The HUD First-Time Homebuyer Education and Counseling Demonstration:

6- to 7-Year Followup Impacts

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U.S. Department of Housing and Urban Development | Office of Policy Development and Research

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Prepared for

U.S. Department of Housing and Urban Development
Office of Policy Development and Research

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Foreword

HUD's First-Time Homebuyer Education and Counseling Demonstration (FTHB Demonstration) tested whether education and counseling for prospective homebuyers would reduce future delinquency and foreclosure risk. The FTHB Demonstration was designed as a large-scale, rigorous, randomized experiment to evaluate the effectiveness of offering free, voluntary, homebuyer education and counseling services to prospective first-time homebuyers enrolled from 2014 through 2016 through three national lenders. Between 2016 and 2022, HUD published four major reports detaining the outcomes of interests on prospective first-time homebuyers throughout the homebuying process.[1] HUD funded the research shared in this report, *The HUD First-Time Homebuyer Education and Counseling Demonstration: 6-to 7-Year Followup Impacts*, to understand how individuals who participated in the FTHB Demonstration fared during the COVID-19 pandemic.

While one wouldn't expect that exposure to a light touch homebuyer education and counseling treatment would have long-term impacts, the COVID-19 pandemic provided an unexpected opportunity to see how the study sample, which was randomly drawn for the original demonstration, fared during an unprecedented, negative event that had rippling effects on housing stability and financial security nationwide.

This report provides impact findings based on the analysis of treatment versus control group to see whether the treatment group would fare better during the pandemic (or in its aftermath) than the control group *because of its exposure* to homebuyer education and counseling services offered from 6 to 7 years earlier. To conduct this analysis, the study team estimated impacts on financial indicators and mortgage performance measured in December 2021, the latest point in time when data could be collected for the majority of the sample after the onset of the COVID-19 pandemic. Analyses included impacts on subgroups by age, race and ethnicity, gender, income, credit score, and for the subset of those who received Federal Housing Administration (FHA) loans.

As with the prior FTHB reports, this report comes with important caveats that should be considered when interpreting the findings: (1) the study sample excluded anyone participating in a downpayment assistance program which is the clientele housing counseling agencies typically serve; (2) the sample was not representative of the typical housing counseling client but was recruited from a broader sample of individuals seeking a mortgage loan from one of three national lenders; (3) the study did not evaluate the effectiveness of any organization's program or the HUD Housing Counseling program; (4) the timing of the intervention was later in the homebuying process than traditional housing counseling, which typically occurs earlier and offers more comprehensive guidance, and the exclusion of earlier-stage homebuyers may reduce the applicability of the findings for typical housing counseling clients; and (5) the report shows disparate impacts across racial groups, with positive benefits for non-Hispanic White participants, limited benefits for Asian and Hispanic participants, and unfavorable outcomes for African American participants, reflecting potential systemic issues not fully examined.

[1] See https://www.huduser.gov/portal/hud_firsttime_hmbyr_study.html for the full set of publications from the study.

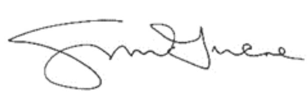
The study found that treatment group members were more likely to refinance their mortgage between March 2020 and December 2021, suggesting that the offer of homebuyer education and counseling helped treatment group members to take advantage of historically low-interest rates. Treatment group members were also less likely to receive forbearance or other loan modification than those in the control group—a positive outcome during an unprecedented time. Overall, there was no impact on either credit score or the 60-day mortgage delinquency rate. The study found that younger adults (aged 29 and younger at the time of random assignment) had fewer nonmortgage derogatory events (charge-off, repossession, bankruptcy) and less total nonmortgage past-due debt relative to their control group counterparts. Younger treatment group participants also had lower 60-day mortgage delinquency rates even though they had greater nonhousing debt (including credit card debt). The findings for young adults were true regardless of race or ethnicity.

