

NDK_PORTFOLIO_COVARIANCE

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

```
int __stdcall NDK_PORTFOLIO_COVARIANCE ( double * weights1,  
                                         double * weights2,  
                                         size_t   nAssets,  
                                         double ** covar,  
                                         double * retVal  
                                         )
```

Calculates the covariance between two portfolios.

Returns

status code of the operation

Return values

NDK_SUCCESS Operation successful

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

Remarks

1. For uncorrelated assets, the covariance matrix is zero for all off-diagonal elements. In this case, the covariance matrix (V) can be passed as an array of only variances (a one dimensional array).
2. The weights array size must equal to the number of risky assets.
3. The assets order in must be identical in the covariance and assets weights arrays.
4. By definition, the covariance matrix is a square symmetric matrix with order equals to number of assets in the portfolio.
5. The number of unique elements in the covariance matrix is equal to: $\frac{N \times (N+1)}{2}$ Where: (N) is the number of risky assets in the portfolio.

Requirements

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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")]