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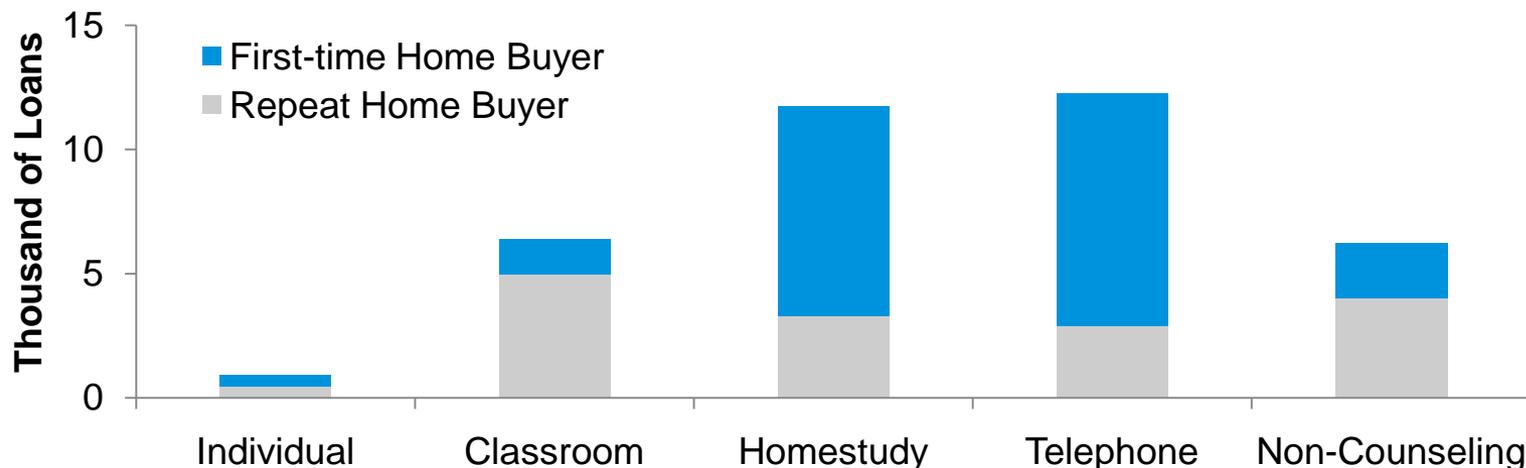
# The Benefits of Pre-Purchase Homeownership Counseling

February 20, 2013

- Motivation:
  - » First-time home buyer programs are a valuable public policy vehicle for expanding homeownership opportunities
  - » Requiring that participants receive pre-purchase homeownership counseling may improve the performance of these programs
  - » Counseling may also reduce the credit risk of alternative outreach programs
  - » There is no definitive proof of counseling's efficacy, reducing its use and funding opportunity/success
  - » Our hope is to definitively demonstrate the value of pre-purchase counseling
  
- Research question:
  - » Does pre-purchase homeownership counseling reduce delinquency rates?
  - » We also consider whether counseling is more effective for first-time home buyers, and whether counseling's effectiveness depends on how it is delivered or the macroeconomic environment in which it is delivered?

# Data used for study

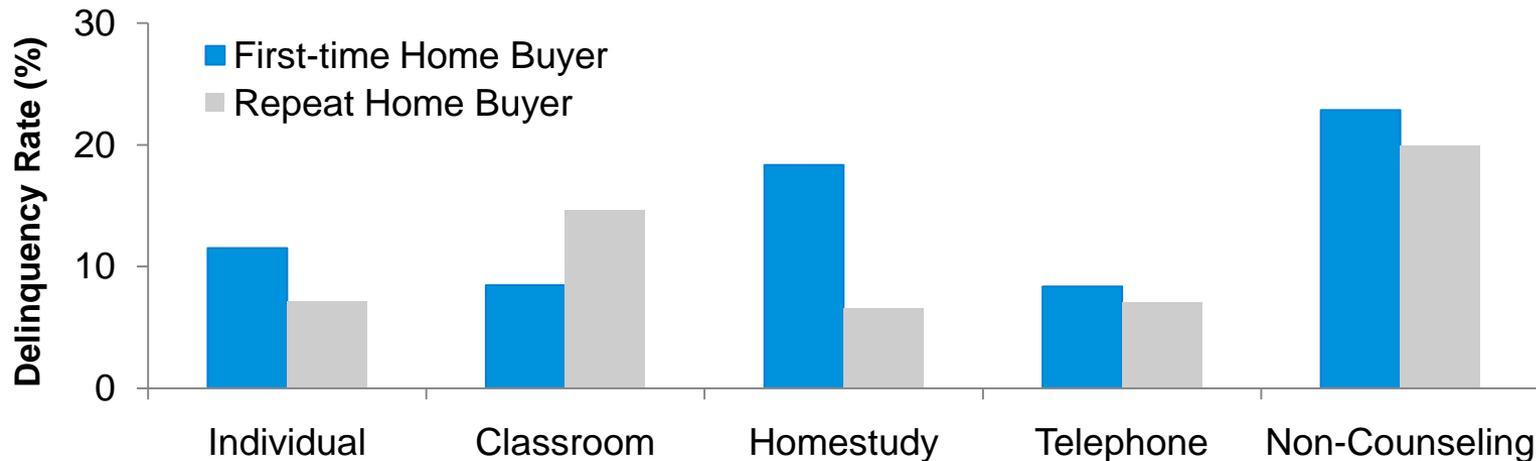
Loan counts of first-time home buyer and repeat home buyer for different types of counseling and non-counseling



