



HOME MORTGAGE DISCLOSURE ACT

Borrowing in *Crisis*

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Agenda

Case Statement

Data Summary

Analysis

Findings

Recommendation

Limitation

01

02

03

04

05

06

Case Statement

Financial institutions are **highly sensitive** to global crises, which can disrupt borrower behavior and lending activity.

Using **six years** (2018-2023) of **Home Mortgage Disclosure Act** data from **Florida**, this analysis identifies how lending patterns and borrower dynamics **changed** in response to the **COVID-19 pandemic**, helping **financial institutions** and **policymakers** develop more **resilient lending strategies** for future crises.

Data Summary



Home Mortgage Disclosure Act



Florida, USA



5.5M Applications



\$ 1.3 Trillion Loan



6 Types of loans

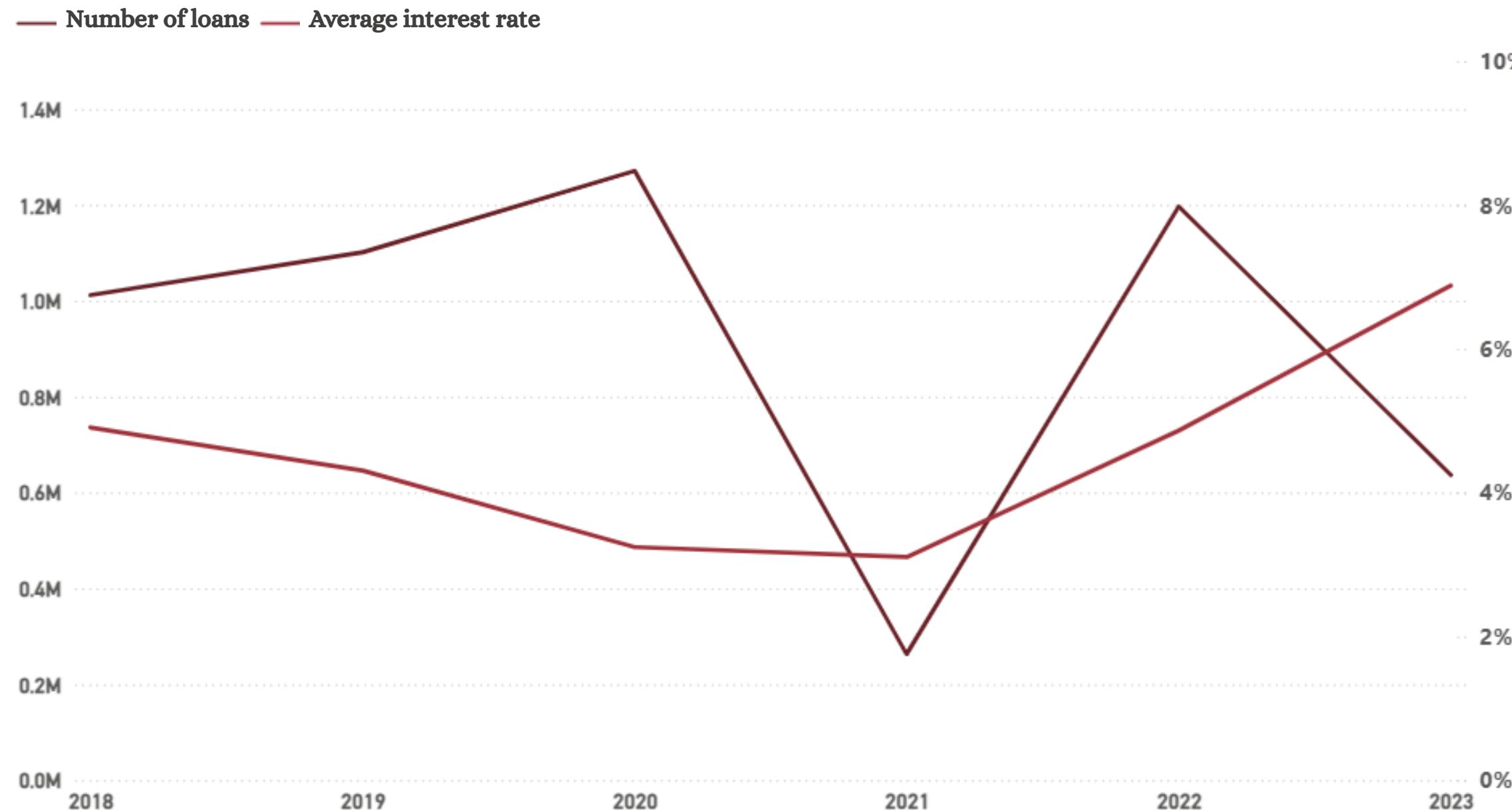


48% Denial rate



Loan activity peaked in 2020 and dropped sharply in 2021 reflecting the impact of low interest rates.

