

# Loan Interest Rate Report for C1OZ6DPJ8Y

Underwriting Team

July 17, 2025

## Loan Details

<b>Loan ID:</b>	C1OZ6DPJ8Y
<b>Borrower Age:</b>	46
<b>Monthly Income:</b>	₹84,208
<b>Loan Amount:</b>	₹129,188
<b>Credit Score:</b>	451 (Very Poor)
<b>Employment Status:</b>	Unemployed
<b>Loan Term:</b>	24 months
<b>DTI Ratio:</b>	31%
<b>Education:</b>	Master's
<b>Marital Status:</b>	Divorced
<b>Has Mortgage:</b>	Yes
<b>Has Dependents:</b>	Yes
<b>Loan Purpose:</b>	Auto
<b>Co-Signer:</b>	No

**Calculated Interest Rate:** 23.75%

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

### 1. Credit Score (Critical Risk Factor)

- Score:** 451 (Very Poor)
- Impact:** +8.00% to base rate
- Justification:** Deep subprime (below 500) indicates severe credit risk.

### 2. Employment Status (Highest Risk Factor)

- Status:** Unemployed
- Impact:** +5.50% adjustment
- Justification:** No active income source significantly increases default risk.

### 3. Loan-to-Income Ratio

$$LTI = \frac{\text{Loan Amount}}{\text{Annual Income}} = \frac{129,188}{84,208 \times 12} = 12.8\%$$

- Impact:** +2.00% (Moderate relative to last known income)

#### 4. Debt-to-Income Ratio

- **DTI:** 31%
- **Impact:** Neutral (within acceptable range)
- **Note:** Based on last known income - actual DTI may be infinite (unemployed)

#### 5. Other Risk Factors

- **Divorced:** +0.75% (higher financial instability risk)
- **Mortgage:** +0.50% (existing debt obligation)
- **Dependents:** +0.50% (increased financial pressure)
- **No Co-Signer:** +3.00% (no credit enhancement)

#### 6. Mitigating Factors

- **Master's Degree:** -0.50% (education correlates with repayment)
- **Short Term (24mo):** -1.00% (reduced duration risk)

### Rate Calculation Breakdown

$$\begin{aligned} \text{Base Rate} &= 5.00\% \\ + \text{Credit Score Adjustment} &= +8.00\% \\ + \text{Unemployment Adjustment} &= +5.50\% \\ &\quad + \text{LTI Adjustment} = +2.00\% \\ &\quad + \text{Divorced Adjustment} = +0.75\% \\ &\quad + \text{Mortgage Adjustment} = +0.50\% \\ &\quad + \text{Dependents Adjustment} = +0.50\% \\ &\quad + \text{No Co-Signer Adjustment} = +3.00\% \\ &\quad - \text{Education Benefit} = -0.50\% \\ &\quad - \text{Short Term Benefit} = -1.00\% \\ \hline \text{Final Rate} &= \boxed{23.75\%} \end{aligned}$$

### Risk Comparison Benchmark

Factor	Risk Level
Credit Score (451)	Critical Risk
Unemployment	Extreme Risk
Loan-to-Income (12.8%)	Moderate Risk
No Co-Signer	High Risk
Short Term (24mo)	Risk Reducer