? How can I calculate the net present value (NPV) in Google Sheets?

Authored by

stats writer

June 29, 2024

The process of determining the net present value (NPV) in Google Sheets involves using a formula to calculate the present value of future cash flows, taking into account the time value of money. This can be done by inputting the cash flow amounts and discount rate into the NPV function in Google Sheets. This allows for an accurate assessment of the profitability of an investment or project. By utilizing this feature, individuals and businesses can make informed financial decisions and evaluate the potential return on their investments.

XNPV

Calculates the net present value of an investment based on a specified series of potentially irregularly spaced cash flows and a discount rate.

Sample Usage

```
XNPV(A2,B2:B25,C2:C25)
```

```
XNPV(0.08,{200,250,300},{DATE(2012,06,23),DATE(2013,05,12),DATE(2014,02,09)})
```

Syntax

```
XNPV(discount, cashflow_amounts, cashflow_dates)
```

`discount` - The discount rate of the investment over one period.

`cashflow_amounts` - A range of cells containing the income or payments associated with the investment.

`cashflow_dates` - A range of cells with dates corresponding to the cash flows in `cashflow_amounts`.

Notes

`XNPV` is similar to `PV` except that `XNPV` allows variable-value cash flows and cash flow intervals.

If the days specified in `cashflow_dates` are at a regular interval, use `NPV` instead.

Each cell in `cashflow_amounts` should be positive if it represents income from the perspective of the owner of the investment (e.g. coupons) or negative if it represents payments (e.g. loan repayment).

`XIRR` under the same conditions calculates the internal rate of return for which the net present value is zero.

See Also

`XIRR`: Calculates the internal rate of return of an investment based on a specified series of potentially irregularly spaced cash flows.

`PV`: Calculates the present value of an annuity investment based on constant-amount periodic payments and a constant interest rate.

`NPV`: Calculates the net present value of an investment based on a series of periodic cash flows and a discount rate.

`MIRR`: Calculates the modified internal rate of return on an investment based on a series of periodic cash flows and the difference between the interest rate paid on financing versus the return received on reinvested income.

`IRR`: Calculates the internal rate of return on an investment based on a series of periodic cash flows.

Examples