Loan vs Average Interest Rate



The Timeline

Pre-Shock period

Shock period

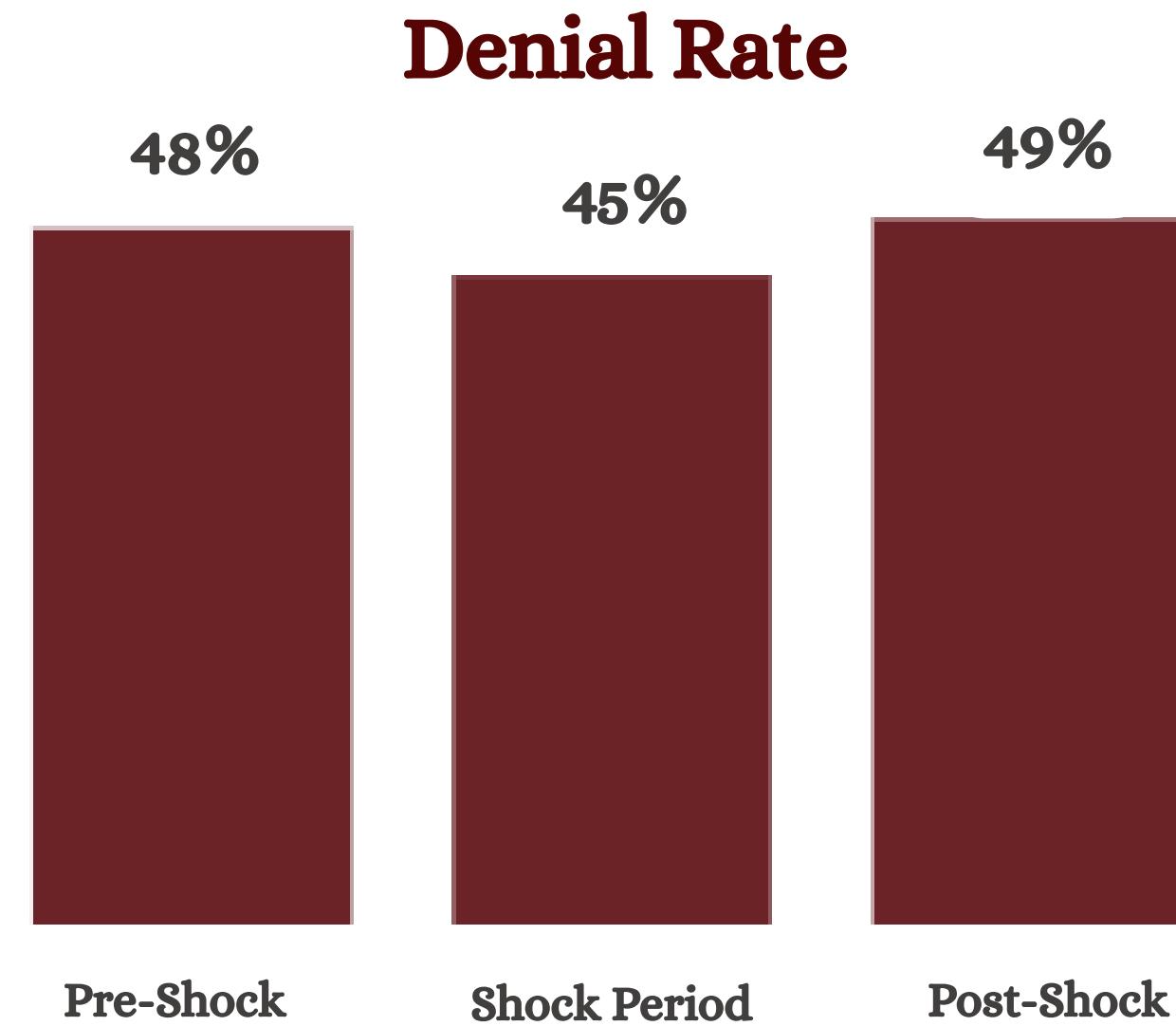
Post-Shock period

2018 - 2019

2020 - 2021

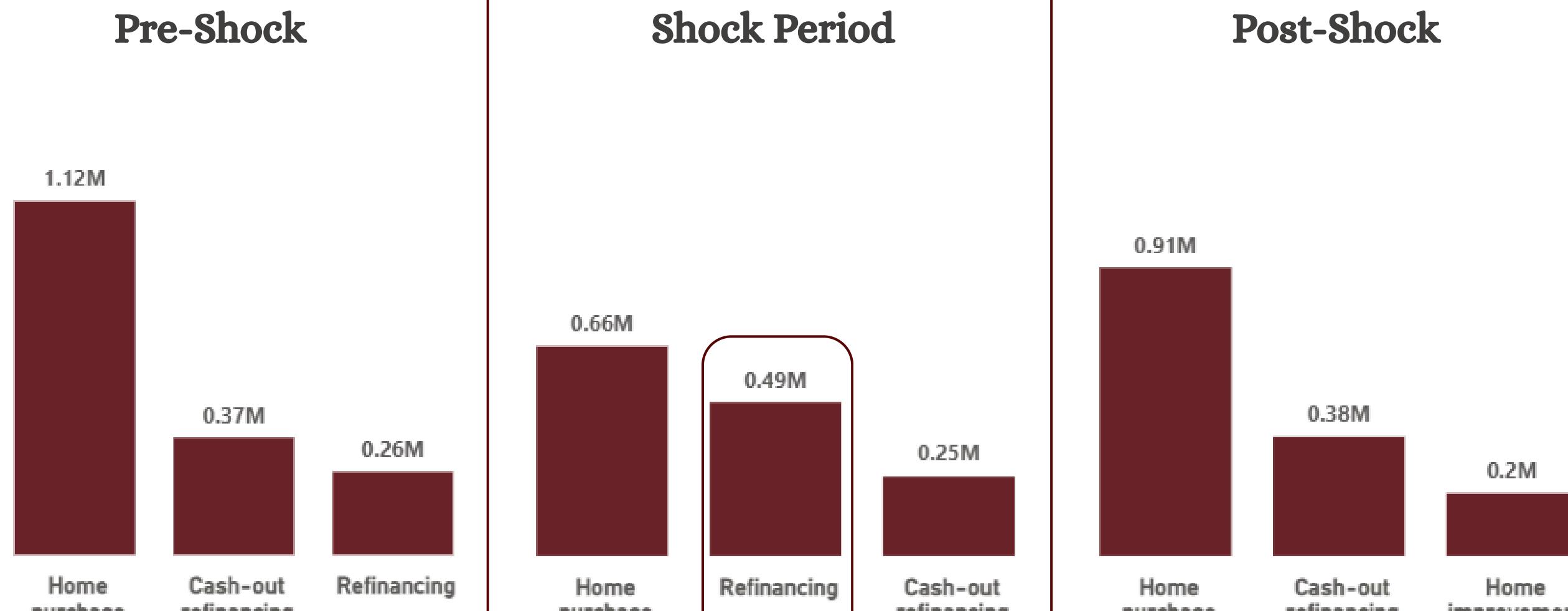
2022 - 2023

During Shock Period Denial Rate Decreased by 3%



Home purchase dominates in all periods, during the shock period refinancing reached the **second top loan purpose**

Loan Purposes



Refinancing

Refinancing means replacing your current mortgage with a new one usually to get better terms like a lower interest rate



