STAGE_t: Standard Model Checks

1

Model Checks

- Check that **VAR WALRAS** is equal to **0**.
- Check that all the **LHS** (left hand sides) are correct
  - search for **LHS** and then search (from cursor) for ******* (which indicates a problem).
- For additional certainty search for **infes**.
- Model will abort when certain checks fail
  - Extended as different 'issues' are resolved

2

Check Initialisation – ASAM1, SAM1

- Check the **initial** values of the variables and parameters are 'correct'
  - Model will abort when **ASAM1** and **SAM1** checks fail
  - Reports will/should help user find the cause
- Aggregated SAM – **ASAM1**
  - **CHECK1** - **all** values should equal **0**
  - **ASAM1CHK** - **all** values should equal **1.000**
  - **DIFFASAM1** - **all** values should equal **0**
  - **CNTASAM1** - **all** values should equal **0**
- Micro SAM – **SAM1**
  - **SAM1CHK** - **all** values should equal **1.000**
  - **DIFFSAM1** - **all** values should equal **0**
  - **CNTSAM1** - **all** values should equal **0**
- Use ref file to understand these checks

3

Initialisation and Replication Checks

```
*------ Macro and Micro SAMG1 -------
$SETGLOBAL ASAM_chk ASAM1
$SETGLOBAL SAM_chk SAM1

numerchk_samchk = 1.0 ;

$INCLUDE 2_include/stg_t_samgchk.inc

$DROPGLOBAL ASAM _chk
$DROPGLOBAL SAM _chk
```

← Initialisation

Replication →

```
*------ Macro and Micro SAMG2 -------
$SETGLOBAL ASAM_chk ASAM2
$SETGLOBAL SAM_chk SAM2

numerchk_samchk = numerchk ;

$INCLUDE 2_include/stg_t_samgchk.inc

$DROPGLOBAL ASAM_chk
$DROPGLOBAL SAM_chk
```


4

Check Replication – ASAM2, SAM2

- Check the **solution** values of the variables and parameters are 'correct'
  - Model will abort when **ASAM2** and **SAM2** checks fail
  - Reports will/should help user find the cause
- Aggregated SAM – **ASAM2**
  - **CHECK2** - **all** values should equal **0**
  - **ASAM2CHK** - **all** values should equal **1.000**
  - **DIFFASAM2** - **all** values should equal **0**
  - **CNTASAM2** - **all** values should equal **0**
- Micro SAM – **SAM2**
  - **SAM2CHK** - **all** values should equal **1**
  - **DIFFSAM2** - **all** values should equal **0**
  - **CNTSAM2** - **all** values should equal **0**
- Use ref file to understand these checks

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Numéraire Check

Data entry file

```
* 1bi. Loading a SAM from Excel via GDX

$GDXIN data_in.gdx
….
* Control data
$LOADdc  flow_cont mod_cont
….
$GDXIN
```

Closure file

```
WF.LO(f)$UEF(f)    = WF0(f) * mod_cont("numerchk") ;

* To use CPI as the numeraire fix CPI

 CPI.FX            = CPI0 * mod_cont("numerchk") ;

* To fix the real exchange rate fix ER and PPI

* PPI.FX           = PPI0 * mod_cont("numerchk") ;

 TEXADJ.FX         = TEXADJ0 * mod_cont("numerchk") ;
```


6

Numéraire Check

- Check the model is homogenous degree zero
  - in the 'controls' worksheet - change cell **B8** to **2**.
  - doubling the numéraire; what should this do?
- Rerun the program
  - find **ASAM2CHK**;
    - What should the values be?
    - What are its values?
  - Also look at
    - **DIFFASAM2, CNTASAM2, CHECK2**
- Use ref file to understand these checks

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Other Checks

- Run a simple experiment
  - Check the results make sense
- Logic
  - Just because the model passes these checks does not mean it is right
  - Check the results are logically consistent

8

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The End

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