

INPUT FORMAT

INPUT FORMAT FOR PROGRAMS TRAMO-SEATS AND TSW

The present file **inputformat.pdf** describes the input format for the DOS versions of programs TRAMO and SEATS, and for the previous windows version of program TSW.

At present, program TSW accepts many more input formats, as shown in the (separate) file **NewTSWFormats.xls**.

An Excel macro (**Xlists.xls**) is provided with the programs (also available at this site) that transforms an Excel file in an arbitrary format, into an appropriate Excel and/or text input file for programs TSW, TRAMO/SEATS or TERROR. The arbitrary Excel field should satisfy two restrictions:

- a) The series names are given in a single row or column.
- b) The dates are not split into columns and rows (for example: the years in a column, the quarters in a row).

The following formats are appropriate:

1. **EXCEL (for TSW):**

The Excel format appropriate for TSW is the following.

Assume there are k series ($k = 1, 2, \dots$). Then the j -th column of the file ($j = 1, \dots, k$) should have the following structure:

Row 1: j -th series name

Row 2: NZ SY SP MQ ,

Where **NZ** = Number of observations (including missing values).

SY = Starting year.

SP = Starting period of the year (for monthly data, 1 if the first observation is a January, 2 if a February, etc.)

MQ = Number of observations per year (12 if series is monthly, 4 if quarterly, and so on)

These four parameters may vary for the different series in the file although, for a TERROR application, or when summary results for the full set of series are desired, all series in the file should have the same MQ.

Row 3 and those following: Observations. Row 3 will contain the most distant observation, Row (NZ + 2) will contain the most recent one.

Missing observations should be entered as -99999.

After loading the file, the k series will show up in the main window.

Selecting one series and setting ITER = 0 or 1, one can treat this particular series (see section 2.4 of the TSW Manual). Setting ITER = 2 or 3, all series shown in the main window will be treated (see section 2.10 of the TSW Manual).

Example of an appropriate EXCEL Input File:

	A	B	C	D	E	F	G	H	I
1	indi1	indi2	indi3	indi4	indi5	indi6			
2	40 198114	46 198114	38 198114	46 198114	44 198114	36 198114			
3	36,0	0,0	60,0	60,0	96,0	227,3			
4	106,7	-90,2	140,0	140,0	-99999,0	519,4			
5	212,4	-43,2	240,0	240,0	-99999,0	838,7			
6	352,3	-64,8	270,0	270,0	-99999,0	1182,1			
7	528,1	-85,4	330,1	330,3	772,8	1550,9			
8	740,4	-45,0	418,0	410,9	-99999,0	1890,7			
9	988,9	24,0	523,5	511,4	-99999,0	2237,6			
10	1272,4	-49,1	546,0	540,6	-99999,0	-99999,0			
11	1593,1	40,1	624,5	602,3	2257,7	2859,0			
12	1949,1	51,3	698,5	682,6	-99999,0	3205,2			
13	2341,8	134,2	818,6	783,9	-99999,0	3602,4			
14	2770,5	228,4	841,9	813,5	-99999,0	4050,5			
15	3235,6	327,4	926,5	875,8	4489,5	4545,2			
16	3737,2	392,9	1009,0	956,8	-99999,0	5161,0			
17	4274,9	441,1	1133,0	1058,5	-99999,0	5864,1			
18	4849,3	373,2	1161,0	1089,2	-99999,0	6656,5			
19	5460,8	298,6	1266,4	1152,7	7025,8	7491,1			
20	6108,6	263,0	1355,2	1234,2	-99999,0	8357,4			
21	6790,8	232,6	1430,5	1334,5	-99999,0	-99999,0			
22	7509,1	185,4	1459,3	1365,6	-99999,0	10093,1			
23	8263,0	200,6	1554,0	1429,0	10017,5	10927,3			
24	9052,7	241,5	1639,0	1510,6	-99999,0	11731,1			
25	9880,3	178,8	1748,8	1613,0	-99999,0	12547,9			
26	10743,5	83,7	1775,0	1643,9	-99999,0	13400,2			
27	11640,8	169,9	1825,6	1705,7	13636,3	14295,7			
28	12573,2	227,2	1890,4	1786,6	14690,8	15280,3			
29	13541,5	275,5	1998,4	1889,2	15815,4	16326,2			
30	14546,7	373,2	2029,9	1921,2	16949,8	17479,5			
31	15587,3	460,0	2074,6	1982,8	18121,9	18686,5			
32	16664,1	555,0	2141,5	2064,0	19360,6	19987,4			
33	17776,7	634,9	2243,9	2166,7	20655,5	21324,9			
34	18924,4	586,2	2268,2	2198,0	21778,8	22697,8			
35	20109,8	669,6	2331,8	2261,5	23111,2	24102,8			
36	21330,9	767,3	2394,7	2342,8	24493,0	25531,0			
37	22587,7	859,9	2487,3	2445,3	25934,8	26958,6			
38	23880,8	958,9	2513,6	2477,3	27353,3	28406,5			
39	25209,3	1037,6	2569,1	2540,5	28816,1				
40	26573,4	1054,4	2624,7	2621,6	30252,5				
41	27974,4	1154,1		2725,2	31865,4				
42	29414,2	1120,3		2760,2	33316,3				
43		1215,4		2825,1	34963,7				
44		1314,0		2906,3	36629,7				
45		1413,9		3010,0	38387,3				
46		1464,8		3044,7	40060,2				
47		1417,2		3111,8					
48		1377,7		3194,7					