The study also found racial differences in the impact of homebuyer education and counseling. White treatment group members experienced higher credit scores, fewer nonmortgage derogatory events, and lower total nonmortgage past-due debt than did White control group members. By contrast, African-American treatment group members experienced higher 90-day delinquency rates and a higher rate of major nonmortgage derogatory events than their African-American control group counterparts. This higher 90-day delinquency rate was concentrated in African-American treatment group members who had purchased a home and had a credit score below 680 at the beginning of the demonstration.

The previous report from the FTHB Demonstration, analyzing impacts 4 to 6 years after random assignment and published in 2022, found positive impacts for White treatment group members and neither positive nor negative impacts on African-American treatment group members.

To understand the potential reasons for the differential racial impacts, the study team conducted a very small number of interviews with White and African-American treatment group members, but these interviews did not yield any information that might explain the differential racial impacts. Although the African-American treatment group members interviewed did not report any racial bias in the information or services provided, they did note discrimination in other parts of the homebuying process.

Ultimately, this study found that homebuyer education and counseling provided 6 to 7 years before the COVID-19 pandemic helped some households better weather the pandemic and its aftermath through increased rates of refinancing and reduced rates of forbearance or other loan modification. The findings from the broader FTHB Demonstration suggest that expanding homebuyer education and counseling services to a broader group of young adults, who are not typically represented as the average housing counseling client, could have significant impacts on their financial futures. At the same time, the study's findings on differential racial impacts for African-American treatment group members suggest the need for more research into why these impacts occurred and how homebuyer education and counseling services can better advance equity in homeownership.



Solomon Greene
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Actions Taken by HUD's Office of Housing Counseling and HUD-Certified Housing Counselors During the COVID-19 Pandemic

Throughout the COVID-19 pandemic, HUD-certified housing counselors provided essential support to families facing housing instability. The Office of Housing Counseling sent letters to almost 800,000 FHA borrowers who had fallen behind on their mortgage payments, informing them about COVID-19 forbearance options and offering housing counseling services to guide them through the process.

During the height of the COVID-19 pandemic (FY2020-FY2022), the Office of Housing Counseling approved agencies conducted over 15,000 workshops focused on resolving mortgage delinquencies. Housing counselors provided more than 325,000 housing counseling sessions to help resolve or prevent mortgage defaults, ultimately saving nearly 100,000 homeowners from losing their homes. They also guided borrowers through the forbearance process, working closely with mortgage providers to ensure homeowners received the necessary assistance.

Housing counselors also assisted families with applications for the Emergency Rental Assistance Program (ERAP) and the Homeowner Assistance Fund (HAF) providing specific guidance to over 100,000 individuals, securing the financial support needed to stay in their homes. Counselors addressed critical needs such as credit management, financial analysis and emergency budgeting, which were crucial in maintaining housing stability and avoiding foreclosure during the pandemic.

HUD-certified housing counselors were instrumental in helping homeowners navigate financial hardships and remain securely housed during one of the most challenging times in recent history.

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Executive Summary

This report presents the findings from a 6- to 7-year followup analysis of HUD's First-Time Homebuyer Education and Counseling Demonstration, a large-scale, multisite experimental evaluation intended to generate strong evidence on the effectiveness of homebuyer education and counseling.

Launched in 2011, the demonstration asked the primary research question: *What are the impacts of offering homebuyer education and counseling on low-, moderate-, and middle-income prospective first-time homebuyers?* To answer that question, it used a rigorous experimental design to measure the extent to which broadly offering voluntary, free homebuyer education and counseling services affects such homebuyers across a wide range of outcomes, including homebuyer preparedness and search, financial capability, and homeownership sustainability.

The demonstration enrolled participants from September 2013 to February 2016 and completed data collection in July 2020. The study's Long-Term Impact Report presented the impacts of homebuyer education and counseling on outcomes measured in 2019, 4 to 6 years after participant enrollment (Peck et al., 2021). The Long-Term Impact Report found the offer of homebuyer education and counseling (1) had no overall impact on its two primary outcomes—credit score or 60-day mortgage delinquency rate, (2) resulted in improved confidence in the ability to find information, (3) resulted in changes in debt and savings compositions (for example, higher levels of student debt but lower levels of credit card debt and higher levels of savings and investments), and (4) improved credit scores for women and participants younger than aged 29 at baseline.

