=. IBKI=. IBMII=. ICAPT=0.0000 IDIIS=. IDILB=. IDILC=. IDIS=. IDIST=. IDIT=.
IDITS=. IIRE=. INITB=. INTAN=0.0000 INTAND=. INTANP=. INTC=. INTFACT=. INTFL=. INTIACT=. INTOACT=. INTPD=. INTPN=.
INTRC=. INVCH=. INVDSP=. INVFG=0.0000 INVO=0.0000 INVRM=0.0000 INVSVC=. INVT=0.0000 INVTFS=. INVWIP=0.0000 IOBD=.
IOI=. IORE=. IP=. IPTI=. ISGR=. ISGT=. ISGU=. ISOTH=. IST=. IVACO=. IVAEQ=0.0000 IVAO=0.0000 IVCH=. IVGOD=. IVI=.
IVNCF=. IVPT=. IVST=0.0000 IVSTCH=. IVSTFS=. LCABG=. LCACL=. LCACR=. LCAG=. LCAL=. LCALT=. LCAM=. LCAO=. LCAST=.
LCAT=. LCO=. LCOFS=. LCOX=. LCT=0.0000 LCTFS=. LCUACU=. LIQRESN=. LIQRESO=. LNDEP=. LNINC=. LNMD=. LNREP=. LO=0.0000
LSE=0.0000 LT=0.0000 LTDCH=. LTDLCH=. LTLO=. MIB=0.0000 MIBN=. MIBT=0.0000 MIC=. MII=0.0000 MISEQ=. MTL=. NCFLIQ=.
NEQMI=. NIO=. NIT=. NOASUB=. NOPI=0.0000 NP=0.0000 NPANL=. NPAORE=. NPARL=. NPAT=. NPFS=. OANCF=. OANCFC=. OANCFD=.
OIADP=0.0000 OIBDP=0.0000 ONBALB=. ONBALE=. OPPRFT=. PACQP=. PCL=. PI=0.0000 PLIACH=. PPEGT=0.0000 PPENT=0.0000
PRC=0.0000 PRODV=. PROSAI=. PRSTKC=. PRV=. PSFIX=. PSTK=0.0000 PSTKN=0.0000 PSTKR=0.0000 PTRAN=. PURTSHR=. PVON=.
PVT=. RADP=. RAGR=. RARI=. RATI=. RAWMSM=. RCL=. RE=0.0000 RECCH=. RECCO=0.0000 RECCOFS=. RECT=0.0000 RECTFS=.
RECTR=0.0000 RECTRFS=. REVT=0.0000 RIS=. RLRI=. RLT=. RPAG=. RV=. RVBCI=. RVBPI=. RVBTI=. RVEQT=. RVLRV=0.0000 RVRI=.
RVSI=. RVTI=. RVUPI=. RVUTX=0.0000 SAA=. SAL=. SALE=0.0000 SBDC=. SC=. SCO=0.0000 SEQ=0.0000 SHRCAP=. SIV=. SPI=.
SPPCH=. SPPIV=. SSNP=. SSTK=. STBO=. STFIXA=. STINV=. STIO=. STKCH=. SUBDIS=. SUBPUR=. TDSG=. TDST=. TEQ=.
TRANSA=0.0000 TSCA=0.0000 TSTK=0.0000 TSTLTA=0.0000 TX=. TXC=0.0000 TXDB=0.0000 TXDC=. TXDI=0.0000 TXDITC=0.0000
TXO=0.0000 TXOP=. TXP=0.0000 TXPD=. TXPFS=. TXT=0.0000 TXW=0.0000 UI=. UNL=0.0000 UNNP=0.0000 VPAC=. VPO=. WCAP=0.0000
WCAPCH=. WCAPCHC=. WCAPOPC=. WCAPS=. WCAPSA=. WCAPSU=. WCAPT=. WCAPU=. XACC=0.0000 XACCFS=. XAGO=. XAGT=. XCOM=.
XCOMI=. XDVRE=. XEQO=. XI=. XIDO=0.0000 XIDOC=. XINDB=. XINDC=. XINS=. XINST=. XINT=. XINTD=. XIVI=. XIVRE=. XLR=.
XNITB=. XOBD=. XOI=. XOPR=0.0000 XOPRO=0.0000 XORE=. XPP=0.0000 XPPFS=. XPR=. XRD=. XRENT=. XS=. XSGA=0.0000 XSTF=.
XSTFO=. XSTFWS=. XT=. AJEXI=1.00000000 CSHOI=. CSHPRIA=. EPSEXCON=-1.37000 EPSEXNC=. EPSINCON=-1.37000 EPSINNC=.
ICAPI=. NAICSH=335999 NICON=. NINC=. PV=. SICH=. TSTKNI=. PS=0 PSTKRV=. PSTKL=. BE=0 year=2001 bvcEquity=. CSHO=.
PRCC_F=. capIntens=. cashFlow=. cashHoldings=. costcap=. leverages=. bleverage=. market_leverage=. roa=. roe=. ni=.
cash_assets=. TobinsQ=. bvEqity=. _ERROR_=1 _N_=280
NOTE: Division by zero detected at line 2585 column 17.
GVKEY=004311 DATADATE=1997-12-31 FYEAR=1997 ADD1=ToHa Tower, 22th floor, 114 Yigal Alon Street ADD2= ADD3= ADD4=
ADDZIP=6744320
BUSDESC=Elron Ventures Ltd is a venture capital firm specializing in early stage and seed investment. The firm prefers
 to invest in B2B software, cybersecurity, enterprise software or healthcare industries. The firm prefers to invest in
 Israel sector. CIK=0000315126 CITY=Tel Aviv CONML=Elron Ventures Ltd COUNTY= DLRSN= EIN= FAX=972 3 607 5556
FYRC=12 GGROUP=4020 GIND=402010 GSECTOR=40 GSUBIND=40201030 IDBFLAG=B INCORP= LOC=ISR NAICS=523999
PHONE=972 3 607 5555 PRICAN= PRIROW=01W PRIUSA=01 SIC=6799 SPCINDCD=185 SPCSECCD=940 SPCSRC= STATE= STKO=3
WEBURL=www.elronventures.com DLDTE=. IPODATE=. CONM=ELRON VENTURES LTD ISIN=IL0007490779 SEDOL=6310844 EXCHG=262
FYR=12 FIC=ISR ACCTSTD=DS ACQMETH= BSPR=GO COMPST= CURCD=USD FINAL=Y ISMOD=. PDDUR=12 SCF=. SRC=3 STALT= UPD=3
FDATE=. PDATE=. ACCLI=. ACCO=0.0000 ACO=. ACOFS=. ACOX=. ACOXFS=. ACQDISN=. ACQDISO=. ACT=. ADPAC=0.0000 AM=0.0000
AMDC=0.0000 AO=1.1910 AOLOCH=. AOX=1.1910 AP=1.2590 APALCH=. APCH=. APDPFS=. APFS=. APO=. APOFS=. AQC=. ARTFS=2.6390
ASDIS=. ASINV=. AT=222.8670 ATOCH=. AU=9 AUOP=1 AUTXR=0.0000 BCEF=0.0000 BCT=0.0000 CA=0.0000 CAPCST=. CAPFL=. CAPR1=.
CAPR2=. CAPR3=. CAPRT=. CAPS=138.9910 CAPX=. CAPXFI=. CEQ=218.4240 CFBD=0.0000 CFERE=0.0000 CFLAOTH=. CFO=0.0000
CFPDO=0.0000 CGA=0.0000 CH=12.8950 CHE=. CHEB=. CHECH=. CHEE=. CHEFS=. CHENFD=. CHFS=. CHS=0.0000 CMP=0.0000 COGS=.

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CRVNLI=0.0000 CSHR=. CSTK=9.5660 CUSTADV=. DBTB=. DBTE=. DC=0.0000 DCSFD=. DCUFD=. DD1=0.0000 DD1FS=. DFPAC=0.0000
DFXA=0.0960 DISPOCH=. DLC=0.0000 DLCCH=. DLCFS=. DLTIS=. DLTR=. DLTT=0.0000 DO=0.0000 DOC=. DP=0.0960 DPACT=0.5360
DPC=. DPDC=0.0000 DPLTB=0.0000 DPSC=0.0000 DPSTB=0.0000 DPTB=0.0000 DPTC=0.0000 DPTIC=0.0000 DV=. DVC=4.8690
DVP=0.0000 DVPDP=0.0000 DVREC=. DVRRE=0.0000 DVSCO=0.0000 DVT=4.8690 EA=0.0000 EBIT=27.1360 EBITDA=27.2320 EIEA=0.0000
EIEAC=. EMP=. EQDIVP=. ERO=0.0000 EXRE=. EXRES=. EXREU=. FATB=0.0000 FATE=1.0090 FATL=0.0000 FATP=0.0000 FCA=.
FDFR=0.0000 FEA=0.0000 FEL=0.0000 FFS=0.0000 FIAO=. FINCF=. FININC=. FINLE=. FINRE=. FINVAO=. FOPO=. FSRCO=. FSRCOPO=.
FSRCOPT=. FSRCT=. FUSEO=. FUSET=. GDWL=0.0000 IAEQ=0.0000 IAFXI=0.0000 IALOI=0.0000 IALTI=0.0000 IAMLI=0.0000
IAOI=0.0000 IAPLI=0.0000 IAREI=0.0000 IASSI=0.0000 IASTI=0.0000 IATI=0.0000 IB=26.7450 IBC=. IBKI=0.0000 IBMII=.
ICAPT=218.4240 IDIIS=0.0000 IDILB=0.0000 IDILC=0.0000 IDIS=. IDIST=. IDIT=1.3500 IDITS=0.0000 IIRE=0.0000 INITB=.
INTAN=0.0000 INTAND=. INTANP=. INTC=0.0000 INTFACT=. INTFL=. INTIACT=. INTOACT=. INTPD=. INTPN=. INTRC=. INVCH=.
INVDSP=. INVFG=. INVO=. INVRM=. INVSVC=. INVT=0.0000 INVTFS=. INVWIP=. IOBD=0.0000 IOI=0.0000 IORE=0.0000 IP=0.0000
IPTI=0.0000 ISGR=0.0000 ISGT=0.0000 ISGU=0.0000 ISOTH=0.0000 IST=0.0000 IVACO=. IVAEQ=0.0000 IVAO=. IVCH=.
IVGOD=0.0000 IVI=0.0000 IVNCF=. IVPT=192.6850 IVST=12.9840 IVSTCH=. IVSTFS=. LCABG=0.0000 LCACL=0.0000 LCACR=0.0000
LCAG=0.0000 LCAL=0.0000 LCALT=0.0000 LCAM=0.0000 LCAO=0.0000 LCAST=0.0000 LCAT=0.0000 LCO=. LCOFS=. LCOX=. LCT=.
LCTFS=. LCUACU=0.0000 LIQRESN=. LIQRESO=. LNDEP=. LNINC=. LNMD=. LNREP=. LO=3.1840 LSE=222.8670 LT=4.4430 LTDCH=.
LTDLCH=. LTLO=. MIB=0.0000 MIBN=. MIBT=0.0000 MIC=. MII=0.0000 MISEQ=. MTL=0.0000 NCFLIQ=. NEQMI=. NIO=0.0000
NIT=0.0000 NOASUB=. NOPI=. NP=0.0000 NPANL=0.0000 NPAORE=0.0000 NPARL=0.0000 NPAT=0.0000 NPFS=. OANCF=. OANCFC=.
OANCFD=. OIADP=27.1360 OIBDP=27.2320 ONBALB=. ONBALE=. OPPRFT=. PACQP=. PCL=0.0000 PI=26.9880 PLIACH=. PPEGT=0.0000
PPENT=0.4730 PRC=0.0000 PRODV=1.2180 PROSAI=. PRSTKC=. PRV=. PSFIX=. PSTK=0.0000 PSTKN=0.0000 PSTKR=0.0000
PTRAN=0.0000 PURTSHR=. PVON=0.0000 PVT=0.0000 RADP=0.0000 RAGR=0.0000 RARI=0.0000 RATI=0.0000 RAWMSM=. RCL=0.0000
RE=69.8670 RECCH=. RECCO=. RECCOFS=. RECT=. RECTFS=. RECTR=. RECTRFS=. REVT=34.4440 RIS=33.0940 RLRI=. RLT=0.0000
RPAG=0.0000 RV=. RVBCI=0.0000 RVBPI=0.0000 RVBTI=0.0000 RVEQT=69.8670 RVLRV=0.0000 RVRI=0.0000 RVSI=0.0000 RVTI=0.0000
RVUPI=0.0000 RVUTX=0.0000 SAA=0.0000 SAL=0.0000 SALE=. SBDC=0.0000 SC=0.0000 SCO=0.0000 SEQ=218.4240 SHRCAP=. SIV=.
SPI=0.0000 SPPCH=. SPPIV=. SSNP=0.0000 SSTK=. STBO=0.0000 STFIXA=. STINV=. STIO=12.9840 STKCH=. SUBDIS=. SUBPUR=.
TDSG=0.0000 TDST=0.0000 TEQ=. TRANSA=. TSCA=. TSTK=0.0000 TSTLTA=0.0000 TX=. TXC=. TXDB=. TXDC=. TXDI=. TXDITC=0.0000
TXO=. TXOP=. TXP=. TXPD=. TXPFS=. TXT=0.2430 TXW=. UI=0.0000 UNL=0.0000 UNNP=0.0000 VPAC=. VPO=. WCAP=. WCAPCH=.
WCAPCHC=. WCAPOPC=. WCAPS=. WCAPSA=. WCAPSU=. WCAPT=. WCAPU=. XACC=. XACCFS=. XAGO=2.6710 XAGT=6.0760 XCOM=0.0000
XCOMI=0.0000 XDVRE=0.0000 XEQO=. XI=0.0000 XIDO=. XIDOC=. XINDB=0.0000 XINDC=0.0000 XINS=0.1480 XINST=0.0000
XINT=0.1480 XINTD=0.0000 XIVI=0.0000 XIVRE=0.0000 XLR=. XNITB=. XOBD=0.0000 XOI=0.0000 XOPR=. XOPRO=. XORE=0.0000
XPP=. XPPFS=. XPR=. XRD=. XRENT=. XS=1.2320 XSGA=. XSTF=3.4050 XSTFO=. XSTFWS=. XT=7.4560 AJEXI=1.00000000
CSHOI=20.29700 CSHPRIA=20.29100 EPSEXCON=1.32000 EPSEXNC=. EPSINCON=1.32000 EPSINNC=. ICAPI=9.56600 NAICSH=523999
NICON=26.74500 NINC=. PV=. SICH=6799 TSTKNI=0.00000 PS=O PSTKRV=. PSTKL=. BE=218.424 year=1997 bvcEquity=. CSHO=.
PRCC_F=. capIntens=. cashFlow=. cashHoldings=. costcap=. leverages=0 bleverage=0 market_leverage=. roa=0.1200043075
roe=. ni=. cash_assets=. TobinsQ=. bvEqity=. _ERROR_=1 _N_=281
NOTE: Division by zero detected at line 2585 column 17.
GVKEY=005302 DATADATE=1998-06-30 FYEAR=1998 ADD1=460 Roberts Road, Level 1, Suite 5 ADD2=  ADD3=  ADD4=  ADDZIP=6008
BUSDESC=Labyrinth Resources Limited engages in the exploration and development of mineral properties in Australia. The
 company explores for gold, lithium, and nickel deposits. It also holds Labyrinth and Denain gold projects located in
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the Abitibi Greenstone Belt region of Quebec, Canada. CIK=0000312653 CITY=Subiaco CONML=Labyrinth Resources Limited
COUNTY= DLRSN= EIN= FAX=61 8 9380 8300 FYRC=6 GGROUP=1510 GIND=151040 GSECTOR=15 GSUBIND=15104030 IDBFLAG=B
INCORP= LOC=AUS NAICS=21222 PHONE=61 8 6149 1573 PRICAN= PRIROW=01W PRIUSA=90 SIC=1040 SPCINDCD=454 SPCSECCD=940
SPCSRC= STATE= STKO=3 WEBURL=labyrinthresources.com DLDTE=. IPODATE=. CONM=LABYRINTH RESOURCES LIMITED
ISIN=AU0000185597 SEDOL=BL55PB2 EXCHG=106 FYR=6 FIC=AUS ACCTSTD=DS ACQMETH= BSPR=GO COMPST= CURCD=AUD FINAL=Y
ISMOD=4 PDDUR=12 SCF=10 SRC=3 STALT= UPD=3 FDATE=. PDATE=. ACCLI=0.0000 ACCO=. ACO=0.0470 ACOFS=. ACOX=0.0000
ACOXFS=. ACQDISN=. ACQDISO=. ACT=0.7050 ADPAC=. AM=0.0550 AMDC=. AO=0.0060 AOLOCH=-0.0060 AOX=0.0060 AP=0.2370
APALCH=. APCH=0.0290 APDPFS=. APFS=. APO=0.0000 APOFS=. AQC=0.0000 ARTFS=. ASDIS=. ASINV=. AT=8.2340 ATOCH=0.0000 AU=4
AUOP=1 AUTXR=0.0000 BCEF=. BCT=. CA=. CAPCST=. CAPFL=. CAPR1=. CAPR2=. CAPR3=. CAPRT=. CAPS=1.7990 CAPX=0.7730
CAPXFI=. CEQ=6.3910 CFBD=. CFERE=. CFLAOTH=0.0000 CFO=. CFPDO=. CGA=. CH=0.1620 CHE=0.5300 CHEB=1.3160 CHECH=-1.1690
CHEE=0.1620 CHEFS=. CHENFD=. CHFS=. CHS=. CMP=. COGS=. CRVNLI=. CSHR=3.8960 CSTK=35.2680 CUSTADV=0.0000 DBTB=. DBTE=.
DC=0.0000 DCSFD=. DCUFD=. DD1=0.0000 DD1FS=. DFPAC=. DFXA=0.0730 DISPOCH=. DLC=0.0000 DLCCH=. DLCFS=. DLTIS=. DLTR=.
DLTT=0.0000 DO=0.0000 DOC=. DP=0.1280 DPACT=0.0970 DPC=0.1280 DPDC=. DPLTB=. DPSC=. DPSTB=. DPTB=. DPTC=. DPTIC=.
DV=0.0000 DVC=. DVP=. DVPDP=. DVREC=. DVRRE=. DVSCO=. DVT=. EA=0.0000 EBIT=-2.2770 EBITDA=-2.1490 EIEA=0.0000
EIEAC=0.0000 EMP=. EQDIVP=. ERO=5.2780 EXRE=. EXRES=. EXREU=. FATB=. FATE=. FATL=. FATP=. FCA=0.0000 FDFR=. FEA=.
FEL=. FFS=. FIAO=0.0500 FINCF=3.4580 FININC=. FINLE=. FINRE=. FINVAO=. FOPO=2.3540 FSRCO=. FSRCOPO=. FSRCOPT=. FSRCT=.
FUSEO=. FUSET=. GDWL=1.0540 IAEQ=. IAFXI=. IALOI=. IALTI=. IAMLI=. IAOI=. IAPLI=. IAREI=. IASSI=. IASTI=. IATI=.
IB=-2.1670 IBC=-4.0820 IBKI=. IBMII=. ICAPT=7.9970 IDIIS=. IDILB=. IDILC=. IDIS=. IDIST=. IDIT=0.0100 IDITS=. IIRE=.
INITB=. INTAN=1.0540 INTAND=. INTANP=0.0000 INTC=0.0000 INTFACT=0.0000 INTFL=. INTIACT=0.0000 INTOACT=0.0000 INTPD=.
INTPN=. INTRC=. INVCH=0.0000 INVDSP=. INVFG=0.0000 INVO=0.0000 INVRM=0.0000 INVSVC=. INVT=0.0000 INVTFS=.
INVWIP=0.0000 IOBD=. IOI=. IORE=. IP=. IPTI=. ISGR=. ISGT=. ISGU=. ISOTH=. IST=. IVACO=0.0000 IVAEQ=0.0000 IVAO=0.0000
IVCH=2.8210 IVGOD=. IVI=. IVNCF=-3.0550 IVPT=. IVST=0.3680 IVSTCH=0.0000 IVSTFS=. LCABG=. LCACL=. LCACR=. LCAG=.
LCAL=. LCALT=. LCAM=. LCAO=. LCAST=. LCAT=. LCO=0.0000 LCOFS=. LCOX=0.0000 LCT=0.2370 LCTFS=. LCUACU=. LIQRESN=.
LIQRESO=. LNDEP=. LNINC=. LNMD=. LNREP=. LO=0.0000 LSE=8.2340 LT=0.2370 LTDCH=0.1850 LTDLCH=. LTLO=. MIB=1.6060 MIBN=.
MIBT=1.6060 MIC=0.0000 MII=-1.9150 MISEQ=0.0000 MTL=. NCFLIQ=. NEQMI=. NIO=0.0000 NIT=. NOASUB=. NOPI=-1.8050
NP=0.0000 NPANL=. NPAORE=. NPARL=. NPAT=. NPFS=. OANCF=-1.5720 OANCFC=. OANCFD=. OIADP=-2.2770 OIBDP=-2.1490
ONBALB=0.0150 ONBALE=0.0000 OPPRFT=. PACQP=0.0000 PCL=. PI=-4.0820 PLIACH=0.0000 PPEGT=6.5660 PPENT=6.4690 PRC=0.0000
PRODV=0.0000 PROSAI=. PRSTKC=0.0000 PRV=0.0000 PSFIX=0.0970 PSTK=0.0000 PSTKN=0.0000 PSTKR=0.0000 PTRAN=.
PURTSHR=0.0000 PVON=. PVT=. RADP=. RAGR=. RARI=. RATI=. RAWMSM=. RCL=. RE=-36.5520 RECCH=0.0050 RECCO=0.1280 RECCOFS=.
RECT=0.1280 RECTFS=. RECTR=0.0000 RECTRFS=. REVT=0.0000 RIS=. RLRI=. RLT=. RPAG=. RV=0.0000 RVBCI=. RVBPI=. RVBTI=.
RVEQT=. RVLRV=0.0000 RVRI=. RVSI=. RVTI=. RVUPI=. RVUTX=0.0000 SAA=. SAL=. SALE=0.0000 SBDC=. SC=. SCO=0.0000
SEQ=6.3910 SHRCAP=. SIV=0.4420 SPI=-2.3540 SPPCH=. SPPIV=0.0000 SSNP=. SSTK=3.2230 STBO=. STFIXA=. STINV=. STIO=.
STKCH=. SUBDIS=. SUBPUR=. TDSG=. TDST=. TEQ=. TRANSA=0.5980 TSCA=0.0000 TSTK=0.0000 TSTLTA=0.0000 TX=0.0000 TXC=0.0000
TXDB=0.0000 TXDC=0.0000 TXDI=0.0000 TXDITC=0.0000 TXO=0.0000 TXOP=0.0000 TXP=0.0000 TXPD=. TXPFS=. TXT=0.0000
TXW=0.0000 UI=. UNL=0.0000 UNNP=0.0000 VPAC=. VPO=. WCAP=0.4680 WCAPCH=. WCAPCHC=. WCAPOPC=0.0280 WCAPS=. WCAPSA=.
WCAPSU=. WCAPT=. WCAPU=. XACC=0.0000 XACCFS=. XAGO=. XAGT=. XCOM=. XCOMI=. XDVRE=. XEQO=. XI=. XIDO=0.0000
XIDOC=0.0000 XINDB=. XINDC=. XINS=. XINST=. XINT=0.0000 XINTD=. XIVI=. XIVRE=. XLR=. XNITB=. XOBD=. XOI=. XOPR=2.1490
XOPRO=. XORE=. XPP=0.0470 XPPFS=. XPR=. XRD=. XRENT=. XS=. XSGA=. XSTF=. XSTFO=. XSTFWS=. XT=. AJEXI=0.00002314

CSHOI=105.19600 CSHPRIA=88.53700 EPSEXCON=-0.04600 EPSEXNC=. EPSINCON=-0.04600 EPSINNC=. ICAPI=35.26800 NAICSH=541512
NICON=-4.08200 NINC=. PV=0.33520 SICH=7373 TSTKNI=0.00000 PS=0 PSTKRV=. PSTKL=. BE=6.391 year=1998 bvcEquity=. CSHO=.
PRCC_F=. capIntens=0.0938790381 cashFlow=-0.480204032 cashHoldings=0.0643672577 costcap=. leverages=0 bleverage=0
market_leverage=. roa=-0.263177071 roe=. ni=. cash_assets=0.0643672577 TobinsQ=. bvEqity=. _ERROR_=1 _N_=431
NOTE: Division by zero detected at line 2585 column 17.
GVKEY=005302 DATADATE=1999-06-30 FYEAR=1999 ADD1=460 Roberts Road, Level 1, Suite 5 ADD2= ADD3= ADD4= ADDZIP=6008
BUSDESC=Labyrinth Resources Limited engages in the exploration and development of mineral properties in Australia. The
 company explores for gold, lithium, and nickel deposits. It also holds Labyrinth and Denain gold projects located in
the Abitibi Greenstone Belt region of Quebec, Canada. CIK=0000312653 CITY=Subiaco CONML=Labyrinth Resources Limited
COUNTY= DLRSN= EIN= FAX=61 8 9380 8300 FYRC=6 GGROUP=1510 GIND=151040 GSECTOR=15 GSUBIND=15104030 IDBFLAG=B
INCORP= LOC=AUS NAICS=21222 PHONE=61 8 6149 1573 PRICAN= PRIROW=01W PRIUSA=90 SIC=1040 SPCINDCD=454 SPCSECCD=940
SPCSRC= STATE= STKO=3 WEBURL=labyrinthresources.com DLDTE=. IPODATE=. CONM=LABYRINTH RESOURCES LIMITED
ISIN=AU0000185597 SEDOL=BL55PB2 EXCHG=106 FYR=6 FIC=AUS ACCTSTD=DS ACQMETH= BSPR=GO COMPST= CURCD=AUD FINAL=Y
ISMOD=4 PDDUR=12 SCF=10 SRC=88 STALT= UPD=3 FDATE=. PDATE=. ACCLI=0.0000 ACCO=. ACO=0.0220 ACOFS=. ACOX=0.0000
ACOXFS=. ACQDISN=. ACQDISO=. ACT=2.5680 ADPAC=. AM=0.0000 AMDC=. AO=2.8750 AOLOCH=0.0320 AOX=2.8750 AP=0.4540 APALCH=.
APCH=0.2460 APDPFS=. APFS=. APO=0.0360 APOFS=. AQC=0.5010 ARTFS=. ASDIS=. ASINV=. AT=9.1820 ATOCH=0.0000 AU=6 AUOP=3
AUTXR=0.0000 BCEF=. BCT=. CA=. CAPCST=. CAPFL=. CAPR1=. CAPR2=. CAPR3=. CAPRT=. CAPS=0.0000 CAPX=0.2720 CAPXFI=.
CEQ=9.0930 CFBD=. CFERE=. CFLAOTH=0.0000 CFO=. CFPDO=. CGA=. CH=1.4070 CHE=2.1820 CHEB=0.1620 CHECH=1.2450 CHEE=1.4070
CHEFS=. CHENFD=. CHFS=. CHS=. CMP=. COGS=. CRVNLI=. CSHR=. CSTK=48.6260 CUSTADV=0.0000 DBTB=. DBTE=. DC=0.0000 DCSFD=.
DCUFD=. DD1=0.0000 DD1FS=. DFPAC=. DFXA=0.0380 DISPOCH=. DLC=0.0000 DLCCH=0.0000 DLCFS=. DLTIS=. DLTR=. DLTT=0.0000
DO=0.0000 DOC=. DP=0.0380 DPACT=0.0370 DPC=0.0380 DPDC=. DPLTB=. DPSC=. DPSTB=. DPTB=. DPTC=. DPTIC=. DV=0.0000 DVC=.
DVP=. DVPDP=. DVREC=. DVRRE=. DVSCO=. DVT=. EA=0.0000 EBIT=-2.4600 EBITDA=-2.4220 EIEA=0.0000 EIEAC=0.0000 EMP=.
EQDIVP=. ERO=0.5160 EXRE=. EXRES=. EXREU=. FATB=. FATE=. FATL=. FATP=. FCA=0.0000 FDFR=. FEA=. FEL=. FFS=.
FIAO=-0.3640 FINCF=4.0590 FININC=. FINLE=. FINRE=. FINVAO=. FOPO=3.9590 FSRCO=. FSRCOPO=. FSRCOPT=. FSRCT=. FUSEO=.
FUSET=. GDWL=0.0000 IAEQ=. IAFXI=. IALOI=. IALTI=. IAMLI=. IAOI=. IAPLI=. IAREI=. IASSI=. IASTI=. IATI=. IB=-3.5820
IBC=-6.0130 IBKI=. IBMII=. ICAPT=8.6920 IDIIS=. IDILB=. IDILC=. IDIS=. IDIST=. IDIT=0.0040 IDITS=. IIRE=. INITB=.
INTAN=0.0000 INTAND=. INTANP=0.0000 INTC=0.0000 INTFACT=0.0000 INTFL=. INTIACT=0.0000 INTOACT=0.0000 INTPD=. INTPN=.
INTRC=. INVCH=0.0000 INVDSP=. INVFG=0.0000 INVO=0.0000 INVRM=0.0000 INVSVC=. INVT=0.0000 INVTFS=. INVWIP=0.0000 IOBD=.
IOI=. IORE=. IP=. IPTI=. ISGR=. ISGT=. ISGU=. ISOTH=. IST=. IVACO=0.0000 IVAEQ=0.0000 IVAO=0.0000 IVCH=0.8780 IVGOD=.
IVI=. IVNCF=-1.2260 IVPT=. IVST=0.7750 IVSTCH=0.0000 IVSTFS=. LCABG=. LCACL=. LCACR=. LCAG=. LCAL=. LCALT=. LCAM=.
LCAO=. LCAST=. LCAT=. LCO=0.0360 LCOFS=. LCOX=0.0000 LCT=0.4900 LCTFS=. LCUACU=. LIQRESN=. LIQRESO=. LNDEP=. LNINC=.
LNMD=. LNREP=. LO=0.0000 LSE=9.1820 LT=0.4900 LTDCH=0.0000 LTDLCH=. LTLO=. MIB=-0.4010 MIBN=. MIBT=-0.4010 MIC=0.0000
MII=-2.4310 MISEQ=0.0000 MTL=. NCFLIQ=. NEQMI=. NIO=0.0000 NIT=. NOASUB=. NOPI=-3.5530 NP=0.0000 NPANL=. NPAORE=.
NPARL=. NPAT=. NPFS=. OANCF=-1.5880 OANCFC=. OANCFD=. OIADP=-2.4600 OIBDP=-2.4220 ONBALB=. ONBALE=. OPPRFT=.
PACQP=0.0000 PCL=. PI=-6.0130 PLIACH=0.0000 PPEGT=3.7760 PPENT=3.7390 PRC=0.0000 PRODV=0.0000 PROSAI=. PRSTKC=0.0000
PRV=0.0990 PSFIX=0.0500 PSTK=0.0000 PSTKN=0.0000 PSTKR=0.0000 PTRAN=. PURTSHR=0.0000 PVON=. PVT=. RADP=. RAGR=. RARI=.
RATI=. RAWMSM=. RCL=. RE=-40.1340 RECCH=0.0290 RECCO=0.3640 RECCOFS=. RECT=0.3640 RECTFS=. RECTR=0.0000 RECTRFS=.
REVT=0.0000 RIS=. RLRI=. RLT=. RPAG=. RV=0.0000 RVBCI=. RVBPI=. RVBTI=. RVEQT=. RVLRV=0.0000 RVRI=. RVSI=. RVTI=.

RVUPI=. RVUTX=0.0000 SAA=. SAL=. SALE=0.0000 SBDC=. SC=. SCO=0.0000 SEQ=9.0930 SHRCAP=. SIV=0.3750 SPI=-3.9320 SPPCH=.
SPPIV=0.0220 SSNP=. SSTK=4.4230 STBO=. STFIXA=. STINV=. STIO=. STKCH=. SUBDIS=. SUBPUR=. TDSG=. TDST=. TEQ=.
TRANSA=0.0850 TSCA=0.0000 TSTK=0.0000 TSTLTA=0.0000 TX=0.0000 TXC=0.0000 TXDB=0.0000 TXDC=0.0000 TXDI=0.0000
TXDITC=0.0000 TXO=0.0000 TXOP=0.0000 TXP=0.0000 TXPD=. TXPFS=. TXT=0.0000 TXW=0.0000 UI=. UNL=0.0000 UNNP=0.0000
VPAC=. VPO=. WCAP=2.0780 WCAPCH=. WCAPCHC=. WCAPOPC=0.3070 WCAPS=. WCAPSA=. WCAPSU=. WCAPT=. WCAPU=. XACC=0.0000
XACCFS=. XAGO=. XAGT=. XCOM=. XCOMI=. XDVRE=. XEQO=. XI=. XIDO=0.0000 XIDOC=0.0000 XINDB=. XINDC=. XINS=. XINST=.
XINT=0.0000 XINTD=. XIVI=. XIVRE=. XLR=. XNITB=. XOBD=. XOI=. XOPR=2.4220 XOPRO=. XORE=. XPP=0.0220 XPPFS=. XPR=.
XRD=. XRENT=. XS=. XSGA=. XSTF=. XSTFO=. XSTFWS=. XT=. AJEXI=0.00009254 CSHOI=107.37700 CSHPRIA=41.84200
EPSEXCON=-0.14400 EPSEXNC=. EPSINCON=-0.14400 EPSINNC=. ICAPI=48.62600 NAICSH=541512 NICON=. NINC=. PV=. SICH=7373
TSTKNI=. PS=0 PSTKRV=. PSTKL=. BE=9.093 year=1999 bvcEquity=. CSHO=. PRCC_F=. capIntens=0.0296231758
cashFlow=-0.650729689 cashHoldings=0.2376388586 costcap=. leverages=0 bleverage=0 market_leverage=. roa=-0.390111087
roe=. ni=. cash_assets=0.2376388586 TobinsQ=. bvEqity=. _ERROR_=1 _N_=432
NOTE: Division by zero detected at line 2585 column 17.
WARNING: Limit set by ERRORS= option reached. Further errors of this type will not be printed.
GVKEY=005302 DATADATE=2000-06-30 FYEAR=2000 ADD1=460 Roberts Road, Level 1, Suite 5 ADD2= ADD3= ADD4= ADDZIP=6008
BUSDESC=Labyrinth Resources Limited engages in the exploration and development of mineral properties in Australia. The
 company explores for gold, lithium, and nickel deposits. It also holds Labyrinth and Denain gold projects located in
the Abitibi Greenstone Belt region of Quebec, Canada. CIK=0000312653 CITY=Subiaco CONML=Labyrinth Resources Limited
COUNTY= DLRSN= EIN= FAX=61 8 9380 8300 FYRC=6 GGROUP=1510 GIND=151040 GSECTOR=15 GSUBIND=15104030 IDBFLAG=B
INCORP= LOC=AUS NAICS=21222 PHONE=61 8 6149 1573 PRICAN= PRIROW=01W PRIUSA=90 SIC=1040 SPCINDCD=454 SPCSECCD=940
SPCSRC= STATE= STKO=3 WEBURL=labyrinthresources.com DLDTE=. IPODATE=. CONM=LABYRINTH RESOURCES LIMITED
ISIN=AU0000185597 SEDOL=BL55PB2 EXCHG=106 FYR=6 FIC=AUS ACCTSTD=DS ACQMETH= BSPR=GO COMPST= CURCD=AUD FINAL=Y
ISMOD=4 PDDUR=12 SCF=10 SRC=3 STALT= UPD=3 FDATE=. PDATE=. ACCLI=0.0000 ACCO=. ACO=0.4790 ACOFS=. ACOX=0.0000
ACOXFS=. ACQDISN=. ACQDISO=. ACT=4.7960 ADPAC=. AM=0.2020 AMDC=. AO=0.0480 AOLOCH=-0.4390 AOX=0.0480 AP=2.2510
APALCH=. APCH=0.7710 APDPFS=. APFS=. APO=0.0300 APOFS=. AQC=0.0000 ARTFS=. ASDIS=. ASINV=. AT=7.8370 ATOCH=0.0000 AU=6
AUOP=3 AUTXR=0.0000 BCEF=. BCT=. CA=. CAPCST=. CAPFL=. CAPR1=. CAPR2=. CAPR3=. CAPRT=. CAPS=0.0000 CAPX=0.3470
CAPXFI=. CEQ=5.5290 CFBD=. CFERE=. CFLAOTH=0.0000 CFO=. CFPDO=. CGA=. CH=2.9720 CHE=3.0070 CHEB=1.4070 CHECH=1.5650
CHEE=2.9720 CHEFS=. CHENFD=. CHFS=. CHS=. CMP=. COGS=. CRVNLI=. CSHR=5.7930 CSTK=56.9080 CUSTADV=0.0000 DBTB=. DBTE=.
DC=0.0000 DCSFD=. DCUFD=. DD1=0.0000 DD1FS=. DFPAC=. DFXA=0.0840 DISPOCH=. DLC=0.0000 DLCCH=0.0000 DLCFS=. DLTIS=.
DLTR=. DLTT=0.0000 DO=0.0000 DOC=. DP=0.2860 DPACT=0.0040 DPC=0.2860 DPDC=. DPLTB=. DPSC=. DPSTB=. DPTB=. DPTC=.
DPTIC=. DV=0.0000 DVC=. DVP=. DVPDP=. DVREC=. DVRRE=. DVSCO=. DVT=. EA=0.0000 EBIT=-2.3780 EBITDA=-2.0920 EIEA=0.0000
EIEAC=0.0000 EMP=. EQDIVP=. ERO=0.5160 EXRE=. EXRES=. EXREU=. FATB=. FATE=. FATL=. FATP=. FCA=0.0000 FDFR=. FEA=.
FEL=. FFS=. FIAO=-0.1570 FINCF=6.3250 FININC=. FINLE=. FINRE=. FINVAO=. FOPO=6.1220 FSRCO=. FSRCOPO=. FSRCOPT=.
FSRCT=. FUSEO=. FUSET=. GDWL=2.6470 IAEQ=. IAFXI=. IALOI=. IALTI=. IAMLI=. IAOI=. IAPLI=. IAREI=. IASSI=. IASTI=.
IATI=. IB=-11.6930 IBC=-11.6930 IBKI=. IBMII=. ICAPT=5.5290 IDIIS=. IDILB=. IDILC=. IDIS=. IDIST=. IDIT=0.1010 IDITS=.
IIRE=. INITB=. INTAN=2.6470 INTAND=. INTANP=0.0000 INTC=0.0000 INTFACT=0.0000 INTFL=. INTIACT=0.0000 INTOACT=0.0000
INTPD=. INTPN=. INTRC=. INVCH=-0.1850 INVDSP=. INVFG=0.0000 INVO=0.1850 INVRM=0.0000 INVSVC=. INVT=0.1850 INVTFS=.
INVWIP=0.0000 IOBD=. IOI=. IORE=. IP=. IPTI=. ISGR=. ISGT=. ISGU=. ISOTH=. IST=. IVACO=0.0000 IVAEQ=0.0000 IVAO=0.0000

```
IVCH=2.7050 IVGOD=. IVI=. IVNCF=-2.5060 IVPT=. IVST=0.0350 IVSTCH=0.0000 IVSTFS=. LCABG=. LCACL=. LCACR=. LCAG=.
LCAL=. LCALT=. LCAM=. LCAO=. LCAST=. LCAT=. LCO=0.0300 LCOFS=. LCOX=0.0000 LCT=2.2810 LCTFS=. LCUACU=. LIQRESN=.
LIQRESO=. LNDEP=. LNINC=. LNMD=. LNREP=. LO=0.0270 LSE=7.8370 LT=2.3080 LTDCH=0.0000 LTDLCH=. LTLO=. MIB=0.0000 MIBN=.
MIBT=0.0000 MIC=0.0000 MII=0.0000 MISEQ=0.0000 MTL=. NCFLIQ=. NEQMI=. NIO=0.0000 NIT=. NOASUB=. NOPI=-9.3150 NP=0.0000
NPANL=. NPAORE=. NPARL=. NPAT=. NPFS=. OANCF=-2.2540 OANCFC=. OANCFD=. OIADP=-2.3780 OIBDP=-2.0920 ONBALB=. ONBALE=.
OPPRFT=. PACQP=0.0000 PCL=. PI=-11.6930 PLIACH=0.0000 PPEGT=0.3500 PPENT=0.3460 PRC=0.0000 PRODV=0.0000 PROSAI=.
PRSTKC=0.0000 PRV=2.5370 PSFIX=0.0000 PSTK=0.0000 PSTKN=0.0000 PSTKR=0.0000 PTRAN=. PURTSHR=0.0000 PVON=. PVT=. RADP=.
RAGR=. RARI=. RATI=. RAWMSM=. RCL=. RE=-51.8270 RECCH=-0.1680 RECCO=1.1250 RECCOFS=. RECT=1.1250 RECTFS=. RECTR=0.0000
RECTRFS=. REVT=3.8650 RIS=. RLRI=. RLT=. RPAG=. RV=0.0260 RVBCI=. RVBPI=. RVBTI=. RVEQT=. RVLRV=0.0000 RVRI=. RVSI=.
RVTI=. RVUPI=. RVUTX=0.0000 SAA=. SAL=. SALE=3.8650 SBDC=. SC=. SCO=0.0000 SEQ=5.5290 SHRCAP=. SIV=0.5460 SPI=-9.4160
SPPCH=. SPPIV=0.4890 SSNP=. SSTK=6.4820 STBO=. STFIXA=. STINV=. STIO=. STKCH=. SUBDIS=. SUBPUR=. TDSG=. TDST=. TEQ=.
TRANSA=-0.0680 TSCA=0.0000 TSTK=0.0000 TSTLTA=0.0000 TX=0.0000 TXC=0.0000 TXDB=0.0000 TXDC=0.0000 TXDI=0.0000
TXDITC=0.0000 TXO=0.0000 TXOP=0.0000 TXP=0.0000 TXPD=. TXPFS=. TXT=0.0000 TXW=0.0000 UI=. UNL=0.0000 UNNP=0.0000
VPAC=. VPO=. WCAP=2.5150 WCAPCH=. WCAPCHC=. WCAPOPC=-0.0210 WCAPS=. WCAPSA=. WCAPSU=. WCAPT=. WCAPU=. XACC=0.0000
XACCFS=. XAGO=. XAGT=. XCOM=. XCOMI=. XDVRE=. XEQO=. XI=. XIDO=0.0000 XIDOC=0.0000 XINDB=. XINDC=. XINS=. XINST=.
XINT=0.0000 XINTD=. XIVI=. XIVRE=. XLR=. XNITB=. XOBD=. XOI=. XOPR=5.9570 XOPRO=. XORE=. XPP=0.4790 XPPFS=. XPR=.
XRD=. XRENT=. XS=. XSGA=. XSTF=. XSTFO=. XSTFWS=. XT=. AJEXI=0.00009254 CSHOI=151.40500 CSHPRIA=108.19800
EPSEXCON=-0.10800 EPSEXNC=. EPSINCON=-0.10800 EPSINNC=. ICAPI=56.90800 NAICSH=541512 NICON=-11.69300 NINC=. PV=.
SICH=7373 TSTKNI=. PS=0 PSTKRV=. PSTKL=. BE=5.529 year=2000 bvcEquity=. CSHO=. PRCC_F=. capIntens=0.0442771469
cashFlow=-1.455531453 cashHoldings=0.3836927396 costcap=. leverages=0 bleverage=0 market_leverage=. roa=-1.49202501
roe=. ni=. cash_assets=0.3836927396 TobinsQ=. bvEqity=. _ERROR_=1 _N_=433
NOTE: Missing values were generated as a result of performing an operation on missing values.
      Each place is given by: (Number of times) at (Line):(Column).
      295 at 2576:10      78313 at 2581:22     15248 at 2582:19     18665 at 2583:18     3329 at 2584:21
      5017 at 2585:17     1333 at 2587:21      239 at 2587:27       1333 at 2590:21      1333 at 2591:27
      17 at 2591:38       76963 at 2591:43     90 at 2593:11        78313 at 2594:11     3329 at 2595:20
      78313 at 2598:16
NOTE: Mathematical operations could not be performed at the following places. The results of the operations have been
      set to missing values.
      Each place is given by: (Number of times) at (Line):(Column).
      105 at 2582:19     119 at 2583:22      302 at 2584:21      7497 at 2585:17    110 at 2587:27     302 at 2590:28
      305 at 2593:11     302 at 2595:20
NOTE: There were 78313 observations read from the data set MERGBACK.GVKEY_IN_COMP_GLOBAL.
NOTE: The data set WORK.GLOBAL_COMP has 78313 observations and 18 variables.
NOTE: DATA statement used (Total process time):
      real time           1.53 seconds
      user cpu time       0.23 seconds
      system cpu time     0.34 seconds
```

```
        memory              1447.09k
        OS Memory           53272.00k
        Timestamp           06/18/2024 06:05:15 PM
        Step Count                         141  Switch Count  0


2613  * short debt/ total debt;

2614

2615  *Debt/Asset Ratio = Total Debt/total Assets;

2616

2617  *Debt-to-Equity Ratio = totaldebt/;

2618  *short debt

2619   short

2620  run;

2621  data my_compustat;

2622      set global_comp

2623          northamerica_comp;

2624      run;


NOTE: There were 78313 observations read from the data set WORK.GLOBAL_COMP.
NOTE: There were 214026 observations read from the data set WORK.NORTHAMERICA_COMP.
NOTE: The data set WORK.MY_COMPUSTAT has 292339 observations and 18 variables.
NOTE: DATA statement used (Total process time):
        real time           0.09 seconds
        user cpu time       0.04 seconds
        system cpu time     0.04 seconds
        memory              934.15k
        OS Memory           53268.00k
        Timestamp           06/18/2024 06:05:15 PM
        Step Count                         142  Switch Count  0


2625  proc sort data = foreign_trans_decile NODUPKEY
2626            out  = or_ee_gvkey_patentid_record_dt2 ;
2627      * by rf_id or_name exec_dt permno;
2628          by rf_id or_name;
2629  run;
```

NOTE: There were 25513 observations read from the data set WORK.FOREIGN_TRANS_DECILE.
NOTE: SAS sort was used.
NOTE: 0 observations with duplicate key values were deleted.
NOTE: The data set WORK.OR_EE_GVKEY_PATENTID_RECORD_DT2 has 25513 observations and 45 variables.
NOTE: PROCEDURE SORT used (Total process time):
      real time   0.13 seconds
      user cpu time   0.07 seconds
      system cpu time   0.06 seconds
      memory   50388.56k
      OS Memory   102404.00k
      Timestamp   06/18/2024 06:07:08 PM
      Step Count   143 Switch Count 0

2630 proc sort data = or_ee_gvkey_patentid_record_dt2
2631   out = oree_gvkey_patentid_record_dtv2 NODUPKEYS;
2632   by permno record_dt;
2633 run;

NOTE: There were 25513 observations read from the data set WORK.OR_EE_GVKEY_PATENTID_RECORD_DT2.
NOTE: SAS sort was used.
NOTE: 7383 observations with duplicate key values were deleted.
NOTE: The data set WORK.OREE_GVKEY_PATENTID_RECORD_DTV2 has 18130 observations and 45 variables.
NOTE: PROCEDURE SORT used (Total process time):
      real time   0.11 seconds
      user cpu time   0.03 seconds
      system cpu time   0.07 seconds
      memory   46249.59k
      OS Memory   98292.00k
      Timestamp   06/18/2024 06:07:13 PM
      Step Count   144 Switch Count 0

2634 proc sql;
2635   create table oree_gvkey_record_dtv2_comp as
2636   select * from
2637   oree_gvkey_patentid_record_dtv2 as a
2638

```
2639            /*or_ee_gvkey_patentid_record_dt2 as a*/
2640                inner join
2641            my_compustat as b
2642            on a.or_gvkey = b.gvkey
2643            and    year(a.record_dt) = b.YEAR;
NOTE: Table WORK.OREE_GVKEY_RECORD_DTV2_COMP created, with 19313 rows and 63 columns.

2644            /*and    year(a.record_dt) - b.FYEAR=1;*/
2645  quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time           0.33 seconds
      user cpu time       0.14 seconds
      system cpu time     0.12 seconds
      memory              33445.31k
      OS Memory           85260.00k
      Timestamp           06/18/2024 06:07:54 PM
      Step Count                         145  Switch Count  0


2646  run;

2647  PROC DATASETS NOLIST;
2648  COPY IN = work OUT = mergback ;
2649  select  oree_gvkey_patentid_record_dtv2 ;
2650  RUN;

NOTE: Copying WORK.OREE_GVKEY_PATENTID_RECORD_DTV2 to MERGBACK.OREE_GVKEY_PATENTID_RECORD_DTV2 (memtype=DATA).
INFO: Engine's block-read method is in use.
INFO: Engine's block-write  method is in use.
NOTE: There were 18130 observations read from the data set WORK.OREE_GVKEY_PATENTID_RECORD_DTV2.
NOTE: The data set MERGBACK.OREE_GVKEY_PATENTID_RECORD_DTV2 has 18130 observations and 45 variables.

NOTE: PROCEDURE DATASETS used (Total process time):
      real time           6:20.84
      user cpu time       7.98 seconds
      system cpu time     16.29 seconds
      memory              1216.71k
      OS Memory           53820.00k
```

2651   PROC SQL;
2652   create table car1_day2_comp as
2653   select * from allfor as a
2654   inner join oree_gvkey_record_dtv2_comp as b
2655   on a.permno = b.permno and a.evtdate = b.record_dt
2656
2657   quit;

          22
          76
ERROR 22-322: Syntax error, expecting one of the following: !, !!, &, *, **, +, ',', -, /, <, <=, <>, =, >, >=, AND,
              EQ, EQT, GE, GET, GROUP, GT, GTT, HAVING, LE, LET, LT, LTT, NE, NET, OR, ORDER, WHERE, ^=, |, ||, ~=.

ERROR 76-322: Syntax error, statement will be ignored.

2658   run;
NOTE: PROC SQL statements are executed immediately; The RUN statement has no effect.
NOTE: The SAS System stopped processing this step because of errors.
NOTE: PROCEDURE SQL used (Total process time):
      real time   21.56 seconds
      user cpu time   0.42 seconds
      system cpu time   1.06 seconds
      memory   74.78k
      OS Memory   52500.00k
      Timestamp   06/18/2024 06:28:44 PM
      Step Count   147 Switch Count 1

2659   PROC SQL;
2660   create table car1_day2_comp as
2661   select * from allfor as a
2662   inner join oree_gvkey_record_dtv2_comp as b
2663   on a.permno = b.permno and a.evtdate = b.record_dt;

WARNING: Variable permno already exists on file WORK.CAR1_DAY2_COMP.
NOTE: Table WORK.CAR1_DAY2_COMP created, with 18413 rows and 84 columns.

2664
2665 quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time   0.08 seconds
      user cpu time   0.01 seconds
      system cpu time   0.06 seconds
      memory   5899.18k
      OS Memory   58180.00k
      Timestamp   06/18/2024 06:28:45 PM
      Step Count   148 Switch Count 0

2666 run;

2667 PROC SQL;
2668   create table Evt_foreign_all_car1_day2_comp as
2669   select * from car_evtdate as a
2670   inner join oree_gvkey_record_dtv2_comp as b
2671   on a.permno = b.permno and a.evtdate = b.record_dt;
WARNING: Variable permno already exists on file WORK.EVT_FOREIGN_ALL_CAR1_DAY2_COMP.
NOTE: Table WORK.EVT_FOREIGN_ALL_CAR1_DAY2_COMP created, with 1049 rows and 81 columns.

2672 quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time   0.08 seconds
      user cpu time   0.03 seconds
      system cpu time   0.03 seconds
      memory   6131.53k
      OS Memory   58436.00k
      Timestamp   06/18/2024 06:30:05 PM
      Step Count   149 Switch Count 0

2673 run;

```
2674  PROC DATASETS NOLIST;
2675  COPY IN = work OUT = evtwindd ;
2676  select  car1_day2_comp ;
2677  RUN;
```

NOTE: Copying WORK.CAR1_DAY2_COMP to EVTWINDD.CAR1_DAY2_COMP (memtype=DATA).
INFO: Engine's block-read method is in use.
INFO: Engine's block-write method is in use.
NOTE: There were 18413 observations read from the data set WORK.CAR1_DAY2_COMP.
NOTE: The data set EVTWINDD.CAR1_DAY2_COMP has 18413 observations and 84 variables.

NOTE: PROCEDURE DATASETS used (Total process time):
      real time   45.05 seconds
      user cpu time   1.15 seconds
      system cpu time   2.43 seconds
      memory   1372.96k
      OS Memory   52632.00k
      Timestamp   06/18/2024 06:33:32 PM
      Step Count   150 Switch Count 1


```
2678   PROC DATASETS NOLIST;
2679  COPY IN = work OUT = mergback ;
2680  select  car1_day2_comp ;
2681  RUN;
```

NOTE: Copying WORK.CAR1_DAY2_COMP to MERGBACK.CAR1_DAY2_COMP (memtype=DATA).
INFO: Engine's block-read method is in use.
INFO: Engine's block-write method is in use.
NOTE: There were 18413 observations read from the data set WORK.CAR1_DAY2_COMP.
NOTE: The data set MERGBACK.CAR1_DAY2_COMP has 18413 observations and 84 variables.

NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE DATASETS used (Total process time):
      real time   4:50.54
      user cpu time   3.84 seconds
      system cpu time   12.89 seconds

```
       memory                 11441.12k
       OS Memory              57900.00k
       Timestamp              06/18/2024 06:38:22 PM
       Step Count                       151  Switch Count  1


2682   proc means data = car1_day2_comp;
2683   var car0 car1 car2 car3;
2684   run;

NOTE: Multiple concurrent threads will be used to summarize data.
NOTE: There were 18413 observations read from the data set WORK.CAR1_DAY2_COMP.
NOTE: PROCEDURE MEANS used (Total process time):
       real time              0.08 seconds
       user cpu time          0.04 seconds
       system cpu time        0.06 seconds
       memory                 7752.06k
       OS Memory              65412.00k
       Timestamp              06/18/2024 06:38:22 PM
       Step Count                       152  Switch Count  0


2685   proc means data = Evtwindd.car_evtwin(where =(evttime=2));
2686   var car0 car1 car2 car3;
2687   run;

NOTE: Multiple concurrent threads will be used to summarize data.
NOTE: There were 17200 observations read from the data set EVTWINDD.CAR_EVTWIN.
       WHERE evttime=2;
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
       format.
NOTE: PROCEDURE MEANS used (Total process time):
       real time              0.06 seconds
       user cpu time          0.04 seconds
       system cpu time        0.03 seconds
       memory                 7092.50k
       OS Memory              68684.00k
       Timestamp              06/18/2024 06:41:02 PM
```

```
      Step Count                        153  Switch Count  0


2688  proc sql;
2689  select count(distinct permno|evtdate) from Evtwindd.car_evtwin  where  evttime=2;
2690  quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time           0.05 seconds
      user cpu time       0.03 seconds
      system cpu time     0.00 seconds
      memory              5201.46k
      OS Memory           68412.00k
      Timestamp           06/18/2024 06:46:24 PM
      Step Count                        154  Switch Count  0


2691  run;

2692  proc sql;
2693     select count(distinct permno||evtdate) from Evtwindd.car_evtwin  where  evttime=2;
ERROR: Concatenation (||) requires character operands.
2694     quit;
NOTE: The SAS System stopped processing this step because of errors.
NOTE: PROCEDURE SQL used (Total process time):
      real time           0.00 seconds
      user cpu time       0.00 seconds
      system cpu time     0.00 seconds
      memory              5215.25k
      OS Memory           68412.00k
      Timestamp           06/18/2024 06:48:24 PM
      Step Count                        155  Switch Count  0


2695  proc sql;
2696  select count(*) from (
2697  select distinct permno, evtdate, count(car0) from Evtwindd.car_evtwin  where  evttime=2
2698  group by permno, evtdate);
NOTE: SAS threaded sort was used.
```

```
2699  quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time           0.06 seconds
      user cpu time       0.03 seconds
      system cpu time     0.01 seconds
      memory              21867.37k
      OS Memory           83780.00k
      Timestamp           06/18/2024 06:49:29 PM
      Step Count                      156  Switch Count  0


2700  run;

2701  proc sql;
2702  create table _acheck as
2703  select distinct permno, evtdate, count(car0) as ccc from Evtwindd.car_evtwin  where  evttime=2
2704  group by permno, evtdate;
NOTE: SAS threaded sort was used.
NOTE: Table WORK._ACHECK created, with 17200 rows and 3 columns.

2705  quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time           0.29 seconds
      user cpu time       0.04 seconds
      system cpu time     0.04 seconds
      memory              22005.09k
      OS Memory           84036.00k
      Timestamp           06/19/2024 12:07:38 PM
      Step Count                      157  Switch Count  0


2706  run;

2707   Title "in Car1_day2_comp";
2708  proc means data = car1_day2_comp;
2709  var car0 car1 car2 car3;
2710  run;
```

NOTE: Multiple concurrent threads will be used to summarize data.
NOTE: There were 18413 observations read from the data set WORK.CAR1_DAY2_COMP.
NOTE: PROCEDURE MEANS used (Total process time):
      real time   0.09 seconds
      user cpu time   0.07 seconds
      system cpu time   0.01 seconds
      memory   7534.87k
      OS Memory   69520.00k
      Timestamp   06/19/2024 12:09:49 PM
      Step Count   158 Switch Count 0

2711 Title "cAR_EVTWIN ";
2712 proc means data = Evtwindd.car_evtwin(where =(evttime=2));
2713 var car0 car1 car2 car3;
2714 run;

NOTE: Multiple concurrent threads will be used to summarize data.
NOTE: There were 17200 observations read from the data set EVTWINDD.CAR_EVTWIN.
      WHERE evttime=2;
NOTE: PROCEDURE MEANS used (Total process time):
      real time   0.08 seconds
      user cpu time   0.04 seconds
      system cpu time   0.01 seconds
      memory   7092.18k
      OS Memory   68940.00k
      Timestamp   06/19/2024 12:09:49 PM
      Step Count   159 Switch Count 0

2715 proc sql;
2716 select count(*) from (
2717 select distinct permno, evtdate, count(car0) as ccc from Evtwindd.car_evtwin where evttime=2
2718 group by permno, evtdate);
NOTE: SAS threaded sort was used.
2719 quit;
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.

```
NOTE: PROCEDURE SQL used (Total process time):
      real time            0.08 seconds
      user cpu time        0.04 seconds
      system cpu time      0.03 seconds
      memory               21870.68k
      OS Memory            76068.00k
      Timestamp            06/19/2024 12:12:39 PM
      Step Count                        160  Switch Count  0


2720  run;

2721  Title "unique combinatons in foreign transactions";
2722  proc sql;
2723  select count(*) from (
2724  select distinct permno, record_dt, count(*) as ccc
2725  from  foreign_trans_decile
2726  group by permno, record_dt;
                                    -
                                    79
ERROR 79-322: Expecting a ).

2727  quit;
NOTE: The SAS System stopped processing this step because of errors.
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE SQL used (Total process time):
      real time            0.00 seconds
      user cpu time        0.00 seconds
      system cpu time      0.00 seconds
      memory               74.59k
      OS Memory            49152.00k
      Timestamp            06/19/2024 02:44:12 PM
      Step Count                        161  Switch Count  0


2728  run;
```

```
2729  Title "unique combinatons in foreign transactions";
2730  proc sql;
2731  select count(*) from (
2732  select distinct permno, record_dt, count(*) as ccc
2733  from  foreign_trans_decile
2734  group by permno, record_dt);
NOTE: SAS threaded sort was used.
2735  quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time           0.36 seconds
      user cpu time       0.06 seconds
      system cpu time     0.06 seconds
      memory              26700.28k
      OS Memory           74472.00k
      Timestamp           06/19/2024 02:44:32 PM
      Step Count                        162  Switch Count  0


2736  run;

2737  Title "unique combinatons in foreign transactions";
2738  proc sql;
2739  select count(*) from (
2740  select distinct permno, record_dt, count(*) as ccc
2741  from  foreign_trans
2742  group by permno, record_dt);
NOTE: SAS threaded sort was used.
2743  quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time           0.09 seconds
      user cpu time       0.01 seconds
      system cpu time     0.07 seconds
      memory              26700.15k
      OS Memory           74216.00k
      Timestamp           06/19/2024 02:45:02 PM
      Step Count                        163  Switch Count  0
```

```
2744  run;

2745  proc sort data = foreign_trans_decile;
2746  by permno  record_dt;
2747  run;

ERROR: You cannot open WORK.FOREIGN_TRANS_DECILE.DATA for output access with member-level control because
WORK.FOREIGN_TRANS_DECILE.DATA is in use by you in resource environment SORT.
NOTE: The SAS System stopped processing this step because of errors.
NOTE: PROCEDURE SORT used (Total process time):
      real time            0.00 seconds
      user cpu time        0.00 seconds
      system cpu time      0.00 seconds
      memory               277.03k
      OS Memory            51996.00k
      Timestamp            06/19/2024 02:46:44 PM
      Step Count                        164  Switch Count  0


2748  proc sort data = foreign_trans_decile;
2749  by permno  record_dt;
2750  run;

NOTE: There were 25513 observations read from the data set WORK.FOREIGN_TRANS_DECILE.
NOTE: SAS sort was used.
NOTE: The data set WORK.FOREIGN_TRANS_DECILE has 25513 observations and 45 variables.
NOTE: PROCEDURE SORT used (Total process time):
      real time            0.13 seconds
      user cpu time        0.03 seconds
      system cpu time      0.14 seconds
      memory               45741.06k
      OS Memory            93660.00k
      Timestamp            06/19/2024 02:47:04 PM
      Step Count                        165  Switch Count  0


2751  proc sql;
2752  create table aggforeign_trans_decile as
```

```
2753  select  *
2754          ,sum(pack_size) as agg_pack_size
2755          ,sum(total_cites) as agg_total_cites
2756          ,sum(vreal) as agg_vreal
2757          ,sum(vnominal) as agg_vnominal
2758          from foreign_trans_decile
2759     group by permno, record_dt;
ERROR: The SUM summary function requires a numeric argument.
ERROR: The following columns were not found in the contributing tables: pack_size.
2760     quit;
NOTE: The SAS System stopped processing this step because of errors.
NOTE: PROCEDURE SQL used (Total process time):
      real time           0.01 seconds
      user cpu time       0.01 seconds
      system cpu time     0.01 seconds
      memory              5419.06k
      OS Memory           56864.00k
      Timestamp           06/19/2024 03:01:48 PM
      Step Count                        166  Switch Count  0


2761     run;



2762  proc sql;
2763  create table aggforeign_trans_decile as
2764  select  *
2765          ,sum(pac_size) as agg_pack_size
2766          ,sum(total_cites) as agg_total_cites
2767          ,sum(vreal) as agg_vreal
2768          ,sum(vnominal) as agg_vnominal
2769          from foreign_trans_decile
2770     group by permno, record_dt;
NOTE: The query requires remerging summary statistics back with the original data.
NOTE: Table WORK.AGGFOREIGN_TRANS_DECILE created, with 25513 rows and 49 columns.

2771     quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time           0.10 seconds
```

```
         user cpu time       0.04 seconds
         system cpu time     0.06 seconds
         memory              5730.84k
         OS Memory           54040.00k
         Timestamp           06/19/2024 03:02:20 PM
         Step Count                        167  Switch Count  0


2772    run;


2773
2774  proc sql;
2775  create table aggforeign_trans_decile as
2776  select  distinct *
2777           ,sum(pac_size) as agg_pack_size
2778           ,sum(total_cites) as agg_total_cites
2779           ,sum(vreal) as agg_vreal
2780           ,sum(vnominal) as agg_vnominal
2781           from foreign_trans_decile
2782    group by permno, record_dt;
NOTE: The query requires remerging summary statistics back with the original data.
NOTE: SAS threaded sort was used.
NOTE: Table WORK.AGGFOREIGN_TRANS_DECILE created, with 25513 rows and 49 columns.


2783    quit;
NOTE: PROCEDURE SQL used (Total process time):
         real time           0.34 seconds
         user cpu time       0.14 seconds
         system cpu time     0.31 seconds
         memory              110313.62k
         OS Memory           157072.00k
         Timestamp           06/19/2024 03:02:54 PM
         Step Count                        168  Switch Count  0


2784    run;


2785  proc sql;
```

```
2785!              *18,130;
2786  select count(*) from (
2787  select distinct permno, record_dt, count(*) as ccc
2788  from  foreign_trans
2789  group by permno, record_dt);
NOTE: SAS threaded sort was used.
2790  quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time            0.09 seconds
      user cpu time        0.04 seconds
      system cpu time      0.03 seconds
      memory               26686.65k
      OS Memory            77068.00k
      Timestamp            06/19/2024 03:05:38 PM
      Step Count                         169  Switch Count  0


2791  run;

2792  Title "unique combinatons in foreign transactions";
2793  proc sql;
2793!           *18,130;
2794  select count(*) from (
2795  select distinct permno, record_dt, count(*) as ccc
2796  from  foreign_trans
2797  group by permno, record_dt ee_nomp_stdname);
                                  ---------------
                                  22
ERROR 22-322: Syntax error, expecting one of the following: !, !!, &, *, **, +, ',', -, '.', /, <, <=, <>, =, >, >=,
            ?, AND, CONTAINS, EQ, EQT, GE, GET, GT, GTT, HAVING, LE, LET, LIKE, LT, LTT, NE, NET, OR, ^=, |, ||,
            ~=.

2798  quit;
NOTE: The SAS System stopped processing this step because of errors.
NOTE: PROCEDURE SQL used (Total process time):
      real time            0.00 seconds
      user cpu time        0.00 seconds
      system cpu time      0.00 seconds
```

2799 run;

2800 Title "unique combinatons in foreign transactions";
2801 proc sql;
2801!   *18,130;
2802 select count(*) from (
2803 select distinct permno, record_dt, count(*) as ccc
2804 from foreign_trans
2805 group by permno, record_dt, ee_nomp_stdname);
ERROR: The following columns were not found in the contributing tables: ee_nomp_stdname.
2806 quit;
NOTE: The SAS System stopped processing this step because of errors.
NOTE: PROCEDURE SQL used (Total process time):
        real time   0.01 seconds
        user cpu time   0.00 seconds
        system cpu time   0.01 seconds
        memory   5628.96k
        OS Memory   57148.00k
        Timestamp   06/19/2024 03:07:35 PM
        Step Count   171 Switch Count 0

2807 run;

2808 Title "unique combinatons in foreign transactions";
2809 proc sql;
2809!   *18,130;
2810 select count(*) from (
2811 select distinct permno, record_dt, ee_nomp_stdname,count(*) as ccc
2812 from foreign_trans
2813 group by permno, record_dt, ee_nomp_stdname);
ERROR: The following columns were not found in the contributing tables: ee_nomp_stdname.

```
2814  quit;
NOTE: The SAS System stopped processing this step because of errors.
NOTE: PROCEDURE SQL used (Total process time):
      real time            0.00 seconds
      user cpu time        0.00 seconds
      system cpu time      0.00 seconds
      memory               5628.96k
      OS Memory            57148.00k
      Timestamp            06/19/2024 03:07:59 PM
      Step Count                        172  Switch Count  0


2815  run;


2816  Title "unique combinatons in foreign transactions";
2817  proc sql;
2817!         *18,130;
2818  select count(*) from (
2819  select distinct permno, record_dt, ee_comp_stdname,count(*) as ccc
2820  from  foreign_trans
2821  group by permno, record_dt, ee_comp_stdname);
NOTE: SAS threaded sort was used.
2822  quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time            0.11 seconds
      user cpu time        0.03 seconds
      system cpu time      0.06 seconds
      memory               30606.53k
      OS Memory            80992.00k
      Timestamp            06/19/2024 03:08:16 PM
      Step Count                        173  Switch Count  0


2823  run;


2824  %contents_short(Aggforeign_trans_decile)
MLOGIC(CONTENTS_SHORT):  Beginning execution.
MLOGIC(CONTENTS_SHORT):  Parameter TABLE has value Aggforeign_trans_decile
```

```
MPRINT(CONTENTS_SHORT):    Title "Varibales in table Aggforeign_trans_decile";
MPRINT(CONTENTS_SHORT):    proc contents data= Aggforeign_trans_decile varnum short ;
MPRINT(CONTENTS_SHORT):    ods select variable;
MPRINT(CONTENTS_SHORT):    run;
NOTE: PROCEDURE CONTENTS used (Total process time):
      real time            3.63 seconds
      user cpu time        0.01 seconds
      system cpu time      0.03 seconds
      memory               482.50k
      OS Memory            51748.00k
      Timestamp            06/19/2024 03:20:49 PM
      Step Count                        174  Switch Count  0

WARNING: Output 'variable' was not created.  Make sure that the output object name, label, or path is spelled
         correctly.  Also, verify that the appropriate procedure options are used to produce the requested output
         object.  For example, verify that the NOPRINT option is not used.

MLOGIC(CONTENTS):  Beginning execution.
MLOGIC(CONTENTS):  Parameter TABLE has value car_evtwin
MPRINT(CONTENTS):   Title "Varibales in table car_evtwin";
MPRINT(CONTENTS):   proc contents data= car_evtwin;
MPRINT(CONTENTS):   ods select variables;
MPRINT(CONTENTS):   run;
NOTE: PROCEDURE CONTENTS used (Total process time):
      real time            0.04 seconds
      user cpu time        0.01 seconds
      system cpu time      0.00 seconds
      memory               832.68k
      OS Memory            51748.00k
      Timestamp            06/19/2024 03:20:49 PM
      Step Count                        175  Switch Count  0


MLOGIC(CONTENTS):  Ending execution.
MLOGIC(CONTENTS):  Beginning execution.
MLOGIC(CONTENTS):  Parameter TABLE has value car_evtdate
MPRINT(CONTENTS):   Title "Varibales in table car_evtdate";
MPRINT(CONTENTS):   proc contents data= car_evtdate;
```

```
MPRINT(CONTENTS):    ods select variables;
MPRINT(CONTENTS):    run;
NOTE: PROCEDURE CONTENTS used (Total process time):
      real time            0.03 seconds
      user cpu time        0.00 seconds
      system cpu time      0.00 seconds
      memory               608.15k
      OS Memory            51748.00k
      Timestamp            06/19/2024 03:20:49 PM
      Step Count                          176  Switch Count  0


MLOGIC(CONTENTS):  Ending execution.
ERROR: The macro CONTENTS_SHORT is still executing and cannot be redefined.
ERROR: A dummy macro will be compiled.
WARNING: Extraneous text on %MEND statement ignored for macro definition CONTENTS_SHORT.
MLOGIC(CONTENTS_SHORT):  Ending execution.

2825  %macro contents(table);
2826  Title "Varibales in table &table";
2827  proc contents data= &table;
2828  ods select variables;
2829  run;
2830  %mend contents;
2831  %macro contents_short(table);
2832  Title "Varibales in table &table";
2833  proc contents data= &table varnum short ;
2834  ods select variable;
2835  run;
2836  %mend contents;
WARNING: Extraneous text on %MEND statement ignored for macro definition CONTENTS_SHORT.
2837  %macro varList(table);
2838  Title "Varibale list in table &table";
2839  proc contents data= &table short varnum;
2840  run;
2841  %mend varList;

2842  %varList(Aggforeign_trans_decile)
```

```
MLOGIC(VARLIST):   Beginning execution.
MLOGIC(VARLIST):   Parameter TABLE has value Aggforeign_trans_decile
MPRINT(VARLIST):    Title "Varibale list in table Aggforeign_trans_decile";
MPRINT(VARLIST):    proc contents data= Aggforeign_trans_decile short varnum;
MPRINT(VARLIST):    run;


NOTE: PROCEDURE CONTENTS used (Total process time):
      real time           0.03 seconds
      user cpu time       0.01 seconds
      system cpu time     0.00 seconds
      memory              559.12k
      OS Memory           51748.00k
      Timestamp           06/19/2024 03:21:59 PM
      Step Count                          177  Switch Count  0



MLOGIC(VARLIST):   Ending execution.

2843  proc sql;
2844  create table foreign_perm_record_all as
2845  select  distinct permno
2846                   ,ee_name
2847                   ,or_name
2848                   ,or_gvkey
2849                   ,or_country_code
2850                   ,or_country_name
2851                   ,or_fic
2852                   ,ee_gvkey
2853                   ,or_naics
2854                   ,ee_country
2855                   ,ee_country_tax
2856                   ,or_country_tax
2857                   ,taxdiff
2858                   ,decile
2859                   ,exec_year
2860                   ,FYEAR
2861                   ,record_dt
2862                   ,exec_dt
```

```
2863                    ,rec_exec_days
2864                    ,agg_total_cites
2865                    ,agg_pack_size
2866                    ,agg_vreal
2867                    ,agg_vnominal
2868        from aggforeign_trans_decile;
NOTE: SAS threaded sort was used.
NOTE: Table WORK.FOREIGN_PERM_RECORD_ALL created, with 21227 rows and 23 columns.

2869        quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time            0.16 seconds
      user cpu time        0.06 seconds
      system cpu time      0.15 seconds
      memory               52723.06k
      OS Memory            102844.00k
      Timestamp            06/19/2024 03:30:36 PM
      Step Count                       178  Switch Count  0


2870  run;

2871  proc sql;
2872  create table foreign_perm_record_all as
2873  select  distinct permno
2874                    ,ee_name
2875                    ,or_name
2876                    ,or_gvkey
2877                    ,or_country_code
2878                    ,or_country_name
2879                    ,or_fic
2880                    ,ee_gvkey
2881                    ,or_naics
2882                    ,ee_country
2883                    ,ee_country_tax
2884                    ,or_country_tax
2885                    ,taxdiff
2886                    ,decile
```

```
2887                    ,exec_year
2888                    ,FYEAR
2889                    ,record_dt
2890                    ,exec_dt
2891                    ,rec_exec_days
2892                    ,agg_total_cites
2893                    ,agg_pack_size
2894                    ,agg_vreal
2895                    ,agg_vnominal
2896        from aggforeign_trans_decile
2897        order by permo, record_dt;
```
ERROR: The following columns were not found in the contributing tables: permo.
```
2898        quit;
```
NOTE: The SAS System stopped processing this step because of errors.
NOTE: PROCEDURE SQL used (Total process time):
   real time   0.01 seconds
   user cpu time   0.00 seconds
   system cpu time   0.01 seconds
   memory   5650.59k
   OS Memory   54048.00k
   Timestamp   06/19/2024 03:32:16 PM
   Step Count   179 Switch Count 0

```
2899  run;


2900  proc sql;
2901  create table foreign_perm_record_all as
2902  select  distinct permno
2903                    ,ee_name
2904                    ,or_name
2905                    ,or_gvkey
2906                    ,or_country_code
2907                    ,or_country_name
2908                    ,or_fic
2909                    ,ee_gvkey
2910                    ,or_naics
2911                    ,ee_country
```

```
2912                      ,ee_country_tax
2913                      ,or_country_tax
2914                      ,taxdiff
2915                      ,decile
2916                      ,exec_year
2917                      ,FYEAR
2918                      ,record_dt
2919                      ,exec_dt
2920                      ,rec_exec_days
2921                      ,agg_total_cites
2922                      ,agg_pack_size
2923                      ,agg_vreal
2924                      ,agg_vnominal
2925          from aggforeign_trans_decile
2926          order by permno, record_dt;
NOTE: SAS threaded sort was used.
NOTE: Table WORK.FOREIGN_PERM_RECORD_ALL created, with 21227 rows and 23 columns.

2927      quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time            0.15 seconds
      user cpu time        0.07 seconds
      system cpu time      0.18 seconds
      memory               53191.01k
      OS Memory            100020.00k
      Timestamp            06/19/2024 03:32:28 PM
      Step Count                        180  Switch Count  0


2928  run;

2929  proc sql;
2929!          * with 21227 rows and 23 variables;
2930  create table foreign_perm_record_all as
2931  select  distinct permno
2932                      ,or_country_code
2933                      ,or_country_name
2934                      ,or_fic
```

```
2935                    ,ee_gvkey
2936                    ,or_naics
2937                    ,ee_country
2938                    ,ee_country_tax
2939                    ,or_country_tax
2940                    ,taxdiff
2941                    ,decile
2942                    ,exec_year
2943                    ,FYEAR
2944                    ,record_dt
2945                    ,exec_dt
2946                    ,rec_exec_days
2947                    ,agg_total_cites
2948                    ,agg_pack_size
2949                    ,agg_vreal
2950                    ,agg_vnominal
2951           from aggforeign_trans_decile
2952           order by permno, record_dt;
NOTE: SAS threaded sort was used.
NOTE: Table WORK.FOREIGN_PERM_RECORD_ALL created, with 21038 rows and 20 columns.

2953      quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time            0.09 seconds
      user cpu time        0.04 seconds
      system cpu time      0.09 seconds
      memory               34930.46k
      OS Memory            81780.00k
      Timestamp            06/19/2024 03:33:20 PM
      Step Count                        181  Switch Count  0


2954  run;

2955  proc sql;
2955!            * with 21227 rows and 23 variables;
2956  create table foreign_perm_record_all as
2957  select  distinct permno
```

```
2958                    ,or_country_code
2959                    ,or_country_name
2960                    ,ee_gvkey
2961                    ,or_naics
2962                    ,ee_country
2963                    ,ee_country_tax
2964                    ,or_country_tax
2965                    ,taxdiff
2966                    ,decile
2967                    ,exec_year
2968                    ,record_dt
2969                    ,exec_dt
2970                    ,rec_exec_days
2971                    ,agg_total_cites
2972                    ,agg_pack_size
2973                    ,agg_vreal
2974                    ,agg_vnominal
2975        from aggforeign_trans_decile
2976        order by permno, record_dt;
NOTE: SAS threaded sort was used.
NOTE: Table WORK.FOREIGN_PERM_RECORD_ALL created, with 21004 rows and 18 columns.

2977        quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time           0.11 seconds
      user cpu time       0.09 seconds
      system cpu time     0.07 seconds
      memory              34894.42k
      OS Memory           81756.00k
      Timestamp           06/19/2024 03:34:18 PM
      Step Count                      182  Switch Count  0


2978  run;


2979
2980  proc sql;
2981  select count(*) from (
```

```
2982   select distinct permno, record_dt, count(*) as ccc from foreign_perm_record_all
2983   group by permno, record_dt);
2984   quit;
NOTE: PROCEDURE SQL used (Total process time):
       real time             0.04 seconds
       user cpu time         0.03 seconds
       system cpu time       0.01 seconds
       memory                5300.28k
       OS Memory             56588.00k
       Timestamp             06/19/2024 03:41:49 PM
       Step Count                        183   Switch Count  0


2985   run;

2986   %varList(foreign_perm_record_all)
MLOGIC(VARLIST):  Beginning execution.
MLOGIC(VARLIST):  Parameter TABLE has value foreign_perm_record_all
MPRINT(VARLIST):    Title "Varibale list in table foreign_perm_record_all";
MPRINT(VARLIST):    proc contents data= foreign_perm_record_all short varnum;
MPRINT(VARLIST):    run;

NOTE: PROCEDURE CONTENTS used (Total process time):
       real time             0.04 seconds
       user cpu time         0.01 seconds
       system cpu time       0.00 seconds
       memory                513.40k
       OS Memory             51464.00k
       Timestamp             06/19/2024 03:42:32 PM
       Step Count                        184   Switch Count  0


MLOGIC(VARLIST):  Ending execution.

2987   proc sql;
2988   create table _acheck1 as
2989   select permno, record_dt, or_country_name, ee_gvkey, or_naics, ee_country, ee_country_tax,
2990   or_country_tax, taxdiff, decile ,exec_year, or_country_code,exec_dt, rec_exec_days, agg_total_cites
```

```
2990!  ,agg_pack_size, agg_vreal ,agg_vnominal
2991  from foreign_perm_record_all
2992  order by permno, record_dt;
NOTE: Table WORK._ACHECK1 created, with 21004 rows and 18 columns.

2993  quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time           0.02 seconds
      user cpu time       0.01 seconds
      system cpu time     0.01 seconds
      memory              5233.06k
      OS Memory           56588.00k
      Timestamp           06/19/2024 03:44:16 PM
      Step Count                      185  Switch Count  0


2994   PROC DATASETS NOLIST;
2995  COPY IN = work OUT = mergback ;
2996  select  _acheck1 ;
2997  RUN;

NOTE: Copying WORK._ACHECK1 to MERGBACK._ACHECK1 (memtype=DATA).
INFO: Engine's block-read method is in use.
INFO: Engine's block-write  method is in use.
NOTE: There were 21004 observations read from the data set WORK._ACHECK1.
NOTE: The data set MERGBACK._ACHECK1 has 21004 observations and 18 variables.

NOTE: PROCEDURE DATASETS used (Total process time):
      real time           12:13.51
      user cpu time       7.29 seconds
      system cpu time     11.81 seconds
      memory              572.75k
      OS Memory           51724.00k
      Timestamp           06/19/2024 03:57:58 PM
      Step Count                      186  Switch Count  1


2998  proc sql  NOREMERGE;
```

```
2999  create table aggforeign_trans as
3000  select  distinct permno
3001           ,record_dt
3002           ,sum(pac_size) as agg_pack_size
3003           ,sum(total_cites) as agg_total_cites
3004           ,sum(vreal) as agg_vreal
3005           ,sum(vnominal) as agg_vnominal
3006           ,min(taxdiff) as min_taxdiff
3007           ,min(rec_exec_days) as rec_exec_days
3008           from foreign_trans
3009     group by permno, record_dt;
NOTE: SAS threaded sort was used.
NOTE: Table WORK.AGGFOREIGN_TRANS created, with 18130 rows and 8 columns.

3010    quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time              0.06 seconds
      user cpu time          0.04 seconds
      system cpu time        0.07 seconds
      memory                 17227.51k
      OS Memory              64292.00k
      Timestamp              06/19/2024 03:57:58 PM
      Step Count                        187  Switch Count  0


3011  run;

3012  proc rank  data=aggforeign_trans
3013           out = foreign_trans_decile groups=10;
3014       var taxdiff;
ERROR: Variable TAXDIFF not found.
3015  ranks decile;
3016  run;

NOTE: The SAS System stopped processing this step because of errors.
WARNING: The data set WORK.FOREIGN_TRANS_DECILE may be incomplete.  When this step was stopped there were 0
         observations and 0 variables.
WARNING: Data set WORK.FOREIGN_TRANS_DECILE was not replaced because this step was stopped.
```

```
NOTE: PROCEDURE RANK used (Total process time):
      real time            0.01 seconds
      user cpu time        0.01 seconds
      system cpu time      0.01 seconds
      memory               179.00k
      OS Memory            48640.00k
      Timestamp            06/19/2024 03:58:22 PM
      Step Count                        188  Switch Count  0


3017  Title "Unique combinatons in foreign transactions on recoreded date between OR and EE";
3018  proc sql;
3018!          *18,986;
3019  select distinct *, count(*) from (
3020  select distinct permno, record_dt, ee_comp_stdname,count(*) as ccc
3021  from  foreign_trans
3022  group by permno, record_dt, ee_comp_stdname);
NOTE: The query requires remerging summary statistics back with the original data.
NOTE: SAS threaded sort was used.
3023  quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time            3.30 seconds
      user cpu time        3.21 seconds
      system cpu time      0.06 seconds
      memory               30887.79k
      OS Memory            77884.00k
      Timestamp            06/19/2024 03:59:34 PM
      Step Count                        189  Switch Count  0


3024  run;

3025  Title "Unique combinatons in foreign transactions on recoreded date between OR and EE";
3026  proc sql;
3026!          *18,986;
3027  select   count(distinct *) from (
3028  select distinct permno, record_dt, ee_comp_stdname,count(*) as ccc
3029  from  foreign_trans
```

```
3030  group by permno, record_dt, ee_comp_stdname);
ERROR: * used in an illegal position.
3031  quit;
NOTE: The SAS System stopped processing this step because of errors.
NOTE: PROCEDURE SQL used (Total process time):
      real time              0.01 seconds
      user cpu time          0.00 seconds
      system cpu time        0.01 seconds
      memory                 5645.15k
      OS Memory              54040.00k
      Timestamp              06/19/2024 04:00:09 PM
      Step Count                         190  Switch Count  0


3032  run;


3033  proc sql;
3033!          *18,986;
3034  select   count(distinct ) from (
                                -
                                22
ERROR 22-322: Syntax error, expecting one of the following: a name, a quoted string, a numeric constant,
              a datetime constant, a missing value, *, BTRIM, INPUT, PUT, SUBSTRING, USER.

3035  select distinct permno, record_dt, ee_comp_stdname,count(*) as ccc
3036  from  foreign_trans
3037  group by permno, record_dt, ee_comp_stdname);
3038  quit;
NOTE: The SAS System stopped processing this step because of errors.
NOTE: PROCEDURE SQL used (Total process time):
      real time              0.00 seconds
      user cpu time          0.00 seconds
      system cpu time        0.00 seconds
      memory                 75.18k
      OS Memory              48640.00k
      Timestamp              06/19/2024 04:00:30 PM
      Step Count                         191  Switch Count  0
```

```
3039  run;


3040  proc rank  data=aggforeign_trans
3041          out = foreign_trans_decile groups=10;
3042      var taxdiff;
ERROR: Variable TAXDIFF not found.
3043  ranks decile;
3044  run;

NOTE: The SAS System stopped processing this step because of errors.
WARNING: The data set WORK.FOREIGN_TRANS_DECILE may be incomplete.  When this step was stopped there were 0
         observations and 0 variables.
WARNING: Data set WORK.FOREIGN_TRANS_DECILE was not replaced because this step was stopped.
NOTE: PROCEDURE RANK used (Total process time):
      real time           0.01 seconds
      user cpu time       0.00 seconds
      system cpu time     0.01 seconds
      memory              179.06k
      OS Memory           48640.00k
      Timestamp           06/19/2024 04:01:44 PM
      Step Count                        192  Switch Count  0


3045


3046  proc sort data = foreign_trans_decile;
3047  by permno  record_dt;
3048  run;

NOTE: Input data set is already sorted, no sorting done.
NOTE: PROCEDURE SORT used (Total process time):
      real time           0.00 seconds
      user cpu time       0.00 seconds
      system cpu time     0.00 seconds
      memory              553.81k
      OS Memory           48916.00k
      Timestamp           06/19/2024 04:01:44 PM
```

```
3049  proc sql  NOREMERGE;
3050  create table aggforeign_trans as
3051  select  distinct permno
3052          ,record_dt
3053          ,sum(pac_size) as agg_pack_size
3054          ,sum(total_cites) as agg_total_cites
3055          ,sum(vreal) as agg_vreal
3056          ,sum(vnominal) as agg_vnominal
3057          ,min(taxdiff) as  taxdiff
3058          ,min(rec_exec_days) as rec_exec_days
3059          from foreign_trans
3060     group by permno, record_dt;
```
NOTE: SAS threaded sort was used.
NOTE: Table WORK.AGGFOREIGN_TRANS created, with 18130 rows and 8 columns.

```
3061     quit;
```
NOTE: PROCEDURE SQL used (Total process time):
      real time   0.08 seconds
      user cpu time   0.03 seconds
      system cpu time   0.09 seconds
      memory   17225.79k
      OS Memory   64292.00k
      Timestamp   06/19/2024 04:02:09 PM
      Step Count   194 Switch Count 0


```
3062  run;
3063  proc rank  data=aggforeign_trans
3064           out = foreign_trans_decile groups=10;
3065       var taxdiff;
3066  ranks decile;
3067  run;
```

