# Package 'ifm'

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Type Package
Title Set of functions for financial evaluation of Software Projects
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<b>Description</b> R packeage with a set of functions for financial evaluation of Software Project.
License LGPL (>= 2.1)
<pre>URL https://github.com/afcosta-ibm/ifm</pre>
<pre>BugReports https://github.com/afcosta-ibm/ifm/issues</pre>
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R topics documented:
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ifm-package

Set of functions for financial evaluation of Software Projects

#### **Description**

R packeage 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...
```

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

 $\label{lem:continuous} \textbf{Interest.rate} \quad \textbf{A number that represents the nominal Interest Rate, presented by year.} \\ \textbf{number.of.periods}$ 

Times that interest rate should be applied.

begin.of.period

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

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#### See Also

Other financial: draw.cfs, future.value, inflation.free.interest.rate

#### **Examples**

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

draw.cfs

Draw the graph of cash flow.

#### 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

# Examples

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

future.value

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.

#### **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)
```

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#### **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

#### **Examples**

```
fv.1 <- future.value(1000, 1.1425, 12)
print(fv.1)</pre>
```

```
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
```

#### **Examples**

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

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nfv ~~function to do ... ~~

#### 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, ~~~
```

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#### **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)
}</pre>
```

npv

~~function to do ... ~~

# Description

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

#### Usage

```
npv(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~~
```

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#### 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/((1 + (r/100))^e))
    return(cfs * tax)
}</pre>
```

pv. pv.

#### Description

pv.

# Usage

```
pv(Fv, r, n)
```

# **Index**

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