

# NAG Library Function Document

## nag\_tsa\_transf\_orders (g13byc)

### 1 Purpose

nag\_tsa\_transf\_orders (g13byc) allocates memory to the four pointers in the structure of type Nag\_TransfOrder. The structure is used to hold the transfer function model orders of the input series for some functions in Chapter g13. This function **must** be called before any attempt is made to access this structure.

### 2 Specification

```
#include <nag.h>
#include <nagg13.h>

void nag_tsa_transf_orders (Integer nseries, Nag_TransfOrder *transfv,
    NagError *fail)
```

### 3 Description

The transfer function model orders of the input series are supplied to the time series function in memory allocated to four pointers. These pointers are the constituent members of the structure of type Nag\_TransfOrder used by some functions in Chapter g13.

The purpose of nag\_tsa\_transf\_orders (g13byc) is to allocate memory to these four pointers.

### 4 References

None.

### 5 Arguments

- 1: **nseries** – Integer *Input*  
*On entry:* the total number of input and output series. There may be any number of input series (including none), but always one output series. (See nag\_tsa\_multi\_inp\_model\_estim (g13bec) or nag\_tsa\_multi\_inp\_model\_forecast (g13bjc) for details).  
*Constraint:* **nseries**  $\geq 1$ .
- 2: **transfv** – Nag\_TransfOrder \*  
 Pointer to structure of type Nag\_TransfOrder with the following members:
 

<b>b</b> – Integer *	<i>Output</i>
<b>q</b> – Integer *	<i>Output</i>
<b>p</b> – Integer *	
<b>r</b> – Integer *	<i>Output</i>

*On exit:* each of the pointers will have been allocated sufficient memory. (See nag\_tsa\_multi\_inp\_model\_estim (g13bec) or nag\_tsa\_multi\_inp\_model\_forecast (g13bjc) for details).
- 3: **fail** – NagError \* *Input/Output*  
 The NAG error argument (see Section 2.7 in How to Use the NAG Library and its Documentation).

## 6 Error Indicators and Warnings

### NE\_ALLOC\_FAIL

Dynamic memory allocation failed.

### NE\_INT\_ARG\_LT

On entry, **nseries** =  $\langle value \rangle$ .  
Constraint: **nseries**  $\geq 1$ .

## 7 Accuracy

Not applicable.

## 8 Parallelism and Performance

nag\_tsa\_transf\_orders (g13byc) is not threaded in any implementation.

## 9 Further Comments

None.

## 10 Example

See nag\_tsa\_multi\_inp\_model\_estim (g13bec) and nag\_tsa\_multi\_inp\_model\_forecast (g13bjc) for examples of how nag\_tsa\_transf\_orders (g13byc) is used.

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