NOTE: The data set WORK.FOREIGN_TRANS_DECILE has 18130 observations and 9 variables.
NOTE: PROCEDURE RANK used (Total process time):

```
        real time           0.04 seconds
        user cpu time       0.00 seconds
        system cpu time     0.03 seconds
        memory              2761.46k
        OS Memory           50692.00k
        Timestamp           06/19/2024 04:02:09 PM
        Step Count                          195  Switch Count  0


3068   /*https://wrds-www.wharton.upenn.edu/pages/support/applications/event-studies/event-study-research-application/*
3068!  /
3069
3070   /* ******************************************************************************* */
3071   /* ********* W R D S    R E S E A R C H    A P P L I C A T I O N S ************** */
3072   /* ******************************************************************************* */
3073   /* Program : EVTSTUDY.SAS                                                       */
3074   /* Summary : Provides a sample methodology for calculating Cumulative           */
3075   /*           Abnormal Returns(CARs)& Buy-Hold Abnormal Returns(BHARs)           */
3076   /*           with various t-statistics (CS test, Standardized CS test&Patell Z)  */
3077   /*           in an event study setting. Displays the dynamics of mean CARs and  */
3078   /*           BHARs in the event window specified by the user                    */
3079   /*                                                                              */
3080   /* Date    : Sep 2011                                                           */
3081   /* Author  : Denys Glushkov, WRDS                                               */
3082   /* ******************************************************************************* */
3083
3084   /* STEP 1A: Speficify the parameters necessary to run the event study such as    */
3085   /* the length of estimation period and event window, gap b/w estimation & event  */
3086   /* window, etc                                                                   */
3087   *%libname mycrsp "C:\Users\hli5\OneDrive - Kent State University\aaaa\event_Study";
3088   %macro event_study(outputPath=outputPath, permno_list=perm_record_dataset);
3089   libname mycrsp "C:\Users\lihon\patent Dropbox\Victor Li\wrds_data";
3090   * libname evtstudy "C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\June6_res";
3091
3092
3093   * %let outputPath=%str(C:\Users\lihon\OneDrive - Kent State
3093! University\aaaa\event_Study\result\foreign_rec_exe10Dec9);
3094   * libname evtstudy "&outputPath\Foreign_rec_exe10";
```

```sas
3095  libname evtstudy "&outputPath";
3096  %let crsp=mycrsp; /*CRSP libary to be used (CRSPQ - quarterly, CRSP-annual update  */
3097  %let estper=150; /*Length of the estimation period in trading days over which     */
3098                   /*the risk model is estimated                                     */
3099
3100  %let start=-2; /*Beginning of the event window (wtr to the event date,e.g. -2)   */
3101  %let end=2;     /*End of the event window (relative to the event date, e.g., +1)  */
3102  %let gap=66;    /*Length of pre-event window,i.e., number of trading days b/w     */
3103                   /*the end of estimation period and the start of the event window */
3104
3105  %let minest=70; /*Minimum of non-missing returns required for estimation          */
3106  %let evtwin=%eval(&end-&start+1);      /*length of event window in trading days */
3107
3108  /* STEP 1B: As an example, create the input table containing Permno-event dates  */
3109  /* corresponding to the stock additions to and deletions from S&P 500 index      */
3110
3111
3112  *  %event_crack(relation_exec) ;
3113  * %let permno_list=relation_exec;
3114  *%let permno_list=foreign_relation;
3115  * %let permno_list=for_event_study_v2;
3116  * %let permno_list=oree_gvkey_patentid_record_dtv2;
3117  * %let permno_list=foreign_trans_exec_record10;
3118  * %let permno_list=foreign_trans_execrec10_dec10;
3119
3120  *  ;
3121  /*- %macro event_crack(permno_list, evt_date=exec_dt); */
3122
3123  proc sql;
3124    create table input
3125    as select distinct permno, record_dt as edate format MMDDYY10.
3126    from &permno_list where not missing(&start) and year(record_dt);
3127  quit;
3128
3129  /* STEP 2. Creating Trading Calendar that accounts for the presence of  */
3130  /* weekends, holidays and other non-trading days in the estimation      */
3131  /* and event windows                                                    */
3132  data caldates;
```

```sas
3133
3134   merge &crsp..dsi(keep=date rename=(date=estper_beg))
3135     &crsp..dsi(keep=date firstobs=&estper rename=(date=estper_end))
3136     &crsp..dsi(keep=date firstobs=%eval(&estper+&gap+1) rename=(date=evtwin_beg))
3137     &crsp..dsi(keep=date firstobs=%eval(&estper+&gap-&start+1) rename=(date=evtdate))
3138     &crsp..dsi(keep=date firstobs=%eval(&estper+&gap+&evtwin) rename=(date=evtwin_end));
3139
3140    format estper_beg estper_end evtwin_beg evtdate evtwin_end date9.;
3141    label  estper_beg='Start of the Estimation Window'
3142           estper_end='End of the Estimation Window'
3143           evtwin_beg='Start of the Event Window'
3144           evtwin_end='End of the Event Window'
3145           evtdate='Event Date';
3146     index+1;
3147    if nmiss(estper_beg,estper_end,evtwin_beg,evtwin_end,evtdate)=0;
3148  run;
3149
3150  /*STEP 3: If event date is a non-trading day*/
3151  /*      select the closest trading day that*/
3152  /* follows the event day                                        */
3153  proc sql; create table temp
3154   as select a.permno
3155             ,b.*
3156    from input a
3157        left join
3158        caldates b
3159    on b.evtdate-a.edate>=0
3160    group by a.edate
3161    having (b.evtdate-a.edate)=min(b.evtdate-a.edate);
3162
3163
3164    /*Returns for sample securities around the event dates */
3165     proc sql;
3166    create table evtrets_temp
3167    as select a.permno, a.date format date9., a.ret as ret1,
3168             b.evtdate, b.estper_beg, b.estper_end,
3169             b.evtwin_beg, b.evtwin_end
3170    from &crsp..dsf a, temp b
```

```
3171   where a.permno=b.permno and b.estper_beg<=a.date<=b.evtwin_end;
3172    quit;
3173    /* Merge in the risk factors                                          */
3174    /* User can create her own risk factors and use it instead of FF+M ones*/
3175     proc sql;
3176    create view evtrets1
3177      as select a.*, (b.mktrf+b.rf) as mkt, b.mktrf, b.rf,b.smb, b.hml, b.umd
3178      from evtrets_temp a left join
3179          &crsp..ff_factors_daily (keep=date mktrf smb hml umd rf) b
3180      on a.date=b.date;
3181       quit;
3182    /*Bring in delisting returns*/
3183       proc sql;
3184    create table evtrets (drop=ret1 where=(not missing(mkt)))
3185      as select a.*,
3186      (1+a.ret1)*sum(1,b.dlret)-1-a.mkt as exret label='Market-adjusted total ret',
3187      (1+a.ret1)*sum(1,b.dlret)-1 as ret "Ret adjusted for delisting"
3188      from evtrets1 a left join &crsp..dsedelist (where=(missing(dlret)=0)) b
3189      on a.permno=b.permno and a.date=b.dlstdt
3190     order by a.permno,a.evtdate,a.date;
3191   quit;
3192
3193   /* STEP 4. Estimating Factor Exposures over the estimation period*/
3194   proc printto log=junk; run;
3195
3196   proc reg data=evtrets edf outest=params  noprint;
3197      where estper_beg<=date<=estper_end;
3198      by permno evtdate;
3199      eq0: model exret=;        /*past market-premium return: ret-mkt as a benchmark*/
3200      eq1: model ret=mktrf;       /*  CAPM      */
3201      eq2: model ret=mktrf smb hml;    /* FF 3 factor **/
3202      eq3: model ret=mktrf smb hml umd; /*FF 4 factor */
3203   run;
3204   proc printto;run;
3205
3206
3207   /* STEP 5. Calculating Abnormal Returns for all models */
3208   /* for each trading day in the event window           */
```

```
3209  data abrets1/view=abrets1; merge
3210     evtrets(where=(evtwin_beg<=date<=evtwin_end) in=in_evtrets)
3211     params (where=(_model_='eq0')
3212        keep=permno evtdate _model_ _rmse_ _p_ _edf_
3213        rename=(_rmse_=std0 _p_=p0 _edf_=edf0))
3214
3215     params (where=(_model_='eq1')
3216        keep=permno evtdate _model_ _rmse_ intercept mktrf
3217        rename=(_rmse_=std1 intercept=alpha1 mktrf=beta1))
3218
3219     params (where=(_model_='eq2')
3220        keep=permno evtdate _model_ _rmse_ intercept mktrf smb hml
3221        rename=(_rmse_=std2 intercept=alpha2 mktrf=beta2 smb=sminb2 hml=hminl2))
3222
3223     params (where=(_model_='eq3')
3224        keep=permno evtdate _model_ _rmse_ intercept mktrf smb hml umd
3225        rename=(_rmse_=std3 intercept=alpha3 mktrf=beta3 smb=sminb3 hml=hminl3 umd=umind3));
3226     by permno evtdate;
3227
3228     retain missret;
3229     if first.permno then missret=missing(ret);
3230     if missing(ret) then missret+1; /*count number of missing returns*/
3231
3232     var0=std0**2;
3233     var1=std1**2;
3234     var2=std2**2;
3235     var3=std3**2;
3236
3237     abret0  = exret; *extra over market;
3238     expret1 = alpha1 + beta1*mktrf;  *CAPM;
3239     abret1  = ret-expret1;
3240
3241     expret2 = alpha2+beta2*mktrf+sminb2*smb+hminl2*hml; *FF3factor;
3242     abret2=ret-expret2;
3243
3244     expret3 =alpha3+beta3*mktrf+sminb3*smb+hminl3*hml+umind3*umd;
3245     abret3=ret-expret3;
3246
```

```
3247   nobs=p0+edf0;   /*number of observations used in estimation*/
3248   drop p0 edf0 estper_beg estper_end std0 std1 std2 std3 _model_ exret;
3249   if in_evtrets and nobs>&minest;
3250   * I add the followings;
3251   if nobs=150;
3252 run;
3253
3254 /* Transform dates to event time using CRSP Trading Calendar        */
3255 /* Using the latter takes into account non-consecutive date records*/
3256 /* do not use lag to avoid non-consecutive date records*/
3257 proc sql;
3258   create table abrets
3259     as select a.*, (b.index-c.index) as evttime
3260     from         abrets1 a
3261       left join  caldates b
3262     on a.date    = b.evtdate
3263        left join caldates c
3264     on a.evtdate = c.evtdate
3265     order by permno, evtdate, date;
3266 quit;
3267
3268 /*
3269 proc contents data=abrets short varnum;
3270 run;
3271 */
3272 proc sort data=abrets  nodupkey;
3273   by PERMNO evtdate DATE
3274     evtwin_beg evtwin_end
3275     mkt mktrf rf smb hml umd ret
3276     alpha1 beta1
3277     alpha2 beta2 sminb2 hminl2
3278     alpha3 beta3 sminb3 hminl3 umind3
3279     missret var0 var1 var2 var3
3280     abret0 expret1 abret1 expret2 abret2 expret3 abret3 nobs evttime ;
3281 run;
3282
3283 /* 673  proc sql;
3284 674      create table abrets as
```

```
3285  675     select distinct * from abrets;
3286  WARNING: This CREATE TABLE statement recursively references the target table. A consequence of this
3287           is a possible data integrity problem.
3288  NOTE: Table WORK.ABRETS created, with 253797 rows and 37 columns.
3289
3290    */
3291  /* Calculating Rolling Cumulative Abnormal Returns and various stats */
3292  /* Transformout= calculates cumulative product of gross returns and  */
3293  /* subtracts 1 to arrive at the total net cumulative return          */
3294  proc expand data=abrets
3295            out=car  /* Cumulative returns*/
3296            method=none;
3297    by permno evtdate;
3298    id date;
3299    convert ret=cret/transformout=(+1 cuprod -1);          /*actural cumulative return from CRSP*/
3300    convert mkt=cmkt/transformout=(+1 cuprod -1);          /*cumulative  market return*/
3301
3302    /*cumulative market model return: expret1= alpha1 + beta1*mktrf; */
3303    convert expret1 =cexpret1 /transformout=(+1 cuprod -1);
3304
3305    /*expret2 = alpha2+ beta2*mktrf+ sminb2*smb+ hminl2*hml; */
3306    convert expret2 =cexpret2 /transformout=(+1 cuprod -1); /*cumulative FF-3 factor return */
3307
3308    /*  expret3 =alpha3+beta3*mktrf+sminb3*smb+hminl3*hml+umind3*umd; */
3309    convert expret3 =cexpret3 /transformout=(+1 cuprod -1);/*cumulative FF-4 factor return */
3310
3311    convert abret0=car0/transformout=(sum);
3312    convert abret1=car1/transformout=(sum);
3313    convert abret2=car2/transformout=(sum);
3314    convert abret3=car3/transformout=(sum);
3315  run;
3316  /*
3317  proc contents data =car;
3318
3319
3320  proc contents data =car;
3321  ods select  Variables;
3322  run;
```

```
3323   */
3324
3325
3326   /* Car_Evtdate Table: */
3327   /* the cross-sectional output that contains for each       */
3328   /* "firm-event date":                                                        */
3329   /*   1) CAR, BHAR, and SCAR (standardized CAR)                   */
3330   /*   2) Alpha and Beta from the estimation period                   */
3331   /*   3) Estimation period variance                                          */
3332
3333   /* Car_Evtwin Table contains Raw, Abnormal, Std. and Buy-and-Hold Abnormal  */
3334   /* Daily Returns "firm-date" in event time                                  */
3335   proc printto log=junk;run;
3336
3337   data car_evtdate
3338          (drop=evttime ret mkt smb hml umd date calpha1 calpha2 calpha3
3339                 cmrkt csmb chml cumd evtwin_beg evtwin_end abret0 abret1
3340                 abret2 abret3 sar0 sar1 sar2 sar3 missret cexpret1 cexpret2 cexpret3)
3341       car_evtwin
3342          (keep=permno evtdate evttime date ret cret abret0 abret1 abret2 abret3
3343            sar0 sar1 sar2 sar3 bhar0 bhar1 bhar2 bhar3 car0 car1 car2 car3);
3344    set car;
3345    by permno evtdate date;
3346    /*Standardized CARs and ARs for various models*/
3347    scar0=car0/(&evtwin*var0)**0.5;
3348    scar1=car1/(&evtwin*var1)**0.5;
3349    scar2=car2/(&evtwin*var2)**0.5;
3350    scar3=car3/(&evtwin*var3)**0.5;
3351
3352    sar0=abret0/sqrt(var0);
3353    sar1=abret1/sqrt(var1);
3354    sar2=abret2/sqrt(var2);
3355    sar3=abret3/sqrt(var3);
3356
3357    pat_scale=(nobs-2)/(nobs-4); /*Patell Z scaling factor*/
3358
3359    /*Buy-Hold Abnormal Returns*/
3360    bhar0=cret-cmkt;
```

```
3361    bhar1=cret-cexpret1;
3362    bhar2=cret-cexpret2;
3363    bhar3=cret-cexpret3;
3364
3365    if last.evtdate then do;
3366          nrets=&evtwin-missret;
3367        output car_evtdate;
3368    end;
3369    output car_evtwin;
3370  run;
3371
3372  proc printto;run;
3373
3374  /*Put Cross-sectional and aggregate results together for further analysis*/
3375  data allcars;
3376      merge
3377      car_evtwin
3378            (rename=(bhar0=bhar0win
3379                      bhar1=bhar1win
3380                      bhar2=bhar2win
3381                      bhar3=bhar3win
3382                      car0=car0win
3383          car1=car1win
3384          car2=car2win
3385          car3=car3win
3386          cret=cretwin))
3387      car_evtdate;
3388   by permno evtdate;
3389  run;
3390
3391  /* STEP 6: Compute Cumulative Average Abnormal Return (CAR_MEAN) */
3392  /* and Average Buy-Hold Abnormal Return (BHAR_MEAN)            */
3393  /* and other stats across all distinct events                 */
3394  * proc means data=allcars noprint;
3395  proc means data=allcars( where = (nobs=150)) noprint;
3396    class evttime; id nobs;
3397    var ret cret
3398    car0 car1 car2 car3  /* at evttime*/
```

```
3399     cretwin car0win car1win car2win car3win /* at evttime=2*/
3400     bhar0 bhar1 bhar2 bhar3
3401     bhar0win bhar1win bhar2win bhar3win
3402
3403     scar0 scar1 scar2 scar3
3404     abret0 abret1 abret2 abret3
3405     sar0 sar1 sar2 sar3 /*originally from car_evtwin*/
3406     pat_scale;
3407     output out=allstats
3408     mean =
3409        n =
3410        t =
3411      sum =/autoname;
3412  run;
3413
3414  /*calculate different stats for assessing    */
3415  /*statistical signficance of abnormal returns*/
3416  data MA_Evtdate (keep=evttime car0_n cret_mean car0_mean car0_t scar0_t
3417                    bhar0_mean pat_car0 model)
3418      MM_Evtdate (keep=evttime car1_n cret_mean car1_mean car1_t scar1_t
3419                    bhar1_mean pat_car1 model )
3420      FF_Evtdate (keep=evttime car2_n cret_mean car2_mean car2_t scar2_t
3421                    bhar2_mean pat_car2 model )
3422      FFM_Evtdate (keep=evttime car3_n cret_mean car3_mean car3_t scar3_t
3423                    bhar3_mean pat_car3 model )
3424      MA_Evtwin  (keep=evttime cretwin_mean abret0_n ret_mean abret0_mean
3425                     car0win_mean bhar0win_mean abret0_t sar0_t pat_ar0 )
3426      MM_Evtwin  (keep=evttime cretwin_mean abret1_n ret_mean abret1_mean
3427                     car1win_mean bhar1win_mean abret1_t sar1_t pat_ar1 )
3428      FF_Evtwin  (keep=evttime cretwin_mean abret2_n ret_mean abret2_mean
3429                     car2win_mean bhar2win_mean abret2_t sar2_t pat_ar2 )
3430      FFM_Evtwin (keep=evttime cretwin_mean abret3_n ret_mean abret3_mean
3431                     car3win_mean bhar3win_mean abret3_t sar3_t pat_ar3 );
3432   set allstats;
3433   by evttime;
3434     if _n_=1 and missing(evttime) then do;
3435     abret0_mean=.;
3436     abret1_mean=.;
```

```
3437        abret2_mean=.;
3438        abret3_mean=.;
3439        cretwin_mean=0;
3440        ret_mean=.;
3441        bhar1win_mean=0;
3442        bhar1win_mean=0;
3443        bhar2win_mean=0;
3444        bhar3win_mean=0;
3445        end;
3446        /*Patell Z statistics*/
3447        pat_car0=scar0_mean/(sqrt(pat_scale_sum)/scar0_n);
3448        pat_car1=scar1_mean/(sqrt(pat_scale_sum)/scar1_n);
3449        pat_car2=scar2_mean/(sqrt(pat_scale_sum)/scar2_n);
3450        pat_car3=scar3_mean/(sqrt(pat_scale_sum)/scar3_n);
3451        pat_ar0=sar0_mean/(sqrt(pat_scale_sum)/sar0_n);
3452        pat_ar1=sar1_mean/(sqrt(pat_scale_sum)/sar1_n);
3453        pat_ar2=sar2_mean/(sqrt(pat_scale_sum)/sar2_n);
3454        pat_ar3=sar3_mean/(sqrt(pat_scale_sum)/sar3_n);
3455     label
3456        pat_ar0=        'Patell Z for AR_MA'   pat_ar1=        'Patell Z for AR_MM'
3457        pat_ar2=        'Patell Z for AR_FF'   pat_ar3=        'Patell Z for AR_FFM'
3458        abret0_t=       'CS t-stat, AR_MA'     abret1_t=       'CS t-stat, AR_MM'
3459        abret2_t=       'CS t-stat, AR_FF'     abret3_t=       'CS t-stat, AR_FFM'
3460        sar0_t=         'Std CS test, AR_MA'   sar1_t=         'Std CS test, AR_MM'
3461        sar2_t=         'Std CS test, AR_FF'   sar3_t=         'Std CS test, AR_FFM'
3462        abret0_mean=    'Mean AR_MA'           abret1_mean=    'Mean AR_MM'
3463        abret2_mean=    'Mean AR_FF'           abret3_mean=    'Mean AR_FFM'
3464        car0_n=         'Number of events in the portfolio'
3465        abret0_n=       'Number of events in the portfolio'
3466        evttime=        'Event Time t'
3467        cret_mean=      "Mean CTR (&start, &end)"
3468        cretwin_mean=   "Mean CTR (&start,t) "
3469        car0win_mean=   "Average CAR_MA (&start, t)"
3470        car1win_mean=   "Average CAR_MM (&start, t)"
3471        car2win_mean=   "Average CAR_FF (&start, t)"
3472        car3win_mean=   "Average CAR_FFM (&start, t)"
3473        bhar0win_mean=  "Mean BHAR_MA (&start, t)"
3474        bhar1win_mean=  "Mean BHAR_MM (&start, t)"
```

```
3475    bhar2win_mean= "Mean BHAR_FF (&start, t)"
3476    bhar3win_mean=  "Mean BHAR_FFM (&start, t)"
3477  ;
3478    format ret_mean       cret_mean      cretwin_mean
3479            abret0_mean   abret1_mean    abret2_mean    abret3_mean
3480            car0_mean     car1_mean      car2_mean      car3_mean
3481            bhar0_mean    bhar1_mean     bhar2_mean     bhar3_mean
3482            bhar0win_mean bhar1win_mean  bhar2win_mean  bhar3win_mean
3483            car0win_mean  car1win_mean   car2win_mean   car3win_mean
3484        percent7.4
3485            abret0_t  abret1_t   abret2_t   abret3_t
3486            sar0_t    sar1_t     sar2_t     sar3_t
3487            pat_car0  pat_car1   pat_car2   pat_car3
3488            pat_ar0   pat_ar1    pat_ar2    pat_ar3
3489            car0_t    car1_t     car2_t     car3_t
3490            scar0_t   car1_t     scar2_t    scar3_t
3491        comma10.2;
3492    if evttime=0 then do; model='Market-Adjusted'; output MA_Evtdate;
3493                          model='Market Model';    output MM_Evtdate;
3494                          model='FF Model';        output FF_Evtdate;
3495                          model='Carhart Model';   output FFM_Evtdate;
3496                  end;
3497    if missing(evttime) then evttime=&start-1;
3498    output MA_Evtwin;
3499    output MM_Evtwin;
3500    output FF_Evtwin;
3501    output FFM_Evtwin;
3502  run;
3503
3504  /* STEP 7. Putting Event Date CARs and BHARS for various risk models together*/
3505  data allevtdate; set
3506    MA_Evtdate  (rename=(car0_mean=car_mean bhar0_mean=bhar_mean
3507                  car0_n=n car0_t=car_t scar0_t=scar_t pat_car0=pat_car))
3508    MM_Evtdate  (rename=(car1_mean=car_mean bhar1_mean=bhar_mean
3509                  car1_n=n car1_t=car_t scar1_t=scar_t pat_car1=pat_car))
3510    FF_Evtdate  (rename=(car2_mean=car_mean bhar2_mean=bhar_mean
3511                  car2_n=n car2_t=car_t scar2_t=scar_t pat_car2=pat_car))
3512    FFM_evtdate (rename=(car3_mean=car_mean bhar3_mean=bhar_mean
```

```
3513                    car3_n=n car3_t=car_t scar3_t=scar_t pat_car3=pat_car));
3514   length=&evtwin;
3515   label pat_car=   'Patell Z'
3516         car_mean=  "Mean CAR (&start, &end)"
3517         bhar_mean= "Mean BHAR (&start, &end)"
3518         car_t=     'Cross-sectional t-stat for CAR'
3519         scar_t=    'Standaridized cross-sectional t-stat for CAR'
3520         length=    'Length of event window in trading days';
3521   run;
3522
3523
3524   /*Cross-sectional output for CARs/BHARs at the firm-event level*/
3525   data car_evtdate;
3526     retain permno evtdate alpha1 beta1 cret car0 bhar0 var0 car1 bhar1 var1
3527           car2 bhar2 var2 car3 bhar3 var3 nrets nobs;
3528     set car_evtdate;
3529     label alpha1= 'Alpha (Market Model)'
3530           beta1=  'Beta (Market Model'
3531           car0=   'CAR_MA'
3532           car1=   'CAR_MM'
3533           car2=   'CAR_FF'
3534       car3=   'CAR_FFM'
3535           bhar0=  'BHAR_MA'
3536       bhar1=  'BHAR_MM'
3537           bhar2=  'BHAR_FF'
3538       bhar3=  'BHAR_FFM'
3539           var0=   'Estimation period variance (Market-adjusted returns)'
3540           var1=   'Estimation period variance (Market Model)'
3541           var2=   'Estimation period variance (FF Model)'
3542           var3=   'Estimation period variance (Carhart Model)'
3543           cret=   'Cumulative Total Return'
3544           nrets=  'Number of non-missing returns in event window'
3545           nobs=   'Length of the estimation period';
3546     keep permno evtdate alpha1 beta1 cret car0 bhar0 var0 car1 bhar1 var1
3547           car2 bhar2 var2 car3 bhar3 var3 nrets nobs;
3548     format cret alpha1
3549           car0 bhar0
3550       car1 bhar1
```

```
3551        car2 bhar2
3552        car3 bhar3
3553            percent7.4
3554            beta1 comma10.3;
3555  run;
3556  /* Save the summary statistics and
3557  the CARs on the event window
3558  */
3559
3560  PROC DATASETS NOLIST;
3561  COPY IN = work OUT = evtstudy ;
3562  select  allevtdate allstats car_evtwin ;
3563  RUN;
3564
3565  /* As an illustration, plot Carhart CAARs and average BHARs in the event window*/
3566  options nodate orientation=landscape;
3567  ods pdf file="&outputPath\Car0_evtrets_5days.pdf";
3568  goptions device=pdfc; /* Plot Saved in Home Directory */
3569  axis1 label=(angle=90 "Cumulative Abnormal Returns");
3570  axis2 label=("Event time");
3571  symbol interpol=join w=3 l=1;
3572
3573
3574
3575  proc gplot data =MA_Evtwin;
3576   where evttime>=&start;
3577   Title "Market adjusted model:  CARs and BHARs around the event date";
3578   plot (car0win_mean bhar0win_mean)*evttime
3579        /overlay legend vaxis=axis1 haxis=axis2;
3580  run;quit; ods pdf close;
3581
3582  ods pdf file="&outputPath\Car1_evtrets_5days.pdf";
3583  proc gplot data =MM_Evtwin;
3584   where evttime>=&start;
3585   Title "Market model:  CARs and BHARs around the event date";
3586   plot (car1win_mean bhar1win_mean)*evttime
3587        /overlay legend vaxis=axis1 haxis=axis2;
3588  run;quit; ods pdf close;
```

```sas
3589
3590  ods pdf file="&outputPath\Car2_evtrets_5days.pdf";
3591  proc gplot data =FF_Evtwin;
3592   where evttime>=&start;
3593   Title "FF 3-factor model:CARs and BHARs around the event date";
3594   plot (car2win_mean bhar2win_mean)*evttime
3595         /overlay legend vaxis=axis1 haxis=axis2;
3596  run;quit; ods pdf close;
3597
3598  ods pdf file="&outputPath\Car3_evtrets_5days.pdf";
3599  proc gplot data =FFM_Evtwin;
3600   where evttime>=&start;
3601   Title "Carhart 4 Factor model: Carhart CARs and BHARs around the event date";
3602   plot (car3win_mean bhar3win_mean)*evttime
3603         /overlay legend vaxis=axis1 haxis=axis2;
3604  run;quit; ods pdf close;
3605
3606  ods pdf file="&outputPath\Car0_3_evtrets_5days.pdf";
3607  proc  gplot data =allstats;
3608   where evttime>=&start;
3609   Title "CARs from the four models: around the event date";
3610   plot (car0win_mean  car1win_mean  car2win_mean  car3win_mean )*evttime
3611         /overlay legend vaxis=axis1 haxis=axis2;
3612  run;quit; ods pdf close;
3613
3614
3615  ods pdf file="&outputPath\BHARS0_3_evtrets_5days.pdf";
3616  proc  gplot data =allstats;
3617   where evttime>=&start;
3618   Title "BHARs from the four models: BHARs around the event date";
3619   plot (bhar0_mean  bhar1_mean  bhar2_mean  bhar3_mean )*evttime
3620         /overlay legend vaxis=axis1 haxis=axis2;
3621  run;quit;
3622
3623  ods pdf close;
3624  run;quit; ods pdf close;
3625
3626
```

```
3627
3628   /*house cleaning*
3629    proc sql;
3630     drop table abrets, allcars, allstats, caldates, car, car_evtwin, evtrets, temp,
3631              evtrets_temp,ffm_evtdate, ff_evtdate, ma_evtdate, mm_evtdate, params;
3632     drop view  evtrets1, abrets1; quit;
3633   */
3634   *%mend  event_crack;
```
```
3635   /* ******************************************************************************* */
3636   /* *************  Material Copyright Wharton Research Data Services  ************* */
3637   /* ************************** All Rights Reserved ************************** */
3638   /* ******************************************************************************* */
3639   %mend event_study;
```
```
3640
3641   proc sort data = foreign_trans_decile NODUPKEY;
3642   by permno  record_dt;
3643   run;
```

NOTE: There were 18130 observations read from the data set WORK.FOREIGN_TRANS_DECILE.
NOTE: SAS sort was used.
NOTE: 0 observations with duplicate key values were deleted.
NOTE: The data set WORK.FOREIGN_TRANS_DECILE has 18130 observations and 9 variables.
NOTE: PROCEDURE SORT used (Total process time):
      real time   0.03 seconds
      user cpu time   0.01 seconds
      system cpu time   0.01 seconds
      memory   2950.96k
      OS Memory   50960.00k
      Timestamp   06/19/2024 04:09:22 PM
      Step Count   196 Switch Count 0

```
3644   /*https://wrds-www.wharton.upenn.edu/pages/support/applications/event-studies/event-study-research-application/*
3644! /
3645
```

```
3646   /* *************************************************************************** */
3647   /* ********* W R D S   R E S E A R C H   A P P L I C A T I O N S ************** */
3648   /* *************************************************************************** */
3649   /* Program : EVTSTUDY.SAS                                                    */
3650   /* Summary : Provides a sample methodology for calculating Cumulative        */
3651   /*           Abnormal Returns(CARs)& Buy-Hold Abnormal Returns(BHARs)         */
3652   /*           with various t-statistics (CS test, Standardized CS test&Patell Z)  */
3653   /*           in an event study setting. Displays the dynamics of mean CARs and   */
3654   /*           BHARs in the event window specified by the user                 */
3655   /*                                                                           */
3656   /* Date    : Sep 2011                                                        */
3657   /* Author  : Denys Glushkov, WRDS                                            */
3658   /* *************************************************************************** */
3659
3660   /* STEP 1A: Speficify the parameters necessary to run the event study such as    */
3661   /* the length of estimation period and event window, gap b/w estimation & event  */
3662   /* window, etc                                                               */
3663   *%libname mycrsp "C:\Users\hli5\OneDrive - Kent State University\aaaa\event_Study";
3664   %macro event_study(outputPath=outputPath, permno_list=perm_record_dataset);
3665   libname mycrsp "C:\Users\lihon\patent Dropbox\Victor Li\wrds_data";
3666   * libname evtstudy "C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\June6_res";
3667
3668
3669   * %let outputPath=%str(C:\Users\lihon\OneDrive - Kent State
3669!  University\aaaa\event_Study\result\foreign_rec_exe10Dec9);
3670   * libname evtstudy "&outputPath\Foreign_rec_exe10";
3671   libname evtstudy "&outputPath";
3672   %let crsp=mycrsp; /*CRSP libary to be used (CRSPQ - quarterly, CRSP-annual update  */
3673   %let estper=150; /*Length of the estimation period in trading days over which     */
3674                    /*the risk model is estimated                                    */
3675
3676   %let start=-2; /*Beginning of the event window (wtr to the event date,e.g. -2)    */
3677   %let end=2;    /*End of the event window (relative to the event date, e.g., +1)   */
3678   %let gap=66;    /*Length of pre-event window,i.e., number of trading days b/w     */
3679                   /*the end of estimation period and the start of the event window */
3680
3681   %let minest=70; /*Minimum of non-missing returns required for estimation         */
3682   %let evtwin=%eval(&end-&start+1);        /*length of event window in trading days */
```

```
3683
3684  /* STEP 1B: As an example, create the input table containing Permno-event dates  */
3685  /* corresponding to the stock additions to and deletions from S&P 500 index      */
3686
3687
3688  *  %event_crack(relation_exec) ;
3689  * %let permno_list=relation_exec;
3690  *%let permno_list=foreign_relation;
3691  * %let permno_list=for_event_study_v2;
3692  * %let permno_list=oree_gvkey_patentid_record_dtv2;
3693  * %let permno_list=foreign_trans_exec_record10;
3694  * %let permno_list=foreign_trans_execrec10_dec10;
3695
3696  *  ;
3697  /*- %macro event_crack(permno_list, evt_date=exec_dt); */
3698
3699  proc sql;
3700    create table input
3701    as select distinct permno, record_dt as edate format MMDDYY10.
3702    from &permno_list where not missing(&start) and year(record_dt);
3703  quit;
3704
3705  /* STEP 2. Creating Trading Calendar that accounts for the presence of  */
3706  /* weekends, holidays and other non-trading days in the estimation      */
3707  /* and event windows                                                    */
3708  data caldates;
3709
3710   merge &crsp..dsi(keep=date rename=(date=estper_beg))
3711     &crsp..dsi(keep=date firstobs=&estper rename=(date=estper_end))
3712     &crsp..dsi(keep=date firstobs=%eval(&estper+&gap+1) rename=(date=evtwin_beg))
3713     &crsp..dsi(keep=date firstobs=%eval(&estper+&gap-&start+1) rename=(date=evtdate))
3714     &crsp..dsi(keep=date firstobs=%eval(&estper+&gap+&evtwin) rename=(date=evtwin_end));
3715
3716    format estper_beg estper_end evtwin_beg evtdate evtwin_end date9.;
3717    label  estper_beg='Start of the Estimation Window'
3718           estper_end='End of the Estimation Window'
3719           evtwin_beg='Start of the Event Window'
3720           evtwin_end='End of the Event Window'
```

```
3721          evtdate='Event Date';
3722      index+1;
3723    if nmiss(estper_beg,estper_end,evtwin_beg,evtwin_end,evtdate)=0;
3724  run;
3725
3726  /*STEP 3: If event date is a non-trading day*/
3727  /*      select the closest trading day that*/
3728  /* follows the event day                                          */
3729  proc sql; create table temp
3730   as select a.permno
3731            ,b.*
3732    from input a
3733         left join
3734         caldates b
3735    on b.evtdate-a.edate>=0
3736    group by a.edate
3737    having (b.evtdate-a.edate)=min(b.evtdate-a.edate);
3738
3739
3740   /*Returns for sample securities around the event dates */
3741    proc sql;
3742   create table evtrets_temp
3743   as select a.permno, a.date format date9., a.ret as ret1,
3744            b.evtdate, b.estper_beg, b.estper_end,
3745            b.evtwin_beg, b.evtwin_end
3746    from &crsp..dsf a, temp b
3747    where a.permno=b.permno and b.estper_beg<=a.date<=b.evtwin_end;
3748     quit;
3749   /* Merge in the risk factors                                    */
3750   /* User can create her own risk factors and use it instead of FF+M ones*/
3751     proc sql;
3752   create view evtrets1
3753     as select a.*, (b.mktrf+b.rf) as mkt, b.mktrf, b.rf,b.smb, b.hml, b.umd
3754     from evtrets_temp a left join
3755         &crsp..ff_factors_daily (keep=date mktrf smb hml umd rf) b
3756     on a.date=b.date;
3757      quit;
3758   /*Bring in delisting returns*/
```

```
3759     proc sql;
3760   create table evtrets (drop=ret1 where=(not missing(mkt)))
3761     as select a.*,
3762     (1+a.ret1)*sum(1,b.dlret)-1-a.mkt as exret label='Market-adjusted total ret',
3763     (1+a.ret1)*sum(1,b.dlret)-1 as ret "Ret adjusted for delisting"
3764     from evtrets1 a left join &crsp..dsedelist (where=(missing(dlret)=0)) b
3765     on a.permno=b.permno and a.date=b.dlstdt
3766   order by a.permno,a.evtdate,a.date;
3767 quit;
3768
3769 /* STEP 4. Estimating Factor Exposures over the estimation period*/
3770 proc printto log=junk; run;
3771
3772 proc reg data=evtrets edf outest=params  noprint;
3773     where estper_beg<=date<=estper_end;
3774     by permno evtdate;
3775     eq0: model exret=;        /*past market-premium return: ret-mkt as a benchmark*/
3776     eq1: model ret=mktrf;      /*  CAPM      */
3777     eq2: model ret=mktrf smb hml;    /* FF 3 factor **/
3778     eq3: model ret=mktrf smb hml umd; /*FF 4 factor */
3779 run;
3780 proc printto;run;
3781
3782
3783 /* STEP 5. Calculating Abnormal Returns for all models */
3784 /* for each trading day in the event window           */
3785 data abrets1/view=abrets1; merge
3786   evtrets(where=(evtwin_beg<=date<=evtwin_end) in=in_evtrets)
3787   params (where=(_model_='eq0')
3788     keep=permno evtdate _model_ _rmse_ _p_ _edf_
3789     rename=(_rmse_=std0 _p_=p0 _edf_=edf0))
3790
3791   params (where=(_model_='eq1')
3792     keep=permno evtdate _model_ _rmse_ intercept mktrf
3793     rename=(_rmse_=std1 intercept=alpha1 mktrf=beta1))
3794
3795   params (where=(_model_='eq2')
3796     keep=permno evtdate _model_ _rmse_ intercept mktrf smb hml
```

```
3797        rename=(_rmse_=std2 intercept=alpha2 mktrf=beta2 smb=sminb2 hml=hminl2))
3798
3799    params (where=(_model_='eq3')
3800        keep=permno evtdate _model_ _rmse_ intercept mktrf smb hml umd
3801        rename=(_rmse_=std3 intercept=alpha3 mktrf=beta3 smb=sminb3 hml=hminl3 umd=umind3));
3802    by permno evtdate;
3803
3804    retain missret;
3805    if first.permno then missret=missing(ret);
3806    if missing(ret) then missret+1; /*count number of missing returns*/
3807
3808    var0=std0**2;
3809    var1=std1**2;
3810    var2=std2**2;
3811    var3=std3**2;
3812
3813    abret0  = exret; *extra over market;
3814    expret1 = alpha1 + beta1*mktrf;  *CAPM;
3815    abret1  = ret-expret1;
3816
3817    expret2 = alpha2+beta2*mktrf+sminb2*smb+hminl2*hml; *FF3factor;
3818    abret2=ret-expret2;
3819
3820    expret3 =alpha3+beta3*mktrf+sminb3*smb+hminl3*hml+umind3*umd;
3821    abret3=ret-expret3;
3822
3823    nobs=p0+edf0;   /*number of observations used in estimation*/
3824    drop p0 edf0 estper_beg estper_end std0 std1 std2 std3 _model_ exret;
3825    if in_evtrets and nobs>&minest;
3826    * I add the followings;
3827    if nobs=150;
3828 run;
3829
3830 /* Transform dates to event time using CRSP Trading Calendar      */
3831 /* Using the latter takes into account non-consecutive date records*/
3832 /* do not use lag to avoid non-consecutive date records*/
3833 proc sql;
3834    create table abrets
```

```
3835      as select a.*, (b.index-c.index) as evttime
3836     from          abrets1 a
3837       left join  caldates b
3838     on a.date    = b.evtdate
3839        left join caldates c
3840     on a.evtdate = c.evtdate
3841     order by permno, evtdate, date;
3842  quit;
3843
3844  /*
3845  proc contents data=abrets short varnum;
3846  run;
3847  */
3848  proc sort data=abrets  nodupkey;
3849    by PERMNO evtdate DATE
3850       evtwin_beg evtwin_end
3851       mkt mktrf rf smb hml umd ret
3852       alpha1 beta1
3853       alpha2 beta2 sminb2 hminl2
3854       alpha3 beta3 sminb3 hminl3 umind3
3855       missret var0 var1 var2 var3
3856       abret0 expret1 abret1 expret2 abret2 expret3 abret3 nobs evttime ;
3857  run;
3858
3859  /* 673  proc sql;
3860  674     create table abrets as
3861  675     select distinct * from abrets;
3862  WARNING: This CREATE TABLE statement recursively references the target table. A consequence of this
3863           is a possible data integrity problem.
3864  NOTE: Table WORK.ABRETS created, with 253797 rows and 37 columns.
3865
3866    */
3867  /* Calculating Rolling Cumulative Abnormal Returns and various stats */
3868  /* Transformout= calculates cumulative product of gross returns and  */
3869  /* subtracts 1 to arrive at the total net cumulative return          */
3870  proc expand data=abrets
3871            out=car  /* Cumulative returns*/
3872            method=none;
```

```
3873   by permno evtdate;
3874   id date;
3875   convert ret=cret/transformout=(+1 cuprod -1);          /*actural cumulative return from CRSP*/
3876   convert mkt=cmkt/transformout=(+1 cuprod -1);          /*cumulative  market return*/
3877
3878   /*cumulative market model return: expret1= alpha1 + beta1*mktrf; */
3879   convert expret1 =cexpret1 /transformout=(+1 cuprod -1);
3880
3881   /*expret2 = alpha2+ beta2*mktrf+ sminb2*smb+ hminl2*hml; */
3882   convert expret2 =cexpret2 /transformout=(+1 cuprod -1); /*cumulative FF-3 factor return */
3883
3884   /*  expret3 =alpha3+beta3*mktrf+sminb3*smb+hminl3*hml+umind3*umd; */
3885   convert expret3 =cexpret3 /transformout=(+1 cuprod -1);/*cumulative FF-4 factor return */
3886
3887   convert abret0=car0/transformout=(sum);
3888   convert abret1=car1/transformout=(sum);
3889   convert abret2=car2/transformout=(sum);
3890   convert abret3=car3/transformout=(sum);
3891 run;
3892 /*
3893 proc contents data =car;
3894
3895
3896 proc contents data =car;
3897 ods select  Variables;
3898 run;
3899 */
3900
3901
3902 /* Car_Evtdate Table: */
3903 /* the cross-sectional output that contains for each      */
3904 /* "firm-event date":                                     */
3905 /*  1) CAR, BHAR, and SCAR (standardized CAR)             */
3906 /*  2) Alpha and Beta from the estimation period          */
3907 /*  3) Estimation period variance                         */
3908
3909 /* Car_Evtwin Table contains Raw, Abnormal, Std. and Buy-and-Hold Abnormal  */
3910 /* Daily Returns "firm-date" in event time                */
```

```
3911   proc printto log=junk;run;
3912
3913   data car_evtdate
3914         (drop=evttime ret mkt smb hml umd date calpha1 calpha2 calpha3
3915              cmrkt csmb chml cumd evtwin_beg evtwin_end abret0 abret1
3916              abret2 abret3 sar0 sar1 sar2 sar3 missret cexpret1 cexpret2 cexpret3)
3917      car_evtwin
3918         (keep=permno evtdate evttime date ret cret abret0 abret1 abret2 abret3
3919          sar0 sar1 sar2 sar3 bhar0 bhar1 bhar2 bhar3 car0 car1 car2 car3);
3920     set car;
3921     by permno evtdate date;
3922     /*Standardized CARs and ARs for various models*/
3923     scar0=car0/(&evtwin*var0)**0.5;
3924     scar1=car1/(&evtwin*var1)**0.5;
3925     scar2=car2/(&evtwin*var2)**0.5;
3926     scar3=car3/(&evtwin*var3)**0.5;
3927
3928     sar0=abret0/sqrt(var0);
3929     sar1=abret1/sqrt(var1);
3930     sar2=abret2/sqrt(var2);
3931     sar3=abret3/sqrt(var3);
3932
3933     pat_scale=(nobs-2)/(nobs-4); /*Patell Z scaling factor*/
3934
3935     /*Buy-Hold Abnormal Returns*/
3936     bhar0=cret-cmkt;
3937     bhar1=cret-cexpret1;
3938     bhar2=cret-cexpret2;
3939     bhar3=cret-cexpret3;
3940
3941     if last.evtdate then do;
3942          nrets=&evtwin-missret;
3943        output car_evtdate;
3944     end;
3945     output car_evtwin;
3946   run;
3947
3948   proc printto;run;
```

```
3949
3950   /*Put Cross-sectional and aggregate results together for further analysis*/
3951   data allcars;
3952       merge
3953       car_evtwin
3954             (rename=(bhar0=bhar0win
3955                      bhar1=bhar1win
3956                      bhar2=bhar2win
3957                      bhar3=bhar3win
3958                      car0=car0win
3959             car1=car1win
3960             car2=car2win
3961             car3=car3win
3962             cret=cretwin))
3963       car_evtdate;
3964    by permno evtdate;
3965   run;
3966
3967   /* STEP 6: Compute Cumulative Average Abnormal Return (CAR_MEAN) */
3968   /* and Average Buy-Hold Abnormal Return (BHAR_MEAN)             */
3969   /* and other stats across all distinct events                  */
3970   * proc means data=allcars noprint;
3971   proc means data=allcars( where = (nobs=150)) noprint;
3972     class evttime; id nobs;
3973     var ret cret
3974     car0 car1 car2 car3  /* at evttime*/
3975     cretwin car0win car1win car2win car3win /* at evttime=2*/
3976     bhar0 bhar1 bhar2 bhar3
3977     bhar0win bhar1win bhar2win bhar3win
3978
3979     scar0 scar1 scar2 scar3
3980     abret0 abret1 abret2 abret3
3981     sar0 sar1 sar2 sar3 /*originally from car_evtwin*/
3982     pat_scale;
3983     output out=allstats
3984     mean =
3985        n =
3986        t =
```

```
3987      sum =/autoname;
3988  run;
3989
3990  /*calculate different stats for assessing     */
3991  /*statistical signficance of abnormal returns*/
3992  data MA_Evtdate (keep=evttime car0_n cret_mean car0_mean car0_t scar0_t
3993                    bhar0_mean pat_car0 model)
3994      MM_Evtdate (keep=evttime car1_n cret_mean car1_mean car1_t scar1_t
3995                    bhar1_mean pat_car1 model )
3996      FF_Evtdate (keep=evttime car2_n cret_mean car2_mean car2_t scar2_t
3997                    bhar2_mean pat_car2 model )
3998      FFM_Evtdate (keep=evttime car3_n cret_mean car3_mean car3_t scar3_t
3999                    bhar3_mean pat_car3 model )
4000      MA_Evtwin  (keep=evttime cretwin_mean abret0_n ret_mean abret0_mean
4001                    car0win_mean bhar0win_mean abret0_t sar0_t pat_ar0 )
4002      MM_Evtwin  (keep=evttime cretwin_mean abret1_n ret_mean abret1_mean
4003                    car1win_mean bhar1win_mean abret1_t sar1_t pat_ar1 )
4004      FF_Evtwin  (keep=evttime cretwin_mean abret2_n ret_mean abret2_mean
4005                    car2win_mean bhar2win_mean abret2_t sar2_t pat_ar2 )
4006      FFM_Evtwin (keep=evttime cretwin_mean abret3_n ret_mean abret3_mean
4007                    car3win_mean bhar3win_mean abret3_t sar3_t pat_ar3 );
4008    set allstats;
4009    by evttime;
4010      if _n_=1 and missing(evttime) then do;
4011      abret0_mean=.;
4012      abret1_mean=.;
4013      abret2_mean=.;
4014      abret3_mean=.;
4015      cretwin_mean=0;
4016      ret_mean=.;
4017      bhar1win_mean=0;
4018      bhar1win_mean=0;
4019      bhar2win_mean=0;
4020      bhar3win_mean=0;
4021      end;
4022      /*Patell Z statistics*/
4023      pat_car0=scar0_mean/(sqrt(pat_scale_sum)/scar0_n);
4024      pat_car1=scar1_mean/(sqrt(pat_scale_sum)/scar1_n);
```

```
4025        pat_car2=scar2_mean/(sqrt(pat_scale_sum)/scar2_n);
4026        pat_car3=scar3_mean/(sqrt(pat_scale_sum)/scar3_n);
4027        pat_ar0=sar0_mean/(sqrt(pat_scale_sum)/sar0_n);
4028        pat_ar1=sar1_mean/(sqrt(pat_scale_sum)/sar1_n);
4029        pat_ar2=sar2_mean/(sqrt(pat_scale_sum)/sar2_n);
4030        pat_ar3=sar3_mean/(sqrt(pat_scale_sum)/sar3_n);
4031      label
4032        pat_ar0=       'Patell Z for AR_MA'  pat_ar1=       'Patell Z for AR_MM'
4033        pat_ar2=       'Patell Z for AR_FF'  pat_ar3=       'Patell Z for AR_FFM'
4034        abret0_t=      'CS t-stat, AR_MA'    abret1_t=      'CS t-stat, AR_MM'
4035        abret2_t=      'CS t-stat, AR_FF'    abret3_t=      'CS t-stat, AR_FFM'
4036        sar0_t=        'Std CS test, AR_MA'  sar1_t=        'Std CS test, AR_MM'
4037        sar2_t=        'Std CS test, AR_FF'  sar3_t=        'Std CS test, AR_FFM'
4038        abret0_mean=   'Mean AR_MA'          abret1_mean=   'Mean AR_MM'
4039        abret2_mean=   'Mean AR_FF'          abret3_mean=   'Mean AR_FFM'
4040        car0_n=        'Number of events in the portfolio'
4041        abret0_n=      'Number of events in the portfolio'
4042        evttime=       'Event Time t'
4043        cret_mean=     "Mean CTR (&start, &end)"
4044        cretwin_mean=  "Mean CTR (&start,t) "
4045        car0win_mean=  "Average CAR_MA (&start, t)"
4046        car1win_mean=  "Average CAR_MM (&start, t)"
4047        car2win_mean=  "Average CAR_FF (&start, t)"
4048        car3win_mean=  "Average CAR_FFM (&start, t)"
4049        bhar0win_mean= "Mean BHAR_MA (&start, t)"
4050        bhar1win_mean=  "Mean BHAR_MM (&start, t)"
4051        bhar2win_mean= "Mean BHAR_FF (&start, t)"
4052        bhar3win_mean=  "Mean BHAR_FFM (&start, t)"
4053      ;
4054      format ret_mean       cret_mean        cretwin_mean
4055             abret0_mean    abret1_mean      abret2_mean     abret3_mean
4056             car0_mean      car1_mean        car2_mean       car3_mean
4057             bhar0_mean     bhar1_mean       bhar2_mean      bhar3_mean
4058             bhar0win_mean bhar1win_mean   bhar2win_mean    bhar3win_mean
4059             car0win_mean  car1win_mean     car2win_mean    car3win_mean
4060         percent7.4
4061             abret0_t  abret1_t   abret2_t   abret3_t
4062             sar0_t    sar1_t     sar2_t     sar3_t
```

```
4063              pat_car0   pat_car1    pat_car2   pat_car3
4064              pat_ar0    pat_ar1     pat_ar2    pat_ar3
4065              car0_t     car1_t      car2_t     car3_t
4066              scar0_t    car1_t      scar2_t    scar3_t
4067        comma10.2;
4068     if evttime=0 then do; model='Market-Adjusted'; output MA_Evtdate;
4069                          model='Market Model';    output MM_Evtdate;
4070                          model='FF Model';        output FF_Evtdate;
4071                          model='Carhart Model';   output FFM_Evtdate;
4072                    end;
4073     if missing(evttime) then evttime=&start-1;
4074     output MA_Evtwin;
4075     output MM_Evtwin;
4076     output FF_Evtwin;
4077     output FFM_Evtwin;
4078   run;
4079
4080   /* STEP 7. Putting Event Date CARs and BHARS for various risk models together*/
4081   data allevtdate; set
4082     MA_Evtdate   (rename=(car0_mean=car_mean bhar0_mean=bhar_mean
4083                   car0_n=n car0_t=car_t scar0_t=scar_t pat_car0=pat_car))
4084     MM_Evtdate   (rename=(car1_mean=car_mean bhar1_mean=bhar_mean
4085                   car1_n=n car1_t=car_t scar1_t=scar_t pat_car1=pat_car))
4086     FF_Evtdate   (rename=(car2_mean=car_mean bhar2_mean=bhar_mean
4087                   car2_n=n car2_t=car_t scar2_t=scar_t pat_car2=pat_car))
4088     FFM_evtdate (rename=(car3_mean=car_mean bhar3_mean=bhar_mean
4089                   car3_n=n car3_t=car_t scar3_t=scar_t pat_car3=pat_car));
4090     length=&evtwin;
4091     label pat_car=   'Patell Z'
4092           car_mean=  "Mean CAR (&start, &end)"
4093           bhar_mean= "Mean BHAR (&start, &end)"
4094           car_t=     'Cross-sectional t-stat for CAR'
4095           scar_t=    'Standaridized cross-sectional t-stat for CAR'
4096           length=    'Length of event window in trading days';
4097   run;
4098
4099
4100   /*Cross-sectional output for CARs/BHARs at the firm-event level*/
```

```
4101  data car_evtdate;
4102    retain permno evtdate alpha1 beta1 cret car0 bhar0 var0 car1 bhar1 var1
4103        car2 bhar2 var2 car3 bhar3 var3 nrets nobs;
4104    set car_evtdate;
4105    label alpha1= 'Alpha (Market Model)'
4106          beta1=  'Beta (Market Model'
4107          car0=   'CAR_MA'
4108          car1=   'CAR_MM'
4109          car2=   'CAR_FF'
4110      car3=   'CAR_FFM'
4111          bhar0=  'BHAR_MA'
4112      bhar1=  'BHAR_MM'
4113          bhar2=  'BHAR_FF'
4114      bhar3=  'BHAR_FFM'
4115          var0=   'Estimation period variance (Market-adjusted returns)'
4116          var1=   'Estimation period variance (Market Model)'
4117          var2=   'Estimation period variance (FF Model)'
4118          var3=   'Estimation period variance (Carhart Model)'
4119          cret=   'Cumulative Total Return'
4120          nrets=  'Number of non-missing returns in event window'
4121          nobs=   'Length of the estimation period';
4122    keep permno evtdate alpha1 beta1 cret car0 bhar0 var0 car1 bhar1 var1
4123        car2 bhar2 var2 car3 bhar3 var3 nrets nobs;
4124    format cret alpha1
4125          car0 bhar0
4126      car1 bhar1
4127      car2 bhar2
4128      car3 bhar3
4129          percent7.4
4130          beta1 comma10.3;
4131  run;
4132  /* Save the summary statistics and
4133  the CARs on the event window
4134  */
4135
4136  PROC DATASETS NOLIST;
4137  COPY IN = work OUT = evtstudy ;
4138  select  allevtdate allstats car_evtwin ;
```

```
4139  RUN;

4140

4141  /* As an illustration, plot Carhart CAARs and average BHARs in the event window*/
4142  options nodate orientation=landscape;
4143  ods pdf file="&outputPath\Car0_evtrets_5days.pdf";
4144  goptions device=pdfc; /* Plot Saved in Home Directory */
4145  axis1 label=(angle=90 "Cumulative Abnormal Returns");
4146  axis2 label=("Event time");
4147  symbol interpol=join w=3 l=1;

4148

4149

4150

4151  proc gplot data =MA_Evtwin;
4152   where evttime>=&start;
4153   Title "Market adjusted model:  CARs and BHARs around the event date";
4154   plot (car0win_mean bhar0win_mean)*evttime
4155        /overlay legend vaxis=axis1 haxis=axis2;
4156  run;quit; ods pdf close;

4157

4158  ods pdf file="&outputPath\Car1_evtrets_5days.pdf";
4159  proc gplot data =MM_Evtwin;
4160   where evttime>=&start;
4161   Title "Market model:  CARs and BHARs around the event date";
4162   plot (car1win_mean bhar1win_mean)*evttime
4163        /overlay legend vaxis=axis1 haxis=axis2;
4164  run;quit; ods pdf close;

4165

4166  ods pdf file="&outputPath\Car2_evtrets_5days.pdf";
4167  proc gplot data =FF_Evtwin;
4168   where evttime>=&start;
4169   Title "FF 3-factor model:CARs and BHARs around the event date";
4170   plot (car2win_mean bhar2win_mean)*evttime
4171        /overlay legend vaxis=axis1 haxis=axis2;
4172  run;quit; ods pdf close;

4173

4174  ods pdf file="&outputPath\Car3_evtrets_5days.pdf";
4175  proc gplot data =FFM_Evtwin;
4176   where evttime>=&start;
```

```
4177   Title "Carhart 4 Factor model: Carhart CARs and BHARs around the event date";
4178   plot (car3win_mean bhar3win_mean)*evttime
4179         /overlay legend vaxis=axis1 haxis=axis2;
4180 run;quit; ods pdf close;
4181
4182 ods pdf file="&outputPath\CarO_3_evtrets_5days.pdf";
4183 proc  gplot data =allstats;
4184  where evttime>=&start;
4185  Title "CARs from the four models: around the event date";
4186  plot (car0win_mean  car1win_mean  car2win_mean  car3win_mean )*evttime
4187         /overlay legend vaxis=axis1 haxis=axis2;
4188 run;quit; ods pdf close;
4189
4190
4191 ods pdf file="&outputPath\BHARS0_3_evtrets_5days.pdf";
4192 proc  gplot data =allstats;
4193  where evttime>=&start;
4194  Title "BHARs from the four models: BHARs around the event date";
4195  plot (bhar0_mean  bhar1_mean  bhar2_mean  bhar3_mean )*evttime
4196         /overlay legend vaxis=axis1 haxis=axis2;
4197 run;quit;
4198
4199 ods pdf close;
4200 run;quit; ods pdf close;
4201
4202
4203
4204 *house cleaning;
4205  proc sql;
4206   drop table abrets, allcars, allstats, caldates, car, car_evtwin, evtrets, temp,
4207            evtrets_temp,ffm_evtdate, ff_evtdate, ma_evtdate, mm_evtdate, params;
4208   drop view  evtrets1, abrets1; quit;
4209
4210 %mend  event_study;
4211 /* ****************************************************************************** */
4212 /* *************  Material Copyright Wharton Research Data Services  ************* */
4213 /* **************************** All Rights Reserved **************************** */
4214 /* ****************************************************************************** */
```

```
4215  %event_study(C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\result\agg_foreign_all,
4215! foreign_trans_decile)
MLOGIC(EVENT_STUDY):  Beginning execution.
ERROR: More positional parameters found than defined.
MLOGIC(EVENT_STUDY):  Parameter OUTPUTPATH has value outputPath
MLOGIC(EVENT_STUDY):  Parameter PERMNO_LIST has value perm_record_dataset
MLOGIC(EVENT_STUDY):  Ending execution.

4216  %event_study(outputPath=C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\result\agg_foreign_all
MLOGIC(EVENT_STUDY):  Beginning execution.
4217                ,permno_list = foreign_trans_decile)
MLOGIC(EVENT_STUDY):  Parameter OUTPUTPATH has value C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_all
MLOGIC(EVENT_STUDY):  Parameter PERMNO_LIST has value foreign_trans_decile
MPRINT(EVENT_STUDY):   libname mycrsp "C:\Users\lihon\patent Dropbox\Victor Li\wrds_data";
NOTE: Libref MYCRSP was successfully assigned as follows:
      Engine:        V9
      Physical Name: C:\Users\lihon\patent Dropbox\Victor Li\wrds_data
MPRINT(EVENT_STUDY):   * libname evtstudy "C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\June6_res";
MLOGIC(EVENT_STUDY):  %LET (variable name is OUTPUTPATH)
MPRINT(EVENT_STUDY):   * * libname evtstudy "&outputPath\Foreign_rec_exe10";
MPRINT(EVENT_STUDY):   libname evtstudy "C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\foreign_rec_exe10Dec9";
NOTE: Libref EVTSTUDY refers to the same physical library as TMP6.
NOTE: Libref EVTSTUDY was successfully assigned as follows:
      Engine:        V9
      Physical Name: C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\result\foreign_rec_exe10Dec9
MLOGIC(EVENT_STUDY):  %LET (variable name is CRSP)
MLOGIC(EVENT_STUDY):  %LET (variable name is ESTPER)
MLOGIC(EVENT_STUDY):  %LET (variable name is START)
MLOGIC(EVENT_STUDY):  %LET (variable name is END)
MLOGIC(EVENT_STUDY):  %LET (variable name is GAP)
MLOGIC(EVENT_STUDY):  %LET (variable name is MINEST)
MLOGIC(EVENT_STUDY):  %LET (variable name is EVTWIN)
MPRINT(EVENT_STUDY):   * %event_crack(relation_exec) ;
MLOGIC(EVENT_STUDY):  %LET (variable name is PERMNO_LIST)
```

```
MLOGIC(EVENT_STUDY):   %LET (variable name is PERMNO_LIST)
MLOGIC(EVENT_STUDY):   %LET (variable name is PERMNO_LIST)
MLOGIC(EVENT_STUDY):   %LET (variable name is PERMNO_LIST)
MLOGIC(EVENT_STUDY):   %LET (variable name is PERMNO_LIST)
MLOGIC(EVENT_STUDY):   %LET (variable name is PERMNO_LIST)
MPRINT(EVENT_STUDY):   * * * * * * * ;
MPRINT(EVENT_STUDY):    proc sql;
MPRINT(EVENT_STUDY):    create table input as select distinct permno, record_dt as edate format MMDDYY10. from
foreign_trans_execrec10_dec10 where not missing(-2) and year(record_dt);
NOTE: Table WORK.INPUT created, with 93 rows and 2 columns.

MPRINT(EVENT_STUDY):    quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time            0.03 seconds
      user cpu time        0.00 seconds
      system cpu time      0.00 seconds
      memory               5641.65k
      OS Memory            54040.00k
      Timestamp            06/19/2024 04:12:26 PM
      Step Count                          197  Switch Count  0


MPRINT(EVENT_STUDY):    data caldates;
MPRINT(EVENT_STUDY):    merge mycrsp.dsi(keep=date rename=(date=estper_beg)) mycrsp.dsi(keep=date firstobs=150
rename=(date=estper_end)) mycrsp.dsi(keep=date firstobs=217 rename=(date=evtwin_beg)) mycrsp.dsi(keep=date
firstobs=219 rename=(date=evtdate)) mycrsp.dsi(keep=date firstobs=221 rename=(date=evtwin_end));
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
```

INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and might reduce performance.
MPRINT(EVENT_STUDY):   format estper_beg estper_end evtwin_beg evtdate evtwin_end date9.;
MPRINT(EVENT_STUDY):   label estper_beg= 'Start of the Estimation Window' estper_end= 'End of the Estimation Window' evtwin_beg= 'Start of the Event Window' evtwin_end= 'End of the Event Window' evtdate= 'Event Date';
MPRINT(EVENT_STUDY):   index+1;
MPRINT(EVENT_STUDY):   if nmiss(estper_beg,estper_end,evtwin_beg,evtwin_end,evtdate)=0;
MPRINT(EVENT_STUDY):   run;

NOTE: There were 25799 observations read from the data set MYCRSP.DSI.
NOTE: There were 25650 observations read from the data set MYCRSP.DSI.
NOTE: There were 25583 observations read from the data set MYCRSP.DSI.
NOTE: There were 25581 observations read from the data set MYCRSP.DSI.
NOTE: There were 25579 observations read from the data set MYCRSP.DSI.
NOTE: The data set WORK.CALDATES has 25579 observations and 6 variables.
NOTE: DATA statement used (Total process time):
      real time   0.14 seconds
      user cpu time   0.09 seconds
      system cpu time   0.00 seconds
      memory   1634.96k
      OS Memory   48640.00k
      Timestamp   06/19/2024 04:12:26 PM
      Step Count   198 Switch Count 0

MPRINT(EVENT_STUDY):   proc sql;
MPRINT(EVENT_STUDY):   create table temp as select a.permno ,b.* from input a left join caldates b on b.evtdate-a.edate>=0 group by a.edate having (b.evtdate-a.edate)=min(b.evtdate-a.edate);
NOTE: The execution of this query involves performing one or more Cartesian product joins that can not be optimized.
NOTE: The query requires remerging summary statistics back with the original data.
NOTE: SAS threaded sort was used.
NOTE: Table WORK.TEMP created, with 93 rows and 7 columns.

NOTE: PROCEDURE SQL used (Total process time):
      real time   0.33 seconds
      user cpu time   0.45 seconds
      system cpu time   0.09 seconds

```
        memory              52096.06k
        OS Memory           98036.00k
        Timestamp           06/19/2024 04:12:26 PM
        Step Count                          199  Switch Count  0


MPRINT(EVENT_STUDY):   proc sql;
MPRINT(EVENT_STUDY):   create table evtrets_temp as select a.permno, a.date format date9., a.ret as ret1, b.evtdate,
b.estper_beg, b.estper_end, b.evtwin_beg, b.evtwin_end from mycrsp.dsf a, temp b where a.permno=b.permno and
b.estper_beg<=a.date<=b.evtwin_end;
INFO: Data file MYCRSP.DSF.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
NOTE: Table WORK.EVTRETS_TEMP created, with 20553 rows and 8 columns.

MPRINT(EVENT_STUDY):   quit;
NOTE: PROCEDURE SQL used (Total process time):
        real time          39.26 seconds
        user cpu time      38.40 seconds
        system cpu time    0.84 seconds
        memory             5853.37k
        OS Memory          53764.00k
        Timestamp          06/19/2024 04:13:06 PM
        Step Count                          200  Switch Count  0


MPRINT(EVENT_STUDY):   proc sql;
MPRINT(EVENT_STUDY):   create view evtrets1 as select a.*, (b.mktrf+b.rf) as mkt, b.mktrf, b.rf,b.smb, b.hml, b.umd
from evtrets_temp a left join mycrsp.ff_factors_daily (keep=date mktrf smb hml umd rf) b on a.date=b.date;
NOTE: SQL view WORK.EVTRETS1 has been defined.
MPRINT(EVENT_STUDY):   quit;
NOTE: PROCEDURE SQL used (Total process time):
        real time          0.01 seconds
        user cpu time      0.00 seconds
        system cpu time    0.00 seconds
        memory             112.18k
        OS Memory          48640.00k
        Timestamp          06/19/2024 04:13:06 PM
```

MPRINT(EVENT_STUDY):   proc sql;
MPRINT(EVENT_STUDY):   create table evtrets (drop=ret1 where=(not missing(mkt))) as select a.*,
(1+a.ret1)*sum(1,b.dlret)-1-a.mkt as exret label='Market-adjusted total ret', (1+a.ret1)*sum(1,b.dlret)-1 as ret "Ret
adjusted for delisting" from evtrets1 a left join mycrsp.dsedelist (where=(missing(dlret)=0)) b on a.permno=b.permno
and a.date=b.dlstdt order by a.permno,a.evtdate,a.date;
INFO: Data file MYCRSP.FF_FACTORS_DAILY.DATA is in a format that is native to another host, or the file encoding does
not match the session encoding. Cross Environment Data Access will be used, which might require additional CPU
resources and might reduce performance.
INFO: Data file MYCRSP.DSEDELIST.DATA is in a format that is native to another host, or the file encoding does not
match the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources
and might reduce performance.
NOTE: SAS threaded sort was used.
NOTE: Table WORK.EVTRETS created, with 20553 rows and 15 columns.

MPRINT(EVENT_STUDY):   quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time   0.20 seconds
      user cpu time   0.17 seconds
      system cpu time   0.07 seconds
      memory   37023.56k
      OS Memory   80556.00k
      Timestamp   06/19/2024 04:13:06 PM
      Step Count   202 Switch Count 0

MPRINT(EVENT_STUDY):   proc printto log=junk;
MPRINT(EVENT_STUDY):   run;

NOTE: PROCEDURE PRINTTO used (Total process time):
      real time   0.00 seconds
      user cpu time   0.00 seconds
      system cpu time   0.00 seconds
      memory   7.03k
      OS Memory   48640.00k
      Timestamp   06/19/2024 04:13:06 PM

```
MPRINT(EVENT_STUDY):   data abrets1/view=abrets1;
MPRINT(EVENT_STUDY):   merge evtrets(where=(evtwin_beg<=date<=evtwin_end) in=in_evtrets) params
(where=(_model_='eq0') keep=permno evtdate _model_ _rmse_ _p_ _edf_ rename=(_rmse_=std0 _p_=p0 _edf_=edf0)) params
(where=(_model_='eq1') keep=permno evtdate _model_ _rmse_ intercept mktrf rename=(_rmse_=std1 intercept=alpha1
mktrf=beta1)) params (where=(_model_='eq2') keep=permno evtdate _model_ _rmse_ intercept mktrf smb hml
rename=(_rmse_=std2 intercept=alpha2 mktrf=beta2 smb=sminb2 hml=hminl2)) params (where=(_model_='eq3') keep=permno
evtdate _model_ _rmse_ intercept mktrf smb hml umd rename=(_rmse_=std3 intercept=alpha3 mktrf=beta3 smb=sminb3
hml=hminl3 umd=umind3));
MPRINT(EVENT_STUDY):   by permno evtdate;
MPRINT(EVENT_STUDY):   retain missret;
MPRINT(EVENT_STUDY):   if first.permno then missret=missing(ret);
MPRINT(EVENT_STUDY):   if missing(ret) then missret+1;
MPRINT(EVENT_STUDY):   var0=std0**2;
MPRINT(EVENT_STUDY):   var1=std1**2;
MPRINT(EVENT_STUDY):   var2=std2**2;
MPRINT(EVENT_STUDY):   var3=std3**2;
MPRINT(EVENT_STUDY):   abret0 = exret;
MPRINT(EVENT_STUDY):   *extra over market;
MPRINT(EVENT_STUDY):   expret1 = alpha1 + beta1*mktrf;
MPRINT(EVENT_STUDY):   *CAPM;
MPRINT(EVENT_STUDY):   abret1 = ret-expret1;
MPRINT(EVENT_STUDY):   expret2 = alpha2+beta2*mktrf+sminb2*smb+hminl2*hml;
MPRINT(EVENT_STUDY):   *FF3factor;
MPRINT(EVENT_STUDY):   abret2=ret-expret2;
MPRINT(EVENT_STUDY):   expret3 =alpha3+beta3*mktrf+sminb3*smb+hminl3*hml+umind3*umd;
MPRINT(EVENT_STUDY):   abret3=ret-expret3;
MPRINT(EVENT_STUDY):   nobs=p0+edf0;
MPRINT(EVENT_STUDY):   drop p0 edf0 estper_beg estper_end std0 std1 std2 std3 _model_ exret;
MPRINT(EVENT_STUDY):   if in_evtrets and nobs>70;
MPRINT(EVENT_STUDY):   * I add the followings;
MPRINT(EVENT_STUDY):   if nobs=150;
MPRINT(EVENT_STUDY):   run;
```

NOTE: DATA STEP view saved on file WORK.ABRETS1.
NOTE: A stored DATA STEP view cannot run under a different operating system.

```
NOTE: DATA statement used (Total process time):
      real time            0.01 seconds
      user cpu time        0.00 seconds
      system cpu time      0.00 seconds
      memory               1079.59k
      OS Memory            48900.00k
      Timestamp            06/19/2024 04:13:06 PM
      Step Count                      206  Switch Count  0


MPRINT(EVENT_STUDY):   proc sql;
MPRINT(EVENT_STUDY):   create table abrets as select a.*, (b.index-c.index) as evttime from abrets1 a left join
caldates b on a.date = b.evtdate left join caldates c on a.evtdate = c.evtdate order by permno, evtdate, date;
NOTE: SAS threaded sort was used.
INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
NOTE: View WORK.ABRETS1.VIEW used (Total process time):
      real time            0.11 seconds
      user cpu time        0.09 seconds
      system cpu time      0.06 seconds
      memory               45665.75k
      OS Memory            89940.00k
      Timestamp            06/19/2024 04:13:06 PM
      Step Count                      207  Switch Count  9


NOTE: There were 465 observations read from the data set WORK.EVTRETS.
      WHERE (evtwin_beg<=date) and (date<=evtwin_end);
NOTE: There were 93 observations read from the data set WORK.PARAMS.
      WHERE _model_='eq0';
NOTE: There were 93 observations read from the data set WORK.PARAMS.
      WHERE _model_='eq1';
NOTE: There were 93 observations read from the data set WORK.PARAMS.
      WHERE _model_='eq2';
NOTE: There were 93 observations read from the data set WORK.PARAMS.
```

```
        WHERE _model_='eq3';
NOTE: Table WORK.ABRETS created, with 465 rows and 37 columns.


MPRINT(EVENT_STUDY):   quit;
NOTE: PROCEDURE SQL used (Total process time):
        real time            0.34 seconds
        user cpu time        0.12 seconds
        system cpu time      0.14 seconds
        memory               45665.75k
        OS Memory            89940.00k
        Timestamp            06/19/2024 04:13:07 PM
        Step Count                    207  Switch Count  10



MPRINT(EVENT_STUDY):   proc sort data=abrets nodupkey;
MPRINT(EVENT_STUDY):   by PERMNO evtdate DATE evtwin_beg evtwin_end mkt mktrf rf smb hml umd ret alpha1 beta1 alpha2
beta2 sminb2 hminl2 alpha3 beta3 sminb3 hminl3 umind3 missret var0 var1 var2 var3 abret0 expret1 abret1 expret2
abret2 expret3 abret3 nobs evttime ;
MPRINT(EVENT_STUDY):   run;

NOTE: There were 465 observations read from the data set WORK.ABRETS.
NOTE: SAS sort was used.
NOTE: 0 observations with duplicate key values were deleted.
NOTE: The data set WORK.ABRETS has 465 observations and 37 variables.
NOTE: PROCEDURE SORT used (Total process time):
        real time            0.01 seconds
        user cpu time        0.00 seconds
        system cpu time      0.01 seconds
        memory               1933.56k
        OS Memory            50700.00k
        Timestamp            06/19/2024 04:13:07 PM
        Step Count                    208  Switch Count  0



MPRINT(EVENT_STUDY):   proc expand data=abrets out=car method=none;
MPRINT(EVENT_STUDY):   by permno evtdate;
MPRINT(EVENT_STUDY):   id date;
MPRINT(EVENT_STUDY):   convert ret=cret/transformout=(+1 cuprod -1);
```

```
MPRINT(EVENT_STUDY):   convert mkt=cmkt/transformout=(+1 cuprod -1);
MPRINT(EVENT_STUDY):   convert expret1 =cexpret1 /transformout=(+1 cuprod -1);
MPRINT(EVENT_STUDY):   convert expret2 =cexpret2 /transformout=(+1 cuprod -1);
MPRINT(EVENT_STUDY):   convert expret3 =cexpret3 /transformout=(+1 cuprod -1);
MPRINT(EVENT_STUDY):   convert abret0=car0/transformout=(sum);
MPRINT(EVENT_STUDY):   convert abret1=car1/transformout=(sum);
MPRINT(EVENT_STUDY):   convert abret2=car2/transformout=(sum);
MPRINT(EVENT_STUDY):   convert abret3=car3/transformout=(sum);
MPRINT(EVENT_STUDY):   run;

NOTE: The data set WORK.CAR has 465 observations and 46 variables.
NOTE: PROCEDURE EXPAND used (Total process time):
      real time           0.04 seconds
      user cpu time       0.00 seconds
      system cpu time     0.01 seconds
      memory              964.75k
      OS Memory           49928.00k
      Timestamp           06/19/2024 04:13:07 PM
      Step Count                       209  Switch Count  0


MPRINT(EVENT_STUDY):   proc printto log=junk;
MPRINT(EVENT_STUDY):  run;

NOTE: PROCEDURE PRINTTO used (Total process time):
      real time           0.00 seconds
      user cpu time       0.00 seconds
      system cpu time     0.00 seconds
      memory              6.68k
      OS Memory           49408.00k
      Timestamp           06/19/2024 04:13:07 PM
      Step Count                       212  Switch Count  0


MPRINT(EVENT_STUDY):   data allcars;
MPRINT(EVENT_STUDY):   merge car_evtwin (rename=(bhar0=bhar0win bhar1=bhar1win bhar2=bhar2win bhar3=bhar3win
car0=car0win car1=car1win car2=car2win car3=car3win cret=cretwin)) car_evtdate;
MPRINT(EVENT_STUDY):   by permno evtdate;
```

```
MPRINT(EVENT_STUDY):    run;
```

```
MPRINT(EVENT_STUDY):    * proc means data=allcars noprint;
MPRINT(EVENT_STUDY):    proc means data=allcars( where = (nobs=150)) noprint;
MPRINT(EVENT_STUDY):    class evttime;
MPRINT(EVENT_STUDY):    id nobs;
MPRINT(EVENT_STUDY):    var ret cret car0 car1 car2 car3 cretwin car0win car1win car2win car3win bhar0 bhar1 bhar2
bhar3 bhar0win bhar1win bhar2win bhar3win scar0 scar1 scar2 scar3 abret0 abret1 abret2 abret3 sar0 sar1 sar2 sar3
pat_scale;
MPRINT(EVENT_STUDY):    output out=allstats mean = n = t = sum =/autoname;
MPRINT(EVENT_STUDY):    run;
```

```
MPRINT(EVENT_STUDY):   data MA_Evtdate (keep=evttime car0_n cret_mean car0_mean car0_t scar0_t bhar0_mean pat_car0
model) MM_Evtdate (keep=evttime car1_n cret_mean car1_mean car1_t scar1_t bhar1_mean pat_car1 model ) FF_Evtdate
(keep=evttime car2_n cret_mean car2_mean car2_t scar2_t bhar2_mean pat_car2 model ) FFM_Evtdate (keep=evttime car3_n
cret_mean car3_mean car3_t scar3_t bhar3_mean pat_car3 model ) MA_Evtwin (keep=evttime cretwin_mean abret0_n ret_mean
abret0_mean car0win_mean bhar0win_mean abret0_t sar0_t pat_ar0 ) MM_Evtwin (keep=evttime cretwin_mean abret1_n
ret_mean abret1_mean car1win_mean bhar1win_mean abret1_t sar1_t pat_ar1 ) FF_Evtwin (keep=evttime cretwin_mean
abret2_n ret_mean abret2_mean car2win_mean bhar2win_mean abret2_t sar2_t pat_ar2 ) FFM_Evtwin (keep=evttime
cretwin_mean abret3_n ret_mean abret3_mean car3win_mean bhar3win_mean abret3_t sar3_t pat_ar3 );
MPRINT(EVENT_STUDY):   set allstats;
MPRINT(EVENT_STUDY):   by evttime;
MPRINT(EVENT_STUDY):   if _n_=1 and missing(evttime) then do;
MPRINT(EVENT_STUDY):   abret0_mean=.;
MPRINT(EVENT_STUDY):   abret1_mean=.;
MPRINT(EVENT_STUDY):   abret2_mean=.;
MPRINT(EVENT_STUDY):   abret3_mean=.;
MPRINT(EVENT_STUDY):   cretwin_mean=0;
MPRINT(EVENT_STUDY):   ret_mean=.;
MPRINT(EVENT_STUDY):   bhar1win_mean=0;
MPRINT(EVENT_STUDY):   bhar1win_mean=0;
MPRINT(EVENT_STUDY):   bhar2win_mean=0;
MPRINT(EVENT_STUDY):   bhar3win_mean=0;
MPRINT(EVENT_STUDY):   end;
MPRINT(EVENT_STUDY):   pat_car0=scar0_mean/(sqrt(pat_scale_sum)/scar0_n);
MPRINT(EVENT_STUDY):   pat_car1=scar1_mean/(sqrt(pat_scale_sum)/scar1_n);
MPRINT(EVENT_STUDY):   pat_car2=scar2_mean/(sqrt(pat_scale_sum)/scar2_n);
MPRINT(EVENT_STUDY):   pat_car3=scar3_mean/(sqrt(pat_scale_sum)/scar3_n);
MPRINT(EVENT_STUDY):   pat_ar0=sar0_mean/(sqrt(pat_scale_sum)/sar0_n);
MPRINT(EVENT_STUDY):   pat_ar1=sar1_mean/(sqrt(pat_scale_sum)/sar1_n);
MPRINT(EVENT_STUDY):   pat_ar2=sar2_mean/(sqrt(pat_scale_sum)/sar2_n);
MPRINT(EVENT_STUDY):   pat_ar3=sar3_mean/(sqrt(pat_scale_sum)/sar3_n);
MPRINT(EVENT_STUDY):   label pat_ar0= 'Patell Z for AR_MA' pat_ar1= 'Patell Z for AR_MM' pat_ar2= 'Patell Z for
AR_FF' pat_ar3= 'Patell Z for AR_FFM' abret0_t= 'CS t-stat, AR_MA' abret1_t= 'CS t-stat, AR_MM' abret2_t= 'CS t-stat,
AR_FF' abret3_t= 'CS t-stat, AR_FFM' sar0_t= 'Std CS test, AR_MA' sar1_t= 'Std CS test, AR_MM' sar2_t= 'Std CS test,
AR_FF' sar3_t= 'Std CS test, AR_FFM' abret0_mean= 'Mean AR_MA' abret1_mean= 'Mean AR_MM' abret2_mean= 'Mean AR_FF'
abret3_mean= 'Mean AR_FFM' car0_n= 'Number of events in the portfolio' abret0_n= 'Number of events in the portfolio'
evttime= 'Event Time t' cret_mean= "Mean CTR (-2, 2)" cretwin_mean= "Mean CTR (-2,t) " car0win_mean= "Average CAR_MA
(-2, t)" car1win_mean= "Average CAR_MM (-2, t)" car2win_mean= "Average CAR_FF (-2, t)" car3win_mean= "Average CAR_FFM
```

```
(-2, t)" bhar0win_mean= "Mean BHAR_MA (-2, t)" bhar1win_mean= "Mean BHAR_MM (-2, t)" bhar2win_mean= "Mean BHAR_FF
(-2, t)" bhar3win_mean= "Mean BHAR_FFM (-2, t)" ;
MPRINT(EVENT_STUDY):   format ret_mean cret_mean cretwin_mean abret0_mean abret1_mean abret2_mean abret3_mean
car0_mean car1_mean car2_mean car3_mean bhar0_mean bhar1_mean bhar2_mean bhar3_mean bhar0win_mean bhar1win_mean
bhar2win_mean bhar3win_mean car0win_mean car1win_mean car2win_mean car3win_mean percent7.4 abret0_t abret1_t abret2_t
abret3_t sar0_t sar1_t sar2_t sar3_t pat_car0 pat_car1 pat_car2 pat_car3 pat_ar0 pat_ar1 pat_ar2 pat_ar3 car0_t
car1_t car2_t car3_t scar0_t car1_t scar2_t scar3_t comma10.2;
MPRINT(EVENT_STUDY):   if evttime=0 then do;
MPRINT(EVENT_STUDY):   model='Market-Adjusted';
MPRINT(EVENT_STUDY):   output MA_Evtdate;
MPRINT(EVENT_STUDY):   model='Market Model';
MPRINT(EVENT_STUDY):   output MM_Evtdate;
MPRINT(EVENT_STUDY):   model='FF Model';
MPRINT(EVENT_STUDY):   output FF_Evtdate;
MPRINT(EVENT_STUDY):   model='Carhart Model';
MPRINT(EVENT_STUDY):   output FFM_Evtdate;
MPRINT(EVENT_STUDY):   end;
MPRINT(EVENT_STUDY):   if missing(evttime) then evttime=-2-1;
MPRINT(EVENT_STUDY):   output MA_Evtwin;
MPRINT(EVENT_STUDY):   output MM_Evtwin;
MPRINT(EVENT_STUDY):   output FF_Evtwin;
MPRINT(EVENT_STUDY):   output FFM_Evtwin;
MPRINT(EVENT_STUDY):   run;


NOTE: There were 6 observations read from the data set WORK.ALLSTATS.
NOTE: The data set WORK.MA_EVTDATE has 1 observations and 9 variables.
NOTE: The data set WORK.MM_EVTDATE has 1 observations and 9 variables.
NOTE: The data set WORK.FF_EVTDATE has 1 observations and 9 variables.
NOTE: The data set WORK.FFM_EVTDATE has 1 observations and 9 variables.
NOTE: The data set WORK.MA_EVTWIN has 6 observations and 10 variables.
NOTE: The data set WORK.MM_EVTWIN has 6 observations and 10 variables.
NOTE: The data set WORK.FF_EVTWIN has 6 observations and 10 variables.
NOTE: The data set WORK.FFM_EVTWIN has 6 observations and 10 variables.
NOTE: DATA statement used (Total process time):
      real time            0.09 seconds
      user cpu time        0.00 seconds
      system cpu time      0.06 seconds
      memory               2528.00k
```

```
       OS Memory           49408.00k
       Timestamp           06/19/2024 04:13:07 PM
       Step Count                          215  Switch Count  0


MPRINT(EVENT_STUDY):   data allevtdate;
MPRINT(EVENT_STUDY):   set MA_Evtdate (rename=(car0_mean=car_mean bhar0_mean=bhar_mean car0_n=n car0_t=car_t
scar0_t=scar_t pat_car0=pat_car)) MM_Evtdate (rename=(car1_mean=car_mean bhar1_mean=bhar_mean car1_n=n car1_t=car_t
scar1_t=scar_t pat_car1=pat_car)) FF_Evtdate (rename=(car2_mean=car_mean bhar2_mean=bhar_mean car2_n=n car2_t=car_t
scar2_t=scar_t pat_car2=pat_car)) FFM_evtdate (rename=(car3_mean=car_mean bhar3_mean=bhar_mean car3_n=n car3_t=car_t
scar3_t=scar_t pat_car3=pat_car));
MPRINT(EVENT_STUDY):   length=5;
MPRINT(EVENT_STUDY):   label pat_car= 'Patell Z' car_mean= "Mean CAR (-2, 2)" bhar_mean= "Mean BHAR (-2, 2)" car_t=
'Cross-sectional t-stat for CAR' scar_t= 'Standaridized cross-sectional t-stat for CAR' length= 'Length of event
window in trading days';
MPRINT(EVENT_STUDY):   run;

NOTE: There were 1 observations read from the data set WORK.MA_EVTDATE.
NOTE: There were 1 observations read from the data set WORK.MM_EVTDATE.
NOTE: There were 1 observations read from the data set WORK.FF_EVTDATE.
NOTE: There were 1 observations read from the data set WORK.FFM_EVTDATE.
NOTE: The data set WORK.ALLEVTDATE has 4 observations and 10 variables.
NOTE: DATA statement used (Total process time):
       real time           0.01 seconds
       user cpu time       0.00 seconds
       system cpu time     0.01 seconds
       memory              1123.12k
       OS Memory           49408.00k
       Timestamp           06/19/2024 04:13:07 PM
       Step Count                          216  Switch Count  0


MPRINT(EVENT_STUDY):   data car_evtdate;
MPRINT(EVENT_STUDY):   retain permno evtdate alpha1 beta1 cret car0 bhar0 var0 car1 bhar1 var1 car2 bhar2 var2 car3
bhar3 var3 nrets nobs;
MPRINT(EVENT_STUDY):   set car_evtdate;
MPRINT(EVENT_STUDY):   label alpha1= 'Alpha (Market Model)' beta1= 'Beta (Market Model' car0= 'CAR_MA' car1= 'CAR_MM'
car2= 'CAR_FF' car3= 'CAR_FFM' bhar0= 'BHAR_MA' bhar1= 'BHAR_MM' bhar2= 'BHAR_FF' bhar3= 'BHAR_FFM' var0= 'Estimation
```

period variance (Market-adjusted returns)' var1= 'Estimation period variance (Market Model)' var2= 'Estimation period variance (FF Model)' var3= 'Estimation period variance (Carhart Model)' cret= 'Cumulative Total Return' nrets= 'Number of non-missing returns in event window' nobs= 'Length of the estimation period';
MPRINT(EVENT_STUDY):   keep permno evtdate alpha1 beta1 cret car0 bhar0 var0 car1 bhar1 var1 car2 bhar2 var2 car3 bhar3 var3 nrets nobs;
MPRINT(EVENT_STUDY):   format cret alpha1 car0 bhar0 car1 bhar1 car2 bhar2 car3 bhar3 percent7.4 beta1 comma10.3;
MPRINT(EVENT_STUDY):   run;

