Difficulty securing loans serves as a substantial barrier to income growth for many households in developing countries. Lenders often impose stringent borrowing requirements, requiring high upfront deposits or substantial commitments from guarantors. A large body of literature in development economics has focused on barriers to credit access, including these kinds of tight borrowing requirements. In this paper, the authors explore asset collateralization as a potential approach to relaxing borrowing requirements and expanding credit access. Asset collateralization is the practice—common in developed countries—of requiring as part of a loan contract that in the event of default, the asset for which the loan is secured can be repossessed by the lender. Familiar examples of asset collateralization include mortgages and car loans.

This research focused in particular on a savings and credit cooperative for Kenyan dairy farmers, which prior to the study offered loan contracts under which one third of the principal was secured by upfront deposits from the borrower and the remaining two thirds were secured with cash deposits or financial assets from guarantors. The study offered loans to a sample of cooperative members for use buying a rainwater harvesting and storage tank. The particular contract terms offered to a given farmer were randomly selected from among four options. One option was the original loan contract, another required 25% of the principal as a deposit from the borrower with the tank collateralizing the remaining 75%, a third option required a 4% deposit with 21% secured by guarantors and the remaining 75% collateralized by the tank, and a final option required only a 4% deposit with the remaining 96% of the principal collateralized by the tank.

Asset collateralization substantially increased loan take up. While only 2.4% of cooperative members offered the original loan terms borrowed, 23.9% of those offered 75% collateralization by the tank and 41.9% of those offered 96% collateralization by the tank borrowed. Based on this variation in take up rates, we can estimate that more than 90% of those who would borrow when
deposit requirements are relaxed to 4% and the tank is used as collateral would be deterred from borrowing by the more stringent requirements of the original loan contract. Furthermore, the 96% collateralized group had an only slightly higher rate of default than the original-contract group. This suggests that the loss to the lender resulting from increased defaults under the low deposit, asset-collateralized loans is minimal.

The paper also includes a mathematical model which extends the experimental evidence that deposit requirements were inefficiently high before asset collateralization, suggesting that deposit requirements may remain inefficiently high even in the presence of asset collateralization. In particular, the model demonstrates that if high deposit requirements serve to screen out risky borrowers (formally, if adverse selection is present) and borrowers would prefer to consume income in the present rather than saving for the future (formally, they are credit-constrained), a monopoly lender will set deposit requirements that are above the socially optimal level. That is, lowering the deposit requirement by a small amount would induce an increase in borrower welfare that outweighs the potential loss in lender profit.

To the extent that this project’s experimental findings generalize to a population broader than the dairy cooperative members, they suggest that government policies that are conducive to asset collateralization can substantially increase credit access in developing countries. The model suggests that even without barriers to asset collateralization, lenders face incentives to set borrowing requirements higher than is welfare-maximizing, and thus policymakers may have reason to subsidize or otherwise encourage low-deposit, asset-collateralized loans.