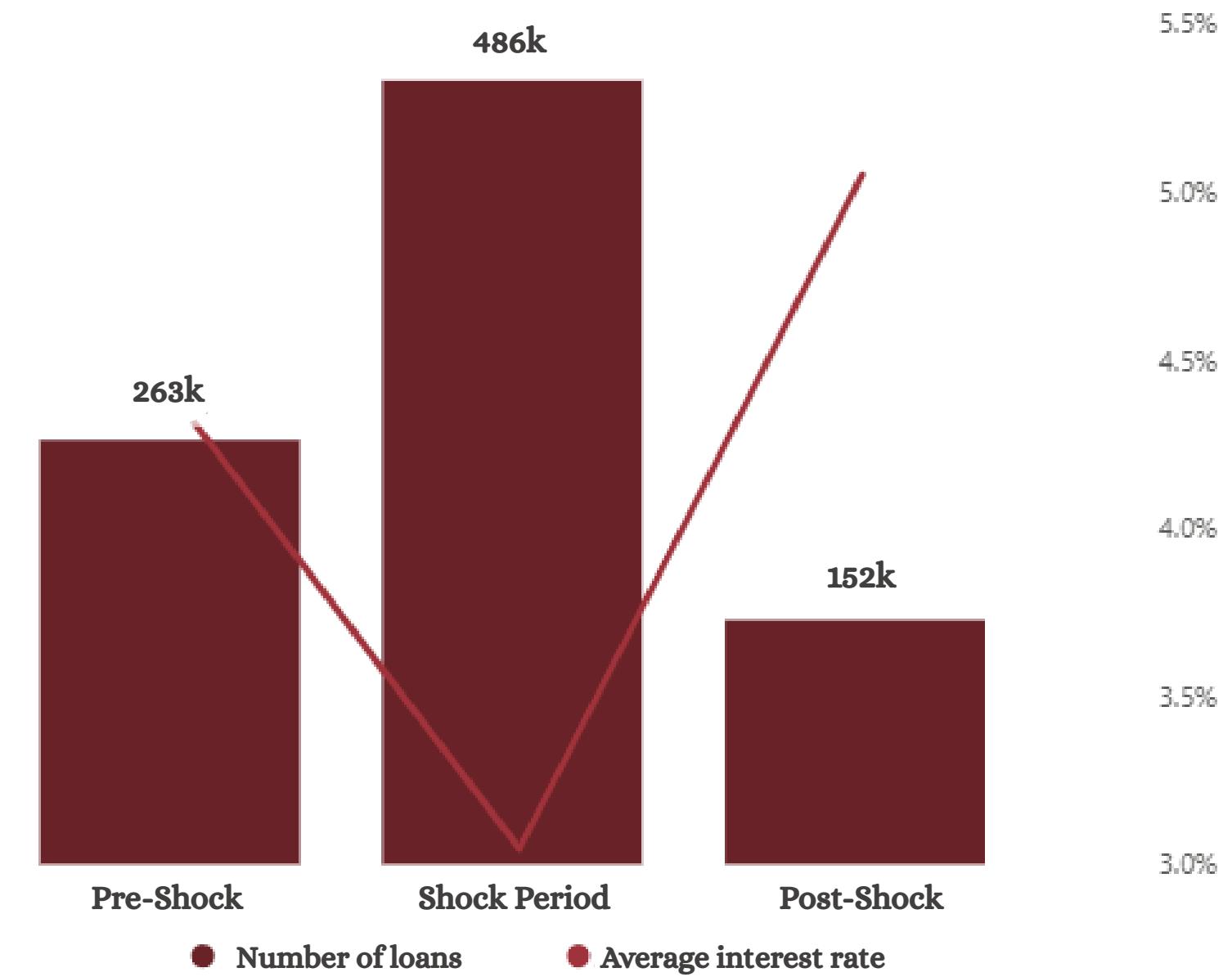
- **Active customer relation**
- Allows to **Adjust** loan terms and update **borrower risk**
- Generates **fee income** from new loan processing



- **Reduce long-term interest income**
- Make **revenue** and **planning less predictable**
- Create **profitability challenges** during economic stress

Number of loans reached **maximum** in shock period and interest rate reached the **minimum**

