PERIODIC PAYMENT

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What is Periodic Payment?

Periodic payment is the scheduled payment due each period and includes interest, principal, taxes, and insurance. If the payment is due monthly, the periodic payment is generally called the monthly payment.

Source :**www.MortgagesAnalyzed.com**

Components of Periodic Payment for Mortgage Loans

In the context of mortgage loans, the periodic payment is due monthly and includes the following:

1. **Principal and Interest:** The total principal and interest portion is based on the amortization of the loan. In case of interest only loans, the payment includes only the interest.
2. **Escrow Payments for Taxes and Insurance:** Escrow payments are made for property taxes and mortgage related insurance such as private mortgage insurance (PMI), flood insurance, and homeowners insurance.

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Monthly Payment = Principal + Interest + Escrow Payments for Taxes and Insurance
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PITI acronym refers to the monthly payment which includes the sum of principal, interest, taxes, and insurance. PITI is a commonly used term in the mortgage industry. The monthly payment, or PITI, is also known as the mortgage payment.

Are Fees Part of Periodic Payments?

Fees such as late fees, account research fees, and account maintenance fees are not included as part of periodic payment. While the fees is included along with the monthly payment when due, they are not considered as part of the monthly payment because they are not scheduled to be made regularly.

Source :**www.MortgagesAnalyzed.com**

Is Periodic Payment/Monthly Payment Constant?

The period payment is not always constant for a mortgage loan. It changes whenever there is a change in the terms of the loans, when certain features end, or when there are changes in escrow payments. Some of these are described below.

1. **Interest Rate Adjustments for Adjustable Rate Mortgages:** A change in interest rate will change the periodic payment. An increase in interest rate causes the payment to increase and vice versa.
2. **End of Interest Only Period:** The periodic payments increase when the interest only period ends. This is because during the interest only period the borrower only makes interest payments, whereas after the end of interest only period the borrower will make interest and principal payment.
3. **Escrow Payments:** Taxes and insurance are main components of the escrow portion of periodic payments. When the taxes and insurance increase the escrow portion of the monthly payment increases.
4. **End of Private Mortgage Insurance (PMI) Premium:** The periodic payment will be reduced when the PMI is cancelled or terminated.
5. **Change in Terms Due to Loan Modification:** A loan modification may allow a borrower to make a different set of periodic payments during a trial period. After end of the trial period the payments may adjust to a higher level. A loan modification may also change the interest rate which would cause a change in the periodic payment.

Source :**www.MortgagesAnalyzed.com**

Examples for Periodic Payment Calculations

Example 1: 30 Year FRM

Assume you take a 30 year fixed rate mortgage loan for $100,000 at an interest rate of 6% per annum. What is the monthly payment?

Where,

P	=	principal amount = $100,000
r	=	annual interest rate = 6%
t	=	loan term = 30
c	=	compounding periods per year = 12 (monthly compounding)
i	=	periodic interest rate (r/c) = 6%/12 = 0.005
n	=	number of periods = t × c = 30 × 12 = 360

$$\text{PMT} = \text{payment} = \frac{[100{,}000 \times 0.005 \times (1+0.005)^{360}]}{[(1+0.005)^{360} - 1]} = \$536.82$$

$$\text{Monthly Payment} = \text{PMT} + \text{PMI Premium} + \text{Escrow Payments}$$

In this case PMI and escrow payments are not required. Therefore monthly payment equals the loan payment of $536.82.

Source :**www.MortgagesAnalyzed.com**

Example 2: 30 Year Interest Only FRM

Assume you take a 30 year fixed interest only mortgage loan for $100,000 at an interest rate of 6% per annum. What is the monthly payment?

Where,

P	=	principal amount = $100,000
r	=	annual interest rate = 6%
t	=	loan term = 30
c	=	compounding periods per year = 12 (monthly compounding)
i	=	periodic interest rate (r/c) = 6%/12 = 0.005
n	=	number of periods = t × c = 30 × 12 = 360

Interest Only Payment = $100,000 × 6% = $500

Monthly Payment = PMT + PMI Premium + Escrow Payments

In this case monthly payment equals the interest only payment of $500.00.

Source :**www.MortgagesAnalyzed.com**

Example 3: 30 Year FRM with Escrow and PMI payment

Assume you take a 30 year fixed mortgage loan for $100,000 at an interest rate of 6% per annum. The loan escrows for taxes and insurance. Property taxes are $1,200 per year, property insurance premium is $600 per year, and mortgage insurance premium is $40 per month. What is the monthly payment?

Where,

P	=	principal amount = $100,000
r	=	annual interest rate = 6%
t	=	loan term = 30
c	=	compounding periods per year = 12 (monthly compounding)
i	=	periodic interest rate (r/c) = 6%/12 = 0.005
n	=	number of periods = t × c = 30 × 12 = 360

$$\text{PMT} = \text{payment} = \frac{[100{,}000 \times 0.005 \times (1+0.005)^{360}]}{[(1+0.005)^{360} - 1]} = \$536.82$$

Monthly taxes = $1,200/12 = $100

Monthly property insurance premium = $600/12 = $50

Monthly escrows (taxes and insurance) = $100 + $50 = $150

Monthly Payment = PMT + PMI Premium + Escrow Payments

`Monthly Payment = 536.82 + 40 + 150 = $726.82`

Source :**www.MortgagesAnalyzed.com**

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