NOTE: There were 93 observations read from the data set WORK.CAR_EVTDATE.
NOTE: The data set WORK.CAR_EVTDATE has 93 observations and 19 variables.
NOTE: DATA statement used (Total process time):
      real time   0.00 seconds
      user cpu time   0.00 seconds
      system cpu time   0.00 seconds
      memory   630.84k
      OS Memory   49408.00k
      Timestamp   06/19/2024 04:13:07 PM
      Step Count   217 Switch Count 0

MPRINT(EVENT_STUDY):   PROC DATASETS NOLIST;
MPRINT(EVENT_STUDY):   COPY IN = work OUT = evtstudy ;
MPRINT(EVENT_STUDY):   select allevtdate allstats car_evtwin ;
MPRINT(EVENT_STUDY):   RUN;

NOTE: Copying WORK.ALLEVTDATE to EVTSTUDY.ALLEVTDATE (memtype=DATA).
INFO: Engine's block-read method is in use.
INFO: Engine's block-write method is in use.
NOTE: There were 4 observations read from the data set WORK.ALLEVTDATE.
NOTE: The data set EVTSTUDY.ALLEVTDATE has 4 observations and 10 variables.
NOTE: Copying WORK.ALLSTATS to EVTSTUDY.ALLSTATS (memtype=DATA).
INFO: Engine's block-read method is in use.
INFO: Engine's block-write method is in use.
NOTE: There were 6 observations read from the data set WORK.ALLSTATS.
NOTE: The data set EVTSTUDY.ALLSTATS has 6 observations and 132 variables.
NOTE: Copying WORK.CAR_EVTWIN to EVTSTUDY.CAR_EVTWIN (memtype=DATA).
INFO: Engine's block-read method is in use.
INFO: Engine's block-write method is in use.

```
NOTE: There were 465 observations read from the data set WORK.CAR_EVTWIN.
NOTE: The data set EVTSTUDY.CAR_EVTWIN has 465 observations and 22 variables.
MPRINT(EVENT_STUDY):   options nodate orientation=landscape;
MPRINT(EVENT_STUDY):   ods pdf file="C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\foreign_rec_exe10Dec9\Car0_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\foreign_rec_exe10Dec9\Car0_evtrets_5days.pdf", printer "PDF".
MPRINT(EVENT_STUDY):   goptions device=pdfc;
MPRINT(EVENT_STUDY):   axis1 label=(angle=90 "Cumulative Abnormal Returns");
MPRINT(EVENT_STUDY):   axis2 label=("Event time");
MPRINT(EVENT_STUDY):   symbol interpol=join w=3 l=1;
NOTE: PROCEDURE DATASETS used (Total process time):
      real time           0.30 seconds
      user cpu time       0.09 seconds
      system cpu time     0.07 seconds
      memory              4277.12k
      OS Memory           50436.00k
      Timestamp           06/19/2024 04:13:07 PM
      Step Count                        218  Switch Count  0


MPRINT(EVENT_STUDY):   proc gplot data =MA_Evtwin;
MPRINT(EVENT_STUDY):   where evttime>=-2;
MPRINT(EVENT_STUDY):   Title "Market adjusted model:  CARs and BHARs around the event date";
MPRINT(EVENT_STUDY):   plot (car0win_mean bhar0win_mean)*evttime /overlay legend vaxis=axis1 haxis=axis2;
MPRINT(EVENT_STUDY):   run;

NOTE: 46485 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot12.png.
MPRINT(EVENT_STUDY):  quit;

NOTE: There were 5 observations read from the data set WORK.MA_EVTWIN.
      WHERE evttime>=-2;
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE GPLOT used (Total process time):
      real time           0.36 seconds
      user cpu time       0.14 seconds
```

```
        system cpu time       0.12 seconds
        memory                8766.84k
        OS Memory             53464.00k
        Timestamp             06/19/2024 04:13:08 PM
        Step Count                          219  Switch Count  0


MPRINT(EVENT_STUDY):   ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\foreign_rec_exe10Dec9\Car0_evtrets_5days.pdf.
MPRINT(EVENT_STUDY):   ods pdf file="C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\foreign_rec_exe10Dec9\Car1_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\foreign_rec_exe10Dec9\Car1_evtrets_5days.pdf", printer "PDF".
MPRINT(EVENT_STUDY):   proc gplot data =MM_Evtwin;
MPRINT(EVENT_STUDY):   where evttime>=-2;
MPRINT(EVENT_STUDY):   Title "Market model:  CARs and BHARs around the event date";
MPRINT(EVENT_STUDY):   plot (car1win_mean bhar1win_mean)*evttime /overlay legend vaxis=axis1 haxis=axis2;
MPRINT(EVENT_STUDY):   run;

NOTE: 42462 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot13.png.
MPRINT(EVENT_STUDY):  quit;

NOTE: There were 5 observations read from the data set WORK.MM_EVTWIN.
      WHERE evttime>=-2;
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE GPLOT used (Total process time):
      real time             0.31 seconds
      user cpu time         0.25 seconds
      system cpu time       0.03 seconds
      memory                8608.53k
      OS Memory             53464.00k
      Timestamp             06/19/2024 04:13:08 PM
      Step Count                          220  Switch Count  0
```

```
MPRINT(EVENT_STUDY):   ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\foreign_rec_exe1ODec9\Car1_evtrets_5days.pdf.
MPRINT(EVENT_STUDY):   ods pdf file="C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\foreign_rec_exe1ODec9\Car2_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\foreign_rec_exe1ODec9\Car2_evtrets_5days.pdf", printer "PDF".
MPRINT(EVENT_STUDY):   proc gplot data =FF_Evtwin;
MPRINT(EVENT_STUDY):   where evttime>=-2;
MPRINT(EVENT_STUDY):   Title "FF 3-factor model:CARs and BHARs around the event date";
MPRINT(EVENT_STUDY):   plot (car2win_mean bhar2win_mean)*evttime /overlay legend vaxis=axis1 haxis=axis2;
MPRINT(EVENT_STUDY):   run;

NOTE: 47276 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot14.png.
MPRINT(EVENT_STUDY):  quit;

NOTE: There were 5 observations read from the data set WORK.FF_EVTWIN.
      WHERE evttime>=-2;
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE GPLOT used (Total process time):
      real time           0.31 seconds
      user cpu time       0.23 seconds
      system cpu time     0.06 seconds
      memory              8609.09k
      OS Memory           53464.00k
      Timestamp           06/19/2024 04:13:08 PM
      Step Count                         221  Switch Count  0


MPRINT(EVENT_STUDY):   ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\foreign_rec_exe1ODec9\Car2_evtrets_5days.pdf.
MPRINT(EVENT_STUDY):   ods pdf file="C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\foreign_rec_exe1ODec9\Car3_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
```

```
                University\aaaa\event_Study\result\foreign_rec_exe10Dec9\Car3_evtrets_5days.pdf", printer "PDF".
MPRINT(EVENT_STUDY):   proc gplot data =FFM_Evtwin;
MPRINT(EVENT_STUDY):   where evttime>=-2;
MPRINT(EVENT_STUDY):   Title "Carhart 4 Factor model: Carhart CARs and BHARs around the event date";
MPRINT(EVENT_STUDY):   plot (car3win_mean bhar3win_mean)*evttime /overlay legend vaxis=axis1 haxis=axis2;
MPRINT(EVENT_STUDY):   run;

NOTE: 42572 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot15.png.
MPRINT(EVENT_STUDY):   quit;

NOTE: There were 5 observations read from the data set WORK.FFM_EVTWIN.
      WHERE evttime>=-2;
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE GPLOT used (Total process time):
      real time           0.34 seconds
      user cpu time       0.20 seconds
      system cpu time     0.12 seconds
      memory              8547.59k
      OS Memory           53720.00k
      Timestamp           06/19/2024 04:13:09 PM
      Step Count                        222  Switch Count  0


MPRINT(EVENT_STUDY):   ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\foreign_rec_exe10Dec9\Car3_evtrets_5days.pdf.
MPRINT(EVENT_STUDY):   ods pdf file="C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\foreign_rec_exe10Dec9\Car0_3_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\foreign_rec_exe10Dec9\Car0_3_evtrets_5days.pdf", printer "PDF".
MPRINT(EVENT_STUDY):   proc gplot data =allstats;
MPRINT(EVENT_STUDY):   where evttime>=-2;
MPRINT(EVENT_STUDY):   Title "CARs from the four models: around the event date";
MPRINT(EVENT_STUDY):   plot (car0win_mean car1win_mean car2win_mean car3win_mean )*evttime /overlay legend
vaxis=axis1 haxis=axis2;
MPRINT(EVENT_STUDY):   run;
```

NOTE: 38227 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files_TD25772_DELL2_\gplot16.png.
MPRINT(EVENT_STUDY): quit;

NOTE: There were 5 observations read from the data set WORK.ALLSTATS.
      WHERE evttime>=-2;
NOTE: PROCEDURE GPLOT used (Total process time):
      real time   0.32 seconds
      user cpu time   0.21 seconds
      system cpu time   0.07 seconds
      memory   8725.00k
      OS Memory   53720.00k
      Timestamp   06/19/2024 04:13:09 PM
      Step Count   223 Switch Count 0

MPRINT(EVENT_STUDY):   ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\foreign_rec_exe10Dec9\Car0_3_evtrets_5days.pdf.
MPRINT(EVENT_STUDY):   ods pdf file="C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\foreign_rec_exe10Dec9\BHARS0_3_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\foreign_rec_exe10Dec9\BHARS0_3_evtrets_5days.pdf", printer "PDF".
MPRINT(EVENT_STUDY):   proc gplot data =allstats;
MPRINT(EVENT_STUDY):   where evttime>=-2;
MPRINT(EVENT_STUDY):   Title "BHARs from the four models: BHARs around the event date";
MPRINT(EVENT_STUDY):   plot (bhar0_mean bhar1_mean bhar2_mean bhar3_mean)*evttime /overlay legend vaxis=axis1
haxis=axis2;
MPRINT(EVENT_STUDY):   run;
NOTE: 18046 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files_TD25772_DELL2_\gplot17.png.
MPRINT(EVENT_STUDY): quit;
NOTE: There were 5 observations read from the data set WORK.ALLSTATS.
      WHERE evttime>=-2;
NOTE: PROCEDURE GPLOT used (Total process time):
      real time   0.31 seconds
      user cpu time   0.17 seconds
      system cpu time   0.11 seconds

```
        memory                 8673.84k
        OS Memory              53720.00k
        Timestamp              06/19/2024 04:13:10 PM
        Step Count                        224  Switch Count  0


MPRINT(EVENT_STUDY):    ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\foreign_rec_exe10Dec9\BHARSO_3_evtrets_5days.pdf.
MPRINT(EVENT_STUDY):    run;
MPRINT(EVENT_STUDY):  quit;
MPRINT(EVENT_STUDY):    ods pdf close;
MPRINT(EVENT_STUDY):    *house cleaning;
MPRINT(EVENT_STUDY):    proc sql;
MPRINT(EVENT_STUDY):    drop table abrets, allcars, allstats, caldates, car, car_evtwin, evtrets, temp,
evtrets_temp,ffm_evtdate, ff_evtdate, ma_evtdate, mm_evtdate, params;
NOTE: Table WORK.ABRETS has been dropped.
NOTE: Table WORK.ALLCARS has been dropped.
NOTE: Table WORK.ALLSTATS has been dropped.
NOTE: Table WORK.CALDATES has been dropped.
NOTE: Table WORK.CAR has been dropped.
NOTE: Table WORK.CAR_EVTWIN has been dropped.
NOTE: Table WORK.EVTRETS has been dropped.
NOTE: Table WORK.TEMP has been dropped.
NOTE: Table WORK.EVTRETS_TEMP has been dropped.
NOTE: Table WORK.FFM_EVTDATE has been dropped.
NOTE: Table WORK.FF_EVTDATE has been dropped.
NOTE: Table WORK.MA_EVTDATE has been dropped.
NOTE: Table WORK.MM_EVTDATE has been dropped.
NOTE: Table WORK.PARAMS has been dropped.
MPRINT(EVENT_STUDY):    drop view evtrets1, abrets1;
NOTE: View WORK.EVTRETS1 has been dropped.
NOTE: View WORK.ABRETS1 has been dropped.
MPRINT(EVENT_STUDY):    quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time           0.06 seconds
      user cpu time       0.00 seconds
      system cpu time     0.01 seconds
```

MLOGIC(EVENT_STUDY): Ending execution.

4218 %event_study(outputPath="C:\Users\lihon\OneDrive - Kent State
4218! University\aaaa\event_Study\result\agg_foreign_all"
MLOGIC(EVENT_STUDY): Beginning execution.
4219   ,permno_list = foreign_trans_decile)
MLOGIC(EVENT_STUDY): Parameter OUTPUTPATH has value "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_all"
MLOGIC(EVENT_STUDY): Parameter PERMNO_LIST has value foreign_trans_decile
MPRINT(EVENT_STUDY):   libname mycrsp "C:\Users\lihon\patent Dropbox\Victor Li\wrds_data";
NOTE: Libref MYCRSP was successfully assigned as follows:
      Engine: V9
      Physical Name: C:\Users\lihon\patent Dropbox\Victor Li\wrds_data
MPRINT(EVENT_STUDY):   * libname evtstudy "C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\June6_res";
MLOGIC(EVENT_STUDY): %LET (variable name is OUTPUTPATH)
MPRINT(EVENT_STUDY):   * * libname evtstudy "&outputPath\Foreign_rec_exe10";
MPRINT(EVENT_STUDY):   libname evtstudy "C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\foreign_rec_exe10Dec9";
NOTE: Libref EVTSTUDY refers to the same physical library as TMP10.
NOTE: Libref EVTSTUDY was successfully assigned as follows:
      Engine: V9
      Physical Name: C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\result\foreign_rec_exe10Dec9
MLOGIC(EVENT_STUDY): %LET (variable name is CRSP)
MLOGIC(EVENT_STUDY): %LET (variable name is ESTPER)
MLOGIC(EVENT_STUDY): %LET (variable name is START)
MLOGIC(EVENT_STUDY): %LET (variable name is END)
MLOGIC(EVENT_STUDY): %LET (variable name is GAP)
MLOGIC(EVENT_STUDY): %LET (variable name is MINEST)
MLOGIC(EVENT_STUDY): %LET (variable name is EVTWIN)
MPRINT(EVENT_STUDY):   * %event_crack(relation_exec) ;
MLOGIC(EVENT_STUDY): %LET (variable name is PERMNO_LIST)

```
MLOGIC(EVENT_STUDY):   %LET (variable name is PERMNO_LIST)
MLOGIC(EVENT_STUDY):   %LET (variable name is PERMNO_LIST)
MLOGIC(EVENT_STUDY):   %LET (variable name is PERMNO_LIST)
MLOGIC(EVENT_STUDY):   %LET (variable name is PERMNO_LIST)
MLOGIC(EVENT_STUDY):   %LET (variable name is PERMNO_LIST)
MPRINT(EVENT_STUDY):   * * * * * * * ;
MPRINT(EVENT_STUDY):   proc sql;
MPRINT(EVENT_STUDY):   create table input as select distinct permno, record_dt as edate format MMDDYY10. from
foreign_trans_execrec10_dec10 where not missing(-2) and year(record_dt);
NOTE: Table WORK.INPUT created, with 93 rows and 2 columns.

MPRINT(EVENT_STUDY):   quit;
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE SQL used (Total process time):
      real time            0.00 seconds
      user cpu time        0.00 seconds
      system cpu time      0.00 seconds
      memory               5641.25k
      OS Memory            60468.00k
      Timestamp            06/19/2024 04:23:59 PM
      Step Count                       226  Switch Count  0


MPRINT(EVENT_STUDY):   data caldates;
MPRINT(EVENT_STUDY):   merge mycrsp.dsi(keep=date rename=(date=estper_beg)) mycrsp.dsi(keep=date firstobs=150
rename=(date=estper_end)) mycrsp.dsi(keep=date firstobs=217 rename=(date=evtwin_beg)) mycrsp.dsi(keep=date
firstobs=219 rename=(date=evtdate)) mycrsp.dsi(keep=date firstobs=221 rename=(date=evtwin_end));
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
```

the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and might reduce performance.
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and might reduce performance.
MPRINT(EVENT_STUDY):   format estper_beg estper_end evtwin_beg evtdate evtwin_end date9.;
MPRINT(EVENT_STUDY):   label estper_beg= 'Start of the Estimation Window' estper_end= 'End of the Estimation Window' evtwin_beg= 'Start of the Event Window' evtwin_end= 'End of the Event Window' evtdate= 'Event Date';
MPRINT(EVENT_STUDY):   index+1;
MPRINT(EVENT_STUDY):   if nmiss(estper_beg,estper_end,evtwin_beg,evtwin_end,evtdate)=0;
MPRINT(EVENT_STUDY):   run;

NOTE: There were 25799 observations read from the data set MYCRSP.DSI.
NOTE: There were 25650 observations read from the data set MYCRSP.DSI.
NOTE: There were 25583 observations read from the data set MYCRSP.DSI.
NOTE: There were 25581 observations read from the data set MYCRSP.DSI.
NOTE: There were 25579 observations read from the data set MYCRSP.DSI.
NOTE: The data set WORK.CALDATES has 25579 observations and 6 variables.
NOTE: DATA statement used (Total process time):
      real time   0.08 seconds
      user cpu time   0.07 seconds
      system cpu time   0.01 seconds
      memory   1607.65k
      OS Memory   55324.00k
      Timestamp   06/19/2024 04:24:00 PM
      Step Count   227 Switch Count 0

MPRINT(EVENT_STUDY):   proc sql;
MPRINT(EVENT_STUDY):   create table temp as select a.permno ,b.* from input a left join caldates b on b.evtdate-a.edate>=0 group by a.edate having (b.evtdate-a.edate)=min(b.evtdate-a.edate);
NOTE: The execution of this query involves performing one or more Cartesian product joins that can not be optimized.
NOTE: The query requires remerging summary statistics back with the original data.
NOTE: SAS threaded sort was used.
NOTE: Table WORK.TEMP created, with 93 rows and 7 columns.

NOTE: PROCEDURE SQL used (Total process time):
      real time   0.34 seconds

```
      user cpu time      0.43 seconds
      system cpu time    0.10 seconds
      memory             52090.71k
      OS Memory          105232.00k
      Timestamp          06/19/2024 04:24:00 PM
      Step Count                        228  Switch Count  0


MPRINT(EVENT_STUDY):   proc sql;
MPRINT(EVENT_STUDY):   create table evtrets_temp as select a.permno, a.date format date9., a.ret as ret1, b.evtdate,
b.estper_beg, b.estper_end, b.evtwin_beg, b.evtwin_end from mycrsp.dsf a, temp b where a.permno=b.permno and
b.estper_beg<=a.date<=b.evtwin_end;
INFO: Data file MYCRSP.DSF.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
NOTE: Table WORK.EVTRETS_TEMP created, with 20553 rows and 8 columns.

MPRINT(EVENT_STUDY):   quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time          38.90 seconds
      user cpu time      38.84 seconds
      system cpu time    2.82 seconds
      memory             5845.75k
      OS Memory          60192.00k
      Timestamp          06/19/2024 04:24:39 PM
      Step Count                        229  Switch Count  0



MPRINT(EVENT_STUDY):   proc sql;
MPRINT(EVENT_STUDY):   create view evtrets1 as select a.*, (b.mktrf+b.rf) as mkt, b.mktrf, b.rf,b.smb, b.hml, b.umd
from evtrets_temp a left join mycrsp.ff_factors_daily (keep=date mktrf smb hml umd rf) b on a.date=b.date;
NOTE: SQL view WORK.EVTRETS1 has been defined.
MPRINT(EVENT_STUDY):   quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time          0.00 seconds
      user cpu time      0.00 seconds
      system cpu time    0.00 seconds
      memory             112.34k
```

```
      OS Memory              54556.00k
      Timestamp              06/19/2024 04:24:39 PM
      Step Count                        230  Switch Count  0


MPRINT(EVENT_STUDY):    proc sql;
MPRINT(EVENT_STUDY):    create table evtrets (drop=ret1 where=(not missing(mkt))) as select a.*,
(1+a.ret1)*sum(1,b.dlret)-1-a.mkt as exret label='Market-adjusted total ret', (1+a.ret1)*sum(1,b.dlret)-1 as ret "Ret
adjusted for delisting" from evtrets1 a left join mycrsp.dsedelist (where=(missing(dlret)=0)) b on a.permno=b.permno
and a.date=b.dlstdt order by a.permno,a.evtdate,a.date;
INFO: Data file MYCRSP.FF_FACTORS_DAILY.DATA is in a format that is native to another host, or the file encoding does
not match the session encoding. Cross Environment Data Access will be used, which might require additional CPU
resources and might reduce performance.
INFO: Data file MYCRSP.DSEDELIST.DATA is in a format that is native to another host, or the file encoding does not
match the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources
and might reduce performance.
NOTE: SAS threaded sort was used.
NOTE: Table WORK.EVTRETS created, with 20553 rows and 15 columns.


MPRINT(EVENT_STUDY):    quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time          0.16 seconds
      user cpu time      0.15 seconds
      system cpu time    0.07 seconds
      memory             37007.46k
      OS Memory          89288.00k
      Timestamp          06/19/2024 04:24:39 PM
      Step Count                        231  Switch Count  0



MPRINT(EVENT_STUDY):    proc printto log=junk;
MPRINT(EVENT_STUDY):    run;

NOTE: PROCEDURE PRINTTO used (Total process time):
      real time          0.00 seconds
      user cpu time      0.00 seconds
      system cpu time    0.00 seconds
      memory             5.75k
```

```
MPRINT(EVENT_STUDY):    data abrets1/view=abrets1;
MPRINT(EVENT_STUDY):    merge evtrets(where=(evtwin_beg<=date<=evtwin_end) in=in_evtrets) params
(where=(_model_='eq0') keep=permno evtdate _model_ _rmse_ _p_ _edf_ rename=(_rmse_=std0 _p_=p0 _edf_=edf0)) params
(where=(_model_='eq1') keep=permno evtdate _model_ _rmse_ intercept mktrf rename=(_rmse_=std1 intercept=alpha1
mktrf=beta1)) params (where=(_model_='eq2') keep=permno evtdate _model_ _rmse_ intercept mktrf smb hml
rename=(_rmse_=std2 intercept=alpha2 mktrf=beta2 smb=sminb2 hml=hminl2)) params (where=(_model_='eq3') keep=permno
evtdate _model_ _rmse_ intercept mktrf smb hml umd rename=(_rmse_=std3 intercept=alpha3 mktrf=beta3 smb=sminb3
hml=hminl3 umd=umind3));
MPRINT(EVENT_STUDY):    by permno evtdate;
MPRINT(EVENT_STUDY):    retain missret;
MPRINT(EVENT_STUDY):    if first.permno then missret=missing(ret);
MPRINT(EVENT_STUDY):    if missing(ret) then missret+1;
MPRINT(EVENT_STUDY):    var0=std0**2;
MPRINT(EVENT_STUDY):    var1=std1**2;
MPRINT(EVENT_STUDY):    var2=std2**2;
MPRINT(EVENT_STUDY):    var3=std3**2;
MPRINT(EVENT_STUDY):    abret0 = exret;
MPRINT(EVENT_STUDY):    *extra over market;
MPRINT(EVENT_STUDY):    expret1 = alpha1 + beta1*mktrf;
MPRINT(EVENT_STUDY):    *CAPM;
MPRINT(EVENT_STUDY):    abret1 = ret-expret1;
MPRINT(EVENT_STUDY):    expret2 = alpha2+beta2*mktrf+sminb2*smb+hminl2*hml;
MPRINT(EVENT_STUDY):    *FF3factor;
MPRINT(EVENT_STUDY):    abret2=ret-expret2;
MPRINT(EVENT_STUDY):    expret3 =alpha3+beta3*mktrf+sminb3*smb+hminl3*hml+umind3*umd;
MPRINT(EVENT_STUDY):    abret3=ret-expret3;
MPRINT(EVENT_STUDY):    nobs=p0+edf0;
MPRINT(EVENT_STUDY):    drop p0 edf0 estper_beg estper_end std0 std1 std2 std3 _model_ exret;
MPRINT(EVENT_STUDY):    if in_evtrets and nobs>70;
MPRINT(EVENT_STUDY):    * I add the followings;
MPRINT(EVENT_STUDY):    if nobs=150;
MPRINT(EVENT_STUDY):    run;
```

```
NOTE: DATA STEP view saved on file WORK.ABRETS1.
NOTE: A stored DATA STEP view cannot run under a different operating system.
NOTE: DATA statement used (Total process time):
      real time           0.01 seconds
      user cpu time       0.01 seconds
      system cpu time     0.00 seconds
      memory              1064.68k
      OS Memory           55328.00k
      Timestamp           06/19/2024 04:24:39 PM
      Step Count                        235  Switch Count  0


MPRINT(EVENT_STUDY):   proc sql;
MPRINT(EVENT_STUDY):   create table abrets as select a.*, (b.index-c.index) as evttime from abrets1 a left join
caldates b on a.date = b.evtdate left join caldates c on a.evtdate = c.evtdate order by permno, evtdate, date;
NOTE: SAS threaded sort was used.
INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
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INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
NOTE: View WORK.ABRETS1.VIEW used (Total process time):
      real time           0.13 seconds
      user cpu time       0.10 seconds
      system cpu time     0.07 seconds
      memory              45726.10k
      OS Memory           99184.00k
      Timestamp           06/19/2024 04:24:44 PM
      Step Count                        236  Switch Count  9


NOTE: There were 465 observations read from the data set WORK.EVTRETS.
      WHERE (evtwin_beg<=date) and (date<=evtwin_end);
NOTE: There were 93 observations read from the data set WORK.PARAMS.
      WHERE _model_='eq0';
NOTE: There were 93 observations read from the data set WORK.PARAMS.
      WHERE _model_='eq1';
NOTE: There were 93 observations read from the data set WORK.PARAMS.
```

```
      WHERE _model_='eq2';
NOTE: There were 93 observations read from the data set WORK.PARAMS.
      WHERE _model_='eq3';
NOTE: Table WORK.ABRETS created, with 465 rows and 37 columns.

MPRINT(EVENT_STUDY):   quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time           4.36 seconds
      user cpu time       4.09 seconds
      system cpu time     0.20 seconds
      memory              45726.10k
      OS Memory           99184.00k
      Timestamp           06/19/2024 04:24:44 PM
      Step Count                        236  Switch Count  10


MPRINT(EVENT_STUDY):   proc sort data=abrets nodupkey;
MPRINT(EVENT_STUDY):   by PERMNO evtdate DATE evtwin_beg evtwin_end mkt mktrf rf smb hml umd ret alpha1 beta1 alpha2
beta2 sminb2 hminl2 alpha3 beta3 sminb3 hminl3 umind3 missret var0 var1 var2 var3 abret0 expret1 abret1 expret2
abret2 expret3 abret3 nobs evttime ;
MPRINT(EVENT_STUDY):   run;

NOTE: There were 465 observations read from the data set WORK.ABRETS.
NOTE: SAS sort was used.
NOTE: 0 observations with duplicate key values were deleted.
NOTE: The data set WORK.ABRETS has 465 observations and 37 variables.
NOTE: PROCEDURE SORT used (Total process time):
      real time           0.01 seconds
      user cpu time       0.00 seconds
      system cpu time     0.03 seconds
      memory              1927.43k
      OS Memory           56616.00k
      Timestamp           06/19/2024 04:24:44 PM
      Step Count                        237  Switch Count  0


MPRINT(EVENT_STUDY):   proc expand data=abrets out=car method=none;
MPRINT(EVENT_STUDY):   by permno evtdate;
```

```
MPRINT(EVENT_STUDY):   id date;
MPRINT(EVENT_STUDY):   convert ret=cret/transformout=(+1 cuprod -1);
MPRINT(EVENT_STUDY):   convert mkt=cmkt/transformout=(+1 cuprod -1);
MPRINT(EVENT_STUDY):   convert expret1 =cexpret1 /transformout=(+1 cuprod -1);
MPRINT(EVENT_STUDY):   convert expret2 =cexpret2 /transformout=(+1 cuprod -1);
MPRINT(EVENT_STUDY):   convert expret3 =cexpret3 /transformout=(+1 cuprod -1);
MPRINT(EVENT_STUDY):   convert abret0=car0/transformout=(sum);
MPRINT(EVENT_STUDY):   convert abret1=car1/transformout=(sum);
MPRINT(EVENT_STUDY):   convert abret2=car2/transformout=(sum);
MPRINT(EVENT_STUDY):   convert abret3=car3/transformout=(sum);
MPRINT(EVENT_STUDY):   run;
```

NOTE: The data set WORK.CAR has 465 observations and 46 variables.
NOTE: PROCEDURE EXPAND used (Total process time):
      real time   0.03 seconds
      user cpu time   0.01 seconds
      system cpu time   0.01 seconds
      memory   970.31k
      OS Memory   55836.00k
      Timestamp   06/19/2024 04:24:44 PM
      Step Count   238 Switch Count 0


```
MPRINT(EVENT_STUDY):   proc printto log=junk;
MPRINT(EVENT_STUDY):   run;
```

NOTE: PROCEDURE PRINTTO used (Total process time):
      real time   0.00 seconds
      user cpu time   0.00 seconds
      system cpu time   0.00 seconds
      memory   5.75k
      OS Memory   54812.00k
      Timestamp   06/19/2024 04:24:44 PM
      Step Count   241 Switch Count 0


```
MPRINT(EVENT_STUDY):   data allcars;
MPRINT(EVENT_STUDY):   merge car_evtwin (rename=(bhar0=bhar0win bhar1=bhar1win bhar2=bhar2win bhar3=bhar3win
```

```
            car0=car0win car1=car1win car2=car2win car3=car3win cret=cretwin)) car_evtdate;
MPRINT(EVENT_STUDY):    by permno evtdate;
MPRINT(EVENT_STUDY):    run;
```

NOTE: There were 465 observations read from the data set WORK.CAR_EVTWIN.
NOTE: There were 93 observations read from the data set WORK.CAR_EVTDATE.
NOTE: The data set WORK.ALLCARS has 465 observations and 59 variables.
NOTE: DATA statement used (Total process time):
      real time   0.01 seconds
      user cpu time   0.00 seconds
      system cpu time   0.01 seconds
      memory   1120.65k
      OS Memory   55580.00k
      Timestamp   06/19/2024 04:24:44 PM
      Step Count   242 Switch Count 0


```
MPRINT(EVENT_STUDY):    * proc means data=allcars noprint;
MPRINT(EVENT_STUDY):    proc means data=allcars( where = (nobs=150)) noprint;
MPRINT(EVENT_STUDY):    class evttime;
MPRINT(EVENT_STUDY):    id nobs;
MPRINT(EVENT_STUDY):    var ret cret car0 car1 car2 car3 cretwin car0win car1win car2win car3win bhar0 bhar1 bhar2
bhar3 bhar0win bhar1win bhar2win bhar3win scar0 scar1 scar2 scar3 abret0 abret1 abret2 abret3 sar0 sar1 sar2 sar3
pat_scale;
MPRINT(EVENT_STUDY):    output out=allstats mean = n = t = sum =/autoname;
MPRINT(EVENT_STUDY):    run;
```

NOTE: Multiple concurrent threads will be used to summarize data.
NOTE: There were 465 observations read from the data set WORK.ALLCARS.
      WHERE nobs=150;
NOTE: The data set WORK.ALLSTATS has 6 observations and 132 variables.
NOTE: PROCEDURE MEANS used (Total process time):
      real time   0.01 seconds
      user cpu time   0.01 seconds
      system cpu time   0.00 seconds
      memory   6689.43k
      OS Memory   60456.00k
      Timestamp   06/19/2024 04:24:44 PM

MPRINT(EVENT_STUDY):   data MA_Evtdate (keep=evttime car0_n cret_mean car0_mean car0_t scar0_t bhar0_mean pat_car0 model) MM_Evtdate (keep=evttime car1_n cret_mean car1_mean car1_t scar1_t bhar1_mean pat_car1 model) FF_Evtdate (keep=evttime car2_n cret_mean car2_mean car2_t scar2_t bhar2_mean pat_car2 model) FFM_Evtdate (keep=evttime car3_n cret_mean car3_mean car3_t scar3_t bhar3_mean pat_car3 model) MA_Evtwin (keep=evttime cretwin_mean abret0_n ret_mean abret0_mean car0win_mean bhar0win_mean abret0_t sar0_t pat_ar0) MM_Evtwin (keep=evttime cretwin_mean abret1_n ret_mean abret1_mean car1win_mean bhar1win_mean abret1_t sar1_t pat_ar1) FF_Evtwin (keep=evttime cretwin_mean abret2_n ret_mean abret2_mean car2win_mean bhar2win_mean abret2_t sar2_t pat_ar2) FFM_Evtwin (keep=evttime cretwin_mean abret3_n ret_mean abret3_mean car3win_mean bhar3win_mean abret3_t sar3_t pat_ar3);
MPRINT(EVENT_STUDY):   set allstats;
MPRINT(EVENT_STUDY):   by evttime;
MPRINT(EVENT_STUDY):   if _n_=1 and missing(evttime) then do;
MPRINT(EVENT_STUDY):   abret0_mean=.;
MPRINT(EVENT_STUDY):   abret1_mean=.;
MPRINT(EVENT_STUDY):   abret2_mean=.;
MPRINT(EVENT_STUDY):   abret3_mean=.;
MPRINT(EVENT_STUDY):   cretwin_mean=0;
MPRINT(EVENT_STUDY):   ret_mean=.;
MPRINT(EVENT_STUDY):   bhar1win_mean=0;
MPRINT(EVENT_STUDY):   bhar1win_mean=0;
MPRINT(EVENT_STUDY):   bhar2win_mean=0;
MPRINT(EVENT_STUDY):   bhar3win_mean=0;
MPRINT(EVENT_STUDY):   end;
MPRINT(EVENT_STUDY):   pat_car0=scar0_mean/(sqrt(pat_scale_sum)/scar0_n);
MPRINT(EVENT_STUDY):   pat_car1=scar1_mean/(sqrt(pat_scale_sum)/scar1_n);
MPRINT(EVENT_STUDY):   pat_car2=scar2_mean/(sqrt(pat_scale_sum)/scar2_n);
MPRINT(EVENT_STUDY):   pat_car3=scar3_mean/(sqrt(pat_scale_sum)/scar3_n);
MPRINT(EVENT_STUDY):   pat_ar0=sar0_mean/(sqrt(pat_scale_sum)/sar0_n);
MPRINT(EVENT_STUDY):   pat_ar1=sar1_mean/(sqrt(pat_scale_sum)/sar1_n);
MPRINT(EVENT_STUDY):   pat_ar2=sar2_mean/(sqrt(pat_scale_sum)/sar2_n);
MPRINT(EVENT_STUDY):   pat_ar3=sar3_mean/(sqrt(pat_scale_sum)/sar3_n);
MPRINT(EVENT_STUDY):   label pat_ar0= 'Patell Z for AR_MA' pat_ar1= 'Patell Z for AR_MM' pat_ar2= 'Patell Z for AR_FF' pat_ar3= 'Patell Z for AR_FFM' abret0_t= 'CS t-stat, AR_MA' abret1_t= 'CS t-stat, AR_MM' abret2_t= 'CS t-stat, AR_FF' abret3_t= 'CS t-stat, AR_FFM' sar0_t= 'Std CS test, AR_MA' sar1_t= 'Std CS test, AR_MM' sar2_t= 'Std CS test, AR_FF' sar3_t= 'Std CS test, AR_FFM' abret0_mean= 'Mean AR_MA' abret1_mean= 'Mean AR_MM' abret2_mean= 'Mean AR_FF' abret3_mean= 'Mean AR_FFM' car0_n= 'Number of events in the portfolio' abret0_n= 'Number of events in the portfolio'

```
evttime= 'Event Time t' cret_mean= "Mean CTR (-2, 2)" cretwin_mean= "Mean CTR (-2,t) " car0win_mean= "Average CAR_MA
(-2, t)" car1win_mean= "Average CAR_MM (-2, t)" car2win_mean= "Average CAR_FF (-2, t)" car3win_mean= "Average CAR_FFM
(-2, t)" bhar0win_mean= "Mean BHAR_MA (-2, t)" bhar1win_mean= "Mean BHAR_MM (-2, t)" bhar2win_mean= "Mean BHAR_FF
(-2, t)" bhar3win_mean= "Mean BHAR_FFM (-2, t)" ;
MPRINT(EVENT_STUDY):   format ret_mean cret_mean cretwin_mean abret0_mean abret1_mean abret2_mean abret3_mean
car0_mean car1_mean car2_mean car3_mean bhar0_mean bhar1_mean bhar2_mean bhar3_mean bhar0win_mean bhar1win_mean
bhar2win_mean bhar3win_mean car0win_mean car1win_mean car2win_mean car3win_mean percent7.4 abret0_t abret1_t abret2_t
abret3_t sar0_t sar1_t sar2_t sar3_t pat_car0 pat_car1 pat_car2 pat_car3 pat_ar0 pat_ar1 pat_ar2 pat_ar3 car0_t
car1_t car2_t car3_t scar0_t car1_t scar2_t scar3_t comma10.2;
MPRINT(EVENT_STUDY):   if evttime=0 then do;
MPRINT(EVENT_STUDY):   model='Market-Adjusted';
MPRINT(EVENT_STUDY):   output MA_Evtdate;
MPRINT(EVENT_STUDY):   model='Market Model';
MPRINT(EVENT_STUDY):   output MM_Evtdate;
MPRINT(EVENT_STUDY):   model='FF Model';
MPRINT(EVENT_STUDY):   output FF_Evtdate;
MPRINT(EVENT_STUDY):   model='Carhart Model';
MPRINT(EVENT_STUDY):   output FFM_Evtdate;
MPRINT(EVENT_STUDY):   end;
MPRINT(EVENT_STUDY):   if missing(evttime) then evttime=-2-1;
MPRINT(EVENT_STUDY):   output MA_Evtwin;
MPRINT(EVENT_STUDY):   output MM_Evtwin;
MPRINT(EVENT_STUDY):   output FF_Evtwin;
MPRINT(EVENT_STUDY):   output FFM_Evtwin;
MPRINT(EVENT_STUDY):   run;


NOTE: There were 6 observations read from the data set WORK.ALLSTATS.
NOTE: The data set WORK.MA_EVTDATE has 1 observations and 9 variables.
NOTE: The data set WORK.MM_EVTDATE has 1 observations and 9 variables.
NOTE: The data set WORK.FF_EVTDATE has 1 observations and 9 variables.
NOTE: The data set WORK.FFM_EVTDATE has 1 observations and 9 variables.
NOTE: The data set WORK.MA_EVTWIN has 6 observations and 10 variables.
NOTE: The data set WORK.MM_EVTWIN has 6 observations and 10 variables.
NOTE: The data set WORK.FF_EVTWIN has 6 observations and 10 variables.
NOTE: The data set WORK.FFM_EVTWIN has 6 observations and 10 variables.
NOTE: DATA statement used (Total process time):
      real time           0.04 seconds
      user cpu time       0.01 seconds
```

```
MPRINT(EVENT_STUDY):   data allevtdate;
MPRINT(EVENT_STUDY):   set MA_Evtdate (rename=(car0_mean=car_mean bhar0_mean=bhar_mean car0_n=n car0_t=car_t
scar0_t=scar_t pat_car0=pat_car)) MM_Evtdate (rename=(car1_mean=car_mean bhar1_mean=bhar_mean car1_n=n car1_t=car_t
scar1_t=scar_t pat_car1=pat_car)) FF_Evtdate (rename=(car2_mean=car_mean bhar2_mean=bhar_mean car2_n=n car2_t=car_t
scar2_t=scar_t pat_car2=pat_car)) FFM_evtdate (rename=(car3_mean=car_mean bhar3_mean=bhar_mean car3_n=n car3_t=car_t
scar3_t=scar_t pat_car3=pat_car));
MPRINT(EVENT_STUDY):   length=5;
MPRINT(EVENT_STUDY):   label pat_car= 'Patell Z' car_mean= "Mean CAR (-2, 2)" bhar_mean= "Mean BHAR (-2, 2)" car_t=
'Cross-sectional t-stat for CAR' scar_t= 'Standaridized cross-sectional t-stat for CAR' length= 'Length of event
window in trading days';
MPRINT(EVENT_STUDY):   run;
```

ERROR: You cannot open WORK.ALLEVTDATE.DATA for output access with member-level control because WORK.ALLEVTDATE.DATA
is in use by you in resource environment ViewTable Window.
NOTE: The SAS System stopped processing this step because of errors.
NOTE: DATA statement used (Total process time):

```
MPRINT(EVENT_STUDY):   data car_evtdate;
MPRINT(EVENT_STUDY):   retain permno evtdate alpha1 beta1 cret car0 bhar0 var0 car1 bhar1 var1 car2 bhar2 var2 car3
bhar3 var3 nrets nobs;
MPRINT(EVENT_STUDY):   set car_evtdate;
MPRINT(EVENT_STUDY):   label alpha1= 'Alpha (Market Model)' beta1= 'Beta (Market Model' car0= 'CAR_MA' car1= 'CAR_MM'
car2= 'CAR_FF' car3= 'CAR_FFM' bhar0= 'BHAR_MA' bhar1= 'BHAR_MM' bhar2= 'BHAR_FF' bhar3= 'BHAR_FFM' var0= 'Estimation
```

period variance (Market-adjusted returns)' var1= 'Estimation period variance (Market Model)' var2= 'Estimation period variance (FF Model)' var3= 'Estimation period variance (Carhart Model)' cret= 'Cumulative Total Return' nrets= 'Number of non-missing returns in event window' nobs= 'Length of the estimation period';
MPRINT(EVENT_STUDY):   keep permno evtdate alpha1 beta1 cret car0 bhar0 var0 car1 bhar1 var1 car2 bhar2 var2 car3 bhar3 var3 nrets nobs;
MPRINT(EVENT_STUDY):   format cret alpha1 car0 bhar0 car1 bhar1 car2 bhar2 car3 bhar3 percent7.4 beta1 comma10.3;
MPRINT(EVENT_STUDY):   run;

NOTE: There were 93 observations read from the data set WORK.CAR_EVTDATE.
NOTE: The data set WORK.CAR_EVTDATE has 93 observations and 19 variables.
NOTE: DATA statement used (Total process time):
      real time   0.01 seconds
      user cpu time   0.00 seconds
      system cpu time   0.01 seconds
      memory   626.81k
      OS Memory   55324.00k
      Timestamp   06/19/2024 04:24:44 PM
      Step Count   246 Switch Count 0

MPRINT(EVENT_STUDY):   PROC DATASETS NOLIST;
MPRINT(EVENT_STUDY):   COPY IN = work OUT = evtstudy ;
MPRINT(EVENT_STUDY):   select allevtdate allstats car_evtwin ;
MPRINT(EVENT_STUDY):   RUN;

NOTE: Copying WORK.ALLEVTDATE to EVTSTUDY.ALLEVTDATE (memtype=DATA).
INFO: Engine's block-read method is in use.
INFO: Engine's block-write method is in use.
NOTE: There were 4 observations read from the data set WORK.ALLEVTDATE.
NOTE: The data set EVTSTUDY.ALLEVTDATE has 4 observations and 10 variables.
NOTE: Copying WORK.ALLSTATS to EVTSTUDY.ALLSTATS (memtype=DATA).
ERROR: You cannot open EVTSTUDY.ALLSTATS.DATA for output access with member-level control because
EVTSTUDY.ALLSTATS.DATA is in use by you in resource environment ViewTable Window.
ERROR: File EVTSTUDY.ALLSTATS.DATA has not been saved because copy could not be completed.
NOTE: Copying WORK.CAR_EVTWIN to EVTSTUDY.CAR_EVTWIN (memtype=DATA).
ERROR: You cannot open EVTSTUDY.CAR_EVTWIN.DATA for output access with member-level control because
EVTSTUDY.CAR_EVTWIN.DATA is in use by you in resource environment ViewTable Window.
ERROR: File EVTSTUDY.CAR_EVTWIN.DATA has not been saved because copy could not be completed.

NOTE: Statements not processed because of errors noted above.
MPRINT(EVENT_STUDY):   options nodate orientation=landscape;
MPRINT(EVENT_STUDY):   ods pdf file="C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\foreign_rec_exe10Dec9\Car0_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\foreign_rec_exe10Dec9\Car0_evtrets_5days.pdf", printer "PDF".
MPRINT(EVENT_STUDY):   goptions device=pdfc;
MPRINT(EVENT_STUDY):   axis1 label=(angle=90 "Cumulative Abnormal Returns");
MPRINT(EVENT_STUDY):   axis2 label=("Event time");
MPRINT(EVENT_STUDY):   symbol interpol=join w=3 l=1;
NOTE: The SAS System stopped processing this step because of errors.
NOTE: PROCEDURE DATASETS used (Total process time):
      real time   0.24 seconds
      user cpu time   0.11 seconds
      system cpu time   0.10 seconds
      memory   4177.68k
      OS Memory   55840.00k
      Timestamp   06/19/2024 04:24:44 PM
      Step Count   247 Switch Count 0

MPRINT(EVENT_STUDY):   proc gplot data =MA_Evtwin;
MPRINT(EVENT_STUDY):   where evttime>=-2;
MPRINT(EVENT_STUDY):   Title "Market adjusted model: CARs and BHARs around the event date";
MPRINT(EVENT_STUDY):   plot (car0win_mean bhar0win_mean)*evttime /overlay legend vaxis=axis1 haxis=axis2;
MPRINT(EVENT_STUDY):   run;

NOTE: 46485 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files_TD25772_DELL2_\gplot18.png.
MPRINT(EVENT_STUDY): quit;

NOTE: There were 5 observations read from the data set WORK.MA_EVTWIN.
      WHERE evttime>=-2;
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE GPLOT used (Total process time):
      real time   0.38 seconds
      user cpu time   0.15 seconds

```
      system cpu time      0.17 seconds
      memory               8741.68k
      OS Memory            65268.00k
      Timestamp            06/19/2024 04:24:44 PM
      Step Count                        248  Switch Count  0


MPRINT(EVENT_STUDY):   ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\foreign_rec_exe10Dec9\Car0_evtrets_5days.pdf.
MPRINT(EVENT_STUDY):   ods pdf file="C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\foreign_rec_exe10Dec9\Car1_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\foreign_rec_exe10Dec9\Car1_evtrets_5days.pdf", printer "PDF".
MPRINT(EVENT_STUDY):   proc gplot data =MM_Evtwin;
MPRINT(EVENT_STUDY):   where evttime>=-2;
MPRINT(EVENT_STUDY):   Title "Market model:  CARs and BHARs around the event date";
MPRINT(EVENT_STUDY):   plot (car1win_mean bhar1win_mean)*evttime /overlay legend vaxis=axis1 haxis=axis2;
MPRINT(EVENT_STUDY):   run;

NOTE: 42462 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot19.png.
MPRINT(EVENT_STUDY):  quit;


NOTE: There were 5 observations read from the data set WORK.MM_EVTWIN.
      WHERE evttime>=-2;
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE GPLOT used (Total process time):
      real time            0.33 seconds
      user cpu time        0.20 seconds
      system cpu time      0.09 seconds
      memory               8615.15k
      OS Memory            65524.00k
      Timestamp            06/19/2024 04:24:45 PM
      Step Count                        249  Switch Count  0
```

```
MPRINT(EVENT_STUDY):    ods pdf close;
```
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\foreign_rec_exe10Dec9\Car1_evtrets_5days.pdf.
```
MPRINT(EVENT_STUDY):    ods pdf file="C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\foreign_rec_exe10Dec9\Car2_evtrets_5days.pdf";
```
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\foreign_rec_exe10Dec9\Car2_evtrets_5days.pdf", printer "PDF".
```
MPRINT(EVENT_STUDY):    proc gplot data =FF_Evtwin;
MPRINT(EVENT_STUDY):    where evttime>=-2;
MPRINT(EVENT_STUDY):    Title "FF 3-factor model:CARs and BHARs around the event date";
MPRINT(EVENT_STUDY):    plot (car2win_mean bhar2win_mean)*evttime /overlay legend vaxis=axis1 haxis=axis2;
MPRINT(EVENT_STUDY):    run;
```

NOTE: 47276 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files_TD25772_DELL2_\gplot20.png.
```
MPRINT(EVENT_STUDY):   quit;
```

NOTE: There were 5 observations read from the data set WORK.FF_EVTWIN.
      WHERE evttime>=-2;
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE GPLOT used (Total process time):
      real time   0.31 seconds
      user cpu time   0.17 seconds
      system cpu time   0.11 seconds
      memory   8619.43k
      OS Memory   65524.00k
      Timestamp   06/19/2024 04:24:45 PM
      Step Count   250 Switch Count 0


```
MPRINT(EVENT_STUDY):    ods pdf close;
```
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\foreign_rec_exe10Dec9\Car2_evtrets_5days.pdf.
```
MPRINT(EVENT_STUDY):    ods pdf file="C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\foreign_rec_exe10Dec9\Car3_evtrets_5days.pdf";
```
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State

```
          University\aaaa\event_Study\result\foreign_rec_exe10Dec9\Car3_evtrets_5days.pdf", printer "PDF".
MPRINT(EVENT_STUDY):   proc gplot data =FFM_Evtwin;
MPRINT(EVENT_STUDY):   where evttime>=-2;
MPRINT(EVENT_STUDY):   Title "Carhart 4 Factor model: Carhart CARs and BHARs around the event date";
MPRINT(EVENT_STUDY):   plot (car3win_mean bhar3win_mean)*evttime /overlay legend vaxis=axis1 haxis=axis2;
MPRINT(EVENT_STUDY):   run;

NOTE: 42572 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot21.png.
MPRINT(EVENT_STUDY):   quit;

NOTE: There were 5 observations read from the data set WORK.FFM_EVTWIN.
      WHERE evttime>=-2;
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE GPLOT used (Total process time):
      real time          0.33 seconds
      user cpu time      0.14 seconds
      system cpu time    0.15 seconds
      memory             8615.87k
      OS Memory          65524.00k
      Timestamp          06/19/2024 04:24:46 PM
      Step Count                        251  Switch Count  0


MPRINT(EVENT_STUDY):   ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\foreign_rec_exe10Dec9\Car3_evtrets_5days.pdf.
MPRINT(EVENT_STUDY):   ods pdf file="C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\foreign_rec_exe10Dec9\Car0_3_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\foreign_rec_exe10Dec9\Car0_3_evtrets_5days.pdf", printer "PDF".
MPRINT(EVENT_STUDY):   proc gplot data =allstats;
MPRINT(EVENT_STUDY):   where evttime>=-2;
MPRINT(EVENT_STUDY):   Title "CARs from the four models: around the event date";
MPRINT(EVENT_STUDY):   plot (car0win_mean car1win_mean car2win_mean car3win_mean )*evttime /overlay legend
vaxis=axis1 haxis=axis2;
MPRINT(EVENT_STUDY):   run;
```

```
NOTE: 38227 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot22.png.
MPRINT(EVENT_STUDY):  quit;

NOTE: There were 5 observations read from the data set WORK.ALLSTATS.
      WHERE evttime>=-2;
NOTE: PROCEDURE GPLOT used (Total process time):
      real time           0.31 seconds
      user cpu time       0.17 seconds
      system cpu time     0.09 seconds
      memory              8718.87k
      OS Memory           65524.00k
      Timestamp           06/19/2024 04:24:46 PM
      Step Count                        252  Switch Count  0


MPRINT(EVENT_STUDY):   ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\foreign_rec_exe10Dec9\Car0_3_evtrets_5days.pdf.
MPRINT(EVENT_STUDY):   ods pdf file="C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\foreign_rec_exe10Dec9\BHARS0_3_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\foreign_rec_exe10Dec9\BHARS0_3_evtrets_5days.pdf", printer "PDF".
MPRINT(EVENT_STUDY):   proc gplot data =allstats;
MPRINT(EVENT_STUDY):   where evttime>=-2;
MPRINT(EVENT_STUDY):   Title "BHARs from the four models: BHARs around the event date";
MPRINT(EVENT_STUDY):   plot (bhar0_mean bhar1_mean bhar2_mean bhar3_mean )*evttime /overlay legend vaxis=axis1
haxis=axis2;
MPRINT(EVENT_STUDY):   run;
NOTE: 18046 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot23.png.
MPRINT(EVENT_STUDY):  quit;
NOTE: There were 5 observations read from the data set WORK.ALLSTATS.
      WHERE evttime>=-2;
NOTE: PROCEDURE GPLOT used (Total process time):
      real time           0.26 seconds
      user cpu time       0.12 seconds
      system cpu time     0.09 seconds
```

```
        memory              8699.81k
        OS Memory           65524.00k
        Timestamp           06/19/2024 04:24:47 PM
        Step Count                      253  Switch Count  0


MPRINT(EVENT_STUDY):   ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\foreign_rec_exe10Dec9\BHARSO_3_evtrets_5days.pdf.
MPRINT(EVENT_STUDY):   run;
MPRINT(EVENT_STUDY):  quit;
MPRINT(EVENT_STUDY):   ods pdf close;
MPRINT(EVENT_STUDY):   *house cleaning;
MPRINT(EVENT_STUDY):   proc sql;
MPRINT(EVENT_STUDY):   drop table abrets, allcars, allstats, caldates, car, car_evtwin, evtrets, temp,
evtrets_temp,ffm_evtdate, ff_evtdate, ma_evtdate, mm_evtdate, params;
NOTE: Table WORK.ABRETS has been dropped.
NOTE: Table WORK.ALLCARS has been dropped.
NOTE: Table WORK.ALLSTATS has been dropped.
NOTE: Table WORK.CALDATES has been dropped.
NOTE: Table WORK.CAR has been dropped.
NOTE: Table WORK.CAR_EVTWIN has been dropped.
NOTE: Table WORK.EVTRETS has been dropped.
NOTE: Table WORK.TEMP has been dropped.
NOTE: Table WORK.EVTRETS_TEMP has been dropped.
NOTE: Table WORK.FFM_EVTDATE has been dropped.
NOTE: Table WORK.FF_EVTDATE has been dropped.
NOTE: Table WORK.MA_EVTDATE has been dropped.
NOTE: Table WORK.MM_EVTDATE has been dropped.
NOTE: Table WORK.PARAMS has been dropped.
MPRINT(EVENT_STUDY):   drop view evtrets1, abrets1;
NOTE: View WORK.EVTRETS1 has been dropped.
NOTE: View WORK.ABRETS1 has been dropped.
MPRINT(EVENT_STUDY):   quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time           0.03 seconds
      user cpu time       0.00 seconds
      system cpu time     0.03 seconds
```

```
        memory              67.84k
        OS Memory           55580.00k
        Timestamp           06/19/2024 04:24:47 PM
        Step Count                      254  Switch Count  0


MLOGIC(EVENT_STUDY):  Ending execution.

4220  %event_study(outputPath="C:\Users\lihon\OneDrive - Kent State
4220! University\aaaa\event_Study\result\agg_foreign_all"
MLOGIC(EVENT_STUDY):  Beginning execution.
4221              ,permno_list = foreign_trans_decile)
MLOGIC(EVENT_STUDY):  Parameter OUTPUTPATH has value "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_all"
MLOGIC(EVENT_STUDY):  Parameter PERMNO_LIST has value foreign_trans_decile
MPRINT(EVENT_STUDY):   libname mycrsp "C:\Users\lihon\patent Dropbox\Victor Li\wrds_data";
NOTE: Libref MYCRSP was successfully assigned as follows:
      Engine:        V9
      Physical Name: C:\Users\lihon\patent Dropbox\Victor Li\wrds_data
MPRINT(EVENT_STUDY):   * libname evtstudy "C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\June6_res";
MLOGIC(EVENT_STUDY):  %LET (variable name is OUTPUTPATH)
MPRINT(EVENT_STUDY):   * * libname evtstudy "&outputPath\Foreign_rec_exe10";
MPRINT(EVENT_STUDY):   libname evtstudy "C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\foreign_rec_exe10Dec9";
NOTE: Libref EVTSTUDY refers to the same physical library as TMP10.
NOTE: Libref EVTSTUDY was successfully assigned as follows:
      Engine:        V9
      Physical Name: C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\result\foreign_rec_exe10Dec9
MLOGIC(EVENT_STUDY):  %LET (variable name is CRSP)
MLOGIC(EVENT_STUDY):  %LET (variable name is ESTPER)
MLOGIC(EVENT_STUDY):  %LET (variable name is START)
MLOGIC(EVENT_STUDY):  %LET (variable name is END)
MLOGIC(EVENT_STUDY):  %LET (variable name is GAP)
MLOGIC(EVENT_STUDY):  %LET (variable name is MINEST)
MLOGIC(EVENT_STUDY):  %LET (variable name is EVTWIN)
MPRINT(EVENT_STUDY):    * %event_crack(relation_exec) ;
MLOGIC(EVENT_STUDY):  %LET (variable name is PERMNO_LIST)
```

```
MLOGIC(EVENT_STUDY):   %LET (variable name is PERMNO_LIST)
MLOGIC(EVENT_STUDY):   %LET (variable name is PERMNO_LIST)
MLOGIC(EVENT_STUDY):   %LET (variable name is PERMNO_LIST)
MLOGIC(EVENT_STUDY):   %LET (variable name is PERMNO_LIST)
MLOGIC(EVENT_STUDY):   %LET (variable name is PERMNO_LIST)
MPRINT(EVENT_STUDY):   * * * * * * * ;
MPRINT(EVENT_STUDY):    proc sql;
MPRINT(EVENT_STUDY):    create table input as select distinct permno, record_dt as edate format MMDDYY10. from
foreign_trans_execrec10_dec10 where not missing(-2) and year(record_dt);
NOTE: Table WORK.INPUT created, with 93 rows and 2 columns.

MPRINT(EVENT_STUDY):    quit;
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE SQL used (Total process time):
      real time           0.04 seconds
      user cpu time       0.04 seconds
      system cpu time     0.03 seconds
      memory              5643.18k
      OS Memory           57632.00k
      Timestamp           06/19/2024 04:30:00 PM
      Step Count                          255  Switch Count  0


MPRINT(EVENT_STUDY):    data caldates;
MPRINT(EVENT_STUDY):    merge mycrsp.dsi(keep=date rename=(date=estper_beg)) mycrsp.dsi(keep=date firstobs=150
rename=(date=estper_end)) mycrsp.dsi(keep=date firstobs=217 rename=(date=evtwin_beg)) mycrsp.dsi(keep=date
firstobs=219 rename=(date=evtdate)) mycrsp.dsi(keep=date firstobs=221 rename=(date=evtwin_end));
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
```

the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and might reduce performance.
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and might reduce performance.
MPRINT(EVENT_STUDY):   format estper_beg estper_end evtwin_beg evtdate evtwin_end date9.;
MPRINT(EVENT_STUDY):   label estper_beg= 'Start of the Estimation Window' estper_end= 'End of the Estimation Window' evtwin_beg= 'Start of the Event Window' evtwin_end= 'End of the Event Window' evtdate= 'Event Date';
MPRINT(EVENT_STUDY):   index+1;
MPRINT(EVENT_STUDY):   if nmiss(estper_beg,estper_end,evtwin_beg,evtwin_end,evtdate)=0;
MPRINT(EVENT_STUDY):   run;

NOTE: There were 25799 observations read from the data set MYCRSP.DSI.
NOTE: There were 25650 observations read from the data set MYCRSP.DSI.
NOTE: There were 25583 observations read from the data set MYCRSP.DSI.
NOTE: There were 25581 observations read from the data set MYCRSP.DSI.
NOTE: There were 25579 observations read from the data set MYCRSP.DSI.
NOTE: The data set WORK.CALDATES has 25579 observations and 6 variables.
NOTE: DATA statement used (Total process time):
      real time   0.06 seconds
      user cpu time   0.06 seconds
      system cpu time   0.03 seconds
      memory   1628.59k
      OS Memory   52232.00k
      Timestamp   06/19/2024 04:30:00 PM
      Step Count   256 Switch Count 0

MPRINT(EVENT_STUDY):   proc sql;
MPRINT(EVENT_STUDY):   create table temp as select a.permno ,b.* from input a left join caldates b on b.evtdate-a.edate>=0 group by a.edate having (b.evtdate-a.edate)=min(b.evtdate-a.edate);
NOTE: The execution of this query involves performing one or more Cartesian product joins that can not be optimized.
NOTE: The query requires remerging summary statistics back with the original data.
NOTE: SAS threaded sort was used.
NOTE: Table WORK.TEMP created, with 93 rows and 7 columns.

