

NDK_FARIMA_SIM

Last Modified on 07/08/2016 11:54 am CDT

- C/C++
- .Net

```
int __stdcall NDK_FARIMA_SIM(double * pData,  
                             size_t  nSize,  
                             double  mean,  
                             double  sigma,  
                             double  nIntegral,  
                             double * phis,  
                             size_t  p,  
                             double * thetas,  
                             size_t  q,  
                             size_t  nStep,  
                             size_t  nSeed,  
                             double * retVal  
                             )
```

Returns a simulated data series the underlying FARIMA process.

Returns

status code of the operation

Return values

NDK_SUCCESS Operation successful

NDK_FAILED Operation unsuccessful. See [Macros](#) for full list.

Parameters

[in] **mean** is the FARMA model mean (i.e. μ).

[in] **sigma** is the standard deviation of the model's residuals/innovations.

[in] **nIntegral** is the model's integration order.

[in] **phis** are the parameters of the AR(p) component model (starting with the lowest lag).

[in] **p** is the number of elements in phis (order of AR component)

[in] **thetas** are the parameters of the MA(q) component model (starting with the lowest lag).

[in] **q** is the number of elements in thetas (order of MA component)

[in] **pData** is the univariate time series data (a one dimensional array).

[in] **nSize** is the number of observations in pData.

[in] **nSeed** is an unsigned integer for setting up the random number generators

[out] **retVal** is the calculated simulation value

[in] **nSteps** is the number of future steps to simulate for.

Remarks

1. The underlying model is described [here](#).
2. The time series is homogeneous or equally spaced
3. The time series may include missing values (e.g. NaN) at either end.

Requirements

Header	SFSDK.H
Library	SFSDK.LIB
DLL	SFSDK.DLL

Examples

References

- Hamilton, J .D.; [Time Series Analysis](#) , Princeton University Press (1994), ISBN 0-691-04289-6
- Tsay, Ruey S.; [Analysis of Financial Time Series](#) John Wiley & SONS. (2005), ISBN 0-471-690740

See Also

[template("related")]
