NDK_ARIMA_VALIDATE

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- C/C++
- .Net

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int __stdcall NDK_ARIMA_VALIDATE(double   mean,

double   sigma,

WORD   nIntegral,

double * phis,

size_t   p,

double * thetas,

size_t   q

)

Examines the model's parameters for stability constraints (e.g. stationary, etc.).

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 ARMA model mean (i.e. mu).

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

[in] **nIntegral** is the 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)

Remarks

1. The underlying model is described here.
2. NDK_ARIMA_VALIDATE checks the ARMA model for stability: stationarity, invertibility, and causality.
3. The integration order argument (d) must be a positive integer.
4. The long-run mean can take any value or may be omitted, in which case a zero value is assumed.
5. The residuals/innovations standard deviation (sigma) must be greater than zero.
6. For the input argument (phi):
   - The input argument is optional and can be omitted, in which case no AR component is included.

- The order of the parameters starts with the lowest lag.
  - The order of the AR component model is solely determined by the order of the last value in the array with a numeric value (vs. missing or error).
7. For the input argument (theta):
  - The input argument is optional and can be omitted, in which case no MA component is included.
  - The order of the parameters starts with the lowest lag.
  - The order of the MA component model is solely determined by the order of the last value in the array with a numeric value (vs. missing or error).

Requirements

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

Examples

```
int NDK_ARIMA_VALIDATE(double    mean,
                       double    sigma,
                       short     nIntegral,
                       double[]  phis,
                       UIntPtr   p,
                       double    thetas,
                       UIntPtr   q
                       )
```

Namespace: NumXLAPI
Class: SFSDK
Scope: Public
Lifetime: Static

Examines the model's parameters for stability constraints (e.g. stationary, etc.).

Return Value

a value from **NDK_RETCODE** enumeration for the status of the call.

NDK_SUCCESS operation successful
Error   Error Code

Parameters

- [in] **mean**   is the ARMA model mean (i.e. mu).
- [in] **sigma**   is the standard deviation of the model's residuals/innovations.
- [in] **nIntegral** is the 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)

Remarks

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6. For the input argument (phi):
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   - The order of the parameters starts with the lowest lag.
   - The order of the AR component model is solely determined by the order of the last value in the array with a numeric value (vs. missing or error).
7. For the input argument (theta):
   - The input argument is optional and can be omitted, in which case no MA component is included.
   - The order of the parameters starts with the lowest lag.
   - The order of the MA component model is solely determined by the order of the last value in the array with a numeric value (vs. missing or error).

Exceptions

Exception Type	Condition
None	N/A

Requirements

Namespace	NumXLAPI
Class	SFSDK
Scope	Public

Lifetime	Static
Package	NumXLAPI.DLL

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")]