NOTE: PROCEDURE SQL used (Total process time):
      real time   0.34 seconds

```
      user cpu time        0.45 seconds
      system cpu time      0.14 seconds
      memory               52107.45k
      OS Memory            101628.00k
      Timestamp            06/19/2024 04:30:00 PM
      Step Count                         257  Switch Count  0


MPRINT(EVENT_STUDY):   proc sql;
MPRINT(EVENT_STUDY):   create table evtrets_temp as select a.permno, a.date format date9., a.ret as ret1, b.evtdate,
b.estper_beg, b.estper_end, b.evtwin_beg, b.evtwin_end from mycrsp.dsf a, temp b where a.permno=b.permno and
b.estper_beg<=a.date<=b.evtwin_end;
INFO: Data file MYCRSP.DSF.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
NOTE: There were 13450494 observations read from the data set MYCRSP.DSF.
NOTE: There were 93 observations read from the data set WORK.TEMP.
      WHERE estper_beg<=evtwin_end;
WARNING: The data set WORK.EVTRETS_TEMP may be incomplete.  When this step was stopped there were 221 observations
         and 8 variables.
NOTE: PROCEDURE SQL used (Total process time):
      real time            27.71 seconds
      user cpu time        22.57 seconds
      system cpu time      0.62 seconds
      memory               5848.59k
      OS Memory            57356.00k
      Timestamp            06/19/2024 04:30:28 PM
      Step Count                         258  Switch Count  1



4222  /*https://wrds-www.wharton.upenn.edu/pages/support/applications/event-studies/event-study-research-application/*
4222! /
4223
4224  /* ****************************************************************************** */
4225  /* ********* W R D S   R E S E A R C H   A P P L I C A T I O N S ************** */
4226  /* ****************************************************************************** */
4227  /* Program : EVTSTUDY.SAS                                                    */
```

```
4228  /* Summary : Provides a sample methodology for calculating Cumulative      */
4229  /*           Abnormal Returns(CARs)& Buy-Hold Abnormal Returns(BHARs)       */
4230  /*           with various t-statistics (CS test, Standardized CS test&Patell Z) */
4231  /*           in an event study setting. Displays the dynamics of mean CARs and  */
4232  /*           BHARs in the event window specified by the user               */
4233  /*                                                                          */
4234  /* Date    : Sep 2011                                                        */
4235  /* Author  : Denys Glushkov, WRDS                                            */
4236  /* *************************************************************************  */
4237
4238  /* STEP 1A: Speficify the parameters necessary to run the event study such as    */
4239  /* the length of estimation period and event window, gap b/w estimation & event  */
4240  /* window, etc                                                                   */
4241  *%libname mycrsp "C:\Users\hli5\OneDrive - Kent State University\aaaa\event_Study";
4242  %macro event_study(outputPath=outputPath, permno_list=perm_record_dataset);
4243  libname mycrsp "C:\Users\lihon\patent Dropbox\Victor Li\wrds_data";
4244  * libname evtstudy "C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\June6_res";
4245
4246
4247  /*
4248  * %let outputPath=%str(C:\Users\lihon\OneDrive - Kent State
4248! University\aaaa\event_Study\result\foreign_rec_exe10Dec9);
4249  * libname evtstudy "&outputPath\Foreign_rec_exe10";
4250  */
4251  libname evtstudy "&outputPath";
4252  %let crsp=mycrsp; /*CRSP libary to be used (CRSPQ - quarterly, CRSP-annual update  */
4253  %let estper=150; /*Length of the estimation period in trading days over which    */
4254                  /*the risk model is estimated                                    */
4255
4256  %let start=-2; /*Beginning of the event window (wtr to the event date,e.g. -2)   */
4257  %let end=2;    /*End of the event window (relative to the event date, e.g., +1)  */
4258  %let gap=66;   /*Length of pre-event window,i.e., number of trading days b/w     */
4259                /*the end of estimation period and the start of the event window */
4260
4261  %let minest=70; /*Minimum of non-missing returns required for estimation       */
4262  %let evtwin=%eval(&end-&start+1);      /*length of event window in trading days */
4263
4264  /* STEP 1B: As an example, create the input table containing Permno-event dates  */
```

```
4265  /* corresponding to the stock additions to and deletions from S&P 500 index       */
4266
4267
4268  *  %event_crack(relation_exec) ;
4269  * %let permno_list=relation_exec;
4270  *%let permno_list=foreign_relation;
4271  * %let permno_list=for_event_study_v2;
4272  * %let permno_list=oree_gvkey_patentid_record_dtv2;
4273  * %let permno_list=foreign_trans_exec_record10;
4274  * %let permno_list=foreign_trans_execrec10_dec10;
4275
4276  *  ;
4277  /*- %macro event_crack(permno_list, evt_date=exec_dt); */
4278
4279  proc sql;
4280    create table input
4281    as select distinct permno, record_dt as edate format MMDDYY10.
4282    from &permno_list where not missing(&start) and year(record_dt);
4283  quit;
4284
4285  /* STEP 2. Creating Trading Calendar that accounts for the presence of  */
4286  /* weekends, holidays and other non-trading days in the estimation     */
4287  /* and event windows                                                   */
4288  data caldates;
4289
4290   merge &crsp..dsi(keep=date rename=(date=estper_beg))
4291     &crsp..dsi(keep=date firstobs=&estper rename=(date=estper_end))
4292     &crsp..dsi(keep=date firstobs=%eval(&estper+&gap+1) rename=(date=evtwin_beg))
4293     &crsp..dsi(keep=date firstobs=%eval(&estper+&gap-&start+1) rename=(date=evtdate))
4294     &crsp..dsi(keep=date firstobs=%eval(&estper+&gap+&evtwin) rename=(date=evtwin_end));
4295
4296    format estper_beg estper_end evtwin_beg evtdate evtwin_end date9.;
4297    label  estper_beg='Start of the Estimation Window'
4298           estper_end='End of the Estimation Window'
4299           evtwin_beg='Start of the Event Window'
4300           evtwin_end='End of the Event Window'
4301           evtdate='Event Date';
4302     index+1;
```

```
4303    if nmiss(estper_beg,estper_end,evtwin_beg,evtwin_end,evtdate)=0;
4304  run;
4305
4306  /*STEP 3: If event date is a non-trading day*/
4307  /*      select the closest trading day that*/
4308  /* follows the event day                                              */
4309  proc sql; create table temp
4310   as select a.permno
4311              ,b.*
4312    from input a
4313        left join
4314        caldates b
4315    on b.evtdate-a.edate>=0
4316    group by a.edate
4317    having (b.evtdate-a.edate)=min(b.evtdate-a.edate);
4318
4319
4320   /*Returns for sample securities around the event dates */
4321    proc sql;
4322   create table evtrets_temp
4323   as select a.permno, a.date format date9., a.ret as ret1,
4324            b.evtdate, b.estper_beg, b.estper_end,
4325            b.evtwin_beg, b.evtwin_end
4326   from &crsp..dsf a, temp b
4327   where a.permno=b.permno and b.estper_beg<=a.date<=b.evtwin_end;
4328    quit;
4329  /* Merge in the risk factors                                    */
4330  /* User can create her own risk factors and use it instead of FF+M ones*/
4331    proc sql;
4332   create view evtrets1
4333     as select a.*, (b.mktrf+b.rf) as mkt, b.mktrf, b.rf,b.smb, b.hml, b.umd
4334     from evtrets_temp a left join
4335         &crsp..ff_factors_daily (keep=date mktrf smb hml umd rf) b
4336     on a.date=b.date;
4337      quit;
4338  /*Bring in delisting returns*/
4339      proc sql;
4340   create table evtrets (drop=ret1 where=(not missing(mkt)))
```

```
4341     as select a.*,
4342     (1+a.ret1)*sum(1,b.dlret)-1-a.mkt as exret label='Market-adjusted total ret',
4343     (1+a.ret1)*sum(1,b.dlret)-1 as ret "Ret adjusted for delisting"
4344     from evtrets1 a left join &crsp..dsedelist (where=(missing(dlret)=0)) b
4345     on a.permno=b.permno and a.date=b.dlstdt
4346   order by a.permno,a.evtdate,a.date;
4347  quit;
4348
4349  /* STEP 4. Estimating Factor Exposures over the estimation period*/
4350  proc printto log=junk; run;
4351
4352  proc reg data=evtrets edf outest=params  noprint;
4353     where estper_beg<=date<=estper_end;
4354     by permno evtdate;
4355     eq0: model exret=;         /*past market-premium return: ret-mkt as a benchmark*/
4356     eq1: model ret=mktrf;      /*  CAPM      */
4357     eq2: model ret=mktrf smb hml;    /* FF 3 factor **/
4358     eq3: model ret=mktrf smb hml umd; /*FF 4 factor */
4359  run;
4360  proc printto;run;
4361
4362
4363  /* STEP 5. Calculating Abnormal Returns for all models */
4364  /* for each trading day in the event window           */
4365  data abrets1/view=abrets1; merge
4366    evtrets(where=(evtwin_beg<=date<=evtwin_end) in=in_evtrets)
4367    params (where=(_model_='eq0')
4368       keep=permno evtdate _model_ _rmse_ _p_ _edf_
4369       rename=(_rmse_=std0 _p_=p0 _edf_=edf0))
4370
4371    params (where=(_model_='eq1')
4372       keep=permno evtdate _model_ _rmse_ intercept mktrf
4373       rename=(_rmse_=std1 intercept=alpha1 mktrf=beta1))
4374
4375    params (where=(_model_='eq2')
4376       keep=permno evtdate _model_ _rmse_ intercept mktrf smb hml
4377       rename=(_rmse_=std2 intercept=alpha2 mktrf=beta2 smb=sminb2 hml=hminl2))
4378
```

```
4379    params (where=(_model_='eq3')
4380       keep=permno evtdate _model_ _rmse_ intercept mktrf smb hml umd
4381       rename=(_rmse_=std3 intercept=alpha3 mktrf=beta3 smb=sminb3 hml=hminl3 umd=umind3));
4382    by permno evtdate;
4383
4384    retain missret;
4385    if first.permno then missret=missing(ret);
4386    if missing(ret) then missret+1; /*count number of missing returns*/
4387
4388    var0=std0**2;
4389    var1=std1**2;
4390    var2=std2**2;
4391    var3=std3**2;
4392
4393    abret0  = exret; *extra over market;
4394    expret1 = alpha1 + beta1*mktrf;  *CAPM;
4395    abret1  = ret-expret1;
4396
4397    expret2 = alpha2+beta2*mktrf+sminb2*smb+hminl2*hml; *FF3factor;
4398    abret2=ret-expret2;
4399
4400    expret3 =alpha3+beta3*mktrf+sminb3*smb+hminl3*hml+umind3*umd;
4401    abret3=ret-expret3;
4402
4403    nobs=p0+edf0;   /*number of observations used in estimation*/
4404    drop p0 edf0 estper_beg estper_end std0 std1 std2 std3 _model_ exret;
4405    if in_evtrets and nobs>&minest;
4406    * I add the followings;
4407    if nobs=150;
4408 run;
4409
4410 /* Transform dates to event time using CRSP Trading Calendar        */
4411 /* Using the latter takes into account non-consecutive date records*/
4412 /* do not use lag to avoid non-consecutive date records*/
4413 proc sql;
4414   create table abrets
4415     as select a.*, (b.index-c.index) as evttime
4416     from          abrets1 a
```

```
4417         left join  caldates b
4418      on a.date    = b.evtdate
4419         left join caldates c
4420      on a.evtdate = c.evtdate
4421      order by permno, evtdate, date;
4422   quit;
4423
4424   /*
4425   proc contents data=abrets short varnum;
4426   run;
4427   */
4428   proc sort data=abrets  nodupkey;
4429     by PERMNO evtdate DATE
4430        evtwin_beg evtwin_end
4431        mkt mktrf rf smb hml umd ret
4432        alpha1 beta1
4433        alpha2 beta2 sminb2 hminl2
4434        alpha3 beta3 sminb3 hminl3 umind3
4435        missret var0 var1 var2 var3
4436        abret0 expret1 abret1 expret2 abret2 expret3 abret3 nobs evttime ;
4437   run;
4438
4439   /* 673  proc sql;
4440   674     create table abrets as
4441   675     select distinct * from abrets;
4442   WARNING: This CREATE TABLE statement recursively references the target table. A consequence of this
4443           is a possible data integrity problem.
4444   NOTE: Table WORK.ABRETS created, with 253797 rows and 37 columns.
4445
4446     */
4447   /* Calculating Rolling Cumulative Abnormal Returns and various stats */
4448   /* Transformout= calculates cumulative product of gross returns and  */
4449   /* subtracts 1 to arrive at the total net cumulative return          */
4450   proc expand data=abrets
4451              out=car  /* Cumulative returns*/
4452              method=none;
4453     by permno evtdate;
4454     id date;
```

```
4455    convert ret=cret/transformout=(+1 cuprod -1);          /*actural cumulative return from CRSP*/
4456    convert mkt=cmkt/transformout=(+1 cuprod -1);          /*cumulative  market return*/
4457
4458    /*cumulative market model return: expret1= alpha1 + beta1*mktrf; */
4459    convert expret1 =cexpret1 /transformout=(+1 cuprod -1);
4460
4461    /*expret2 = alpha2+ beta2*mktrf+ sminb2*smb+ hminl2*hml; */
4462    convert expret2 =cexpret2 /transformout=(+1 cuprod -1); /*cumulative FF-3 factor return */
4463
4464    /*  expret3 =alpha3+beta3*mktrf+sminb3*smb+hminl3*hml+umind3*umd; */
4465    convert expret3 =cexpret3 /transformout=(+1 cuprod -1);/*cumulative FF-4 factor return */
4466
4467    convert abret0=car0/transformout=(sum);
4468    convert abret1=car1/transformout=(sum);
4469    convert abret2=car2/transformout=(sum);
4470    convert abret3=car3/transformout=(sum);
4471 run;
4472 /*
4473 proc contents data =car;
4474
4475
4476 proc contents data =car;
4477 ods select  Variables;
4478 run;
4479 */
4480
4481
4482 /* Car_Evtdate Table: */
4483 /* the cross-sectional output that contains for each      */
4484 /* "firm-event date":                                          */
4485 /*   1) CAR, BHAR, and SCAR (standardized CAR)                 */
4486 /*   2) Alpha and Beta from the estimation period             */
4487 /*   3) Estimation period variance                            */
4488
4489 /* Car_Evtwin Table contains Raw, Abnormal, Std. and Buy-and-Hold Abnormal  */
4490 /* Daily Returns "firm-date" in event time                     */
4491 proc printto log=junk;run;
4492
```

```
4493  data car_evtdate
4494         (drop=evttime ret mkt smb hml umd date calpha1 calpha2 calpha3
4495               cmrkt csmb chml cumd evtwin_beg evtwin_end abret0 abret1
4496               abret2 abret3 sar0 sar1 sar2 sar3 missret cexpret1 cexpret2 cexpret3)
4497      car_evtwin
4498        (keep=permno evtdate evttime date ret cret abret0 abret1 abret2 abret3
4499         sar0 sar1 sar2 sar3 bhar0 bhar1 bhar2 bhar3 car0 car1 car2 car3);
4500    set car;
4501    by permno evtdate date;
4502    /*Standardized CARs and ARs for various models*/
4503    scar0=car0/(&evtwin*var0)**0.5;
4504    scar1=car1/(&evtwin*var1)**0.5;
4505    scar2=car2/(&evtwin*var2)**0.5;
4506    scar3=car3/(&evtwin*var3)**0.5;
4507
4508    sar0=abret0/sqrt(var0);
4509    sar1=abret1/sqrt(var1);
4510    sar2=abret2/sqrt(var2);
4511    sar3=abret3/sqrt(var3);
4512
4513    pat_scale=(nobs-2)/(nobs-4); /*Patell Z scaling factor*/
4514
4515    /*Buy-Hold Abnormal Returns*/
4516    bhar0=cret-cmkt;
4517    bhar1=cret-cexpret1;
4518    bhar2=cret-cexpret2;
4519    bhar3=cret-cexpret3;
4520
4521    if last.evtdate then do;
4522         nrets=&evtwin-missret;
4523      output car_evtdate;
4524    end;
4525    output car_evtwin;
4526  run;
4527
4528  proc printto;run;
4529
4530  /*Put Cross-sectional and aggregate results together for further analysis*/
```

```
4531  data allcars;
4532      merge
4533    car_evtwin
4534          (rename=(bhar0=bhar0win
4535                   bhar1=bhar1win
4536                   bhar2=bhar2win
4537                   bhar3=bhar3win
4538                   car0=car0win
4539          car1=car1win
4540          car2=car2win
4541          car3=car3win
4542          cret=cretwin))
4543    car_evtdate;
4544   by permno evtdate;
4545  run;
4546
4547  /* STEP 6: Compute Cumulative Average Abnormal Return (CAR_MEAN) */
4548  /* and Average Buy-Hold Abnormal Return (BHAR_MEAN)              */
4549  /* and other stats across all distinct events                   */
4550  * proc means data=allcars noprint;
4551  proc means data=allcars( where = (nobs=150)) noprint;
4552    class evttime; id nobs;
4553    var ret cret
4554    car0 car1 car2 car3  /* at evttime*/
4555    cretwin car0win car1win car2win car3win /* at evttime=2*/
4556    bhar0 bhar1 bhar2 bhar3
4557    bhar0win bhar1win bhar2win bhar3win
4558
4559    scar0 scar1 scar2 scar3
4560    abret0 abret1 abret2 abret3
4561    sar0 sar1 sar2 sar3 /*originally from car_evtwin*/
4562    pat_scale;
4563    output out=allstats
4564    mean =
4565      n =
4566      t =
4567    sum =/autoname;
4568  run;
```

```
4569
4570   /*calculate different stats for assessing    */
4571   /*statistical signficance of abnormal returns*/
4572   data MA_Evtdate (keep=evttime car0_n cret_mean car0_mean car0_t scar0_t
4573                    bhar0_mean pat_car0 model)
4574        MM_Evtdate (keep=evttime car1_n cret_mean car1_mean car1_t scar1_t
4575                    bhar1_mean pat_car1 model )
4576        FF_Evtdate (keep=evttime car2_n cret_mean car2_mean car2_t scar2_t
4577                    bhar2_mean pat_car2 model )
4578        FFM_Evtdate (keep=evttime car3_n cret_mean car3_mean car3_t scar3_t
4579                    bhar3_mean pat_car3 model )
4580        MA_Evtwin  (keep=evttime cretwin_mean abret0_n ret_mean abret0_mean
4581                    car0win_mean bhar0win_mean abret0_t sar0_t pat_ar0 )
4582        MM_Evtwin  (keep=evttime cretwin_mean abret1_n ret_mean abret1_mean
4583                    car1win_mean bhar1win_mean abret1_t sar1_t pat_ar1 )
4584        FF_Evtwin  (keep=evttime cretwin_mean abret2_n ret_mean abret2_mean
4585                    car2win_mean bhar2win_mean abret2_t sar2_t pat_ar2 )
4586        FFM_Evtwin (keep=evttime cretwin_mean abret3_n ret_mean abret3_mean
4587                    car3win_mean bhar3win_mean abret3_t sar3_t pat_ar3 );
4588     set allstats;
4589     by evttime;
4590       if _n_=1 and missing(evttime) then do;
4591       abret0_mean=.;
4592       abret1_mean=.;
4593       abret2_mean=.;
4594       abret3_mean=.;
4595       cretwin_mean=0;
4596       ret_mean=.;
4597       bhar1win_mean=0;
4598       bhar1win_mean=0;
4599       bhar2win_mean=0;
4600       bhar3win_mean=0;
4601       end;
4602       /*Patell Z statistics*/
4603       pat_car0=scar0_mean/(sqrt(pat_scale_sum)/scar0_n);
4604       pat_car1=scar1_mean/(sqrt(pat_scale_sum)/scar1_n);
4605       pat_car2=scar2_mean/(sqrt(pat_scale_sum)/scar2_n);
4606       pat_car3=scar3_mean/(sqrt(pat_scale_sum)/scar3_n);
```

```
4607     pat_ar0=sar0_mean/(sqrt(pat_scale_sum)/sar0_n);
4608     pat_ar1=sar1_mean/(sqrt(pat_scale_sum)/sar1_n);
4609     pat_ar2=sar2_mean/(sqrt(pat_scale_sum)/sar2_n);
4610     pat_ar3=sar3_mean/(sqrt(pat_scale_sum)/sar3_n);
4611  label
4612     pat_ar0=        'Patell Z for AR_MA'  pat_ar1=        'Patell Z for AR_MM'
4613     pat_ar2=        'Patell Z for AR_FF'  pat_ar3=        'Patell Z for AR_FFM'
4614     abret0_t=       'CS t-stat, AR_MA'    abret1_t=       'CS t-stat, AR_MM'
4615     abret2_t=       'CS t-stat, AR_FF'    abret3_t=       'CS t-stat, AR_FFM'
4616     sar0_t=         'Std CS test, AR_MA'  sar1_t=         'Std CS test, AR_MM'
4617     sar2_t=         'Std CS test, AR_FF'  sar3_t=         'Std CS test, AR_FFM'
4618     abret0_mean=    'Mean AR_MA'          abret1_mean=    'Mean AR_MM'
4619     abret2_mean=    'Mean AR_FF'          abret3_mean=    'Mean AR_FFM'
4620     car0_n=         'Number of events in the portfolio'
4621     abret0_n=       'Number of events in the portfolio'
4622     evttime=        'Event Time t'
4623     cret_mean=      "Mean CTR (&start, &end)"
4624     cretwin_mean=   "Mean CTR (&start,t) "
4625     car0win_mean=   "Average CAR_MA (&start, t)"
4626     car1win_mean=   "Average CAR_MM (&start, t)"
4627     car2win_mean=   "Average CAR_FF (&start, t)"
4628     car3win_mean=   "Average CAR_FFM (&start, t)"
4629     bhar0win_mean=  "Mean BHAR_MA (&start, t)"
4630     bhar1win_mean=  "Mean BHAR_MM (&start, t)"
4631     bhar2win_mean=  "Mean BHAR_FF (&start, t)"
4632     bhar3win_mean=  "Mean BHAR_FFM (&start, t)"
4633  ;
4634     format ret_mean      cret_mean        cretwin_mean
4635            abret0_mean    abret1_mean      abret2_mean    abret3_mean
4636            car0_mean      car1_mean        car2_mean      car3_mean
4637            bhar0_mean     bhar1_mean       bhar2_mean     bhar3_mean
4638            bhar0win_mean  bhar1win_mean    bhar2win_mean  bhar3win_mean
4639            car0win_mean   car1win_mean     car2win_mean   car3win_mean
4640        percent7.4
4641            abret0_t   abret1_t    abret2_t   abret3_t
4642            sar0_t     sar1_t      sar2_t     sar3_t
4643            pat_car0   pat_car1    pat_car2   pat_car3
4644            pat_ar0    pat_ar1     pat_ar2    pat_ar3
```

```
4645              car0_t      car1_t       car2_t      car3_t
4646              scar0_t     car1_t       scar2_t     scar3_t
4647          comma10.2;
4648    if evttime=0 then do; model='Market-Adjusted'; output MA_Evtdate;
4649                          model='Market Model';    output MM_Evtdate;
4650                          model='FF Model';        output FF_Evtdate;
4651                          model='Carhart Model';   output FFM_Evtdate;
4652                    end;
4653    if missing(evttime) then evttime=&start-1;
4654    output MA_Evtwin;
4655    output MM_Evtwin;
4656    output FF_Evtwin;
4657    output FFM_Evtwin;
4658  run;
4659
4660  /* STEP 7. Putting Event Date CARs and BHARS for various risk models together*/
4661  data allevtdate; set
4662    MA_Evtdate  (rename=(car0_mean=car_mean bhar0_mean=bhar_mean
4663                  car0_n=n car0_t=car_t scar0_t=scar_t pat_car0=pat_car))
4664    MM_Evtdate  (rename=(car1_mean=car_mean bhar1_mean=bhar_mean
4665                  car1_n=n car1_t=car_t scar1_t=scar_t pat_car1=pat_car))
4666    FF_Evtdate  (rename=(car2_mean=car_mean bhar2_mean=bhar_mean
4667                  car2_n=n car2_t=car_t scar2_t=scar_t pat_car2=pat_car))
4668    FFM_evtdate (rename=(car3_mean=car_mean bhar3_mean=bhar_mean
4669                  car3_n=n car3_t=car_t scar3_t=scar_t pat_car3=pat_car));
4670    length=&evtwin;
4671    label pat_car=   'Patell Z'
4672          car_mean=  "Mean CAR (&start, &end)"
4673          bhar_mean= "Mean BHAR (&start, &end)"
4674          car_t=     'Cross-sectional t-stat for CAR'
4675          scar_t=    'Standaridized cross-sectional t-stat for CAR'
4676          length=    'Length of event window in trading days';
4677  run;
4678
4679
4680  /*Cross-sectional output for CARs/BHARs at the firm-event level*/
4681  data car_evtdate;
4682    retain permno evtdate alpha1 beta1 cret car0 bhar0 var0 car1 bhar1 var1
```

```
4683          car2 bhar2 var2 car3 bhar3 var3 nrets nobs;
4684    set car_evtdate;
4685    label alpha1= 'Alpha (Market Model)'
4686          beta1=  'Beta (Market Model'
4687          car0=   'CAR_MA'
4688          car1=   'CAR_MM'
4689          car2=   'CAR_FF'
4690      car3=   'CAR_FFM'
4691          bhar0=  'BHAR_MA'
4692      bhar1=  'BHAR_MM'
4693          bhar2=  'BHAR_FF'
4694      bhar3=  'BHAR_FFM'
4695          var0=    'Estimation period variance (Market-adjusted returns)'
4696          var1=    'Estimation period variance (Market Model)'
4697          var2=    'Estimation period variance (FF Model)'
4698          var3=    'Estimation period variance (Carhart Model)'
4699          cret=    'Cumulative Total Return'
4700          nrets=   'Number of non-missing returns in event window'
4701          nobs=    'Length of the estimation period';
4702    keep permno evtdate alpha1 beta1 cret car0 bhar0 var0 car1 bhar1 var1
4703          car2 bhar2 var2 car3 bhar3 var3 nrets nobs;
4704    format cret alpha1
4705            car0 bhar0
4706      car1 bhar1
4707      car2 bhar2
4708      car3 bhar3
4709          percent7.4
4710          beta1 comma10.3;
4711  run;
4712  /* Save the summary statistics and
4713  the CARs on the event window
4714  */
4715
4716  PROC DATASETS NOLIST;
4717  COPY IN = work OUT = evtstudy ;
4718  select  allevtdate allstats car_evtwin ;
4719  RUN;
4720
```

```
4721  /* As an illustration, plot Carhart CAARs and average BHARs in the event window*/
4722  options nodate orientation=landscape;
4723  ods pdf file="&outputPath\Car0_evtrets_5days.pdf";
4724  goptions device=pdfc; /* Plot Saved in Home Directory */
4725  axis1 label=(angle=90 "Cumulative Abnormal Returns");
4726  axis2 label=("Event time");
4727  symbol interpol=join w=3 l=1;
4728
4729
4730
4731  proc gplot data =MA_Evtwin;
4732   where evttime>=&start;
4733   Title "Market adjusted model:  CARs and BHARs around the event date";
4734   plot (car0win_mean bhar0win_mean)*evttime
4735        /overlay legend vaxis=axis1 haxis=axis2;
4736  run;quit; ods pdf close;
4737
4738  ods pdf file="&outputPath\Car1_evtrets_5days.pdf";
4739  proc gplot data =MM_Evtwin;
4740   where evttime>=&start;
4741   Title "Market model:  CARs and BHARs around the event date";
4742   plot (car1win_mean bhar1win_mean)*evttime
4743        /overlay legend vaxis=axis1 haxis=axis2;
4744  run;quit; ods pdf close;
4745
4746  ods pdf file="&outputPath\Car2_evtrets_5days.pdf";
4747  proc gplot data =FF_Evtwin;
4748   where evttime>=&start;
4749   Title "FF 3-factor model:CARs and BHARs around the event date";
4750   plot (car2win_mean bhar2win_mean)*evttime
4751        /overlay legend vaxis=axis1 haxis=axis2;
4752  run;quit; ods pdf close;
4753
4754  ods pdf file="&outputPath\Car3_evtrets_5days.pdf";
4755  proc gplot data =FFM_Evtwin;
4756   where evttime>=&start;
4757   Title "Carhart 4 Factor model: Carhart CARs and BHARs around the event date";
4758   plot (car3win_mean bhar3win_mean)*evttime
```

```
4759         /overlay legend vaxis=axis1 haxis=axis2;
4760  run;quit; ods pdf close;
4761
4762  ods pdf file="&outputPath\Car0_3_evtrets_5days.pdf";
4763  proc  gplot data =allstats;
4764   where evttime>=&start;
4765   Title "CARs from the four models: around the event date";
4766   plot (car0win_mean  car1win_mean  car2win_mean  car3win_mean )*evttime
4767         /overlay legend vaxis=axis1 haxis=axis2;
4768  run;quit; ods pdf close;
4769
4770
4771  ods pdf file="&outputPath\BHARS0_3_evtrets_5days.pdf";
4772  proc  gplot data =allstats;
4773   where evttime>=&start;
4774   Title "BHARs from the four models: BHARs around the event date";
4775   plot (bhar0_mean  bhar1_mean  bhar2_mean  bhar3_mean )*evttime
4776         /overlay legend vaxis=axis1 haxis=axis2;
4777  run;quit;
4778
4779  ods pdf close;
4780  run;quit; ods pdf close;
4781
4782
4783
4784  *house cleaning;
4785   proc sql;
4786    drop table abrets, allcars, allstats, caldates, car, car_evtwin, evtrets, temp,
4787            evtrets_temp,ffm_evtdate, ff_evtdate, ma_evtdate, mm_evtdate, params;
4788    drop view  evtrets1, abrets1; quit;
4789
4790  %mend  event_study;
4791  /* ************************************************************************* */
4792  /* *************  Material Copyright Wharton Research Data Services  ************* */
4793  /* *************************** All Rights Reserved *************************** */
4794  /* ************************************************************************* */

4795  /*https://wrds-www.wharton.upenn.edu/pages/support/applications/event-studies/event-study-research-application/*
```

```
4795! /
4796
4797  /* *********************************************************************** */
4798  /* ********* W R D S   R E S E A R C H   A P P L I C A T I O N S ************** */
4799  /* *********************************************************************** */
4800  /* Program : EVTSTUDY.SAS                                                */
4801  /* Summary : Provides a sample methodology for calculating Cumulative    */
4802  /*           Abnormal Returns(CARs)& Buy-Hold Abnormal Returns(BHARs)     */
4803  /*           with various t-statistics (CS test, Standardized CS test&Patell Z) */
4804  /*           in an event study setting. Displays the dynamics of mean CARs and */
4805  /*           BHARs in the event window specified by the user             */
4806  /*                                                                       */
4807  /* Date    : Sep 2011                                                    */
4808  /* Author  : Denys Glushkov, WRDS                                        */
4809  /* *********************************************************************** */
4810
4811  /* STEP 1A: Speficify the parameters necessary to run the event study such as  */
4812  /* the length of estimation period and event window, gap b/w estimation & event */
4813  /* window, etc                                                           */
4814  *%libname mycrsp "C:\Users\hli5\OneDrive - Kent State University\aaaa\event_Study";
4815  %macro event_study(outputPath=outputPath, permno_list=perm_record_dataset);
4816  libname mycrsp "C:\Users\lihon\patent Dropbox\Victor Li\wrds_data";
4817  * libname evtstudy "C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\June6_res";
4818
4819
4820  /*
4821  * %let outputPath=%str(C:\Users\lihon\OneDrive - Kent State
4821! University\aaaa\event_Study\result\foreign_rec_exe10Dec9);
4822  * libname evtstudy "&outputPath\Foreign_rec_exe10";
4823  */
4824  libname evtstudy "&outputPath";
4825  %let crsp=mycrsp; /*CRSP libary to be used (CRSPQ - quarterly, CRSP-annual update  */
4826  %let estper=150; /*Length of the estimation period in trading days over which    */
4827                   /*the risk model is estimated                            */
4828
4829  %let start=-2; /*Beginning of the event window (wtr to the event date,e.g. -2)   */
4830  %let end=2;    /*End of the event window (relative to the event date, e.g., +1)  */
4831  %let gap=66;    /*Length of pre-event window,i.e., number of trading days b/w    */
```

```
4832                      /*the end of estimation period and the start of the event window */
4833
4834  %let minest=70; /*Minimum of non-missing returns required for estimation          */
4835  %let evtwin=%eval(&end-&start+1);        /*length of event window in trading days */
4836
4837  /* STEP 1B: As an example, create the input table containing Permno-event dates  */
4838  /* corresponding to the stock additions to and deletions from S&P 500 index       */
4839
4840
4841  *  %event_crack(relation_exec) ;
4842  * %let permno_list=relation_exec;
4843  *%let permno_list=foreign_relation;
4844  * %let permno_list=for_event_study_v2;
4845  * %let permno_list=oree_gvkey_patentid_record_dtv2;
4846  * %let permno_list=foreign_trans_exec_record10;
4847  * %let permno_list=foreign_trans_execrec10_dec10;
4848
4849  *  ;
4850  /*- %macro event_crack(permno_list, evt_date=exec_dt); */
4851
4852  proc sql;
4853    create table input
4854    as select distinct permno, record_dt as edate format MMDDYY10.
4855    from &permno_list where not missing(&start) and year(record_dt);
4856  quit;
4857
4858  /* STEP 2. Creating Trading Calendar that accounts for the presence of  */
4859  /* weekends, holidays and other non-trading days in the estimation      */
4860  /* and event windows                                                    */
4861  data caldates;
4862
4863   merge &crsp..dsi(keep=date rename=(date=estper_beg))
4864     &crsp..dsi(keep=date firstobs=&estper rename=(date=estper_end))
4865     &crsp..dsi(keep=date firstobs=%eval(&estper+&gap+1) rename=(date=evtwin_beg))
4866     &crsp..dsi(keep=date firstobs=%eval(&estper+&gap-&start+1) rename=(date=evtdate))
4867     &crsp..dsi(keep=date firstobs=%eval(&estper+&gap+&evtwin) rename=(date=evtwin_end));
4868
4869    format estper_beg estper_end evtwin_beg evtdate evtwin_end date9.;
```

```sas
4870    label  estper_beg='Start of the Estimation Window'
4871           estper_end='End of the Estimation Window'
4872           evtwin_beg='Start of the Event Window'
4873           evtwin_end='End of the Event Window'
4874           evtdate='Event Date';
4875     index+1;
4876     if nmiss(estper_beg,estper_end,evtwin_beg,evtwin_end,evtdate)=0;
4877  run;
4878
4879  /*STEP 3: If event date is a non-trading day*/
4880  /*       select the closest trading day that*/
4881  /* follows the event day                                            */
4882  proc sql; create table temp
4883   as select a.permno
4884              ,b.*
4885    from input a
4886         left join
4887         caldates b
4888    on b.evtdate-a.edate>=0
4889    group by a.edate
4890    having (b.evtdate-a.edate)=min(b.evtdate-a.edate);
4891
4892
4893   /*Returns for sample securities around the event dates */
4894    proc sql;
4895   create table evtrets_temp
4896   as select a.permno, a.date format date9., a.ret as ret1,
4897            b.evtdate, b.estper_beg, b.estper_end,
4898            b.evtwin_beg, b.evtwin_end
4899   from &crsp..dsf a, temp b
4900   where a.permno=b.permno and b.estper_beg<=a.date<=b.evtwin_end;
4901    quit;
4902  /* Merge in the risk factors                                    */
4903  /* User can create her own risk factors and use it instead of FF+M ones*/
4904    proc sql;
4905   create view evtrets1
4906     as select a.*, (b.mktrf+b.rf) as mkt, b.mktrf, b.rf,b.smb, b.hml, b.umd
4907      from evtrets_temp a left join
```

```
4908          &crsp..ff_factors_daily (keep=date mktrf smb hml umd rf) b
4909      on a.date=b.date;
4910       quit;
4911   /*Bring in delisting returns*/
4912       proc sql;
4913   create table evtrets (drop=ret1 where=(not missing(mkt)))
4914     as select a.*,
4915     (1+a.ret1)*sum(1,b.dlret)-1-a.mkt as exret label='Market-adjusted total ret',
4916     (1+a.ret1)*sum(1,b.dlret)-1 as ret "Ret adjusted for delisting"
4917     from evtrets1 a left join &crsp..dsedelist (where=(missing(dlret)=0)) b
4918     on a.permno=b.permno and a.date=b.dlstdt
4919   order by a.permno,a.evtdate,a.date;
4920   quit;
4921
4922   /* STEP 4. Estimating Factor Exposures over the estimation period*/
4923   proc printto log=junk; run;
4924
4925   proc reg data=evtrets edf outest=params  noprint;
4926     where estper_beg<=date<=estper_end;
4927     by permno evtdate;
4928     eq0: model exret=;        /*past market-premium return: ret-mkt as a benchmark*/
4929     eq1: model ret=mktrf;     /*  CAPM      */
4930     eq2: model ret=mktrf smb hml;    /* FF 3 factor **/
4931     eq3: model ret=mktrf smb hml umd; /*FF 4 factor */
4932   run;
4933   proc printto;run;
4934
4935
4936   /* STEP 5. Calculating Abnormal Returns for all models */
4937   /* for each trading day in the event window            */
4938   data abrets1/view=abrets1; merge
4939     evtrets(where=(evtwin_beg<=date<=evtwin_end) in=in_evtrets)
4940     params (where=(_model_='eq0')
4941       keep=permno evtdate _model_ _rmse_ _p_ _edf_
4942       rename=(_rmse_=std0 _p_=p0 _edf_=edf0))
4943
4944     params (where=(_model_='eq1')
4945       keep=permno evtdate _model_ _rmse_ intercept mktrf
```

```
4946        rename=(_rmse_=std1 intercept=alpha1 mktrf=beta1))
4947
4948    params (where=(_model_='eq2')
4949        keep=permno evtdate _model_ _rmse_ intercept mktrf smb hml
4950        rename=(_rmse_=std2 intercept=alpha2 mktrf=beta2 smb=sminb2 hml=hminl2))
4951
4952    params (where=(_model_='eq3')
4953        keep=permno evtdate _model_ _rmse_ intercept mktrf smb hml umd
4954        rename=(_rmse_=std3 intercept=alpha3 mktrf=beta3 smb=sminb3 hml=hminl3 umd=umind3));
4955    by permno evtdate;
4956
4957    retain missret;
4958    if first.permno then missret=missing(ret);
4959    if missing(ret) then missret+1; /*count number of missing returns*/
4960
4961    var0=std0**2;
4962    var1=std1**2;
4963    var2=std2**2;
4964    var3=std3**2;
4965
4966    abret0  = exret; *extra over market;
4967    expret1 = alpha1 + beta1*mktrf;  *CAPM;
4968    abret1  = ret-expret1;
4969
4970    expret2 = alpha2+beta2*mktrf+sminb2*smb+hminl2*hml; *FF3factor;
4971    abret2=ret-expret2;
4972
4973    expret3 =alpha3+beta3*mktrf+sminb3*smb+hminl3*hml+umind3*umd;
4974    abret3=ret-expret3;
4975
4976    nobs=p0+edf0;  /*number of observations used in estimation*/
4977    drop p0 edf0 estper_beg estper_end std0 std1 std2 std3 _model_ exret;
4978    if in_evtrets and nobs>&minest;
4979    * I add the followings;
4980    if nobs=150;
4981 run;
4982
4983 /* Transform dates to event time using CRSP Trading Calendar      */
```

```
4984  /* Using the latter takes into account non-consecutive date records*/
4985  /* do not use lag to avoid non-consecutive date records*/
4986  proc sql;
4987    create table abrets
4988      as select a.*, (b.index-c.index) as evttime
4989      from          abrets1 a
4990        left join  caldates b
4991      on a.date    = b.evtdate
4992        left join caldates c
4993     on a.evtdate = c.evtdate
4994      order by permno, evtdate, date;
4995  quit;
4996
4997  /*
4998  proc contents data=abrets short varnum;
4999  run;
5000  */
5001  proc sort data=abrets  nodupkey;
5002    by PERMNO evtdate DATE
5003       evtwin_beg evtwin_end
5004       mkt mktrf rf smb hml umd ret
5005       alpha1 beta1
5006       alpha2 beta2 sminb2 hminl2
5007       alpha3 beta3 sminb3 hminl3 umind3
5008       missret var0 var1 var2 var3
5009       abret0 expret1 abret1 expret2 abret2 expret3 abret3 nobs evttime ;
5010  run;
5011
5012  /* 673  proc sql;
5013  674     create table abrets as
5014  675     select distinct * from abrets;
5015  WARNING: This CREATE TABLE statement recursively references the target table. A consequence of this
5016          is a possible data integrity problem.
5017  NOTE: Table WORK.ABRETS created, with 253797 rows and 37 columns.
5018
5019    */
5020  /* Calculating Rolling Cumulative Abnormal Returns and various stats */
5021  /* Transformout= calculates cumulative product of gross returns and  */
```

```sas
5022  /* subtracts 1 to arrive at the total net cumulative return         */
5023  proc expand data=abrets
5024              out=car   /* Cumulative returns*/
5025              method=none;
5026    by permno evtdate;
5027    id date;
5028    convert ret=cret/transformout=(+1 cuprod -1);          /*actural cumulative return from CRSP*/
5029    convert mkt=cmkt/transformout=(+1 cuprod -1);          /*cumulative  market return*/
5030
5031    /*cumulative market model return: expret1= alpha1 + beta1*mktrf; */
5032    convert expret1 =cexpret1 /transformout=(+1 cuprod -1);
5033
5034    /*expret2 = alpha2+ beta2*mktrf+ sminb2*smb+ hminl2*hml; */
5035    convert expret2 =cexpret2 /transformout=(+1 cuprod -1); /*cumulative FF-3 factor return */
5036
5037    /*  expret3 =alpha3+beta3*mktrf+sminb3*smb+hminl3*hml+umind3*umd; */
5038    convert expret3 =cexpret3 /transformout=(+1 cuprod -1);/*cumulative FF-4 factor return */
5039
5040    convert abret0=car0/transformout=(sum);
5041    convert abret1=car1/transformout=(sum);
5042    convert abret2=car2/transformout=(sum);
5043    convert abret3=car3/transformout=(sum);
5044  run;
5045  /*
5046  proc contents data =car;
5047
5048
5049  proc contents data =car;
5050  ods select  Variables;
5051  run;
5052  */
5053
5054
5055  /* Car_Evtdate Table: */
5056  /* the cross-sectional output that contains for each       */
5057  /* "firm-event date":                                      */
5058  /*   1) CAR, BHAR, and SCAR (standardized CAR)             */
5059  /*   2) Alpha and Beta from the estimation period          */
```

```
5060  /*   3) Estimation period variance                              */
5061
5062  /* Car_Evtwin Table contains Raw, Abnormal, Std. and Buy-and-Hold Abnormal  */
5063  /* Daily Returns "firm-date" in event time                      */
5064  proc printto log=junk;run;
5065
5066  data car_evtdate
5067          (drop=evttime ret mkt smb hml umd date calpha1 calpha2 calpha3
5068                  cmrkt csmb chml cumd evtwin_beg evtwin_end abret0 abret1
5069                  abret2 abret3 sar0 sar1 sar2 sar3 missret cexpret1 cexpret2 cexpret3)
5070      car_evtwin
5071          (keep=permno evtdate evttime date ret cret abret0 abret1 abret2 abret3
5072            sar0 sar1 sar2 sar3 bhar0 bhar1 bhar2 bhar3 car0 car1 car2 car3);
5073    set car;
5074    by permno evtdate date;
5075    /*Standardized CARs and ARs for various models*/
5076    scar0=car0/(&evtwin*var0)**0.5;
5077    scar1=car1/(&evtwin*var1)**0.5;
5078    scar2=car2/(&evtwin*var2)**0.5;
5079    scar3=car3/(&evtwin*var3)**0.5;
5080
5081    sar0=abret0/sqrt(var0);
5082    sar1=abret1/sqrt(var1);
5083    sar2=abret2/sqrt(var2);
5084    sar3=abret3/sqrt(var3);
5085
5086    pat_scale=(nobs-2)/(nobs-4); /*Patell Z scaling factor*/
5087
5088    /*Buy-Hold Abnormal Returns*/
5089    bhar0=cret-cmkt;
5090    bhar1=cret-cexpret1;
5091    bhar2=cret-cexpret2;
5092    bhar3=cret-cexpret3;
5093
5094    if last.evtdate then do;
5095        nrets=&evtwin-missret;
5096      output car_evtdate;
5097    end;
```

```sas
5098    output car_evtwin;
5099  run;
5100
5101  proc printto;run;
5102
5103  /*Put Cross-sectional and aggregate results together for further analysis*/
5104  data allcars;
5105      merge
5106    car_evtwin
5107            (rename=(bhar0=bhar0win
5108                     bhar1=bhar1win
5109                     bhar2=bhar2win
5110                     bhar3=bhar3win
5111                     car0=car0win
5112            car1=car1win
5113            car2=car2win
5114            car3=car3win
5115            cret=cretwin))
5116     car_evtdate;
5117   by permno evtdate;
5118  run;
5119
5120  /* STEP 6: Compute Cumulative Average Abnormal Return (CAR_MEAN) */
5121  /* and Average Buy-Hold Abnormal Return (BHAR_MEAN)             */
5122  /* and other stats across all distinct events                  */
5123  * proc means data=allcars noprint;
5124  proc means data=allcars( where = (nobs=150)) noprint;
5125    class evttime; id nobs;
5126    var ret cret
5127    car0 car1 car2 car3  /* at evttime*/
5128    cretwin car0win car1win car2win car3win /* at evttime=2*/
5129    bhar0 bhar1 bhar2 bhar3
5130    bhar0win bhar1win bhar2win bhar3win
5131
5132    scar0 scar1 scar2 scar3
5133    abret0 abret1 abret2 abret3
5134    sar0 sar1 sar2 sar3 /*originally from car_evtwin*/
5135    pat_scale;
```

```
5136   output out=allstats
5137    mean =
5138       n =
5139       t =
5140     sum =/autoname;
5141  run;
5142
5143  /*calculate different stats for assessing     */
5144  /*statistical signficance of abnormal returns*/
5145  data MA_Evtdate (keep=evttime car0_n cret_mean car0_mean car0_t scar0_t
5146                    bhar0_mean pat_car0 model)
5147       MM_Evtdate (keep=evttime car1_n cret_mean car1_mean car1_t scar1_t
5148                    bhar1_mean pat_car1 model )
5149       FF_Evtdate (keep=evttime car2_n cret_mean car2_mean car2_t scar2_t
5150                    bhar2_mean pat_car2 model )
5151       FFM_Evtdate (keep=evttime car3_n cret_mean car3_mean car3_t scar3_t
5152                    bhar3_mean pat_car3 model )
5153       MA_Evtwin  (keep=evttime cretwin_mean abret0_n ret_mean abret0_mean
5154                    car0win_mean bhar0win_mean abret0_t sar0_t pat_ar0 )
5155       MM_Evtwin  (keep=evttime cretwin_mean abret1_n ret_mean abret1_mean
5156                    car1win_mean bhar1win_mean abret1_t sar1_t pat_ar1 )
5157       FF_Evtwin  (keep=evttime cretwin_mean abret2_n ret_mean abret2_mean
5158                    car2win_mean bhar2win_mean abret2_t sar2_t pat_ar2 )
5159       FFM_Evtwin (keep=evttime cretwin_mean abret3_n ret_mean abret3_mean
5160                    car3win_mean bhar3win_mean abret3_t sar3_t pat_ar3 );
5161   set allstats;
5162   by evttime;
5163     if _n_=1 and missing(evttime) then do;
5164     abret0_mean=.;
5165     abret1_mean=.;
5166     abret2_mean=.;
5167     abret3_mean=.;
5168     cretwin_mean=0;
5169     ret_mean=.;
5170     bhar1win_mean=0;
5171     bhar1win_mean=0;
5172     bhar2win_mean=0;
5173     bhar3win_mean=0;
```

```
5174        end;
5175        /*Patell Z statistics*/
5176        pat_car0=scar0_mean/(sqrt(pat_scale_sum)/scar0_n);
5177        pat_car1=scar1_mean/(sqrt(pat_scale_sum)/scar1_n);
5178        pat_car2=scar2_mean/(sqrt(pat_scale_sum)/scar2_n);
5179        pat_car3=scar3_mean/(sqrt(pat_scale_sum)/scar3_n);
5180        pat_ar0=sar0_mean/(sqrt(pat_scale_sum)/sar0_n);
5181        pat_ar1=sar1_mean/(sqrt(pat_scale_sum)/sar1_n);
5182        pat_ar2=sar2_mean/(sqrt(pat_scale_sum)/sar2_n);
5183        pat_ar3=sar3_mean/(sqrt(pat_scale_sum)/sar3_n);
5184      label
5185        pat_ar0=        'Patell Z for AR_MA'   pat_ar1=        'Patell Z for AR_MM'
5186        pat_ar2=        'Patell Z for AR_FF'   pat_ar3=        'Patell Z for AR_FFM'
5187        abret0_t=       'CS t-stat, AR_MA'     abret1_t=       'CS t-stat, AR_MM'
5188        abret2_t=       'CS t-stat, AR_FF'     abret3_t=       'CS t-stat, AR_FFM'
5189        sar0_t=         'Std CS test, AR_MA'   sar1_t=         'Std CS test, AR_MM'
5190        sar2_t=         'Std CS test, AR_FF'   sar3_t=         'Std CS test, AR_FFM'
5191        abret0_mean=    'Mean AR_MA'           abret1_mean=    'Mean AR_MM'
5192        abret2_mean=    'Mean AR_FF'           abret3_mean=    'Mean AR_FFM'
5193        car0_n=         'Number of events in the portfolio'
5194        abret0_n=       'Number of events in the portfolio'
5195        evttime=        'Event Time t'
5196        cret_mean=      "Mean CTR (&start, &end)"
5197        cretwin_mean=   "Mean CTR (&start,t) "
5198        car0win_mean=   "Average CAR_MA (&start, t)"
5199        car1win_mean=   "Average CAR_MM (&start, t)"
5200        car2win_mean=   "Average CAR_FF (&start, t)"
5201        car3win_mean=   "Average CAR_FFM (&start, t)"
5202        bhar0win_mean=  "Mean BHAR_MA (&start, t)"
5203        bhar1win_mean=  "Mean BHAR_MM (&start, t)"
5204        bhar2win_mean=  "Mean BHAR_FF (&start, t)"
5205        bhar3win_mean=  "Mean BHAR_FFM (&start, t)"
5206      ;
5207      format ret_mean      cret_mean        cretwin_mean
5208             abret0_mean    abret1_mean    abret2_mean    abret3_mean
5209             car0_mean      car1_mean      car2_mean      car3_mean
5210             bhar0_mean     bhar1_mean     bhar2_mean     bhar3_mean
5211             bhar0win_mean bhar1win_mean  bhar2win_mean  bhar3win_mean
```

```
5212                carOwin_mean   car1win_mean    car2win_mean    car3win_mean
5213        percent7.4
5214            abret0_t  abret1_t   abret2_t   abret3_t
5215            sar0_t    sar1_t     sar2_t     sar3_t
5216            pat_car0  pat_car1   pat_car2   pat_car3
5217            pat_ar0   pat_ar1    pat_ar2    pat_ar3
5218            car0_t    car1_t     car2_t     car3_t
5219            scar0_t   car1_t     scar2_t    scar3_t
5220        comma10.2;
5221    if evttime=0 then do; model='Market-Adjusted'; output MA_Evtdate;
5222                          model='Market Model';    output MM_Evtdate;
5223                          model='FF Model';        output FF_Evtdate;
5224                          model='Carhart Model';   output FFM_Evtdate;
5225                 end;
5226    if missing(evttime) then evttime=&start-1;
5227    output MA_Evtwin;
5228    output MM_Evtwin;
5229    output FF_Evtwin;
5230    output FFM_Evtwin;
5231 run;
5232
5233 /* STEP 7. Putting Event Date CARs and BHARS for various risk models together*/
5234 data allevtdate; set
5235   MA_Evtdate  (rename=(car0_mean=car_mean bhar0_mean=bhar_mean
5236                 car0_n=n car0_t=car_t scar0_t=scar_t pat_car0=pat_car))
5237   MM_Evtdate  (rename=(car1_mean=car_mean bhar1_mean=bhar_mean
5238                 car1_n=n car1_t=car_t scar1_t=scar_t pat_car1=pat_car))
5239   FF_Evtdate  (rename=(car2_mean=car_mean bhar2_mean=bhar_mean
5240                 car2_n=n car2_t=car_t scar2_t=scar_t pat_car2=pat_car))
5241   FFM_evtdate (rename=(car3_mean=car_mean bhar3_mean=bhar_mean
5242                 car3_n=n car3_t=car_t scar3_t=scar_t pat_car3=pat_car));
5243   length=&evtwin;
5244   label pat_car=   'Patell Z'
5245         car_mean=  "Mean CAR (&start, &end)"
5246         bhar_mean= "Mean BHAR (&start, &end)"
5247         car_t=     'Cross-sectional t-stat for CAR'
5248         scar_t=    'Standaridized cross-sectional t-stat for CAR'
5249         length=    'Length of event window in trading days';
```

```
5250   run;
5251
5252
5253   /*Cross-sectional output for CARs/BHARs at the firm-event level*/
5254   data car_evtdate;
5255     retain permno evtdate alpha1 beta1 cret car0 bhar0 var0 car1 bhar1 var1
5256         car2 bhar2 var2 car3 bhar3 var3 nrets nobs;
5257     set car_evtdate;
5258     label alpha1= 'Alpha (Market Model)'
5259           beta1=  'Beta (Market Model'
5260           car0=   'CAR_MA'
5261           car1=   'CAR_MM'
5262           car2=   'CAR_FF'
5263       car3=   'CAR_FFM'
5264           bhar0=  'BHAR_MA'
5265       bhar1=  'BHAR_MM'
5266           bhar2=  'BHAR_FF'
5267       bhar3=  'BHAR_FFM'
5268           var0=    'Estimation period variance (Market-adjusted returns)'
5269           var1=    'Estimation period variance (Market Model)'
5270           var2=    'Estimation period variance (FF Model)'
5271           var3=    'Estimation period variance (Carhart Model)'
5272           cret=    'Cumulative Total Return'
5273           nrets=   'Number of non-missing returns in event window'
5274           nobs=    'Length of the estimation period';
5275     keep permno evtdate alpha1 beta1 cret car0 bhar0 var0 car1 bhar1 var1
5276         car2 bhar2 var2 car3 bhar3 var3 nrets nobs;
5277     format cret alpha1
5278           car0 bhar0
5279       car1 bhar1
5280       car2 bhar2
5281       car3 bhar3
5282           percent7.4
5283           beta1 comma10.3;
5284   run;
5285   /* Save the summary statistics and
5286   the CARs on the event window
5287   */
```

```
5288
5289   PROC DATASETS NOLIST;
5290   COPY IN = work OUT = evtstudy ;
5291   select  allevtdate allstats car_evtwin ;
5292   RUN;
5293
5294   /* As an illustration, plot Carhart CAARs and average BHARs in the event window*/
5295   options nodate orientation=landscape;
5296   ods pdf file="&outputPath\Car0_evtrets_5days.pdf";
5297   goptions device=pdfc; /* Plot Saved in Home Directory */
5298   axis1 label=(angle=90 "Cumulative Abnormal Returns");
5299   axis2 label=("Event time");
5300   symbol interpol=join w=3 l=1;
5301
5302
5303
5304   proc gplot data =MA_Evtwin;
5305    where evttime>=&start;
5306    Title "Market adjusted model:  CARs and BHARs around the event date";
5307    plot (car0win_mean bhar0win_mean)*evttime
5308         /overlay legend vaxis=axis1 haxis=axis2;
5309   run;quit; ods pdf close;
5310
5311   ods pdf file="&outputPath\Car1_evtrets_5days.pdf";
5312   proc gplot data =MM_Evtwin;
5313    where evttime>=&start;
5314    Title "Market model:  CARs and BHARs around the event date";
5315    plot (car1win_mean bhar1win_mean)*evttime
5316         /overlay legend vaxis=axis1 haxis=axis2;
5317   run;quit; ods pdf close;
5318
5319   ods pdf file="&outputPath\Car2_evtrets_5days.pdf";
5320   proc gplot data =FF_Evtwin;
5321    where evttime>=&start;
5322    Title "FF 3-factor model:CARs and BHARs around the event date";
5323    plot (car2win_mean bhar2win_mean)*evttime
5324         /overlay legend vaxis=axis1 haxis=axis2;
5325   run;quit; ods pdf close;
```

```
5326
5327  ods pdf file="&outputPath\Car3_evtrets_5days.pdf";
5328  proc gplot data =FFM_Evtwin;
5329   where evttime>=&start;
5330   Title "Carhart 4 Factor model: Carhart CARs and BHARs around the event date";
5331   plot (car3win_mean bhar3win_mean)*evttime
5332         /overlay legend vaxis=axis1 haxis=axis2;
5333  run;quit; ods pdf close;
5334
5335  ods pdf file="&outputPath\Car0_3_evtrets_5days.pdf";
5336  proc  gplot data =allstats;
5337   where evttime>=&start;
5338   Title "CARs from the four models: around the event date";
5339   plot (car0win_mean  car1win_mean  car2win_mean  car3win_mean )*evttime
5340         /overlay legend vaxis=axis1 haxis=axis2;
5341  run;quit; ods pdf close;
5342
5343
5344  ods pdf file="&outputPath\BHARS0_3_evtrets_5days.pdf";
5345  proc  gplot data =allstats;
5346   where evttime>=&start;
5347   Title "BHARs from the four models: BHARs around the event date";
5348   plot (bhar0_mean  bhar1_mean  bhar2_mean  bhar3_mean )*evttime
5349         /overlay legend vaxis=axis1 haxis=axis2;
5350  run;quit;
5351
5352  ods pdf close;
5353  run;quit; ods pdf close;
5354
5355
5356
5357  /*house cleaning;
5358   proc sql;
5359    drop table abrets, allcars, allstats, caldates, car, car_evtwin, evtrets, temp,
5360              evtrets_temp,ffm_evtdate, ff_evtdate, ma_evtdate, mm_evtdate, params;
5361    drop view  evtrets1, abrets1; quit;
5362  */
5363  %mend  event_study;
```

```
5364  /* ************************************************************************ */
5365  /* *************  Material Copyright Wharton Research Data Services  ************* */
5366  /* **************************** All Rights Reserved **************************** */
5367  /* ************************************************************************ */

5368
5369  %event_study(outputPath="C:\Users\lihon\OneDrive - Kent State
5369! University\aaaa\event_Study\result\agg_foreign_all"
MLOGIC(EVENT_STUDY):  Beginning execution.
5370              ,permno_list = foreign_trans_decile)
MLOGIC(EVENT_STUDY):  Parameter OUTPUTPATH has value "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_all"
MLOGIC(EVENT_STUDY):  Parameter PERMNO_LIST has value foreign_trans_decile
MPRINT(EVENT_STUDY):   libname mycrsp "C:\Users\lihon\patent Dropbox\Victor Li\wrds_data";
NOTE: Libref MYCRSP was successfully assigned as follows:
      Engine:        V9
      Physical Name: C:\Users\lihon\patent Dropbox\Victor Li\wrds_data
MPRINT(EVENT_STUDY):   * libname evtstudy "C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\June6_res";
NOTE: Line generated by the macro variable "OUTPUTPATH".
1      ""C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\result\agg_foreign_all"
       --
       49
        -
         22

       --
       49
MPRINT(EVENT_STUDY):   libname evtstudy ""C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\agg_foreign_all"";
ERROR: Libref EVTSTUDY is not assigned.
ERROR: Error in the LIBNAME statement.
MLOGIC(EVENT_STUDY):  %LET (variable name is CRSP)
MLOGIC(EVENT_STUDY):  %LET (variable name is ESTPER)
MLOGIC(EVENT_STUDY):  %LET (variable name is START)
MLOGIC(EVENT_STUDY):  %LET (variable name is END)
MLOGIC(EVENT_STUDY):  %LET (variable name is GAP)
MLOGIC(EVENT_STUDY):  %LET (variable name is MINEST)
```

```
MLOGIC(EVENT_STUDY):   %LET (variable name is EVTWIN)
MPRINT(EVENT_STUDY):    * %event_crack(relation_exec) ;
MLOGIC(EVENT_STUDY):   %LET (variable name is PERMNO_LIST)
MLOGIC(EVENT_STUDY):   %LET (variable name is PERMNO_LIST)
MLOGIC(EVENT_STUDY):   %LET (variable name is PERMNO_LIST)
MLOGIC(EVENT_STUDY):   %LET (variable name is PERMNO_LIST)
MLOGIC(EVENT_STUDY):   %LET (variable name is PERMNO_LIST)
MLOGIC(EVENT_STUDY):   %LET (variable name is PERMNO_LIST)
MPRINT(EVENT_STUDY):    * * * * * * * ;
MPRINT(EVENT_STUDY):    proc sql;
NOTE 49-169: The meaning of an identifier after a quoted string might change in a future SAS release.  Inserting
             white space between a quoted string and the succeeding identifier is recommended.

ERROR 22-7: Invalid option name C.

MPRINT(EVENT_STUDY):    create table input as select distinct permno, record_dt as edate format MMDDYY10. from
foreign_trans_execrec10_dec10 where not missing(-2) and year(record_dt);
NOTE: Table WORK.INPUT created, with 93 rows and 2 columns.

MPRINT(EVENT_STUDY):    quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time           0.01 seconds
      user cpu time       0.00 seconds
      system cpu time     0.03 seconds
      memory              5640.96k
      OS Memory           54808.00k
      Timestamp           06/19/2024 04:33:21 PM
      Step Count                    259  Switch Count  0


MPRINT(EVENT_STUDY):    data caldates;
MPRINT(EVENT_STUDY):    merge mycrsp.dsi(keep=date rename=(date=estper_beg)) mycrsp.dsi(keep=date firstobs=150
rename=(date=estper_end)) mycrsp.dsi(keep=date firstobs=217 rename=(date=evtwin_beg)) mycrsp.dsi(keep=date
firstobs=219 rename=(date=evtdate)) mycrsp.dsi(keep=date firstobs=221 rename=(date=evtwin_end));
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
```

the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and might reduce performance.

INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and might reduce performance.

INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and might reduce performance.

INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and might reduce performance.

```
MPRINT(EVENT_STUDY):   format estper_beg estper_end evtwin_beg evtdate evtwin_end date9.;
MPRINT(EVENT_STUDY):   label estper_beg= 'Start of the Estimation Window' estper_end= 'End of the Estimation Window'
evtwin_beg= 'Start of the Event Window' evtwin_end= 'End of the Event Window' evtdate= 'Event Date';
MPRINT(EVENT_STUDY):   index+1;
MPRINT(EVENT_STUDY):   if nmiss(estper_beg,estper_end,evtwin_beg,evtwin_end,evtdate)=0;
MPRINT(EVENT_STUDY):   run;
```

NOTE: There were 25799 observations read from the data set MYCRSP.DSI.
NOTE: There were 25650 observations read from the data set MYCRSP.DSI.
NOTE: There were 25583 observations read from the data set MYCRSP.DSI.
NOTE: There were 25581 observations read from the data set MYCRSP.DSI.
NOTE: There were 25579 observations read from the data set MYCRSP.DSI.
NOTE: The data set WORK.CALDATES has 25579 observations and 6 variables.
NOTE: DATA statement used (Total process time):
      real time   0.06 seconds
      user cpu time   0.06 seconds
      system cpu time   0.00 seconds
      memory   1642.56k
      OS Memory   49408.00k
      Timestamp   06/19/2024 04:33:22 PM
      Step Count   260 Switch Count 0


```
MPRINT(EVENT_STUDY):   proc sql;
MPRINT(EVENT_STUDY):   create table temp as select a.permno ,b.* from input a left join caldates b on
b.evtdate-a.edate>=0 group by a.edate having (b.evtdate-a.edate)=min(b.evtdate-a.edate);
```
NOTE: The execution of this query involves performing one or more Cartesian product joins that can not be optimized.

NOTE: The query requires remerging summary statistics back with the original data.
NOTE: SAS threaded sort was used.
NOTE: Table WORK.TEMP created, with 93 rows and 7 columns.

NOTE: PROCEDURE SQL used (Total process time):
      real time   0.33 seconds
      user cpu time   0.39 seconds
      system cpu time   0.14 seconds
      memory   52117.17k
      OS Memory   98804.00k
      Timestamp   06/19/2024 04:33:22 PM
      Step Count   261 Switch Count 0

MPRINT(EVENT_STUDY):   proc sql;
MPRINT(EVENT_STUDY):   create table evtrets_temp as select a.permno, a.date format date9., a.ret as ret1, b.evtdate,
b.estper_beg, b.estper_end, b.evtwin_beg, b.evtwin_end from mycrsp.dsf a, temp b where a.permno=b.permno and
b.estper_beg<=a.date<=b.evtwin_end;
INFO: Data file MYCRSP.DSF.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
NOTE: Table WORK.EVTRETS_TEMP created, with 20553 rows and 8 columns.

MPRINT(EVENT_STUDY):   quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time   37.99 seconds
      user cpu time   37.15 seconds
      system cpu time   0.84 seconds
      memory   5848.15k
      OS Memory   54532.00k
      Timestamp   06/19/2024 04:34:00 PM
      Step Count   262 Switch Count 0

MPRINT(EVENT_STUDY):   proc sql;
MPRINT(EVENT_STUDY):   create view evtrets1 as select a.*, (b.mktrf+b.rf) as mkt, b.mktrf, b.rf,b.smb, b.hml, b.umd
from evtrets_temp a left join mycrsp.ff_factors_daily (keep=date mktrf smb hml umd rf) b on a.date=b.date;
NOTE: SQL view WORK.EVTRETS1 has been defined.

```
MPRINT(EVENT_STUDY):   quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time           0.01 seconds
      user cpu time       0.00 seconds
      system cpu time     0.03 seconds
      memory              111.31k
      OS Memory           49408.00k
      Timestamp           06/19/2024 04:34:00 PM
      Step Count                          263  Switch Count  0


MPRINT(EVENT_STUDY):   proc sql;
MPRINT(EVENT_STUDY):    create table evtrets (drop=ret1 where=(not missing(mkt))) as select a.*,
(1+a.ret1)*sum(1,b.dlret)-1-a.mkt as exret label='Market-adjusted total ret', (1+a.ret1)*sum(1,b.dlret)-1 as ret "Ret
adjusted for delisting" from evtrets1 a left join mycrsp.dsedelist (where=(missing(dlret)=0)) b on a.permno=b.permno
and a.date=b.dlstdt order by a.permno,a.evtdate,a.date;
INFO: Data file MYCRSP.FF_FACTORS_DAILY.DATA is in a format that is native to another host, or the file encoding does
not match the session encoding. Cross Environment Data Access will be used, which might require additional CPU
resources and might reduce performance.
INFO: Data file MYCRSP.DSEDELIST.DATA is in a format that is native to another host, or the file encoding does not
match the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources
and might reduce performance.
NOTE: SAS threaded sort was used.
NOTE: Table WORK.EVTRETS created, with 20553 rows and 15 columns.


MPRINT(EVENT_STUDY):   quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time           0.18 seconds
      user cpu time       0.21 seconds
      system cpu time     0.06 seconds
      memory              37030.73k
      OS Memory           81324.00k
      Timestamp           06/19/2024 04:34:00 PM
      Step Count                          264  Switch Count  0


MPRINT(EVENT_STUDY):   proc printto log=junk;
MPRINT(EVENT_STUDY):   run;
```

```
MPRINT(EVENT_STUDY):   data abrets1/view=abrets1;
MPRINT(EVENT_STUDY):   merge evtrets(where=(evtwin_beg<=date<=evtwin_end) in=in_evtrets) params
(where=(_model_='eq0') keep=permno evtdate _model_ _rmse_ _p_ _edf_ rename=(_rmse_=std0 _p_=p0 _edf_=edf0)) params
(where=(_model_='eq1') keep=permno evtdate _model_ _rmse_ intercept mktrf rename=(_rmse_=std1 intercept=alpha1
mktrf=beta1)) params (where=(_model_='eq2') keep=permno evtdate _model_ _rmse_ intercept mktrf smb hml
rename=(_rmse_=std2 intercept=alpha2 mktrf=beta2 smb=sminb2 hml=hminl2)) params (where=(_model_='eq3') keep=permno
evtdate _model_ _rmse_ intercept mktrf smb hml umd rename=(_rmse_=std3 intercept=alpha3 mktrf=beta3 smb=sminb3
hml=hminl3 umd=umind3));
MPRINT(EVENT_STUDY):   by permno evtdate;
MPRINT(EVENT_STUDY):   retain missret;
MPRINT(EVENT_STUDY):   if first.permno then missret=missing(ret);
MPRINT(EVENT_STUDY):   if missing(ret) then missret+1;
MPRINT(EVENT_STUDY):   var0=std0**2;
MPRINT(EVENT_STUDY):   var1=std1**2;
MPRINT(EVENT_STUDY):   var2=std2**2;
MPRINT(EVENT_STUDY):   var3=std3**2;
MPRINT(EVENT_STUDY):   abret0 = exret;
MPRINT(EVENT_STUDY):   *extra over market;
MPRINT(EVENT_STUDY):   expret1 = alpha1 + beta1*mktrf;
MPRINT(EVENT_STUDY):   *CAPM;
MPRINT(EVENT_STUDY):   abret1 = ret-expret1;
MPRINT(EVENT_STUDY):   expret2 = alpha2+beta2*mktrf+sminb2*smb+hminl2*hml;
MPRINT(EVENT_STUDY):   *FF3factor;
MPRINT(EVENT_STUDY):   abret2=ret-expret2;
MPRINT(EVENT_STUDY):   expret3 =alpha3+beta3*mktrf+sminb3*smb+hminl3*hml+umind3*umd;
MPRINT(EVENT_STUDY):   abret3=ret-expret3;
MPRINT(EVENT_STUDY):   nobs=p0+edf0;
```

```
MPRINT(EVENT_STUDY):   drop p0 edf0 estper_beg estper_end std0 std1 std2 std3 _model_ exret;
MPRINT(EVENT_STUDY):   if in_evtrets and nobs>70;
MPRINT(EVENT_STUDY):   * I add the followings;
MPRINT(EVENT_STUDY):   if nobs=150;
MPRINT(EVENT_STUDY):   run;

NOTE: DATA STEP view saved on file WORK.ABRETS1.
NOTE: A stored DATA STEP view cannot run under a different operating system.
NOTE: DATA statement used (Total process time):
      real time           0.01 seconds
      user cpu time       0.00 seconds
      system cpu time     0.01 seconds
      memory              1075.81k
      OS Memory           49668.00k
      Timestamp           06/19/2024 04:34:00 PM
      Step Count                        268  Switch Count  0


MPRINT(EVENT_STUDY):   proc sql;
MPRINT(EVENT_STUDY):   create table abrets as select a.*, (b.index-c.index) as evttime from abrets1 a left join
caldates b on a.date = b.evtdate left join caldates c on a.evtdate = c.evtdate order by permno, evtdate, date;
NOTE: SAS threaded sort was used.
INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
NOTE: View WORK.ABRETS1.VIEW used (Total process time):
      real time           0.10 seconds
      user cpu time       0.04 seconds
      system cpu time     0.11 seconds
      memory              45771.17k
      OS Memory           90196.00k
      Timestamp           06/19/2024 04:34:13 PM
      Step Count                        269  Switch Count  9


NOTE: There were 465 observations read from the data set WORK.EVTRETS.
```

```
        WHERE (evtwin_beg<=date) and (date<=evtwin_end);
NOTE: There were 93 observations read from the data set WORK.PARAMS.
        WHERE _model_='eq0';
NOTE: There were 93 observations read from the data set WORK.PARAMS.
        WHERE _model_='eq1';
NOTE: There were 93 observations read from the data set WORK.PARAMS.
        WHERE _model_='eq2';
NOTE: There were 93 observations read from the data set WORK.PARAMS.
        WHERE _model_='eq3';
NOTE: Table WORK.ABRETS created, with 465 rows and 37 columns.

MPRINT(EVENT_STUDY):   quit;
NOTE: PROCEDURE SQL used (Total process time):
        real time              12.33 seconds
        user cpu time          12.14 seconds
        system cpu time        0.21 seconds
        memory                 45771.17k
        OS Memory              90196.00k
        Timestamp              06/19/2024 04:34:13 PM
        Step Count                             269   Switch Count   10


MPRINT(EVENT_STUDY):   proc sort data=abrets nodupkey;
MPRINT(EVENT_STUDY):   by PERMNO evtdate DATE evtwin_beg evtwin_end mkt mktrf rf smb hml umd ret alpha1 beta1 alpha2
beta2 sminb2 hminl2 alpha3 beta3 sminb3 hminl3 umind3 missret var0 var1 var2 var3 abret0 expret1 abret1 expret2
abret2 expret3 abret3 nobs evttime ;
MPRINT(EVENT_STUDY):   run;

NOTE: There were 465 observations read from the data set WORK.ABRETS.
NOTE: SAS sort was used.
NOTE: 0 observations with duplicate key values were deleted.
NOTE: The data set WORK.ABRETS has 465 observations and 37 variables.
NOTE: PROCEDURE SORT used (Total process time):
        real time              0.01 seconds
        user cpu time          0.00 seconds
        system cpu time        0.01 seconds
        memory                 1940.06k
        OS Memory              50956.00k
```

MPRINT(EVENT_STUDY):   proc expand data=abrets out=car method=none;
MPRINT(EVENT_STUDY):   by permno evtdate;
MPRINT(EVENT_STUDY):   id date;
MPRINT(EVENT_STUDY):   convert ret=cret/transformout=(+1 cuprod -1);
MPRINT(EVENT_STUDY):   convert mkt=cmkt/transformout=(+1 cuprod -1);
MPRINT(EVENT_STUDY):   convert expret1 =cexpret1 /transformout=(+1 cuprod -1);
MPRINT(EVENT_STUDY):   convert expret2 =cexpret2 /transformout=(+1 cuprod -1);
MPRINT(EVENT_STUDY):   convert expret3 =cexpret3 /transformout=(+1 cuprod -1);
MPRINT(EVENT_STUDY):   convert abret0=car0/transformout=(sum);
MPRINT(EVENT_STUDY):   convert abret1=car1/transformout=(sum);
MPRINT(EVENT_STUDY):   convert abret2=car2/transformout=(sum);
MPRINT(EVENT_STUDY):   convert abret3=car3/transformout=(sum);
MPRINT(EVENT_STUDY):   run;

NOTE: The data set WORK.CAR has 465 observations and 46 variables.
NOTE: PROCEDURE EXPAND used (Total process time):
      real time   0.03 seconds
      user cpu time   0.01 seconds
      system cpu time   0.01 seconds
      memory   972.25k
      OS Memory   50184.00k
      Timestamp   06/19/2024 04:34:13 PM
      Step Count   271 Switch Count 0

MPRINT(EVENT_STUDY):   proc printto log=junk;
MPRINT(EVENT_STUDY):   run;

NOTE: PROCEDURE PRINTTO used (Total process time):
      real time   0.00 seconds
      user cpu time   0.00 seconds
      system cpu time   0.00 seconds
      memory   7.12k
      OS Memory   49664.00k

MPRINT(EVENT_STUDY):   data allcars;
MPRINT(EVENT_STUDY):   merge car_evtwin (rename=(bhar0=bhar0win bhar1=bhar1win bhar2=bhar2win bhar3=bhar3win
car0=car0win car1=car1win car2=car2win car3=car3win cret=cretwin)) car_evtdate;
MPRINT(EVENT_STUDY):   by permno evtdate;
MPRINT(EVENT_STUDY):   run;

NOTE: There were 465 observations read from the data set WORK.CAR_EVTWIN.
NOTE: There were 93 observations read from the data set WORK.CAR_EVTDATE.
NOTE: The data set WORK.ALLCARS has 465 observations and 59 variables.
NOTE: DATA statement used (Total process time):
      real time   0.01 seconds
      user cpu time   0.00 seconds
      system cpu time   0.01 seconds
      memory   1123.53k
      OS Memory   49664.00k
      Timestamp   06/19/2024 04:34:13 PM
      Step Count   275 Switch Count 0

MPRINT(EVENT_STUDY):   * proc means data=allcars noprint;
MPRINT(EVENT_STUDY):   proc means data=allcars(where = (nobs=150)) noprint;
MPRINT(EVENT_STUDY):   class evttime;
MPRINT(EVENT_STUDY):   id nobs;
MPRINT(EVENT_STUDY):   var ret cret car0 car1 car2 car3 cretwin car0win car1win car2win car3win bhar0 bhar1 bhar2
bhar3 bhar0win bhar1win bhar2win bhar3win scar0 scar1 scar2 scar3 abret0 abret1 abret2 abret3 sar0 sar1 sar2 sar3
pat_scale;
MPRINT(EVENT_STUDY):   output out=allstats mean = n = t = sum =/autoname;
MPRINT(EVENT_STUDY):   run;

NOTE: Multiple concurrent threads will be used to summarize data.
NOTE: There were 465 observations read from the data set WORK.ALLCARS.
      WHERE nobs=150;
NOTE: The data set WORK.ALLSTATS has 6 observations and 132 variables.
NOTE: PROCEDURE MEANS used (Total process time):

```
MPRINT(EVENT_STUDY):   data MA_Evtdate (keep=evttime car0_n cret_mean car0_mean car0_t scar0_t bhar0_mean pat_car0
model) MM_Evtdate (keep=evttime car1_n cret_mean car1_mean car1_t scar1_t bhar1_mean pat_car1 model ) FF_Evtdate
(keep=evttime car2_n cret_mean car2_mean car2_t scar2_t bhar2_mean pat_car2 model ) FFM_Evtdate (keep=evttime car3_n
cret_mean car3_mean car3_t scar3_t bhar3_mean pat_car3 model ) MA_Evtwin (keep=evttime cretwin_mean abret0_n ret_mean
abret0_mean car0win_mean bhar0win_mean abret0_t sar0_t pat_ar0 ) MM_Evtwin (keep=evttime cretwin_mean abret1_n
ret_mean abret1_mean car1win_mean bhar1win_mean abret1_t sar1_t pat_ar1 ) FF_Evtwin (keep=evttime cretwin_mean
abret2_n ret_mean abret2_mean car2win_mean bhar2win_mean abret2_t sar2_t pat_ar2 ) FFM_Evtwin (keep=evttime
cretwin_mean abret3_n ret_mean abret3_mean car3win_mean bhar3win_mean abret3_t sar3_t pat_ar3 );
MPRINT(EVENT_STUDY):   set allstats;
MPRINT(EVENT_STUDY):   by evttime;
MPRINT(EVENT_STUDY):   if _n_=1 and missing(evttime) then do;
MPRINT(EVENT_STUDY):   abret0_mean=.;
MPRINT(EVENT_STUDY):   abret1_mean=.;
MPRINT(EVENT_STUDY):   abret2_mean=.;
MPRINT(EVENT_STUDY):   abret3_mean=.;
MPRINT(EVENT_STUDY):   cretwin_mean=0;
MPRINT(EVENT_STUDY):   ret_mean=.;
MPRINT(EVENT_STUDY):   bhar1win_mean=0;
MPRINT(EVENT_STUDY):   bhar1win_mean=0;
MPRINT(EVENT_STUDY):   bhar2win_mean=0;
MPRINT(EVENT_STUDY):   bhar3win_mean=0;
MPRINT(EVENT_STUDY):   end;
MPRINT(EVENT_STUDY):   pat_car0=scar0_mean/(sqrt(pat_scale_sum)/scar0_n);
MPRINT(EVENT_STUDY):   pat_car1=scar1_mean/(sqrt(pat_scale_sum)/scar1_n);
MPRINT(EVENT_STUDY):   pat_car2=scar2_mean/(sqrt(pat_scale_sum)/scar2_n);
MPRINT(EVENT_STUDY):   pat_car3=scar3_mean/(sqrt(pat_scale_sum)/scar3_n);
MPRINT(EVENT_STUDY):   pat_ar0=sar0_mean/(sqrt(pat_scale_sum)/sar0_n);
MPRINT(EVENT_STUDY):   pat_ar1=sar1_mean/(sqrt(pat_scale_sum)/sar1_n);
MPRINT(EVENT_STUDY):   pat_ar2=sar2_mean/(sqrt(pat_scale_sum)/sar2_n);
```

```
MPRINT(EVENT_STUDY):   pat_ar3=sar3_mean/(sqrt(pat_scale_sum)/sar3_n);
MPRINT(EVENT_STUDY):   label pat_ar0= 'Patell Z for AR_MA' pat_ar1= 'Patell Z for AR_MM' pat_ar2= 'Patell Z for
AR_FF' pat_ar3= 'Patell Z for AR_FFM' abret0_t= 'CS t-stat, AR_MA' abret1_t= 'CS t-stat, AR_MM' abret2_t= 'CS t-stat,
AR_FF' abret3_t= 'CS t-stat, AR_FFM' sar0_t= 'Std CS test, AR_MA' sar1_t= 'Std CS test, AR_MM' sar2_t= 'Std CS test,
AR_FF' sar3_t= 'Std CS test, AR_FFM' abret0_mean= 'Mean AR_MA' abret1_mean= 'Mean AR_MM' abret2_mean= 'Mean AR_FF'
abret3_mean= 'Mean AR_FFM' car0_n= 'Number of events in the portfolio' abret0_n= 'Number of events in the portfolio'
evttime= 'Event Time t' cret_mean= "Mean CTR (-2, 2)" cretwin_mean= "Mean CTR (-2,t) " car0win_mean= "Average CAR_MA
(-2, t)" car1win_mean= "Average CAR_MM (-2, t)" car2win_mean= "Average CAR_FF (-2, t)" car3win_mean= "Average CAR_FFM
(-2, t)" bhar0win_mean= "Mean BHAR_MA (-2, t)" bhar1win_mean= "Mean BHAR_MM (-2, t)" bhar2win_mean= "Mean BHAR_FF
(-2, t)" bhar3win_mean= "Mean BHAR_FFM (-2, t)" ;
MPRINT(EVENT_STUDY):   format ret_mean cret_mean cretwin_mean abret0_mean abret1_mean abret2_mean abret3_mean
car0_mean car1_mean car2_mean car3_mean bhar0_mean bhar1_mean bhar2_mean bhar3_mean bhar0win_mean bhar1win_mean
bhar2win_mean bhar3win_mean car0win_mean car1win_mean car2win_mean car3win_mean percent7.4 abret0_t abret1_t abret2_t
abret3_t sar0_t sar1_t sar2_t sar3_t pat_car0 pat_car1 pat_car2 pat_car3 pat_ar0 pat_ar1 pat_ar2 pat_ar3 car0_t
car1_t car2_t car3_t scar0_t car1_t scar2_t scar3_t comma10.2;
MPRINT(EVENT_STUDY):   if evttime=0 then do;
MPRINT(EVENT_STUDY):   model='Market-Adjusted';
MPRINT(EVENT_STUDY):   output MA_Evtdate;
MPRINT(EVENT_STUDY):   model='Market Model';
MPRINT(EVENT_STUDY):   output MM_Evtdate;
MPRINT(EVENT_STUDY):   model='FF Model';
MPRINT(EVENT_STUDY):   output FF_Evtdate;
MPRINT(EVENT_STUDY):   model='Carhart Model';
MPRINT(EVENT_STUDY):   output FFM_Evtdate;
MPRINT(EVENT_STUDY):   end;
MPRINT(EVENT_STUDY):   if missing(evttime) then evttime=-2-1;
MPRINT(EVENT_STUDY):   output MA_Evtwin;
MPRINT(EVENT_STUDY):   output MM_Evtwin;
MPRINT(EVENT_STUDY):   output FF_Evtwin;
MPRINT(EVENT_STUDY):   output FFM_Evtwin;
MPRINT(EVENT_STUDY):   run;


NOTE: There were 6 observations read from the data set WORK.ALLSTATS.
NOTE: The data set WORK.MA_EVTDATE has 1 observations and 9 variables.
NOTE: The data set WORK.MM_EVTDATE has 1 observations and 9 variables.
NOTE: The data set WORK.FF_EVTDATE has 1 observations and 9 variables.
NOTE: The data set WORK.FFM_EVTDATE has 1 observations and 9 variables.
NOTE: The data set WORK.MA_EVTWIN has 6 observations and 10 variables.
```

NOTE: The data set WORK.MM_EVTWIN has 6 observations and 10 variables.
NOTE: The data set WORK.FF_EVTWIN has 6 observations and 10 variables.
NOTE: The data set WORK.FFM_EVTWIN has 6 observations and 10 variables.
NOTE: DATA statement used (Total process time):
      real time   0.03 seconds
      user cpu time   0.00 seconds
      system cpu time   0.01 seconds
      memory   2544.31k
      OS Memory   49664.00k
      Timestamp   06/19/2024 04:34:13 PM
      Step Count   277 Switch Count 0

MPRINT(EVENT_STUDY):   data allevtdate;
MPRINT(EVENT_STUDY):   set MA_Evtdate (rename=(car0_mean=car_mean bhar0_mean=bhar_mean car0_n=n car0_t=car_t
scar0_t=scar_t pat_car0=pat_car)) MM_Evtdate (rename=(car1_mean=car_mean bhar1_mean=bhar_mean car1_n=n car1_t=car_t
scar1_t=scar_t pat_car1=pat_car)) FF_Evtdate (rename=(car2_mean=car_mean bhar2_mean=bhar_mean car2_n=n car2_t=car_t
scar2_t=scar_t pat_car2=pat_car)) FFM_evtdate (rename=(car3_mean=car_mean bhar3_mean=bhar_mean car3_n=n car3_t=car_t
scar3_t=scar_t pat_car3=pat_car));
MPRINT(EVENT_STUDY):   length=5;
MPRINT(EVENT_STUDY):   label pat_car= 'Patell Z' car_mean= "Mean CAR (-2, 2)" bhar_mean= "Mean BHAR (-2, 2)" car_t=
'Cross-sectional t-stat for CAR' scar_t= 'Standaridized cross-sectional t-stat for CAR' length= 'Length of event
window in trading days';
MPRINT(EVENT_STUDY):   run;

NOTE: There were 1 observations read from the data set WORK.MA_EVTDATE.
NOTE: There were 1 observations read from the data set WORK.MM_EVTDATE.
NOTE: There were 1 observations read from the data set WORK.FF_EVTDATE.
NOTE: There were 1 observations read from the data set WORK.FFM_EVTDATE.
NOTE: The data set WORK.ALLEVTDATE has 4 observations and 10 variables.
NOTE: DATA statement used (Total process time):
      real time   0.01 seconds
      user cpu time   0.00 seconds
      system cpu time   0.01 seconds
      memory   1104.87k
      OS Memory   49664.00k
      Timestamp   06/19/2024 04:34:13 PM
      Step Count   278 Switch Count 0

```
MPRINT(EVENT_STUDY):   data car_evtdate;
MPRINT(EVENT_STUDY):   retain permno evtdate alpha1 beta1 cret car0 bhar0 var0 car1 bhar1 var1 car2 bhar2 var2 car3
bhar3 var3 nrets nobs;
MPRINT(EVENT_STUDY):   set car_evtdate;
MPRINT(EVENT_STUDY):   label alpha1= 'Alpha (Market Model)' beta1= 'Beta (Market Model' car0= 'CAR_MA' car1= 'CAR_MM'
car2= 'CAR_FF' car3= 'CAR_FFM' bhar0= 'BHAR_MA' bhar1= 'BHAR_MM' bhar2= 'BHAR_FF' bhar3= 'BHAR_FFM' var0= 'Estimation
period variance (Market-adjusted returns)' var1= 'Estimation period variance (Market Model)' var2= 'Estimation period
variance (FF Model)' var3= 'Estimation period variance (Carhart Model)' cret= 'Cumulative Total Return' nrets=
'Number of non-missing returns in event window' nobs= 'Length of the estimation period';
MPRINT(EVENT_STUDY):   keep permno evtdate alpha1 beta1 cret car0 bhar0 var0 car1 bhar1 var1 car2 bhar2 var2 car3
bhar3 var3 nrets nobs;
MPRINT(EVENT_STUDY):   format cret alpha1 car0 bhar0 car1 bhar1 car2 bhar2 car3 bhar3 percent7.4 beta1 comma10.3;
MPRINT(EVENT_STUDY):   run;

NOTE: There were 93 observations read from the data set WORK.CAR_EVTDATE.
NOTE: The data set WORK.CAR_EVTDATE has 93 observations and 19 variables.
NOTE: DATA statement used (Total process time):
      real time            0.01 seconds
      user cpu time        0.00 seconds
      system cpu time      0.01 seconds
      memory               632.87k
      OS Memory            49664.00k
      Timestamp            06/19/2024 04:34:13 PM
      Step Count                        279  Switch Count  0


MPRINT(EVENT_STUDY):   PROC DATASETS NOLIST;
MPRINT(EVENT_STUDY):   COPY IN = work OUT = evtstudy ;
MPRINT(EVENT_STUDY):   select allevtdate allstats car_evtwin ;
MPRINT(EVENT_STUDY):   RUN;

ERROR: Libref EVTSTUDY is not assigned.
NOTE: Statements not processed because of errors noted above.
MPRINT(EVENT_STUDY):   options nodate orientation=landscape;
NOTE: Line generated by the macro variable "OUTPUTPATH".
1      ""C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\result\agg_foreign_all"
```

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     --
     49

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       22
       202
MPRINT(EVENT_STUDY):   ods pdf file=""C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\agg_foreign_all"\Car0_evtrets_5days.pdf";
MPRINT(EVENT_STUDY):   goptions device=pdfc;
MPRINT(EVENT_STUDY):   axis1 label=(angle=90 "Cumulative Abnormal Returns");
MPRINT(EVENT_STUDY):   axis2 label=("Event time");
MPRINT(EVENT_STUDY):   symbol interpol=join w=3 l=1;
NOTE: The SAS System stopped processing this step because of errors.
NOTE: PROCEDURE DATASETS used (Total process time):
      real time           0.18 seconds
      user cpu time       0.04 seconds
      system cpu time     0.06 seconds
      memory              404.78k
      OS Memory           49664.00k
      Timestamp           06/19/2024 04:34:13 PM
      Step Count                        280  Switch Count  0


MPRINT(EVENT_STUDY):   proc gplot data =MA_Evtwin;
MPRINT(EVENT_STUDY):   where evttime>=-2;
MPRINT(EVENT_STUDY):   Title "Market adjusted model:  CARs and BHARs around the event date";
MPRINT(EVENT_STUDY):   plot (car0win_mean bhar0win_mean)*evttime /overlay legend vaxis=axis1 haxis=axis2;
MPRINT(EVENT_STUDY):   run;

NOTE 49-169: The meaning of an identifier after a quoted string might change in a future SAS release.  Inserting
             white space between a quoted string and the succeeding identifier is recommended.

ERROR 22-322: Syntax error, expecting one of the following: ;, ACCESSIBLE, ACCESSIBLE_IDENTIFIER, ANCHOR, AUTHOR,
              BACKGROUND, BASE, BODY, BOOKMARK, BOOKMARKGEN, BOOKMARKLIST, BOX_SIZING, CLOSE, COLOR, COLUMNS,
              COMPRESS, CONTENTS, CSSSTYLE, DISPLAY, DOM, DPI, FILE, FONTSCALE, GFOOTNOTE, GTITLE, HOST, KEYWORDS,
              NAMED_DEST, NEWFILE, NOACCESSIBLE, NOACCESSIBLE_IDENTIFIER, NOBACKGROUND, NOBOOKMARKGEN,
              NOBOOKMARKLIST, NOCOLOR, NOCONTENTS, NOGFOOTNOTE, NOGTITLE, NOPDFNOTE, NOTOC, PACKAGE, PCL, PDF,
              PDFMARK, PDFNOTE, PDFTOC, PRINTER, PS, SAS, SGE, STARTPAGE, STYLE, SUBJECT, TEXT, TITLE, UNIFORM.
```

ERROR 202-322: The option or parameter is not recognized and will be ignored.

NOTE: 46485 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files_TD25772_DELL2_\gplot24.png.
MPRINT(EVENT_STUDY): quit;

NOTE: There were 5 observations read from the data set WORK.MA_EVTWIN.
      WHERE evttime>=-2;
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE GPLOT used (Total process time):
      real time   0.31 seconds
      user cpu time   0.21 seconds
      system cpu time   0.04 seconds
      memory   7709.25k
      OS Memory   52948.00k
      Timestamp   06/19/2024 04:34:14 PM
      Step Count   281   Switch Count 0

MPRINT(EVENT_STUDY):   ods pdf close;
NOTE: Line generated by the macro variable "OUTPUTPATH".
1   ""C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\result\agg_foreign_all"
       --
       49

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        22
        202
MPRINT(EVENT_STUDY):   ods pdf file=""C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\agg_foreign_all"\Car1_evtrets_5days.pdf";
MPRINT(EVENT_STUDY):   proc gplot data =MM_Evtwin;
MPRINT(EVENT_STUDY):   where evttime>=-2;
MPRINT(EVENT_STUDY):   Title "Market model: CARs and BHARs around the event date";
MPRINT(EVENT_STUDY):   plot (car1win_mean bhar1win_mean)*evttime /overlay legend vaxis=axis1 haxis=axis2;
MPRINT(EVENT_STUDY):   run;

NOTE 49-169: The meaning of an identifier after a quoted string might change in a future SAS release. Inserting
             white space between a quoted string and the succeeding identifier is recommended.

ERROR 22-322: Syntax error, expecting one of the following: ;, ACCESSIBLE, ACCESSIBLE_IDENTIFIER, ANCHOR, AUTHOR,
             BACKGROUND, BASE, BODY, BOOKMARK, BOOKMARKGEN, BOOKMARKLIST, BOX_SIZING, CLOSE, COLOR, COLUMNS,
             COMPRESS, CONTENTS, CSSSTYLE, DISPLAY, DOM, DPI, FILE, FONTSCALE, GFOOTNOTE, GTITLE, HOST, KEYWORDS,
             NAMED_DEST, NEWFILE, NOACCESSIBLE, NOACCESSIBLE_IDENTIFIER, NOBACKGROUND, NOBOOKMARKGEN,
             NOBOOKMARKLIST, NOCOLOR, NOCONTENTS, NOGFOOTNOTE, NOGTITLE, NOPDFNOTE, NOTOC, PACKAGE, PCL, PDF,
             PDFMARK, PDFNOTE, PDFTOC, PRINTER, PS, SAS, SGE, STARTPAGE, STYLE, SUBJECT, TEXT, TITLE, UNIFORM.

ERROR 202-322: The option or parameter is not recognized and will be ignored.

NOTE: 42462 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files_TD25772_DELL2_\gplot25.png.
MPRINT(EVENT_STUDY): quit;

NOTE: There were 5 observations read from the data set WORK.MM_EVTWIN.
      WHERE evttime>=-2;
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE GPLOT used (Total process time):
      real time   0.31 seconds
      user cpu time   0.18 seconds
      system cpu time   0.10 seconds
      memory   7461.06k
      OS Memory   52948.00k
      Timestamp   06/19/2024 04:34:14 PM
      Step Count   282 Switch Count 0

MPRINT(EVENT_STUDY):   ods pdf close;
NOTE: Line generated by the macro variable "OUTPUTPATH".
1   ""C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\result\agg_foreign_all"
       --
       49
        -
        22
        202
MPRINT(EVENT_STUDY):   ods pdf file=""C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\agg_foreign_all"\Car2_evtrets_5days.pdf";
MPRINT(EVENT_STUDY):   proc gplot data =FF_Evtwin;
MPRINT(EVENT_STUDY):   where evttime>=-2;

```
MPRINT(EVENT_STUDY):   Title "FF 3-factor model:CARs and BHARs around the event date";
MPRINT(EVENT_STUDY):   plot (car2win_mean bhar2win_mean)*evttime /overlay legend vaxis=axis1 haxis=axis2;
MPRINT(EVENT_STUDY):   run;
```

NOTE 49-169: The meaning of an identifier after a quoted string might change in a future SAS release. Inserting
            white space between a quoted string and the succeeding identifier is recommended.

ERROR 22-322: Syntax error, expecting one of the following: ;, ACCESSIBLE, ACCESSIBLE_IDENTIFIER, ANCHOR, AUTHOR,
            BACKGROUND, BASE, BODY, BOOKMARK, BOOKMARKGEN, BOOKMARKLIST, BOX_SIZING, CLOSE, COLOR, COLUMNS,
            COMPRESS, CONTENTS, CSSSTYLE, DISPLAY, DOM, DPI, FILE, FONTSCALE, GFOOTNOTE, GTITLE, HOST, KEYWORDS,
            NAMED_DEST, NEWFILE, NOACCESSIBLE, NOACCESSIBLE_IDENTIFIER, NOBACKGROUND, NOBOOKMARKGEN,
            NOBOOKMARKLIST, NOCOLOR, NOCONTENTS, NOGFOOTNOTE, NOGTITLE, NOPDFNOTE, NOTOC, PACKAGE, PCL, PDF,
            PDFMARK, PDFNOTE, PDFTOC, PRINTER, PS, SAS, SGE, STARTPAGE, STYLE, SUBJECT, TEXT, TITLE, UNIFORM.

ERROR 202-322: The option or parameter is not recognized and will be ignored.

NOTE: 47276 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files_TD25772_DELL2_\gplot26.png.
```
MPRINT(EVENT_STUDY):   quit;
```

NOTE: There were 5 observations read from the data set WORK.FF_EVTWIN.
      WHERE evttime>=-2;
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE GPLOT used (Total process time):
      real time   0.28 seconds
      user cpu time   0.15 seconds
      system cpu time   0.11 seconds
      memory   7453.43k
      OS Memory   52948.00k
      Timestamp   06/19/2024 04:34:15 PM
      Step Count   283 Switch Count 0


```
MPRINT(EVENT_STUDY):   ods pdf close;
```
NOTE: Line generated by the macro variable "OUTPUTPATH".
```
1     ""C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\result\agg_foreign_all"
      --
      49
```

```
          -
          22
          202
MPRINT(EVENT_STUDY):   ods pdf file=""C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\agg_foreign_all"\Car3_evtrets_5days.pdf";
MPRINT(EVENT_STUDY):   proc gplot data =FFM_Evtwin;
MPRINT(EVENT_STUDY):   where evttime>=-2;
MPRINT(EVENT_STUDY):   Title "Carhart 4 Factor model: Carhart CARs and BHARs around the event date";
MPRINT(EVENT_STUDY):   plot (car3win_mean bhar3win_mean)*evttime /overlay legend vaxis=axis1 haxis=axis2;
MPRINT(EVENT_STUDY):   run;

NOTE 49-169: The meaning of an identifier after a quoted string might change in a future SAS release.  Inserting
             white space between a quoted string and the succeeding identifier is recommended.

ERROR 22-322: Syntax error, expecting one of the following: ;, ACCESSIBLE, ACCESSIBLE_IDENTIFIER, ANCHOR, AUTHOR,
              BACKGROUND, BASE, BODY, BOOKMARK, BOOKMARKGEN, BOOKMARKLIST, BOX_SIZING, CLOSE, COLOR, COLUMNS,
              COMPRESS, CONTENTS, CSSSTYLE, DISPLAY, DOM, DPI, FILE, FONTSCALE, GFOOTNOTE, GTITLE, HOST, KEYWORDS,
              NAMED_DEST, NEWFILE, NOACCESSIBLE, NOACCESSIBLE_IDENTIFIER, NOBACKGROUND, NOBOOKMARKGEN,
              NOBOOKMARKLIST, NOCOLOR, NOCONTENTS, NOGFOOTNOTE, NOGTITLE, NOPDFNOTE, NOTOC, PACKAGE, PCL, PDF,
              PDFMARK, PDFNOTE, PDFTOC, PRINTER, PS, SAS, SGE, STARTPAGE, STYLE, SUBJECT, TEXT, TITLE, UNIFORM.

ERROR 202-322: The option or parameter is not recognized and will be ignored.

NOTE: 42572 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot27.png.
MPRINT(EVENT_STUDY):   quit;

NOTE: There were 5 observations read from the data set WORK.FFM_EVTWIN.
      WHERE evttime>=-2;
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE GPLOT used (Total process time):
      real time            0.28 seconds
      user cpu time        0.17 seconds
      system cpu time      0.06 seconds
      memory               7464.12k
      OS Memory            52948.00k
      Timestamp            06/19/2024 04:34:15 PM
      Step Count                        284  Switch Count  0
```

```
MPRINT(EVENT_STUDY):   ods pdf close;
NOTE: Line generated by the macro variable "OUTPUTPATH".
1      ""C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\result\agg_foreign_all"
       --
       49

        -
         22
         202
MPRINT(EVENT_STUDY):   ods pdf file=""C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\agg_foreign_all"\Car0_3_evtrets_5days.pdf";
MPRINT(EVENT_STUDY):   proc gplot data =allstats;
MPRINT(EVENT_STUDY):   where evttime>=-2;
MPRINT(EVENT_STUDY):   Title "CARs from the four models: around the event date";
MPRINT(EVENT_STUDY):   plot (car0win_mean car1win_mean car2win_mean car3win_mean )*evttime /overlay legend
vaxis=axis1 haxis=axis2;
MPRINT(EVENT_STUDY):   run;


NOTE 49-169: The meaning of an identifier after a quoted string might change in a future SAS release.  Inserting
             white space between a quoted string and the succeeding identifier is recommended.


ERROR 22-322: Syntax error, expecting one of the following: ;, ACCESSIBLE, ACCESSIBLE_IDENTIFIER, ANCHOR, AUTHOR,
             BACKGROUND, BASE, BODY, BOOKMARK, BOOKMARKGEN, BOOKMARKLIST, BOX_SIZING, CLOSE, COLOR, COLUMNS,
             COMPRESS, CONTENTS, CSSSTYLE, DISPLAY, DOM, DPI, FILE, FONTSCALE, GFOOTNOTE, GTITLE, HOST, KEYWORDS,
             NAMED_DEST, NEWFILE, NOACCESSIBLE, NOACCESSIBLE_IDENTIFIER, NOBACKGROUND, NOBOOKMARKGEN,
             NOBOOKMARKLIST, NOCOLOR, NOCONTENTS, NOGFOOTNOTE, NOGTITLE, NOPDFNOTE, NOTOC, PACKAGE, PCL, PDF,
             PDFMARK, PDFNOTE, PDFTOC, PRINTER, PS, SAS, SGE, STARTPAGE, STYLE, SUBJECT, TEXT, TITLE, UNIFORM.


ERROR 202-322: The option or parameter is not recognized and will be ignored.


NOTE: 38227 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot28.png.
MPRINT(EVENT_STUDY):  quit;


NOTE: There were 5 observations read from the data set WORK.ALLSTATS.
      WHERE evttime>=-2;
NOTE: PROCEDURE GPLOT used (Total process time):
      real time            0.28 seconds
```

```
      user cpu time       0.17 seconds
      system cpu time     0.03 seconds
      memory              7575.71k
      OS Memory           52948.00k
      Timestamp           06/19/2024 04:34:15 PM
      Step Count                        285  Switch Count  0


MPRINT(EVENT_STUDY):   ods pdf close;
NOTE: Line generated by the macro variable "OUTPUTPATH".
1      ""C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\result\agg_foreign_all"
       --
       49
        -
        22
        202
MPRINT(EVENT_STUDY):   ods pdf file=""C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\agg_foreign_all"\BHARSO_3_evtrets_5days.pdf";
MPRINT(EVENT_STUDY):   proc gplot data =allstats;
MPRINT(EVENT_STUDY):   where evttime>=-2;
MPRINT(EVENT_STUDY):   Title "BHARs from the four models: BHARs around the event date";
MPRINT(EVENT_STUDY):   plot (bhar0_mean bhar1_mean bhar2_mean bhar3_mean )*evttime /overlay legend vaxis=axis1
haxis=axis2;
MPRINT(EVENT_STUDY):   run;
NOTE: 18046 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot29.png.
MPRINT(EVENT_STUDY):  quit;
NOTE: There were 5 observations read from the data set WORK.ALLSTATS.
      WHERE evttime>=-2;
NOTE: PROCEDURE GPLOT used (Total process time):
      real time           0.26 seconds
      user cpu time       0.17 seconds
      system cpu time     0.06 seconds
      memory              7580.09k
      OS Memory           52948.00k
      Timestamp           06/19/2024 04:34:16 PM
      Step Count                        286  Switch Count  0
```

```
MPRINT(EVENT_STUDY):   ods pdf close;
MPRINT(EVENT_STUDY):   run;
MPRINT(EVENT_STUDY):  quit;
MPRINT(EVENT_STUDY):   ods pdf close;
MLOGIC(EVENT_STUDY):  Ending execution.
```

NOTE 49-169: The meaning of an identifier after a quoted string might change in a future SAS release. Inserting
            white space between a quoted string and the succeeding identifier is recommended.

ERROR 22-322: Syntax error, expecting one of the following: ;, ACCESSIBLE, ACCESSIBLE_IDENTIFIER, ANCHOR, AUTHOR,
            BACKGROUND, BASE, BODY, BOOKMARK, BOOKMARKGEN, BOOKMARKLIST, BOX_SIZING, CLOSE, COLOR, COLUMNS,
            COMPRESS, CONTENTS, CSSSTYLE, DISPLAY, DOM, DPI, FILE, FONTSCALE, GFOOTNOTE, GTITLE, HOST, KEYWORDS,
            NAMED_DEST, NEWFILE, NOACCESSIBLE, NOACCESSIBLE_IDENTIFIER, NOBACKGROUND, NOBOOKMARKGEN,
            NOBOOKMARKLIST, NOCOLOR, NOCONTENTS, NOGFOOTNOTE, NOGTITLE, NOPDFNOTE, NOTOC, PACKAGE, PCL, PDF,
            PDFMARK, PDFNOTE, PDFTOC, PRINTER, PS, SAS, SGE, STARTPAGE, STYLE, SUBJECT, TEXT, TITLE, UNIFORM.

ERROR 202-322: The option or parameter is not recognized and will be ignored.

```
5371  proc sql NOREMERGE;
5372  select count(*) from(
5373                  select distinct permno, record_dt from aggforeign_trans group by permno, record_dt)
5374  ;
```
NOTE: A GROUP BY clause has been discarded because neither the SELECT clause nor the optional HAVING clause of the
      associated table-expression referenced a summary function.
```
5375  quit;
```
NOTE: PROCEDURE SQL used (Total process time):
      real time   0.03 seconds
      user cpu time   0.00 seconds
      system cpu time   0.00 seconds
      memory   5426.62k
      OS Memory   54788.00k
      Timestamp   06/19/2024 04:41:50 PM
      Step Count   287 Switch Count 0


```
5376  proc sql;
5377    create table input
5378    as select distinct permno, record_dt as edate format MMDDYY10.
```

```
5379     from foreign_trans_decile where not missing(-2) and year(record_dt);
NOTE: Table WORK.INPUT created, with 18130 rows and 2 columns.

5380  quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time            0.03 seconds
      user cpu time        0.01 seconds
      system cpu time      0.01 seconds
      memory               5413.53k
      OS Memory            54788.00k
      Timestamp            06/19/2024 04:46:42 PM
      Step Count                        288  Switch Count  0


5381  %event_study(outputPath="C:\Users\lihon\OneDrive - Kent State
5381! University\aaaa\event_Study\result\agg_foreign_all"
MLOGIC(EVENT_STUDY):  Beginning execution.
5382             ,permno_list = foreign_trans_decile)
MLOGIC(EVENT_STUDY):  Parameter OUTPUTPATH has value "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_all"
MLOGIC(EVENT_STUDY):  Parameter PERMNO_LIST has value foreign_trans_decile
MPRINT(EVENT_STUDY):   libname mycrsp "C:\Users\lihon\patent Dropbox\Victor Li\wrds_data";
NOTE: Libref MYCRSP was successfully assigned as follows:
      Engine:        V9
      Physical Name: C:\Users\lihon\patent Dropbox\Victor Li\wrds_data
MPRINT(EVENT_STUDY):   * libname evtstudy "C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\June6_res";
NOTE: Line generated by the macro variable "OUTPUTPATH".
1      ""C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\result\agg_foreign_all"
       --
       49
        -
        22


       --
       49
MPRINT(EVENT_STUDY):   libname evtstudy ""C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\agg_foreign_all"";
```

```
ERROR: Libref EVTSTUDY is not assigned.
ERROR: Error in the LIBNAME statement.
MLOGIC(EVENT_STUDY):  %LET (variable name is CRSP)
MLOGIC(EVENT_STUDY):  %LET (variable name is ESTPER)
MLOGIC(EVENT_STUDY):  %LET (variable name is START)
MLOGIC(EVENT_STUDY):  %LET (variable name is END)
MLOGIC(EVENT_STUDY):  %LET (variable name is GAP)
MLOGIC(EVENT_STUDY):  %LET (variable name is MINEST)
MLOGIC(EVENT_STUDY):  %LET (variable name is EVTWIN)
MPRINT(EVENT_STUDY):   * %event_crack(relation_exec) ;
MLOGIC(EVENT_STUDY):  %LET (variable name is PERMNO_LIST)
MLOGIC(EVENT_STUDY):  %LET (variable name is PERMNO_LIST)
MLOGIC(EVENT_STUDY):  %LET (variable name is PERMNO_LIST)
MLOGIC(EVENT_STUDY):  %LET (variable name is PERMNO_LIST)
MLOGIC(EVENT_STUDY):  %LET (variable name is PERMNO_LIST)
MLOGIC(EVENT_STUDY):  %LET (variable name is PERMNO_LIST)
MPRINT(EVENT_STUDY):   * * * * * * * ;
MPRINT(EVENT_STUDY):   proc sql;
NOTE 49-169: The meaning of an identifier after a quoted string might change in a future SAS release.  Inserting
             white space between a quoted string and the succeeding identifier is recommended.