- We analyze nearly 38,000 purchase money, fixed-rate loans made under Freddie Mac's affordable lending programs between 2000 and 2008
  - » Nearly 60% of the sample are first-time home buyers, 10% of those were non-counseled.
- Data include a variety of borrower, property and loan variables
  - » FICO score, LTV, DTI, first-time home buyer flag, etc.
  - » Local house price appreciation and lender/servicer information
  - » Delinquency history—we analyze 90-day delinquency within the first 3 years

# Evidence from the raw data

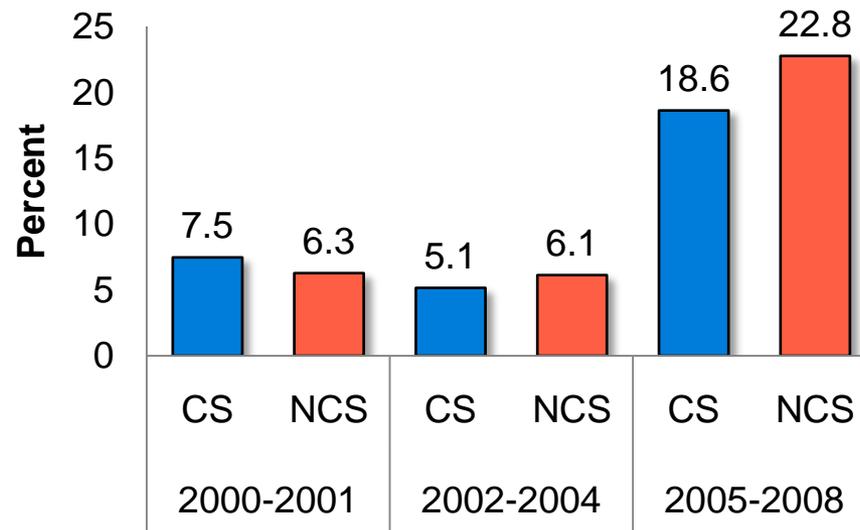
Comparison of delinquency rates for first-time home buyer and second-time home buyer with different types of counseling and non-counseling



- First-time home buyers seem to especially benefit from classroom counseling.
  - » The first-time buyer delinquency rate of 8% is smaller than the 15% rate of repeat buyers
- First-time home buyers generally have higher delinquency rates than repeat borrowers.
  - » The delinquency rate of first-time home buyers not receiving counseling was 23%, while the delinquency rate of repeat home buyers not receiving counseling was 20%.

# Evidence from the raw data

Comparison of delinquency rates for borrowers receiving counseling (CS) and borrowers not receiving counseling (NCS)



- Counseling seems to be especially effective at reducing delinquency rates during the boom/crisis era (2005-2008).
  - » The delinquency rate of borrowers not receiving counseling during the boom/crisis era was 23%, while the delinquency rate for borrowers receiving counseling was only 19%.

# Difficulties with the data

- Data are not from a true experiment
  - » Borrowers receiving counseling have different observable risk characteristics and experience different macroeconomic environments
  - » Observable and unobservable differences across borrowers may determine whether or not they receive counseling
  - » Lenders may differentially underwrite and service loans
- We account for borrower and macroeconomic heterogeneity
  - » Include observable borrower and macroeconomic characteristics in our delinquency model
- We account for selection into counseling
  - » Explicitly model the effects of selection into counseling on delinquency
  - » Account for unobservable factors affecting selection into counseling
- We account for differences in lender/servicer behaviors
  - » Include lender/servicer fixed effects captured from additional data