Number of Loan vs Interest Rate in Refinancing

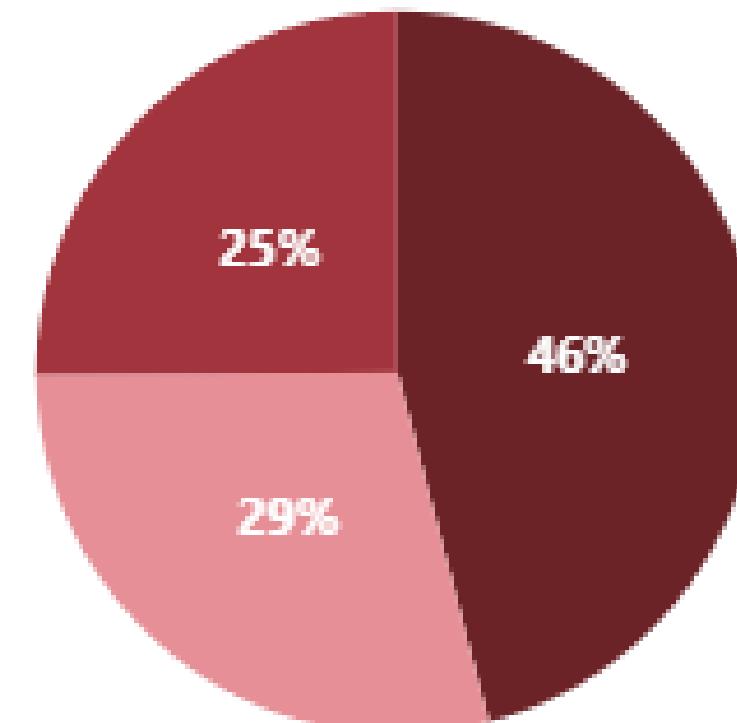


During the shock **80%** of the Applicants are **middle- income and above**, compared by **70%** in **pre** and **post** period