The long-term findings were observed during a very specific credit and economic environment—that is, one of high credit standards for borrowers, low unemployment, low interest rates, and rising housing prices. Those 4- to 6-year findings could have differed under alternative credit and economic conditions.

In March 2020, near the end of the demonstration's survey data collection period, the COVID-19 pandemic hit the United States, causing devastation to the U.S. economy, including skyrocketing unemployment.[2] In response, the government implemented a series of aggressive policy interventions to ameliorate financial hardships, including direct stimulus payments, eviction moratoria, the Housing Assistance Fund program, expanded unemployment insurance, increased flexibility in borrowers' repayment of student loans and home mortgages, and requirements for how servicers could report accommodations to credit bureaus. Changes to credit reporting requirements were among these credit score protections that prohibited servicers from reporting to credit bureaus the delinquency status of loans that received accommodations. It also implemented a host of housing supports, among them policies developed to protect homeowners from losing their homes. Homeowner supports included a foreclosure moratorium and mandatory forbearance for mortgage borrowers who requested one.

[2] The onset of the pandemic caused the largest 1-month increase in unemployment since the U.S. Bureau of Labor Statistics began publishing the data in January 1948, with unemployment rates rising from 4.4 percent in March 2020 to 14.7 percent in April 2020 (BLS, 2020).

Research has shown that people's financial well-being actually improved on average, at least during the first year of the pandemic, likely as a result of these policy interventions (Fulford and Shupe, 2021).[3] Analyses conducted for a separate report, which describes changes during COVID in the financial conditions for the demonstration's subsample of participants who purchased homes, largely confirm these findings (Moulton et al., forthcoming).[4]

The unique circumstances of the pandemic—both the economic devastation and the aggressive government response—provide a valuable opportunity to assess the impact of homebuyer education and counseling under a dramatically different context from that of the long-term analysis previously reported. Although not part of the original research design of the demonstration, this report considers data from a longer 7-year followup window on the demonstration's full sample to understand the effect of offering homebuyer education and counseling in the context of COVID-19.

This followup analysis considers and reports the extent to which the treatment group, *because of its exposure* to homebuyer education and counseling, fared any better during the COVID-19 pandemic than the control group. To address this research question, the research team estimated the impact of the homebuyer education and counseling (the intervention) on outcomes measured in December 2021, the latest observed time point after the onset of COVID-19 for which data could be collected for the full study sample. In addition to estimating impacts for the full sample of study participants, the team estimated the impact of offering homebuyer education and counseling on subgroups defined by age, race and ethnicity, gender, income, and credit score, and for the subset of those who received Federal Housing Administration loans.

To better understand the treatment group's experiences with the homebuyer education and counseling services and how these experiences varied across racial and ethnic subgroups, the team conducted semi-structured interviews with individuals who received the demonstration's services. The interviews focused on generating insights into the participant experience with homebuyer and counseling services, mechanisms underlying differential impacts of the intervention on African-American versus White subgroups, and respondents' experiences with the forbearance process.

Key Findings

This analysis estimated the impact of being offered free homebuyer education and counseling on 2 confirmatory outcomes and 15 exploratory outcomes across two outcome domains—financial indicators and mortgage performance (see Exhibit 2.4 for list of outcomes).[5] The key findings are presented in the order in which the study prioritized their importance.

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[3] Behavioral changes—such as less discretionary spending—also likely contributed to improved financial well-being during this time.

[4] Although that report primarily focuses on changes in financial conditions for the subset of study participants who were recent homebuyers, it also presents changes for those who did not purchase homes and for the overall sample of demonstration participants (Moulton et al., forthcoming: appendix C).

[5] These categorizations refer to the level of importance for determining the "success" of the intervention, with *confirmatory* being the most important. The study team applied a designation of *confirmatory* or *exploratory* to each outcome prior to beginning the analysis.

As of the 6- to 7-year followup, which took place during the economic downturn from the COVID-19 pandemic:

Overall, the intervention did not improve the treatment group's outcomes relative to the control group.

