

**Researchers**

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**Timeline**

2003

**Sample Size**

50,000 past clients of a major South African consumer microfinance lender

**Data Repository**

[https://www.aeaweb.org/aer/data/june08/20070848\\_data.zip](https://www.aeaweb.org/aer/data/june08/20070848_data.zip)

**Research Implemented by IPA**

Yes

# Interest Rates and Consumer Credit in South Africa

## Abstract

How sensitive are borrowers to higher interest rates? We worked with a South African lender to randomize both the interest rate offered to clients by a direct mail solicitation, and the maturity of an example loan shown on the offer letter.

## Policy Issue

In 2001, more than one billion people were living in extreme poverty, subsisting on less than \$1 a day.<sup>1</sup> Microcredit can help to alleviate poverty by expanding access to credit, providing the capital necessary to invest in higher education, smooth consumption or start a business. But providing small loans to risky clients in poor settings often yields small profits for lenders, and many microfinance institutions (MFIs) rely on subsidies to stay afloat. Policymakers often call on MFIs to increase interest rates in order to increase profits and eliminate their reliance on subsidies. This strategy makes sense if the poor are not sensitive to higher interest rates; microlenders could increase profitability and achieve sustainability without reducing the poor's access to credit. Yet existing research offers little evidence on interest rate sensitivities in target markets, and little guidance on how MFIs can derive optimal rates.

## Context of the Evaluation

Cash loan borrowers are prevalent in South Africa. Estimates of the proportion of working-age population currently borrowing in the cash loan market range from below 5% to around 10% and the borrowed funds account for about 11% of aggregate annual income. The for-profit South African lender who collaborated for this study is one bank who provides cash loans in

this high-risk consumer loan market. Clients typically use loans for a range of consumption smoothing and investment purposes, including food, clothing, transport, education, housing, and paying off other debt. Cash loan sizes tend to be small relative to the fixed costs of underwriting and monitoring them, but substantial relative to a typical borrower's income. For example, the lender's median loan size of approximately US\$150 is 32% of its median borrower's gross monthly income. This lender typically offers "medium-maturity," 4-month loans, with a 7.75 to 11.75% interest rate per month. Repeat borrowers have default rates of about 15%, and first-time borrowers default twice as often.

## Details of the Intervention

Researchers test the assumption that borrowers are not sensitive to higher interest rates by working with this South African lender to randomize both the interest rate offered to past clients on a direct mail solicitation, and the maturity of an example loan shown on the offer letter.

First the lender randomized the interest rate offered in "pre-qualified," limited-time offers that were mailed to approximately 58,000 former clients with good repayment histories. Most of the offers were at relatively low rates. Clients eligible for maturities longer than four months also received a randomized example of either a four-, six- or twelve-month loan. Clients who wished to borrow at the offer rate then went to a branch to apply, through the standard bank procedure.

These clients were from 86 predominantly urban branches and had borrowed from the lender within the past 24 months. They were in good standing, and did not currently have a loan from the lender as of thirty days prior to the mailer. Each mailer contained a deadline, ranging from two to six weeks, by which the client had to respond in order to be eligible for the offer rate. At that time, loan applications were taken and assessed as per the lender's standard underwriting, and 3,887 individuals were approved for a loan.

## Results and Policy Lessons

*Price Elasticities:* Results reveal demand curves with respect to price that were gently downward sloping throughout a wide range of rates below the lender's standard ones. But demand sensitivity rises sharply at prices above the Lender's standard rates. A price decrease from the maximum 11.75% to the minimum 3.25% rate only increased take-up by 2.6 percentage points. However, high rates reduced the number of applicants significantly; clients randomly assigned a higher-than-standard offer were 36% less likely to apply than their lower-rate counterparts. Higher rates also reduced repayment. Thus, an interest rate increase would be unprofitable for this lender. It would produce both a reduction in demand and increased default rates, which would not be compensated by the increase in interest revenue from higher rates.

*Maturity Elasticities:* The example maturity date on the loan letter powerfully predicted the actual maturity date chosen by the borrower. For each additional month of maturity

suggested, the actual maturity date chosen was pushed out by 0.11 months. Researchers also found that each month of additional time to maturity increased loan demand by 15.7%. Most notably, the maturity effect was large relative to price sensitivity. Loan size did not respond to price in the maturity-suggestion sample, but was very responsive to loan maturity. On average, a one month maturity increase had approximately the same effect as a 436 basis point interest rate decrease.

Taken together, this evidence suggests a practical implication that some MFIs should consider using varied maturity dates rather than price to balance profitability and targeting goals.

## Sources

1. United Nation Secretary General Millennium Project, "Fast Facts - The Faces of Poverty," <https://selectra.co.uk/energy/news/world/un-millennium-project>. (Accessed September 18, 2009)

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