ERROR 22-7: Invalid option name C.

MPRINT(EVENT_STUDY):   create table input as select distinct permno, record_dt as edate format MMDDYY10. from
foreign_trans_execrec10_dec10 where not missing(-2) and year(record_dt);
NOTE: Table WORK.INPUT created, with 93 rows and 2 columns.

MPRINT(EVENT_STUDY):   quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time           0.01 seconds
      user cpu time       0.00 seconds
      system cpu time     0.01 seconds
      memory              5640.96k
      OS Memory           55064.00k
      Timestamp           06/19/2024 04:48:48 PM
      Step Count                        289  Switch Count  0
```

```
MPRINT(EVENT_STUDY):    data caldates;
MPRINT(EVENT_STUDY):    merge mycrsp.dsi(keep=date rename=(date=estper_beg)) mycrsp.dsi(keep=date firstobs=150
rename=(date=estper_end)) mycrsp.dsi(keep=date firstobs=217 rename=(date=evtwin_beg)) mycrsp.dsi(keep=date
firstobs=219 rename=(date=evtdate)) mycrsp.dsi(keep=date firstobs=221 rename=(date=evtwin_end));
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
MPRINT(EVENT_STUDY):    format estper_beg estper_end evtwin_beg evtdate evtwin_end date9.;
MPRINT(EVENT_STUDY):    label estper_beg= 'Start of the Estimation Window' estper_end= 'End of the Estimation Window'
evtwin_beg= 'Start of the Event Window' evtwin_end= 'End of the Event Window' evtdate= 'Event Date';
MPRINT(EVENT_STUDY):    index+1;
MPRINT(EVENT_STUDY):    if nmiss(estper_beg,estper_end,evtwin_beg,evtwin_end,evtdate)=0;
MPRINT(EVENT_STUDY):    run;

NOTE: There were 25799 observations read from the data set MYCRSP.DSI.
NOTE: There were 25650 observations read from the data set MYCRSP.DSI.
NOTE: There were 25583 observations read from the data set MYCRSP.DSI.
NOTE: There were 25581 observations read from the data set MYCRSP.DSI.
NOTE: There were 25579 observations read from the data set MYCRSP.DSI.
NOTE: The data set WORK.CALDATES has 25579 observations and 6 variables.
NOTE: DATA statement used (Total process time):
      real time           0.07 seconds
      user cpu time       0.07 seconds
      system cpu time     0.00 seconds
      memory              1632.62k
      OS Memory           49664.00k
```

```
                 Timestamp              06/19/2024 04:48:48 PM
                 Step Count                         290  Switch Count  0


MPRINT(EVENT_STUDY):   proc sql;
MPRINT(EVENT_STUDY):   create table temp as select a.permno ,b.* from input a left join caldates b on
b.evtdate-a.edate>=0 group by a.edate having (b.evtdate-a.edate)=min(b.evtdate-a.edate);
NOTE: The execution of this query involves performing one or more Cartesian product joins that can not be optimized.
NOTE: The query requires remerging summary statistics back with the original data.
NOTE: SAS threaded sort was used.
NOTE: Table WORK.TEMP created, with 93 rows and 7 columns.

NOTE: PROCEDURE SQL used (Total process time):
      real time           0.31 seconds
      user cpu time       0.40 seconds
      system cpu time     0.12 seconds
      memory              52108.21k
      OS Memory           99060.00k
      Timestamp           06/19/2024 04:48:49 PM
      Step Count                         291  Switch Count  0


MPRINT(EVENT_STUDY):   proc sql;
MPRINT(EVENT_STUDY):   create table evtrets_temp as select a.permno, a.date format date9., a.ret as ret1, b.evtdate,
b.estper_beg, b.estper_end, b.evtwin_beg, b.evtwin_end from mycrsp.dsf a, temp b where a.permno=b.permno and
b.estper_beg<=a.date<=b.evtwin_end;
INFO: Data file MYCRSP.DSF.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
NOTE: There were 25058272 observations read from the data set MYCRSP.DSF.
NOTE: There were 93 observations read from the data set WORK.TEMP.
      WHERE estper_beg<=evtwin_end;
WARNING: The data set WORK.EVTRETS_TEMP may be incomplete.  When this step was stopped there were 221 observations
         and 8 variables.
WARNING: Data set WORK.EVTRETS_TEMP was not replaced because this step was stopped.
NOTE: PROCEDURE SQL used (Total process time):
      real time           31.87 seconds
      user cpu time       27.15 seconds
```

      system cpu time   0.67 seconds
      memory   5846.59k
      OS Memory   54788.00k
      Timestamp   06/19/2024 04:49:21 PM
      Step Count   292 Switch Count 1

```
5383  /*https://wrds-www.wharton.upenn.edu/pages/support/applications/event-studies/event-study-research-application/*
5383! /
5384
5385  /* *************************************************************************** */
5386  /* ********* W R D S    R E S E A R C H    A P P L I C A T I O N S ************** */
5387  /* *************************************************************************** */
5388  /* Program : EVTSTUDY.SAS                                          */
5389  /* Summary : Provides a sample methodology for calculating Cumulative   */
5390  /*           Abnormal Returns(CARs)& Buy-Hold Abnormal Returns(BHARs)    */
5391  /*           with various t-statistics (CS test, Standardized CS test&Patell Z)  */
5392  /*           in an event study setting. Displays the dynamics of mean CARs and   */
5393  /*           BHARs in the event window specified by the user            */
5394  /*                                                                 */
5395  /* Date    : Sep 2011                                              */
5396  /* Author  : Denys Glushkov, WRDS                                  */
5397  /* ***************************************************************************  */
5398
5399  /* STEP 1A: Speficify the parameters necessary to run the event study such as    */
5400  /* the length of estimation period and event window, gap b/w estimation & event  */
5401  /* window, etc                                                     */
5402  *%libname mycrsp "C:\Users\hli5\OneDrive - Kent State University\aaaa\event_Study";
5403  %macro event_study(outputPath=outputPath, permno_list=perm_record_dataset);
5404  libname mycrsp "C:\Users\lihon\patent Dropbox\Victor Li\wrds_data";
5405  /* libname evtstudy "C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\June6_res";
5406  */
5407
5408  /*
5409  * %let outputPath=%str(C:\Users\lihon\OneDrive - Kent State
5409! University\aaaa\event_Study\result\foreign_rec_exe10Dec9);
5410  * libname evtstudy "&outputPath\Foreign_rec_exe10";
```

```
5411  */
5412  libname evtstudy "&outputPath";
5413  %let crsp=mycrsp; /*CRSP libary to be used (CRSPQ - quarterly, CRSP-annual update  */
5414  %let estper=150; /*Length of the estimation period in trading days over which    */
5415                   /*the risk model is estimated                                   */
5416
5417  %let start=-2; /*Beginning of the event window (wtr to the event date,e.g. -2)   */
5418  %let end=2;    /*End of the event window (relative to the event date, e.g., +1)  */
5419  %let gap=66;   /*Length of pre-event window,i.e., number of trading days b/w     */
5420                   /*the end of estimation period and the start of the event window */
5421
5422  %let minest=70; /*Minimum of non-missing returns required for estimation        */
5423  %let evtwin=%eval(&end-&start+1);       /*length of event window in trading days */
5424
5425  /* STEP 1B: As an example, create the input table containing Permno-event dates  */
5426  /* corresponding to the stock additions to and deletions from S&P 500 index      */
5427
5428
5429  /*  %event_crack(relation_exec) ; */
5430  /* %let permno_list=relation_exec; */
5431  /*%let permno_list=foreign_relation; */
5432  /* %let permno_list=for_event_study_v2; */
5433  /* %let permno_list=oree_gvkey_patentid_record_dtv2;*/
5434  /* %let permno_list=foreign_trans_exec_record10;   */
5435  /* %let permno_list=foreign_trans_execrec10_dec10; */
5436
5437  /*  ;
5438  */
5439  /*- %macro event_crack(permno_list, evt_date=exec_dt); */
5440
5441  proc sql;
5442    create table input
5443    as select distinct permno, record_dt as edate format MMDDYY10.
5444    from &permno_list where not missing(&start) and year(record_dt);
5445  quit;
5446
5447  /* STEP 2. Creating Trading Calendar that accounts for the presence of  */
5448  /* weekends, holidays and other non-trading days in the estimation      */
```

```
5449   /* and event windows                                              */
5450   data caldates;
5451
5452    merge &crsp..dsi(keep=date rename=(date=estper_beg))
5453      &crsp..dsi(keep=date firstobs=&estper rename=(date=estper_end))
5454      &crsp..dsi(keep=date firstobs=%eval(&estper+&gap+1) rename=(date=evtwin_beg))
5455      &crsp..dsi(keep=date firstobs=%eval(&estper+&gap-&start+1) rename=(date=evtdate))
5456      &crsp..dsi(keep=date firstobs=%eval(&estper+&gap+&evtwin) rename=(date=evtwin_end));
5457
5458      format estper_beg estper_end evtwin_beg evtdate evtwin_end date9.;
5459      label  estper_beg='Start of the Estimation Window'
5460             estper_end='End of the Estimation Window'
5461             evtwin_beg='Start of the Event Window'
5462             evtwin_end='End of the Event Window'
5463             evtdate='Event Date';
5464        index+1;
5465      if nmiss(estper_beg,estper_end,evtwin_beg,evtwin_end,evtdate)=0;
5466   run;
5467
5468   /*STEP 3: If event date is a non-trading day*/
5469   /*       select the closest trading day that*/
5470   /* follows the event day                                            */
5471   proc sql; create table temp
5472    as select a.permno
5473              ,b.*
5474      from input a
5475          left join
5476          caldates b
5477      on b.evtdate-a.edate>=0
5478      group by a.edate
5479      having (b.evtdate-a.edate)=min(b.evtdate-a.edate);
5480
5481
5482    /*Returns for sample securities around the event dates */
5483     proc sql;
5484    create table evtrets_temp
5485    as select a.permno, a.date format date9., a.ret as ret1,
5486             b.evtdate, b.estper_beg, b.estper_end,
```

```
5487              b.evtwin_beg, b.evtwin_end
5488    from &crsp..dsf a, temp b
5489    where a.permno=b.permno and b.estper_beg<=a.date<=b.evtwin_end;
5490     quit;
5491    /* Merge in the risk factors                                    */
5492    /* User can create her own risk factors and use it instead of FF+M ones*/
5493     proc sql;
5494    create view evtrets1
5495      as select a.*, (b.mktrf+b.rf) as mkt, b.mktrf, b.rf,b.smb, b.hml, b.umd
5496      from evtrets_temp a left join
5497           &crsp..ff_factors_daily (keep=date mktrf smb hml umd rf) b
5498      on a.date=b.date;
5499       quit;
5500    /*Bring in delisting returns*/
5501        proc sql;
5502    create table evtrets (drop=ret1 where=(not missing(mkt)))
5503      as select a.*,
5504      (1+a.ret1)*sum(1,b.dlret)-1-a.mkt as exret label='Market-adjusted total ret',
5505      (1+a.ret1)*sum(1,b.dlret)-1 as ret "Ret adjusted for delisting"
5506      from evtrets1 a left join &crsp..dsedelist (where=(missing(dlret)=0)) b
5507      on a.permno=b.permno and a.date=b.dlstdt
5508    order by a.permno,a.evtdate,a.date;
5509    quit;
5510
5511    /* STEP 4. Estimating Factor Exposures over the estimation period*/
5512    proc printto log=junk; run;
5513
5514    proc reg data=evtrets edf outest=params  noprint;
5515       where estper_beg<=date<=estper_end;
5516       by permno evtdate;
5517       eq0: model exret=;         /*past market-premium return: ret-mkt as a benchmark*/
5518       eq1: model ret=mktrf;      /*  CAPM       */
5519       eq2: model ret=mktrf smb hml;    /* FF 3 factor **/
5520       eq3: model ret=mktrf smb hml umd; /*FF 4 factor */
5521    run;
5522    proc printto;run;
5523
5524
```

```
5525  /* STEP 5. Calculating Abnormal Returns for all models */
5526  /* for each trading day in the event window          */
5527  data abrets1/view=abrets1; merge
5528    evtrets(where=(evtwin_beg<=date<=evtwin_end) in=in_evtrets)
5529    params (where=(_model_='eq0')
5530       keep=permno evtdate _model_ _rmse_ _p_ _edf_
5531       rename=(_rmse_=std0 _p_=p0 _edf_=edf0))
5532
5533    params (where=(_model_='eq1')
5534       keep=permno evtdate _model_ _rmse_ intercept mktrf
5535       rename=(_rmse_=std1 intercept=alpha1 mktrf=beta1))
5536
5537    params (where=(_model_='eq2')
5538       keep=permno evtdate _model_ _rmse_ intercept mktrf smb hml
5539       rename=(_rmse_=std2 intercept=alpha2 mktrf=beta2 smb=sminb2 hml=hminl2))
5540
5541    params (where=(_model_='eq3')
5542       keep=permno evtdate _model_ _rmse_ intercept mktrf smb hml umd
5543       rename=(_rmse_=std3 intercept=alpha3 mktrf=beta3 smb=sminb3 hml=hminl3 umd=umind3));
5544    by permno evtdate;
5545
5546    retain missret;
5547    if first.permno then missret=missing(ret);
5548    if missing(ret) then missret+1; /*count number of missing returns*/
5549
5550    var0=std0**2;
5551    var1=std1**2;
5552    var2=std2**2;
5553    var3=std3**2;
5554
5555    abret0  = exret; *extra over market;
5556    expret1 = alpha1 + beta1*mktrf;  *CAPM;
5557    abret1  = ret-expret1;
5558
5559    expret2 = alpha2+beta2*mktrf+sminb2*smb+hminl2*hml; *FF3factor;
5560    abret2=ret-expret2;
5561
5562    expret3 =alpha3+beta3*mktrf+sminb3*smb+hminl3*hml+umind3*umd;
```

```
5563   abret3=ret-expret3;
5564
5565   nobs=p0+edf0;   /*number of observations used in estimation*/
5566   drop p0 edf0 estper_beg estper_end std0 std1 std2 std3 _model_ exret;
5567   if in_evtrets and nobs>&minest;
5568   * I add the followings;
5569   if nobs=150;
5570 run;
5571
5572 /* Transform dates to event time using CRSP Trading Calendar      */
5573 /* Using the latter takes into account non-consecutive date records*/
5574 /* do not use lag to avoid non-consecutive date records*/
5575 proc sql;
5576   create table abrets
5577     as select a.*, (b.index-c.index) as evttime
5578     from          abrets1 a
5579       left join  caldates b
5580     on a.date   = b.evtdate
5581        left join caldates c
5582    on a.evtdate = c.evtdate
5583    order by permno, evtdate, date;
5584 quit;
5585
5586 /*
5587 proc contents data=abrets short varnum;
5588 run;
5589 */
5590 proc sort data=abrets  nodupkey;
5591   by PERMNO evtdate DATE
5592     evtwin_beg evtwin_end
5593     mkt mktrf rf smb hml umd ret
5594     alpha1 beta1
5595     alpha2 beta2 sminb2 hminl2
5596     alpha3 beta3 sminb3 hminl3 umind3
5597     missret var0 var1 var2 var3
5598     abret0 expret1 abret1 expret2 abret2 expret3 abret3 nobs evttime ;
5599 run;
5600
```

```
/* 673  proc sql;
674      create table abrets as
675      select distinct * from abrets;
WARNING: This CREATE TABLE statement recursively references the target table. A consequence of this
         is a possible data integrity problem.
NOTE: Table WORK.ABRETS created, with 253797 rows and 37 columns.

  */
/* Calculating Rolling Cumulative Abnormal Returns and various stats */
/* Transformout= calculates cumulative product of gross returns and  */
/* subtracts 1 to arrive at the total net cumulative return          */
proc expand data=abrets
            out=car  /* Cumulative returns*/
            method=none;
  by permno evtdate;
  id date;
  convert ret=cret/transformout=(+1 cuprod -1);       /*actural cumulative return from CRSP*/
  convert mkt=cmkt/transformout=(+1 cuprod -1);       /*cumulative  market return*/

  /*cumulative market model return: expret1= alpha1 + beta1*mktrf; */
  convert expret1 =cexpret1 /transformout=(+1 cuprod -1);

  /*expret2 = alpha2+ beta2*mktrf+ sminb2*smb+ hminl2*hml; */
  convert expret2 =cexpret2 /transformout=(+1 cuprod -1); /*cumulative FF-3 factor return */

  /*  expret3 =alpha3+beta3*mktrf+sminb3*smb+hminl3*hml+umind3*umd; */
  convert expret3 =cexpret3 /transformout=(+1 cuprod -1);/*cumulative FF-4 factor return */

  convert abret0=car0/transformout=(sum);
  convert abret1=car1/transformout=(sum);
  convert abret2=car2/transformout=(sum);
  convert abret3=car3/transformout=(sum);
run;
/*
proc contents data =car;


proc contents data =car;
```

```
5639   ods select  Variables;
5640   run;
5641   */
5642
5643
5644   /* Car_Evtdate Table: */
5645   /* the cross-sectional output that contains for each      */
5646   /* "firm-event date":                                     */
5647   /*   1) CAR, BHAR, and SCAR (standardized CAR)            */
5648   /*   2) Alpha and Beta from the estimation period         */
5649   /*   3) Estimation period variance                        */
5650
5651   /* Car_Evtwin Table contains Raw, Abnormal, Std. and Buy-and-Hold Abnormal  */
5652   /* Daily Returns "firm-date" in event time                */
5653   proc printto log=junk;run;
5654
5655   data car_evtdate
5656           (drop=evttime ret mkt smb hml umd date calpha1 calpha2 calpha3
5657                 cmrkt csmb chml cumd evtwin_beg evtwin_end abret0 abret1
5658                 abret2 abret3 sar0 sar1 sar2 sar3 missret cexpret1 cexpret2 cexpret3)
5659      car_evtwin
5660         (keep=permno evtdate evttime date ret cret abret0 abret1 abret2 abret3
5661          sar0 sar1 sar2 sar3 bhar0 bhar1 bhar2 bhar3 car0 car1 car2 car3);
5662     set car;
5663     by permno evtdate date;
5664     /*Standardized CARs and ARs for various models*/
5665     scar0=car0/(&evtwin*var0)**0.5;
5666     scar1=car1/(&evtwin*var1)**0.5;
5667     scar2=car2/(&evtwin*var2)**0.5;
5668     scar3=car3/(&evtwin*var3)**0.5;
5669
5670     sar0=abret0/sqrt(var0);
5671     sar1=abret1/sqrt(var1);
5672     sar2=abret2/sqrt(var2);
5673     sar3=abret3/sqrt(var3);
5674
5675     pat_scale=(nobs-2)/(nobs-4); /*Patell Z scaling factor*/
5676
```

```
5677    /*Buy-Hold Abnormal Returns*/
5678    bhar0=cret-cmkt;
5679    bhar1=cret-cexpret1;
5680    bhar2=cret-cexpret2;
5681    bhar3=cret-cexpret3;
5682
5683    if last.evtdate then do;
5684         nrets=&evtwin-missret;
5685       output car_evtdate;
5686    end;
5687    output car_evtwin;
5688 run;
5689
5690 proc printto;run;
5691
5692 /*Put Cross-sectional and aggregate results together for further analysis*/
5693 data allcars;
5694     merge
5695    car_evtwin
5696         (rename=(bhar0=bhar0win
5697                  bhar1=bhar1win
5698                  bhar2=bhar2win
5699                  bhar3=bhar3win
5700                  car0=car0win
5701           car1=car1win
5702           car2=car2win
5703           car3=car3win
5704           cret=cretwin))
5705     car_evtdate;
5706  by permno evtdate;
5707 run;
5708
5709 /* STEP 6: Compute Cumulative Average Abnormal Return (CAR_MEAN) */
5710 /* and Average Buy-Hold Abnormal Return (BHAR_MEAN)               */
5711 /* and other stats across all distinct events                    */
5712 * proc means data=allcars noprint;
5713 proc means data=allcars( where = (nobs=150)) noprint;
5714   class evttime; id nobs;
```

```
5715    var ret cret
5716    car0 car1 car2 car3  /* at evttime*/
5717    cretwin car0win car1win car2win car3win /* at evttime=2*/
5718    bhar0 bhar1 bhar2 bhar3
5719    bhar0win bhar1win bhar2win bhar3win
5720
5721    scar0 scar1 scar2 scar3
5722    abret0 abret1 abret2 abret3
5723    sar0 sar1 sar2 sar3 /*originally from car_evtwin*/
5724    pat_scale;
5725    output out=allstats
5726    mean =
5727       n =
5728       t =
5729     sum =/autoname;
5730  run;
5731
5732  /*calculate different stats for assessing     */
5733  /*statistical signficance of abnormal returns*/
5734  data MA_Evtdate (keep=evttime car0_n cret_mean car0_mean car0_t scar0_t
5735                  bhar0_mean pat_car0 model)
5736     MM_Evtdate (keep=evttime car1_n cret_mean car1_mean car1_t scar1_t
5737                  bhar1_mean pat_car1 model )
5738     FF_Evtdate (keep=evttime car2_n cret_mean car2_mean car2_t scar2_t
5739                  bhar2_mean pat_car2 model )
5740     FFM_Evtdate (keep=evttime car3_n cret_mean car3_mean car3_t scar3_t
5741                  bhar3_mean pat_car3 model )
5742     MA_Evtwin  (keep=evttime cretwin_mean abret0_n ret_mean abret0_mean
5743                  car0win_mean bhar0win_mean abret0_t sar0_t pat_ar0 )
5744     MM_Evtwin  (keep=evttime cretwin_mean abret1_n ret_mean abret1_mean
5745                  car1win_mean bhar1win_mean abret1_t sar1_t pat_ar1 )
5746     FF_Evtwin  (keep=evttime cretwin_mean abret2_n ret_mean abret2_mean
5747                  car2win_mean bhar2win_mean abret2_t sar2_t pat_ar2 )
5748     FFM_Evtwin (keep=evttime cretwin_mean abret3_n ret_mean abret3_mean
5749                  car3win_mean bhar3win_mean abret3_t sar3_t pat_ar3 );
5750   set allstats;
5751   by evttime;
5752     if _n_=1 and missing(evttime) then do;
```

```
5753    abret0_mean=.;
5754    abret1_mean=.;
5755    abret2_mean=.;
5756    abret3_mean=.;
5757    cretwin_mean=0;
5758    ret_mean=.;
5759    bhar1win_mean=0;
5760    bhar1win_mean=0;
5761    bhar2win_mean=0;
5762    bhar3win_mean=0;
5763    end;
5764    /*Patell Z statistics*/
5765    pat_car0=scar0_mean/(sqrt(pat_scale_sum)/scar0_n);
5766    pat_car1=scar1_mean/(sqrt(pat_scale_sum)/scar1_n);
5767    pat_car2=scar2_mean/(sqrt(pat_scale_sum)/scar2_n);
5768    pat_car3=scar3_mean/(sqrt(pat_scale_sum)/scar3_n);
5769    pat_ar0=sar0_mean/(sqrt(pat_scale_sum)/sar0_n);
5770    pat_ar1=sar1_mean/(sqrt(pat_scale_sum)/sar1_n);
5771    pat_ar2=sar2_mean/(sqrt(pat_scale_sum)/sar2_n);
5772    pat_ar3=sar3_mean/(sqrt(pat_scale_sum)/sar3_n);
5773  label
5774    pat_ar0=       'Patell Z for AR_MA'  pat_ar1=       'Patell Z for AR_MM'
5775    pat_ar2=       'Patell Z for AR_FF'  pat_ar3=       'Patell Z for AR_FFM'
5776    abret0_t=      'CS t-stat, AR_MA'    abret1_t=      'CS t-stat, AR_MM'
5777    abret2_t=      'CS t-stat, AR_FF'    abret3_t=      'CS t-stat, AR_FFM'
5778    sar0_t=        'Std CS test, AR_MA'  sar1_t=        'Std CS test, AR_MM'
5779    sar2_t=        'Std CS test, AR_FF'  sar3_t=        'Std CS test, AR_FFM'
5780    abret0_mean=   'Mean AR_MA'          abret1_mean=   'Mean AR_MM'
5781    abret2_mean=   'Mean AR_FF'          abret3_mean=   'Mean AR_FFM'
5782    car0_n=        'Number of events in the portfolio'
5783    abret0_n=      'Number of events in the portfolio'
5784    evttime=       'Event Time t'
5785    cret_mean=     "Mean CTR (&start, &end)"
5786    cretwin_mean=  "Mean CTR (&start,t) "
5787    car0win_mean=  "Average CAR_MA (&start, t)"
5788    car1win_mean=  "Average CAR_MM (&start, t)"
5789    car2win_mean=  "Average CAR_FF (&start, t)"
5790    car3win_mean=  "Average CAR_FFM (&start, t)"
```

```
5791      bhar0win_mean= "Mean BHAR_MA (&start, t)"
5792      bhar1win_mean=  "Mean BHAR_MM (&start, t)"
5793      bhar2win_mean= "Mean BHAR_FF (&start, t)"
5794      bhar3win_mean=  "Mean BHAR_FFM (&start, t)"
5795   ;
5796      format ret_mean        cret_mean         cretwin_mean
5797              abret0_mean   abret1_mean     abret2_mean      abret3_mean
5798              car0_mean     car1_mean       car2_mean        car3_mean
5799              bhar0_mean    bhar1_mean      bhar2_mean       bhar3_mean
5800              bhar0win_mean bhar1win_mean   bhar2win_mean    bhar3win_mean
5801              car0win_mean  car1win_mean    car2win_mean     car3win_mean
5802        percent7.4
5803              abret0_t   abret1_t    abret2_t   abret3_t
5804              sar0_t     sar1_t      sar2_t     sar3_t
5805              pat_car0   pat_car1    pat_car2   pat_car3
5806              pat_ar0    pat_ar1     pat_ar2    pat_ar3
5807              car0_t     car1_t      car2_t     car3_t
5808              scar0_t    car1_t      scar2_t    scar3_t
5809        comma10.2;
5810   if evttime=0 then do; model='Market-Adjusted'; output MA_Evtdate;
5811                         model='Market Model';    output MM_Evtdate;
5812                         model='FF Model';        output FF_Evtdate;
5813                         model='Carhart Model';   output FFM_Evtdate;
5814                   end;
5815   if missing(evttime) then evttime=&start-1;
5816   output MA_Evtwin;
5817   output MM_Evtwin;
5818   output FF_Evtwin;
5819   output FFM_Evtwin;
5820  run;
5821
5822  /* STEP 7. Putting Event Date CARs and BHARS for various risk models together*/
5823  data allevtdate; set
5824    MA_Evtdate  (rename=(car0_mean=car_mean bhar0_mean=bhar_mean
5825                  car0_n=n car0_t=car_t scar0_t=scar_t pat_car0=pat_car))
5826    MM_Evtdate  (rename=(car1_mean=car_mean bhar1_mean=bhar_mean
5827                  car1_n=n car1_t=car_t scar1_t=scar_t pat_car1=pat_car))
5828    FF_Evtdate  (rename=(car2_mean=car_mean bhar2_mean=bhar_mean
```

```
5829                    car2_n=n car2_t=car_t scar2_t=scar_t pat_car2=pat_car))
5830    FFM_evtdate (rename=(car3_mean=car_mean bhar3_mean=bhar_mean
5831                    car3_n=n car3_t=car_t scar3_t=scar_t pat_car3=pat_car));
5832   length=&evtwin;
5833   label pat_car=   'Patell Z'
5834         car_mean=  "Mean CAR (&start, &end)"
5835         bhar_mean= "Mean BHAR (&start, &end)"
5836         car_t=     'Cross-sectional t-stat for CAR'
5837         scar_t=    'Standaridized cross-sectional t-stat for CAR'
5838         length=    'Length of event window in trading days';
5839  run;
5840
5841
5842  /*Cross-sectional output for CARs/BHARs at the firm-event level*/
5843  data car_evtdate;
5844    retain permno evtdate alpha1 beta1 cret car0 bhar0 var0 car1 bhar1 var1
5845         car2 bhar2 var2 car3 bhar3 var3 nrets nobs;
5846    set car_evtdate;
5847    label alpha1= 'Alpha (Market Model)'
5848          beta1=  'Beta (Market Model'
5849          car0=   'CAR_MA'
5850          car1=   'CAR_MM'
5851          car2=   'CAR_FF'
5852      car3=   'CAR_FFM'
5853          bhar0=  'BHAR_MA'
5854      bhar1=  'BHAR_MM'
5855          bhar2=  'BHAR_FF'
5856      bhar3=  'BHAR_FFM'
5857          var0=    'Estimation period variance (Market-adjusted returns)'
5858          var1=    'Estimation period variance (Market Model)'
5859          var2=    'Estimation period variance (FF Model)'
5860          var3=    'Estimation period variance (Carhart Model)'
5861          cret=    'Cumulative Total Return'
5862          nrets=   'Number of non-missing returns in event window'
5863          nobs=    'Length of the estimation period';
5864    keep permno evtdate alpha1 beta1 cret car0 bhar0 var0 car1 bhar1 var1
5865         car2 bhar2 var2 car3 bhar3 var3 nrets nobs;
5866    format cret alpha1
```

```
5867            car0 bhar0
5868        car1 bhar1
5869        car2 bhar2
5870        car3 bhar3
5871            percent7.4
5872            beta1 comma10.3;
5873  run;
5874  /* Save the summary statistics and
5875  the CARs on the event window
5876  */
5877
5878  PROC DATASETS NOLIST;
5879  COPY IN = work OUT = evtstudy ;
5880  select  allevtdate allstats car_evtwin ;
5881  RUN;
5882
5883  /* As an illustration, plot Carhart CAARs and average BHARs in the event window*/
5884  options nodate orientation=landscape;
5885  ods pdf file="&outputPath\Car0_evtrets_5days.pdf";
5886  goptions device=pdfc; /* Plot Saved in Home Directory */
5887  axis1 label=(angle=90 "Cumulative Abnormal Returns");
5888  axis2 label=("Event time");
5889  symbol interpol=join w=3 l=1;
5890
5891
5892
5893  proc gplot data =MA_Evtwin;
5894   where evttime>=&start;
5895   Title "Market adjusted model:  CARs and BHARs around the event date";
5896   plot (car0win_mean bhar0win_mean)*evttime
5897        /overlay legend vaxis=axis1 haxis=axis2;
5898  run;quit; ods pdf close;
5899
5900  ods pdf file="&outputPath\Car1_evtrets_5days.pdf";
5901  proc gplot data =MM_Evtwin;
5902   where evttime>=&start;
5903   Title "Market model:  CARs and BHARs around the event date";
5904   plot (car1win_mean bhar1win_mean)*evttime
```

```
5905        /overlay legend vaxis=axis1 haxis=axis2;
5906  run;quit; ods pdf close;
5907
5908  ods pdf file="&outputPath\Car2_evtrets_5days.pdf";
5909  proc gplot data =FF_Evtwin;
5910   where evttime>=&start;
5911   Title "FF 3-factor model:CARs and BHARs around the event date";
5912   plot (car2win_mean bhar2win_mean)*evttime
5913        /overlay legend vaxis=axis1 haxis=axis2;
5914  run;quit; ods pdf close;
5915
5916  ods pdf file="&outputPath\Car3_evtrets_5days.pdf";
5917  proc gplot data =FFM_Evtwin;
5918   where evttime>=&start;
5919   Title "Carhart 4 Factor model: Carhart CARs and BHARs around the event date";
5920   plot (car3win_mean bhar3win_mean)*evttime
5921        /overlay legend vaxis=axis1 haxis=axis2;
5922  run;quit; ods pdf close;
5923
5924  ods pdf file="&outputPath\Car0_3_evtrets_5days.pdf";
5925  proc  gplot data =allstats;
5926   where evttime>=&start;
5927   Title "CARs from the four models: around the event date";
5928   plot (car0win_mean  car1win_mean  car2win_mean  car3win_mean )*evttime
5929        /overlay legend vaxis=axis1 haxis=axis2;
5930  run;quit; ods pdf close;
5931
5932
5933  ods pdf file="&outputPath\BHARS0_3_evtrets_5days.pdf";
5934  proc  gplot data =allstats;
5935   where evttime>=&start;
5936   Title "BHARs from the four models: BHARs around the event date";
5937   plot (bhar0_mean  bhar1_mean  bhar2_mean  bhar3_mean )*evttime
5938        /overlay legend vaxis=axis1 haxis=axis2;
5939  run;quit;
5940
5941  ods pdf close;
5942  run;quit; ods pdf close;
```

```
5943
5944
5945
5946  /*house cleaning;
5947   proc sql;
5948    drop table abrets, allcars, allstats, caldates, car, car_evtwin, evtrets, temp,
5949           evtrets_temp,ffm_evtdate, ff_evtdate, ma_evtdate, mm_evtdate, params;
5950    drop view  evtrets1, abrets1; quit;
5951  */
5952  %mend  event_study;
5953  /* *********************************************************************** */
5954  /* *************  Material Copyright Wharton Research Data Services  ************* */
5955  /* **************************** All Rights Reserved **************************** */
5956  /* *********************************************************************** */

5957  %event_study(outputPath=C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\result\agg_foreign_all
MLOGIC(EVENT_STUDY):  Beginning execution.
5958              ,permno_list = foreign_trans_decile)
MLOGIC(EVENT_STUDY):  Parameter OUTPUTPATH has value C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_all
MLOGIC(EVENT_STUDY):  Parameter PERMNO_LIST has value foreign_trans_decile
MPRINT(EVENT_STUDY):   libname mycrsp "C:\Users\lihon\patent Dropbox\Victor Li\wrds_data";
NOTE: Libref MYCRSP was successfully assigned as follows:
      Engine:        V9
      Physical Name: C:\Users\lihon\patent Dropbox\Victor Li\wrds_data
MPRINT(EVENT_STUDY):   libname evtstudy "C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\agg_foreign_all";
NOTE: Libref EVTSTUDY was successfully assigned as follows:
      Engine:        V9
      Physical Name: C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\result\agg_foreign_all
MLOGIC(EVENT_STUDY):  %LET (variable name is CRSP)
MLOGIC(EVENT_STUDY):  %LET (variable name is ESTPER)
MLOGIC(EVENT_STUDY):  %LET (variable name is START)
MLOGIC(EVENT_STUDY):  %LET (variable name is END)
MLOGIC(EVENT_STUDY):  %LET (variable name is GAP)
MLOGIC(EVENT_STUDY):  %LET (variable name is MINEST)
MLOGIC(EVENT_STUDY):  %LET (variable name is EVTWIN)
MPRINT(EVENT_STUDY):   proc sql;
```

```
MPRINT(EVENT_STUDY):    create table input as select distinct permno, record_dt as edate format MMDDYY10. from
foreign_trans_decile where not missing(-2) and year(record_dt);
NOTE: Table WORK.INPUT created, with 18130 rows and 2 columns.

MPRINT(EVENT_STUDY):    quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time           0.03 seconds
      user cpu time       0.01 seconds
      system cpu time     0.01 seconds
      memory              5428.50k
      OS Memory           54788.00k
      Timestamp           06/19/2024 04:52:11 PM
      Step Count                         293  Switch Count  0


MPRINT(EVENT_STUDY):    data caldates;
MPRINT(EVENT_STUDY):    merge mycrsp.dsi(keep=date rename=(date=estper_beg)) mycrsp.dsi(keep=date firstobs=150
rename=(date=estper_end)) mycrsp.dsi(keep=date firstobs=217 rename=(date=evtwin_beg)) mycrsp.dsi(keep=date
firstobs=219 rename=(date=evtdate)) mycrsp.dsi(keep=date firstobs=221 rename=(date=evtwin_end));
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
MPRINT(EVENT_STUDY):    format estper_beg estper_end evtwin_beg evtdate evtwin_end date9.;
MPRINT(EVENT_STUDY):    label estper_beg= 'Start of the Estimation Window' estper_end= 'End of the Estimation Window'
evtwin_beg= 'Start of the Event Window' evtwin_end= 'End of the Event Window' evtdate= 'Event Date';
MPRINT(EVENT_STUDY):    index+1;
```

```
MPRINT(EVENT_STUDY):   if nmiss(estper_beg,estper_end,evtwin_beg,evtwin_end,evtdate)=0;
MPRINT(EVENT_STUDY):   run;

NOTE: There were 25799 observations read from the data set MYCRSP.DSI.
NOTE: There were 25650 observations read from the data set MYCRSP.DSI.
NOTE: There were 25583 observations read from the data set MYCRSP.DSI.
NOTE: There were 25581 observations read from the data set MYCRSP.DSI.
NOTE: There were 25579 observations read from the data set MYCRSP.DSI.
NOTE: The data set WORK.CALDATES has 25579 observations and 6 variables.
NOTE: DATA statement used (Total process time):
      real time            0.06 seconds
      user cpu time        0.06 seconds
      system cpu time      0.00 seconds
      memory               1638.34k
      OS Memory            49664.00k
      Timestamp            06/19/2024 04:52:12 PM
      Step Count                        294   Switch Count  0


MPRINT(EVENT_STUDY):   proc sql;
MPRINT(EVENT_STUDY):   create table temp as select a.permno ,b.* from input a left join caldates b on
b.evtdate-a.edate>=0 group by a.edate having (b.evtdate-a.edate)=min(b.evtdate-a.edate);
NOTE: The execution of this query involves performing one or more Cartesian product joins that can not be optimized.
NOTE: The query requires remerging summary statistics back with the original data.
NOTE: SAS threaded sort was used.
NOTE: Table WORK.TEMP created, with 18130 rows and 7 columns.

NOTE: PROCEDURE SQL used (Total process time):
      real time            43.61 seconds
      user cpu time        1:02.61
      system cpu time      9.89 seconds
      memory               4820614.45k
      OS Memory            4867708.00k
      Timestamp            06/19/2024 04:52:55 PM
      Step Count                        295   Switch Count  0


MPRINT(EVENT_STUDY):   proc sql;
```

```
MPRINT(EVENT_STUDY):   create table evtrets_temp as select a.permno, a.date format date9., a.ret as ret1, b.evtdate,
b.estper_beg, b.estper_end, b.evtwin_beg, b.evtwin_end from mycrsp.dsf a, temp b where a.permno=b.permno and
b.estper_beg<=a.date<=b.evtwin_end;
INFO: Data file MYCRSP.DSF.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
NOTE: Table WORK.EVTRETS_TEMP created, with 3866914 rows and 8 columns.

MPRINT(EVENT_STUDY):   quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time           47.43 seconds
      user cpu time       46.48 seconds
      system cpu time     1.00 seconds
      memory              5920.65k
      OS Memory           54788.00k
      Timestamp           06/19/2024 04:53:43 PM
      Step Count                      296  Switch Count  0


MPRINT(EVENT_STUDY):   proc sql;
MPRINT(EVENT_STUDY):   create view evtrets1 as select a.*, (b.mktrf+b.rf) as mkt, b.mktrf, b.rf,b.smb, b.hml, b.umd
from evtrets_temp a left join mycrsp.ff_factors_daily (keep=date mktrf smb hml umd rf) b on a.date=b.date;
NOTE: SQL view WORK.EVTRETS1 has been defined.
MPRINT(EVENT_STUDY):   quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time           0.01 seconds
      user cpu time       0.00 seconds
      system cpu time     0.01 seconds
      memory              112.34k
      OS Memory           49664.00k
      Timestamp           06/19/2024 04:53:43 PM
      Step Count                      297  Switch Count  0


MPRINT(EVENT_STUDY):   proc sql;
MPRINT(EVENT_STUDY):   create table evtrets (drop=ret1 where=(not missing(mkt))) as select a.*,
(1+a.ret1)*sum(1,b.dlret)-1-a.mkt as exret label='Market-adjusted total ret', (1+a.ret1)*sum(1,b.dlret)-1 as ret "Ret
adjusted for delisting" from evtrets1 a left join mycrsp.dsedelist (where=(missing(dlret)=0)) b on a.permno=b.permno
```

and a.date=b.dlstdt order by a.permno,a.evtdate,a.date;
INFO: Data file MYCRSP.FF_FACTORS_DAILY.DATA is in a format that is native to another host, or the file encoding does not match the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and might reduce performance.
INFO: Data file MYCRSP.DSEDELIST.DATA is in a format that is native to another host, or the file encoding does not match the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and might reduce performance.
NOTE: SAS threaded sort was used.
NOTE: Table WORK.EVTRETS created, with 3866914 rows and 15 columns.

MPRINT(EVENT_STUDY):   quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time   6.38 seconds
      user cpu time   10.56 seconds
      system cpu time   2.95 seconds
      memory   649542.23k
      OS Memory   695624.00k
      Timestamp   06/19/2024 04:53:49 PM
      Step Count   298 Switch Count 0

MPRINT(EVENT_STUDY):   proc printto log=junk;
MPRINT(EVENT_STUDY):   run;

NOTE: PROCEDURE PRINTTO used (Total process time):
      real time   0.00 seconds
      user cpu time   0.00 seconds
      system cpu time   0.00 seconds
      memory   6.68k
      OS Memory   49664.00k
      Timestamp   06/19/2024 04:53:53 PM
      Step Count   301 Switch Count 0

MPRINT(EVENT_STUDY):   data abrets1/view=abrets1;
MPRINT(EVENT_STUDY):   merge evtrets(where=(evtwin_beg<=date<=evtwin_end) in=in_evtrets) params
(where=(_model_='eq0') keep=permno evtdate _model_ _rmse_ _p_ _edf_ rename=(_rmse_=std0 _p_=p0 _edf_=edf0)) params
(where=(_model_='eq1') keep=permno evtdate _model_ _rmse_ intercept mktrf rename=(_rmse_=std1 intercept=alpha1

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mktrf=beta1)) params (where=(_model_='eq2') keep=permno evtdate _model_ _rmse_ intercept mktrf smb hml
rename=(_rmse_=std2 intercept=alpha2 mktrf=beta2 smb=sminb2 hml=hminl2)) params (where=(_model_='eq3') keep=permno
evtdate _model_ _rmse_ intercept mktrf smb hml umd rename=(_rmse_=std3 intercept=alpha3 mktrf=beta3 smb=sminb3
hml=hminl3 umd=umind3));
MPRINT(EVENT_STUDY):   by permno evtdate;
MPRINT(EVENT_STUDY):   retain missret;
MPRINT(EVENT_STUDY):   if first.permno then missret=missing(ret);
MPRINT(EVENT_STUDY):   if missing(ret) then missret+1;
MPRINT(EVENT_STUDY):   var0=std0**2;
MPRINT(EVENT_STUDY):   var1=std1**2;
MPRINT(EVENT_STUDY):   var2=std2**2;
MPRINT(EVENT_STUDY):   var3=std3**2;
MPRINT(EVENT_STUDY):   abret0 = exret;
MPRINT(EVENT_STUDY):   *extra over market;
MPRINT(EVENT_STUDY):   expret1 = alpha1 + beta1*mktrf;
MPRINT(EVENT_STUDY):   *CAPM;
MPRINT(EVENT_STUDY):   abret1 = ret-expret1;
MPRINT(EVENT_STUDY):   expret2 = alpha2+beta2*mktrf+sminb2*smb+hminl2*hml;
MPRINT(EVENT_STUDY):   *FF3factor;
MPRINT(EVENT_STUDY):   abret2=ret-expret2;
MPRINT(EVENT_STUDY):   expret3 =alpha3+beta3*mktrf+sminb3*smb+hminl3*hml+umind3*umd;
MPRINT(EVENT_STUDY):   abret3=ret-expret3;
MPRINT(EVENT_STUDY):   nobs=p0+edf0;
MPRINT(EVENT_STUDY):   drop p0 edf0 estper_beg estper_end std0 std1 std2 std3 _model_ exret;
MPRINT(EVENT_STUDY):   if in_evtrets and nobs>70;
MPRINT(EVENT_STUDY):   * I add the followings;
MPRINT(EVENT_STUDY):   if nobs=150;
MPRINT(EVENT_STUDY):   run;

NOTE: DATA STEP view saved on file WORK.ABRETS1.
NOTE: A stored DATA STEP view cannot run under a different operating system.
NOTE: DATA statement used (Total process time):
      real time           0.01 seconds
      user cpu time       0.00 seconds
      system cpu time     0.01 seconds
      memory              1363.84k
      OS Memory           49924.00k
      Timestamp           06/19/2024 04:53:53 PM
```

```
     Step Count                        302  Switch Count  0


MPRINT(EVENT_STUDY):   proc sql;
MPRINT(EVENT_STUDY):   create table abrets as select a.*, (b.index-c.index) as evttime from abrets1 a left join
caldates b on a.date = b.evtdate left join caldates c on a.evtdate = c.evtdate order by permno, evtdate, date;
NOTE: SAS threaded sort was used.
INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
NOTE: Missing values were generated as a result of performing an operation on missing values.
      Each place is given by: (Number of times) at (Line):(Column).
      341 at 7719:71    341 at 7719:87    352 at 7719:103   367 at 7719:119   484 at 7719:190   530 at 7719:221
      484 at 7720:14    530 at 7720:68    484 at 7720:102   530 at 7720:155   334 at 7720:175
NOTE: View WORK.ABRETS1.VIEW used (Total process time):
      real time              1.06 seconds
      user cpu time          0.81 seconds
      system cpu time        0.64 seconds
      memory                 56383.87k
      OS Memory              101024.00k
      Timestamp              06/19/2024 04:53:58 PM
      Step Count                        303  Switch Count  385


NOTE: There were 87459 observations read from the data set WORK.EVTRETS.
      WHERE (evtwin_beg<=date) and (date<=evtwin_end);
NOTE: There were 17532 observations read from the data set WORK.PARAMS.
      WHERE _model_='eq0';
NOTE: There were 17532 observations read from the data set WORK.PARAMS.
      WHERE _model_='eq1';
NOTE: There were 17532 observations read from the data set WORK.PARAMS.
      WHERE _model_='eq2';
NOTE: There were 17532 observations read from the data set WORK.PARAMS.
      WHERE _model_='eq3';
NOTE: Table WORK.ABRETS created, with 86005 rows and 37 columns.
```

```
MPRINT(EVENT_STUDY):   quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time          5.33 seconds
      user cpu time      4.89 seconds
      system cpu time    0.76 seconds
      memory             56383.87k
      OS Memory          101024.00k
      Timestamp          06/19/2024 04:53:58 PM
      Step Count                        303  Switch Count  386


MPRINT(EVENT_STUDY):   proc sort data=abrets nodupkey;
MPRINT(EVENT_STUDY):   by PERMNO evtdate DATE evtwin_beg evtwin_end mkt mktrf rf smb hml umd ret alpha1 beta1 alpha2
beta2 sminb2 hminl2 alpha3 beta3 sminb3 hminl3 umind3 missret var0 var1 var2 var3 abret0 expret1 abret1 expret2
abret2 expret3 abret3 nobs evttime ;
MPRINT(EVENT_STUDY):   run;

NOTE: There were 86005 observations read from the data set WORK.ABRETS.
NOTE: SAS sort was used.
NOTE: 0 observations with duplicate key values were deleted.
NOTE: The data set WORK.ABRETS has 86005 observations and 37 variables.
NOTE: PROCEDURE SORT used (Total process time):
      real time          0.13 seconds
      user cpu time      0.04 seconds
      system cpu time    0.06 seconds
      memory             51361.78k
      OS Memory          100144.00k
      Timestamp          06/19/2024 04:53:58 PM
      Step Count                        304  Switch Count  0


MPRINT(EVENT_STUDY):   proc expand data=abrets out=car method=none;
MPRINT(EVENT_STUDY):   by permno evtdate;
MPRINT(EVENT_STUDY):   id date;
MPRINT(EVENT_STUDY):   convert ret=cret/transformout=(+1 cuprod -1);
MPRINT(EVENT_STUDY):   convert mkt=cmkt/transformout=(+1 cuprod -1);
MPRINT(EVENT_STUDY):   convert expret1 =cexpret1 /transformout=(+1 cuprod -1);
MPRINT(EVENT_STUDY):   convert expret2 =cexpret2 /transformout=(+1 cuprod -1);
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MPRINT(EVENT_STUDY):   convert expret3 =cexpret3 /transformout=(+1 cuprod -1);
MPRINT(EVENT_STUDY):   convert abret0=car0/transformout=(sum);
MPRINT(EVENT_STUDY):   convert abret1=car1/transformout=(sum);
MPRINT(EVENT_STUDY):   convert abret2=car2/transformout=(sum);
MPRINT(EVENT_STUDY):   convert abret3=car3/transformout=(sum);
MPRINT(EVENT_STUDY):   run;


WARNING: The variable ret has only 0 nonmissing observations, which is too few to apply the conversion method. The
         result series is set to missing.
WARNING: The variable abret0 has only 0 nonmissing observations, which is too few to apply the conversion method. The
         result series is set to missing.
WARNING: The variable abret1 has only 0 nonmissing observations, which is too few to apply the conversion method. The
         result series is set to missing.
WARNING: The variable abret2 has only 0 nonmissing observations, which is too few to apply the conversion method. The
         result series is set to missing.
WARNING: The variable abret3 has only 0 nonmissing observations, which is too few to apply the conversion method. The
         result series is set to missing.
NOTE: The above message was for the following BY group:
      PERMNO=10942 evtdate=02MAR2007
WARNING: The variable ret has only 0 nonmissing observations, which is too few to apply the conversion method. The
         result series is set to missing.
WARNING: The variable abret0 has only 0 nonmissing observations, which is too few to apply the conversion method. The
         result series is set to missing.
WARNING: The variable abret1 has only 0 nonmissing observations, which is too few to apply the conversion method. The
         result series is set to missing.
WARNING: The variable abret2 has only 0 nonmissing observations, which is too few to apply the conversion method. The
         result series is set to missing.
WARNING: The variable abret3 has only 0 nonmissing observations, which is too few to apply the conversion method. The
         result series is set to missing.
NOTE: The above message was for the following BY group:
      PERMNO=78001 evtdate=25MAR2009
WARNING: The variable ret has only 0 nonmissing observations, which is too few to apply the conversion method. The
         result series is set to missing.
WARNING: The variable abret0 has only 0 nonmissing observations, which is too few to apply the conversion method. The
         result series is set to missing.
WARNING: The variable abret1 has only 0 nonmissing observations, which is too few to apply the conversion method. The
         result series is set to missing.
WARNING: The variable abret2 has only 0 nonmissing observations, which is too few to apply the conversion method. The
```

result series is set to missing.
WARNING: The variable abret3 has only 0 nonmissing observations, which is too few to apply the conversion method. The
            result series is set to missing.
NOTE: The above message was for the following BY group:
      PERMNO=89833 evtdate=24FEB2009
NOTE: The data set WORK.CAR has 86005 observations and 46 variables.
NOTE: PROCEDURE EXPAND used (Total process time):
      real time   1.05 seconds
      user cpu time   0.64 seconds
      system cpu time   0.42 seconds
      memory   972.28k
      OS Memory   50184.00k
      Timestamp   06/19/2024 04:54:00 PM
      Step Count   305 Switch Count 0

MPRINT(EVENT_STUDY):   proc printto log=junk;
MPRINT(EVENT_STUDY): run;

NOTE: PROCEDURE PRINTTO used (Total process time):
      real time   0.00 seconds
      user cpu time   0.00 seconds
      system cpu time   0.00 seconds
      memory   7.12k
      OS Memory   49664.00k
      Timestamp   06/19/2024 04:54:00 PM
      Step Count   308 Switch Count 0

MPRINT(EVENT_STUDY):   data allcars;
MPRINT(EVENT_STUDY):   merge car_evtwin (rename=(bhar0=bhar0win bhar1=bhar1win bhar2=bhar2win bhar3=bhar3win
car0=car0win car1=car1win car2=car2win car3=car3win cret=cretwin)) car_evtdate;
MPRINT(EVENT_STUDY):   by permno evtdate;
MPRINT(EVENT_STUDY): run;

NOTE: There were 86005 observations read from the data set WORK.CAR_EVTWIN.
NOTE: There were 17202 observations read from the data set WORK.CAR_EVTDATE.
NOTE: The data set WORK.ALLCARS has 86005 observations and 59 variables.

```
NOTE: DATA statement used (Total process time):
      real time           0.08 seconds
      user cpu time       0.04 seconds
      system cpu time     0.04 seconds
      memory              1198.84k
      OS Memory           49664.00k
      Timestamp           06/19/2024 04:54:00 PM
      Step Count                    309  Switch Count  0


MPRINT(EVENT_STUDY):   * proc means data=allcars noprint;
MPRINT(EVENT_STUDY):   proc means data=allcars( where = (nobs=150)) noprint;
MPRINT(EVENT_STUDY):   class evttime;
MPRINT(EVENT_STUDY):   id nobs;
MPRINT(EVENT_STUDY):   var ret cret car0 car1 car2 car3 cretwin car0win car1win car2win car3win bhar0 bhar1 bhar2
bhar3 bhar0win bhar1win bhar2win bhar3win scar0 scar1 scar2 scar3 abret0 abret1 abret2 abret3 sar0 sar1 sar2 sar3
pat_scale;
MPRINT(EVENT_STUDY):   output out=allstats mean = n = t = sum =/autoname;
MPRINT(EVENT_STUDY):   run;

NOTE: Multiple concurrent threads will be used to summarize data.
NOTE: There were 86005 observations read from the data set WORK.ALLCARS.
      WHERE nobs=150;
NOTE: The data set WORK.ALLSTATS has 6 observations and 132 variables.
NOTE: PROCEDURE MEANS used (Total process time):
      real time           0.18 seconds
      user cpu time       0.92 seconds
      system cpu time     0.09 seconds
      memory              6692.87k
      OS Memory           54796.00k
      Timestamp           06/19/2024 04:54:00 PM
      Step Count                    310  Switch Count  0


MPRINT(EVENT_STUDY):   data MA_Evtdate (keep=evttime car0_n cret_mean car0_mean car0_t scar0_t bhar0_mean pat_car0
model) MM_Evtdate (keep=evttime car1_n cret_mean car1_mean car1_t scar1_t bhar1_mean pat_car1 model ) FF_Evtdate
(keep=evttime car2_n cret_mean car2_mean car2_t scar2_t bhar2_mean pat_car2 model ) FFM_Evtdate (keep=evttime car3_n
cret_mean car3_mean car3_t scar3_t bhar3_mean pat_car3 model ) MA_Evtwin (keep=evttime cretwin_mean abret0_n ret_mean
```

```
abret0_mean car0win_mean bhar0win_mean abret0_t sar0_t pat_ar0 ) MM_Evtwin (keep=evttime cretwin_mean abret1_n
ret_mean abret1_mean car1win_mean bhar1win_mean abret1_t sar1_t pat_ar1 ) FF_Evtwin (keep=evttime cretwin_mean
abret2_n ret_mean abret2_mean car2win_mean bhar2win_mean abret2_t sar2_t pat_ar2 ) FFM_Evtwin (keep=evttime
cretwin_mean abret3_n ret_mean abret3_mean car3win_mean bhar3win_mean abret3_t sar3_t pat_ar3 );
MPRINT(EVENT_STUDY):   set allstats;
MPRINT(EVENT_STUDY):   by evttime;
MPRINT(EVENT_STUDY):   if _n_=1 and missing(evttime) then do;
MPRINT(EVENT_STUDY):   abret0_mean=.;
MPRINT(EVENT_STUDY):   abret1_mean=.;
MPRINT(EVENT_STUDY):   abret2_mean=.;
MPRINT(EVENT_STUDY):   abret3_mean=.;
MPRINT(EVENT_STUDY):   cretwin_mean=0;
MPRINT(EVENT_STUDY):   ret_mean=.;
MPRINT(EVENT_STUDY):   bhar1win_mean=0;
MPRINT(EVENT_STUDY):   bhar1win_mean=0;
MPRINT(EVENT_STUDY):   bhar2win_mean=0;
MPRINT(EVENT_STUDY):   bhar3win_mean=0;
MPRINT(EVENT_STUDY):   end;
MPRINT(EVENT_STUDY):   pat_car0=scar0_mean/(sqrt(pat_scale_sum)/scar0_n);
MPRINT(EVENT_STUDY):   pat_car1=scar1_mean/(sqrt(pat_scale_sum)/scar1_n);
MPRINT(EVENT_STUDY):   pat_car2=scar2_mean/(sqrt(pat_scale_sum)/scar2_n);
MPRINT(EVENT_STUDY):   pat_car3=scar3_mean/(sqrt(pat_scale_sum)/scar3_n);
MPRINT(EVENT_STUDY):   pat_ar0=sar0_mean/(sqrt(pat_scale_sum)/sar0_n);
MPRINT(EVENT_STUDY):   pat_ar1=sar1_mean/(sqrt(pat_scale_sum)/sar1_n);
MPRINT(EVENT_STUDY):   pat_ar2=sar2_mean/(sqrt(pat_scale_sum)/sar2_n);
MPRINT(EVENT_STUDY):   pat_ar3=sar3_mean/(sqrt(pat_scale_sum)/sar3_n);
MPRINT(EVENT_STUDY):   label pat_ar0= 'Patell Z for AR_MA' pat_ar1= 'Patell Z for AR_MM' pat_ar2= 'Patell Z for
AR_FF' pat_ar3= 'Patell Z for AR_FFM' abret0_t= 'CS t-stat, AR_MA' abret1_t= 'CS t-stat, AR_MM' abret2_t= 'CS t-stat,
AR_FF' abret3_t= 'CS t-stat, AR_FFM' sar0_t= 'Std CS test, AR_MA' sar1_t= 'Std CS test, AR_MM' sar2_t= 'Std CS test,
AR_FF' sar3_t= 'Std CS test, AR_FFM' abret0_mean= 'Mean AR_MA' abret1_mean= 'Mean AR_MM' abret2_mean= 'Mean AR_FF'
abret3_mean= 'Mean AR_FFM' car0_n= 'Number of events in the portfolio' abret0_n= 'Number of events in the portfolio'
evttime= 'Event Time t' cret_mean= "Mean CTR (-2, 2)" cretwin_mean= "Mean CTR (-2,t) " car0win_mean= "Average CAR_MA
(-2, t)" car1win_mean= "Average CAR_MM (-2, t)" car2win_mean= "Average CAR_FF (-2, t)" car3win_mean= "Average CAR_FFM
(-2, t)" bhar0win_mean= "Mean BHAR_MA (-2, t)" bhar1win_mean= "Mean BHAR_MM (-2, t)" bhar2win_mean= "Mean BHAR_FF
(-2, t)" bhar3win_mean= "Mean BHAR_FFM (-2, t)" ;
MPRINT(EVENT_STUDY):   format ret_mean cret_mean cretwin_mean abret0_mean abret1_mean abret2_mean abret3_mean
car0_mean car1_mean car2_mean car3_mean bhar0_mean bhar1_mean bhar2_mean bhar3_mean bhar0win_mean bhar1win_mean
bhar2win_mean bhar3win_mean car0win_mean car1win_mean car2win_mean car3win_mean percent7.4 abret0_t abret1_t abret2_t
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```
abret3_t sar0_t sar1_t sar2_t sar3_t pat_car0 pat_car1 pat_car2 pat_car3 pat_ar0 pat_ar1 pat_ar2 pat_ar3 car0_t
car1_t car2_t car3_t scar0_t car1_t scar2_t scar3_t comma10.2;
MPRINT(EVENT_STUDY):    if evttime=0 then do;
MPRINT(EVENT_STUDY):    model='Market-Adjusted';
MPRINT(EVENT_STUDY):    output MA_Evtdate;
MPRINT(EVENT_STUDY):    model='Market Model';
MPRINT(EVENT_STUDY):    output MM_Evtdate;
MPRINT(EVENT_STUDY):    model='FF Model';
MPRINT(EVENT_STUDY):    output FF_Evtdate;
MPRINT(EVENT_STUDY):    model='Carhart Model';
MPRINT(EVENT_STUDY):    output FFM_Evtdate;
MPRINT(EVENT_STUDY):    end;
MPRINT(EVENT_STUDY):    if missing(evttime) then evttime=-2-1;
MPRINT(EVENT_STUDY):    output MA_Evtwin;
MPRINT(EVENT_STUDY):    output MM_Evtwin;
MPRINT(EVENT_STUDY):    output FF_Evtwin;
MPRINT(EVENT_STUDY):    output FFM_Evtwin;
MPRINT(EVENT_STUDY):    run;


NOTE: There were 6 observations read from the data set WORK.ALLSTATS.
NOTE: The data set WORK.MA_EVTDATE has 1 observations and 9 variables.
NOTE: The data set WORK.MM_EVTDATE has 1 observations and 9 variables.
NOTE: The data set WORK.FF_EVTDATE has 1 observations and 9 variables.
NOTE: The data set WORK.FFM_EVTDATE has 1 observations and 9 variables.
NOTE: The data set WORK.MA_EVTWIN has 6 observations and 10 variables.
NOTE: The data set WORK.MM_EVTWIN has 6 observations and 10 variables.
NOTE: The data set WORK.FF_EVTWIN has 6 observations and 10 variables.
NOTE: The data set WORK.FFM_EVTWIN has 6 observations and 10 variables.
NOTE: DATA statement used (Total process time):
      real time              0.04 seconds
      user cpu time          0.00 seconds
      system cpu time        0.04 seconds
      memory                 2605.28k
      OS Memory              49664.00k
      Timestamp              06/19/2024 04:54:00 PM
      Step Count                       311  Switch Count  0
```

```
MPRINT(EVENT_STUDY):   data allevtdate;
MPRINT(EVENT_STUDY):   set MA_Evtdate (rename=(car0_mean=car_mean bhar0_mean=bhar_mean car0_n=n car0_t=car_t
scar0_t=scar_t pat_car0=pat_car)) MM_Evtdate (rename=(car1_mean=car_mean bhar1_mean=bhar_mean car1_n=n car1_t=car_t
scar1_t=scar_t pat_car1=pat_car)) FF_Evtdate (rename=(car2_mean=car_mean bhar2_mean=bhar_mean car2_n=n car2_t=car_t
scar2_t=scar_t pat_car2=pat_car)) FFM_evtdate (rename=(car3_mean=car_mean bhar3_mean=bhar_mean car3_n=n car3_t=car_t
scar3_t=scar_t pat_car3=pat_car));
MPRINT(EVENT_STUDY):   length=5;
MPRINT(EVENT_STUDY):   label pat_car= 'Patell Z' car_mean= "Mean CAR (-2, 2)" bhar_mean= "Mean BHAR (-2, 2)" car_t=
'Cross-sectional t-stat for CAR' scar_t= 'Standaridized cross-sectional t-stat for CAR' length= 'Length of event
window in trading days';
MPRINT(EVENT_STUDY):   run;

NOTE: There were 1 observations read from the data set WORK.MA_EVTDATE.
NOTE: There were 1 observations read from the data set WORK.MM_EVTDATE.
NOTE: There were 1 observations read from the data set WORK.FF_EVTDATE.
NOTE: There were 1 observations read from the data set WORK.FFM_EVTDATE.
NOTE: The data set WORK.ALLEVTDATE has 4 observations and 10 variables.
NOTE: DATA statement used (Total process time):
      real time           0.01 seconds
      user cpu time       0.00 seconds
      system cpu time     0.01 seconds
      memory              1129.68k
      OS Memory           49664.00k
      Timestamp           06/19/2024 04:54:00 PM
      Step Count                       312  Switch Count  0


MPRINT(EVENT_STUDY):   data car_evtdate;
MPRINT(EVENT_STUDY):   retain permno evtdate alpha1 beta1 cret car0 bhar0 var0 car1 bhar1 var1 car2 bhar2 var2 car3
bhar3 var3 nrets nobs;
MPRINT(EVENT_STUDY):   set car_evtdate;
MPRINT(EVENT_STUDY):   label alpha1= 'Alpha (Market Model)' beta1= 'Beta (Market Model' car0= 'CAR_MA' car1= 'CAR_MM'
car2= 'CAR_FF' car3= 'CAR_FFM' bhar0= 'BHAR_MA' bhar1= 'BHAR_MM' bhar2= 'BHAR_FF' bhar3= 'BHAR_FFM' var0= 'Estimation
period variance (Market-adjusted returns)' var1= 'Estimation period variance (Market Model)' var2= 'Estimation period
variance (FF Model)' var3= 'Estimation period variance (Carhart Model)' cret= 'Cumulative Total Return' nrets=
'Number of non-missing returns in event window' nobs= 'Length of the estimation period';
MPRINT(EVENT_STUDY):   keep permno evtdate alpha1 beta1 cret car0 bhar0 var0 car1 bhar1 var1 car2 bhar2 var2 car3
bhar3 var3 nrets nobs;
```

```
MPRINT(EVENT_STUDY):   format cret alpha1 car0 bhar0 car1 bhar1 car2 bhar2 car3 bhar3 percent7.4 beta1 comma10.3;
MPRINT(EVENT_STUDY):   run;
```

NOTE: There were 17202 observations read from the data set WORK.CAR_EVTDATE.
NOTE: The data set WORK.CAR_EVTDATE has 17202 observations and 19 variables.
NOTE: DATA statement used (Total process time):
      real time   0.01 seconds
      user cpu time   0.01 seconds
      system cpu time   0.00 seconds
      memory   713.59k
      OS Memory   49664.00k
      Timestamp   06/19/2024 04:54:00 PM
      Step Count   313 Switch Count 0


```
MPRINT(EVENT_STUDY):   PROC DATASETS NOLIST;
MPRINT(EVENT_STUDY):   COPY IN = work OUT = evtstudy ;
MPRINT(EVENT_STUDY):   select allevtdate allstats car_evtwin ;
MPRINT(EVENT_STUDY):   RUN;
```

NOTE: Copying WORK.ALLEVTDATE to EVTSTUDY.ALLEVTDATE (memtype=DATA).
INFO: Engine's block-read method is in use.
INFO: Engine's block-write method is in use.
NOTE: There were 4 observations read from the data set WORK.ALLEVTDATE.
NOTE: The data set EVTSTUDY.ALLEVTDATE has 4 observations and 10 variables.
NOTE: Copying WORK.ALLSTATS to EVTSTUDY.ALLSTATS (memtype=DATA).
INFO: Engine's block-read method is in use.
INFO: Engine's block-write method is in use.
NOTE: There were 6 observations read from the data set WORK.ALLSTATS.
NOTE: The data set EVTSTUDY.ALLSTATS has 6 observations and 132 variables.
NOTE: Copying WORK.CAR_EVTWIN to EVTSTUDY.CAR_EVTWIN (memtype=DATA).
INFO: Engine's block-read method is in use.
INFO: Engine's block-write method is in use.
NOTE: There were 86005 observations read from the data set WORK.CAR_EVTWIN.
NOTE: The data set EVTSTUDY.CAR_EVTWIN has 86005 observations and 22 variables.
```
MPRINT(EVENT_STUDY):   options nodate orientation=landscape;
MPRINT(EVENT_STUDY):   ods pdf file="C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\agg_foreign_all\Car0_evtrets_5days.pdf";
```

```
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_all\Car0_evtrets_5days.pdf", printer "PDF".
MPRINT(EVENT_STUDY):   goptions device=pdfc;
MPRINT(EVENT_STUDY):   axis1 label=(angle=90 "Cumulative Abnormal Returns");
MPRINT(EVENT_STUDY):   axis2 label=("Event time");
MPRINT(EVENT_STUDY):   symbol interpol=join w=3 l=1;
NOTE: PROCEDURE DATASETS used (Total process time):
      real time            0.26 seconds
      user cpu time        0.09 seconds
      system cpu time      0.07 seconds
      memory               4241.81k
      OS Memory            50436.00k
      Timestamp            06/19/2024 04:54:01 PM
      Step Count                      314  Switch Count  0


MPRINT(EVENT_STUDY):   proc gplot data =MA_Evtwin;
MPRINT(EVENT_STUDY):   where evttime>=-2;
MPRINT(EVENT_STUDY):   Title "Market adjusted model:  CARs and BHARs around the event date";
MPRINT(EVENT_STUDY):   plot (car0win_mean bhar0win_mean)*evttime /overlay legend vaxis=axis1 haxis=axis2;
MPRINT(EVENT_STUDY):   run;

NOTE: 33793 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot30.png.
MPRINT(EVENT_STUDY):  quit;

NOTE: There were 5 observations read from the data set WORK.MA_EVTWIN.
      WHERE evttime>=-2;
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE GPLOT used (Total process time):
      real time            0.26 seconds
      user cpu time        0.17 seconds
      system cpu time      0.04 seconds
      memory               8657.93k
      OS Memory            53976.00k
      Timestamp            06/19/2024 04:54:01 PM
      Step Count                      315  Switch Count  0
```

```
MPRINT(EVENT_STUDY):   ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_all\Car0_evtrets_5days.pdf.
MPRINT(EVENT_STUDY):   ods pdf file="C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\agg_foreign_all\Car1_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_all\Car1_evtrets_5days.pdf", printer "PDF".
MPRINT(EVENT_STUDY):   proc gplot data =MM_Evtwin;
MPRINT(EVENT_STUDY):   where evttime>=-2;
MPRINT(EVENT_STUDY):   Title "Market model:  CARs and BHARs around the event date";
MPRINT(EVENT_STUDY):   plot (car1win_mean bhar1win_mean)*evttime /overlay legend vaxis=axis1 haxis=axis2;
MPRINT(EVENT_STUDY):   run;

NOTE: 48874 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot31.png.
MPRINT(EVENT_STUDY):  quit;

NOTE: There were 5 observations read from the data set WORK.MM_EVTWIN.
      WHERE evttime>=-2;
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE GPLOT used (Total process time):
      real time            0.33 seconds
      user cpu time        0.15 seconds
      system cpu time      0.12 seconds
      memory               8582.40k
      OS Memory            53976.00k
      Timestamp            06/19/2024 04:54:01 PM
      Step Count                        316  Switch Count  0


MPRINT(EVENT_STUDY):   ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_all\Car1_evtrets_5days.pdf.
MPRINT(EVENT_STUDY):   ods pdf file="C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\agg_foreign_all\Car2_evtrets_5days.pdf";
```

```
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_all\Car2_evtrets_5days.pdf", printer "PDF".
MPRINT(EVENT_STUDY):   proc gplot data =FF_Evtwin;
MPRINT(EVENT_STUDY):   where evttime>=-2;
MPRINT(EVENT_STUDY):   Title "FF 3-factor model:CARs and BHARs around the event date";
MPRINT(EVENT_STUDY):   plot (car2win_mean bhar2win_mean)*evttime /overlay legend vaxis=axis1 haxis=axis2;
MPRINT(EVENT_STUDY):   run;

NOTE: 54659 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot32.png.
MPRINT(EVENT_STUDY):  quit;

NOTE: There were 5 observations read from the data set WORK.FF_EVTWIN.
      WHERE evttime>=-2;
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE GPLOT used (Total process time):
      real time           0.34 seconds
      user cpu time       0.18 seconds
      system cpu time     0.12 seconds
      memory              8610.03k
      OS Memory           53976.00k
      Timestamp           06/19/2024 04:54:02 PM
      Step Count                        317  Switch Count  0


MPRINT(EVENT_STUDY):   ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_all\Car2_evtrets_5days.pdf.
MPRINT(EVENT_STUDY):   ods pdf file="C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\agg_foreign_all\Car3_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_all\Car3_evtrets_5days.pdf", printer "PDF".
MPRINT(EVENT_STUDY):   proc gplot data =FFM_Evtwin;
MPRINT(EVENT_STUDY):   where evttime>=-2;
MPRINT(EVENT_STUDY):   Title "Carhart 4 Factor model: Carhart CARs and BHARs around the event date";
MPRINT(EVENT_STUDY):   plot (car3win_mean bhar3win_mean)*evttime /overlay legend vaxis=axis1 haxis=axis2;
```

```
MPRINT(EVENT_STUDY):   run;

NOTE: 49722 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot33.png.
MPRINT(EVENT_STUDY):   quit;

NOTE: There were 5 observations read from the data set WORK.FFM_EVTWIN.
      WHERE evttime>=-2;
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE GPLOT used (Total process time):
      real time            0.34 seconds
      user cpu time        0.14 seconds
      system cpu time      0.14 seconds
      memory               8631.46k
      OS Memory            53976.00k
      Timestamp            06/19/2024 04:54:02 PM
      Step Count                        318   Switch Count   0


MPRINT(EVENT_STUDY):   ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_all\Car3_evtrets_5days.pdf.
MPRINT(EVENT_STUDY):   ods pdf file="C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\agg_foreign_all\Car0_3_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_all\Car0_3_evtrets_5days.pdf", printer "PDF".
MPRINT(EVENT_STUDY):   proc gplot data =allstats;
MPRINT(EVENT_STUDY):   where evttime>=-2;
MPRINT(EVENT_STUDY):   Title "CARs from the four models: around the event date";
MPRINT(EVENT_STUDY):   plot (car0win_mean car1win_mean car2win_mean car3win_mean )*evttime /overlay legend
vaxis=axis1 haxis=axis2;
MPRINT(EVENT_STUDY):   run;

NOTE: 34635 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot34.png.
MPRINT(EVENT_STUDY):   quit;

NOTE: There were 5 observations read from the data set WORK.ALLSTATS.
```

```
          WHERE evttime>=-2;
NOTE: PROCEDURE GPLOT used (Total process time):
      real time            0.29 seconds
      user cpu time        0.18 seconds
      system cpu time      0.06 seconds
      memory               8712.34k
      OS Memory            53976.00k
      Timestamp            06/19/2024 04:54:03 PM
      Step Count                        319  Switch Count  0


MPRINT(EVENT_STUDY):   ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_all\Car0_3_evtrets_5days.pdf.
MPRINT(EVENT_STUDY):   ods pdf file="C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\agg_foreign_all\BHARS0_3_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_all\BHARS0_3_evtrets_5days.pdf", printer "PDF".
MPRINT(EVENT_STUDY):   proc gplot data =allstats;
MPRINT(EVENT_STUDY):   where evttime>=-2;
MPRINT(EVENT_STUDY):   Title "BHARs from the four models: BHARs around the event date";
MPRINT(EVENT_STUDY):   plot (bhar0_mean bhar1_mean bhar2_mean bhar3_mean )*evttime /overlay legend vaxis=axis1
haxis=axis2;
MPRINT(EVENT_STUDY):   run;
NOTE: 20765 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot35.png.
MPRINT(EVENT_STUDY):  quit;
NOTE: There were 5 observations read from the data set WORK.ALLSTATS.
      WHERE evttime>=-2;
NOTE: PROCEDURE GPLOT used (Total process time):
      real time            0.45 seconds
      user cpu time        0.21 seconds
      system cpu time      0.06 seconds
      memory               8704.46k
      OS Memory            53976.00k
      Timestamp            06/19/2024 04:54:03 PM
      Step Count                        320  Switch Count  0
```

```
MPRINT(EVENT_STUDY):   ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_all\BHARSO_3_evtrets_5days.pdf.
MPRINT(EVENT_STUDY):   run;
MPRINT(EVENT_STUDY):  quit;
MPRINT(EVENT_STUDY):   ods pdf close;
MLOGIC(EVENT_STUDY):  Ending execution.

5959  proc report data=allevtdate;
5960    column  model Cret_mean   car_mean   bhar_mean    car_t  scar_t  pat_car n ;
5961    define  model / display;
5962    define  Cret_mean / display;
5963    define  car_mean / display;
5964    define  bhar_mean / display;
5965   define   car_t / display;
5966   define   scar_t / display;
5967   define  pat_car / display;
5968   define n / display "total Obs";
5969
5970  run;

NOTE: Multiple concurrent threads will be used to summarize data.
NOTE: There were 4 observations read from the data set WORK.ALLEVTDATE.
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE REPORT used (Total process time):
      real time            0.04 seconds
      user cpu time        0.00 seconds
      system cpu time      0.01 seconds
      memory               8318.25k
      OS Memory            57632.00k
      Timestamp            06/19/2024 04:56:55 PM
      Step Count                        321  Switch Count  0


5971  PROC DATASETS NOLIST;
5972  COPY IN = work OUT = mergback ;
```

```
5973  select   or_ee_gvkey_patentid_record_dt,
                                           -
                                          22
                                          76
ERROR 22-322: Syntax error, expecting one of the following: a name, ;, (, -, /, :.
ERROR 76-322: Syntax error, statement will be ignored.
5974  my_all_trans, foreign_trans,aggforeign_trans,  foreign_trans_decile;
NOTE: Enter RUN; to continue or QUIT; to end the procedure.
5975  run;

NOTE: Statements not processed because of errors noted above.

NOTE: The SAS System stopped processing this step because of errors.
NOTE: PROCEDURE DATASETS used (Total process time):
      real time            38.38 seconds
      user cpu time        8.86 seconds
      system cpu time      1.53 seconds
      memory               292.59k
      OS Memory            52232.00k
      Timestamp            06/19/2024 05:03:05 PM
      Step Count                       322   Switch Count  1




5976  PROC DATASETS NOLIST;
5977  COPY IN = work OUT = mergback ;
5978  select   or_ee_gvkey_patentid_record_dt
5979  my_all_trans foreign_trans,aggforeign_trans  foreign_trans_decile;
                                  -
                                 22
                                200
NOTE: Enter RUN; to continue or QUIT; to end the procedure.
ERROR 22-322: Syntax error, expecting one of the following: a name, ;, (, -, /, :.
ERROR 200-322: The symbol is not recognized and will be ignored.
5980  run;

NOTE: Statements not processed because of errors noted above.
```

NOTE: The SAS System stopped processing this step because of errors.
NOTE: PROCEDURE DATASETS used (Total process time):
      real time   27.81 seconds
      user cpu time   8.73 seconds
      system cpu time   1.20 seconds
      memory   292.59k
      OS Memory   52232.00k
      Timestamp   06/19/2024 05:03:32 PM
      Step Count   323   Switch Count 1

5981   PROC DATASETS NOLIST;
5982   COPY IN = work OUT = mergback ;
5983   select   or_ee_gvkey_patentid_record_dt
5984   my_all_trans foreign_trans aggforeign_trans foreign_trans_decile;
5985   run;

NOTE: Copying WORK.OR_EE_GVKEY_PATENTID_RECORD_DT to MERGBACK.OR_EE_GVKEY_PATENTID_RECORD_DT (memtype=DATA).
INFO: Engine's block-read method is in use.
INFO: Engine's block-write method is in use.
NOTE: There were 124849 observations read from the data set WORK.OR_EE_GVKEY_PATENTID_RECORD_DT.
NOTE: The data set MERGBACK.OR_EE_GVKEY_PATENTID_RECORD_DT has 124849 observations and 42 variables.
NOTE: Copying WORK.MY_ALL_TRANS to MERGBACK.MY_ALL_TRANS (memtype=DATA).
INFO: Engine's block-read method is in use.
INFO: Engine's block-write method is in use.
NOTE: There were 124849 observations read from the data set WORK.MY_ALL_TRANS.
NOTE: The data set MERGBACK.MY_ALL_TRANS has 124849 observations and 44 variables.
NOTE: Copying WORK.FOREIGN_TRANS to MERGBACK.FOREIGN_TRANS (memtype=DATA).
INFO: Engine's block-read method is in use.
INFO: Engine's block-write method is in use.
NOTE: There were 25513 observations read from the data set WORK.FOREIGN_TRANS.
NOTE: The data set MERGBACK.FOREIGN_TRANS has 25513 observations and 44 variables.
NOTE: Copying WORK.AGGFOREIGN_TRANS to MERGBACK.AGGFOREIGN_TRANS (memtype=DATA).
INFO: Engine's block-read method is in use.
INFO: Engine's block-write method is in use.
NOTE: There were 18130 observations read from the data set WORK.AGGFOREIGN_TRANS.
NOTE: The data set MERGBACK.AGGFOREIGN_TRANS has 18130 observations and 8 variables.

NOTE: Copying WORK.FOREIGN_TRANS_DECILE to MERGBACK.FOREIGN_TRANS_DECILE (memtype=DATA).
INFO: Engine's block-read method is in use.
INFO: Engine's block-write method is in use.
NOTE: There were 18130 observations read from the data set WORK.FOREIGN_TRANS_DECILE.
NOTE: The data set MERGBACK.FOREIGN_TRANS_DECILE has 18130 observations and 9 variables.

NOTE: PROCEDURE DATASETS used (Total process time):
      real time   5:51:09.30
      user cpu time   13.14 seconds
      system cpu time   10.00 seconds
      memory   1205.00k
      OS Memory   52784.00k
      Timestamp   06/19/2024 10:54:42 PM
      Step Count   324 Switch Count 1

5986 PROC DATASETS NOLIST;
5987 COPY IN = work OUT = mergback ;
5988 select   my_compustat;
5989 run;

NOTE: Copying WORK.MY_COMPUSTAT to MERGBACK.MY_COMPUSTAT (memtype=DATA).
INFO: Engine's block-read method is in use.
INFO: Engine's block-write method is in use.
NOTE: There were 292339 observations read from the data set WORK.MY_COMPUSTAT.
NOTE: The data set MERGBACK.MY_COMPUSTAT has 292339 observations and 18 variables.

NOTE: PROCEDURE DATASETS used (Total process time):
      real time   3:23.09
      user cpu time   11.14 seconds
      system cpu time   7.81 seconds
      memory   710.15k
      OS Memory   52232.00k
      Timestamp   06/19/2024 10:58:05 PM
      Step Count   325 Switch Count 1

5990 proc sql;

```
5991      create table  oree_gvkey_record_dtv2_comp as
5992          select * from
5993          input as a
5994
5995           /*or_ee_gvkey_patentid_record_dt2 as a*/
5996               inner join
5997             my_compustat as b
5998             on a.or_gvkey = b.gvkey
5999             and    year(a.record_dt) = b.YEAR;
ERROR: Column or_gvkey could not be found in the table/view identified with the correlation name A.
ERROR: Column or_gvkey could not be found in the table/view identified with the correlation name A.
ERROR: Column record_dt could not be found in the table/view identified with the correlation name A.
ERROR: Column record_dt could not be found in the table/view identified with the correlation name A.
ERROR: Function YEAR requires a numeric expression as argument 1.
ERROR: Expression using equals (=) has components that are of different data types.
6000          /*and    year(a.record_dt) - b.FYEAR=1;*/
6001  quit;
NOTE: The SAS System stopped processing this step because of errors.
NOTE: PROCEDURE SQL used (Total process time):
      real time            0.00 seconds
      user cpu time        0.00 seconds
      system cpu time      0.00 seconds
      memory               5688.12k
      OS Memory            57356.00k
      Timestamp            06/19/2024 10:58:05 PM
      Step Count                        326  Switch Count  0


6002  run;


6003  proc sql;
6004      create table  oree_gvkey_record_dtv2_comp as
6005          select * from
6006          my_all_trans as a
6007
6008           /*or_ee_gvkey_patentid_record_dt2 as a*/
6009               inner join
6010             my_compustat as b
```

```
6011              on a.or_gvkey = b.gvkey
6012              and    year(a.record_dt) = b.YEAR;
NOTE: Table WORK.OREE_GVKEY_RECORD_DTV2_COMP created, with 94036 rows and 62 columns.

6013            /*and    year(a.record_dt) - b.FYEAR=1;*/
6014  quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time           0.48 seconds
      user cpu time       0.21 seconds
      system cpu time     0.25 seconds
      memory              57214.37k
      OS Memory           108352.00k
      Timestamp           06/19/2024 11:01:20 PM
      Step Count                          327  Switch Count  0


6015  run;

6016  PROC DATASETS NOLIST;
6017  COPY IN = work OUT = mergback ;
6018  select   my_all_trans;
6019  run;

NOTE: Copying WORK.MY_ALL_TRANS to MERGBACK.MY_ALL_TRANS (memtype=DATA).
INFO: Engine's block-read method is in use.
INFO: Engine's block-write  method is in use.
NOTE: There were 124849 observations read from the data set WORK.MY_ALL_TRANS.
NOTE: The data set MERGBACK.MY_ALL_TRANS has 124849 observations and 44 variables.

NOTE: PROCEDURE DATASETS used (Total process time):
      real time           20.89 seconds
      user cpu time       8.65 seconds
      system cpu time     0.76 seconds
      memory              1139.46k
      OS Memory           52784.00k
      Timestamp           06/19/2024 11:02:40 PM
      Step Count                          328  Switch Count  1
```

```
6020  PROC SQL;
6021    create table Evt_foreign_all_car1_day2_comp as
6022      select * from  car_evtdate as a
6023        inner join oree_gvkey_record_dtv2_comp as b
6024      on a.permno = b.permno and a.evtdate = b.record_dt;
WARNING: Variable permno already exists on file WORK.EVT_FOREIGN_ALL_CAR1_DAY2_COMP.
NOTE: Table WORK.EVT_FOREIGN_ALL_CAR1_DAY2_COMP created, with 27297 rows and 80 columns.

6025   quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time           0.21 seconds
      user cpu time       0.09 seconds
      system cpu time     0.10 seconds
      memory              6115.65k
      OS Memory           57656.00k
      Timestamp           06/19/2024 11:02:40 PM
      Step Count                      329  Switch Count  0


6026   run;

6027    PROC DATASETS NOLIST;
6028   COPY IN = work OUT = evtstudy ;
6029   select   foreign_trans_decile Evt_foreign_all_car1_day2_comp ;
6030   run;

NOTE: Copying WORK.FOREIGN_TRANS_DECILE to EVTSTUDY.FOREIGN_TRANS_DECILE (memtype=DATA).
INFO: Engine's block-read method is in use.
INFO: Engine's block-write  method is in use.
NOTE: There were 18130 observations read from the data set WORK.FOREIGN_TRANS_DECILE.
NOTE: The data set EVTSTUDY.FOREIGN_TRANS_DECILE has 18130 observations and 9 variables.
NOTE: Copying WORK.EVT_FOREIGN_ALL_CAR1_DAY2_COMP to EVTSTUDY.EVT_FOREIGN_ALL_CAR1_DAY2_COMP (memtype=DATA).
INFO: Engine's block-read method is in use.
INFO: Engine's block-write  method is in use.
NOTE: There were 27297 observations read from the data set WORK.EVT_FOREIGN_ALL_CAR1_DAY2_COMP.
NOTE: The data set EVTSTUDY.EVT_FOREIGN_ALL_CAR1_DAY2_COMP has 27297 observations and 80 variables.
WARNING: Apparent invocation of macro UNIQUE_VALUES not resolved.
```

```
6031  %unique_values(oree_gvkey_record_dtv2_comp,rf_id)
        -
        180
ERROR 180-322: Statement is not valid or it is used out of proper order.

6032  %macro uniquevalue(table, var_name1);
6033  Title "The count of total values and  unique variable &var_name1 from table &table";
6034  proc sql;
6035  select count(*) ,'total' as total from &table
6036  union
6037  select count(distinct &var_name1) as gvkey_N, "&var_name1" as uniq1 from  &table;
6038  quit;
6039  run;
6040  %mend uniquevalue;

6041

6042

6043
6044  %macro unique_values(table, var_name1, var_name2);
6045  Title "The count of total values and  unique variable &var_name1 and &var_name2 values from table &table";
6046  proc sql;
6047  select count(*) ,'total' as total from &table
6048  union
6049  select count(distinct &var_name1) as gvkey_N, "&var_name1" as uniq1 from  &table
6050  union
6051  select count(distinct &var_name2) as conm_N, "&var_name2" as unique_2 from &table;
6052  quit;
6053  run;
6054  %mend unique_values;
6055  *********************
6056  %uniquevalue(oree_gvkey_record_dtv2_comp,rf_id)
MLOGIC(UNIQUEVALUE):  Beginning execution.
MLOGIC(UNIQUEVALUE):  Parameter TABLE has value oree_gvkey_record_dtv2_comp
MLOGIC(UNIQUEVALUE):  Parameter VAR_NAME1 has value rf_id
MPRINT(UNIQUEVALUE):   Title "The count of total values and  unique variable rf_id from table
oree_gvkey_record_dtv2_comp";
NOTE: Enter RUN; to continue or QUIT; to end the procedure.

NOTE: The SAS System stopped processing this step because of errors.
```

```
NOTE: PROCEDURE DATASETS used (Total process time):
      real time            5:20.39
      user cpu time        35.53 seconds
      system cpu time      7.51 seconds
      memory               1305.93k
      OS Memory            52864.00k
      Timestamp            06/19/2024 11:12:27 PM
      Step Count                        330  Switch Count  3


MPRINT(UNIQUEVALUE):   proc sql;
MPRINT(UNIQUEVALUE):   select count(*) ,'total' as total from oree_gvkey_record_dtv2_comp union select count(distinct
rf_id) as gvkey_N, "rf_id" as uniq1 from oree_gvkey_record_dtv2_comp;
MPRINT(UNIQUEVALUE):   quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time            0.21 seconds
      user cpu time        0.15 seconds
      system cpu time      0.03 seconds
      memory               8642.06k
      OS Memory            57656.00k
      Timestamp            06/19/2024 11:12:27 PM
      Step Count                        331  Switch Count  0


MPRINT(UNIQUEVALUE):   run;
MLOGIC(UNIQUEVALUE):  Ending execution.

6057  %uniquevalue(my_all_trans)
MLOGIC(UNIQUEVALUE):  Beginning execution.
MLOGIC(UNIQUEVALUE):  Parameter TABLE has value my_all_trans
MLOGIC(UNIQUEVALUE):  Parameter VAR_NAME1 has value
MPRINT(UNIQUEVALUE):   Title "The count of total values and  unique variable  from table my_all_trans";
MPRINT(UNIQUEVALUE):   proc sql;
NOTE: Line generated by the invoked macro "UNIQUEVALUE".
1                                                                                            select count(*)
1   ! ,'total' as total from &table union select count(distinct &var_name1) as gvkey_N, "&var_name1" as uniq1 from
                                                    -
```

```
1    ! &table; quit; run;
MPRINT(UNIQUEVALUE):   select count(*) ,'total' as total from my_all_trans union select count(distinct ) as gvkey_N ,
"" as uniq1 from my_all_trans;
ERROR 22-322: Syntax error, expecting one of the following: a name, a quoted string, a numeric constant,
              a datetime constant, a missing value, *, BTRIM, INPUT, PUT, SUBSTRING, USER.

MPRINT(UNIQUEVALUE):   quit;
NOTE: The SAS System stopped processing this step because of errors.
NOTE: PROCEDURE SQL used (Total process time):
      real time           0.00 seconds
      user cpu time       0.00 seconds
      system cpu time     0.00 seconds
      memory              74.06k
      OS Memory           50952.00k
      Timestamp           06/19/2024 11:13:21 PM
      Step Count                         332  Switch Count  0


MPRINT(UNIQUEVALUE):   run;
MLOGIC(UNIQUEVALUE):  Ending execution.



6058  %uniquevalue(my_all_trans,rf_id)
MLOGIC(UNIQUEVALUE):  Beginning execution.
MLOGIC(UNIQUEVALUE):  Parameter TABLE has value my_all_trans
MLOGIC(UNIQUEVALUE):  Parameter VAR_NAME1 has value rf_id
MPRINT(UNIQUEVALUE):   Title "The count of total values and  unique variable rf_id from table my_all_trans";
MPRINT(UNIQUEVALUE):   proc sql;
MPRINT(UNIQUEVALUE):   select count(*) ,'total' as total from my_all_trans union select count(distinct rf_id) as
gvkey_N, "rf_id" as uniq1 from my_all_trans;
MPRINT(UNIQUEVALUE):   quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time           0.25 seconds
      user cpu time       0.10 seconds
      system cpu time     0.14 seconds
      memory              11365.84k
      OS Memory           57888.00k
      Timestamp           06/19/2024 11:13:41 PM
```

MPRINT(UNIQUEVALUE):   run;
MLOGIC(UNIQUEVALUE): Ending execution.