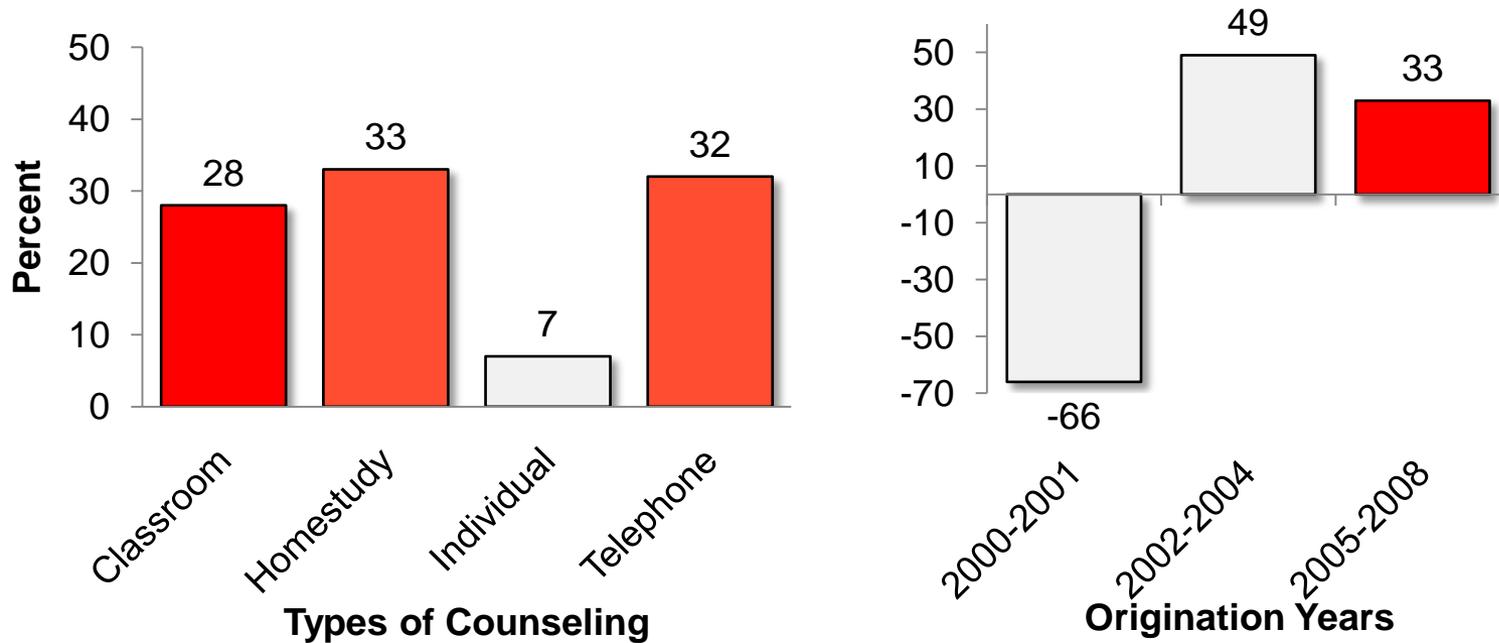
# Our conceptual approach

- Replicate design of true experiment
  - » Estimate model to determine effects of observable and unobservable characteristics on delinquency rates
  - » Use estimated model to predict delinquency rates for a fixed set of borrowers as a “control” group
  - » Compute predicted delinquency rates for the same fixed set of borrowers under a “treatment” regime
  
- Experiments (treatments regimes)
  - » Receiving counseling
  - » Counseling for first-time versus repeat home buyers
  - » Delivery of counseling through classroom, individual, home study and “other” (primarily telephone)
  - » Counseling in three different macroeconomic “eras”—steady (2000–2001), refinance (2002–2004), boom/crisis (2005–2008)

# Results from our analysis

- Pre-purchase counseling provides a significant reduction in delinquency rates
  - » Delinquency rates of borrowers receiving counseling are 15% lower than those not receiving counseling
- The effect is mostly due to the significant impact of pre-purchase counseling on first-time home buyers
  - » First-time buyers' delinquency rates are reduced 29% from receiving counseling.
  - » Repeat buyers receive no economically or statistically significant impact from receiving pre-purchase counseling
- A 29% reduction in delinquency rates reduces default costs to lenders by about \$1,000.
  - » Counseling may also increase prepayment rates, which could reduce some of these cost savings to lenders

## Reductions in delinquency rates for counseled first-time home buyers



- First-time home buyers benefit from classroom, home study and telephone counseling, however we do not find any statistically significant impact from receiving individual counseling.
- First-time home buyers receive a statistically significant benefit from counseling during the boom/crisis period (2005-2008)

- Summary of empirical results
  - » Counseling reduces first-time home buyers delinquency rates by 29%
  - » This results in about a \$1,000 savings in expected default costs
  - » Classroom, home study and telephone counseling are all effective
  - » Counseling provides significant benefit in periods of macroeconomic stress
  
- Policy implications
  - » Pre-purchase counseling provides an effective vehicle for reducing the credit risk of first-time buyer homeownership programs
  - » The cost savings from counseling appear large enough to pay for its delivery