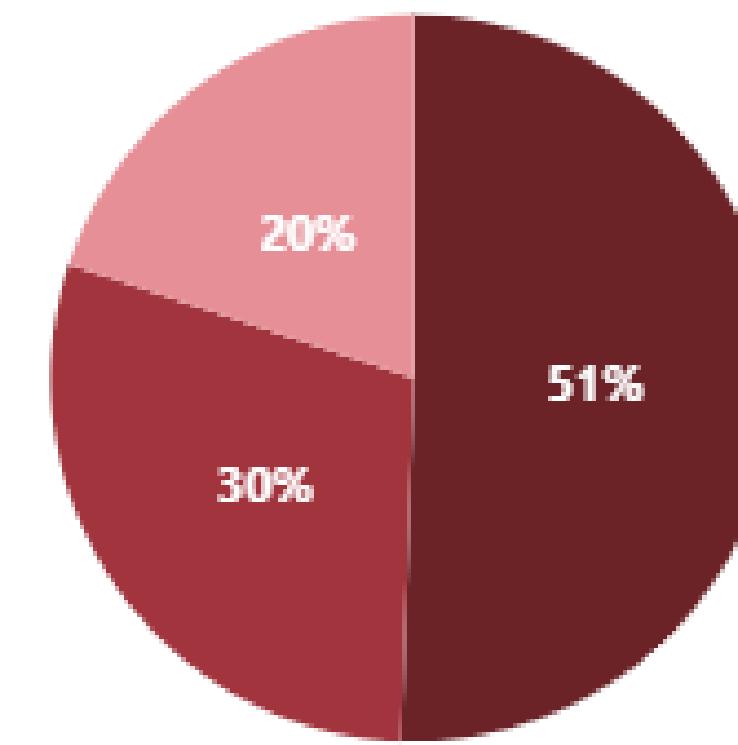
Income Distribution

Pre-Post Shock

- Distribution
- Mid-Income
 - Low-Income
 - High-Income

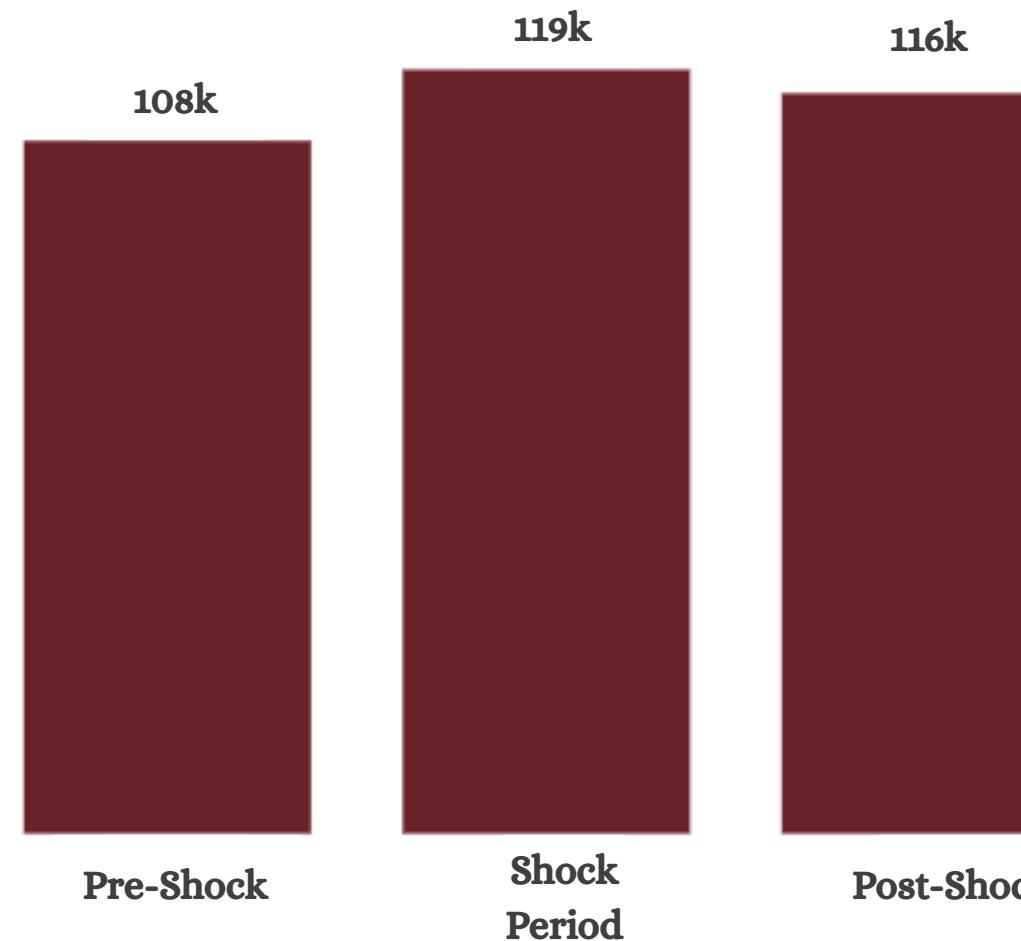


Shock-Period

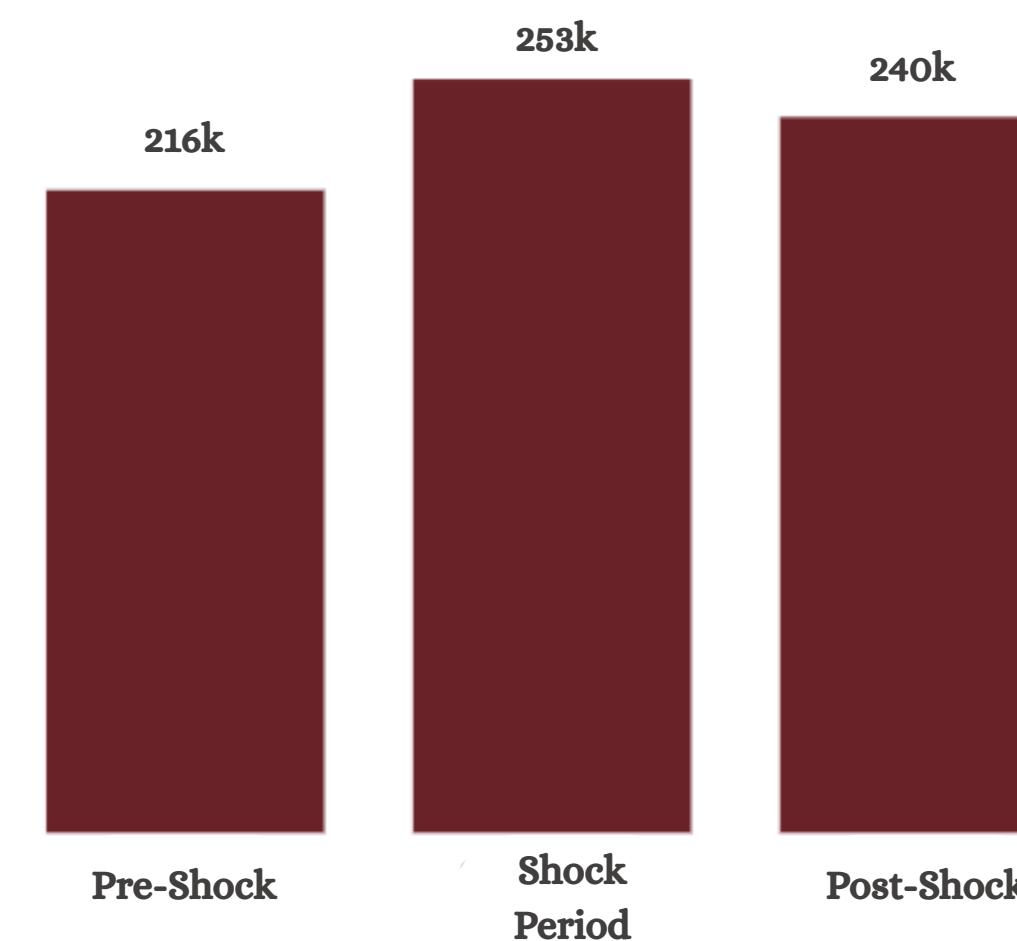


During the **shock** period, both average income and average loan amounts reached their **highest levels**