Based on analyses of outcomes measured for all study participants, there is no detectable difference between the treatment and control groups for either of the two **confirmatory outcomes**—credit score or the 60-day mortgage delinquency rate. Furthermore, there is no detectable difference in alternative measures of mortgage performance or other financial indicators.

Beyond these null findings, the study observed a detectable impact on the rate of forbearance, a secondary outcome that is especially relevant to the followup period. Treatment group members were less likely to receive forbearance or other loan modifications than those in the control group.[6] The team also found that treatment group members were more likely than control group members to refinance their mortgage between March 2020 and December 2021, suggesting that homebuyer education and counseling services better positioned the treatment group members to take advantage of historically low-interest rates.

Homebuyer education and counseling might have provided benefits to younger adults during the pandemic.

Analysis suggests that the offer of homebuyer education and counseling might provide some benefits to younger participants. Study participants aged 29 and younger in the treatment group had fewer nonmortgage derogatory events and less total nonmortgage past-due debt relative to comparably aged control group members. Moreover, despite having greater nonhousing debt (including credit card debt), the younger treatment group members achieved lower 60-day mortgage delinquency rates.

Evidence indicates that the impact of homebuyer education and counseling varies by race.

The team observed favorable impacts of the offer of homebuyer education and counseling services for White study participants,[7] with White treatment group members experiencing higher credit scores, fewer nonmortgage derogatory events, and lower total nonmortgage past-due debt than did White control group members. The team did not observe similar favorable impacts for other racial or ethnic groups. Furthermore, exploratory analysis suggests that the intervention might have had some unfavorable impacts for African-American study participants. African-

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[6] Whether this finding is favorable or unfavorable is not straightforward. On the one hand, the lower incidence of forbearance could indicate that members of the treatment group were less likely to experience the financial hardships that would catalyze them asking for a forbearance, which would be a favorable outcome. On the other hand, it could be that they experienced hardships at similar levels to the control group but were less likely to reach out to their loan servicers to ask for a forbearance, which would be an unfavorable outcome. The lack of a clear and consistent pattern of impacts makes it difficult to infer which interpretation more likely reflects the actual dynamics at play.

[7] For parsimony and to be consistent with prior reports, the authors abbreviate the labels for subgroups defined by race and ethnicity. The subgroups that are White, non-Hispanic; African-American, non-Hispanic; Asian, non-Hispanic; and Hispanic are referred to simply as "White," "African-American," "Asian," and "Hispanic, respectively. The four groups are mutually exclusive in this study and together cover 100 percent of the study sample.

American treatment group members had a higher 90-day mortgage delinquency rate and a higher rate of major nonmortgage derogatory events than did their control group counterparts.

A small-scale qualitative analysis highlighted many benefits of homebuyer education and counseling; it shed little light on the differential impacts by race.

The team conducted 18 interviews with treatment group members to gain insight into their experiences with homebuyer education and counseling to identify potential causes of the observed differential impacts between White and African-American treatment group members and to better understand their experiences during and after the forbearance process. The research participants consistently identified beneficial outcomes related to their participation in the intervention, including improving their understanding of the homebuying process and gaining skills and tools related to budgeting, savings, and credit maintenance. However, the interviews did not highlight any element of homebuyer education and counseling that might explain the observed differential impacts across racial subgroups.

Although many of the African-American respondents reported experiencing racial bias during the homebuying process (for example, by realtors and underwriters), they uniformly reported they had not experienced or observed racially biased information or behaviors during the homebuyer education and counseling sessions.

The interviews provided useful insights into the respondents' experiences during and after the forbearance process. Of those who had received a forbearance, most reported that they sought the forbearance because of an unanticipated financial shock, that the process to get a forbearance was relatively straightforward, and that the forbearance had provided them with a range of benefits, including greater financial and emotional stability.

Implications and Next Steps

Because this study applies a rigorous experimental study design, the team feels confident in concluding that the offer of homebuyer education and counseling—as it was designed and operated during the period of the demonstration for the study sample of low-, moderate-, and middle-income prospective first-time homebuyers—did not have an impact on the two confirmatory outcomes as of 6 to 7 years after study enrollment and under the unique circumstances of the COVID-19 pandemic.

