

LPMTSCHED

Updated: 31 Mar 2016

Use **LPMTSCHED** to generate a loan amortization schedule, given the period payment amount, the principal amount (or present value amount), and the balloon payment (or future value amount). The amortization schedule includes the payment number, the payment date, and the principal amount at the beginning of the period, the interest amount for the period, the principal payment for the period, any deferred interest for the period, and the ending principal amount.

LPMTSCHED supports loans with odd first periods, does US Rule or actuarial interest calculations, and allows you to specify a terminal (or future) value for the loan. **LPMTSCHED** also lets you calculate the amortization schedule using a different term for the amortization and the maturity, with the final payment amount adjusted for the outstanding principal balance.

LPMTSCHED lets you enter the periodic payment, the interest rate, or both. If the rate is not entered, the rate is calculated from the periodic payment. If the periodic payment is not entered, the periodic payment is calculated from the rate. If both the periodic payment and the rate are entered, then the schedule then the interest portion of each period is calculated using the rate, and the principal payment portion is calculated using periodic payment minus that interest payment amount. This may result in an odd final payment or even in a reduction in the number of payments for the loan.

Syntax

```
Public Shared Function LPMTSCHED(  
    ByVal PV As Double,  
    ByVal LoanDate As Date,  
    ByVal Pmt As Double,  
    ByVal Rate As Double,  
    ByVal FirstPayDate As Date,  
    ByVal NumPmts As Integer,  
    ByVal Pmtpyr As Integer,  
    ByVal DaysInYr As Integer,  
    ByVal FV As Double,  
    ByVal IntRule As String,  
    ByVal Decimals As Integer,  
    ByVal LastPmtNum As Integer,)
```

Arguments

PV

the principal amount of the loan or lease. *PV* is an expression that returns a **Double**, or of a type that can be implicitly converted to **Double**.

LoanDate

the date that the loan starts accruing interest. *LoanDate* is an expression that returns a **Date**, or of a type that can be implicitly converted to **Date**.

Pmt

the payment made in each period. *Pmt* is an expression that returns a **Double**, or of a type that can be implicitly converted to **Double**.

Rate

the annual interest rate for the loan. *Rate* is an expression that returns a **Double**, or of a type that can be implicitly converted to **Double**.

FirstPayDate

the date that the first payment is due. *FirstPayDate* is an expression that returns a **Date**, or of a type that can be implicitly converted to **Date**.

NumPmts

the total number of payments to be recorded over the life of the loan. *NumPmts* is an expression that returns a **Integer**, or of a type that can be implicitly converted to **Integer**.

Pmtpyr

the number of loan payments made in a year. *Pmtpyr* is an expression that returns an **Integer**, or of a type that can be implicitly converted to **Integer**.

DaysInYr

the denominator number of days to be used in the calculation of the interest amount in the odd first period. *DaysInYr* is an expression that returns a **Integer**, or of a type that can be implicitly converted to **Integer**.

FV

the future value at the end of the loan. *FV* is an expression that returns a **Double**, or of a type that can be implicitly converted to **Double**.

IntRule

Identifies the loan as conforming to the US Rule ("U") or the actuarial rule ("A") regarding the compounding of interest in the odd first period. *IntRule* is an expression that returns a **String**, or of a type that can be implicitly converted to **String**.

Decimals

the number of decimal places to round the calculated amounts. *Decimals* is an expression that returns an **Integer**, or of a type that can be implicitly converted to **Integer**.

LastPmtNum

the last payment number if the life of the loan is shorter than the amortization period. *LastPmtNum* is an expression that returns an **Integer**, or of a type that can be implicitly converted to **Integer**.

Return Type

`FinancialTypes.LPMTSCHED_table`

`Class LPMTSCHED_table`
`Inherits Data.DataTable`

```
Property Item(RowIndex As Integer) As FinancialTypes.OutputRow_LPMTSCHED
```

```
Class OutputRow_LPMTSCHED
  Public num_pmt As Integer
  Public date_pmt As Date
  Public amt_prin_init As Double
  Public amt_pmt As Double
  Public amt_int_pay As Double
  Public amt_prin_pay As Double
  Public amt_int_def As Double
  Public amt_prin_end As Double
End Class
```

Column	Description
num_pmt	The payment number.
date_pmt	The date of the payment.
amt_prin_init	The principal amount at the beginning of the period. For the first period, the principal amount is the amount of the loan, otherwise the principal amount is the ending principal amount from the prior period.
amt_pmt	The payment amount supplied to the function.
amt_int_pay	The interest payable amount for the period. The interest amount is the period interest rate (<i>Rate/Pmtpyr</i>) multiplied by the principal amount at the beginning of the period (<i>amt_prin_init</i>) rounded to the number of decimal places (<i>Decimals</i>).
amt_prin_pay	The principal payment amount for the period. For actuarial accrual loans, the principal payment amount is the payment amount (<i>amt_pmt</i>) minus the interest payment amount (<i>amt_int_pay</i>). If the interest payment amount is greater than the payment amount, then the principal payment amount is negative. For US rule loans, the principal payment amount will always be greater than or equal to zero.
amt_int_def	The interest deferral (or escrow) amount. For US Rule loans only. If the interest payment amount (<i>amt_int_pay</i>) is greater than the payment amount (<i>amt_pmt</i>) then the difference is put into this column. When the interest payments (<i>amt_int_pay</i>) become less than the periodic payment (<i>amt_pmt</i>), the interest deferral amount (<i>amt_int_def</i>) from prior periods are reduced to zero, before applying any amounts to principal payments (<i>amt_prin_pay</i>).
amt_prin_end	The ending principal amount. Calculated as the beginning principal amount (<i>amt_prin_init</i>) less the principal payment amount for the period (<i>amt_prin_pay</i>).

Remarks

- If *DaysInYr* is NULL, then *DaysInYr* = 360
- If *FV* is NULL, then *FV* = 0
- If *IntRule* is NULL, then *IntRule* = "A"
- *FirstPayDate* must be greater than *LoanDate*
- *Pmtpyr* must be 1, 2, 3, 4, 6, 12, 13, 24, 26, 52, or 365

- *NumPmts* must be greater than 1
- *Rate* must be greater than zero
- *DaysInYr* must be 360, 364, or 365
- *PV* must be greater than zero
- If *Decimals* is NULL, then *Decimals* = 2
- If *LastPmtNum* is NULL, the *LastPmtNum* = *NumPmts*

See Also

- CUMIPMT - Cumulative interest paid on an annuity
- CUMLIPMT - Cumulative interest payments of a loan
- CUMLPPMT - Cumulative principal payments of a loan
- CUMPRINC - Cumulative principal paid on an annuity
- EFFECT - Effective annual interest rate
- IPMT - Interest portion of an annuity payment
- LIPMT - Interest portion of a loan payment
- LPMT - Periodic payment of a loan
- LPMTSCHED - Generate loan amortization with balloon payment and other parameters
- LPPMT - Principal portion of a loan payment
- LRATE - Interest rate for an annuity with an odd first period
- NUMPMTS - Total number of payments over the life of the loan
- PMT - Annuity periodic payment
- PMTSCHED - Payment schedule of a loan
- PPMT - Principal portion of an annuity payment
- TOTALINT - Total interest amount of a loan