

Loan Interest Rate Report for HPSK72WA7R

Loan Details

Loan ID: HPSK72WA7R
Borrower Age: 69
Monthly Income: ₹50,432
Loan Amount: ₹124,440
Credit Score: 458 (Very Poor)
Loan Term: 60 months
DTI Ratio: 68%
Education: Master's
Employment: Full-time
Co-Signer: Yes

Calculated Interest Rate: 11.75%

The interest rate was determined based on a risk-adjusted pricing model considering the following factors:

1. Credit Score (Critical Risk Factor)

- **Score:** 458 (Very Poor)
- **Impact:** +10.00% to base rate
- **Justification:** Deep subprime (below 500) indicates severe credit risk.

2. Debt-to-Income Ratio

- **DTI:** 68%
- **Impact:** +4.50% adjustment
- **Justification:** Far exceeds 43% maximum for qualified mortgages.

3. Loan-to-Income Ratio

$$LTI = \frac{\text{Loan Amount}}{\text{Annual Income}} = \frac{124,440}{50,432 \times 12} = 20.6\%$$

- **Impact:** +1.25% (High relative to income)

4. Employment Stability

- **Months Employed:** 15 (1.25 years)
- **Impact:** +1.75% adjustment
- **Justification:** Short tenure increases job instability risk.

5. Co-Signer Mitigation

- **Impact:** -7.50% reduction
- **Justification:** Strong co-signer credit profile offsets primary borrower risk.

6. Positive Factors

- Master's degree (-0.50%)
- Full-time employment (-0.50%)
- No dependents (-0.25%)

Rate Calculation Breakdown

Base Rate	= 3.00%
+ Credit Score Adjustment	= +10.00%
+ DTI Adjustment	= +4.50%
+ LTI Adjustment	= +1.25%
+ Employment Adjustment	= +1.75%
- Co-Signer Benefit	= -7.50%
- Education Benefit	= -0.50%
- Employment Type Benefit	= -0.50%
- No Dependents Benefit	= -0.25%
Final Rate	= 11.75%

Risk Comparison Benchmark

Factor	Risk Level
Credit Score (458)	Critical Risk
DTI (68%)	Severe Risk
Loan-to-Income (20.6%)	Elevated Risk
Employment Tenure (15 mos)	High Risk
Co-Signer Present	Significant Mitigation