The study's results can be usefully generalized to a specific population of potential first-time homebuyers who might not otherwise have sought out these services on their own but were informed of their availability and given the opportunity to enroll at the time they approached a lender. However, the programmatic and policy implications of these findings might not be generalizable beyond this context. For example, findings are not necessarily generalizable to (1) HUD's current housing counseling program or housing counseling programs mandated as a condition of using particular mortgage products or receiving downpayment assistance, (2) "typical" users of voluntary homebuyer education and counseling, those who seek out homebuyer education and counseling rather than their lender offering it, or (3) economic environments that are different than the conditions that resulted from the pandemic and the government's response to it. Furthermore, the study does not assess the impact of other housing counseling interventions, such as foreclosure prevention counseling or pandemic-specific counseling services.[8]

Although the offer of homebuyer education and counseling did not improve the two confirmatory outcomes—credit score and 60-day delinquency rate—it is worth remembering that the specific intervention analyzed in this study followed industry standards at the time and involved around 6 to 8 hours of homebuyer education and 1 hour of one-on-one counseling, was offered to potential homebuyers at a variety of points in the homebuying process (including some who had already signed contracts or purchased homes), and was experienced by treatment group members several years prior to this followup study. It is perhaps unrealistic to expect an impact so many years later and during a once-in-a-lifetime pandemic. Furthermore, the overall findings are relevant to a very specific and complex economic environment resulting from the COVID-19 pandemic and the government's response to it. It could be that any marginal benefit that the treatment group might have realized in the absence of a government response was masked because of the aggressive actions that the government took, which provided financial relief to both the treatment and control groups.

That said, it is troubling to find that other subgroups did not experience the benefits experienced among White treatment group members, most notably African-Americans. These subgroup analyses are exploratory in nature, and therefore, the team has lower levels of confidence in the findings emanating from them than from the overall impact analyses, which are inclusive of all study participants. Still, if true, the findings suggest that the offer of free "light touch" interventions might actually widen disparities that have existed for generations. Therefore, it is critical to invest in additional research to further explore the validity and causes of these findings. More importantly, if these disparities are the result of long-standing structural and systemic discrimination, as seems likely, larger, bolder housing policies could be needed to help overcome the structural barriers to homeownership and wealth accumulation faced by historically disadvantaged groups.[9]

Study Methods in Brief

Study Sample. Between September 2013 and February 2016, the First-Time Homebuyer Education and Counseling Demonstration randomized 5,854 low-, moderate-, and middle-income prospective first-time homebuyers in 28 large metropolitan areas who initiated contact with a lender. Study participants randomly assigned to the treatment group were offered homebuyer education or counseling services consisting of 6 to 8 hours of homebuyer education and 1 hour of one-on-one counseling. The control group was not offered the services. This followup study captures key outcomes across two domains—financial indicators and mortgage performance—during the COVID-19 pandemic. The difference between the average treatment group outcomes and average control group outcomes is the estimated impact of the offer of this homebuyer education and counseling.

Intervention Impact Evaluation Design. This followup analysis uses the demonstration's *randomized experimental design* to rigorously evaluate the impact of offering voluntary, free homebuyer education and counseling services, a "light-touch" financial education intervention meant to help expand access to and the

[8] For example, the Housing Assistance Fund—established as part of the American Rescue Plan Act during the pandemic—provided support for homeowners facing hardships. This support included education and counseling services to help them understand their rights and take steps to keep their homes.

[9] Potential policies include restorative housing reparations, zoning reforms, and changes to credit and appraisal practices.

sustainability of homeownership. The randomized experimental design allows the team to determine whether any impacts have been *caused by the offer* of homebuyer education and counseling services.

Impact Analysis. “Impact” is computed as the difference between the treatment and the control group’s mean outcomes. An evaluative assessment of an offer of the intervention is referred to as an intent-to-treat (ITT) impact, and it differs from a treatment-on-the-treated (TOT) impact, which accounts for no-shows, attributing the entirety of estimated impacts to treatment group members who took up the offer. Where the team observes ITT impacts, the TOT impacts are also statistically significant, and they are reported as well. Both the ITT and TOT impacts have relevance but to different audiences, as prior reports and this report’s appendix elaborate.

