

NDK_SARIMAX_FITTED

Last Modified on 03/14/2016 1:26 pm CDT

- [C/C++](#)
- [.Net](#)

```
int __stdcall NDK_SARIMAX_FITTED ( double *      pData,
                                   double **     pFactors,
                                   size_t        nSize,
                                   size_t        nFactors,
                                   double *      fBetas,
                                   double        mean,
                                   double        sigma,
                                   WORD          nIntegral,
                                   double *      phis,
                                   size_t        p,
                                   double *      thetas,
                                   size_t        q,
                                   WORD          nSIntegral,
                                   WORD          nSPeriod,
                                   double *      sPhis,
                                   size_t        sP,
                                   double *      sThetas,
                                   size_t        sQ,
                                   FIT_RETVAL_FUNC retType
                                   )
```

Returns an array of cells for the fitted values (i.e. mean, volatility and residuals)

Returns

status code of the operation

Return values

NDK_SUCCESS Operation successful

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

Parameters

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

[in] **pFactors** is the exogeneous factors time series data (each column is a separate factor, and each row is an observation).

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

- [in] **nFactors** is the number of exogenous factors
- [in] **fBetas** is the weights or loading of the exogenous factors
- [in] **mean** is the ARIMA/SARIMA model's long-run mean/trend (i.e. μ). If missing (i.e. NaN), then it is assumed zero.
- [in] **sigma** is the standard deviation of the model's residuals/innovations.
- [in] **nIntegral** is the non-seasonal difference order
- [in] **phis** are the coefficients's values of the non-seasonal AR component
- [in] **p** is the order of the non-seasonal AR component
- [in] **thetas** are the coefficients's values of the non-seasonal MA component
- [in] **q** is the order of the non-seasonal MA component
- [in] **nSIntegral** is the seasonal difference
- [in] **nSPeriod** is the number of observations per one period (e.g. 12=Annual, 4=Quarter)
- [in] **sPhis** are the coefficients's values of the seasonal AR component
- [in] **sP** is the order of the seasonal AR component
- [in] **sThetas** are the coefficients's values of the seasonal MA component
- [in] **sQ** is the order of the seasonal MA component
- [in] **retType** is a switch to select a output type

Order Description

1	Fitted mean (default)
2	Fitted standard deviation or volatility
3	Raw (non-standardized) residuals
4	Standardized residuals

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

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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
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See Also

[template("related")]