NDK_PROBIT

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- C/C++
- .Net

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int __stdcall NDK_PROBIT(double * X,
size_t   N,
WORD   retTYpe
)

Computes the probit transformation, including its inverse.

Returns

status code of the operation

Return values

NDK_SUCCESS Operation successful
NDK_FAILED   Operation unsuccessful. See **Macros** for full list.

Parameters

[in,out]	**X**	is the univariate time series data (a one dimensional array).
[in]	**N**	is the number of observations in X.
[in]	**retTYpe**	is a number that determines the type of return value: 1 (or missing)=probit , 2=inverse probit.

Remarks

1. The **probit** link function is commonly used for parameters that lie in the unit interval.
2. Numerical values of X close to 0 or 1 or out of range result in #VALUE! or #N/A.
3. The **probit** function is defined as the inverse cumulative distribution function (CDF): $$y=\textit{Probit}(x)=\Phi^{-1}(x)$$ And $$x=\textit{probit}^{-1}(y)=\Phi(y)=\frac{1}{\sqrt{2\pi}}\int_{-\infty}^{y}e^{\frac{-Z^2}{2}}dz$$ Where:
   - x_{t} is the value of the input time series at time t
   - y_{t} is the transformed probit value at time t
   - $\textit{probit}^{-1}(y)$ is the inverse probit function
4. The **probit** function accepts a single value or an array of values for X.

Requirements

Header	SFSDK.H
Library	SFSDK.LIB

DLL	SFSDK.DLL

Examples

int NDK_PROBIT(double[] pData,
UIntPtr nSize,
short argRetType
)

Computes the probit transformation, including its inverse.

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] **nSize** is the number of observations in pData.
[in] **argRetType** is a number that determines the type of return value: 1 (or missing)=probit , 2=inverse probit.

Remarks

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Exceptions

Exception Type	Condition
None	N/A

Requirements

Namespace	NumXLAPI
Class	SFSDK
Scope	Public
Lifetime	Static
Package	NumXLAPI.DLL

Examples

References

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* Tsay, Ruey S.; Analysis of Financial Time Series John Wiley & SONS. (2005), ISBN 0-471-690740

* D. S.G. Pollock; Handbook of Time Series Analysis, Signal Processing, and Dynamics; Academic Press; Har/Cdr edition(Nov 17, 1999), ISBN: 125609906

* Box, Jenkins and Reisel; Time Series Analysis: Forecasting and Control; John Wiley & SONS.; 4th edition(Jun 30, 2008), ISBN: 470272848

See Also

[template("related")]