6059   proc sql;
6060   select count(*) from (
6061   select distinct rf_id, or_gvkey,   count(*)
6062   from oree_gvkey_record_dtv2_comp
6063   group by rf_id, or_gvkey);
NOTE: SAS threaded sort was used.
6064   quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time   0.21 seconds
      user cpu time   0.09 seconds
      system cpu time   0.12 seconds
      memory   38710.12k
      OS Memory   88284.00k
      Timestamp   06/19/2024 11:18:28 PM
      Step Count   334   Switch Count 0

6065   run;

6066   %uniquevalue(my_all_trans,or_gvkey)
MLOGIC(UNIQUEVALUE): Beginning execution.
MLOGIC(UNIQUEVALUE): Parameter TABLE has value my_all_trans
MLOGIC(UNIQUEVALUE): Parameter VAR_NAME1 has value or_gvkey
MPRINT(UNIQUEVALUE):   Title "The count of total values and unique variable or_gvkey from table my_all_trans";
MPRINT(UNIQUEVALUE):   proc sql;
MPRINT(UNIQUEVALUE):   select count(*) ,'total' as total from my_all_trans union select count(distinct or_gvkey) as
gvkey_N, "or_gvkey" as uniq1 from my_all_trans;
MPRINT(UNIQUEVALUE):   quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time   0.20 seconds
      user cpu time   0.04 seconds
      system cpu time   0.12 seconds

```
        memory                  5975.68k
        OS Memory               56352.00k
        Timestamp               06/19/2024 11:21:04 PM
        Step Count                          335  Switch Count  0


MPRINT(UNIQUEVALUE):   run;
MLOGIC(UNIQUEVALUE):  Ending execution.

6067  proc sql  NOREMERGE;
6068  create table aggforeign_trans as
6069  select  distinct permno
6070          ,or_gvkey
6071          ,record_dt
6072          ,sum(pac_size) as agg_pack_size
6073          ,sum(total_cites) as agg_total_cites
6074          ,sum(vreal) as agg_vreal
6075          ,sum(vnominal) as agg_vnominal
6076          ,min(taxdiff) as  taxdiff
6077          ,min(rec_exec_days) as rec_exec_days
6078          from foreign_trans
6079     group by permno, record_dt;
ERROR: The query requires remerging summary statistics back with the original data.  This is disallowed due to the
       NOREMERGE proc option or NOSQLREMERGE system option.
6080     quit;
NOTE: The SAS System stopped processing this step because of errors.
NOTE: PROCEDURE SQL used (Total process time):
        real time             0.01 seconds
        user cpu time         0.00 seconds
        system cpu time       0.01 seconds
        memory                5663.78k
        OS Memory             56352.00k
        Timestamp             06/19/2024 11:28:47 PM
        Step Count                          336  Switch Count  0


6081  run;
```

```
6082   proc rank  data=aggforeign_trans
6083            out = foreign_trans_decile groups=10;
6084       var taxdiff;
6085   ranks decile;
6086   run;
```

NOTE: The data set WORK.FOREIGN_TRANS_DECILE has 18130 observations and 9 variables.
NOTE: PROCEDURE RANK used (Total process time):
      real time   0.04 seconds
      user cpu time   0.04 seconds
      system cpu time   0.03 seconds
      memory   2742.18k
      OS Memory   53004.00k
      Timestamp   06/19/2024 11:29:13 PM
      Step Count   337   Switch Count 0


```
6087    proc sql;
6088       create table  aggforeign_trans_record_dt_comp as
6089           select * from
6090           aggforeign_trans as a
6091
6092            /*or_ee_gvkey_patentid_record_dt2 as a*/
6093                inner join
6094              my_compustat as b
6095              on a.or_gvkey = b.gvkey
6096              and    year(a.record_dt) = b.YEAR;
```
ERROR: Column or_gvkey could not be found in the table/view identified with the correlation name A.
ERROR: Column or_gvkey could not be found in the table/view identified with the correlation name A.
```
6097          /*and    year(a.record_dt) - b.FYEAR=1;*/
6098   quit;
```
NOTE: The SAS System stopped processing this step because of errors.
NOTE: PROCEDURE SQL used (Total process time):
      real time   0.01 seconds
      user cpu time   0.00 seconds
      system cpu time   0.01 seconds
      memory   5692.37k
      OS Memory   56076.00k

```
          Timestamp              06/19/2024 11:31:49 PM
          Step Count                       338  Switch Count  0


6099  run;


6100  proc sql  NOREMERGE;
6101  create table aggforeign_trans as
6102  select  distinct permno
6103          ,or_gvkey
6104          ,record_dt
6105          ,sum(pac_size) as agg_pack_size
6106          ,sum(total_cites) as agg_total_cites
6107          ,sum(vreal) as agg_vreal
6108          ,sum(vnominal) as agg_vnominal
6109          ,min(taxdiff) as  taxdiff
6110          ,min(rec_exec_days) as rec_exec_days
6111          from foreign_trans
6112    group by permno, record_dt;
ERROR: The query requires remerging summary statistics back with the original data.  This is disallowed due to the
       NOREMERGE proc option or NOSQLREMERGE system option.
6113    quit;
NOTE: The SAS System stopped processing this step because of errors.
NOTE: PROCEDURE SQL used (Total process time):
      real time           0.01 seconds
      user cpu time       0.01 seconds
      system cpu time     0.00 seconds
      memory              5665.56k
      OS Memory           56352.00k
      Timestamp           06/19/2024 11:32:43 PM
      Step Count                       339  Switch Count  0


6114  run;


6115  proc rank  data=aggforeign_trans
6116            out = foreign_trans_decile groups=10;
6117      var taxdiff;
```

```
6118   ranks decile;
6119   run;
```

```
6120   proc sql  NOREMERGE;
6121   create table aggforeign_trans as
6122   select  distinct permno
6123           ,or_gvkey
6124           ,record_dt
6125           ,sum(pac_size) as agg_pack_size
6126           ,sum(total_cites) as agg_total_cites
6127           ,sum(vreal) as agg_vreal
6128           ,sum(vnominal) as agg_vnominal
6129           ,min(taxdiff) as  taxdiff
6130           ,min(rec_exec_days) as rec_exec_days
6131           from foreign_trans
6132      group by permno, or_gvkey,record_dt;
```

```
6133     quit;
```

6134 run;

6135 proc rank data=aggforeign_trans
6136   out = foreign_trans_decile groups=10;
6137   var taxdiff;
6138 ranks decile;
6139 run;

NOTE: The data set WORK.FOREIGN_TRANS_DECILE has 18130 observations and 10 variables.
NOTE: PROCEDURE RANK used (Total process time):
      real time   2.36 seconds
      user cpu time   0.04 seconds
      system cpu time   0.03 seconds
      memory   2743.18k
      OS Memory   53004.00k
      Timestamp   06/19/2024 11:34:22 PM
      Step Count   342 Switch Count O

6140 proc sort data = foreign_trans_decile NODUPKEY;
6141 by permno record_dt;
6142 run;

NOTE: There were 18130 observations read from the data set WORK.FOREIGN_TRANS_DECILE.
NOTE: SAS sort was used.
NOTE: O observations with duplicate key values were deleted.
NOTE: The data set WORK.FOREIGN_TRANS_DECILE has 18130 observations and 10 variables.
NOTE: PROCEDURE SORT used (Total process time):
      real time   0.01 seconds
      user cpu time   0.01 seconds
      system cpu time   0.00 seconds
      memory   5053.75k
      OS Memory   55328.00k
      Timestamp   06/19/2024 11:34:54 PM
      Step Count   343 Switch Count O

```
6143   PROC DATASETS NOLIST;
6144   COPY IN = work OUT = mergback ;
6145   select
6146               aggforeign_trans
6147           foreign_trans_decile;
6148   run;
```

NOTE: Copying WORK.AGGFOREIGN_TRANS to MERGBACK.AGGFOREIGN_TRANS (memtype=DATA).
INFO: Engine's block-read method is in use.
INFO: Engine's block-write method is in use.
NOTE: There were 18130 observations read from the data set WORK.AGGFOREIGN_TRANS.
NOTE: The data set MERGBACK.AGGFOREIGN_TRANS has 18130 observations and 9 variables.
NOTE: Copying WORK.FOREIGN_TRANS_DECILE to MERGBACK.FOREIGN_TRANS_DECILE (memtype=DATA).
INFO: Engine's block-read method is in use.
INFO: Engine's block-write method is in use.
NOTE: There were 18130 observations read from the data set WORK.FOREIGN_TRANS_DECILE.
NOTE: The data set MERGBACK.FOREIGN_TRANS_DECILE has 18130 observations and 10 variables.

NOTE: PROCEDURE DATASETS used (Total process time):
      real time   16.06 seconds
      user cpu time   8.31 seconds
      system cpu time   0.65 seconds
      memory   709.90k
      OS Memory   50952.00k
      Timestamp   06/19/2024 11:35:27 PM
      Step Count   344 Switch Count 1

6149   proc sql;
6150   create table aggforeign_trans_record_dt_comp as
6151   select * from
6152   aggforeign_trans as a
6153
6154   /*or_ee_gvkey_patentid_record_dt2 as a*/
6155   inner join
6156   my_compustat as b
```

```
6157              on a.or_gvkey = b.gvkey
6158              and    year(a.record_dt) = b.YEAR;
NOTE: Table WORK.AGGFOREIGN_TRANS_RECORD_DT_COMP created, with 19313 rows and 27 columns.

6159           /*and    year(a.record_dt) - b.FYEAR=1;*/
6160  quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time              0.08 seconds
      user cpu time          0.06 seconds
      system cpu time        0.01 seconds
      memory                 5726.78k
      OS Memory              56076.00k
      Timestamp              06/19/2024 11:35:27 PM
      Step Count                      345  Switch Count  0


6161  run;

6162  ROC SQL;
      ---
      180

ERROR 180-322: Statement is not valid or it is used out of proper order.

6163    create table Evt_foreign_all_car1_day2_comp as
          ------
           180
ERROR 180-322: Statement is not valid or it is used out of proper order.
6164     select * from  car_evtdate as a
6165        inner join aggforeign_trans_record_dt_comp as b
6166     on a.permno = b.permno and a.evtdate = b.record_dt;

6167   quit;
6168   run;

6169  PROC SQL;
6170    create table Evt_foreign_all_car1_day2_comp as
6171     select * from  car_evtdate as a
```

```
6172        inner join aggforeign_trans_record_dt_comp as b
6173     on a.permno = b.permno and a.evtdate = b.record_dt;
WARNING: Variable permno already exists on file WORK.EVT_FOREIGN_ALL_CAR1_DAY2_COMP.
NOTE: Table WORK.EVT_FOREIGN_ALL_CAR1_DAY2_COMP created, with 18414 rows and 45 columns.

6174   quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time           0.04 seconds
      user cpu time       0.04 seconds
      system cpu time     0.01 seconds
      memory              5744.31k
      OS Memory           56076.00k
      Timestamp           06/19/2024 11:36:50 PM
      Step Count                        346  Switch Count  0


6175   run;

6176   PROC DATASETS NOLIST;
6177   COPY IN = work OUT = evtstudy ;
6178   select   foreign_trans_decile Evt_foreign_all_car1_day2_comp ;
6179   run;

NOTE: Copying WORK.FOREIGN_TRANS_DECILE to EVTSTUDY.FOREIGN_TRANS_DECILE (memtype=DATA).
INFO: Engine's block-read method is in use.
INFO: Engine's block-write  method is in use.
NOTE: There were 18130 observations read from the data set WORK.FOREIGN_TRANS_DECILE.
NOTE: The data set EVTSTUDY.FOREIGN_TRANS_DECILE has 18130 observations and 10 variables.
NOTE: Copying WORK.EVT_FOREIGN_ALL_CAR1_DAY2_COMP to EVTSTUDY.EVT_FOREIGN_ALL_CAR1_DAY2_COMP (memtype=DATA).
INFO: Engine's block-read method is in use.
INFO: Engine's block-write  method is in use.
NOTE: There were 18414 observations read from the data set WORK.EVT_FOREIGN_ALL_CAR1_DAY2_COMP.
NOTE: The data set EVTSTUDY.EVT_FOREIGN_ALL_CAR1_DAY2_COMP has 18414 observations and 45 variables.

NOTE: PROCEDURE DATASETS used (Total process time):
      real time           15:16.29
      user cpu time       10.53 seconds
      system cpu time     4.36 seconds
```

```
        memory              802.56k
        OS Memory           50952.00k
        Timestamp           06/19/2024 11:52:45 PM
        Step Count                          347  Switch Count  1


6180  data  foreign_trans_exec_record10; * There were 25513 observations;
6181      set aggforeign_trans (where =( NOT missing(permno)
6182                                  and 0 le rec_exec_days<5));
6183
6184  run;

NOTE: There were 792 observations read from the data set WORK.AGGFOREIGN_TRANS.
      WHERE (not MISSING(permno)) and (rec_exec_days>=0 and rec_exec_days<5);
NOTE: The data set WORK.FOREIGN_TRANS_EXEC_RECORD10 has 792 observations and 9 variables.
NOTE: DATA statement used (Total process time):
      real time           0.09 seconds
      user cpu time       0.01 seconds
      system cpu time     0.01 seconds
      memory              653.09k
      OS Memory           50952.00k
      Timestamp           06/19/2024 11:52:45 PM
      Step Count                          348  Switch Count  0


6185  proc rank  data=foreign_trans_exec_record10
6186          out = foreign_trans_execrec10_decile groups=10;
6187      var taxdiff;
6188  ranks decile;
6189  run;

NOTE: The data set WORK.FOREIGN_TRANS_EXECREC10_DECILE has 792 observations and 10 variables.
NOTE: PROCEDURE RANK used (Total process time):
      real time           0.03 seconds
      user cpu time       0.00 seconds
      system cpu time     0.00 seconds
      memory              2475.96k
      OS Memory           53004.00k
```

6190
6191 data foreign_trans_execrec10_dec10;
6192 set foreign_trans_execrec10_decile (where = (decile=9));
6193 run;

NOTE: There were 74 observations read from the data set WORK.FOREIGN_TRANS_EXECREC10_DECILE.
      WHERE decile=9;
NOTE: The data set WORK.FOREIGN_TRANS_EXECREC10_DEC10 has 74 observations and 10 variables.
NOTE: DATA statement used (Total process time):
      real time   0.03 seconds
      user cpu time   0.00 seconds
      system cpu time   0.03 seconds
      memory   639.87k
      OS Memory   50952.00k
      Timestamp   06/19/2024 11:55:15 PM
      Step Count   350 Switch Count 0

6194 %event_study(outputPath=C:\Users\lihon\OneDrive - Kent State
6194! University\aaaa\event_Study\result\agg_foreign_rec_exe10
MLOGIC(EVENT_STUDY): Beginning execution.
6195   ,permno_list = foreign_trans_execrec10_decile)
MLOGIC(EVENT_STUDY): Parameter OUTPUTPATH has value C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10
MLOGIC(EVENT_STUDY): Parameter PERMNO_LIST has value foreign_trans_execrec10_decile
MPRINT(EVENT_STUDY):   libname mycrsp "C:\Users\lihon\patent Dropbox\Victor Li\wrds_data";
NOTE: Libref MYCRSP was successfully assigned as follows:
      Engine: V9
      Physical Name: C:\Users\lihon\patent Dropbox\Victor Li\wrds_data
MPRINT(EVENT_STUDY):   libname evtstudy "C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\agg_foreign_rec_exe10";
NOTE: Libref EVTSTUDY was successfully assigned as follows:
      Engine: V9
      Physical Name: C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\result\agg_foreign_rec_exe10

```
MLOGIC(EVENT_STUDY):   %LET (variable name is CRSP)
MLOGIC(EVENT_STUDY):   %LET (variable name is ESTPER)
MLOGIC(EVENT_STUDY):   %LET (variable name is START)
MLOGIC(EVENT_STUDY):   %LET (variable name is END)
MLOGIC(EVENT_STUDY):   %LET (variable name is GAP)
MLOGIC(EVENT_STUDY):   %LET (variable name is MINEST)
MLOGIC(EVENT_STUDY):   %LET (variable name is EVTWIN)
MPRINT(EVENT_STUDY):    proc sql;
MPRINT(EVENT_STUDY):    create table input as select distinct permno, record_dt as edate format MMDDYY10. from
foreign_trans_execrec10_decile where not missing(-2) and year(record_dt);
NOTE: Table WORK.INPUT created, with 792 rows and 2 columns.

MPRINT(EVENT_STUDY):    quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time           0.04 seconds
      user cpu time       0.01 seconds
      system cpu time     0.01 seconds
      memory              5428.46k
      OS Memory           56076.00k
      Timestamp           06/19/2024 11:59:00 PM
      Step Count                        351  Switch Count  0


MPRINT(EVENT_STUDY):    data caldates;
MPRINT(EVENT_STUDY):    merge mycrsp.dsi(keep=date rename=(date=estper_beg)) mycrsp.dsi(keep=date firstobs=150
rename=(date=estper_end)) mycrsp.dsi(keep=date firstobs=217 rename=(date=evtwin_beg)) mycrsp.dsi(keep=date
firstobs=219 rename=(date=evtdate)) mycrsp.dsi(keep=date firstobs=221 rename=(date=evtwin_end));
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
```

might reduce performance.
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
MPRINT(EVENT_STUDY):   format estper_beg estper_end evtwin_beg evtdate evtwin_end date9.;
MPRINT(EVENT_STUDY):   label estper_beg= 'Start of the Estimation Window' estper_end= 'End of the Estimation Window'
evtwin_beg= 'Start of the Event Window' evtwin_end= 'End of the Event Window' evtdate= 'Event Date';
MPRINT(EVENT_STUDY):   index+1;
MPRINT(EVENT_STUDY):   if nmiss(estper_beg,estper_end,evtwin_beg,evtwin_end,evtdate)=0;
MPRINT(EVENT_STUDY):   run;

NOTE: There were 25799 observations read from the data set MYCRSP.DSI.
NOTE: There were 25650 observations read from the data set MYCRSP.DSI.
NOTE: There were 25583 observations read from the data set MYCRSP.DSI.
NOTE: There were 25581 observations read from the data set MYCRSP.DSI.
NOTE: There were 25579 observations read from the data set MYCRSP.DSI.
NOTE: The data set WORK.CALDATES has 25579 observations and 6 variables.
NOTE: DATA statement used (Total process time):
      real time   0.08 seconds
      user cpu time   0.06 seconds
      system cpu time   0.00 seconds
      memory   1617.34k
      OS Memory   50952.00k
      Timestamp   06/19/2024 11:59:00 PM
      Step Count   352 Switch Count 0

MPRINT(EVENT_STUDY):   proc sql;
MPRINT(EVENT_STUDY):   create table temp as select a.permno ,b.* from input a left join caldates b on
b.evtdate-a.edate>=0 group by a.edate having (b.evtdate-a.edate)=min(b.evtdate-a.edate);
NOTE: The execution of this query involves performing one or more Cartesian product joins that can not be optimized.
NOTE: The query requires remerging summary statistics back with the original data.
NOTE: SAS threaded sort was used.
NOTE: Table WORK.TEMP created, with 792 rows and 7 columns.

NOTE: PROCEDURE SQL used (Total process time):
      real time   2.21 seconds
      user cpu time   2.68 seconds

```
      system cpu time     0.56 seconds
      memory              225744.09k
      OS Memory           274024.00k
      Timestamp           06/19/2024 11:59:03 PM
      Step Count                        353  Switch Count  0


MPRINT(EVENT_STUDY):   proc sql;
MPRINT(EVENT_STUDY):    create table evtrets_temp as select a.permno, a.date format date9., a.ret as ret1, b.evtdate,
b.estper_beg, b.estper_end, b.evtwin_beg, b.evtwin_end from mycrsp.dsf a, temp b where a.permno=b.permno and
b.estper_beg<=a.date<=b.evtwin_end;
INFO: Data file MYCRSP.DSF.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
NOTE: Table WORK.EVTRETS_TEMP created, with 174239 rows and 8 columns.

MPRINT(EVENT_STUDY):   quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time           36.84 seconds
      user cpu time       36.01 seconds
      system cpu time     0.81 seconds
      memory              5847.93k
      OS Memory           56076.00k
      Timestamp           06/19/2024 11:59:40 PM
      Step Count                        354  Switch Count  0


MPRINT(EVENT_STUDY):   proc sql;
MPRINT(EVENT_STUDY):    create view evtrets1 as select a.*, (b.mktrf+b.rf) as mkt, b.mktrf, b.rf,b.smb, b.hml, b.umd
from evtrets_temp a left join mycrsp.ff_factors_daily (keep=date mktrf smb hml umd rf) b on a.date=b.date;
NOTE: SQL view WORK.EVTRETS1 has been defined.
MPRINT(EVENT_STUDY):   quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time           0.03 seconds
      user cpu time       0.00 seconds
      system cpu time     0.00 seconds
      memory              90.12k
      OS Memory           50952.00k
```

MPRINT(EVENT_STUDY):   proc sql;
MPRINT(EVENT_STUDY):   create table evtrets (drop=ret1 where=(not missing(mkt))) as select a.*,
(1+a.ret1)*sum(1,b.dlret)-1-a.mkt as exret label='Market-adjusted total ret', (1+a.ret1)*sum(1,b.dlret)-1 as ret "Ret
adjusted for delisting" from evtrets1 a left join mycrsp.dsedelist (where=(missing(dlret)=0)) b on a.permno=b.permno
and a.date=b.dlstdt order by a.permno,a.evtdate,a.date;
INFO: Data file MYCRSP.FF_FACTORS_DAILY.DATA is in a format that is native to another host, or the file encoding does
not match the session encoding. Cross Environment Data Access will be used, which might require additional CPU
resources and might reduce performance.
INFO: Data file MYCRSP.DSEDELIST.DATA is in a format that is native to another host, or the file encoding does not
match the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources
and might reduce performance.
NOTE: SAS threaded sort was used.
NOTE: Table WORK.EVTRETS created, with 174239 rows and 15 columns.

MPRINT(EVENT_STUDY):   quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time   0.63 seconds
      user cpu time   0.76 seconds
      system cpu time   0.23 seconds
      memory   49330.21k
      OS Memory   95520.00k
      Timestamp   06/19/2024 11:59:40 PM
      Step Count   356 Switch Count 0

MPRINT(EVENT_STUDY):   proc printto log=junk;
MPRINT(EVENT_STUDY):   run;

NOTE: PROCEDURE PRINTTO used (Total process time):
      real time   0.00 seconds
      user cpu time   0.00 seconds
      system cpu time   0.00 seconds
      memory   7.03k
      OS Memory   50952.00k

```
MPRINT(EVENT_STUDY):   data abrets1/view=abrets1;
MPRINT(EVENT_STUDY):    merge evtrets(where=(evtwin_beg<=date<=evtwin_end) in=in_evtrets) params
(where=(_model_='eq0') keep=permno evtdate _model_ _rmse_ _p_ _edf_ rename=(_rmse_=std0 _p_=p0 _edf_=edf0)) params
(where=(_model_='eq1') keep=permno evtdate _model_ _rmse_ intercept mktrf rename=(_rmse_=std1 intercept=alpha1
mktrf=beta1)) params (where=(_model_='eq2') keep=permno evtdate _model_ _rmse_ intercept mktrf smb hml
rename=(_rmse_=std2 intercept=alpha2 mktrf=beta2 smb=sminb2 hml=hminl2)) params (where=(_model_='eq3') keep=permno
evtdate _model_ _rmse_ intercept mktrf smb hml umd rename=(_rmse_=std3 intercept=alpha3 mktrf=beta3 smb=sminb3
hml=hminl3 umd=umind3));
MPRINT(EVENT_STUDY):   by permno evtdate;
MPRINT(EVENT_STUDY):   retain missret;
MPRINT(EVENT_STUDY):   if first.permno then missret=missing(ret);
MPRINT(EVENT_STUDY):   if missing(ret) then missret+1;
MPRINT(EVENT_STUDY):   var0=std0**2;
MPRINT(EVENT_STUDY):   var1=std1**2;
MPRINT(EVENT_STUDY):   var2=std2**2;
MPRINT(EVENT_STUDY):   var3=std3**2;
MPRINT(EVENT_STUDY):   abret0 = exret;
MPRINT(EVENT_STUDY):   *extra over market;
MPRINT(EVENT_STUDY):   expret1 = alpha1 + beta1*mktrf;
MPRINT(EVENT_STUDY):   *CAPM;
MPRINT(EVENT_STUDY):   abret1 = ret-expret1;
MPRINT(EVENT_STUDY):   expret2 = alpha2+beta2*mktrf+sminb2*smb+hminl2*hml;
MPRINT(EVENT_STUDY):   *FF3factor;
MPRINT(EVENT_STUDY):   abret2=ret-expret2;
MPRINT(EVENT_STUDY):   expret3 =alpha3+beta3*mktrf+sminb3*smb+hminl3*hml+umind3*umd;
MPRINT(EVENT_STUDY):   abret3=ret-expret3;
MPRINT(EVENT_STUDY):   nobs=p0+edf0;
MPRINT(EVENT_STUDY):   drop p0 edf0 estper_beg estper_end std0 std1 std2 std3 _model_ exret;
MPRINT(EVENT_STUDY):   if in_evtrets and nobs>70;
MPRINT(EVENT_STUDY):   * I add the followings;
MPRINT(EVENT_STUDY):   if nobs=150;
MPRINT(EVENT_STUDY):   run;
```

NOTE: DATA STEP view saved on file WORK.ABRETS1.

```
NOTE: A stored DATA STEP view cannot run under a different operating system.
NOTE: DATA statement used (Total process time):
      real time            0.03 seconds
      user cpu time        0.00 seconds
      system cpu time      0.01 seconds
      memory               1362.06k
      OS Memory            51212.00k
      Timestamp            06/19/2024 11:59:41 PM
      Step Count                        360  Switch Count  0


MPRINT(EVENT_STUDY):   proc sql;
MPRINT(EVENT_STUDY):   create table abrets as select a.*, (b.index-c.index) as evttime from abrets1 a left join
caldates b on a.date = b.evtdate left join caldates c on a.evtdate = c.evtdate order by permno, evtdate, date;
NOTE: SAS threaded sort was used.
INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
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INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
NOTE: Missing values were generated as a result of performing an operation on missing values.
      Each place is given by: (Number of times) at (Line):(Column).
      5 at 8272:71    5 at 8272:87    5 at 8272:103   5 at 8272:119   5 at 8272:190   5 at 8272:221   5 at 8273:14
      5 at 8273:68    5 at 8273:102   5 at 8273:155   5 at 8273:175
NOTE: View WORK.ABRETS1.VIEW used (Total process time):
      real time            0.15 seconds
      user cpu time        0.15 seconds
      system cpu time      0.12 seconds
      memory               45914.85k
      OS Memory            91740.00k
      Timestamp            06/19/2024 11:59:45 PM
      Step Count                        361  Switch Count  24


NOTE: There were 3955 observations read from the data set WORK.EVTRETS.
      WHERE (evtwin_beg<=date) and (date<=evtwin_end);
NOTE: There were 790 observations read from the data set WORK.PARAMS.
      WHERE _model_='eq0';
```

```
NOTE: There were 790 observations read from the data set WORK.PARAMS.
      WHERE _model_='eq1';
NOTE: There were 790 observations read from the data set WORK.PARAMS.
      WHERE _model_='eq2';
NOTE: There were 790 observations read from the data set WORK.PARAMS.
      WHERE _model_='eq3';
NOTE: Table WORK.ABRETS created, with 3905 rows and 37 columns.

MPRINT(EVENT_STUDY):   quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time            4.26 seconds
      user cpu time        4.20 seconds
      system cpu time      0.17 seconds
      memory               45914.85k
      OS Memory            91740.00k
      Timestamp            06/19/2024 11:59:45 PM
      Step Count                      361  Switch Count  25


MPRINT(EVENT_STUDY):   proc sort data=abrets nodupkey;
MPRINT(EVENT_STUDY):   by PERMNO evtdate DATE evtwin_beg evtwin_end mkt mktrf rf smb hml umd ret alpha1 beta1 alpha2
beta2 sminb2 hminl2 alpha3 beta3 sminb3 hminl3 umind3 missret var0 var1 var2 var3 abret0 expret1 abret1 expret2
abret2 expret3 abret3 nobs evttime ;
MPRINT(EVENT_STUDY):   run;

NOTE: There were 3905 observations read from the data set WORK.ABRETS.
NOTE: SAS sort was used.
NOTE: 0 observations with duplicate key values were deleted.
NOTE: The data set WORK.ABRETS has 3905 observations and 37 variables.
NOTE: PROCEDURE SORT used (Total process time):
      real time            0.03 seconds
      user cpu time        0.00 seconds
      system cpu time      0.03 seconds
      memory               3981.50k
      OS Memory            54300.00k
      Timestamp            06/19/2024 11:59:45 PM
      Step Count                      362  Switch Count  0
```

```
MPRINT(EVENT_STUDY):   proc expand data=abrets out=car method=none;
MPRINT(EVENT_STUDY):   by permno evtdate;
MPRINT(EVENT_STUDY):   id date;
MPRINT(EVENT_STUDY):   convert ret=cret/transformout=(+1 cuprod -1);
MPRINT(EVENT_STUDY):   convert mkt=cmkt/transformout=(+1 cuprod -1);
MPRINT(EVENT_STUDY):   convert expret1 =cexpret1 /transformout=(+1 cuprod -1);
MPRINT(EVENT_STUDY):   convert expret2 =cexpret2 /transformout=(+1 cuprod -1);
MPRINT(EVENT_STUDY):   convert expret3 =cexpret3 /transformout=(+1 cuprod -1);
MPRINT(EVENT_STUDY):   convert abret0=car0/transformout=(sum);
MPRINT(EVENT_STUDY):   convert abret1=car1/transformout=(sum);
MPRINT(EVENT_STUDY):   convert abret2=car2/transformout=(sum);
MPRINT(EVENT_STUDY):   convert abret3=car3/transformout=(sum);
MPRINT(EVENT_STUDY):   run;

NOTE: The data set WORK.CAR has 3905 observations and 46 variables.
NOTE: PROCEDURE EXPAND used (Total process time):
      real time            0.10 seconds
      user cpu time        0.04 seconds
      system cpu time      0.04 seconds
      memory               972.46k
      OS Memory            51472.00k
      Timestamp            06/19/2024 11:59:45 PM
      Step Count                        363  Switch Count  0


MPRINT(EVENT_STUDY):   proc printto log=junk;
MPRINT(EVENT_STUDY):  run;

NOTE: PROCEDURE PRINTTO used (Total process time):
      real time            0.00 seconds
      user cpu time        0.00 seconds
      system cpu time      0.00 seconds
      memory               7.03k
      OS Memory            50952.00k
      Timestamp            06/19/2024 11:59:45 PM
      Step Count                        366  Switch Count  0
```

```
MPRINT(EVENT_STUDY):    data allcars;
MPRINT(EVENT_STUDY):    merge car_evtwin (rename=(bhar0=bhar0win bhar1=bhar1win bhar2=bhar2win bhar3=bhar3win
car0=car0win car1=car1win car2=car2win car3=car3win cret=cretwin)) car_evtdate;
MPRINT(EVENT_STUDY):    by permno evtdate;
MPRINT(EVENT_STUDY):    run;

NOTE: There were 3905 observations read from the data set WORK.CAR_EVTWIN.
NOTE: There were 781 observations read from the data set WORK.CAR_EVTDATE.
NOTE: The data set WORK.ALLCARS has 3905 observations and 59 variables.
NOTE: DATA statement used (Total process time):
      real time           0.03 seconds
      user cpu time       0.00 seconds
      system cpu time     0.01 seconds
      memory              1194.93k
      OS Memory           50952.00k
      Timestamp           06/19/2024 11:59:45 PM
      Step Count                        367  Switch Count  0


MPRINT(EVENT_STUDY):    * proc means data=allcars noprint;
MPRINT(EVENT_STUDY):    proc means data=allcars( where = (nobs=150)) noprint;
MPRINT(EVENT_STUDY):    class evttime;
MPRINT(EVENT_STUDY):    id nobs;
MPRINT(EVENT_STUDY):    var ret cret car0 car1 car2 car3 cretwin car0win car1win car2win car3win bhar0 bhar1 bhar2
bhar3 bhar0win bhar1win bhar2win bhar3win scar0 scar1 scar2 scar3 abret0 abret1 abret2 abret3 sar0 sar1 sar2 sar3
pat_scale;
ERROR: You cannot open WORK.ALLSTATS.DATA for output access with member-level control because WORK.ALLSTATS.DATA is
in use by you in resource environment ViewTable Window.
MPRINT(EVENT_STUDY):    output out=allstats mean = n = t = sum =/autoname;
MPRINT(EVENT_STUDY):    run;

NOTE: The SAS System stopped processing this step because of errors.
NOTE: PROCEDURE MEANS used (Total process time):
      real time           0.00 seconds
      user cpu time       0.00 seconds
      system cpu time     0.00 seconds
      memory              333.65k
```

```
MPRINT(EVENT_STUDY):   data MA_Evtdate (keep=evttime car0_n cret_mean car0_mean car0_t scar0_t bhar0_mean pat_car0
model) MM_Evtdate (keep=evttime car1_n cret_mean car1_mean car1_t scar1_t bhar1_mean pat_car1 model ) FF_Evtdate
(keep=evttime car2_n cret_mean car2_mean car2_t scar2_t bhar2_mean pat_car2 model ) FFM_Evtdate (keep=evttime car3_n
cret_mean car3_mean car3_t scar3_t bhar3_mean pat_car3 model ) MA_Evtwin (keep=evttime cretwin_mean abret0_n ret_mean
abret0_mean car0win_mean bhar0win_mean abret0_t sar0_t pat_ar0 ) MM_Evtwin (keep=evttime cretwin_mean abret1_n
ret_mean abret1_mean car1win_mean bhar1win_mean abret1_t sar1_t pat_ar1 ) FF_Evtwin (keep=evttime cretwin_mean
abret2_n ret_mean abret2_mean car2win_mean bhar2win_mean abret2_t sar2_t pat_ar2 ) FFM_Evtwin (keep=evttime
cretwin_mean abret3_n ret_mean abret3_mean car3win_mean bhar3win_mean abret3_t sar3_t pat_ar3 );
MPRINT(EVENT_STUDY):   set allstats;
MPRINT(EVENT_STUDY):   by evttime;
MPRINT(EVENT_STUDY):   if _n_=1 and missing(evttime) then do;
MPRINT(EVENT_STUDY):   abret0_mean=.;
MPRINT(EVENT_STUDY):   abret1_mean=.;
MPRINT(EVENT_STUDY):   abret2_mean=.;
MPRINT(EVENT_STUDY):   abret3_mean=.;
MPRINT(EVENT_STUDY):   cretwin_mean=0;
MPRINT(EVENT_STUDY):   ret_mean=.;
MPRINT(EVENT_STUDY):   bhar1win_mean=0;
MPRINT(EVENT_STUDY):   bhar1win_mean=0;
MPRINT(EVENT_STUDY):   bhar2win_mean=0;
MPRINT(EVENT_STUDY):   bhar3win_mean=0;
MPRINT(EVENT_STUDY):   end;
MPRINT(EVENT_STUDY):   pat_car0=scar0_mean/(sqrt(pat_scale_sum)/scar0_n);
MPRINT(EVENT_STUDY):   pat_car1=scar1_mean/(sqrt(pat_scale_sum)/scar1_n);
MPRINT(EVENT_STUDY):   pat_car2=scar2_mean/(sqrt(pat_scale_sum)/scar2_n);
MPRINT(EVENT_STUDY):   pat_car3=scar3_mean/(sqrt(pat_scale_sum)/scar3_n);
MPRINT(EVENT_STUDY):   pat_ar0=sar0_mean/(sqrt(pat_scale_sum)/sar0_n);
MPRINT(EVENT_STUDY):   pat_ar1=sar1_mean/(sqrt(pat_scale_sum)/sar1_n);
MPRINT(EVENT_STUDY):   pat_ar2=sar2_mean/(sqrt(pat_scale_sum)/sar2_n);
MPRINT(EVENT_STUDY):   pat_ar3=sar3_mean/(sqrt(pat_scale_sum)/sar3_n);
MPRINT(EVENT_STUDY):   label pat_ar0= 'Patell Z for AR_MA' pat_ar1= 'Patell Z for AR_MM' pat_ar2= 'Patell Z for
AR_FF' pat_ar3= 'Patell Z for AR_FFM' abret0_t= 'CS t-stat, AR_MA' abret1_t= 'CS t-stat, AR_MM' abret2_t= 'CS t-stat,
```

```
AR_FF' abret3_t= 'CS t-stat, AR_FFM' sar0_t= 'Std CS test, AR_MA' sar1_t= 'Std CS test, AR_MM' sar2_t= 'Std CS test,
AR_FF' sar3_t= 'Std CS test, AR_FFM' abret0_mean= 'Mean AR_MA' abret1_mean= 'Mean AR_MM' abret2_mean= 'Mean AR_FF'
abret3_mean= 'Mean AR_FFM' car0_n= 'Number of events in the portfolio' abret0_n= 'Number of events in the portfolio'
evttime= 'Event Time t' cret_mean= "Mean CTR (-2, 2)" cretwin_mean= "Mean CTR (-2,t) " car0win_mean= "Average CAR_MA
(-2, t)" car1win_mean= "Average CAR_MM (-2, t)" car2win_mean= "Average CAR_FF (-2, t)" car3win_mean= "Average CAR_FFM
(-2, t)" bhar0win_mean= "Mean BHAR_MA (-2, t)" bhar1win_mean= "Mean BHAR_MM (-2, t)" bhar2win_mean= "Mean BHAR_FF
(-2, t)" bhar3win_mean= "Mean BHAR_FFM (-2, t)" ;
MPRINT(EVENT_STUDY):   format ret_mean cret_mean cretwin_mean abret0_mean abret1_mean abret2_mean abret3_mean
car0_mean car1_mean car2_mean car3_mean bhar0_mean bhar1_mean bhar2_mean bhar3_mean bhar0win_mean bhar1win_mean
bhar2win_mean bhar3win_mean car0win_mean car1win_mean car2win_mean car3win_mean percent7.4 abret0_t abret1_t abret2_t
abret3_t sar0_t sar1_t sar2_t sar3_t pat_car0 pat_car1 pat_car2 pat_car3 pat_ar0 pat_ar1 pat_ar2 pat_ar3 car0_t
car1_t car2_t car3_t scar0_t car1_t scar2_t scar3_t comma10.2;
MPRINT(EVENT_STUDY):   if evttime=0 then do;
MPRINT(EVENT_STUDY):   model='Market-Adjusted';
MPRINT(EVENT_STUDY):   output MA_Evtdate;
MPRINT(EVENT_STUDY):   model='Market Model';
MPRINT(EVENT_STUDY):   output MM_Evtdate;
MPRINT(EVENT_STUDY):   model='FF Model';
MPRINT(EVENT_STUDY):   output FF_Evtdate;
MPRINT(EVENT_STUDY):   model='Carhart Model';
MPRINT(EVENT_STUDY):   output FFM_Evtdate;
MPRINT(EVENT_STUDY):   end;
MPRINT(EVENT_STUDY):   if missing(evttime) then evttime=-2-1;
MPRINT(EVENT_STUDY):   output MA_Evtwin;
MPRINT(EVENT_STUDY):   output MM_Evtwin;
MPRINT(EVENT_STUDY):   output FF_Evtwin;
MPRINT(EVENT_STUDY):   output FFM_Evtwin;
MPRINT(EVENT_STUDY):   run;


NOTE: There were 6 observations read from the data set WORK.ALLSTATS.
NOTE: The data set WORK.MA_EVTDATE has 1 observations and 9 variables.
NOTE: The data set WORK.MM_EVTDATE has 1 observations and 9 variables.
NOTE: The data set WORK.FF_EVTDATE has 1 observations and 9 variables.
NOTE: The data set WORK.FFM_EVTDATE has 1 observations and 9 variables.
NOTE: The data set WORK.MA_EVTWIN has 6 observations and 10 variables.
NOTE: The data set WORK.MM_EVTWIN has 6 observations and 10 variables.
NOTE: The data set WORK.FF_EVTWIN has 6 observations and 10 variables.
NOTE: The data set WORK.FFM_EVTWIN has 6 observations and 10 variables.
```

NOTE: DATA statement used (Total process time):
      real time   0.10 seconds
      user cpu time   0.01 seconds
      system cpu time   0.01 seconds
      memory   2389.59k
      OS Memory   51464.00k
      Timestamp   06/19/2024 11:59:45 PM
      Step Count   369 Switch Count 0

MPRINT(EVENT_STUDY):   data allevtdate;
MPRINT(EVENT_STUDY):   set MA_Evtdate (rename=(car0_mean=car_mean bhar0_mean=bhar_mean car0_n=n car0_t=car_t
scar0_t=scar_t pat_car0=pat_car)) MM_Evtdate (rename=(car1_mean=car_mean bhar1_mean=bhar_mean car1_n=n car1_t=car_t
scar1_t=scar_t pat_car1=pat_car)) FF_Evtdate (rename=(car2_mean=car_mean bhar2_mean=bhar_mean car2_n=n car2_t=car_t
scar2_t=scar_t pat_car2=pat_car)) FFM_evtdate (rename=(car3_mean=car_mean bhar3_mean=bhar_mean car3_n=n car3_t=car_t
scar3_t=scar_t pat_car3=pat_car));
MPRINT(EVENT_STUDY):   length=5;
MPRINT(EVENT_STUDY):   label pat_car= 'Patell Z' car_mean= "Mean CAR (-2, 2)" bhar_mean= "Mean BHAR (-2, 2)" car_t=
'Cross-sectional t-stat for CAR' scar_t= 'Standaridized cross-sectional t-stat for CAR' length= 'Length of event
window in trading days';
MPRINT(EVENT_STUDY):   run;

NOTE: There were 1 observations read from the data set WORK.MA_EVTDATE.
NOTE: There were 1 observations read from the data set WORK.MM_EVTDATE.
NOTE: There were 1 observations read from the data set WORK.FF_EVTDATE.
NOTE: There were 1 observations read from the data set WORK.FFM_EVTDATE.
NOTE: The data set WORK.ALLEVTDATE has 4 observations and 10 variables.
NOTE: DATA statement used (Total process time):
      real time   0.01 seconds
      user cpu time   0.00 seconds
      system cpu time   0.00 seconds
      memory   1119.68k
      OS Memory   50952.00k
      Timestamp   06/19/2024 11:59:45 PM
      Step Count   370 Switch Count 0

MPRINT(EVENT_STUDY):   data car_evtdate;

```
MPRINT(EVENT_STUDY):   retain permno evtdate alpha1 beta1 cret car0 bhar0 var0 car1 bhar1 var1 car2 bhar2 var2 car3
bhar3 var3 nrets nobs;
MPRINT(EVENT_STUDY):   set car_evtdate;
MPRINT(EVENT_STUDY):   label alpha1= 'Alpha (Market Model)' beta1= 'Beta (Market Model' car0= 'CAR_MA' car1= 'CAR_MM'
car2= 'CAR_FF' car3= 'CAR_FFM' bhar0= 'BHAR_MA' bhar1= 'BHAR_MM' bhar2= 'BHAR_FF' bhar3= 'BHAR_FFM' var0= 'Estimation
period variance (Market-adjusted returns)' var1= 'Estimation period variance (Market Model)' var2= 'Estimation period
variance (FF Model)' var3= 'Estimation period variance (Carhart Model)' cret= 'Cumulative Total Return' nrets=
'Number of non-missing returns in event window' nobs= 'Length of the estimation period';
MPRINT(EVENT_STUDY):   keep permno evtdate alpha1 beta1 cret car0 bhar0 var0 car1 bhar1 var1 car2 bhar2 var2 car3
bhar3 var3 nrets nobs;
MPRINT(EVENT_STUDY):   format cret alpha1 car0 bhar0 car1 bhar1 car2 bhar2 car3 bhar3 percent7.4 beta1 comma10.3;
MPRINT(EVENT_STUDY):   run;

NOTE: There were 781 observations read from the data set WORK.CAR_EVTDATE.
NOTE: The data set WORK.CAR_EVTDATE has 781 observations and 19 variables.
NOTE: DATA statement used (Total process time):
      real time           0.00 seconds
      user cpu time       0.00 seconds
      system cpu time     0.00 seconds
      memory              699.59k
      OS Memory           50952.00k
      Timestamp           06/19/2024 11:59:45 PM
      Step Count                        371  Switch Count  0


MPRINT(EVENT_STUDY):   PROC DATASETS NOLIST;
MPRINT(EVENT_STUDY):   COPY IN = work OUT = evtstudy ;
MPRINT(EVENT_STUDY):   select allevtdate allstats car_evtwin ;
MPRINT(EVENT_STUDY):   RUN;

NOTE: Copying WORK.ALLEVTDATE to EVTSTUDY.ALLEVTDATE (memtype=DATA).
INFO: Engine's block-read method is in use.
INFO: Engine's block-write  method is in use.
NOTE: There were 4 observations read from the data set WORK.ALLEVTDATE.
NOTE: The data set EVTSTUDY.ALLEVTDATE has 4 observations and 10 variables.
NOTE: Copying WORK.ALLSTATS to EVTSTUDY.ALLSTATS (memtype=DATA).
INFO: Engine's block-read method is in use.
INFO: Engine's block-write  method is in use.
```

```
NOTE: There were 6 observations read from the data set WORK.ALLSTATS.
NOTE: The data set EVTSTUDY.ALLSTATS has 6 observations and 132 variables.
NOTE: Copying WORK.CAR_EVTWIN to EVTSTUDY.CAR_EVTWIN (memtype=DATA).
INFO: Engine's block-read method is in use.
INFO: Engine's block-write  method is in use.
NOTE: There were 3905 observations read from the data set WORK.CAR_EVTWIN.
NOTE: The data set EVTSTUDY.CAR_EVTWIN has 3905 observations and 22 variables.
MPRINT(EVENT_STUDY):   options nodate orientation=landscape;
MPRINT(EVENT_STUDY):   ods pdf file="C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car0_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car0_evtrets_5days.pdf", printer "PDF".
MPRINT(EVENT_STUDY):   goptions device=pdfc;
MPRINT(EVENT_STUDY):   axis1 label=(angle=90 "Cumulative Abnormal Returns");
MPRINT(EVENT_STUDY):   axis2 label=("Event time");
MPRINT(EVENT_STUDY):   symbol interpol=join w=3 l=1;
NOTE: PROCEDURE DATASETS used (Total process time):
      real time            0.33 seconds
      user cpu time        0.07 seconds
      system cpu time      0.12 seconds
      memory               4233.56k
      OS Memory            51980.00k
      Timestamp            06/19/2024 11:59:46 PM
      Step Count                        372  Switch Count  0


MPRINT(EVENT_STUDY):   proc gplot data =MA_Evtwin;
MPRINT(EVENT_STUDY):   where evttime>=-2;
MPRINT(EVENT_STUDY):   Title "Market adjusted model:  CARs and BHARs around the event date";
MPRINT(EVENT_STUDY):   plot (car0win_mean bhar0win_mean)*evttime /overlay legend vaxis=axis1 haxis=axis2;
MPRINT(EVENT_STUDY):   run;

NOTE: 33793 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot36.png.
MPRINT(EVENT_STUDY):  quit;

NOTE: There were 5 observations read from the data set WORK.MA_EVTWIN.
      WHERE evttime>=-2;
```

NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE GPLOT used (Total process time):
      real time   0.34 seconds
      user cpu time   0.18 seconds
      system cpu time   0.06 seconds
      memory   8672.37k
      OS Memory   57568.00k
      Timestamp   06/19/2024 11:59:46 PM
      Step Count   373 Switch Count 0

MPRINT(EVENT_STUDY):   ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car0_evtrets_5days.pdf.
MPRINT(EVENT_STUDY):   ods pdf file="C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car1_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car1_evtrets_5days.pdf", printer "PDF".
MPRINT(EVENT_STUDY):   proc gplot data =MM_Evtwin;
MPRINT(EVENT_STUDY):   where evttime>=-2;
MPRINT(EVENT_STUDY):   Title "Market model: CARs and BHARs around the event date";
MPRINT(EVENT_STUDY):   plot (car1win_mean bhar1win_mean)*evttime /overlay legend vaxis=axis1 haxis=axis2;
MPRINT(EVENT_STUDY):   run;

NOTE: 48874 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files_TD25772_DELL2_\gplot37.png.
MPRINT(EVENT_STUDY): quit;

NOTE: There were 5 observations read from the data set WORK.MM_EVTWIN.
      WHERE evttime>=-2;
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE GPLOT used (Total process time):
      real time   0.33 seconds
      user cpu time   0.23 seconds
      system cpu time   0.07 seconds
      memory   8601.31k

```
        OS Memory             57824.00k
        Timestamp             06/19/2024 11:59:46 PM
        Step Count                      374  Switch Count  0


MPRINT(EVENT_STUDY):   ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car1_evtrets_5days.pdf.
MPRINT(EVENT_STUDY):   ods pdf file="C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car2_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car2_evtrets_5days.pdf", printer "PDF".
MPRINT(EVENT_STUDY):   proc gplot data =FF_Evtwin;
MPRINT(EVENT_STUDY):   where evttime>=-2;
MPRINT(EVENT_STUDY):   Title "FF 3-factor model:CARs and BHARs around the event date";
MPRINT(EVENT_STUDY):   plot (car2win_mean bhar2win_mean)*evttime /overlay legend vaxis=axis1 haxis=axis2;
MPRINT(EVENT_STUDY):   run;

NOTE: 54659 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot38.png.
MPRINT(EVENT_STUDY):  quit;

NOTE: There were 5 observations read from the data set WORK.FF_EVTWIN.
      WHERE evttime>=-2;
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE GPLOT used (Total process time):
      real time           0.36 seconds
      user cpu time       0.23 seconds
      system cpu time     0.07 seconds
      memory              8601.90k
      OS Memory           57824.00k
      Timestamp           06/19/2024 11:59:47 PM
      Step Count                      375  Switch Count  0


MPRINT(EVENT_STUDY):   ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
```

```
              University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car2_evtrets_5days.pdf.
MPRINT(EVENT_STUDY):   ods pdf file="C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car3_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car3_evtrets_5days.pdf", printer "PDF".
MPRINT(EVENT_STUDY):   proc gplot data =FFM_Evtwin;
MPRINT(EVENT_STUDY):   where evttime>=-2;
MPRINT(EVENT_STUDY):   Title "Carhart 4 Factor model: Carhart CARs and BHARs around the event date";
MPRINT(EVENT_STUDY):   plot (car3win_mean bhar3win_mean)*evttime /overlay legend vaxis=axis1 haxis=axis2;
MPRINT(EVENT_STUDY):   run;

NOTE: 49722 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot39.png.
MPRINT(EVENT_STUDY):  quit;

NOTE: There were 5 observations read from the data set WORK.FFM_EVTWIN.
      WHERE evttime>=-2;
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE GPLOT used (Total process time):
      real time           0.35 seconds
      user cpu time       0.23 seconds
      system cpu time     0.09 seconds
      memory              8636.81k
      OS Memory           57824.00k
      Timestamp           06/19/2024 11:59:47 PM
      Step Count                        376  Switch Count  0


MPRINT(EVENT_STUDY):   ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car3_evtrets_5days.pdf.
MPRINT(EVENT_STUDY):   ods pdf file="C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car0_3_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car0_3_evtrets_5days.pdf", printer "PDF".
MPRINT(EVENT_STUDY):   proc gplot data =allstats;
```

```
MPRINT(EVENT_STUDY):    where evttime>=-2;
MPRINT(EVENT_STUDY):    Title "CARs from the four models: around the event date";
MPRINT(EVENT_STUDY):    plot (car0win_mean car1win_mean car2win_mean car3win_mean )*evttime /overlay legend
vaxis=axis1 haxis=axis2;
MPRINT(EVENT_STUDY):    run;


NOTE: 34635 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot40.png.
MPRINT(EVENT_STUDY):    quit;


NOTE: There were 5 observations read from the data set WORK.ALLSTATS.
      WHERE evttime>=-2;
NOTE: PROCEDURE GPLOT used (Total process time):
      real time            0.34 seconds
      user cpu time        0.18 seconds
      system cpu time      0.09 seconds
      memory               8532.87k
      OS Memory            58080.00k
      Timestamp            06/19/2024 11:59:48 PM
      Step Count                          377  Switch Count  0



MPRINT(EVENT_STUDY):    ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car0_3_evtrets_5days.pdf.
MPRINT(EVENT_STUDY):    ods pdf file="C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\agg_foreign_rec_exe10\BHARS0_3_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\BHARS0_3_evtrets_5days.pdf", printer "PDF".
MPRINT(EVENT_STUDY):    proc gplot data =allstats;
MPRINT(EVENT_STUDY):    where evttime>=-2;
MPRINT(EVENT_STUDY):    Title "BHARs from the four models: BHARs around the event date";
MPRINT(EVENT_STUDY):    plot (bhar0_mean bhar1_mean bhar2_mean bhar3_mean )*evttime /overlay legend vaxis=axis1
haxis=axis2;
MPRINT(EVENT_STUDY):    run;
NOTE: 20765 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot41.png.
MPRINT(EVENT_STUDY):    quit;
NOTE: There were 5 observations read from the data set WORK.ALLSTATS.
```

```
       WHERE evttime>=-2;
NOTE: PROCEDURE GPLOT used (Total process time):
       real time            0.31 seconds
       user cpu time        0.18 seconds
       system cpu time      0.11 seconds
       memory               8531.18k
       OS Memory            58080.00k
       Timestamp            06/19/2024 11:59:48 PM
       Step Count                         378   Switch Count   0


MPRINT(EVENT_STUDY):    ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
       University\aaaa\event_Study\result\agg_foreign_rec_exe10\BHARSO_3_evtrets_5days.pdf.
MPRINT(EVENT_STUDY):    run;
MPRINT(EVENT_STUDY):   quit;
MPRINT(EVENT_STUDY):    ods pdf close;
MLOGIC(EVENT_STUDY):   Ending execution.

6196  proc report data=allevtdate;
6197    column  model Cret_mean   car_mean  bhar_mean    car_t  scar_t  pat_car n ;
6198    define  model / display;
6199    define  Cret_mean / display;
6200    define  car_mean / display;
6201    define  bhar_mean / display;
6202   define   car_t / display;
6203   define   scar_t / display;
6204   define   pat_car / display;
6205   define n / display "total Obs";
6206
6207  run;

NOTE: Multiple concurrent threads will be used to summarize data.
NOTE: There were 4 observations read from the data set WORK.ALLEVTDATE.
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
       format.
NOTE: PROCEDURE REPORT used (Total process time):
       real time            0.04 seconds
```

```
      user cpu time       0.01 seconds
      system cpu time     0.04 seconds
      memory              8321.78k
      OS Memory           57632.00k
      Timestamp           06/20/2024 12:00:37 AM
      Step Count                       379  Switch Count  0


6208  %let outputPath=%str(C:\Users\lihon\OneDrive - Kent State
6208! University\aaaa\event_Study\result\agg_foreign_rec_exe10);
6209
6210  libname evt_res "&outputPath";
NOTE: Libref EVT_RES refers to the same physical library as EVTSTUDY.
NOTE: Libref EVT_RES was successfully assigned as follows:
      Engine:        V9
      Physical Name: C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\result\agg_foreign_rec_exe10
6211  options nolabel;
6212  proc report data=evt_res.allevtdate;
6213    column  model Cret_mean   car_mean  bhar_mean    car_t  scar_t  pat_car n ;
6214    define  model / display;
6215    define  Cret_mean / display;
6216    define  car_mean / display;
6217    define  bhar_mean / display;
6218   define   car_t / display;
6219   define   scar_t / display;
6220   define   pat_car / display;
6221   define n / display "total Obs";
6222
6223  run;


NOTE: Multiple concurrent threads will be used to summarize data.
NOTE: There were 4 observations read from the data set EVT_RES.ALLEVTDATE.
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE REPORT used (Total process time):
      real time          0.04 seconds
      user cpu time      0.00 seconds
      system cpu time    0.03 seconds
```

```
         memory                8329.50k
         OS Memory             57632.00k
         Timestamp             06/20/2024 12:02:56 AM
         Step Count                        380   Switch Count  0


6224  proc rank  data=foreign_trans_exec_record10
6225          out = foreign_trans_execrec10_decile groups=10;
6226      var taxdiff;
6227  ranks decile;
6228  run;

NOTE: The data set WORK.FOREIGN_TRANS_EXECREC10_DECILE has 792 observations and 10 variables.
NOTE: PROCEDURE RANK used (Total process time):
         real time             0.03 seconds
         user cpu time         0.00 seconds
         system cpu time       0.06 seconds
         memory                2482.59k
         OS Memory             55316.00k
         Timestamp             06/20/2024 12:11:39 AM
         Step Count                        381   Switch Count  0


6229  proc sort data = foreign_trans_execrec10_decile NODUPKEY;
6230  by permno  record_dt;
6231  run;

NOTE: There were 792 observations read from the data set WORK.FOREIGN_TRANS_EXECREC10_DECILE.
NOTE: SAS sort was used.
NOTE: 0 observations with duplicate key values were deleted.
NOTE: The data set WORK.FOREIGN_TRANS_EXECREC10_DECILE has 792 observations and 10 variables.
NOTE: PROCEDURE SORT used (Total process time):
         real time             0.00 seconds
         user cpu time         0.00 seconds
         system cpu time       0.00 seconds
         memory                762.78k
         OS Memory             53524.00k
         Timestamp             06/20/2024 12:11:57 AM
```

6232 %event_study(outputPath=C:\Users\lihon\OneDrive - Kent State
6232! University\aaaa\event_Study\result\agg_foreign_rec_exe10
MLOGIC(EVENT_STUDY): Beginning execution.
6233   ,permno_list = foreign_trans_execrec10_decile)
MLOGIC(EVENT_STUDY): Parameter OUTPUTPATH has value C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10
MLOGIC(EVENT_STUDY): Parameter PERMNO_LIST has value foreign_trans_execrec10_decile
MPRINT(EVENT_STUDY):   libname mycrsp "C:\Users\lihon\patent Dropbox\Victor Li\wrds_data";
NOTE: Libref MYCRSP was successfully assigned as follows:
      Engine: V9
      Physical Name: C:\Users\lihon\patent Dropbox\Victor Li\wrds_data
MPRINT(EVENT_STUDY):   libname evtstudy "C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\agg_foreign_rec_exe10";
NOTE: Libref EVTSTUDY refers to the same physical library as TMP12.
NOTE: Libref EVTSTUDY was successfully assigned as follows:
      Engine: V9
      Physical Name: C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\result\agg_foreign_rec_exe10
MLOGIC(EVENT_STUDY): %LET (variable name is CRSP)
MLOGIC(EVENT_STUDY): %LET (variable name is ESTPER)
MLOGIC(EVENT_STUDY): %LET (variable name is START)
MLOGIC(EVENT_STUDY): %LET (variable name is END)
MLOGIC(EVENT_STUDY): %LET (variable name is GAP)
MLOGIC(EVENT_STUDY): %LET (variable name is MINEST)
MLOGIC(EVENT_STUDY): %LET (variable name is EVTWIN)
MPRINT(EVENT_STUDY):   proc sql;
MPRINT(EVENT_STUDY):   create table input as select distinct permno, record_dt as edate format MMDDYY10. from
foreign_trans_execrec10_decile where not missing(-2) and year(record_dt);
NOTE: Table WORK.INPUT created, with 792 rows and 2 columns.

MPRINT(EVENT_STUDY):   quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time   0.01 seconds
      user cpu time   0.01 seconds
      system cpu time   0.00 seconds
      memory   5426.87k

```
MPRINT(EVENT_STUDY):   data caldates;
MPRINT(EVENT_STUDY):   merge mycrsp.dsi(keep=date rename=(date=estper_beg)) mycrsp.dsi(keep=date firstobs=150
rename=(date=estper_end)) mycrsp.dsi(keep=date firstobs=217 rename=(date=evtwin_beg)) mycrsp.dsi(keep=date
firstobs=219 rename=(date=evtdate)) mycrsp.dsi(keep=date firstobs=221 rename=(date=evtwin_end));
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
MPRINT(EVENT_STUDY):   format estper_beg estper_end evtwin_beg evtdate evtwin_end date9.;
MPRINT(EVENT_STUDY):   label estper_beg= 'Start of the Estimation Window' estper_end= 'End of the Estimation Window'
evtwin_beg= 'Start of the Event Window' evtwin_end= 'End of the Event Window' evtdate= 'Event Date';
MPRINT(EVENT_STUDY):   index+1;
MPRINT(EVENT_STUDY):   if nmiss(estper_beg,estper_end,evtwin_beg,evtwin_end,evtdate)=0;
MPRINT(EVENT_STUDY):   run;
```

NOTE: There were 25799 observations read from the data set MYCRSP.DSI.
NOTE: There were 25650 observations read from the data set MYCRSP.DSI.
NOTE: There were 25583 observations read from the data set MYCRSP.DSI.
NOTE: There were 25581 observations read from the data set MYCRSP.DSI.
NOTE: There were 25579 observations read from the data set MYCRSP.DSI.
NOTE: The data set WORK.CALDATES has 25579 observations and 6 variables.
NOTE: DATA statement used (Total process time):

```
      real time           0.04 seconds
      user cpu time       0.04 seconds
      system cpu time     0.00 seconds
      memory              1621.15k
      OS Memory           53264.00k
      Timestamp           06/20/2024 12:12:48 AM
      Step Count                        384  Switch Count  0


MPRINT(EVENT_STUDY):   proc sql;
MPRINT(EVENT_STUDY):   create table temp as select a.permno ,b.* from input a left join caldates b on
b.evtdate-a.edate>=0 group by a.edate having (b.evtdate-a.edate)=min(b.evtdate-a.edate);
NOTE: The execution of this query involves performing one or more Cartesian product joins that can not be optimized.
NOTE: The query requires remerging summary statistics back with the original data.
NOTE: SAS threaded sort was used.
NOTE: Table WORK.TEMP created, with 792 rows and 7 columns.

NOTE: PROCEDURE SQL used (Total process time):
      real time           1.86 seconds
      user cpu time       2.60 seconds
      system cpu time     0.51 seconds
      memory              225742.96k
      OS Memory           276592.00k
      Timestamp           06/20/2024 12:12:50 AM
      Step Count                        385  Switch Count  0


MPRINT(EVENT_STUDY):   proc sql;
MPRINT(EVENT_STUDY):   create table evtrets_temp as select a.permno, a.date format date9., a.ret as ret1, b.evtdate,
b.estper_beg, b.estper_end, b.evtwin_beg, b.evtwin_end from mycrsp.dsf a, temp b where a.permno=b.permno and
b.estper_beg<=a.date<=b.evtwin_end;
INFO: Data file MYCRSP.DSF.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
NOTE: Table WORK.EVTRETS_TEMP created, with 174239 rows and 8 columns.

MPRINT(EVENT_STUDY):   quit;
NOTE: PROCEDURE SQL used (Total process time):
```

```
      real time            37.03 seconds
      user cpu time        36.42 seconds
      system cpu time      0.59 seconds
      memory               5852.75k
      OS Memory            58388.00k
      Timestamp            06/20/2024 12:13:27 AM
      Step Count                      386  Switch Count  0


MPRINT(EVENT_STUDY):   proc sql;
MPRINT(EVENT_STUDY):    create view evtrets1 as select a.*, (b.mktrf+b.rf) as mkt, b.mktrf, b.rf,b.smb, b.hml, b.umd
from evtrets_temp a left join mycrsp.ff_factors_daily (keep=date mktrf smb hml umd rf) b on a.date=b.date;
NOTE: SQL view WORK.EVTRETS1 has been defined.
MPRINT(EVENT_STUDY):   quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time            0.01 seconds
      user cpu time        0.01 seconds
      system cpu time      0.00 seconds
      memory               111.87k
      OS Memory            53264.00k
      Timestamp            06/20/2024 12:13:27 AM
      Step Count                      387  Switch Count  0


MPRINT(EVENT_STUDY):   proc sql;
MPRINT(EVENT_STUDY):    create table evtrets (drop=ret1 where=(not missing(mkt))) as select a.*,
(1+a.ret1)*sum(1,b.dlret)-1-a.mkt as exret label='Market-adjusted total ret', (1+a.ret1)*sum(1,b.dlret)-1 as ret "Ret
adjusted for delisting" from evtrets1 a left join mycrsp.dsedelist (where=(missing(dlret)=0)) b on a.permno=b.permno
and a.date=b.dlstdt order by a.permno,a.evtdate,a.date;
INFO: Data file MYCRSP.FF_FACTORS_DAILY.DATA is in a format that is native to another host, or the file encoding does
not match the session encoding. Cross Environment Data Access will be used, which might require additional CPU
resources and might reduce performance.
INFO: Data file MYCRSP.DSEDELIST.DATA is in a format that is native to another host, or the file encoding does not
match the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources
and might reduce performance.
NOTE: SAS threaded sort was used.
NOTE: Table WORK.EVTRETS created, with 174239 rows and 15 columns.
```

```
MPRINT(EVENT_STUDY):   quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time           0.46 seconds
      user cpu time       0.71 seconds
      system cpu time     0.18 seconds
      memory              49334.85k
      OS Memory           98088.00k
      Timestamp           06/20/2024 12:13:27 AM
      Step Count                        388  Switch Count  0


MPRINT(EVENT_STUDY):   proc printto log=junk;
MPRINT(EVENT_STUDY):   run;

NOTE: PROCEDURE PRINTTO used (Total process time):
      real time           0.00 seconds
      user cpu time       0.00 seconds
      system cpu time     0.00 seconds
      memory              7.06k
      OS Memory           53264.00k
      Timestamp           06/20/2024 12:13:28 AM
      Step Count                        391  Switch Count  0


MPRINT(EVENT_STUDY):   data abrets1/view=abrets1;
MPRINT(EVENT_STUDY):   merge evtrets(where=(evtwin_beg<=date<=evtwin_end) in=in_evtrets) params
(where=(_model_='eq0') keep=permno evtdate _model_ _rmse_ _p_ _edf_ rename=(_rmse_=std0 _p_=p0 _edf_=edf0)) params
(where=(_model_='eq1') keep=permno evtdate _model_ _rmse_ intercept mktrf rename=(_rmse_=std1 intercept=alpha1
mktrf=beta1)) params (where=(_model_='eq2') keep=permno evtdate _model_ _rmse_ intercept mktrf smb hml
rename=(_rmse_=std2 intercept=alpha2 mktrf=beta2 smb=sminb2 hml=hminl2)) params (where=(_model_='eq3') keep=permno
evtdate _model_ _rmse_ intercept mktrf smb hml umd rename=(_rmse_=std3 intercept=alpha3 mktrf=beta3 smb=sminb3
hml=hminl3 umd=umind3));
MPRINT(EVENT_STUDY):   by permno evtdate;
MPRINT(EVENT_STUDY):   retain missret;
MPRINT(EVENT_STUDY):   if first.permno then missret=missing(ret);
MPRINT(EVENT_STUDY):   if missing(ret) then missret+1;
MPRINT(EVENT_STUDY):   var0=std0**2;
MPRINT(EVENT_STUDY):   var1=std1**2;
```

```
MPRINT(EVENT_STUDY):   var2=std2**2;
MPRINT(EVENT_STUDY):   var3=std3**2;
MPRINT(EVENT_STUDY):   abret0 = exret;
MPRINT(EVENT_STUDY):   *extra over market;
MPRINT(EVENT_STUDY):   expret1 = alpha1 + beta1*mktrf;
MPRINT(EVENT_STUDY):   *CAPM;
MPRINT(EVENT_STUDY):   abret1 = ret-expret1;
MPRINT(EVENT_STUDY):   expret2 = alpha2+beta2*mktrf+sminb2*smb+hminl2*hml;
MPRINT(EVENT_STUDY):   *FF3factor;
MPRINT(EVENT_STUDY):   abret2=ret-expret2;
MPRINT(EVENT_STUDY):   expret3 =alpha3+beta3*mktrf+sminb3*smb+hminl3*hml+umind3*umd;
MPRINT(EVENT_STUDY):   abret3=ret-expret3;
MPRINT(EVENT_STUDY):   nobs=p0+edf0;
MPRINT(EVENT_STUDY):   drop p0 edf0 estper_beg estper_end std0 std1 std2 std3 _model_ exret;
MPRINT(EVENT_STUDY):   if in_evtrets and nobs>70;
MPRINT(EVENT_STUDY):   * I add the followings;
MPRINT(EVENT_STUDY):   if nobs=150;
MPRINT(EVENT_STUDY):   run;

NOTE: DATA STEP view saved on file WORK.ABRETS1.
NOTE: A stored DATA STEP view cannot run under a different operating system.
NOTE: DATA statement used (Total process time):
      real time           0.01 seconds
      user cpu time       0.00 seconds
      system cpu time     0.01 seconds
      memory              1361.34k
      OS Memory           53524.00k
      Timestamp           06/20/2024 12:13:28 AM
      Step Count                       392  Switch Count  0


MPRINT(EVENT_STUDY):   proc sql;
MPRINT(EVENT_STUDY):   create table abrets as select a.*, (b.index-c.index) as evttime from abrets1 a left join
caldates b on a.date = b.evtdate left join caldates c on a.evtdate = c.evtdate order by permno, evtdate, date;
NOTE: SAS threaded sort was used.
INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
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INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
NOTE: Missing values were generated as a result of performing an operation on missing values.
      Each place is given by: (Number of times) at (Line):(Column).
      5 at 8568:71    5 at 8568:87    5 at 8568:103   5 at 8568:119   5 at 8568:190   5 at 8568:221   5 at 8569:14
      5 at 8569:68    5 at 8569:102   5 at 8569:155   5 at 8569:175
NOTE: View WORK.ABRETS1.VIEW used (Total process time):
      real time              0.14 seconds
      user cpu time          0.14 seconds
      system cpu time        0.26 seconds
      memory                 45898.78k
      OS Memory              94564.00k
      Timestamp              06/20/2024 12:13:32 AM
      Step Count                        393  Switch Count  24

NOTE: There were 3955 observations read from the data set WORK.EVTRETS.
      WHERE (evtwin_beg<=date) and (date<=evtwin_end);
NOTE: There were 790 observations read from the data set WORK.PARAMS.
      WHERE _model_='eq0';
NOTE: There were 790 observations read from the data set WORK.PARAMS.
      WHERE _model_='eq1';
NOTE: There were 790 observations read from the data set WORK.PARAMS.
      WHERE _model_='eq2';
NOTE: There were 790 observations read from the data set WORK.PARAMS.
      WHERE _model_='eq3';
NOTE: Table WORK.ABRETS created, with 3905 rows and 37 columns.

MPRINT(EVENT_STUDY):   quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time              4.41 seconds
      user cpu time          4.28 seconds
      system cpu time        0.31 seconds
      memory                 45898.78k
      OS Memory              94564.00k
      Timestamp              06/20/2024 12:13:32 AM
      Step Count                        393  Switch Count  25
```

```
MPRINT(EVENT_STUDY):   proc sort data=abrets nodupkey;
MPRINT(EVENT_STUDY):    by PERMNO evtdate DATE evtwin_beg evtwin_end mkt mktrf rf smb hml umd ret alpha1 beta1 alpha2
beta2 sminb2 hminl2 alpha3 beta3 sminb3 hminl3 umind3 missret var0 var1 var2 var3 abret0 expret1 abret1 expret2
abret2 expret3 abret3 nobs evttime ;
MPRINT(EVENT_STUDY):   run;

NOTE: There were 3905 observations read from the data set WORK.ABRETS.
NOTE: SAS sort was used.
NOTE: 0 observations with duplicate key values were deleted.
NOTE: The data set WORK.ABRETS has 3905 observations and 37 variables.
NOTE: PROCEDURE SORT used (Total process time):
      real time           0.01 seconds
      user cpu time       0.00 seconds
      system cpu time     0.01 seconds
      memory              3991.50k
      OS Memory           56100.00k
      Timestamp           06/20/2024 12:13:32 AM
      Step Count                       394  Switch Count  0


MPRINT(EVENT_STUDY):   proc expand data=abrets out=car method=none;
MPRINT(EVENT_STUDY):   by permno evtdate;
MPRINT(EVENT_STUDY):   id date;
MPRINT(EVENT_STUDY):   convert ret=cret/transformout=(+1 cuprod -1);
MPRINT(EVENT_STUDY):   convert mkt=cmkt/transformout=(+1 cuprod -1);
MPRINT(EVENT_STUDY):   convert expret1 =cexpret1 /transformout=(+1 cuprod -1);
MPRINT(EVENT_STUDY):   convert expret2 =cexpret2 /transformout=(+1 cuprod -1);
MPRINT(EVENT_STUDY):   convert expret3 =cexpret3 /transformout=(+1 cuprod -1);
MPRINT(EVENT_STUDY):   convert abret0=car0/transformout=(sum);
MPRINT(EVENT_STUDY):   convert abret1=car1/transformout=(sum);
MPRINT(EVENT_STUDY):   convert abret2=car2/transformout=(sum);
MPRINT(EVENT_STUDY):   convert abret3=car3/transformout=(sum);
MPRINT(EVENT_STUDY):   run;

NOTE: The data set WORK.CAR has 3905 observations and 46 variables.
NOTE: PROCEDURE EXPAND used (Total process time):
      real time           0.08 seconds
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```
        user cpu time        0.06 seconds
        system cpu time      0.01 seconds
        memory               982.59k
        OS Memory            53272.00k
        Timestamp            06/20/2024 12:13:32 AM
        Step Count                        395  Switch Count  0


MPRINT(EVENT_STUDY):   proc printto log=junk;
MPRINT(EVENT_STUDY):   run;

NOTE: PROCEDURE PRINTTO used (Total process time):
        real time            0.00 seconds
        user cpu time        0.00 seconds
        system cpu time      0.00 seconds
        memory               7.06k
        OS Memory            52752.00k
        Timestamp            06/20/2024 12:13:32 AM
        Step Count                        398  Switch Count  0


MPRINT(EVENT_STUDY):   data allcars;
MPRINT(EVENT_STUDY):   merge car_evtwin (rename=(bhar0=bhar0win bhar1=bhar1win bhar2=bhar2win bhar3=bhar3win
car0=car0win car1=car1win car2=car2win car3=car3win cret=cretwin)) car_evtdate;
MPRINT(EVENT_STUDY):   by permno evtdate;
MPRINT(EVENT_STUDY):   run;

NOTE: There were 3905 observations read from the data set WORK.CAR_EVTWIN.
NOTE: There were 781 observations read from the data set WORK.CAR_EVTDATE.
NOTE: The data set WORK.ALLCARS has 3905 observations and 59 variables.
NOTE: DATA statement used (Total process time):
        real time            0.01 seconds
        user cpu time        0.00 seconds
        system cpu time      0.01 seconds
        memory               1188.71k
        OS Memory            52752.00k
        Timestamp            06/20/2024 12:13:32 AM
        Step Count                        399  Switch Count  0
```

```
MPRINT(EVENT_STUDY):   * proc means data=allcars noprint;
MPRINT(EVENT_STUDY):   proc means data=allcars( where = (nobs=150)) noprint;
MPRINT(EVENT_STUDY):   class evttime;
MPRINT(EVENT_STUDY):   id nobs;
MPRINT(EVENT_STUDY):   var ret cret car0 car1 car2 car3 cretwin car0win car1win car2win car3win bhar0 bhar1 bhar2
bhar3 bhar0win bhar1win bhar2win bhar3win scar0 scar1 scar2 scar3 abret0 abret1 abret2 abret3 sar0 sar1 sar2 sar3
pat_scale;
ERROR: You cannot open WORK.ALLSTATS.DATA for output access with member-level control because WORK.ALLSTATS.DATA is
in use by you in resource environment ViewTable Window.
MPRINT(EVENT_STUDY):   output out=allstats mean = n = t = sum =/autoname;
MPRINT(EVENT_STUDY):   run;

NOTE: The SAS System stopped processing this step because of errors.
NOTE: PROCEDURE MEANS used (Total process time):
      real time             0.00 seconds
      user cpu time         0.00 seconds
      system cpu time       0.00 seconds
      memory                331.87k
      OS Memory             52752.00k
      Timestamp             06/20/2024 12:13:32 AM
      Step Count                               400  Switch Count  0


MPRINT(EVENT_STUDY):   data MA_Evtdate (keep=evttime car0_n cret_mean car0_mean car0_t scar0_t bhar0_mean pat_car0
model) MM_Evtdate (keep=evttime car1_n cret_mean car1_mean car1_t scar1_t bhar1_mean pat_car1 model ) FF_Evtdate
(keep=evttime car2_n cret_mean car2_mean car2_t scar2_t bhar2_mean pat_car2 model ) FFM_Evtdate (keep=evttime car3_n
cret_mean car3_mean car3_t scar3_t bhar3_mean pat_car3 model ) MA_Evtwin (keep=evttime cretwin_mean abret0_n ret_mean
abret0_mean car0win_mean bhar0win_mean abret0_t sar0_t pat_ar0 ) MM_Evtwin (keep=evttime cretwin_mean abret1_n
ret_mean abret1_mean car1win_mean bhar1win_mean abret1_t sar1_t pat_ar1 ) FF_Evtwin (keep=evttime cretwin_mean
abret2_n ret_mean abret2_mean car2win_mean bhar2win_mean abret2_t sar2_t pat_ar2 ) FFM_Evtwin (keep=evttime
cretwin_mean abret3_n ret_mean abret3_mean car3win_mean bhar3win_mean abret3_t sar3_t pat_ar3 );
MPRINT(EVENT_STUDY):   set allstats;
MPRINT(EVENT_STUDY):   by evttime;
MPRINT(EVENT_STUDY):   if _n_=1 and missing(evttime) then do;
MPRINT(EVENT_STUDY):   abret0_mean=.;
```

```
MPRINT(EVENT_STUDY):    abret1_mean=.;
MPRINT(EVENT_STUDY):    abret2_mean=.;
MPRINT(EVENT_STUDY):    abret3_mean=.;
MPRINT(EVENT_STUDY):    cretwin_mean=0;
MPRINT(EVENT_STUDY):    ret_mean=.;
MPRINT(EVENT_STUDY):    bhar1win_mean=0;
MPRINT(EVENT_STUDY):    bhar1win_mean=0;
MPRINT(EVENT_STUDY):    bhar2win_mean=0;
MPRINT(EVENT_STUDY):    bhar3win_mean=0;
MPRINT(EVENT_STUDY):    end;
MPRINT(EVENT_STUDY):    pat_car0=scar0_mean/(sqrt(pat_scale_sum)/scar0_n);
MPRINT(EVENT_STUDY):    pat_car1=scar1_mean/(sqrt(pat_scale_sum)/scar1_n);
MPRINT(EVENT_STUDY):    pat_car2=scar2_mean/(sqrt(pat_scale_sum)/scar2_n);
MPRINT(EVENT_STUDY):    pat_car3=scar3_mean/(sqrt(pat_scale_sum)/scar3_n);
MPRINT(EVENT_STUDY):    pat_ar0=sar0_mean/(sqrt(pat_scale_sum)/sar0_n);
MPRINT(EVENT_STUDY):    pat_ar1=sar1_mean/(sqrt(pat_scale_sum)/sar1_n);
MPRINT(EVENT_STUDY):    pat_ar2=sar2_mean/(sqrt(pat_scale_sum)/sar2_n);
MPRINT(EVENT_STUDY):    pat_ar3=sar3_mean/(sqrt(pat_scale_sum)/sar3_n);
MPRINT(EVENT_STUDY):    label pat_ar0= 'Patell Z for AR_MA' pat_ar1= 'Patell Z for AR_MM' pat_ar2= 'Patell Z for
AR_FF' pat_ar3= 'Patell Z for AR_FFM' abret0_t= 'CS t-stat, AR_MA' abret1_t= 'CS t-stat, AR_MM' abret2_t= 'CS t-stat,
AR_FF' abret3_t= 'CS t-stat, AR_FFM' sar0_t= 'Std CS test, AR_MA' sar1_t= 'Std CS test, AR_MM' sar2_t= 'Std CS test,
AR_FF' sar3_t= 'Std CS test, AR_FFM' abret0_mean= 'Mean AR_MA' abret1_mean= 'Mean AR_MM' abret2_mean= 'Mean AR_FF'
abret3_mean= 'Mean AR_FFM' car0_n= 'Number of events in the portfolio' abret0_n= 'Number of events in the portfolio'
evttime= 'Event Time t' cret_mean= "Mean CTR (-2, 2)" cretwin_mean= "Mean CTR (-2,t) " car0win_mean= "Average CAR_MA
(-2, t)" car1win_mean= "Average CAR_MM (-2, t)" car2win_mean= "Average CAR_FF (-2, t)" car3win_mean= "Average CAR_FFM
(-2, t)" bhar0win_mean= "Mean BHAR_MA (-2, t)" bhar1win_mean= "Mean BHAR_MM (-2, t)" bhar2win_mean= "Mean BHAR_FF
(-2, t)" bhar3win_mean= "Mean BHAR_FFM (-2, t)" ;
MPRINT(EVENT_STUDY):    format ret_mean cret_mean cretwin_mean abret0_mean abret1_mean abret2_mean abret3_mean
car0_mean car1_mean car2_mean car3_mean bhar0_mean bhar1_mean bhar2_mean bhar3_mean bhar0win_mean bhar1win_mean
bhar2win_mean bhar3win_mean car0win_mean car1win_mean car2win_mean car3win_mean percent7.4 abret0_t abret1_t abret2_t
abret3_t sar0_t sar1_t sar2_t sar3_t pat_car0 pat_car1 pat_car2 pat_car3 pat_ar0 pat_ar1 pat_ar2 pat_ar3 car0_t
car1_t car2_t car3_t scar0_t car1_t scar2_t scar3_t comma10.2;
MPRINT(EVENT_STUDY):    if evttime=0 then do;
MPRINT(EVENT_STUDY):    model='Market-Adjusted';
MPRINT(EVENT_STUDY):    output MA_Evtdate;
MPRINT(EVENT_STUDY):    model='Market Model';
MPRINT(EVENT_STUDY):    output MM_Evtdate;
MPRINT(EVENT_STUDY):    model='FF Model';
```

```
MPRINT(EVENT_STUDY):    output FF_Evtdate;
MPRINT(EVENT_STUDY):    model='Carhart Model';
MPRINT(EVENT_STUDY):    output FFM_Evtdate;
MPRINT(EVENT_STUDY):    end;
MPRINT(EVENT_STUDY):    if missing(evttime) then evttime=-2-1;
MPRINT(EVENT_STUDY):    output MA_Evtwin;
MPRINT(EVENT_STUDY):    output MM_Evtwin;
MPRINT(EVENT_STUDY):    output FF_Evtwin;
MPRINT(EVENT_STUDY):    output FFM_Evtwin;
MPRINT(EVENT_STUDY):    run;
```

NOTE: There were 6 observations read from the data set WORK.ALLSTATS.
NOTE: The data set WORK.MA_EVTDATE has 1 observations and 9 variables.
NOTE: The data set WORK.MM_EVTDATE has 1 observations and 9 variables.
NOTE: The data set WORK.FF_EVTDATE has 1 observations and 9 variables.
NOTE: The data set WORK.FFM_EVTDATE has 1 observations and 9 variables.
NOTE: The data set WORK.MA_EVTWIN has 6 observations and 10 variables.
NOTE: The data set WORK.MM_EVTWIN has 6 observations and 10 variables.
NOTE: The data set WORK.FF_EVTWIN has 6 observations and 10 variables.
NOTE: The data set WORK.FFM_EVTWIN has 6 observations and 10 variables.
NOTE: DATA statement used (Total process time):
      real time   0.06 seconds
      user cpu time   0.01 seconds
      system cpu time   0.06 seconds
      memory   2442.56k
      OS Memory   54032.00k
      Timestamp   06/20/2024 12:13:32 AM
      Step Count   401 Switch Count 0

MPRINT(EVENT_STUDY):   data allevtdate;
MPRINT(EVENT_STUDY):   set MA_Evtdate (rename=(car0_mean=car_mean bhar0_mean=bhar_mean car0_n=n car0_t=car_t
scar0_t=scar_t pat_car0=pat_car)) MM_Evtdate (rename=(car1_mean=car_mean bhar1_mean=bhar_mean car1_n=n car1_t=car_t
scar1_t=scar_t pat_car1=pat_car)) FF_Evtdate (rename=(car2_mean=car_mean bhar2_mean=bhar_mean car2_n=n car2_t=car_t
scar2_t=scar_t pat_car2=pat_car)) FFM_evtdate (rename=(car3_mean=car_mean bhar3_mean=bhar_mean car3_n=n car3_t=car_t
scar3_t=scar_t pat_car3=pat_car));
MPRINT(EVENT_STUDY):   length=5;
MPRINT(EVENT_STUDY):   label pat_car= 'Patell Z' car_mean= "Mean CAR (-2, 2)" bhar_mean= "Mean BHAR (-2, 2)" car_t=

```
'Cross-sectional t-stat for CAR' scar_t= 'Standaridized cross-sectional t-stat for CAR' length= 'Length of event
window in trading days';
MPRINT(EVENT_STUDY):   run;
```

NOTE: There were 1 observations read from the data set WORK.MA_EVTDATE.
NOTE: There were 1 observations read from the data set WORK.MM_EVTDATE.
NOTE: There were 1 observations read from the data set WORK.FF_EVTDATE.
NOTE: There were 1 observations read from the data set WORK.FFM_EVTDATE.
NOTE: The data set WORK.ALLEVTDATE has 4 observations and 10 variables.
NOTE: DATA statement used (Total process time):
      real time   0.01 seconds
      user cpu time   0.00 seconds
      system cpu time   0.01 seconds
      memory   1124.71k
      OS Memory   53264.00k
      Timestamp   06/20/2024 12:13:32 AM
      Step Count   402 Switch Count 0


```
MPRINT(EVENT_STUDY):   data car_evtdate;
MPRINT(EVENT_STUDY):   retain permno evtdate alpha1 beta1 cret car0 bhar0 var0 car1 bhar1 var1 car2 bhar2 var2 car3
bhar3 var3 nrets nobs;
MPRINT(EVENT_STUDY):   set car_evtdate;
MPRINT(EVENT_STUDY):   label alpha1= 'Alpha (Market Model)' beta1= 'Beta (Market Model' car0= 'CAR_MA' car1= 'CAR_MM'
car2= 'CAR_FF' car3= 'CAR_FFM' bhar0= 'BHAR_MA' bhar1= 'BHAR_MM' bhar2= 'BHAR_FF' bhar3= 'BHAR_FFM' var0= 'Estimation
period variance (Market-adjusted returns)' var1= 'Estimation period variance (Market Model)' var2= 'Estimation period
variance (FF Model)' var3= 'Estimation period variance (Carhart Model)' cret= 'Cumulative Total Return' nrets=
'Number of non-missing returns in event window' nobs= 'Length of the estimation period';
MPRINT(EVENT_STUDY):   keep permno evtdate alpha1 beta1 cret car0 bhar0 var0 car1 bhar1 var1 car2 bhar2 var2 car3
bhar3 var3 nrets nobs;
MPRINT(EVENT_STUDY):   format cret alpha1 car0 bhar0 car1 bhar1 car2 bhar2 car3 bhar3 percent7.4 beta1 comma10.3;
MPRINT(EVENT_STUDY):   run;
```

NOTE: There were 781 observations read from the data set WORK.CAR_EVTDATE.
NOTE: The data set WORK.CAR_EVTDATE has 781 observations and 19 variables.
NOTE: DATA statement used (Total process time):
      real time   0.00 seconds
      user cpu time   0.00 seconds

        system cpu time   0.00 seconds
        memory   692.53k
        OS Memory   52752.00k
        Timestamp   06/20/2024 12:13:32 AM
        Step Count   403 Switch Count 0

MPRINT(EVENT_STUDY):   PROC DATASETS NOLIST;
MPRINT(EVENT_STUDY):   COPY IN = work OUT = evtstudy ;
MPRINT(EVENT_STUDY):   select allevtdate allstats car_evtwin ;
MPRINT(EVENT_STUDY):   RUN;

NOTE: Copying WORK.ALLEVTDATE to EVTSTUDY.ALLEVTDATE (memtype=DATA).
INFO: Engine's block-read method is in use.
INFO: Engine's block-write method is in use.
NOTE: There were 4 observations read from the data set WORK.ALLEVTDATE.
NOTE: The data set EVTSTUDY.ALLEVTDATE has 4 observations and 10 variables.
NOTE: Copying WORK.ALLSTATS to EVTSTUDY.ALLSTATS (memtype=DATA).
ERROR: You cannot open EVTSTUDY.ALLSTATS.DATA for output access with member-level control because
EVTSTUDY.ALLSTATS.DATA is in use by you in resource environment ViewTable Window.
ERROR: File EVTSTUDY.ALLSTATS.DATA has not been saved because copy could not be completed.
NOTE: Copying WORK.CAR_EVTWIN to EVTSTUDY.CAR_EVTWIN (memtype=DATA).
INFO: Engine's block-read method is in use.
INFO: Engine's block-write method is in use.
NOTE: There were 3905 observations read from the data set WORK.CAR_EVTWIN.
NOTE: The data set EVTSTUDY.CAR_EVTWIN has 3905 observations and 22 variables.
NOTE: Statements not processed because of errors noted above.
MPRINT(EVENT_STUDY):   options nodate orientation=landscape;
MPRINT(EVENT_STUDY):   ods pdf file="C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car0_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car0_evtrets_5days.pdf", printer "PDF".
MPRINT(EVENT_STUDY):   goptions device=pdfc;
MPRINT(EVENT_STUDY):   axis1 label=(angle=90 "Cumulative Abnormal Returns");
MPRINT(EVENT_STUDY):   axis2 label=("Event time");
MPRINT(EVENT_STUDY):   symbol interpol=join w=3 l=1;
NOTE: The SAS System stopped processing this step because of errors.

