

How can I use the IRR function in Excel to calculate the internal rate of return for a series of cash flows?

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The IRR function in Excel is a powerful tool that allows users to calculate the internal rate of return for a series of cash flows. This function takes into account the initial investment, the expected future cash flows, and the time value of money to determine the rate of return that would make the net present value of all the cash flows equal to zero. By using this function, users can analyze the profitability of potential investments and make informed financial decisions. To use the IRR function in Excel, users need to input the cash flows in a specific order and format, and then the function will automatically calculate the internal rate of return. This makes it a quick and efficient way to evaluate the potential returns of different investment opportunities.

This article describes the formula syntax and usage of the **IRR** function in Microsoft Excel.

Description

Returns the internal rate of return for a series of cash flows represented by the numbers in values. These cash flows do not have to be even, as they would be for an annuity. However, the cash flows must occur at regular intervals, such as monthly or annually. The internal rate of return is the interest rate received for an investment consisting of payments (negative values) and income (positive values) that occur at regular periods.

Syntax

IRR(values,)

The IRR function syntax has the following arguments:

Values: Required. An array or a reference to cells that contain numbers for which you want to calculate the internal rate of return.

Values must contain at least one positive value and one negative value to calculate the internal rate of return.

IRR uses the order of values to interpret the order of cash flows. Be sure to enter your payment and income values in the sequence you want.

If an array or reference argument contains text, logical values, or empty cells, those values are ignored.

Guess: Optional. A number that you guess is close to the result of IRR.

Microsoft Excel uses an iterative technique for calculating IRR. Starting with guess, IRR cycles through the calculation until the result is accurate within 0.00001 percent. If IRR can't find a result

that works after 20 tries, the #NUM! error value is returned.

In most cases you do not need to provide guess for the IRR calculation. If guess is omitted, it is assumed to be 0.1 (10 percent).

If IRR gives the #NUM! error value, or if the result is not close to what you expected, try again with a different value for guess.

Remarks

IRR is closely related to NPV, the net present value function. The rate of return calculated by IRR is the interest rate corresponding to a 0 (zero) net present value. The following formula demonstrates how NPV and IRR are related:

NPV(IRR(A2:A7),A2:A7) equals 1.79E-09