

# Loan pricing calculation Reports

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## Customer Details

<b>Loan ID:</b>	H8GXPAOS71
<b>Age:</b>	38
<b>Income:</b>	\$111,188/month
<b>Loan Amount:</b>	\$177,025 (159% of income)
<b>Credit Score:</b>	429 (Very Poor)
<b>Employment:</b>	80 months (6.7 years) at current job
<b>DTI Ratio:</b>	16%
<b>Existing Mortgage:</b>	Yes
<b>Co-Signer:</b>	Yes
<b>Loan Purpose:</b>	Home

## Approved Interest Rate

**19.11%**

## Rate Justification

The interest rate was determined based on the following risk factors:

### Primary Risk Components

- **Credit History (429 Score):**
  - Deep subprime credit tier indicates significant repayment risks
  - Added **+6.50%** to base rate
- **Loan-to-Income Ratio (159%):**
  - Loan amount exceeds annual income by 59%
  - Added **+3.00%** for repayment capacity concerns
- **Existing Mortgage:**
  - Current housing liability increases overall debt exposure
  - Added **+1.50%** for additional obligation risk

### Mitigating Factors

- **Co-Signer Presence:**
  - Qualified co-signer reduces some lender risk
  - Provided **-2.00%** adjustment
- **Employment Stability:**
  - 6.7 years at current job demonstrates income reliability
  - Prevented additional rate increases

## Rate Calculation Breakdown

Component	Rate Adjustment
Base Rate (RBI Repo + Bank Profit)	7.00%
Credit Score Risk Premium	+6.50%
Loan-to-Income Risk Premium	+3.00%
Existing Mortgage Premium	+1.50%
Loan Purpose Risk Premium	+2.11%
Co-Signer Discount	-2.00%
<b>Final Approved Rate</b>	<b>19.11%</b>

## Recommendations for Rate Improvement

- **Credit Repair:** Bringing score above 600 could reduce rate by 4-6%
- **Loan Reduction:** Decreasing amount to  $\leq 100\%$  of income may lower rate by 2-3%
- **Collateral Addition:** Secured loan structure could qualify for better pricing

## Customer Details

<b>Loan ID:</b>	0HGZQKJ36W
<b>Age:</b>	56
<b>Income:</b>	\$126,802/month
<b>Loan Amount:</b>	\$155,511 (123% of income)
<b>Credit Score:</b>	531 (Poor)
<b>Employment:</b>	67 months (5.6 years) at current job
<b>DTI Ratio:</b>	43%
<b>Education:</b>	PhD
<b>Marital Status:</b>	Married
<b>Existing Mortgage:</b>	No
<b>Dependents:</b>	No
<b>Co-Signer:</b>	Yes
<b>Loan Purpose:</b>	Home

## Approved Interest Rate

**8.15%**

## Rate Justification

The interest rate was determined based on the following risk factors:

### Primary Risk Components

- **Credit History (531 Score):**
  - Poor credit tier indicates some repayment risks
  - Added **+1.25%** to base rate
- **Loan-to-Income Ratio (123%):**
  - Loan amount exceeds annual income by 23%
  - Added **+0.75%** for repayment capacity concerns
- **Debt-to-Income Ratio (43%):**
  - Nearing the maximum recommended DTI threshold
  - Added **+0.50%** for elevated debt burden

### Mitigating Factors

- **Co-Signer Presence:**
  - Qualified co-signer reduces lender risk
  - Provided **-2.00%** adjustment
- **Employment Stability:**
  - 5.6 years at current job demonstrates income reliability
  - Prevented additional rate increases
- **Education Level (PhD):**
  - Advanced degree suggests strong earning potential
  - Provided **-0.25%** adjustment

## Rate Calculation Breakdown

Component	Rate Adjustment
Base Rate (RBI Repo + Bank Profit)	7.00%
Credit Score Risk Premium	+1.25%
Loan-to-Income Risk Premium	+0.75%
DTI Ratio Premium	+0.50%
Co-Signer Discount	-2.00%
Education Level Discount	-0.25%
Loan Term Premium (60 months)	+0.90%
<b>Final Approved Rate</b>	<b>8.15%</b>

## Key Positive Factors

- Long-term employment (5.6 years) with stable income
- No existing mortgage reduces debt obligations
- Married status suggests financial stability
- Co-signer provides additional security

## Recommendations for Rate Improvement

- **Credit Repair:** Bringing score above 650 could reduce rate by 0.5-1.0%
- **Shorter Loan Term:** 36-month term could lower rate by 0.25-0.5%
- **Down Payment Increase:** Reducing loan amount to >100% of income may improve terms

## Customer Details

<b>Loan ID:</b>	1R0N3LGNRJ
<b>Age:</b>	36
<b>Income:</b>	504,636/year (42,053/month)
<b>Loan Amount:</b>	92,357 (18.3% of income)
<b>Credit Score:</b>	827 (Excellent)
<b>Employment:</b>	83 months (6.9 years) at current job
<b>Number of Credit Lines:</b>	1
<b>Loan Term:</b>	48 months
<b>Interest Rate (Current):</b>	23.94%
<b>DTI Ratio:</b>	20%
<b>Education:</b>	Bachelor's
<b>Employment Type:</b>	Self-employed
<b>Marital Status:</b>	Divorced
<b>Existing Mortgage:</b>	Yes
<b>Dependents:</b>	No
<b>Loan Purpose:</b>	Education
<b>Co-Signer:</b>	No

## Suggested Interest Rate

**7.70%**

## Rate Justification

The currently assigned rate of 23.94% is significantly high and not justified by the borrower's profile. After considering all key financial and risk factors, the recommended fair interest rate is given below.

## Primary Risk Components

- **Self-Employment:**
  - Income uncertainty and verification risks
  - Added **+0.75%**
- **No Co-Signer:**
  - Increases lender's exposure in case of default
  - Added **+0.50%**
- **Only 1 Credit Line:**
  - Limited credit history creates underwriting difficulty
  - Added **+0.25%**

## Mitigating Factors

- **Excellent Credit Score (827):**
  - Indicates high repayment discipline
  - Reduced **-1.50%**
- **Low Loan-to-Income Ratio (18.3%):**
  - Very safe ratio ensures repayment capacity
  - Reduced **-0.50%**
- **Stable Long-Term Employment (6.9 years):**

- Strong signal of financial consistency
- Prevented additional rate additions
- **Low DTI (20%):**
  - Financial obligations are manageable
  - Reduced **-0.25%**

## Rate Calculation Breakdown

Component	Rate Adjustment
Base Rate (Benchmark)	7.00%
Self-Employment Premium	+0.75%
No Co-Signer Premium	+0.50%
Limited Credit History Premium	+0.25%
Excellent Credit Score Discount	-1.50%
Low LTI Ratio Discount	-0.50%
Low DTI Ratio Discount	-0.25%
Loan Term Premium (48 months)	+0.45%
<b>Final Suggested Rate</b>	<b>7.70%</b>

## Key Positive Factors

- Excellent credit score (827)
- Low loan-to-income ratio (18.3%)
- Stable employment (6.9 years)
- Education loan with long-term earning potential

## Recommendations

- **Build additional credit lines** to diversify credit portfolio
- **Add a co-signer** to potentially reduce rate by 0.5–1.0%
- **Consider a shorter loan term** for further interest savings