Package 'capitalR'

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Type Package

Title Capital Budgeting Analysis, Annuity Loan Calculations and Amortization Schedules

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Description
Provides Capital Budgeting Analysis functionality and the essential Annuity loan functions. Also computes Loan Amortization Schedules including schedules with irregular payments.

License GPL-3

Encoding UTF-8

LazyData true

RoxygenNote 6.1.1

Suggests knitr, rmarkdown

VignetteBuilder knitr

NeedsCompilation no

Repository CRAN

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Contents

annuity *Annuity Loan Calculation*

Description

Calculates the payment, present value, future value, rate, or the number of periods

Usage

```
annuity(type = c("pv", "fv", "pmt", "nper", "rate"), pv, fv = 0, pmt,
  n, r, end = TRUE)
```

Arguments

type	Loan parameter to return. ("pv", "fv", "pmt", "nper", "rate")
pv	Present Value
fv	Future Value
pmt	Periodic Payment
n	Number of Periods
r	Rate
end	Logical, set to TRUE. If FALSE, payments are made at the beginning the period.

Value

Returns the selected Annuity Loan Parameter

Examples

```
annuity(type = "pmt", pv = -2000, fv = 0, n  = 4 * 12, r = 0.06/12, end = TRUE)
```

ear *Effective Annual Rate*

Description

Effective Annual Rate

Usage

```
ear(apr, n, p = 5)
```

Arguments

apr	Annual Rate (Nominal Interest Rate)
n	Number of compounds in a year
p	Calculates the EAR to the (1/10^p) decimal place

Value

Effective Annual Rate

Examples

```
ear(apr= 0.05, n = 12)
```

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fv *Future Value*

Description

Calculates the Future Value given a Present Value

Usage

```
fv(pv, r, n)
```

Arguments

pv	Present Value
r	Discount Rate
n	Number of Compounding Periods

Value

Returns the Future Value

Examples

```
fv(5000, 0.08/12, 5*12)
```

geometric *Geometric Mean Return*

Description

Geometric Mean Return

Usage

```
geometric(c)
```

Arguments

c	Periodic returns in decimal form

Value

Returns the Geometric Mean Return

Examples

```
geometric(c(0.05, 0.02, -0.03, 0.09, -0.02))
```

ipmt *Interest Payment*

Description

Calculates the interest portion of the payment in period "x"

Usage

```
ipmt(pv, fv = 0, n, r, x, end = TRUE)
```

Arguments

pv	Present Value
fv	Future Value
n	Number of Periods
r	Rate
x	Period in which to calculate the interest portion of the payment
end	If FALSE, payments are made at the beginning of the period

Value

Returns the Interest Portion of the Payment in Period "x"

Examples

```
ipmt(pv = 20000, fv = 0, n = 5 * 12, r = 0.05/12, x = 12, end = TRUE)
```

`irregular` *Amortization Schedule With Irregular Payments*

Description

Creates an amortization schedule of a loan with irregular payments and withdrawals

Usage

```
irregular(payments, dates, apr, pv, info = TRUE)
```

Arguments

`payments`	Vector of payments, the first payment must be 0
`dates`	Vector of dates, the first date is the date of origination
`apr`	Annual rate
`pv`	Present Value
`info`	Logical, if set to 'TRUE' information about the dataframe arrangement will be printed

Value

Returns the irregular Amortization Schedule in a Dataframe

Examples

```
irregular(payments = c(0, 200, -100), dates = c("2019-01-01", "2019-02-08", "2019-03-20"),
apr = 0.05, pv = 2000, info = FALSE)
```

ppmt *Principal Payment*

Description

Calculates the principal of the payment in period "x"

Usage

```
ppmt(pv, fv = 0, n, r, x, end = TRUE)
```

Arguments

pv	Present Value
fv	Future Value
n	Number of Periods
r	Rate
x	Period in which to calculate the principal portion of the payment
end	If FALSE, payments are made at the beginning of the period

Value

Returns the Principal Portion of the Payment in Period "x"

Examples

```
ppmt(pv  = 5000, fv = 0, n = 4 * 12, r = 0.06/12, x = 12, end = TRUE)
```

pv *Present Value*

Description

Calculates the present value of a given future value

Usage

```
pv(fv, r, n)
```

Arguments

fv	Future Value
r	Discount Rate
n	Number of Compounding Periods

Value

Returns the Present Value

Examples

```
pv(5000, 0.08/12, 5*12)
```

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r.calc *Return Calculation*

Description

Return Calculation

Usage

```
r.calc(vector)
```

Arguments

vector	Vector from which to calculate the periodic return

Value

Returns the Periodic Percent Return

Examples

```
r.calc(c(100, 75, 50, 80, 125))
```

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schedule *Amortization Schedule*

Description

Creates an amortization schedule of a loan

Usage

```
schedule(r, n, pv, fv = 0, end = TRUE)
```

Arguments

r	Rate
n	Number of Periods
pv	Present Value
fv	Future Value, set = 0
end	If FALSE, payments are made at the beginning of the period

Value

Returns the Amortization Schedule in a dataframe

Examples

```
schedule(r = 0.06/12, n = 10 * 12, pv = -5000, fv = 0, end = TRUE)
```

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