

# Package ‘ifm’

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**Type** Package

**Title** Set of functions for financial evaluation of Software Projects

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**Author** Eber Schmitz

**Maintainer** Antoanne Pontes <antoanne@ufrj.br>

**Description** R package with a set of functions for financial evaluation of Software Project.

**License** LGPL (>= 2.1)

**URL** <https://github.com/afcosta-ibm/ifm>

**BugReports** <https://github.com/afcosta-ibm/ifm/issues>

**NeedsCompilation** no

**RoxygenNote** 5.0.1

**Imports** igraph

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ifm-package

Set of functions for financial evaluation of Software Projects

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## Description

R package with a set of functions for financial evaluation of Software Project.

## Details

The DESCRIPTION file: This package was not yet installed at build time.

Index: This package was not yet installed at build time.

~~ An overview of how to use the package, including the most important functions ~~

## Author(s)

Eber Schmitz

Maintainer: Antoanne Pontes <antoanne@ufrj.br>

## References

~~ Literature or other references for background information ~~

## See Also

~~ Optional links to other man pages, e.g. ~~

## Examples

## examples here...

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discount.rate.vector

Vectorize the Discount Rate

---

## Description

Generate a vector with discount rate to be applied to each of the time periods.

## Usage

```
discount.rate.vector(interest.rate, number.of.periods,
  begin.of.period = FALSE)
```

## Arguments

interest.rate A number that represents the nominal Interest Rate, presented by year.

number.of.periods

Times that interest rate should be applied.

begin.of.period

A boolean that represents if the Tax Rate will be applied at the beginning of period. FALSE by default.

**See Also**

Other financial: [draw.cfs](#), [future.value](#), [inflation.free.interest.rate](#), [net.present.value](#), [present.value](#)

**Examples**

```
ex.disc.vector <- discount.rate.vector(6.19, 12)
```

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draw.cfs	<i>Draw the graph of cash flow.</i>
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**Description**

Draw the graph of cash flow.

**Usage**

```
draw.cfs(cfs, gt = "Cash Flow Graphic")
```

**Arguments**

cfs	A vector with a series of cash flows.
gt	A title for the graph.

**See Also**

Other financial: [discount.rate.vector](#), [future.value](#), [inflation.free.interest.rate](#), [net.present.value](#), [present.value](#)

**Examples**

```
ex.cfs <- c(-2000,1000,1500,-500,500)
draw.cfs(ex.cfs, 'My Cash Flow')
```

---

future.value	<i>Calculate the future value of an asset at a specific date. It measures the nominal future sum of money that a given sum of money is "worth" at a specified time in the future assuming a certain interest rate, or more generally, rate of return.</i>
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**Description**

Calculate the future value of an asset at a specific date. It measures the nominal future sum of money that a given sum of money is "worth" at a specified time in the future assuming a certain interest rate, or more generally, rate of return.

**Usage**

```
future.value(present.value, interest.rate, number.of.periods)
```

**Arguments**

`present.value` A number that represents the present value of the money.  
`interest.rate` A number that represents the interest rate.  
`number.of.periods` A number that represent the number of periods.

**See Also**

Other financial: [discount.rate.vector](#), [draw.cfs](#), [inflation.free.interest.rate](#), [net.present.value](#), [present.value](#)

**Examples**

```
ex.fv <- future.value(1000, 1.1425, 12)
print(ex.fv)
```

---

```
inflation.free.interest.rate
```

*Calculate the Inflation-free Interest Rate.*

---

**Description**

Calculate the Inflation-free Interest Rate.

**Usage**

```
inflation.free.interest.rate(interest.rate = 14.25, inflation.rate = 7.59)
```

**Arguments**

`interest.rate` A number that represents the nominal Interest Rate, presented by year.  
`inflation.rate` A number that represents the Inflation Rate, presented by year.

**See Also**

Other financial: [discount.rate.vector](#), [draw.cfs](#), [future.value](#), [net.present.value](#), [present.value](#)

**Examples**

```
ex.ifir <- inflation.free.interest.rate(14.25, 12)
```

---

net.present.value	<i>Vectorize the Present Value</i>
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**Description**

Vectorize the Present Value

**Usage**

```
net.present.value(cfs, interest.rate, begin.of.period = FALSE)
```

**Arguments**

cfs	A vector with a series of cash flows.
interest.rate	A number that represents the nominal Interest Rate, presented by year.
begin.of.period	A boolean that represents if the Tax Rate will be applied at the beginning of period. FALSE by default.

**See Also**

Other financial: [discount.rate.vector](#), [draw.cfs](#), [future.value](#), [inflation.free.interest.rate](#), [present.value](#)

**Examples**

```
ex.npv <- net.present.value(c(-350,100,200,150,75), 6.19, TRUE)
```

---

nfv	<i>~~function to do ... ~~</i>
-----	--------------------------------

---

**Description**

~~ A concise (1-5 lines) description of what the function does. ~~

**Usage**

```
nfv(cfs, r, bop = TRUE)
```

**Arguments**

cfs	~~Describe cfs here~~
r	~~Describe r here~~
bop	~~Describe bop here~~

**Details**

~~ If necessary, more details than the description above ~~

**Value**

~Describe the value returned If it is a LIST, use

comp1	Description of 'comp1'
comp2	Description of 'comp2'

**Note**

~~further notes~~

**Author(s)**

~~who you are~~

**References**

~put references to the literature/web site here ~

**See Also**

~~objects to See Also as [help](#), ~~~

**Examples**

```
##---- Should be DIRECTLY executable !! ----
##-- ==> Define data, use random,
##--or do help(data=index) for the standard data sets.

## The function is currently defined as
function (cfs, r, bop = TRUE)
{
  e <- if (bop) {
    0:(length(cfs) - 1)
  }
  else {
    1:(length(cfs))
  }
  tax <- (1 + (r/100))^e
  return(cfs * tax)
}
```

---

present.value

*Calculate the present value of an asset at a specific date.*

---

**Description**

In economics, present value, also known as present discounted value, is the value of an expected income stream determined as of the date of valuation. The present value is always less than or equal to the future value because money has interest-earning potential, a characteristic referred to as the time value of money, except during times of negative interest rates, when the present value will be less than the future value.

## Usage

```
present.value(future.value, interest.rate, number.of.periods)
```

## Arguments

<code>future.value</code>	A number that represents the future value of the money.
<code>interest.rate</code>	A number that represents the interest rate.
<code>number.of.periods</code>	A number that represent the number of periods.

## See Also

Other financial: [discount.rate.vector](#), [draw.cfs](#), [future.value](#), [inflation.free.interest.rate](#), [net.present.value](#)

## Examples

```
ex.pv <- present.value(1000, 1.1425, 12)
print(ex.pv)
```

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