Questions
1. Are financially unskilled borrowers disadvantaged in the mortgage market?
2. How do financial skill differences translate into consumption inequality?
3. How effective is financial education in reducing fn. skill-based consumption gap?
4. What are the implications of mortgage accessibility for financial education?

Answers - two step approach
1. financially unskilled lose in the mortgage market
2. mortgage search framework with endogenous financial skills and search intensity
   - fin. unskilled secure higher rates, have fewer resources
   - fn. education incentivizes better-performing mortgages
   - financial education mitigates the adverse effect of accessible mortgages on delinquency rates

New U.S. data - stochastic record linkage
- mortgage data (the National Survey of Mortgage Origination) ~ the Survey of Consumer Finances
- NSMO+
- estimates the distribution of financial skills for every borrower in the NSMO
- Bayesian weights used in inference robust to imputation bias (Enamorado et al., 2019)

Financial skills, search effort and the mortgage
1. three questions-based financial literacy score (Lusardi et al., 2017), standardized
2. Number of lenders considered prior to formal application for the mortgage
3. A rich set of mortgage specifics - secured rate, duration, amount, etc.

Key evidence from the SCF
- financial skills vary with age, cognitive decline
- financially savvy borrowers are 30% more likely to refinance their mortgage
- financially unskilled borrowers are 12-16% more likely to become delinquent

Table 1. Variance decomposition of the mortgage interest rate in model equilibrium.

Financial skills-based consumption inequality
- financially skilled search effectively, secure low rates - effective search
- mortgage rate variation - effective search

Figure 1. Mortgage rate dispersion across financial skill levels.
- back-of-the-envelope estimates - for a $100,000 loan, financially unskilled borrowers lose at least $9,329 in mortgage overpayments over the mortgage term

Structural search framework
- leverages the current way borrowers search for a mortgage
- borrowers invest in financial skills \( s \) and choose search intensity \( \rho \); face cognitive costs \( c^f \) and \( c^r \)
- skill accumulation \( f = \frac{\partial (r_t)^\alpha}{\partial \rho} \)
- secure mortgage repayment \( M_r \); conditional on search effort and financial skills, consume and save
- face expense shocks at a rate \( p \); \( \alpha \)

Consumption growth decomposition - three channels
1. time preference (standard)
2. high mortgage payees dissuade due to expected mortgage rate change
3. precautionary saving due to expense shock, strongest at lowest mortgage rates

Untargeted solution patterns
- financially savvy borrowers are 5% more likely to search more and 30% more likely to refinance
- financially unskilled secure higher mortgage rates
- aligns with consumption inequality estimates
- mortgage repayments \( \Rightarrow \) consumption inequality

Figure 2. Model-based Lorenz curve for consumption, compared to BLS data.

References