```
NOTE: PROCEDURE DATASETS used (Total process time):
      real time           0.23 seconds
      user cpu time       0.10 seconds
      system cpu time     0.07 seconds
      memory              4194.71k
      OS Memory           53780.00k
      Timestamp           06/20/2024 12:13:33 AM
      Step Count                        404  Switch Count  0


MPRINT(EVENT_STUDY):    proc gplot data =MA_Evtwin;
MPRINT(EVENT_STUDY):    where evttime>=-2;
MPRINT(EVENT_STUDY):    Title "Market adjusted model:  CARs and BHARs around the event date";
MPRINT(EVENT_STUDY):    plot (car0win_mean bhar0win_mean)*evttime /overlay legend vaxis=axis1 haxis=axis2;
MPRINT(EVENT_STUDY):    run;

NOTE: 33793 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot42.png.
MPRINT(EVENT_STUDY):  quit;

NOTE: There were 5 observations read from the data set WORK.MA_EVTWIN.
      WHERE evttime>=-2;
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE GPLOT used (Total process time):
      real time           0.31 seconds
      user cpu time       0.20 seconds
      system cpu time     0.07 seconds
      memory              8732.06k
      OS Memory           60648.00k
      Timestamp           06/20/2024 12:13:33 AM
      Step Count                        405  Switch Count  0


MPRINT(EVENT_STUDY):    ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car0_evtrets_5days.pdf.
MPRINT(EVENT_STUDY):    ods pdf file="C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car1_evtrets_5days.pdf";
```

```
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car1_evtrets_5days.pdf", printer "PDF".
MPRINT(EVENT_STUDY):   proc gplot data =MM_Evtwin;
MPRINT(EVENT_STUDY):   where evttime>=-2;
MPRINT(EVENT_STUDY):   Title "Market model:  CARs and BHARs around the event date";
MPRINT(EVENT_STUDY):   plot (car1win_mean bhar1win_mean)*evttime /overlay legend vaxis=axis1 haxis=axis2;
MPRINT(EVENT_STUDY):   run;

NOTE: 48874 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot43.png.
MPRINT(EVENT_STUDY):  quit;

NOTE: There were 5 observations read from the data set WORK.MM_EVTWIN.
      WHERE evttime>=-2;
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE GPLOT used (Total process time):
      real time           0.33 seconds
      user cpu time       0.20 seconds
      system cpu time     0.09 seconds
      memory              8607.25k
      OS Memory           60648.00k
      Timestamp           06/20/2024 12:13:34 AM
      Step Count                        406  Switch Count  0


MPRINT(EVENT_STUDY):   ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car1_evtrets_5days.pdf.
MPRINT(EVENT_STUDY):   ods pdf file="C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car2_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car2_evtrets_5days.pdf", printer "PDF".
MPRINT(EVENT_STUDY):   proc gplot data =FF_Evtwin;
MPRINT(EVENT_STUDY):   where evttime>=-2;
MPRINT(EVENT_STUDY):   Title "FF 3-factor model:CARs and BHARs around the event date";
MPRINT(EVENT_STUDY):   plot (car2win_mean bhar2win_mean)*evttime /overlay legend vaxis=axis1 haxis=axis2;
```

```
MPRINT(EVENT_STUDY):   run;

NOTE: 54659 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot44.png.
MPRINT(EVENT_STUDY):  quit;

NOTE: There were 5 observations read from the data set WORK.FF_EVTWIN.
      WHERE evttime>=-2;
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE GPLOT used (Total process time):
      real time           0.35 seconds
      user cpu time       0.17 seconds
      system cpu time     0.14 seconds
      memory              8619.87k
      OS Memory           60648.00k
      Timestamp           06/20/2024 12:13:34 AM
      Step Count                          407  Switch Count  0


MPRINT(EVENT_STUDY):   ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car2_evtrets_5days.pdf.
MPRINT(EVENT_STUDY):   ods pdf file="C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car3_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car3_evtrets_5days.pdf", printer "PDF".
MPRINT(EVENT_STUDY):   proc gplot data =FFM_Evtwin;
MPRINT(EVENT_STUDY):   where evttime>=-2;
MPRINT(EVENT_STUDY):   Title "Carhart 4 Factor model: Carhart CARs and BHARs around the event date";
MPRINT(EVENT_STUDY):   plot (car3win_mean bhar3win_mean)*evttime /overlay legend vaxis=axis1 haxis=axis2;
MPRINT(EVENT_STUDY):   run;

NOTE: 49722 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot45.png.
MPRINT(EVENT_STUDY):  quit;

NOTE: There were 5 observations read from the data set WORK.FFM_EVTWIN.
      WHERE evttime>=-2;
```

NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE GPLOT used (Total process time):
      real time   0.33 seconds
      user cpu time   0.17 seconds
      system cpu time   0.09 seconds
      memory   8624.75k
      OS Memory   60648.00k
      Timestamp   06/20/2024 12:13:35 AM
      Step Count   408 Switch Count 0

MPRINT(EVENT_STUDY):   ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car3_evtrets_5days.pdf.
MPRINT(EVENT_STUDY):   ods pdf file="C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car0_3_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car0_3_evtrets_5days.pdf", printer "PDF".
MPRINT(EVENT_STUDY):   proc gplot data =allstats;
MPRINT(EVENT_STUDY):   where evttime>=-2;
MPRINT(EVENT_STUDY):   Title "CARs from the four models: around the event date";
MPRINT(EVENT_STUDY):   plot (car0win_mean car1win_mean car2win_mean car3win_mean)*evttime /overlay legend
vaxis=axis1 haxis=axis2;
MPRINT(EVENT_STUDY):   run;

NOTE: 34635 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files_TD25772_DELL2_\gplot46.png.
MPRINT(EVENT_STUDY): quit;

NOTE: There were 5 observations read from the data set WORK.ALLSTATS.
      WHERE evttime>=-2;
NOTE: PROCEDURE GPLOT used (Total process time):
      real time   0.31 seconds
      user cpu time   0.21 seconds
      system cpu time   0.03 seconds
      memory   8525.25k
      OS Memory   60904.00k

```
MPRINT(EVENT_STUDY):   ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car0_3_evtrets_5days.pdf.
MPRINT(EVENT_STUDY):   ods pdf file="C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\agg_foreign_rec_exe10\BHARS0_3_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\BHARS0_3_evtrets_5days.pdf", printer "PDF".
MPRINT(EVENT_STUDY):   proc gplot data =allstats;
MPRINT(EVENT_STUDY):   where evttime>=-2;
MPRINT(EVENT_STUDY):   Title "BHARs from the four models: BHARs around the event date";
MPRINT(EVENT_STUDY):   plot (bhar0_mean bhar1_mean bhar2_mean bhar3_mean )*evttime /overlay legend vaxis=axis1
haxis=axis2;
MPRINT(EVENT_STUDY):   run;
NOTE: 20765 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot47.png.
MPRINT(EVENT_STUDY):  quit;
NOTE: There were 5 observations read from the data set WORK.ALLSTATS.
      WHERE evttime>=-2;
NOTE: PROCEDURE GPLOT used (Total process time):
      real time           0.31 seconds
      user cpu time       0.21 seconds
      system cpu time     0.06 seconds
      memory              8523.50k
      OS Memory           60904.00k
      Timestamp           06/20/2024 12:13:35 AM
      Step Count                         410  Switch Count  0


MPRINT(EVENT_STUDY):   ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\BHARS0_3_evtrets_5days.pdf.
MPRINT(EVENT_STUDY):   run;
MPRINT(EVENT_STUDY):  quit;
MPRINT(EVENT_STUDY):   ods pdf close;
```

```
MLOGIC(EVENT_STUDY):  Ending execution.

6234  %let outputPath=%str(C:\Users\lihon\OneDrive - Kent State
6234! University\aaaa\event_Study\result\agg_foreign_rec_exe10);
6235
6236  libname evt_res "&outputPath";
NOTE: Libref EVT_RES refers to the same physical library as EVTSTUDY.
NOTE: Libref EVT_RES was successfully assigned as follows:
      Engine:        V9
      Physical Name: C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\result\agg_foreign_rec_exe10
6237  ods latex path="&outputpath"  file='Foreign_rec_exc10_model_summary_report.tex' style=journal;
NOTE: Writing LATEX Body file: Foreign_rec_exc10_model_summary_report.tex
6238  Title 'Summary report of the four models';
6239  options nolabel;
6240  proc report data=evt_res.allevtdate;
6241    column  model Cret_mean   car_mean  bhar_mean    car_t  scar_t  pat_car n ;
6242    define  model / display;
6243    define  Cret_mean / display;
6244    define  car_mean / display;
6245    define  bhar_mean / display;
6246   define   car_t / display;
6247   define   scar_t / display;
6248   define   pat_car / display;
6249   define  n / display "total Obs";
6250
6251  run;

NOTE: Multiple concurrent threads will be used to summarize data.
NOTE: There were 4 observations read from the data set EVT_RES.ALLEVTDATE.
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE REPORT used (Total process time):
      real time           0.06 seconds
      user cpu time       0.01 seconds
      system cpu time     0.01 seconds
      memory              8400.00k
      OS Memory           58664.00k
      Timestamp           06/20/2024 12:14:23 AM
```

6252 %event_study(outputPath=C:\Users\lihon\OneDrive - Kent State
6252! University\aaaa\event_Study\result\agg_foreign_rec_exe10
MLOGIC(EVENT_STUDY): Beginning execution.
6253   ,permno_list = foreign_trans_execrec10_decile)
MLOGIC(EVENT_STUDY): Parameter OUTPUTPATH has value C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10
MLOGIC(EVENT_STUDY): Parameter PERMNO_LIST has value foreign_trans_execrec10_decile
MPRINT(EVENT_STUDY):   libname mycrsp "C:\Users\lihon\patent Dropbox\Victor Li\wrds_data";
NOTE: Libref MYCRSP was successfully assigned as follows:
      Engine: V9
      Physical Name: C:\Users\lihon\patent Dropbox\Victor Li\wrds_data
MPRINT(EVENT_STUDY):   libname evtstudy "C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\agg_foreign_rec_exe10";
NOTE: Libref EVTSTUDY refers to the same physical library as TMP13.
NOTE: Libref EVTSTUDY was successfully assigned as follows:
      Engine: V9
      Physical Name: C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\result\agg_foreign_rec_exe10
MLOGIC(EVENT_STUDY): %LET (variable name is CRSP)
MLOGIC(EVENT_STUDY): %LET (variable name is ESTPER)
MLOGIC(EVENT_STUDY): %LET (variable name is START)
MLOGIC(EVENT_STUDY): %LET (variable name is END)
MLOGIC(EVENT_STUDY): %LET (variable name is GAP)
MLOGIC(EVENT_STUDY): %LET (variable name is MINEST)
MLOGIC(EVENT_STUDY): %LET (variable name is EVTWIN)
MPRINT(EVENT_STUDY):   proc sql;
MPRINT(EVENT_STUDY):   create table input as select distinct permno, record_dt as edate format MMDDYY10. from
foreign_trans_execrec10_decile where not missing(-2) and year(record_dt);
NOTE: Table WORK.INPUT created, with 792 rows and 2 columns.

MPRINT(EVENT_STUDY):   quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time   0.01 seconds
      user cpu time   0.01 seconds
      system cpu time   0.01 seconds
      memory   5430.65k

MPRINT(EVENT_STUDY):   data caldates;
MPRINT(EVENT_STUDY):   merge mycrsp.dsi(keep=date rename=(date=estper_beg)) mycrsp.dsi(keep=date firstobs=150
rename=(date=estper_end)) mycrsp.dsi(keep=date firstobs=217 rename=(date=evtwin_beg)) mycrsp.dsi(keep=date
firstobs=219 rename=(date=evtdate)) mycrsp.dsi(keep=date firstobs=221 rename=(date=evtwin_end));
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
MPRINT(EVENT_STUDY):   format estper_beg estper_end evtwin_beg evtdate evtwin_end date9.;
MPRINT(EVENT_STUDY):   label estper_beg= 'Start of the Estimation Window' estper_end= 'End of the Estimation Window'
evtwin_beg= 'Start of the Event Window' evtwin_end= 'End of the Event Window' evtdate= 'Event Date';
MPRINT(EVENT_STUDY):   index+1;
MPRINT(EVENT_STUDY):   if nmiss(estper_beg,estper_end,evtwin_beg,evtwin_end,evtdate)=0;
MPRINT(EVENT_STUDY):   run;

NOTE: There were 25799 observations read from the data set MYCRSP.DSI.
NOTE: There were 25650 observations read from the data set MYCRSP.DSI.
NOTE: There were 25583 observations read from the data set MYCRSP.DSI.
NOTE: There were 25581 observations read from the data set MYCRSP.DSI.
NOTE: There were 25579 observations read from the data set MYCRSP.DSI.
NOTE: The data set WORK.CALDATES has 25579 observations and 6 variables.
NOTE: DATA statement used (Total process time):

```
     real time           0.06 seconds
     user cpu time       0.06 seconds
     system cpu time     0.00 seconds
     memory              1627.53k
     OS Memory           51976.00k
     Timestamp           06/20/2024 12:17:14 AM
     Step Count                        413  Switch Count  0


MPRINT(EVENT_STUDY):   proc sql;
MPRINT(EVENT_STUDY):   create table temp as select a.permno ,b.* from input a left join caldates b on
b.evtdate-a.edate>=0 group by a.edate having (b.evtdate-a.edate)=min(b.evtdate-a.edate);
NOTE: The execution of this query involves performing one or more Cartesian product joins that can not be optimized.
NOTE: The query requires remerging summary statistics back with the original data.
NOTE: SAS threaded sort was used.
NOTE: Table WORK.TEMP created, with 792 rows and 7 columns.

NOTE: PROCEDURE SQL used (Total process time):
     real time           1.93 seconds
     user cpu time       2.67 seconds
     system cpu time     0.59 seconds
     memory              225746.35k
     OS Memory           275048.00k
     Timestamp           06/20/2024 12:17:16 AM
     Step Count                        414  Switch Count  0


MPRINT(EVENT_STUDY):   proc sql;
MPRINT(EVENT_STUDY):   create table evtrets_temp as select a.permno, a.date format date9., a.ret as ret1, b.evtdate,
b.estper_beg, b.estper_end, b.evtwin_beg, b.evtwin_end from mycrsp.dsf a, temp b where a.permno=b.permno and
b.estper_beg<=a.date<=b.evtwin_end;
INFO: Data file MYCRSP.DSF.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
NOTE: Table WORK.EVTRETS_TEMP created, with 174239 rows and 8 columns.

MPRINT(EVENT_STUDY):   quit;
NOTE: PROCEDURE SQL used (Total process time):
```

```
     real time            37.25 seconds
     user cpu time        36.68 seconds
     system cpu time      1.01 seconds
     memory               5850.37k
     OS Memory            57100.00k
     Timestamp            06/20/2024 12:17:53 AM
     Step Count                        415  Switch Count  0


MPRINT(EVENT_STUDY):   proc sql;
MPRINT(EVENT_STUDY):   create view evtrets1 as select a.*, (b.mktrf+b.rf) as mkt, b.mktrf, b.rf,b.smb, b.hml, b.umd
from evtrets_temp a left join mycrsp.ff_factors_daily (keep=date mktrf smb hml umd rf) b on a.date=b.date;
NOTE: SQL view WORK.EVTRETS1 has been defined.
MPRINT(EVENT_STUDY):   quit;
NOTE: PROCEDURE SQL used (Total process time):
     real time            0.00 seconds
     user cpu time        0.00 seconds
     system cpu time      0.00 seconds
     memory               92.28k
     OS Memory            51976.00k
     Timestamp            06/20/2024 12:17:53 AM
     Step Count                        416  Switch Count  0


MPRINT(EVENT_STUDY):   proc sql;
MPRINT(EVENT_STUDY):   create table evtrets (drop=ret1 where=(not missing(mkt))) as select a.*,
(1+a.ret1)*sum(1,b.dlret)-1-a.mkt as exret label='Market-adjusted total ret', (1+a.ret1)*sum(1,b.dlret)-1 as ret "Ret
adjusted for delisting" from evtrets1 a left join mycrsp.dsedelist (where=(missing(dlret)=0)) b on a.permno=b.permno
and a.date=b.dlstdt order by a.permno,a.evtdate,a.date;
INFO: Data file MYCRSP.FF_FACTORS_DAILY.DATA is in a format that is native to another host, or the file encoding does
not match the session encoding. Cross Environment Data Access will be used, which might require additional CPU
resources and might reduce performance.
INFO: Data file MYCRSP.DSEDELIST.DATA is in a format that is native to another host, or the file encoding does not
match the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources
and might reduce performance.
NOTE: SAS threaded sort was used.
NOTE: Table WORK.EVTRETS created, with 174239 rows and 15 columns.
```

```
MPRINT(EVENT_STUDY):   quit;
```
NOTE: PROCEDURE SQL used (Total process time):
      real time   0.45 seconds
      user cpu time   0.54 seconds
      system cpu time   0.28 seconds
      memory   49277.29k
      OS Memory   96800.00k
      Timestamp   06/20/2024 12:17:54 AM
      Step Count   417 Switch Count 0

```
MPRINT(EVENT_STUDY):   proc printto log=junk;
MPRINT(EVENT_STUDY):   run;
```

NOTE: PROCEDURE PRINTTO used (Total process time):
      real time   0.00 seconds
      user cpu time   0.00 seconds
      system cpu time   0.00 seconds
      memory   7.03k
      OS Memory   51464.00k
      Timestamp   06/20/2024 12:17:54 AM
      Step Count   420 Switch Count 0

```
MPRINT(EVENT_STUDY):   data abrets1/view=abrets1;
MPRINT(EVENT_STUDY):   merge evtrets(where=(evtwin_beg<=date<=evtwin_end) in=in_evtrets) params
(where=(_model_='eq0') keep=permno evtdate _model_ _rmse_ _p_ _edf_ rename=(_rmse_=std0 _p_=p0 _edf_=edf0)) params
(where=(_model_='eq1') keep=permno evtdate _model_ _rmse_ intercept mktrf rename=(_rmse_=std1 intercept=alpha1
mktrf=beta1)) params (where=(_model_='eq2') keep=permno evtdate _model_ _rmse_ intercept mktrf smb hml
rename=(_rmse_=std2 intercept=alpha2 mktrf=beta2 smb=sminb2 hml=hminl2)) params (where=(_model_='eq3') keep=permno
evtdate _model_ _rmse_ intercept mktrf smb hml umd rename=(_rmse_=std3 intercept=alpha3 mktrf=beta3 smb=sminb3
hml=hminl3 umd=umind3));
MPRINT(EVENT_STUDY):   by permno evtdate;
MPRINT(EVENT_STUDY):   retain missret;
MPRINT(EVENT_STUDY):   if first.permno then missret=missing(ret);
MPRINT(EVENT_STUDY):   if missing(ret) then missret+1;
MPRINT(EVENT_STUDY):   var0=std0**2;
MPRINT(EVENT_STUDY):   var1=std1**2;
```

```
MPRINT(EVENT_STUDY):   var2=std2**2;
MPRINT(EVENT_STUDY):   var3=std3**2;
MPRINT(EVENT_STUDY):   abret0 = exret;
MPRINT(EVENT_STUDY):   *extra over market;
MPRINT(EVENT_STUDY):   expret1 = alpha1 + beta1*mktrf;
MPRINT(EVENT_STUDY):   *CAPM;
MPRINT(EVENT_STUDY):   abret1 = ret-expret1;
MPRINT(EVENT_STUDY):   expret2 = alpha2+beta2*mktrf+sminb2*smb+hminl2*hml;
MPRINT(EVENT_STUDY):   *FF3factor;
MPRINT(EVENT_STUDY):   abret2=ret-expret2;
MPRINT(EVENT_STUDY):   expret3 =alpha3+beta3*mktrf+sminb3*smb+hminl3*hml+umind3*umd;
MPRINT(EVENT_STUDY):   abret3=ret-expret3;
MPRINT(EVENT_STUDY):   nobs=p0+edf0;
MPRINT(EVENT_STUDY):   drop p0 edf0 estper_beg estper_end std0 std1 std2 std3 _model_ exret;
MPRINT(EVENT_STUDY):   if in_evtrets and nobs>70;
MPRINT(EVENT_STUDY):   * I add the followings;
MPRINT(EVENT_STUDY):   if nobs=150;
MPRINT(EVENT_STUDY):   run;

NOTE: DATA STEP view saved on file WORK.ABRETS1.
NOTE: A stored DATA STEP view cannot run under a different operating system.
NOTE: DATA statement used (Total process time):
      real time           0.01 seconds
      user cpu time       0.01 seconds
      system cpu time     0.00 seconds
      memory              1361.56k
      OS Memory           51724.00k
      Timestamp           06/20/2024 12:17:54 AM
      Step Count                    421  Switch Count  0


MPRINT(EVENT_STUDY):   proc sql;
MPRINT(EVENT_STUDY):   create table abrets as select a.*, (b.index-c.index) as evttime from abrets1 a left join
caldates b on a.date = b.evtdate left join caldates c on a.evtdate = c.evtdate order by permno, evtdate, date;
NOTE: SAS threaded sort was used.
INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
```

```
INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
NOTE: Missing values were generated as a result of performing an operation on missing values.
      Each place is given by: (Number of times) at (Line):(Column).
      5 at 8844:71    5 at 8844:87    5 at 8844:103   5 at 8844:119   5 at 8844:190   5 at 8844:221   5 at 8845:14
      5 at 8845:68    5 at 8845:102   5 at 8845:155   5 at 8845:175
NOTE: View WORK.ABRETS1.VIEW used (Total process time):
      real time              0.15 seconds
      user cpu time          0.12 seconds
      system cpu time        0.23 seconds
      memory                 46020.31k
      OS Memory              94044.00k
      Timestamp              06/20/2024 12:17:59 AM
      Step Count                         422  Switch Count  24


NOTE: There were 3955 observations read from the data set WORK.EVTRETS.
      WHERE (evtwin_beg<=date) and (date<=evtwin_end);
NOTE: There were 790 observations read from the data set WORK.PARAMS.
      WHERE _model_='eq0';
NOTE: There were 790 observations read from the data set WORK.PARAMS.
      WHERE _model_='eq1';
NOTE: There were 790 observations read from the data set WORK.PARAMS.
      WHERE _model_='eq2';
NOTE: There were 790 observations read from the data set WORK.PARAMS.
      WHERE _model_='eq3';
NOTE: Table WORK.ABRETS created, with 3905 rows and 37 columns.

MPRINT(EVENT_STUDY):   quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time          4.51 seconds
      user cpu time      4.21 seconds
      system cpu time    0.37 seconds
      memory             46020.31k
      OS Memory          94044.00k
      Timestamp          06/20/2024 12:17:59 AM
      Step Count                         422  Switch Count  25
```

```
MPRINT(EVENT_STUDY):   proc sort data=abrets nodupkey;
MPRINT(EVENT_STUDY):    by PERMNO evtdate DATE evtwin_beg evtwin_end mkt mktrf rf smb hml umd ret alpha1 beta1 alpha2
beta2 sminb2 hminl2 alpha3 beta3 sminb3 hminl3 umind3 missret var0 var1 var2 var3 abret0 expret1 abret1 expret2
abret2 expret3 abret3 nobs evttime ;
MPRINT(EVENT_STUDY):   run;

NOTE: There were 3905 observations read from the data set WORK.ABRETS.
NOTE: SAS sort was used.
NOTE: 0 observations with duplicate key values were deleted.
NOTE: The data set WORK.ABRETS has 3905 observations and 37 variables.
NOTE: PROCEDURE SORT used (Total process time):
      real time             0.01 seconds
      user cpu time         0.01 seconds
      system cpu time       0.00 seconds
      memory                3980.90k
      OS Memory             55580.00k
      Timestamp             06/20/2024 12:17:59 AM
      Step Count                       423   Switch Count   0


MPRINT(EVENT_STUDY):   proc expand data=abrets out=car method=none;
MPRINT(EVENT_STUDY):   by permno evtdate;
MPRINT(EVENT_STUDY):   id date;
MPRINT(EVENT_STUDY):   convert ret=cret/transformout=(+1 cuprod -1);
MPRINT(EVENT_STUDY):   convert mkt=cmkt/transformout=(+1 cuprod -1);
MPRINT(EVENT_STUDY):   convert expret1 =cexpret1 /transformout=(+1 cuprod -1);
MPRINT(EVENT_STUDY):   convert expret2 =cexpret2 /transformout=(+1 cuprod -1);
MPRINT(EVENT_STUDY):   convert expret3 =cexpret3 /transformout=(+1 cuprod -1);
MPRINT(EVENT_STUDY):   convert abret0=car0/transformout=(sum);
MPRINT(EVENT_STUDY):   convert abret1=car1/transformout=(sum);
MPRINT(EVENT_STUDY):   convert abret2=car2/transformout=(sum);
MPRINT(EVENT_STUDY):   convert abret3=car3/transformout=(sum);
MPRINT(EVENT_STUDY):   run;

NOTE: The data set WORK.CAR has 3905 observations and 46 variables.
NOTE: PROCEDURE EXPAND used (Total process time):
      real time             0.08 seconds
```

```
        user cpu time        0.06 seconds
        system cpu time      0.01 seconds
        memory               973.21k
        OS Memory            52752.00k
        Timestamp            06/20/2024 12:17:59 AM
        Step Count                        424  Switch Count  0


MPRINT(EVENT_STUDY):   proc printto log=junk;
MPRINT(EVENT_STUDY):  run;

NOTE: PROCEDURE PRINTTO used (Total process time):
        real time            0.00 seconds
        user cpu time        0.00 seconds
        system cpu time      0.00 seconds
        memory               7.03k
        OS Memory            52232.00k
        Timestamp            06/20/2024 12:17:59 AM
        Step Count                        427  Switch Count  0


MPRINT(EVENT_STUDY):   data allcars;
MPRINT(EVENT_STUDY):   merge car_evtwin (rename=(bhar0=bhar0win bhar1=bhar1win bhar2=bhar2win bhar3=bhar3win
car0=car0win car1=car1win car2=car2win car3=car3win cret=cretwin)) car_evtdate;
MPRINT(EVENT_STUDY):   by permno evtdate;
MPRINT(EVENT_STUDY):   run;

NOTE: There were 3905 observations read from the data set WORK.CAR_EVTWIN.
NOTE: There were 781 observations read from the data set WORK.CAR_EVTDATE.
NOTE: The data set WORK.ALLCARS has 3905 observations and 59 variables.
NOTE: DATA statement used (Total process time):
        real time            0.01 seconds
        user cpu time        0.00 seconds
        system cpu time      0.01 seconds
        memory               1196.12k
        OS Memory            52232.00k
        Timestamp            06/20/2024 12:17:59 AM
        Step Count                        428  Switch Count  0
```

```
MPRINT(EVENT_STUDY):    * proc means data=allcars noprint;
MPRINT(EVENT_STUDY):    proc means data=allcars( where = (nobs=150)) noprint;
MPRINT(EVENT_STUDY):    class evttime;
MPRINT(EVENT_STUDY):    id nobs;
MPRINT(EVENT_STUDY):    var ret cret car0 car1 car2 car3 cretwin car0win car1win car2win car3win bhar0 bhar1 bhar2
bhar3 bhar0win bhar1win bhar2win bhar3win scar0 scar1 scar2 scar3 abret0 abret1 abret2 abret3 sar0 sar1 sar2 sar3
pat_scale;
ERROR: You cannot open WORK.ALLSTATS.DATA for output access with member-level control because WORK.ALLSTATS.DATA is
in use by you in resource environment ViewTable Window.
MPRINT(EVENT_STUDY):    output out=allstats mean = n = t = sum =/autoname;
MPRINT(EVENT_STUDY):    run;

NOTE: The SAS System stopped processing this step because of errors.
NOTE: PROCEDURE MEANS used (Total process time):
      real time            0.00 seconds
      user cpu time        0.00 seconds
      system cpu time      0.00 seconds
      memory               333.15k
      OS Memory            52232.00k
      Timestamp            06/20/2024 12:17:59 AM
      Step Count                          429   Switch Count  0



MPRINT(EVENT_STUDY):    data MA_Evtdate (keep=evttime car0_n cret_mean car0_mean car0_t scar0_t bhar0_mean pat_car0
model) MM_Evtdate (keep=evttime car1_n cret_mean car1_mean car1_t scar1_t bhar1_mean pat_car1 model ) FF_Evtdate
(keep=evttime car2_n cret_mean car2_mean car2_t scar2_t bhar2_mean pat_car2 model ) FFM_Evtdate (keep=evttime car3_n
cret_mean car3_mean car3_t scar3_t bhar3_mean pat_car3 model ) MA_Evtwin (keep=evttime cretwin_mean abret0_n ret_mean
abret0_mean car0win_mean bhar0win_mean abret0_t sar0_t pat_ar0 ) MM_Evtwin (keep=evttime cretwin_mean abret1_n
ret_mean abret1_mean car1win_mean bhar1win_mean abret1_t sar1_t pat_ar1 ) FF_Evtwin (keep=evttime cretwin_mean
abret2_n ret_mean abret2_mean car2win_mean bhar2win_mean abret2_t sar2_t pat_ar2 ) FFM_Evtwin (keep=evttime
cretwin_mean abret3_n ret_mean abret3_mean car3win_mean bhar3win_mean abret3_t sar3_t pat_ar3 );
MPRINT(EVENT_STUDY):    set allstats;
MPRINT(EVENT_STUDY):    by evttime;
MPRINT(EVENT_STUDY):    if _n_=1 and missing(evttime) then do;
MPRINT(EVENT_STUDY):    abret0_mean=.;
```

```
MPRINT(EVENT_STUDY):    abret1_mean=.;
MPRINT(EVENT_STUDY):    abret2_mean=.;
MPRINT(EVENT_STUDY):    abret3_mean=.;
MPRINT(EVENT_STUDY):    cretwin_mean=0;
MPRINT(EVENT_STUDY):    ret_mean=.;
MPRINT(EVENT_STUDY):    bhar1win_mean=0;
MPRINT(EVENT_STUDY):    bhar1win_mean=0;
MPRINT(EVENT_STUDY):    bhar2win_mean=0;
MPRINT(EVENT_STUDY):    bhar3win_mean=0;
MPRINT(EVENT_STUDY):    end;
MPRINT(EVENT_STUDY):    pat_car0=scar0_mean/(sqrt(pat_scale_sum)/scar0_n);
MPRINT(EVENT_STUDY):    pat_car1=scar1_mean/(sqrt(pat_scale_sum)/scar1_n);
MPRINT(EVENT_STUDY):    pat_car2=scar2_mean/(sqrt(pat_scale_sum)/scar2_n);
MPRINT(EVENT_STUDY):    pat_car3=scar3_mean/(sqrt(pat_scale_sum)/scar3_n);
MPRINT(EVENT_STUDY):    pat_ar0=sar0_mean/(sqrt(pat_scale_sum)/sar0_n);
MPRINT(EVENT_STUDY):    pat_ar1=sar1_mean/(sqrt(pat_scale_sum)/sar1_n);
MPRINT(EVENT_STUDY):    pat_ar2=sar2_mean/(sqrt(pat_scale_sum)/sar2_n);
MPRINT(EVENT_STUDY):    pat_ar3=sar3_mean/(sqrt(pat_scale_sum)/sar3_n);
MPRINT(EVENT_STUDY):    label pat_ar0= 'Patell Z for AR_MA' pat_ar1= 'Patell Z for AR_MM' pat_ar2= 'Patell Z for
AR_FF' pat_ar3= 'Patell Z for AR_FFM' abret0_t= 'CS t-stat, AR_MA' abret1_t= 'CS t-stat, AR_MM' abret2_t= 'CS t-stat,
AR_FF' abret3_t= 'CS t-stat, AR_FFM' sar0_t= 'Std CS test, AR_MA' sar1_t= 'Std CS test, AR_MM' sar2_t= 'Std CS test,
AR_FF' sar3_t= 'Std CS test, AR_FFM' abret0_mean= 'Mean AR_MA' abret1_mean= 'Mean AR_MM' abret2_mean= 'Mean AR_FF'
abret3_mean= 'Mean AR_FFM' car0_n= 'Number of events in the portfolio' abret0_n= 'Number of events in the portfolio'
evttime= 'Event Time t' cret_mean= "Mean CTR (-2, 2)" cretwin_mean= "Mean CTR (-2,t) " car0win_mean= "Average CAR_MA
(-2, t)" car1win_mean= "Average CAR_MM (-2, t)" car2win_mean= "Average CAR_FF (-2, t)" car3win_mean= "Average CAR_FFM
(-2, t)" bhar0win_mean= "Mean BHAR_MA (-2, t)" bhar1win_mean= "Mean BHAR_MM (-2, t)" bhar2win_mean= "Mean BHAR_FF
(-2, t)" bhar3win_mean= "Mean BHAR_FFM (-2, t)" ;
MPRINT(EVENT_STUDY):    format ret_mean cret_mean cretwin_mean abret0_mean abret1_mean abret2_mean abret3_mean
car0_mean car1_mean car2_mean car3_mean bhar0_mean bhar1_mean bhar2_mean bhar3_mean bhar0win_mean bhar1win_mean
bhar2win_mean bhar3win_mean car0win_mean car1win_mean car2win_mean car3win_mean percent7.4 abret0_t abret1_t abret2_t
abret3_t sar0_t sar1_t sar2_t sar3_t pat_car0 pat_car1 pat_car2 pat_car3 pat_ar0 pat_ar1 pat_ar2 pat_ar3 car0_t
car1_t car2_t car3_t scar0_t car1_t scar2_t scar3_t comma10.2;
MPRINT(EVENT_STUDY):    if evttime=0 then do;
MPRINT(EVENT_STUDY):    model='Market-Adjusted';
MPRINT(EVENT_STUDY):    output MA_Evtdate;
MPRINT(EVENT_STUDY):    model='Market Model';
MPRINT(EVENT_STUDY):    output MM_Evtdate;
MPRINT(EVENT_STUDY):    model='FF Model';
```

```
MPRINT(EVENT_STUDY):    output FF_Evtdate;
MPRINT(EVENT_STUDY):    model='Carhart Model';
MPRINT(EVENT_STUDY):    output FFM_Evtdate;
MPRINT(EVENT_STUDY):    end;
MPRINT(EVENT_STUDY):    if missing(evttime) then evttime=-2-1;
MPRINT(EVENT_STUDY):    output MA_Evtwin;
MPRINT(EVENT_STUDY):    output MM_Evtwin;
MPRINT(EVENT_STUDY):    output FF_Evtwin;
MPRINT(EVENT_STUDY):    output FFM_Evtwin;
MPRINT(EVENT_STUDY):    run;
```

NOTE: There were 6 observations read from the data set WORK.ALLSTATS.
NOTE: The data set WORK.MA_EVTDATE has 1 observations and 9 variables.
NOTE: The data set WORK.MM_EVTDATE has 1 observations and 9 variables.
NOTE: The data set WORK.FF_EVTDATE has 1 observations and 9 variables.
NOTE: The data set WORK.FFM_EVTDATE has 1 observations and 9 variables.
NOTE: The data set WORK.MA_EVTWIN has 6 observations and 10 variables.
NOTE: The data set WORK.MM_EVTWIN has 6 observations and 10 variables.
NOTE: The data set WORK.FF_EVTWIN has 6 observations and 10 variables.
NOTE: The data set WORK.FFM_EVTWIN has 6 observations and 10 variables.
NOTE: DATA statement used (Total process time):
      real time   0.05 seconds
      user cpu time   0.00 seconds
      system cpu time   0.04 seconds
      memory   2388.90k
      OS Memory   52744.00k
      Timestamp   06/20/2024 12:17:59 AM
      Step Count   430   Switch Count 0

```
MPRINT(EVENT_STUDY):    data allevtdate;
MPRINT(EVENT_STUDY):    set MA_Evtdate (rename=(car0_mean=car_mean bhar0_mean=bhar_mean car0_n=n car0_t=car_t
scar0_t=scar_t pat_car0=pat_car)) MM_Evtdate (rename=(car1_mean=car_mean bhar1_mean=bhar_mean car1_n=n car1_t=car_t
scar1_t=scar_t pat_car1=pat_car)) FF_Evtdate (rename=(car2_mean=car_mean bhar2_mean=bhar_mean car2_n=n car2_t=car_t
scar2_t=scar_t pat_car2=pat_car)) FFM_evtdate (rename=(car3_mean=car_mean bhar3_mean=bhar_mean car3_n=n car3_t=car_t
scar3_t=scar_t pat_car3=pat_car));
MPRINT(EVENT_STUDY):    length=5;
MPRINT(EVENT_STUDY):    label pat_car= 'Patell Z' car_mean= "Mean CAR (-2, 2)" bhar_mean= "Mean BHAR (-2, 2)" car_t=
```

'Cross-sectional t-stat for CAR' scar_t= 'Standaridized cross-sectional t-stat for CAR' length= 'Length of event
window in trading days';
MPRINT(EVENT_STUDY):   run;

NOTE: There were 1 observations read from the data set WORK.MA_EVTDATE.
NOTE: There were 1 observations read from the data set WORK.MM_EVTDATE.
NOTE: There were 1 observations read from the data set WORK.FF_EVTDATE.
NOTE: There were 1 observations read from the data set WORK.FFM_EVTDATE.
NOTE: The data set WORK.ALLEVTDATE has 4 observations and 10 variables.
NOTE: DATA statement used (Total process time):
      real time   0.01 seconds
      user cpu time   0.01 seconds
      system cpu time   0.00 seconds
      memory   1120.78k
      OS Memory   52232.00k
      Timestamp   06/20/2024 12:17:59 AM
      Step Count   431   Switch Count 0

MPRINT(EVENT_STUDY):   data car_evtdate;
MPRINT(EVENT_STUDY):   retain permno evtdate alpha1 beta1 cret car0 bhar0 var0 car1 bhar1 var1 car2 bhar2 var2 car3
bhar3 var3 nrets nobs;
MPRINT(EVENT_STUDY):   set car_evtdate;
MPRINT(EVENT_STUDY):   label alpha1= 'Alpha (Market Model)' beta1= 'Beta (Market Model' car0= 'CAR_MA' car1= 'CAR_MM'
car2= 'CAR_FF' car3= 'CAR_FFM' bhar0= 'BHAR_MA' bhar1= 'BHAR_MM' bhar2= 'BHAR_FF' bhar3= 'BHAR_FFM' var0= 'Estimation
period variance (Market-adjusted returns)' var1= 'Estimation period variance (Market Model)' var2= 'Estimation period
variance (FF Model)' var3= 'Estimation period variance (Carhart Model)' cret= 'Cumulative Total Return' nrets=
'Number of non-missing returns in event window' nobs= 'Length of the estimation period';
MPRINT(EVENT_STUDY):   keep permno evtdate alpha1 beta1 cret car0 bhar0 var0 car1 bhar1 var1 car2 bhar2 var2 car3
bhar3 var3 nrets nobs;
MPRINT(EVENT_STUDY):   format cret alpha1 car0 bhar0 car1 bhar1 car2 bhar2 car3 bhar3 percent7.4 beta1 comma10.3;
MPRINT(EVENT_STUDY):   run;

NOTE: There were 781 observations read from the data set WORK.CAR_EVTDATE.
NOTE: The data set WORK.CAR_EVTDATE has 781 observations and 19 variables.
NOTE: DATA statement used (Total process time):
      real time   0.01 seconds
      user cpu time   0.00 seconds

```
       system cpu time     0.01 seconds
       memory              698.81k
       OS Memory           52232.00k
       Timestamp           06/20/2024 12:17:59 AM
       Step Count                        432  Switch Count  0


MPRINT(EVENT_STUDY):   PROC DATASETS NOLIST;
MPRINT(EVENT_STUDY):   COPY IN = work OUT = evtstudy ;
MPRINT(EVENT_STUDY):   select allevtdate allstats car_evtwin ;
MPRINT(EVENT_STUDY):   RUN;

NOTE: Copying WORK.ALLEVTDATE to EVTSTUDY.ALLEVTDATE (memtype=DATA).
INFO: Engine's block-read method is in use.
INFO: Engine's block-write  method is in use.
NOTE: There were 4 observations read from the data set WORK.ALLEVTDATE.
NOTE: The data set EVTSTUDY.ALLEVTDATE has 4 observations and 10 variables.
NOTE: Copying WORK.ALLSTATS to EVTSTUDY.ALLSTATS (memtype=DATA).
INFO: Engine's block-read method is in use.
INFO: Engine's block-write  method is in use.
NOTE: There were 6 observations read from the data set WORK.ALLSTATS.
NOTE: The data set EVTSTUDY.ALLSTATS has 6 observations and 132 variables.
NOTE: Copying WORK.CAR_EVTWIN to EVTSTUDY.CAR_EVTWIN (memtype=DATA).
INFO: Engine's block-read method is in use.
INFO: Engine's block-write  method is in use.
NOTE: There were 3905 observations read from the data set WORK.CAR_EVTWIN.
NOTE: The data set EVTSTUDY.CAR_EVTWIN has 3905 observations and 22 variables.
MPRINT(EVENT_STUDY):   options nodate orientation=landscape;
MPRINT(EVENT_STUDY):   ods pdf file="C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car0_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car0_evtrets_5days.pdf", printer "PDF".
MPRINT(EVENT_STUDY):   goptions device=pdfc;
MPRINT(EVENT_STUDY):   axis1 label=(angle=90 "Cumulative Abnormal Returns");
MPRINT(EVENT_STUDY):   axis2 label=("Event time");
MPRINT(EVENT_STUDY):   symbol interpol=join w=3 l=1;
NOTE: PROCEDURE DATASETS used (Total process time):
```

```
        real time          0.24 seconds
        user cpu time      0.03 seconds
        system cpu time    0.11 seconds
        memory             4237.92k
        OS Memory          53260.00k
        Timestamp          06/20/2024 12:17:59 AM
        Step Count                        433  Switch Count  0


MPRINT(EVENT_STUDY):    proc gplot data =MA_Evtwin;
MPRINT(EVENT_STUDY):    where evttime>=-2;
MPRINT(EVENT_STUDY):    Title "Market adjusted model:  CARs and BHARs around the event date";
MPRINT(EVENT_STUDY):    plot (car0win_mean bhar0win_mean)*evttime /overlay legend vaxis=axis1 haxis=axis2;
MPRINT(EVENT_STUDY):    run;

NOTE: 33793 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot48.png.
NOTE: 80418 bytes written to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\gplot.pdf.
ERROR: Image file type is not supported, or corrupted file.
MPRINT(EVENT_STUDY):  quit;

NOTE: There were 5 observations read from the data set WORK.MA_EVTWIN.
      WHERE evttime>=-2;
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE GPLOT used (Total process time):
        real time          1.06 seconds
        user cpu time      0.25 seconds
        system cpu time    0.23 seconds
        memory             10165.15k
        OS Memory          62432.00k
        Timestamp          06/20/2024 12:18:00 AM
        Step Count                        434  Switch Count  0


MPRINT(EVENT_STUDY):    ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car0_evtrets_5days.pdf.
```

```
MPRINT(EVENT_STUDY):   ods pdf file="C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car1_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car1_evtrets_5days.pdf", printer "PDF".
MPRINT(EVENT_STUDY):   proc gplot data =MM_Evtwin;
MPRINT(EVENT_STUDY):   where evttime>=-2;
MPRINT(EVENT_STUDY):   Title "Market model:  CARs and BHARs around the event date";
MPRINT(EVENT_STUDY):   plot (car1win_mean bhar1win_mean)*evttime /overlay legend vaxis=axis1 haxis=axis2;
MPRINT(EVENT_STUDY):   run;

NOTE: 48874 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot49.png.
NOTE: 79872 bytes written to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\gplot1.pdf.
ERROR: Image file type is not supported, or corrupted file.
MPRINT(EVENT_STUDY):  quit;

NOTE: There were 5 observations read from the data set WORK.MM_EVTWIN.
      WHERE evttime>=-2;
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE GPLOT used (Total process time):
      real time            0.48 seconds
      user cpu time        0.23 seconds
      system cpu time      0.18 seconds
      memory               9994.25k
      OS Memory            62432.00k
      Timestamp            06/20/2024 12:18:01 AM
      Step Count                         435  Switch Count  0


MPRINT(EVENT_STUDY):   ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car1_evtrets_5days.pdf.
MPRINT(EVENT_STUDY):   ods pdf file="C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car2_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
```

```
            University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car2_evtrets_5days.pdf", printer "PDF".
MPRINT(EVENT_STUDY):   proc gplot data =FF_Evtwin;
MPRINT(EVENT_STUDY):   where evttime>=-2;
MPRINT(EVENT_STUDY):   Title "FF 3-factor model:CARs and BHARs around the event date";
MPRINT(EVENT_STUDY):   plot (car2win_mean bhar2win_mean)*evttime /overlay legend vaxis=axis1 haxis=axis2;
MPRINT(EVENT_STUDY):   run;

NOTE: 54659 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot50.png.
NOTE: 80147 bytes written to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\gplot2.pdf.
ERROR: Image file type is not supported, or corrupted file.
MPRINT(EVENT_STUDY):   quit;

NOTE: There were 5 observations read from the data set WORK.FF_EVTWIN.
      WHERE evttime>=-2;
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE GPLOT used (Total process time):
      real time           0.49 seconds
      user cpu time       0.32 seconds
      system cpu time     0.09 seconds
      memory              9957.93k
      OS Memory           62432.00k
      Timestamp           06/20/2024 12:18:02 AM
      Step Count                        436   Switch Count  0


MPRINT(EVENT_STUDY):   ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car2_evtrets_5days.pdf.
MPRINT(EVENT_STUDY):   ods pdf file="C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car3_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car3_evtrets_5days.pdf", printer "PDF".
MPRINT(EVENT_STUDY):   proc gplot data =FFM_Evtwin;
MPRINT(EVENT_STUDY):   where evttime>=-2;
MPRINT(EVENT_STUDY):   Title "Carhart 4 Factor model: Carhart CARs and BHARs around the event date";
```

```
MPRINT(EVENT_STUDY):    plot (car3win_mean bhar3win_mean)*evttime /overlay legend vaxis=axis1 haxis=axis2;
MPRINT(EVENT_STUDY):    run;


NOTE: 49722 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot51.png.
NOTE: 79551 bytes written to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\gplot3.pdf.
ERROR: Image file type is not supported, or corrupted file.
MPRINT(EVENT_STUDY):   quit;


NOTE: There were 5 observations read from the data set WORK.FFM_EVTWIN.
      WHERE evttime>=-2;
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE GPLOT used (Total process time):
      real time            0.50 seconds
      user cpu time        0.31 seconds
      system cpu time      0.10 seconds
      memory               9995.96k
      OS Memory            62432.00k
      Timestamp            06/20/2024 12:18:02 AM
      Step Count                       437  Switch Count  0



MPRINT(EVENT_STUDY):    ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car3_evtrets_5days.pdf.
MPRINT(EVENT_STUDY):    ods pdf file="C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car0_3_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car0_3_evtrets_5days.pdf", printer "PDF".
MPRINT(EVENT_STUDY):    proc gplot data =allstats;
MPRINT(EVENT_STUDY):    where evttime>=-2;
MPRINT(EVENT_STUDY):    Title "CARs from the four models: around the event date";
MPRINT(EVENT_STUDY):    plot (car0win_mean car1win_mean car2win_mean car3win_mean )*evttime /overlay legend
vaxis=axis1 haxis=axis2;
MPRINT(EVENT_STUDY):    run;
```

```
NOTE: 34635 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot52.png.
NOTE: 79111 bytes written to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\gplot4.pdf.
ERROR: Image file type is not supported, or corrupted file.
MPRINT(EVENT_STUDY):  quit;

NOTE: There were 5 observations read from the data set WORK.ALLSTATS.
      WHERE evttime>=-2;
NOTE: PROCEDURE GPLOT used (Total process time):
      real time            0.39 seconds
      user cpu time        0.28 seconds
      system cpu time      0.11 seconds
      memory               9892.84k
      OS Memory            62432.00k
      Timestamp            06/20/2024 12:18:03 AM
      Step Count                       438   Switch Count  0


MPRINT(EVENT_STUDY):   ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\CarO_3_evtrets_5days.pdf.
MPRINT(EVENT_STUDY):   ods pdf file="C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\agg_foreign_rec_exe10\BHARS0_3_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\BHARS0_3_evtrets_5days.pdf", printer "PDF".
MPRINT(EVENT_STUDY):   proc gplot data =allstats;
MPRINT(EVENT_STUDY):   where evttime>=-2;
MPRINT(EVENT_STUDY):   Title "BHARs from the four models: BHARs around the event date";
MPRINT(EVENT_STUDY):   plot (bhar0_mean bhar1_mean bhar2_mean bhar3_mean )*evttime /overlay legend vaxis=axis1
haxis=axis2;
MPRINT(EVENT_STUDY):   run;
NOTE: 20765 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot53.png.
NOTE: 78219 bytes written to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\gplot5.pdf.
ERROR: Image file type is not supported, or corrupted file.
MPRINT(EVENT_STUDY):  quit;
NOTE: There were 5 observations read from the data set WORK.ALLSTATS.
```

```
      WHERE evttime>=-2;
NOTE: PROCEDURE GPLOT used (Total process time):
      real time            0.43 seconds
      user cpu time        0.31 seconds
      system cpu time      0.06 seconds
      memory               9837.34k
      OS Memory            62432.00k
      Timestamp            06/20/2024 12:18:03 AM
      Step Count                        439  Switch Count  0


MPRINT(EVENT_STUDY):   ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\BHARSO_3_evtrets_5days.pdf.
MPRINT(EVENT_STUDY):   run;
MPRINT(EVENT_STUDY):  quit;
MPRINT(EVENT_STUDY):   ods pdf close;
MLOGIC(EVENT_STUDY):  Ending execution.

6254  %event_study(outputPath=C:\Users\lihon\OneDrive - Kent State
6254! University\aaaa\event_Study\result\agg_foreign_rec_exe10
MLOGIC(EVENT_STUDY):  Beginning execution.
6255               ,permno_list = foreign_trans_execrec10_decile)
MLOGIC(EVENT_STUDY):  Parameter OUTPUTPATH has value C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10
MLOGIC(EVENT_STUDY):  Parameter PERMNO_LIST has value foreign_trans_execrec10_decile
MPRINT(EVENT_STUDY):   libname mycrsp "C:\Users\lihon\patent Dropbox\Victor Li\wrds_data";
NOTE: Libref MYCRSP was successfully assigned as follows:
      Engine:        V9
      Physical Name: C:\Users\lihon\patent Dropbox\Victor Li\wrds_data
MPRINT(EVENT_STUDY):   libname evtstudy "C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\agg_foreign_rec_exe10";
NOTE: Libref EVTSTUDY refers to the same physical library as TMP13.
NOTE: Libref EVTSTUDY was successfully assigned as follows:
      Engine:        V9
      Physical Name: C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\result\agg_foreign_rec_exe10
MLOGIC(EVENT_STUDY):  %LET (variable name is CRSP)
MLOGIC(EVENT_STUDY):  %LET (variable name is ESTPER)
```

```
MLOGIC(EVENT_STUDY):   %LET (variable name is START)
MLOGIC(EVENT_STUDY):   %LET (variable name is END)
MLOGIC(EVENT_STUDY):   %LET (variable name is GAP)
MLOGIC(EVENT_STUDY):   %LET (variable name is MINEST)
MLOGIC(EVENT_STUDY):   %LET (variable name is EVTWIN)
MPRINT(EVENT_STUDY):    proc sql;
MPRINT(EVENT_STUDY):    create table input as select distinct permno, record_dt as edate format MMDDYY10. from
foreign_trans_execrec10_decile where not missing(-2) and year(record_dt);
NOTE: Table WORK.INPUT created, with 792 rows and 2 columns.

MPRINT(EVENT_STUDY):    quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time           0.01 seconds
      user cpu time       0.01 seconds
      system cpu time     0.00 seconds
      memory              5431.00k
      OS Memory           55300.00k
      Timestamp           06/20/2024 12:19:25 AM
      Step Count                       440  Switch Count  0


MPRINT(EVENT_STUDY):    data caldates;
MPRINT(EVENT_STUDY):    merge mycrsp.dsi(keep=date rename=(date=estper_beg)) mycrsp.dsi(keep=date firstobs=150
rename=(date=estper_end)) mycrsp.dsi(keep=date firstobs=217 rename=(date=evtwin_beg)) mycrsp.dsi(keep=date
firstobs=219 rename=(date=evtdate)) mycrsp.dsi(keep=date firstobs=221 rename=(date=evtwin_end));
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
```

the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and might reduce performance.
MPRINT(EVENT_STUDY):   format estper_beg estper_end evtwin_beg evtdate evtwin_end date9.;
MPRINT(EVENT_STUDY):   label estper_beg= 'Start of the Estimation Window' estper_end= 'End of the Estimation Window' evtwin_beg= 'Start of the Event Window' evtwin_end= 'End of the Event Window' evtdate= 'Event Date';
MPRINT(EVENT_STUDY):   index+1;
MPRINT(EVENT_STUDY):   if nmiss(estper_beg,estper_end,evtwin_beg,evtwin_end,evtdate)=0;
MPRINT(EVENT_STUDY):   run;

NOTE: There were 25799 observations read from the data set MYCRSP.DSI.
NOTE: There were 25650 observations read from the data set MYCRSP.DSI.
NOTE: There were 25583 observations read from the data set MYCRSP.DSI.
NOTE: There were 25581 observations read from the data set MYCRSP.DSI.
NOTE: There were 25579 observations read from the data set MYCRSP.DSI.
NOTE: The data set WORK.CALDATES has 25579 observations and 6 variables.
NOTE: DATA statement used (Total process time):
      real time   0.08 seconds
      user cpu time   0.07 seconds
      system cpu time   0.03 seconds
      memory   1640.31k
      OS Memory   50176.00k
      Timestamp   06/20/2024 12:19:26 AM
      Step Count   441   Switch Count 0

MPRINT(EVENT_STUDY):   proc sql;
MPRINT(EVENT_STUDY):   create table temp as select a.permno ,b.* from input a left join caldates b on b.evtdate-a.edate>=0 group by a.edate having (b.evtdate-a.edate)=min(b.evtdate-a.edate);
NOTE: The execution of this query involves performing one or more Cartesian product joins that can not be optimized.
NOTE: The query requires remerging summary statistics back with the original data.
NOTE: SAS threaded sort was used.
NOTE: Table WORK.TEMP created, with 792 rows and 7 columns.

NOTE: PROCEDURE SQL used (Total process time):
      real time   2.00 seconds
      user cpu time   2.78 seconds
      system cpu time   0.62 seconds
      memory   225757.21k

```
              OS Memory              273248.00k
              Timestamp              06/20/2024 12:19:28 AM
              Step Count                           442  Switch Count  0


    MPRINT(EVENT_STUDY):   proc sql;
    MPRINT(EVENT_STUDY):   create table evtrets_temp as select a.permno, a.date format date9., a.ret as ret1, b.evtdate,
    b.estper_beg, b.estper_end, b.evtwin_beg, b.evtwin_end from mycrsp.dsf a, temp b where a.permno=b.permno and
    b.estper_beg<=a.date<=b.evtwin_end;
    INFO: Data file MYCRSP.DSF.DATA is in a format that is native to another host, or the file encoding does not match
    the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
    might reduce performance.
    NOTE: Table WORK.EVTRETS_TEMP created, with 174239 rows and 8 columns.

    MPRINT(EVENT_STUDY):   quit;
    NOTE: PROCEDURE SQL used (Total process time):
              real time             39.31 seconds
              user cpu time         38.45 seconds
              system cpu time       1.09 seconds
              memory                5850.34k
              OS Memory             55300.00k
              Timestamp             06/20/2024 12:20:07 AM
              Step Count                           443  Switch Count  0


    MPRINT(EVENT_STUDY):   proc sql;
    MPRINT(EVENT_STUDY):   create view evtrets1 as select a.*, (b.mktrf+b.rf) as mkt, b.mktrf, b.rf,b.smb, b.hml, b.umd
    from evtrets_temp a left join mycrsp.ff_factors_daily (keep=date mktrf smb hml umd rf) b on a.date=b.date;
    NOTE: SQL view WORK.EVTRETS1 has been defined.
    MPRINT(EVENT_STUDY):   quit;
    NOTE: PROCEDURE SQL used (Total process time):
              real time             0.00 seconds
              user cpu time         0.00 seconds
              system cpu time       0.01 seconds
              memory                113.18k
              OS Memory             50176.00k
              Timestamp             06/20/2024 12:20:07 AM
              Step Count                           444  Switch Count  0
```

```
MPRINT(EVENT_STUDY):   proc sql;
MPRINT(EVENT_STUDY):   create table evtrets (drop=ret1 where=(not missing(mkt))) as select a.*,
(1+a.ret1)*sum(1,b.dlret)-1-a.mkt as exret label='Market-adjusted total ret', (1+a.ret1)*sum(1,b.dlret)-1 as ret "Ret
adjusted for delisting" from evtrets1 a left join mycrsp.dsedelist (where=(missing(dlret)=0)) b on a.permno=b.permno
and a.date=b.dlstdt order by a.permno,a.evtdate,a.date;
INFO: Data file MYCRSP.FF_FACTORS_DAILY.DATA is in a format that is native to another host, or the file encoding does
not match the session encoding. Cross Environment Data Access will be used, which might require additional CPU
resources and might reduce performance.
INFO: Data file MYCRSP.DSEDELIST.DATA is in a format that is native to another host, or the file encoding does not
match the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources
and might reduce performance.
NOTE: SAS threaded sort was used.
NOTE: Table WORK.EVTRETS created, with 174239 rows and 15 columns.

MPRINT(EVENT_STUDY):   quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time           0.50 seconds
      user cpu time       0.70 seconds
      system cpu time     0.18 seconds
      memory              49339.95k
      OS Memory           94744.00k
      Timestamp           06/20/2024 12:20:07 AM
      Step Count                        445  Switch Count  0


MPRINT(EVENT_STUDY):   proc printto log=junk;
MPRINT(EVENT_STUDY):   run;

NOTE: PROCEDURE PRINTTO used (Total process time):
      real time           0.00 seconds
      user cpu time       0.00 seconds
      system cpu time     0.00 seconds
      memory              7.06k
      OS Memory           50176.00k
      Timestamp           06/20/2024 12:20:08 AM
      Step Count                        448  Switch Count  0
```

```
MPRINT(EVENT_STUDY):   data abrets1/view=abrets1;
MPRINT(EVENT_STUDY):   merge evtrets(where=(evtwin_beg<=date<=evtwin_end) in=in_evtrets) params
(where=(_model_='eq0') keep=permno evtdate _model_ _rmse_ _p_ _edf_ rename=(_rmse_=std0 _p_=p0 _edf_=edf0)) params
(where=(_model_='eq1') keep=permno evtdate _model_ _rmse_ intercept mktrf rename=(_rmse_=std1 intercept=alpha1
mktrf=beta1)) params (where=(_model_='eq2') keep=permno evtdate _model_ _rmse_ intercept mktrf smb hml
rename=(_rmse_=std2 intercept=alpha2 mktrf=beta2 smb=sminb2 hml=hminl2)) params (where=(_model_='eq3') keep=permno
evtdate _model_ _rmse_ intercept mktrf smb hml umd rename=(_rmse_=std3 intercept=alpha3 mktrf=beta3 smb=sminb3
hml=hminl3 umd=umind3));
MPRINT(EVENT_STUDY):   by permno evtdate;
MPRINT(EVENT_STUDY):   retain missret;
MPRINT(EVENT_STUDY):   if first.permno then missret=missing(ret);
MPRINT(EVENT_STUDY):   if missing(ret) then missret+1;
MPRINT(EVENT_STUDY):   var0=std0**2;
MPRINT(EVENT_STUDY):   var1=std1**2;
MPRINT(EVENT_STUDY):   var2=std2**2;
MPRINT(EVENT_STUDY):   var3=std3**2;
MPRINT(EVENT_STUDY):   abret0 = exret;
MPRINT(EVENT_STUDY):   *extra over market;
MPRINT(EVENT_STUDY):   expret1 = alpha1 + beta1*mktrf;
MPRINT(EVENT_STUDY):   *CAPM;
MPRINT(EVENT_STUDY):   abret1 = ret-expret1;
MPRINT(EVENT_STUDY):   expret2 = alpha2+beta2*mktrf+sminb2*smb+hminl2*hml;
MPRINT(EVENT_STUDY):   *FF3factor;
MPRINT(EVENT_STUDY):   abret2=ret-expret2;
MPRINT(EVENT_STUDY):   expret3 =alpha3+beta3*mktrf+sminb3*smb+hminl3*hml+umind3*umd;
MPRINT(EVENT_STUDY):   abret3=ret-expret3;
MPRINT(EVENT_STUDY):   nobs=p0+edf0;
MPRINT(EVENT_STUDY):   drop p0 edf0 estper_beg estper_end std0 std1 std2 std3 _model_ exret;
MPRINT(EVENT_STUDY):   if in_evtrets and nobs>70;
MPRINT(EVENT_STUDY):   * I add the followings;
MPRINT(EVENT_STUDY):   if nobs=150;
MPRINT(EVENT_STUDY):   run;

NOTE: DATA STEP view saved on file WORK.ABRETS1.
NOTE: A stored DATA STEP view cannot run under a different operating system.
NOTE: DATA statement used (Total process time):
```

```
      real time              0.01 seconds
      user cpu time          0.00 seconds
      system cpu time        0.00 seconds
      memory                 1365.71k
      OS Memory              50436.00k
      Timestamp              06/20/2024 12:20:08 AM
      Step Count                        449  Switch Count  0


MPRINT(EVENT_STUDY):   proc sql;
MPRINT(EVENT_STUDY):    create table abrets as select a.*, (b.index-c.index) as evttime from abrets1 a left join
caldates b on a.date = b.evtdate left join caldates c on a.evtdate = c.evtdate order by permno, evtdate, date;
NOTE: SAS threaded sort was used.
INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
INFO: The variable _MODEL_ on data set WORK.PARAMS will be overwritten by data set WORK.PARAMS.
NOTE: Missing values were generated as a result of performing an operation on missing values.
      Each place is given by: (Number of times) at (Line):(Column).
      5 at 9095:71    5 at 9095:87    5 at 9095:103   5 at 9095:119   5 at 9095:190   5 at 9095:221   5 at 9096:14
      5 at 9096:68    5 at 9096:102   5 at 9096:155   5 at 9096:175
NOTE: View WORK.ABRETS1.VIEW used (Total process time):
      real time              0.17 seconds
      user cpu time          0.15 seconds
      system cpu time        0.07 seconds
      memory                 46026.48k
      OS Memory              90964.00k
      Timestamp              06/20/2024 12:20:08 AM
      Step Count                        450  Switch Count  24


NOTE: There were 3955 observations read from the data set WORK.EVTRETS.
      WHERE (evtwin_beg<=date) and (date<=evtwin_end);
NOTE: There were 790 observations read from the data set WORK.PARAMS.
      WHERE _model_='eq0';
NOTE: There were 790 observations read from the data set WORK.PARAMS.
      WHERE _model_='eq1';
```

```
NOTE: There were 790 observations read from the data set WORK.PARAMS.
      WHERE _model_='eq2';
NOTE: There were 790 observations read from the data set WORK.PARAMS.
      WHERE _model_='eq3';
NOTE: Table WORK.ABRETS created, with 3905 rows and 37 columns.

MPRINT(EVENT_STUDY):   quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time            0.41 seconds
      user cpu time        0.21 seconds
      system cpu time      0.17 seconds
      memory               46026.48k
      OS Memory            90964.00k
      Timestamp            06/20/2024 12:20:08 AM
      Step Count                          450   Switch Count  25


MPRINT(EVENT_STUDY):   proc sort data=abrets nodupkey;
MPRINT(EVENT_STUDY):   by PERMNO evtdate DATE evtwin_beg evtwin_end mkt mktrf rf smb hml umd ret alpha1 beta1 alpha2
beta2 sminb2 hminl2 alpha3 beta3 sminb3 hminl3 umind3 missret var0 var1 var2 var3 abret0 expret1 abret1 expret2
abret2 expret3 abret3 nobs evttime ;
MPRINT(EVENT_STUDY):   run;

NOTE: There were 3905 observations read from the data set WORK.ABRETS.
NOTE: SAS sort was used.
NOTE: 0 observations with duplicate key values were deleted.
NOTE: The data set WORK.ABRETS has 3905 observations and 37 variables.
NOTE: PROCEDURE SORT used (Total process time):
      real time            0.01 seconds
      user cpu time        0.00 seconds
      system cpu time      0.01 seconds
      memory               3995.90k
      OS Memory            53268.00k
      Timestamp            06/20/2024 12:20:08 AM
      Step Count                          451   Switch Count   0


MPRINT(EVENT_STUDY):   proc expand data=abrets out=car method=none;
```

```
MPRINT(EVENT_STUDY):    by permno evtdate;
MPRINT(EVENT_STUDY):    id date;
MPRINT(EVENT_STUDY):    convert ret=cret/transformout=(+1 cuprod -1);
MPRINT(EVENT_STUDY):    convert mkt=cmkt/transformout=(+1 cuprod -1);
MPRINT(EVENT_STUDY):    convert expret1 =cexpret1 /transformout=(+1 cuprod -1);
MPRINT(EVENT_STUDY):    convert expret2 =cexpret2 /transformout=(+1 cuprod -1);
MPRINT(EVENT_STUDY):    convert expret3 =cexpret3 /transformout=(+1 cuprod -1);
MPRINT(EVENT_STUDY):    convert abret0=car0/transformout=(sum);
MPRINT(EVENT_STUDY):    convert abret1=car1/transformout=(sum);
MPRINT(EVENT_STUDY):    convert abret2=car2/transformout=(sum);
MPRINT(EVENT_STUDY):    convert abret3=car3/transformout=(sum);
MPRINT(EVENT_STUDY):    run;

NOTE: The data set WORK.CAR has 3905 observations and 46 variables.
NOTE: PROCEDURE EXPAND used (Total process time):
      real time           0.08 seconds
      user cpu time       0.04 seconds
      system cpu time     0.03 seconds
      memory              971.31k
      OS Memory           50440.00k
      Timestamp           06/20/2024 12:20:08 AM
      Step Count                      452  Switch Count  0


MPRINT(EVENT_STUDY):    proc printto log=junk;
MPRINT(EVENT_STUDY):    run;

NOTE: PROCEDURE PRINTTO used (Total process time):
      real time           0.00 seconds
      user cpu time       0.00 seconds
      system cpu time     0.00 seconds
      memory              7.06k
      OS Memory           49920.00k
      Timestamp           06/20/2024 12:20:08 AM
      Step Count                      455  Switch Count  0


MPRINT(EVENT_STUDY):    data allcars;
```

```
MPRINT(EVENT_STUDY):   merge car_evtwin (rename=(bhar0=bhar0win bhar1=bhar1win bhar2=bhar2win bhar3=bhar3win
car0=car0win car1=car1win car2=car2win car3=car3win cret=cretwin)) car_evtdate;
MPRINT(EVENT_STUDY):   by permno evtdate;
MPRINT(EVENT_STUDY):   run;
```

NOTE: There were 3905 observations read from the data set WORK.CAR_EVTWIN.
NOTE: There were 781 observations read from the data set WORK.CAR_EVTDATE.
NOTE: The data set WORK.ALLCARS has 3905 observations and 59 variables.
NOTE: DATA statement used (Total process time):
     real time   0.01 seconds
     user cpu time   0.00 seconds
     system cpu time   0.01 seconds
     memory   1198.68k
     OS Memory   49920.00k
     Timestamp   06/20/2024 12:20:08 AM
     Step Count   456 Switch Count 0

```
MPRINT(EVENT_STUDY):   * proc means data=allcars noprint;
MPRINT(EVENT_STUDY):   proc means data=allcars( where = (nobs=150)) noprint;
MPRINT(EVENT_STUDY):   class evttime;
MPRINT(EVENT_STUDY):   id nobs;
MPRINT(EVENT_STUDY):   var ret cret car0 car1 car2 car3 cretwin car0win car1win car2win car3win bhar0 bhar1 bhar2
bhar3 bhar0win bhar1win bhar2win bhar3win scar0 scar1 scar2 scar3 abret0 abret1 abret2 abret3 sar0 sar1 sar2 sar3
pat_scale;
MPRINT(EVENT_STUDY):   output out=allstats mean = n = t = sum =/autoname;
MPRINT(EVENT_STUDY):   run;
```

NOTE: Multiple concurrent threads will be used to summarize data.
NOTE: There were 3905 observations read from the data set WORK.ALLCARS.
     WHERE nobs=150;
NOTE: The data set WORK.ALLSTATS has 6 observations and 132 variables.
NOTE: PROCEDURE MEANS used (Total process time):
     real time   0.04 seconds
     user cpu time   0.03 seconds
     system cpu time   0.01 seconds
     memory   6697.03k
     OS Memory   55052.00k

```
MPRINT(EVENT_STUDY):   data MA_Evtdate (keep=evttime car0_n cret_mean car0_mean car0_t scar0_t bhar0_mean pat_car0
model) MM_Evtdate (keep=evttime car1_n cret_mean car1_mean car1_t scar1_t bhar1_mean pat_car1 model ) FF_Evtdate
(keep=evttime car2_n cret_mean car2_mean car2_t scar2_t bhar2_mean pat_car2 model ) FFM_Evtdate (keep=evttime car3_n
cret_mean car3_mean car3_t scar3_t bhar3_mean pat_car3 model ) MA_Evtwin (keep=evttime cretwin_mean abret0_n ret_mean
abret0_mean car0win_mean bhar0win_mean abret0_t sar0_t pat_ar0 ) MM_Evtwin (keep=evttime cretwin_mean abret1_n
ret_mean abret1_mean car1win_mean bhar1win_mean abret1_t sar1_t pat_ar1 ) FF_Evtwin (keep=evttime cretwin_mean
abret2_n ret_mean abret2_mean car2win_mean bhar2win_mean abret2_t sar2_t pat_ar2 ) FFM_Evtwin (keep=evttime
cretwin_mean abret3_n ret_mean abret3_mean car3win_mean bhar3win_mean abret3_t sar3_t pat_ar3 );
MPRINT(EVENT_STUDY):   set allstats;
MPRINT(EVENT_STUDY):   by evttime;
MPRINT(EVENT_STUDY):   if _n_=1 and missing(evttime) then do;
MPRINT(EVENT_STUDY):   abret0_mean=.;
MPRINT(EVENT_STUDY):   abret1_mean=.;
MPRINT(EVENT_STUDY):   abret2_mean=.;
MPRINT(EVENT_STUDY):   abret3_mean=.;
MPRINT(EVENT_STUDY):   cretwin_mean=0;
MPRINT(EVENT_STUDY):   ret_mean=.;
MPRINT(EVENT_STUDY):   bhar1win_mean=0;
MPRINT(EVENT_STUDY):   bhar1win_mean=0;
MPRINT(EVENT_STUDY):   bhar2win_mean=0;
MPRINT(EVENT_STUDY):   bhar3win_mean=0;
MPRINT(EVENT_STUDY):   end;
MPRINT(EVENT_STUDY):   pat_car0=scar0_mean/(sqrt(pat_scale_sum)/scar0_n);
MPRINT(EVENT_STUDY):   pat_car1=scar1_mean/(sqrt(pat_scale_sum)/scar1_n);
MPRINT(EVENT_STUDY):   pat_car2=scar2_mean/(sqrt(pat_scale_sum)/scar2_n);
MPRINT(EVENT_STUDY):   pat_car3=scar3_mean/(sqrt(pat_scale_sum)/scar3_n);
MPRINT(EVENT_STUDY):   pat_ar0=sar0_mean/(sqrt(pat_scale_sum)/sar0_n);
MPRINT(EVENT_STUDY):   pat_ar1=sar1_mean/(sqrt(pat_scale_sum)/sar1_n);
MPRINT(EVENT_STUDY):   pat_ar2=sar2_mean/(sqrt(pat_scale_sum)/sar2_n);
MPRINT(EVENT_STUDY):   pat_ar3=sar3_mean/(sqrt(pat_scale_sum)/sar3_n);
MPRINT(EVENT_STUDY):   label pat_ar0= 'Patell Z for AR_MA' pat_ar1= 'Patell Z for AR_MM' pat_ar2= 'Patell Z for
AR_FF' pat_ar3= 'Patell Z for AR_FFM' abret0_t= 'CS t-stat, AR_MA' abret1_t= 'CS t-stat, AR_MM' abret2_t= 'CS t-stat,
AR_FF' abret3_t= 'CS t-stat, AR_FFM' sar0_t= 'Std CS test, AR_MA' sar1_t= 'Std CS test, AR_MM' sar2_t= 'Std CS test,
AR_FF' sar3_t= 'Std CS test, AR_FFM' abret0_mean= 'Mean AR_MA' abret1_mean= 'Mean AR_MM' abret2_mean= 'Mean AR_FF'
```

```
abret3_mean= 'Mean AR_FFM' car0_n= 'Number of events in the portfolio' abret0_n= 'Number of events in the portfolio'
evttime= 'Event Time t' cret_mean= "Mean CTR (-2, 2)" cretwin_mean= "Mean CTR (-2,t) " car0win_mean= "Average CAR_MA
(-2, t)" car1win_mean= "Average CAR_MM (-2, t)" car2win_mean= "Average CAR_FF (-2, t)" car3win_mean= "Average CAR_FFM
(-2, t)" bhar0win_mean= "Mean BHAR_MA (-2, t)" bhar1win_mean= "Mean BHAR_MM (-2, t)" bhar2win_mean= "Mean BHAR_FF
(-2, t)" bhar3win_mean= "Mean BHAR_FFM (-2, t)" ;
MPRINT(EVENT_STUDY):   format ret_mean cret_mean cretwin_mean abret0_mean abret1_mean abret2_mean abret3_mean
car0_mean car1_mean car2_mean car3_mean bhar0_mean bhar1_mean bhar2_mean bhar3_mean bhar0win_mean bhar1win_mean
bhar2win_mean bhar3win_mean car0win_mean car1win_mean car2win_mean car3win_mean percent7.4 abret0_t abret1_t abret2_t
abret3_t sar0_t sar1_t sar2_t sar3_t pat_car0 pat_car1 pat_car2 pat_car3 pat_ar0 pat_ar1 pat_ar2 pat_ar3 car0_t
car1_t car2_t car3_t scar0_t car1_t scar2_t scar3_t comma10.2;
MPRINT(EVENT_STUDY):   if evttime=0 then do;
MPRINT(EVENT_STUDY):   model='Market-Adjusted';
MPRINT(EVENT_STUDY):   output MA_Evtdate;
MPRINT(EVENT_STUDY):   model='Market Model';
MPRINT(EVENT_STUDY):   output MM_Evtdate;
MPRINT(EVENT_STUDY):   model='FF Model';
MPRINT(EVENT_STUDY):   output FF_Evtdate;
MPRINT(EVENT_STUDY):   model='Carhart Model';
MPRINT(EVENT_STUDY):   output FFM_Evtdate;
MPRINT(EVENT_STUDY):   end;
MPRINT(EVENT_STUDY):   if missing(evttime) then evttime=-2-1;
MPRINT(EVENT_STUDY):   output MA_Evtwin;
MPRINT(EVENT_STUDY):   output MM_Evtwin;
MPRINT(EVENT_STUDY):   output FF_Evtwin;
MPRINT(EVENT_STUDY):   output FFM_Evtwin;
MPRINT(EVENT_STUDY):   run;


NOTE: There were 6 observations read from the data set WORK.ALLSTATS.
NOTE: The data set WORK.MA_EVTDATE has 1 observations and 9 variables.
NOTE: The data set WORK.MM_EVTDATE has 1 observations and 9 variables.
NOTE: The data set WORK.FF_EVTDATE has 1 observations and 9 variables.
NOTE: The data set WORK.FFM_EVTDATE has 1 observations and 9 variables.
NOTE: The data set WORK.MA_EVTWIN has 6 observations and 10 variables.
NOTE: The data set WORK.MM_EVTWIN has 6 observations and 10 variables.
NOTE: The data set WORK.FF_EVTWIN has 6 observations and 10 variables.
NOTE: The data set WORK.FFM_EVTWIN has 6 observations and 10 variables.
NOTE: DATA statement used (Total process time):
      real time           0.05 seconds
```

```
        user cpu time        0.01 seconds
        system cpu time      0.03 seconds
        memory               2527.65k
        OS Memory            49920.00k
        Timestamp            06/20/2024 12:20:08 AM
        Step Count                        458  Switch Count  0


MPRINT(EVENT_STUDY):   data allevtdate;
MPRINT(EVENT_STUDY):   set MA_Evtdate (rename=(car0_mean=car_mean bhar0_mean=bhar_mean car0_n=n car0_t=car_t
scar0_t=scar_t pat_car0=pat_car)) MM_Evtdate (rename=(car1_mean=car_mean bhar1_mean=bhar_mean car1_n=n car1_t=car_t
scar1_t=scar_t pat_car1=pat_car)) FF_Evtdate (rename=(car2_mean=car_mean bhar2_mean=bhar_mean car2_n=n car2_t=car_t
scar2_t=scar_t pat_car2=pat_car)) FFM_evtdate (rename=(car3_mean=car_mean bhar3_mean=bhar_mean car3_n=n car3_t=car_t
scar3_t=scar_t pat_car3=pat_car));
MPRINT(EVENT_STUDY):   length=5;
MPRINT(EVENT_STUDY):   label pat_car= 'Patell Z' car_mean= "Mean CAR (-2, 2)" bhar_mean= "Mean BHAR (-2, 2)" car_t=
'Cross-sectional t-stat for CAR' scar_t= 'Standaridized cross-sectional t-stat for CAR' length= 'Length of event
window in trading days';
MPRINT(EVENT_STUDY):   run;

NOTE: There were 1 observations read from the data set WORK.MA_EVTDATE.
NOTE: There were 1 observations read from the data set WORK.MM_EVTDATE.
NOTE: There were 1 observations read from the data set WORK.FF_EVTDATE.
NOTE: There were 1 observations read from the data set WORK.FFM_EVTDATE.
NOTE: The data set WORK.ALLEVTDATE has 4 observations and 10 variables.
NOTE: DATA statement used (Total process time):
        real time            0.01 seconds
        user cpu time        0.00 seconds
        system cpu time      0.01 seconds
        memory               1125.18k
        OS Memory            49920.00k
        Timestamp            06/20/2024 12:20:08 AM
        Step Count                        459  Switch Count  0


MPRINT(EVENT_STUDY):   data car_evtdate;
MPRINT(EVENT_STUDY):   retain permno evtdate alpha1 beta1 cret car0 bhar0 var0 car1 bhar1 var1 car2 bhar2 var2 car3
bhar3 var3 nrets nobs;
```

```
MPRINT(EVENT_STUDY):   set car_evtdate;
MPRINT(EVENT_STUDY):   label alpha1= 'Alpha (Market Model)' beta1= 'Beta (Market Model' car0= 'CAR_MA' car1= 'CAR_MM'
car2= 'CAR_FF' car3= 'CAR_FFM' bhar0= 'BHAR_MA' bhar1= 'BHAR_MM' bhar2= 'BHAR_FF' bhar3= 'BHAR_FFM' var0= 'Estimation
period variance (Market-adjusted returns)' var1= 'Estimation period variance (Market Model)' var2= 'Estimation period
variance (FF Model)' var3= 'Estimation period variance (Carhart Model)' cret= 'Cumulative Total Return' nrets=
'Number of non-missing returns in event window' nobs= 'Length of the estimation period';
MPRINT(EVENT_STUDY):   keep permno evtdate alpha1 beta1 cret car0 bhar0 var0 car1 bhar1 var1 car2 bhar2 var2 car3
bhar3 var3 nrets nobs;
MPRINT(EVENT_STUDY):   format cret alpha1 car0 bhar0 car1 bhar1 car2 bhar2 car3 bhar3 percent7.4 beta1 comma10.3;
MPRINT(EVENT_STUDY):   run;

NOTE: There were 781 observations read from the data set WORK.CAR_EVTDATE.
NOTE: The data set WORK.CAR_EVTDATE has 781 observations and 19 variables.
NOTE: DATA statement used (Total process time):
      real time           0.00 seconds
      user cpu time       0.00 seconds
      system cpu time     0.01 seconds
      memory              704.56k
      OS Memory           49920.00k
      Timestamp           06/20/2024 12:20:09 AM
      Step Count                    460  Switch Count  0


MPRINT(EVENT_STUDY):   PROC DATASETS NOLIST;
MPRINT(EVENT_STUDY):   COPY IN = work OUT = evtstudy ;
MPRINT(EVENT_STUDY):   select allevtdate allstats car_evtwin ;
MPRINT(EVENT_STUDY):   RUN;

NOTE: Copying WORK.ALLEVTDATE to EVTSTUDY.ALLEVTDATE (memtype=DATA).
INFO: Engine's block-read method is in use.
INFO: Engine's block-write  method is in use.
NOTE: There were 4 observations read from the data set WORK.ALLEVTDATE.
NOTE: The data set EVTSTUDY.ALLEVTDATE has 4 observations and 10 variables.
NOTE: Copying WORK.ALLSTATS to EVTSTUDY.ALLSTATS (memtype=DATA).
INFO: Engine's block-read method is in use.
INFO: Engine's block-write  method is in use.
NOTE: There were 6 observations read from the data set WORK.ALLSTATS.
NOTE: The data set EVTSTUDY.ALLSTATS has 6 observations and 132 variables.
```

```
NOTE: Copying WORK.CAR_EVTWIN to EVTSTUDY.CAR_EVTWIN (memtype=DATA).
INFO: Engine's block-read method is in use.
INFO: Engine's block-write  method is in use.
NOTE: There were 3905 observations read from the data set WORK.CAR_EVTWIN.
NOTE: The data set EVTSTUDY.CAR_EVTWIN has 3905 observations and 22 variables.
MPRINT(EVENT_STUDY):   options nodate orientation=landscape;
MPRINT(EVENT_STUDY):   ods pdf file="C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car0_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car0_evtrets_5days.pdf", printer "PDF".
MPRINT(EVENT_STUDY):   goptions device=pdfc;
MPRINT(EVENT_STUDY):   axis1 label=(angle=90 "Cumulative Abnormal Returns");
MPRINT(EVENT_STUDY):   axis2 label=("Event time");
MPRINT(EVENT_STUDY):   symbol interpol=join w=3 l=1;
NOTE: PROCEDURE DATASETS used (Total process time):
      real time           0.24 seconds
      user cpu time       0.07 seconds
      system cpu time     0.09 seconds
      memory              4251.92k
      OS Memory           50948.00k
      Timestamp           06/20/2024 12:20:09 AM
      Step Count                        461  Switch Count  0


MPRINT(EVENT_STUDY):   proc gplot data =MA_Evtwin;
MPRINT(EVENT_STUDY):   where evttime>=-2;
MPRINT(EVENT_STUDY):   Title "Market adjusted model:  CARs and BHARs around the event date";
MPRINT(EVENT_STUDY):   plot (car0win_mean bhar0win_mean)*evttime /overlay legend vaxis=axis1 haxis=axis2;
MPRINT(EVENT_STUDY):   run;

NOTE: 40655 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot54.png.
NOTE: 78810 bytes written to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\gplot6.pdf.
ERROR: Image file type is not supported, or corrupted file.
MPRINT(EVENT_STUDY):  quit;

NOTE: There were 5 observations read from the data set WORK.MA_EVTWIN.
```

```
        WHERE evttime>=-2;
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE GPLOT used (Total process time):
      real time             0.45 seconds
      user cpu time         0.29 seconds
      system cpu time       0.06 seconds
      memory                10076.71k
      OS Memory             57304.00k
      Timestamp             06/20/2024 12:20:09 AM
      Step Count                            462  Switch Count  0


MPRINT(EVENT_STUDY):   ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car0_evtrets_5days.pdf.
MPRINT(EVENT_STUDY):   ods pdf file="C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car1_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car1_evtrets_5days.pdf", printer "PDF".
MPRINT(EVENT_STUDY):   proc gplot data =MM_Evtwin;
MPRINT(EVENT_STUDY):   where evttime>=-2;
MPRINT(EVENT_STUDY):   Title "Market model:  CARs and BHARs around the event date";
MPRINT(EVENT_STUDY):   plot (car1win_mean bhar1win_mean)*evttime /overlay legend vaxis=axis1 haxis=axis2;
MPRINT(EVENT_STUDY):   run;

NOTE: 41104 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot55.png.
NOTE: 79970 bytes written to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\gplot7.pdf.
ERROR: Image file type is not supported, or corrupted file.
MPRINT(EVENT_STUDY):  quit;


NOTE: There were 5 observations read from the data set WORK.MM_EVTWIN.
      WHERE evttime>=-2;
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE GPLOT used (Total process time):
```

```
        real time              0.44 seconds
        user cpu time          0.28 seconds
        system cpu time        0.11 seconds
        memory                 9919.78k
        OS Memory              57304.00k
        Timestamp              06/20/2024 12:20:10 AM
        Step Count                        463  Switch Count  0


MPRINT(EVENT_STUDY):   ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car1_evtrets_5days.pdf.
MPRINT(EVENT_STUDY):   ods pdf file="C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car2_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car2_evtrets_5days.pdf", printer "PDF".
MPRINT(EVENT_STUDY):   proc gplot data =FF_Evtwin;
MPRINT(EVENT_STUDY):   where evttime>=-2;
MPRINT(EVENT_STUDY):   Title "FF 3-factor model:CARs and BHARs around the event date";
MPRINT(EVENT_STUDY):   plot (car2win_mean bhar2win_mean)*evttime /overlay legend vaxis=axis1 haxis=axis2;
MPRINT(EVENT_STUDY):   run;

NOTE: 40743 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot56.png.
NOTE: 78820 bytes written to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\gplot8.pdf.
ERROR: Image file type is not supported, or corrupted file.
MPRINT(EVENT_STUDY):  quit;

NOTE: There were 5 observations read from the data set WORK.FF_EVTWIN.
      WHERE evttime>=-2;
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE GPLOT used (Total process time):
        real time              0.40 seconds
        user cpu time          0.21 seconds
        system cpu time        0.15 seconds
        memory                 9998.59k
```

```
        OS Memory               57304.00k
        Timestamp               06/20/2024 12:20:10 AM
        Step Count                              464  Switch Count  0


MPRINT(EVENT_STUDY):   ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car2_evtrets_5days.pdf.
MPRINT(EVENT_STUDY):   ods pdf file="C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car3_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car3_evtrets_5days.pdf", printer "PDF".
MPRINT(EVENT_STUDY):   proc gplot data =FFM_Evtwin;
MPRINT(EVENT_STUDY):   where evttime>=-2;
MPRINT(EVENT_STUDY):   Title "Carhart 4 Factor model: Carhart CARs and BHARs around the event date";
MPRINT(EVENT_STUDY):   plot (car3win_mean bhar3win_mean)*evttime /overlay legend vaxis=axis1 haxis=axis2;
MPRINT(EVENT_STUDY):   run;


NOTE: 41825 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot57.png.
NOTE: 79422 bytes written to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\gplot9.pdf.
ERROR: Image file type is not supported, or corrupted file.
MPRINT(EVENT_STUDY):  quit;


NOTE: There were 5 observations read from the data set WORK.FFM_EVTWIN.
      WHERE evttime>=-2;
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE GPLOT used (Total process time):
      real time               0.43 seconds
      user cpu time           0.18 seconds
      system cpu time         0.18 seconds
      memory                  9987.65k
      OS Memory               57304.00k
      Timestamp               06/20/2024 12:20:11 AM
      Step Count                              465  Switch Count  0
```

```
MPRINT(EVENT_STUDY):   ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car3_evtrets_5days.pdf.
MPRINT(EVENT_STUDY):   ods pdf file="C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car0_3_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car0_3_evtrets_5days.pdf", printer "PDF".
MPRINT(EVENT_STUDY):   proc gplot data =allstats;
MPRINT(EVENT_STUDY):   where evttime>=-2;
MPRINT(EVENT_STUDY):   Title "CARs from the four models: around the event date";
MPRINT(EVENT_STUDY):   plot (car0win_mean car1win_mean car2win_mean car3win_mean )*evttime /overlay legend
vaxis=axis1 haxis=axis2;
MPRINT(EVENT_STUDY):   run;

NOTE: 49814 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot58.png.
NOTE: 78857 bytes written to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\gplot10.pdf.
ERROR: Image file type is not supported, or corrupted file.
MPRINT(EVENT_STUDY):  quit;

NOTE: There were 5 observations read from the data set WORK.ALLSTATS.
      WHERE evttime>=-2;
NOTE: PROCEDURE GPLOT used (Total process time):
      real time            0.51 seconds
      user cpu time        0.31 seconds
      system cpu time      0.09 seconds
      memory               10022.90k
      OS Memory            57304.00k
      Timestamp            06/20/2024 12:20:11 AM
      Step Count                        466  Switch Count  0


MPRINT(EVENT_STUDY):   ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\Car0_3_evtrets_5days.pdf.
MPRINT(EVENT_STUDY):   ods pdf file="C:\Users\lihon\OneDrive - Kent State
```

```
University\aaaa\event_Study\result\agg_foreign_rec_exe10\BHARS0_3_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\BHARS0_3_evtrets_5days.pdf", printer "PDF".
MPRINT(EVENT_STUDY):   proc gplot data =allstats;
MPRINT(EVENT_STUDY):   where evttime>=-2;
MPRINT(EVENT_STUDY):   Title "BHARs from the four models: BHARs around the event date";
MPRINT(EVENT_STUDY):   plot (bhar0_mean bhar1_mean bhar2_mean bhar3_mean )*evttime /overlay legend vaxis=axis1
haxis=axis2;
MPRINT(EVENT_STUDY):   run;
NOTE: 17946 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot59.png.
NOTE: 77886 bytes written to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\gplot11.pdf.
ERROR: Image file type is not supported, or corrupted file.
MPRINT(EVENT_STUDY):  quit;
NOTE: There were 5 observations read from the data set WORK.ALLSTATS.
      WHERE evttime>=-2;
NOTE: PROCEDURE GPLOT used (Total process time):
      real time           0.44 seconds
      user cpu time       0.20 seconds
      system cpu time     0.17 seconds
      memory              10077.15k
      OS Memory           57304.00k
      Timestamp           06/20/2024 12:20:12 AM
      Step Count                      467  Switch Count  0


MPRINT(EVENT_STUDY):   ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10\BHARS0_3_evtrets_5days.pdf.
MPRINT(EVENT_STUDY):   run;
MPRINT(EVENT_STUDY):  quit;
MPRINT(EVENT_STUDY):   ods pdf close;
MLOGIC(EVENT_STUDY):  Ending execution.

