

Package: capitalR (via r-universe)

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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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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)

| | |
|----|---------------------|
| fv | <i>Future Value</i> |
|----|---------------------|

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)
```


Value

Returns the Present Value

Examples

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

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))`

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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