2. **TEXT:**

Standard text input files for TRAMO and SEATS containing only **one series** can also be used in TSW. The format is the following:

First line: Series name

Second line: NZ SY SP MQ (same as before).

Third and following lines: Observations. (Free format and read from left to right, with the first observation corresponding to the most distant date.).

Next line(s): (after the last time with observations) INPUT NAMELIST.

The Input Namelist should be entered as *\$INPUT parameter1=value1, ..., lastparameter=valueL, \$*.

Only non-default values need to be included.

Example of a TEXT Input File:

SERIESNAME

35 1996 1 4

13998 12294 12093 10616

10743 9121 8743 7333

7604 5951 7649 4411

5149 6911 8048 11231

15167 18097 21356 26452

37497 50568 50187 50776

81589 76967 83796 110400

130361 144905 158743 165967

175078 177505 173685

\$INPUT MQ = 4, RSA = 3 \$

Note: The macro **Xlsts.xls** can also transform Excel files with arbitrary formats into text files for the DOS versions of the programs.

For the DOS versions, a file with multiple series should contain the series in consecutive order, as in the following example:

```
1.Series one
22 1991 2 4
101 -99999 102 103
104 105 106 107
108 109 110 111
112 113 114 115
116 117 118 119
120 121
$INPUT MQ = 4 RSA = 3 ITER = 2 $
2.Series two
26 1990 3 4
201 -99999 202 -99999
203 -99999 204 205
-99999 206 -99999 -99999
207 208 209 210
211 212 213 214
215 216 217 218
219 220
3.Series three
22 1990 1 4
301
302
303
304
305
306
307
308
309
310
311
312
313
314
315
316
317
318
319
320
321
322
4.Series four
25 1989 4 4
401 402 403 404 405 406
407 408 409 410 411 412
413 414 415 416 417 418
419 420 421 422 423 424
```

Notes:

1. In the example, given that ITER = 2, the input namelist is only entered at the end of the first series (see the DOS or TSW Manuals).
2. This input specifies that the series are quarterly and that the standard automatic procedure (not including calendar effects) will be applied to all of them.
3. In a TERROR application, the input namelist is only entered at the end of the first series as follows:

\$INPUT TERROR 0 1, (if desired) other parameter = parameter value, ...\$,
where only non-fixed, non-default parameter values need to be entered. (For example, \$INPUT TERROR = 1, ITRAD = -1, IEAST = -1\$.) Executing TRAMO, the TERROR application is obtained.

3. REGRESSION VARIABLES:

A regression variable is entered as a column vector of numbers (the first line is the first value) in a text or Excel file. The variable should be extended over the forecasting horizon. Forecasting horizon = max (NPRED, FH), where FH = max (8, 2MQ). By default, NPRED = 0, thus Forecasting horizon = FH, so that, for monthly series, by default, 24 “forecasts” of the regression variable have to be added (8 for quarterly or annual series).

An easy way to extend a stochastic regression variable when forecasts are not available is to run TRAMO on them in an automatic manner, with RSA = 3 or 4 – 5, depending on whether or not the series can a priori be assumed unaffected by Trading-Day effects (see the TSW manual) and NPRED = forecast horizon. The series extended with forecasts is in the file **table-t.out** of the OUTPUT directory, or under **Out-tables** in TSW.

When IUSER = -1, several regression variables can be jointly entered as a matrix in text (DOS or TSW) or Excel format (TSW). Then,

- 1st column: 1st regression variable
- 2nd column: 2nd regression variable
- ...

and so on.