6256  proc report data=evt_res.allevtdate;
6257     column  model Cret_mean   car_mean  bhar_mean    car_t  scar_t  pat_car n ;
6258     define  model / display;
```

```
6259    define  Cret_mean / display;
6260     define  car_mean / display;
6261      define  bhar_mean / display;
6262    define   car_t / display;
6263    define   scar_t / display;
6264    define  pat_car / display;
6265    define n / display "total Obs";
6266
6267  run;
```

```
6268  ods latex close;
6269
6270  title;

6271
6272  ods latex path="&outputPath" file='Foreign_rec_exc10_ARet_summary_report.tex' style=Journal2;
```
```
6273  Title 'Summary report of ARs from the four models';
6274  options nolabel;
6275  * proc report data=allstats;
6276  proc report data = evt_res.allstats
6277     column  evttime abret0_Mean abret1_Mean abret2_Mean abret3_Mean  abret0_t abret1_t abret2_t abret3_t sar0_t
                 ------
                 22
```

```
6277! sar1_t sar2_t sar3_t;
ERROR 22-322: Syntax error, expecting one of the following: ;, (, BOX, BYPAGENO, CAPTION, CENTER, COLWIDTH, COMMAND,
              COMPLETECOLS, COMPLETEROWS, CONTENTS, DATA, EXCLNPWGT, EXCLNPWGTS, FORMCHAR, FS, HEADLINE, HEADSKIP,
              HELP, LIST, LS, MISSING, NAMED, NOALIAS, NOCENTER, NOCOMPLETECOLS, NOCOMPLETEROWS, NOEXEC, NOEXECUTE,
              NOFS, NOHEADER, NOTHREADS, NOWD, NOWINDOWS, OUT, OUTREPT, PANELS, PCTLDEF, PROFILE, PROMPT, PS, PSPACE,
              QMARKERS, QMETHOD, QNTLDEF, REPORT, SHOWALL, SPACING, SPANROWS, SPLIT, STYLE, THREADS, VARDEF, WD,
              WINDOWS, WRAP.
ERROR 76-322: Syntax error, statement will be ignored.
6278    define  evttime / display;
6279    define  abret0_Mean / display format=7.5;
6280    define  abret1_Mean / display format=7.5;
6281    define  abret2_Mean / display format=7.5;
6282    define  abret3_Mean / display format=7.5;
6283    define  abret0_t / display format=5.3;
6284    define  abret1_t / display format=5.3;
6285    define  abret2_t / display format=5.3;
6286    define  abret3_t / display format=5.3;
6287    define  sar0_t / display format=5.3;
6288    define  sar1_t / display format=5.3;
6289    define  sar2_t / display format=5.3;
6290    define  sar3_t / display format=5.3;
6291
6292  where  NOT missing(evttime);
WARNING: No data sets qualify for WHERE processing.
6293
6294  run;


NOTE: The SAS System stopped processing this step because of errors.
NOTE: PROCEDURE REPORT used (Total process time):
      real time           0.01 seconds
      user cpu time       0.01 seconds
      system cpu time     0.00 seconds
      memory              121.81k
      OS Memory           50432.00k
      Timestamp           06/20/2024 12:32:43 AM
      Step Count                        469  Switch Count  0
```

```
6295  ods latex close;title;
6296
6297
6298  ods latex path="&outputPath" file='Foreign_rec_exc10_Car_summary_report.tex' style=Journal2;
NOTE: Writing LATEX Body file: Foreign_rec_exc10_Car_summary_report.tex
6299  Title 'Summary report of CARS from the four models';
6300
6301
6302  options nolabel;
6303  * proc report data=allstats;


6304  proc report data = "C:\Users\lihon\OneDrive - Kent State
6304! University\aaaa\event_Study\result\Foreign_all_res\allstats.sas7bdat";
6305    column  evttime  car0win_Mean  car1win_Mean car2win_Mean car3win_Mean
6306                     car0win_t     car1win_t    car2win_t    car3win_t
6307                     scar0_t       scar1_t      scar2_t      scar3_t
6308                     bhar0win_t    bhar1win_t   bhar2win_t   bhar3win_t ;
6309    define  evttime / display;
6310    define   car0win_mean / display format=7.5;
6311    define   car1win_mean / display format=7.5;
6312    define   car2win_mean / display format=7.5;
6313    define   car3win_mean / display format=7.5;
6314    define   car0win_t / display format=5.3;
6315    define   car1win_t / display format=5.3;
6316    define   car2win_t / display format=5.3;
6317    define   car3win_t / display format=5.3;
6318    define  scar0_t / display format=5.3;
6319    define  scar1_t / display format=5.3;
6320    define  scar2_t / display format=5.3;
6321    define  scar3_t / display format=5.3;
6322     define  bhar0win_t / display format=5.3;
6323     define  bhar1win_t / display format=5.3;
6324     define  bhar2win_t / display format=5.3;
6325     define  bhar3win_t / display format=5.3;
6326
6327  where  NOT missing(evttime);
6328  run;
```

NOTE: Multiple concurrent threads will be used to summarize data.
NOTE: There were 5 observations read from the data set C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\Foreign_all_res\allstats.sas7bdat.
      WHERE not MISSING(evttime);
NOTE: PROCEDURE REPORT used (Total process time):
      real time   0.07 seconds
      user cpu time   0.01 seconds
      system cpu time   0.03 seconds
      memory   7862.03k
      OS Memory   55824.00k
      Timestamp   06/20/2024 12:32:44 AM
      Step Count   470 Switch Count 0

6329 ods latex close; title;
6330 data foreign_trans_execrec10_dec10;
6331 set foreign_trans_exec_record10 (where = (decile=9));
ERROR: Variable decile is not on file WORK.FOREIGN_TRANS_EXEC_RECORD10.
6332 run;

NOTE: The SAS System stopped processing this step because of errors.
WARNING: The data set WORK.FOREIGN_TRANS_EXECREC10_DEC10 may be incomplete. When this step was stopped there were 0
         observations and 0 variables.
WARNING: Data set WORK.FOREIGN_TRANS_EXECREC10_DEC10 was not replaced because this step was stopped.
NOTE: DATA statement used (Total process time):
      real time   0.00 seconds
      user cpu time   0.00 seconds
      system cpu time   0.00 seconds
      memory   550.93k
      OS Memory   50432.00k
      Timestamp   06/20/2024 12:33:33 AM
      Step Count   471 Switch Count 0

6333 data foreign_trans_execrec10_dec10;
6334 set foreign_trans_execrec10_decile (where = (decile=9));
6335 run;

NOTE: There were 74 observations read from the data set WORK.FOREIGN_TRANS_EXECREC10_DECILE.
      WHERE decile=9;
NOTE: The data set WORK.FOREIGN_TRANS_EXECREC10_DEC10 has 74 observations and 10 variables.
NOTE: DATA statement used (Total process time):
      real time   0.01 seconds
      user cpu time   0.01 seconds
      system cpu time   0.00 seconds
      memory   644.65k
      OS Memory   50432.00k
      Timestamp   06/20/2024 12:37:07 AM
      Step Count   472 Switch Count 0

6336 %event_study(outputPath=C:\Users\lihon\OneDrive - Kent State
6336! University\aaaa\event_Study\result\agg_foreign_rec_exe10_dec10,
MLOGIC(EVENT_STUDY): Beginning execution.
6337   ,
ERROR: All positional parameters must precede keyword parameters.
MLOGIC(EVENT_STUDY): Ending execution.
6337!   permno_list = foreign_trans_execrec10_dec10)

                180

ERROR 180-322: Statement is not valid or it is used out of proper order.

6338 %event_study(outputPath=C:\Users\lihon\OneDrive - Kent State
6338! University\aaaa\event_Study\result\agg_foreign_rec_exe10_dec10
MLOGIC(EVENT_STUDY): Beginning execution.
6339   ,permno_list = foreign_trans_execrec10_dec10)
MLOGIC(EVENT_STUDY): Parameter OUTPUTPATH has value C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10_dec10
MLOGIC(EVENT_STUDY): Parameter PERMNO_LIST has value foreign_trans_execrec10_dec10
MPRINT(EVENT_STUDY):   libname mycrsp "C:\Users\lihon\patent Dropbox\Victor Li\wrds_data";
NOTE: Libref MYCRSP was successfully assigned as follows:
      Engine: V9
      Physical Name: C:\Users\lihon\patent Dropbox\Victor Li\wrds_data
MPRINT(EVENT_STUDY):   libname evtstudy "C:\Users\lihon\OneDrive - Kent State

University\aaaa\event_Study\result\agg_foreign_rec_exe10_dec10";
NOTE: Libref EVTSTUDY was successfully assigned as follows:
      Engine: V9
      Physical Name: C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10_dec10
MLOGIC(EVENT_STUDY): %LET (variable name is CRSP)
MLOGIC(EVENT_STUDY): %LET (variable name is ESTPER)
MLOGIC(EVENT_STUDY): %LET (variable name is START)
MLOGIC(EVENT_STUDY): %LET (variable name is END)
MLOGIC(EVENT_STUDY): %LET (variable name is GAP)
MLOGIC(EVENT_STUDY): %LET (variable name is MINEST)
MLOGIC(EVENT_STUDY): %LET (variable name is EVTWIN)
MPRINT(EVENT_STUDY):   proc sql;
MPRINT(EVENT_STUDY):   create table input as select distinct permno, record_dt as edate format MMDDYY10. from
foreign_trans_execrec10_dec10 where not missing(-2) and year(record_dt);
NOTE: Table WORK.INPUT created, with 74 rows and 2 columns.

MPRINT(EVENT_STUDY):   quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time   0.01 seconds
      user cpu time   0.00 seconds
      system cpu time   0.01 seconds
      memory   5358.12k
      OS Memory   55556.00k
      Timestamp   06/20/2024 12:41:12 AM
      Step Count   473 Switch Count 0

MPRINT(EVENT_STUDY):   data caldates;
MPRINT(EVENT_STUDY):   merge mycrsp.dsi(keep=date rename=(date=estper_beg)) mycrsp.dsi(keep=date firstobs=150
rename=(date=estper_end)) mycrsp.dsi(keep=date firstobs=217 rename=(date=evtwin_beg)) mycrsp.dsi(keep=date
firstobs=219 rename=(date=evtdate)) mycrsp.dsi(keep=date firstobs=221 rename=(date=evtwin_end));
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.

INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and might reduce performance.
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and might reduce performance.
INFO: Data file MYCRSP.DSI.DATA is in a format that is native to another host, or the file encoding does not match the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and might reduce performance.
MPRINT(EVENT_STUDY):   format estper_beg estper_end evtwin_beg evtdate evtwin_end date9.;
MPRINT(EVENT_STUDY):   label estper_beg= 'Start of the Estimation Window' estper_end= 'End of the Estimation Window' evtwin_beg= 'Start of the Event Window' evtwin_end= 'End of the Event Window' evtdate= 'Event Date';
MPRINT(EVENT_STUDY):   index+1;
MPRINT(EVENT_STUDY):   if nmiss(estper_beg,estper_end,evtwin_beg,evtwin_end,evtdate)=0;
MPRINT(EVENT_STUDY):   run;

NOTE: There were 25799 observations read from the data set MYCRSP.DSI.
NOTE: There were 25650 observations read from the data set MYCRSP.DSI.
NOTE: There were 25583 observations read from the data set MYCRSP.DSI.
NOTE: There were 25581 observations read from the data set MYCRSP.DSI.
NOTE: There were 25579 observations read from the data set MYCRSP.DSI.
NOTE: The data set WORK.CALDATES has 25579 observations and 6 variables.
NOTE: DATA statement used (Total process time):
      real time   0.07 seconds
      user cpu time   0.04 seconds
      system cpu time   0.03 seconds
      memory   1632.50k
      OS Memory   50432.00k
      Timestamp   06/20/2024 12:41:12 AM
      Step Count   474 Switch Count 0

MPRINT(EVENT_STUDY):   proc sql;
MPRINT(EVENT_STUDY):   create table temp as select a.permno ,b.* from input a left join caldates b on b.evtdate-a.edate>=0 group by a.edate having (b.evtdate-a.edate)=min(b.evtdate-a.edate);
NOTE: The execution of this query involves performing one or more Cartesian product joins that can not be optimized.
NOTE: The query requires remerging summary statistics back with the original data.
NOTE: SAS threaded sort was used.

```
NOTE: Table WORK.TEMP created, with 74 rows and 7 columns.

NOTE: PROCEDURE SQL used (Total process time):
      real time           0.31 seconds
      user cpu time       0.39 seconds
      system cpu time     0.14 seconds
      memory              45036.06k
      OS Memory           92768.00k
      Timestamp           06/20/2024 12:41:13 AM
      Step Count                        475  Switch Count  0


MPRINT(EVENT_STUDY):    proc sql;
MPRINT(EVENT_STUDY):    create table evtrets_temp as select a.permno, a.date format date9., a.ret as ret1, b.evtdate,
b.estper_beg, b.estper_end, b.evtwin_beg, b.evtwin_end from mycrsp.dsf a, temp b where a.permno=b.permno and
b.estper_beg<=a.date<=b.evtwin_end;
INFO: Data file MYCRSP.DSF.DATA is in a format that is native to another host, or the file encoding does not match
the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources and
might reduce performance.
NOTE: Table WORK.EVTRETS_TEMP created, with 16354 rows and 8 columns.

MPRINT(EVENT_STUDY):    quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time           36.51 seconds
      user cpu time       35.51 seconds
      system cpu time     1.07 seconds
      memory              5848.75k
      OS Memory           55556.00k
      Timestamp           06/20/2024 12:41:49 AM
      Step Count                        476  Switch Count  0


MPRINT(EVENT_STUDY):    proc sql;
MPRINT(EVENT_STUDY):    create view evtrets1 as select a.*, (b.mktrf+b.rf) as mkt, b.mktrf, b.rf,b.smb, b.hml, b.umd
from evtrets_temp a left join mycrsp.ff_factors_daily (keep=date mktrf smb hml umd rf) b on a.date=b.date;
NOTE: SQL view WORK.EVTRETS1 has been defined.
MPRINT(EVENT_STUDY):    quit;
NOTE: PROCEDURE SQL used (Total process time):
```

```
      real time             0.00 seconds
      user cpu time         0.00 seconds
      system cpu time       0.00 seconds
      memory                112.75k
      OS Memory             50432.00k
      Timestamp             06/20/2024 12:41:49 AM
      Step Count                        477  Switch Count  0


MPRINT(EVENT_STUDY):   proc sql;
MPRINT(EVENT_STUDY):   create table evtrets (drop=ret1 where=(not missing(mkt))) as select a.*,
(1+a.ret1)*sum(1,b.dlret)-1-a.mkt as exret label='Market-adjusted total ret', (1+a.ret1)*sum(1,b.dlret)-1 as ret "Ret
adjusted for delisting" from evtrets1 a left join mycrsp.dsedelist (where=(missing(dlret)=0)) b on a.permno=b.permno
and a.date=b.dlstdt order by a.permno,a.evtdate,a.date;
INFO: Data file MYCRSP.FF_FACTORS_DAILY.DATA is in a format that is native to another host, or the file encoding does
not match the session encoding. Cross Environment Data Access will be used, which might require additional CPU
resources and might reduce performance.
INFO: Data file MYCRSP.DSEDELIST.DATA is in a format that is native to another host, or the file encoding does not
match the session encoding. Cross Environment Data Access will be used, which might require additional CPU resources
and might reduce performance.
NOTE: SAS threaded sort was used.
NOTE: Table WORK.EVTRETS created, with 16354 rows and 15 columns.

MPRINT(EVENT_STUDY):   quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time             0.17 seconds
      user cpu time         0.18 seconds
      system cpu time       0.07 seconds
      memory                37007.79k
      OS Memory             82348.00k
      Timestamp             06/20/2024 12:41:49 AM
      Step Count                        478  Switch Count  0


MPRINT(EVENT_STUDY):   proc printto log=junk;
MPRINT(EVENT_STUDY):   run;

NOTE: PROCEDURE PRINTTO used (Total process time):
```

```
MPRINT(EVENT_STUDY):   data abrets1/view=abrets1;
MPRINT(EVENT_STUDY):   merge evtrets(where=(evtwin_beg<=date<=evtwin_end) in=in_evtrets) params
(where=(_model_='eq0') keep=permno evtdate _model_ _rmse_ _p_ _edf_ rename=(_rmse_=std0 _p_=p0 _edf_=edf0)) params
(where=(_model_='eq1') keep=permno evtdate _model_ _rmse_ intercept mktrf rename=(_rmse_=std1 intercept=alpha1
mktrf=beta1)) params (where=(_model_='eq2') keep=permno evtdate _model_ _rmse_ intercept mktrf smb hml
rename=(_rmse_=std2 intercept=alpha2 mktrf=beta2 smb=sminb2 hml=hminl2)) params (where=(_model_='eq3') keep=permno
evtdate _model_ _rmse_ intercept mktrf smb hml umd rename=(_rmse_=std3 intercept=alpha3 mktrf=beta3 smb=sminb3
hml=hminl3 umd=umind3));
MPRINT(EVENT_STUDY):   by permno evtdate;
MPRINT(EVENT_STUDY):   retain missret;
MPRINT(EVENT_STUDY):   if first.permno then missret=missing(ret);
MPRINT(EVENT_STUDY):   if missing(ret) then missret+1;
MPRINT(EVENT_STUDY):   var0=std0**2;
MPRINT(EVENT_STUDY):   var1=std1**2;
MPRINT(EVENT_STUDY):   var2=std2**2;
MPRINT(EVENT_STUDY):   var3=std3**2;
MPRINT(EVENT_STUDY):   abret0 = exret;
MPRINT(EVENT_STUDY):   *extra over market;
MPRINT(EVENT_STUDY):   expret1 = alpha1 + beta1*mktrf;
MPRINT(EVENT_STUDY):   *CAPM;
MPRINT(EVENT_STUDY):   abret1 = ret-expret1;
MPRINT(EVENT_STUDY):   expret2 = alpha2+beta2*mktrf+sminb2*smb+hminl2*hml;
MPRINT(EVENT_STUDY):   *FF3factor;
MPRINT(EVENT_STUDY):   abret2=ret-expret2;
MPRINT(EVENT_STUDY):   expret3 =alpha3+beta3*mktrf+sminb3*smb+hminl3*hml+umind3*umd;
MPRINT(EVENT_STUDY):   abret3=ret-expret3;
MPRINT(EVENT_STUDY):   nobs=p0+edf0;
MPRINT(EVENT_STUDY):   drop p0 edf0 estper_beg estper_end std0 std1 std2 std3 _model_ exret;
MPRINT(EVENT_STUDY):   if in_evtrets and nobs>70;
```

```
MPRINT(EVENT_STUDY):   * I add the followings;
MPRINT(EVENT_STUDY):   if nobs=150;
MPRINT(EVENT_STUDY):   run;
```

```
MPRINT(EVENT_STUDY):   proc sql;
MPRINT(EVENT_STUDY):   create table abrets as select a.*, (b.index-c.index) as evttime from abrets1 a left join
caldates b on a.date = b.evtdate left join caldates c on a.evtdate = c.evtdate order by permno, evtdate, date;
```

```
      WHERE _model_='eq0';
NOTE: There were 74 observations read from the data set WORK.PARAMS.
      WHERE _model_='eq1';
NOTE: There were 74 observations read from the data set WORK.PARAMS.
      WHERE _model_='eq2';
NOTE: There were 74 observations read from the data set WORK.PARAMS.
      WHERE _model_='eq3';
NOTE: Table WORK.ABRETS created, with 370 rows and 37 columns.


MPRINT(EVENT_STUDY):   quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time           12.23 seconds
      user cpu time       12.14 seconds
      system cpu time     0.31 seconds
      memory              45627.87k
      OS Memory           90196.00k
      Timestamp           06/20/2024 12:42:02 AM
      Step Count                      483  Switch Count  9



MPRINT(EVENT_STUDY):   proc sort data=abrets nodupkey;
MPRINT(EVENT_STUDY):    by PERMNO evtdate DATE evtwin_beg evtwin_end mkt mktrf rf smb hml umd ret alpha1 beta1 alpha2
beta2 sminb2 hminl2 alpha3 beta3 sminb3 hminl3 umind3 missret var0 var1 var2 var3 abret0 expret1 abret1 expret2
abret2 expret3 abret3 nobs evttime ;
MPRINT(EVENT_STUDY):   run;


NOTE: There were 370 observations read from the data set WORK.ABRETS.
NOTE: SAS sort was used.
NOTE: 0 observations with duplicate key values were deleted.
NOTE: The data set WORK.ABRETS has 370 observations and 37 variables.
NOTE: PROCEDURE SORT used (Total process time):
      real time           0.01 seconds
      user cpu time       0.00 seconds
      system cpu time     0.01 seconds
      memory              824.09k
      OS Memory           49924.00k
      Timestamp           06/20/2024 12:42:02 AM
      Step Count                      484  Switch Count  0
```

```
MPRINT(EVENT_STUDY):    proc expand data=abrets out=car method=none;
MPRINT(EVENT_STUDY):    by permno evtdate;
MPRINT(EVENT_STUDY):    id date;
MPRINT(EVENT_STUDY):    convert ret=cret/transformout=(+1 cuprod -1);
MPRINT(EVENT_STUDY):    convert mkt=cmkt/transformout=(+1 cuprod -1);
MPRINT(EVENT_STUDY):    convert expret1 =cexpret1 /transformout=(+1 cuprod -1);
MPRINT(EVENT_STUDY):    convert expret2 =cexpret2 /transformout=(+1 cuprod -1);
MPRINT(EVENT_STUDY):    convert expret3 =cexpret3 /transformout=(+1 cuprod -1);
MPRINT(EVENT_STUDY):    convert abret0=car0/transformout=(sum);
MPRINT(EVENT_STUDY):    convert abret1=car1/transformout=(sum);
MPRINT(EVENT_STUDY):    convert abret2=car2/transformout=(sum);
MPRINT(EVENT_STUDY):    convert abret3=car3/transformout=(sum);
MPRINT(EVENT_STUDY):    run;

NOTE: The data set WORK.CAR has 370 observations and 46 variables.
NOTE: PROCEDURE EXPAND used (Total process time):
      real time            0.03 seconds
      user cpu time        0.00 seconds
      system cpu time      0.03 seconds
      memory               976.71k
      OS Memory            50184.00k
      Timestamp            06/20/2024 12:42:02 AM
      Step Count                       485  Switch Count  0


MPRINT(EVENT_STUDY):    proc printto log=junk;
MPRINT(EVENT_STUDY):    run;

NOTE: PROCEDURE PRINTTO used (Total process time):
      real time            0.00 seconds
      user cpu time        0.00 seconds
      system cpu time      0.00 seconds
      memory               7.06k
      OS Memory            49664.00k
      Timestamp            06/20/2024 12:42:02 AM
      Step Count                       488  Switch Count  0
```

```
MPRINT(EVENT_STUDY):   data allcars;
MPRINT(EVENT_STUDY):   merge car_evtwin (rename=(bhar0=bhar0win bhar1=bhar1win bhar2=bhar2win bhar3=bhar3win
car0=car0win car1=car1win car2=car2win car3=car3win cret=cretwin)) car_evtdate;
MPRINT(EVENT_STUDY):   by permno evtdate;
MPRINT(EVENT_STUDY):   run;
```

NOTE: There were 370 observations read from the data set WORK.CAR_EVTWIN.
NOTE: There were 74 observations read from the data set WORK.CAR_EVTDATE.
NOTE: The data set WORK.ALLCARS has 370 observations and 59 variables.
NOTE: DATA statement used (Total process time):
     real time   0.01 seconds
     user cpu time   0.01 seconds
     system cpu time   0.00 seconds
     memory   1128.50k
     OS Memory   49664.00k
     Timestamp   06/20/2024 12:42:02 AM
     Step Count   489 Switch Count 0

```
MPRINT(EVENT_STUDY):   * proc means data=allcars noprint;
MPRINT(EVENT_STUDY):   proc means data=allcars( where = (nobs=150)) noprint;
MPRINT(EVENT_STUDY):   class evttime;
MPRINT(EVENT_STUDY):   id nobs;
MPRINT(EVENT_STUDY):   var ret cret car0 car1 car2 car3 cretwin car0win car1win car2win car3win bhar0 bhar1 bhar2
bhar3 bhar0win bhar1win bhar2win bhar3win scar0 scar1 scar2 scar3 abret0 abret1 abret2 abret3 sar0 sar1 sar2 sar3
pat_scale;
MPRINT(EVENT_STUDY):   output out=allstats mean = n = t = sum =/autoname;
MPRINT(EVENT_STUDY):   run;
```

NOTE: Multiple concurrent threads will be used to summarize data.
NOTE: There were 370 observations read from the data set WORK.ALLCARS.
     WHERE nobs=150;
NOTE: The data set WORK.ALLSTATS has 6 observations and 132 variables.
NOTE: PROCEDURE MEANS used (Total process time):
     real time   0.03 seconds
     user cpu time   0.03 seconds

```
        system cpu time     0.03 seconds
        memory              6695.84k
        OS Memory           54796.00k
        Timestamp           06/20/2024 12:42:02 AM
        Step Count                         490  Switch Count  0
```

```
MPRINT(EVENT_STUDY):   data MA_Evtdate (keep=evttime car0_n cret_mean car0_mean car0_t scar0_t bhar0_mean pat_car0
model) MM_Evtdate (keep=evttime car1_n cret_mean car1_mean car1_t scar1_t bhar1_mean pat_car1 model ) FF_Evtdate
(keep=evttime car2_n cret_mean car2_mean car2_t scar2_t bhar2_mean pat_car2 model ) FFM_Evtdate (keep=evttime car3_n
cret_mean car3_mean car3_t scar3_t bhar3_mean pat_car3 model ) MA_Evtwin (keep=evttime cretwin_mean abret0_n ret_mean
abret0_mean car0win_mean bhar0win_mean abret0_t sar0_t pat_ar0 ) MM_Evtwin (keep=evttime cretwin_mean abret1_n
ret_mean abret1_mean car1win_mean bhar1win_mean abret1_t sar1_t pat_ar1 ) FF_Evtwin (keep=evttime cretwin_mean
abret2_n ret_mean abret2_mean car2win_mean bhar2win_mean abret2_t sar2_t pat_ar2 ) FFM_Evtwin (keep=evttime
cretwin_mean abret3_n ret_mean abret3_mean car3win_mean bhar3win_mean abret3_t sar3_t pat_ar3 );
MPRINT(EVENT_STUDY):   set allstats;
MPRINT(EVENT_STUDY):   by evttime;
MPRINT(EVENT_STUDY):   if _n_=1 and missing(evttime) then do;
MPRINT(EVENT_STUDY):   abret0_mean=.;
MPRINT(EVENT_STUDY):   abret1_mean=.;
MPRINT(EVENT_STUDY):   abret2_mean=.;
MPRINT(EVENT_STUDY):   abret3_mean=.;
MPRINT(EVENT_STUDY):   cretwin_mean=0;
MPRINT(EVENT_STUDY):   ret_mean=.;
MPRINT(EVENT_STUDY):   bhar1win_mean=0;
MPRINT(EVENT_STUDY):   bhar1win_mean=0;
MPRINT(EVENT_STUDY):   bhar2win_mean=0;
MPRINT(EVENT_STUDY):   bhar3win_mean=0;
MPRINT(EVENT_STUDY):   end;
MPRINT(EVENT_STUDY):   pat_car0=scar0_mean/(sqrt(pat_scale_sum)/scar0_n);
MPRINT(EVENT_STUDY):   pat_car1=scar1_mean/(sqrt(pat_scale_sum)/scar1_n);
MPRINT(EVENT_STUDY):   pat_car2=scar2_mean/(sqrt(pat_scale_sum)/scar2_n);
MPRINT(EVENT_STUDY):   pat_car3=scar3_mean/(sqrt(pat_scale_sum)/scar3_n);
MPRINT(EVENT_STUDY):   pat_ar0=sar0_mean/(sqrt(pat_scale_sum)/sar0_n);
MPRINT(EVENT_STUDY):   pat_ar1=sar1_mean/(sqrt(pat_scale_sum)/sar1_n);
MPRINT(EVENT_STUDY):   pat_ar2=sar2_mean/(sqrt(pat_scale_sum)/sar2_n);
MPRINT(EVENT_STUDY):   pat_ar3=sar3_mean/(sqrt(pat_scale_sum)/sar3_n);
MPRINT(EVENT_STUDY):   label pat_ar0= 'Patell Z for AR_MA' pat_ar1= 'Patell Z for AR_MM' pat_ar2= 'Patell Z for
```

```
AR_FF' pat_ar3= 'Patell Z for AR_FFM' abret0_t= 'CS t-stat, AR_MA' abret1_t= 'CS t-stat, AR_MM' abret2_t= 'CS t-stat,
AR_FF' abret3_t= 'CS t-stat, AR_FFM' sar0_t= 'Std CS test, AR_MA' sar1_t= 'Std CS test, AR_MM' sar2_t= 'Std CS test,
AR_FF' sar3_t= 'Std CS test, AR_FFM' abret0_mean= 'Mean AR_MA' abret1_mean= 'Mean AR_MM' abret2_mean= 'Mean AR_FF'
abret3_mean= 'Mean AR_FFM' car0_n= 'Number of events in the portfolio' abret0_n= 'Number of events in the portfolio'
evttime= 'Event Time t' cret_mean= "Mean CTR (-2, 2)" cretwin_mean= "Mean CTR (-2,t) " car0win_mean= "Average CAR_MA
(-2, t)" car1win_mean= "Average CAR_MM (-2, t)" car2win_mean= "Average CAR_FF (-2, t)" car3win_mean= "Average CAR_FFM
(-2, t)" bhar0win_mean= "Mean BHAR_MA (-2, t)" bhar1win_mean= "Mean BHAR_MM (-2, t)" bhar2win_mean= "Mean BHAR_FF
(-2, t)" bhar3win_mean= "Mean BHAR_FFM (-2, t)" ;
MPRINT(EVENT_STUDY):   format ret_mean cret_mean cretwin_mean abret0_mean abret1_mean abret2_mean abret3_mean
car0_mean car1_mean car2_mean car3_mean bhar0_mean bhar1_mean bhar2_mean bhar3_mean bhar0win_mean bhar1win_mean
bhar2win_mean bhar3win_mean car0win_mean car1win_mean car2win_mean car3win_mean percent7.4 abret0_t abret1_t abret2_t
abret3_t sar0_t sar1_t sar2_t sar3_t pat_car0 pat_car1 pat_car2 pat_car3 pat_ar0 pat_ar1 pat_ar2 pat_ar3 car0_t
car1_t car2_t car3_t scar0_t car1_t scar2_t scar3_t comma10.2;
MPRINT(EVENT_STUDY):   if evttime=0 then do;
MPRINT(EVENT_STUDY):   model='Market-Adjusted';
MPRINT(EVENT_STUDY):   output MA_Evtdate;
MPRINT(EVENT_STUDY):   model='Market Model';
MPRINT(EVENT_STUDY):   output MM_Evtdate;
MPRINT(EVENT_STUDY):   model='FF Model';
MPRINT(EVENT_STUDY):   output FF_Evtdate;
MPRINT(EVENT_STUDY):   model='Carhart Model';
MPRINT(EVENT_STUDY):   output FFM_Evtdate;
MPRINT(EVENT_STUDY):   end;
MPRINT(EVENT_STUDY):   if missing(evttime) then evttime=-2-1;
MPRINT(EVENT_STUDY):   output MA_Evtwin;
MPRINT(EVENT_STUDY):   output MM_Evtwin;
MPRINT(EVENT_STUDY):   output FF_Evtwin;
MPRINT(EVENT_STUDY):   output FFM_Evtwin;
MPRINT(EVENT_STUDY):   run;


NOTE: There were 6 observations read from the data set WORK.ALLSTATS.
NOTE: The data set WORK.MA_EVTDATE has 1 observations and 9 variables.
NOTE: The data set WORK.MM_EVTDATE has 1 observations and 9 variables.
NOTE: The data set WORK.FF_EVTDATE has 1 observations and 9 variables.
NOTE: The data set WORK.FFM_EVTDATE has 1 observations and 9 variables.
NOTE: The data set WORK.MA_EVTWIN has 6 observations and 10 variables.
NOTE: The data set WORK.MM_EVTWIN has 6 observations and 10 variables.
NOTE: The data set WORK.FF_EVTWIN has 6 observations and 10 variables.
```

NOTE: The data set WORK.FFM_EVTWIN has 6 observations and 10 variables.
NOTE: DATA statement used (Total process time):
      real time   0.04 seconds
      user cpu time   0.01 seconds
      system cpu time   0.03 seconds
      memory   2546.25k
      OS Memory   49664.00k
      Timestamp   06/20/2024 12:42:02 AM
      Step Count   491 Switch Count 0

MPRINT(EVENT_STUDY):   data allevtdate;
MPRINT(EVENT_STUDY):   set MA_Evtdate (rename=(car0_mean=car_mean bhar0_mean=bhar_mean car0_n=n car0_t=car_t
scar0_t=scar_t pat_car0=pat_car)) MM_Evtdate (rename=(car1_mean=car_mean bhar1_mean=bhar_mean car1_n=n car1_t=car_t
scar1_t=scar_t pat_car1=pat_car)) FF_Evtdate (rename=(car2_mean=car_mean bhar2_mean=bhar_mean car2_n=n car2_t=car_t
scar2_t=scar_t pat_car2=pat_car)) FFM_evtdate (rename=(car3_mean=car_mean bhar3_mean=bhar_mean car3_n=n car3_t=car_t
scar3_t=scar_t pat_car3=pat_car));
MPRINT(EVENT_STUDY):   length=5;
MPRINT(EVENT_STUDY):   label pat_car= 'Patell Z' car_mean= "Mean CAR (-2, 2)" bhar_mean= "Mean BHAR (-2, 2)" car_t=
'Cross-sectional t-stat for CAR' scar_t= 'Standaridized cross-sectional t-stat for CAR' length= 'Length of event
window in trading days';
MPRINT(EVENT_STUDY):   run;

NOTE: There were 1 observations read from the data set WORK.MA_EVTDATE.
NOTE: There were 1 observations read from the data set WORK.MM_EVTDATE.
NOTE: There were 1 observations read from the data set WORK.FF_EVTDATE.
NOTE: There were 1 observations read from the data set WORK.FFM_EVTDATE.
NOTE: The data set WORK.ALLEVTDATE has 4 observations and 10 variables.
NOTE: DATA statement used (Total process time):
      real time   0.00 seconds
      user cpu time   0.00 seconds
      system cpu time   0.00 seconds
      memory   1123.43k
      OS Memory   49664.00k
      Timestamp   06/20/2024 12:42:02 AM
      Step Count   492 Switch Count 0

```
MPRINT(EVENT_STUDY):   data car_evtdate;
MPRINT(EVENT_STUDY):   retain permno evtdate alpha1 beta1 cret car0 bhar0 var0 car1 bhar1 var1 car2 bhar2 var2 car3
bhar3 var3 nrets nobs;
MPRINT(EVENT_STUDY):   set car_evtdate;
MPRINT(EVENT_STUDY):   label alpha1= 'Alpha (Market Model)' beta1= 'Beta (Market Model' car0= 'CAR_MA' car1= 'CAR_MM'
car2= 'CAR_FF' car3= 'CAR_FFM' bhar0= 'BHAR_MA' bhar1= 'BHAR_MM' bhar2= 'BHAR_FF' bhar3= 'BHAR_FFM' var0= 'Estimation
period variance (Market-adjusted returns)' var1= 'Estimation period variance (Market Model)' var2= 'Estimation period
variance (FF Model)' var3= 'Estimation period variance (Carhart Model)' cret= 'Cumulative Total Return' nrets=
'Number of non-missing returns in event window' nobs= 'Length of the estimation period';
MPRINT(EVENT_STUDY):   keep permno evtdate alpha1 beta1 cret car0 bhar0 var0 car1 bhar1 var1 car2 bhar2 var2 car3
bhar3 var3 nrets nobs;
MPRINT(EVENT_STUDY):   format cret alpha1 car0 bhar0 car1 bhar1 car2 bhar2 car3 bhar3 percent7.4 beta1 comma10.3;
MPRINT(EVENT_STUDY):   run;

NOTE: There were 74 observations read from the data set WORK.CAR_EVTDATE.
NOTE: The data set WORK.CAR_EVTDATE has 74 observations and 19 variables.
NOTE: DATA statement used (Total process time):
      real time            0.00 seconds
      user cpu time        0.00 seconds
      system cpu time      0.00 seconds
      memory               631.28k
      OS Memory            49664.00k
      Timestamp            06/20/2024 12:42:02 AM
      Step Count                         493  Switch Count  0


MPRINT(EVENT_STUDY):   PROC DATASETS NOLIST;
MPRINT(EVENT_STUDY):   COPY IN = work OUT = evtstudy ;
MPRINT(EVENT_STUDY):   select allevtdate allstats car_evtwin ;
MPRINT(EVENT_STUDY):   RUN;

NOTE: Copying WORK.ALLEVTDATE to EVTSTUDY.ALLEVTDATE (memtype=DATA).
INFO: Engine's block-read method is in use.
INFO: Engine's block-write  method is in use.
NOTE: There were 4 observations read from the data set WORK.ALLEVTDATE.
NOTE: The data set EVTSTUDY.ALLEVTDATE has 4 observations and 10 variables.
NOTE: Copying WORK.ALLSTATS to EVTSTUDY.ALLSTATS (memtype=DATA).
INFO: Engine's block-read method is in use.
```

```
INFO: Engine's block-write  method is in use.
NOTE: There were 6 observations read from the data set WORK.ALLSTATS.
NOTE: The data set EVTSTUDY.ALLSTATS has 6 observations and 132 variables.
NOTE: Copying WORK.CAR_EVTWIN to EVTSTUDY.CAR_EVTWIN (memtype=DATA).
INFO: Engine's block-read method is in use.
INFO: Engine's block-write  method is in use.
NOTE: There were 370 observations read from the data set WORK.CAR_EVTWIN.
NOTE: The data set EVTSTUDY.CAR_EVTWIN has 370 observations and 22 variables.
MPRINT(EVENT_STUDY):   options nodate orientation=landscape;
MPRINT(EVENT_STUDY):   ods pdf file="C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\agg_foreign_rec_exe10_dec10\Car0_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10_dec10\Car0_evtrets_5days.pdf", printer "PDF".
MPRINT(EVENT_STUDY):   goptions device=pdfc;
MPRINT(EVENT_STUDY):   axis1 label=(angle=90 "Cumulative Abnormal Returns");
MPRINT(EVENT_STUDY):   axis2 label=("Event time");
MPRINT(EVENT_STUDY):   symbol interpol=join w=3 l=1;
NOTE: PROCEDURE DATASETS used (Total process time):
      real time          0.25 seconds
      user cpu time      0.09 seconds
      system cpu time    0.06 seconds
      memory             4244.31k
      OS Memory          50692.00k
      Timestamp          06/20/2024 12:42:02 AM
      Step Count                    494  Switch Count  0


MPRINT(EVENT_STUDY):   proc gplot data =MA_Evtwin;
MPRINT(EVENT_STUDY):   where evttime>=-2;
MPRINT(EVENT_STUDY):   Title "Market adjusted model:  CARs and BHARs around the event date";
MPRINT(EVENT_STUDY):   plot (car0win_mean bhar0win_mean)*evttime /overlay legend vaxis=axis1 haxis=axis2;
MPRINT(EVENT_STUDY):   run;

NOTE: 33900 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot60.png.
MPRINT(EVENT_STUDY):  quit;

NOTE: There were 5 observations read from the data set WORK.MA_EVTWIN.
```

```
        WHERE evttime>=-2;
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE GPLOT used (Total process time):
      real time           0.32 seconds
      user cpu time       0.23 seconds
      system cpu time     0.03 seconds
      memory              8684.37k
      OS Memory           53976.00k
      Timestamp           06/20/2024 12:42:03 AM
      Step Count                              495  Switch Count  0


MPRINT(EVENT_STUDY):   ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10_dec10\Car0_evtrets_5days.pdf.
MPRINT(EVENT_STUDY):   ods pdf file="C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\agg_foreign_rec_exe10_dec10\Car1_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10_dec10\Car1_evtrets_5days.pdf", printer "PDF".
MPRINT(EVENT_STUDY):   proc gplot data =MM_Evtwin;
MPRINT(EVENT_STUDY):   where evttime>=-2;
MPRINT(EVENT_STUDY):   Title "Market model:  CARs and BHARs around the event date";
MPRINT(EVENT_STUDY):   plot (car1win_mean bhar1win_mean)*evttime /overlay legend vaxis=axis1 haxis=axis2;
MPRINT(EVENT_STUDY):   run;

NOTE: 58095 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot61.png.
MPRINT(EVENT_STUDY):  quit;

NOTE: There were 5 observations read from the data set WORK.MM_EVTWIN.
      WHERE evttime>=-2;
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE GPLOT used (Total process time):
      real time           0.36 seconds
      user cpu time       0.21 seconds
      system cpu time     0.11 seconds
```

```
        memory              8617.65k
        OS Memory           54232.00k
        Timestamp           06/20/2024 12:42:03 AM
        Step Count                        496  Switch Count  0


MPRINT(EVENT_STUDY):   ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10_dec10\Car1_evtrets_5days.pdf.
MPRINT(EVENT_STUDY):   ods pdf file="C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\agg_foreign_rec_exe10_dec10\Car2_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10_dec10\Car2_evtrets_5days.pdf", printer "PDF".
MPRINT(EVENT_STUDY):   proc gplot data =FF_Evtwin;
MPRINT(EVENT_STUDY):   where evttime>=-2;
MPRINT(EVENT_STUDY):   Title "FF 3-factor model:CARs and BHARs around the event date";
MPRINT(EVENT_STUDY):   plot (car2win_mean bhar2win_mean)*evttime /overlay legend vaxis=axis1 haxis=axis2;
MPRINT(EVENT_STUDY):   run;

NOTE: 50128 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot62.png.
MPRINT(EVENT_STUDY):  quit;

NOTE: There were 5 observations read from the data set WORK.FF_EVTWIN.
      WHERE evttime>=-2;
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE GPLOT used (Total process time):
      real time           0.34 seconds
      user cpu time       0.25 seconds
      system cpu time     0.04 seconds
      memory              8559.62k
      OS Memory           54232.00k
      Timestamp           06/20/2024 12:42:04 AM
      Step Count                        497  Switch Count  0


MPRINT(EVENT_STUDY):   ods pdf close;
```

```
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10_dec10\Car2_evtrets_5days.pdf.
MPRINT(EVENT_STUDY):   ods pdf file="C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\agg_foreign_rec_exe10_dec10\Car3_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10_dec10\Car3_evtrets_5days.pdf", printer "PDF".
MPRINT(EVENT_STUDY):   proc gplot data =FFM_Evtwin;
MPRINT(EVENT_STUDY):   where evttime>=-2;
MPRINT(EVENT_STUDY):   Title "Carhart 4 Factor model: Carhart CARs and BHARs around the event date";
MPRINT(EVENT_STUDY):   plot (car3win_mean bhar3win_mean)*evttime /overlay legend vaxis=axis1 haxis=axis2;
MPRINT(EVENT_STUDY):   run;

NOTE: 49232 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot63.png.
MPRINT(EVENT_STUDY):   quit;

NOTE: There were 5 observations read from the data set WORK.FFM_EVTWIN.
      WHERE evttime>=-2;
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE GPLOT used (Total process time):
      real time           0.34 seconds
      user cpu time       0.21 seconds
      system cpu time     0.11 seconds
      memory              8609.53k
      OS Memory           54232.00k
      Timestamp           06/20/2024 12:42:04 AM
      Step Count                        498  Switch Count  0


MPRINT(EVENT_STUDY):   ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10_dec10\Car3_evtrets_5days.pdf.
MPRINT(EVENT_STUDY):   ods pdf file="C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\agg_foreign_rec_exe10_dec10\Car0_3_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10_dec10\Car0_3_evtrets_5days.pdf", printer "PDF".
```

```
MPRINT(EVENT_STUDY):   proc gplot data =allstats;
MPRINT(EVENT_STUDY):   where evttime>=-2;
MPRINT(EVENT_STUDY):   Title "CARs from the four models: around the event date";
MPRINT(EVENT_STUDY):   plot (car0win_mean car1win_mean car2win_mean car3win_mean )*evttime /overlay legend
vaxis=axis1 haxis=axis2;
MPRINT(EVENT_STUDY):   run;


NOTE: 43801 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot64.png.
MPRINT(EVENT_STUDY):   quit;


NOTE: There were 5 observations read from the data set WORK.ALLSTATS.
      WHERE evttime>=-2;
NOTE: PROCEDURE GPLOT used (Total process time):
      real time           0.31 seconds
      user cpu time       0.20 seconds
      system cpu time     0.06 seconds
      memory              8713.40k
      OS Memory           54232.00k
      Timestamp           06/20/2024 12:42:05 AM
      Step Count                        499  Switch Count  0



MPRINT(EVENT_STUDY):   ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10_dec10\Car0_3_evtrets_5days.pdf.
MPRINT(EVENT_STUDY):   ods pdf file="C:\Users\lihon\OneDrive - Kent State
University\aaaa\event_Study\result\agg_foreign_rec_exe10_dec10\BHARS0_3_evtrets_5days.pdf";
NOTE: Writing ODS PDF output to DISK destination
      "C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10_dec10\BHARS0_3_evtrets_5days.pdf", printer "PDF".
MPRINT(EVENT_STUDY):   proc gplot data =allstats;
MPRINT(EVENT_STUDY):   where evttime>=-2;
MPRINT(EVENT_STUDY):   Title "BHARs from the four models: BHARs around the event date";
MPRINT(EVENT_STUDY):   plot (bhar0_mean bhar1_mean bhar2_mean bhar3_mean )*evttime /overlay legend vaxis=axis1
haxis=axis2;
MPRINT(EVENT_STUDY):   run;
NOTE: 18238 bytes written to C:\Users\lihon\AppData\Local\Temp\SAS Temporary Files\_TD25772_DELL2_\gplot65.png.
MPRINT(EVENT_STUDY):   quit;
```

NOTE: There were 5 observations read from the data set WORK.ALLSTATS.
      WHERE evttime>=-2;
NOTE: PROCEDURE GPLOT used (Total process time):
      real time   0.29 seconds
      user cpu time   0.14 seconds
      system cpu time   0.11 seconds
      memory   8710.40k
      OS Memory   54232.00k
      Timestamp   06/20/2024 12:42:05 AM
      Step Count   500 Switch Count 0

MPRINT(EVENT_STUDY):   ods pdf close;
NOTE: ODS PDF printed 1 page to C:\Users\lihon\OneDrive - Kent State
      University\aaaa\event_Study\result\agg_foreign_rec_exe10_dec10\BHARSO_3_evtrets_5days.pdf.
MPRINT(EVENT_STUDY):   run;
MPRINT(EVENT_STUDY): quit;
MPRINT(EVENT_STUDY):   ods pdf close;
MLOGIC(EVENT_STUDY): Ending execution.

6340 proc report data=evt_res.allevtdate;
6341   column model Cret_mean   car_mean bhar_mean   car_t scar_t pat_car n ;
6342   define model / display;
6343   define Cret_mean / display;
6344   define car_mean / display;
6345   define bhar_mean / display;
6346   define   car_t / display;
6347   define   scar_t / display;
6348   define   pat_car / display;
6349   define n / display "total Obs";
6350   run;

NOTE: Multiple concurrent threads will be used to summarize data.
NOTE: There were 4 observations read from the data set EVT_RES.ALLEVTDATE.
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE REPORT used (Total process time):
      real time   55.04 seconds

        user cpu time   8.90 seconds
        system cpu time   1.50 seconds
        memory   8327.43k
        OS Memory   55320.00k
        Timestamp   06/20/2024 12:44:31 AM
        Step Count   501 Switch Count 1

```
6351  proc report data=allevtdate;
6352    column  model Cret_mean   car_mean  bhar_mean    car_t  scar_t  pat_car n ;
6353    define  model / display;
6354    define  Cret_mean / display;
6355    define  car_mean / display;
6356    define  bhar_mean / display;
6357   define  car_t / display;
6358   define  scar_t / display;
6359   define  pat_car / display;
6360   define n / display "total Obs";
6361
6362  run;
```

NOTE: Multiple concurrent threads will be used to summarize data.
NOTE: There were 4 observations read from the data set WORK.ALLEVTDATE.
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE REPORT used (Total process time):
        real time   0.04 seconds
        user cpu time   0.01 seconds
        system cpu time   0.00 seconds
        memory   8332.87k
        OS Memory   55320.00k
        Timestamp   06/20/2024 12:45:17 AM
        Step Count   502 Switch Count 0

```
6363  %let outputPath=%str(C:\Users\lihon\OneDrive - Kent State
6363! University\aaaa\event_Study\result\agg_foreign_rec_exe10_dec10)
6364  libname evt_res "&outputPath";
```

```
6365  ods latex path="&outputpath"  file='Foreign_rec_exc10_model_summary_report.tex' style=journal;
```
```
1      "C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\result\agg_foreign_rec_exe10_dec10 libname
1    ! evt_res "C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\result\agg_foreign_rec_exe10"
                   -
                  22
                     -
                    202
ERROR 22-322: Syntax error, expecting one of the following: ;, (, ANCHOR, ARCHIVE, ATTRIBUTES, AUTHOR, BASE, BODY,
              BOX_SIZING, CHARSET, CLOSE, CODE, CODEBASE, COLUMNS, CONTENTS, CSSSTYLE, DATA, DOM, DPI, ENCODING,
              EVENT, FILE, FRAME, GFOOTNOTE, GPATH, GTITLE, HEADTEXT, IMAGE_DPI, METATEXT, NEWFILE, NOGFOOTNOTE,
              NOGTITLE, OPERATOR, OPTIONS, PACKAGE, PAGE, PARAMETERS, PATH, RECORD_SEPARATOR, SGE, STARTPAGE, STYLE,
              STYLESHEET, TAGSET, TEXT, TRANTAB, TYPE, UNIFORM.
ERROR 202-322: The option or parameter is not recognized and will be ignored.
6366  Title 'Summary report of the four models';
6367  options nolabel;
6368  proc report data=allevtdate;
6369    column  model Cret_mean   car_mean  bhar_mean    car_t  scar_t  pat_car n ;
6370    define  model / display;
6371    define  Cret_mean / display;
6372    define  car_mean / display;
6373    define  bhar_mean / display;
6374   define   car_t / display;
6375   define  scar_t / display;
6376   define  pat_car / display;
6377   define n / display "total Obs";
6378
6379  run;

NOTE: Multiple concurrent threads will be used to summarize data.
NOTE: There were 4 observations read from the data set WORK.ALLEVTDATE.
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE REPORT used (Total process time):
      real time           0.04 seconds
      user cpu time       0.01 seconds
      system cpu time     0.01 seconds
      memory              8321.59k
```

```
6380  ods latex close;
6381
6382  title;
6383
6384
6385
6386
6387  /*
6388  Variables in Creation Order
6389  evttime nobs _TYPE_ _FREQ_ ret_Mean cret_Mean
6390  car0_Mean car1_Mean car2_Mean car3_Mean
6391  bhar0_Mean bhar1_Mean bhar2_Mean bhar3_Mean
6392  bhar0win_Mean bhar1win_Mean bhar2win_Mean bhar3win_Mean
6393  cretwin_Mean car0win_Mean car1win_Mean car2win_Mean car3win_Mean
6394  scar0_Mean scar1_Mean scar2_Mean scar3_Mean
6395
6396  abret0_Mean abret1_Mean abret2_Mean abret3_Mean
6397  sar0_Mean sar1_Mean sar2_Mean sar3_Mean
6398  pat_scale_Mean
6399  ret_N cret_N car0_N car1_N car2_N car3_N
6400  bhar0_N bhar1_N bhar2_N bhar3_N
6401  bhar0win_N bhar1win_N bhar2win_N bhar3win_N
6402  cretwin_N car0win_N car1win_N car2win_N car3win_N
6403  scar0_N scar1_N scar2_N scar3_N
6404
6405  abret0_N abret1_N abret2_N abret3_N
6406  sar0_N sar1_N sar2_N sar3_N
6407  pat_scale_N
6408  ret_t cret_t
6409  car0_t car1_t car2_t car3_t
6410  bhar0_t bhar1_t bhar2_t bhar3_t
6411  bhar0win_t bhar1win_t bhar2win_t bhar3win_t
6412  cretwin_t car0win_t car1win_t car2win_t car3win_t
```

```
6413   scar0_t scar1_t scar2_t scar3_t

6415   abret0_t abret1_t abret2_t abret3_t

6417   sar0_t sar1_t sar2_t sar3_t

6419   pat_scale_t

6421   ret_Sum cret_Sum car0_Sum car1_Sum car2_Sum car3_Sum
6422   bhar0_Sum bhar1_Sum bhar2_Sum bhar3_Sum
6423   bhar0win_Sum bhar1win_Sum bhar2win_Sum bhar3win_Sum
6424   cretwin_Sum car0win_Sum car1win_Sum car2win_Sum car3win_Sum scar0_Sum scar1_Sum scar2_Sum scar3_Sum
6425   abret0_Sum abret1_Sum abret2_Sum abret3_Sum sar0_Sum sar1_Sum sar2_Sum sar3_Sum pat_scale_Sum

6427   */



6431   ods latex path="&outputPath" file='Foreign_rec_exc10_ARet_summary_report.tex' style=Journal2;
NOTE: Line generated by the macro variable "OUTPUTPATH".
1     "C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\result\agg_foreign_rec_exe10_dec10 libname
1   ! evt_res "C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\result\agg_foreign_rec_exe10"
                  -
                  22
                    -
                  202
ERROR 22-322: Syntax error, expecting one of the following: ;, (, ANCHOR, ARCHIVE, ATTRIBUTES, AUTHOR, BASE, BODY,
              BOX_SIZING, CHARSET, CLOSE, CODE, CODEBASE, COLUMNS, CONTENTS, CSSSTYLE, DATA, DOM, DPI, ENCODING,
              EVENT, FILE, FRAME, GFOOTNOTE, GPATH, GTITLE, HEADTEXT, IMAGE_DPI, METATEXT, NEWFILE, NOGFOOTNOTE,
              NOGTITLE, OPERATOR, OPTIONS, PACKAGE, PAGE, PARAMETERS, PATH, RECORD_SEPARATOR, SGE, STARTPAGE, STYLE,
              STYLESHEET, TAGSET, TEXT, TRANTAB, TYPE, UNIFORM.
ERROR 202-322: The option or parameter is not recognized and will be ignored.
6432   Title 'Summary report of ARs from the four models';
6433   options nolabel;
6434   * proc report data=allstats;
6435   proc report data = allstats;
6436     column  evttime abret0_Mean abret1_Mean abret2_Mean abret3_Mean  abret0_t abret1_t abret2_t abret3_t sar0_t
6436! sar1_t sar2_t sar3_t;
```

```
6437    define   evttime / display;
6438    define   abret0_Mean / display format=7.5;
6439    define   abret1_Mean / display format=7.5;
6440    define   abret2_Mean / display format=7.5;
6441    define   abret3_Mean / display format=7.5;
6442    define   abret0_t / display format=5.3;
6443    define   abret1_t / display format=5.3;
6444    define   abret2_t / display format=5.3;
6445    define   abret3_t / display format=5.3;
6446    define   sar0_t / display format=5.3;
6447    define   sar1_t / display format=5.3;
6448    define   sar2_t / display format=5.3;
6449    define   sar3_t / display format=5.3;
6450
6451  where   NOT missing(evttime);
6452
6453  run;
```

NOTE: Multiple concurrent threads will be used to summarize data.
NOTE: There were 5 observations read from the data set WORK.ALLSTATS.
      WHERE not MISSING(evttime);
NOTE: PROCEDURE REPORT used (Total process time):
      real time   0.03 seconds
      user cpu time   0.03 seconds
      system cpu time   0.00 seconds
      memory   7770.53k
      OS Memory   55320.00k
      Timestamp   06/20/2024 12:48:18 AM
      Step Count   504 Switch Count 0


```
6454  ods latex close;title;
6455
6456
6457  ods latex path="&outputPath" file='Foreign_rec_exc10_Car_summary_report.tex' style=Journal2;
```
NOTE: Line generated by the macro variable "OUTPUTPATH".
1   "C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\result\agg_foreign_rec_exe10_dec10 libname
1   ! evt_res "C:\Users\lihon\OneDrive - Kent State University\aaaa\event_Study\result\agg_foreign_rec_exe10"

```
                    -
                   22
                       -
                      202
ERROR 22-322: Syntax error, expecting one of the following: ;, (, ANCHOR, ARCHIVE, ATTRIBUTES, AUTHOR, BASE, BODY,
              BOX_SIZING, CHARSET, CLOSE, CODE, CODEBASE, COLUMNS, CONTENTS, CSSSTYLE, DATA, DOM, DPI, ENCODING,
              EVENT, FILE, FRAME, GFOOTNOTE, GPATH, GTITLE, HEADTEXT, IMAGE_DPI, METATEXT, NEWFILE, NOGFOOTNOTE,
              NOGTITLE, OPERATOR, OPTIONS, PACKAGE, PAGE, PARAMETERS, PATH, RECORD_SEPARATOR, SGE, STARTPAGE, STYLE,
              STYLESHEET, TAGSET, TEXT, TRANTAB, TYPE, UNIFORM.
ERROR 202-322: The option or parameter is not recognized and will be ignored.
6458  Title 'Summary report of CARS from the four models';

6459

6460

6461  options nolabel;
6462  * proc report data=allstats;
6463  proc report data = allstats;
6464    column  evttime  car0win_Mean  car1win_Mean  car2win_Mean  car3win_Mean
6465                     car0win_t     car1win_t     car2win_t     car3win_t
6466                     scar0_t       scar1_t       scar2_t       scar3_t
6467                     bhar0win_t    bhar1win_t    bhar2win_t    bhar3win_t ;
6468    define  evttime / display;
6469    define   car0win_mean / display format=7.5;
6470    define   car1win_mean / display format=7.5;
6471    define   car2win_mean / display format=7.5;
6472    define   car3win_mean / display format=7.5;
6473    define   car0win_t / display format=5.3;
6474    define   car1win_t / display format=5.3;
6475    define   car2win_t / display format=5.3;
6476    define   car3win_t / display format=5.3;
6477    define  scar0_t / display format=5.3;
6478    define  scar1_t / display format=5.3;
6479    define  scar2_t / display format=5.3;
6480    define  scar3_t / display format=5.3;
6481    define  bhar0win_t / display format=5.3;
6482    define  bhar1win_t / display format=5.3;
6483    define  bhar2win_t / display format=5.3;
6484    define  bhar3win_t / display format=5.3;

6485
```

```
6486  where  NOT missing(evttime);
6487  run;
```

NOTE: Multiple concurrent threads will be used to summarize data.
NOTE: There were 5 observations read from the data set WORK.ALLSTATS.
      WHERE not MISSING(evttime);
NOTE: PROCEDURE REPORT used (Total process time):
      real time   0.03 seconds
      user cpu time   0.01 seconds
      system cpu time   0.00 seconds
      memory   7565.87k
      OS Memory   55312.00k
      Timestamp   06/20/2024 12:48:18 AM
      Step Count   505 Switch Count 0

```
6488  ods latex close; title;
6489  /*
6490  ods latex path=&outputPath file='Foreign_rec_exc10_Car_summary_report.tex' style=Journal2;
6491  Title 'Summary report of CARS from the four models';
6492  options nolabel;
6493  proc report data=allstats;
6494    column  evttime  car0_Mean car1_Mean car2_Mean car3win_Mean car0_t car1_t car2_t car3_t scar0_t scar1_t
6494! scar2_t scar3_t ;
6495    define  evttime / display;
6496    define  car0_mean / display format=7.5;
6497    define  car1_mean / display format=7.5;
6498    define  car2_mean / display format=7.5;
6499    define  car3_mean / display format=7.5;
6500    define  car0_t / display format=5.3;
6501    define  car1_t / display format=5.3;
6502    define  car2_t / display format=5.3;
6503    define  car3_t / display format=5.3;
6504    define  scar0_t / display format=5.3;
6505    define  scar1_t / display format=5.3;
6506    define  scar2_t / display format=5.3;
6507    define  scar3_t / display format=5.3;
6508
```

```
6509  where   NOT missing(evttime);
6510  run;
6511  ods latex close; title;
6512  */

6513  /* %let outputPath=%str(C:\Users\lihon\OneDrive - Kent State
6513! University\aaaa\event_Study\result\agg_foreign_rec_exe10);
6514  libname evt_res "&outputPath";
6515
6516  */
6517
6518  %let outputPath=%str(C:\Users\lihon\OneDrive - Kent State
6518! University\aaaa\event_Study\result\agg_foreign_rec_exe10_dec10) ;
6519
6520  ods latex path="&outputpath"  file='Foreign_rec_exc10_model_summary_report.tex' style=journal;
NOTE: Writing LATEX Body file: Foreign_rec_exc10_model_summary_report.tex
6521  Title 'Summary report of the four models';
6522  options nolabel;
6523  proc report data=allevtdate;
6524    column  model Cret_mean   car_mean   bhar_mean    car_t   scar_t   pat_car n ;
6525    define   model / display;
6526    define   Cret_mean / display;
6527    define   car_mean / display;
6528    define   bhar_mean / display;
6529   define   car_t / display;
6530   define   scar_t / display;
6531   define   pat_car / display;
6532   define n / display "total Obs";
6533
6534  run;

NOTE: Multiple concurrent threads will be used to summarize data.
NOTE: There were 4 observations read from the data set WORK.ALLEVTDATE.
NOTE: At least one W.D format was too small for the number to be printed. The decimal may be shifted by the "BEST"
      format.
NOTE: PROCEDURE REPORT used (Total process time):
      real time           0.03 seconds
      user cpu time       0.01 seconds
```

```
6535  ods latex close;
6536
6537  title;
6538
6539
6540
6541
6542  /*
6543  Variables in Creation Order
6544  evttime nobs _TYPE_ _FREQ_ ret_Mean cret_Mean
6545  car0_Mean car1_Mean car2_Mean car3_Mean
6546  bhar0_Mean bhar1_Mean bhar2_Mean bhar3_Mean
6547  bhar0win_Mean bhar1win_Mean bhar2win_Mean bhar3win_Mean
6548  cretwin_Mean car0win_Mean car1win_Mean car2win_Mean car3win_Mean
6549  scar0_Mean scar1_Mean scar2_Mean scar3_Mean
6550
6551  abret0_Mean abret1_Mean abret2_Mean abret3_Mean
6552  sar0_Mean sar1_Mean sar2_Mean sar3_Mean
6553  pat_scale_Mean
6554  ret_N cret_N car0_N car1_N car2_N car3_N
6555  bhar0_N bhar1_N bhar2_N bhar3_N
6556  bhar0win_N bhar1win_N bhar2win_N bhar3win_N
6557  cretwin_N car0win_N car1win_N car2win_N car3win_N
6558  scar0_N scar1_N scar2_N scar3_N
6559
6560  abret0_N abret1_N abret2_N abret3_N
6561  sar0_N sar1_N sar2_N sar3_N
6562  pat_scale_N
6563  ret_t cret_t
6564  car0_t car1_t car2_t car3_t
6565  bhar0_t bhar1_t bhar2_t bhar3_t
```

```
6566   bhar0win_t bhar1win_t bhar2win_t bhar3win_t
6567   cretwin_t car0win_t car1win_t car2win_t car3win_t
6568   scar0_t scar1_t scar2_t scar3_t
6569
6570   abret0_t abret1_t abret2_t abret3_t
6571
6572   sar0_t sar1_t sar2_t sar3_t
6573
6574   pat_scale_t
6575
6576   ret_Sum cret_Sum car0_Sum car1_Sum car2_Sum car3_Sum
6577   bhar0_Sum bhar1_Sum bhar2_Sum bhar3_Sum
6578   bhar0win_Sum bhar1win_Sum bhar2win_Sum bhar3win_Sum
6579   cretwin_Sum car0win_Sum car1win_Sum car2win_Sum car3win_Sum scar0_Sum scar1_Sum scar2_Sum scar3_Sum
6580   abret0_Sum abret1_Sum abret2_Sum abret3_Sum sar0_Sum sar1_Sum sar2_Sum sar3_Sum pat_scale_Sum
6581
6582   */
6583
6584
6585
6586   ods latex path="&outputPath" file='Foreign_rec_exc10_ARet_summary_report.tex' style=Journal2;
NOTE: Writing LATEX Body file: Foreign_rec_exc10_ARet_summary_report.tex
6587   Title 'Summary report of ARs from the four models';
6588   options nolabel;
6589   * proc report data=allstats;
6590   proc report data = allstats;
6591     column  evttime abret0_Mean abret1_Mean abret2_Mean abret3_Mean  abret0_t abret1_t abret2_t abret3_t sar0_t
6591!  sar1_t sar2_t sar3_t;
6592     define  evttime / display;
6593     define  abret0_Mean / display format=7.5;
6594     define  abret1_Mean / display format=7.5;
6595     define  abret2_Mean / display format=7.5;
6596     define  abret3_Mean / display format=7.5;
6597     define  abret0_t / display format=5.3;
6598     define  abret1_t / display format=5.3;
6599     define  abret2_t / display format=5.3;
6600     define  abret3_t / display format=5.3;
6601     define  sar0_t / display format=5.3;
```

```
6602    define  sar1_t / display format=5.3;
6603    define  sar2_t / display format=5.3;
6604    define  sar3_t / display format=5.3;
6605
6606  where  NOT missing(evttime);
6607
6608  run;
```

```
6609  ods latex close;title;
6610
6611
6612  ods latex path="&outputPath" file='Foreign_rec_exc1O_Car_summary_report.tex' style=Journal2;
```
```
6613  Title 'Summary report of CARS from the four models';
6614
6615
6616  options nolabel;
6617  * proc report data=allstats;
6618  proc report data = allstats;
6619    column  evttime  car0win_Mean  car1win_Mean  car2win_Mean  car3win_Mean
6620                     car0win_t     car1win_t    car2win_t     car3win_t
6621                     scar0_t       scar1_t      scar2_t       scar3_t
6622                     bhar0win_t    bhar1win_t   bhar2win_t    bhar3win_t ;
6623    define  evttime / display;
6624    define   car0win_mean / display format=7.5;
```

```
6625    define   car1win_mean / display format=7.5;
6626    define   car2win_mean / display format=7.5;
6627    define   car3win_mean / display format=7.5;
6628    define   car0win_t / display format=5.3;
6629    define   car1win_t / display format=5.3;
6630    define   car2win_t / display format=5.3;
6631    define   car3win_t / display format=5.3;
6632    define  scar0_t / display format=5.3;
6633    define  scar1_t / display format=5.3;
6634    define  scar2_t / display format=5.3;
6635    define  scar3_t / display format=5.3;
6636     define  bhar0win_t / display format=5.3;
6637     define  bhar1win_t / display format=5.3;
6638     define  bhar2win_t / display format=5.3;
6639     define  bhar3win_t / display format=5.3;
6640
6641  where  NOT missing(evttime);
6642  run;

NOTE: Multiple concurrent threads will be used to summarize data.
NOTE: There were 5 observations read from the data set WORK.ALLSTATS.
      WHERE not MISSING(evttime);
NOTE: PROCEDURE REPORT used (Total process time):
      real time            0.06 seconds
      user cpu time        0.04 seconds
      system cpu time      0.03 seconds
      memory               7645.57k
      OS Memory            55312.00k
      Timestamp            06/20/2024 12:49:39 AM
      Step Count                      508  Switch Count  0


6643  ods latex close; title;
6644  /*
6645  ods latex path=&outputPath file='Foreign_rec_exc10_Car_summary_report.tex' style=Journal2;
6646  Title 'Summary report of CARS from the four models';
6647  options nolabel;
6648  proc report data=allstats;
```

```
6649    column  evttime  car0_Mean car1_Mean car2_Mean car3win_Mean car0_t car1_t car2_t car3_t scar0_t scar1_t
6649! scar2_t scar3_t ;
6650    define  evttime / display;
6651    define   car0_mean / display format=7.5;
6652    define   car1_mean / display format=7.5;
6653    define   car2_mean / display format=7.5;
6654    define   car3_mean / display format=7.5;
6655    define   car0_t / display format=5.3;
6656    define   car1_t / display format=5.3;
6657    define   car2_t / display format=5.3;
6658    define   car3_t / display format=5.3;
6659    define  scar0_t / display format=5.3;
6660    define  scar1_t / display format=5.3;
6661    define  scar2_t / display format=5.3;
6662    define  scar3_t / display format=5.3;
6663
6664  where  NOT missing(evttime);
6665  run;
6666  ods latex close; title;
6667  */

6668  proc means data = foreign_trans_execrec10_decile;
6669  class decile;
6670  var taxdiff;
6671  run;
```

NOTE: Multiple concurrent threads will be used to summarize data.
NOTE: There were 792 observations read from the data set WORK.FOREIGN_TRANS_EXECREC10_DECILE.
NOTE: PROCEDURE MEANS used (Total process time):
      real time   0.07 seconds
      user cpu time   0.04 seconds
      system cpu time   0.00 seconds
      memory   11813.96k
      OS Memory   58388.00k
      Timestamp   06/20/2024 01:31:18 AM
      Step Count   509 Switch Count 0

```
6672  proc means data = foreign_trans_decile;
6673  class decile;
6674  var taxdiff;
6675  run;
```

NOTE: Multiple concurrent threads will be used to summarize data.
NOTE: There were 18130 observations read from the data set WORK.FOREIGN_TRANS_DECILE.
NOTE: PROCEDURE MEANS used (Total process time):
      real time   0.07 seconds
      user cpu time   0.01 seconds
      system cpu time   0.03 seconds
      memory   11813.50k
      OS Memory   58388.00k
      Timestamp   06/20/2024 01:32:27 AM
      Step Count   510 Switch Count 0

```
6676  proc means data = foreign_trans_decile mean std;
6677  class decile;
6678  var roa roe;
```
ERROR: Variable ROA not found.
ERROR: Variable ROE not found.
```
6679  run;
```

NOTE: The SAS System stopped processing this step because of errors.
NOTE: PROCEDURE MEANS used (Total process time):
      real time   0.00 seconds
      user cpu time   0.00 seconds
      system cpu time   0.00 seconds
      memory   309.31k
      OS Memory   48384.00k
      Timestamp   06/20/2024 01:33:39 AM
      Step Count   511 Switch Count 0

```
6680   proc sql;
6681     create table  aggforeign_trans_record_dt_comp as
6682         select * from
```

```
6683          foreign_trans_decile as a

6684

6685            /*or_ee_gvkey_patentid_record_dt2 as a*/
6686               inner join
6687            my_compustat as b
6688            on a.or_gvkey = b.gvkey
6689            and    year(a.record_dt) = b.YEAR;
NOTE: Table WORK.AGGFOREIGN_TRANS_RECORD_DT_COMP created, with 19313 rows and 28 columns.

6690          /*and    year(a.record_dt) - b.FYEAR=1;*/
6691  quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time           0.14 seconds
      user cpu time       0.04 seconds
      system cpu time     0.06 seconds
      memory              5726.34k
      OS Memory           53508.00k
      Timestamp           06/20/2024 01:34:40 AM
      Step Count                         512  Switch Count  0


6692  run;

6693  %contents(my_all_trans)
MLOGIC(CONTENTS):  Beginning execution.
MLOGIC(CONTENTS):  Parameter TABLE has value my_all_trans
MPRINT(CONTENTS):   Title "Varibales in table my_all_trans";
MPRINT(CONTENTS):   proc contents data= my_all_trans;
MPRINT(CONTENTS):   ods select variables;
MPRINT(CONTENTS):   run;
NOTE: PROCEDURE CONTENTS used (Total process time):
      real time           0.06 seconds
      user cpu time       0.00 seconds
      system cpu time     0.01 seconds
      memory              942.12k
      OS Memory           48660.00k
      Timestamp           06/20/2024 11:12:02 AM
      Step Count                         513  Switch Count  0
```

```
MLOGIC(CONTENTS):  Ending execution.

6694  %contents(foreign_trans_decile)
MLOGIC(CONTENTS):  Beginning execution.
MLOGIC(CONTENTS):  Parameter TABLE has value foreign_trans_decile
MPRINT(CONTENTS):   Title "Varibales in table foreign_trans_decile";
MPRINT(CONTENTS):   proc contents data= foreign_trans_decile;
MPRINT(CONTENTS):   ods select variables;
MPRINT(CONTENTS):   run;
NOTE: PROCEDURE CONTENTS used (Total process time):
      real time           0.10 seconds
      user cpu time       0.01 seconds
      system cpu time     0.01 seconds
      memory              826.37k
      OS Memory           48384.00k
      Timestamp           06/20/2024 12:20:20 PM
      Step Count                        514  Switch Count  0


MLOGIC(CONTENTS):  Ending execution.

6695  proc sql;
6696  select rf_id, permno, record_dt, exec_dt, or_name, ee_name
6697  from foreign_trans;
6698  quit;
NOTE: PROCEDURE SQL used (Total process time):
      real time           4.89 seconds
      user cpu time       4.78 seconds
      system cpu time     0.07 seconds
      memory              5352.68k
      OS Memory           58412.00k
      Timestamp           06/20/2024 05:30:25 PM
      Step Count                        515  Switch Count  0


6699  run;
```

```
6700  proc sql;
6701  select *
6702  from or_ee_trans_permno_rf_id_unique
6703  where rf_id =129910579;
6704  quit;
```

NOTE: PROCEDURE SQL used (Total process time):
      real time   0.14 seconds
      user cpu time   0.06 seconds
      system cpu time   0.09 seconds
      memory   5664.18k
      OS Memory   58936.00k
      Timestamp   06/20/2024 05:38:15 PM
      Step Count   516 Switch Count 0


```
6705  run;
```