Average Annual Income



Average Loan Amount



Risk Measures

Loan to Income ratio

Definition:

- LTI ratio of the loan amount to the borrower's annual income.

Measures:

- Affordability and repayment capacity

Loan to Value ratio

Definition:

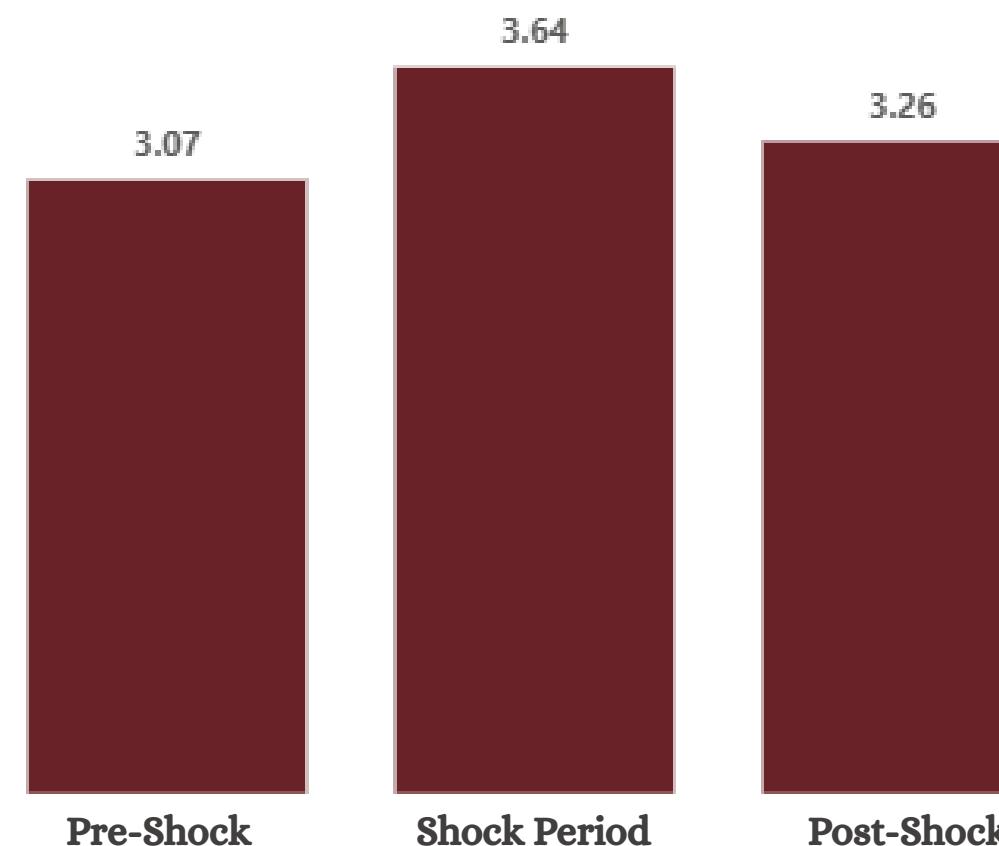
- LTV ratio of the loan amount to the value of the property.

