ENPV

Updated: 31 Mar 2016

Use ENPV to calculate the net present value of an investment based on a series of periodic cash flows and a discount rate. ENPV is closely related to NPV function.

Syntax

```
Public Shared Function ENPV(
    ByVal Rate As Double,
    ByVal CF_Amt As Double(),
    ByVal Per As Integer(),)
```

Arguments

Rate

the rate to be used for discounting the cash flows in calculating the net present value. *Rate* is an expression that returns a **Double**, or of a type that can be implicitly converted to **Double**.

CF_Amt

the cash flow amounts. *CF_Amt* is an expression that returns an Array of **Double**, or of a type that can be implicitly converted to an Array of **Double**.

Per

the period in which the cash flow occurred. *Per* is an expression that returns a **Integer**, or of a type that can be implicitly converted to **Integer**.

Return Type

Double

Remarks

- The ENPV function requires pairing the cash flows *(CF_Amt*) and the periods in which those cash flows occurred (*Per*) as input. However, the order in which the cash flows are passed into is not important.
- Periods in which the cash flow is zero, or in which there is no cash flow, do not have to be included.
- The periods can start and end with any integer value, including negative numbers.
- There can be multiple cash flows with the same period number.
- If the discount rate (*Rate*) is equal to -1, a NULL will be returned.
- It is important to be consistent with the units for *Rate* and *Per*. For example if payments are to be paid monthly, then *Rate* should be the monthly rate, which can be specified as the annual rate divided by 12. If payments are made quarterly, divide the annual rate by 4. If payments are made semi-annually, divide the annual rate by 2.

- Funds that are paid should be represented with negative numbers. Funds that are received should be represented as positive numbers.
- For calculations involving dates, consider using the XNPV aggregate function.
- The ENPV function differs from the NPV function in that the ENPV function calculates the discount rate as $(1+rate)^{i}$ for i equal zero to n-1, where n is difference between the maximum period value and the minimum period value. The NPV function calculates the discount rate as $(1+rate)^{i}$ for i equal one to n, where n is the difference between the maximum period value and the minimum period value. The ENPV result divided by the NPV result should be equal to 1 plus the rate (*Rate*).

See Also

- EFV - Enhanced future value
- EPV - Enhanced present value
- NFV - Net future value
- NPV - Net present value
- XDCF - Discounted cash flows value of a series of irregular cash flows
- XFV - Future value of a cash flow between two dates
- XNFV - Net future value for non-periodic cash flows
- XNPV - Net present value for non-periodic cash flows
- XNPV30360 - Net present value for irregular cash flows using a 30/360 day-count convention
- XNPVT - Net present value for cash flows with irregular time periods
- XPV - Discounted value of a cash flow between two dates