Measures:

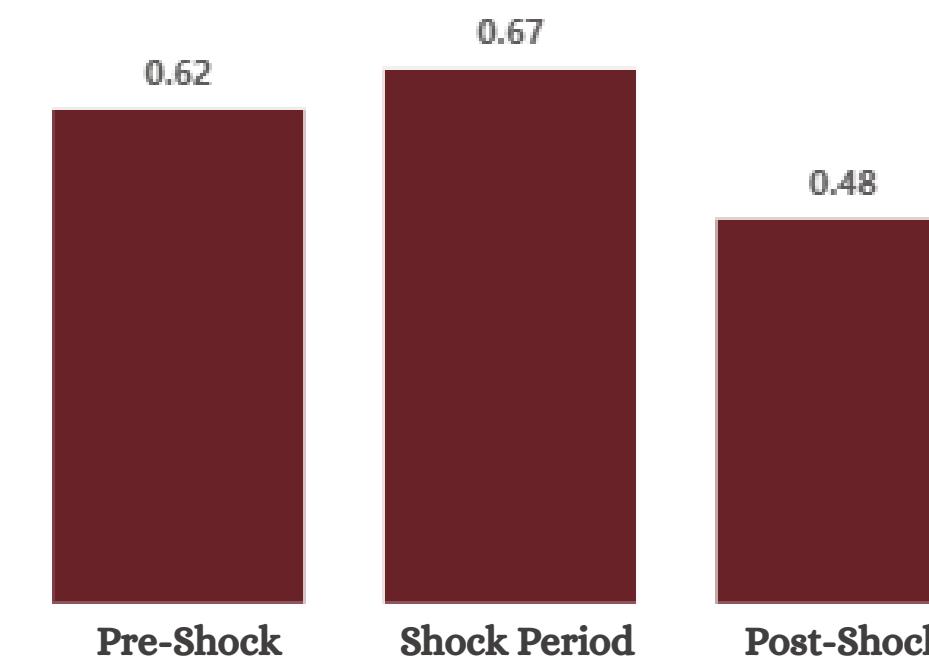
- Collateral risk for the lender.

Both ratios **peaked** during the **shock** period indicates
Higher risk

Loan to Income ratio



Loan to Value ratio



Findings



Interest rate **dropped sharply** during the shock, yet number of loans **dropped** in 2021



Refinancing loans peaked during shock period

Denial rate decreased during the shock period



Borrowers took on **higher risk**

Recommendations

To maintain **risk**



- Adjust **Risk-based pricing** Assessment to reflect higher LTI/LTV levels
- Strengthen **underwriting** reviews for high-risk borrowers.
- **Introduce/increase fee-based** services connected to the refinancing process.

Recommendations

To **support** customer demand



- Provide refinancing products with **reasonable** LTV limits
- Share **clear information** about interest-rate changes and available options
- Offer loyalty based **benefits** that encourage good borrowers to **stay** with the institution

Limitations

Annual loan information



Insufficient information to calculate **Additional ratios**

No visibility on loan performance



Lack of credit **score** information



The image features a large, bold, dark red serif font that reads "Thank you for listening". The text is partially cut off at the bottom right. The background consists of a collage of various objects: a computer keyboard in the foreground; a smartphone displaying a blue screen with a white logo; a credit card with "Bank Name" and a card number; and a person's arm in a suit jacket holding a pen over a document. There are also some green leaves in the bottom left corner.