Data Sources. The outcomes data used to estimate impacts for this followup study come from two sources: (1) a national credit bureau and (2) the Federal Housing Administration, collected approximately 6 to 7 years after study members enrolled.

Chapter 1. Introduction

In 2011, HUD launched The First-Time Homebuyer Education and Counseling Demonstration, a large-scale, multi-site, randomized controlled trial intended to generate strong evidence on the effectiveness of homebuyer education and counseling. From September 2013 through February 2016, the study recruited and enrolled 5,854 low-, moderate-, and middle-income prospective first-time homebuyers across 28 large metropolitan areas.[10,11] The demonstration used a randomized experimental design to assess the impacts of homebuyer education and counseling on homebuyer preparedness and search, financial capability, and homeownership sustainability.

In early 2020, the COVID-19 pandemic hit the United States, killing millions and devastating the U.S. economy. The onset of the pandemic caused the largest 1-month increase in unemployment since the U.S. Bureau of Labor Statistics began publishing the data in January 1948, with unemployment rates rising from 4.4 percent in March 2020 to 14.7 percent in April 2020 (BLS, 2020). However, during the course of the pandemic, people's financial health—measured by indicators such as credit card debt—actually improved (Fulford and Shupe, 2021). These improvements were likely the result of aggressive policy interventions put in place to offset financial hardships created by the pandemic. These policies included federal stimulus payments, the Housing Assistance Fund,[12] expanded unemployment insurance, eviction moratoria, and loan forbearance programs for student loans and home mortgages.

This part of the study's final report presents findings related to the extent to which the offer of homebuyer education and counseling provided an additional buffer to the treatment group when, about 6 to 7 years after enrolling in the study, they were faced with that major economic downturn. That is, the authors estimate the *impacts of homebuyer education and counseling on financial indicators and mortgage performance in the context of COVID-19.*

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[10] Low-, moderate-, and middle-income homebuyers are those who have incomes at or below 120 percent of their local area median income (AMI). Specifically, those whose incomes are less than 50 percent of AMI are classified as low income; those whose incomes are between 50 and 80 percent of AMI are classified as moderate income; and those whose incomes are between 80 and 120 percent of AMI are classified as middle income. Those whose incomes are 120 percent of AMI are considered upper income and are not targets of this study.

[11] The 28 metropolitan areas covered in the study include Atlanta-Sandy Springs-Marietta, GA; Boston-Cambridge-Quincy, MA-NH; Chicago-Naperville-Joliet, IL-IN-WI; Dallas-Fort Worth-Arlington, TX; Detroit-Warren-Livonia, MI; Houston-Sugar Land-Baytown, TX; Las Vegas, NV; Los Angeles-Long-Beach-Santa Ana, CA; Miami-Fort Lauderdale-Miami Beach, FL; Minneapolis-St. Paul-Bloomington, MN-WI; New York-Northern New Jersey-Long Island, NY-NJ-PA; Orlando-Kissimmee, FL; Philadelphia-Camden-Wilmington, PA-NJ-DE-MD; Phoenix-Mesa-Scottsdale, AZ; Portland-Vancouver-Hillsboro, OR-WA; Raleigh-Cary, NC; Riverside-San Bernardino-Ontario, CA; Sacramento-Arden-Arcade-Roseville, CA; San Antonio-New Braunfels, TX; San Diego-Carlsbad-San Marcos, CA; San Francisco-Oakland-Fremont, CA; San Jose-Sunnyvale-Santa Clara, CA; Seattle-Tacoma-Bellevue, WA; St. Louis, MO-IL; Stockton, CA; Tampa-St. Petersburg-Clearwater, FL; Virginia Beach-Norfolk-Newport News, VA-NC; and Washington, D.C.

[12] The Housing Assistance Fund—established as part of the American Rescue Plan Act during the pandemic—provided support for homeowners facing hardships. This support included education and counseling services to help them understand their rights and take steps to keep their homes.

Prior Demonstration Reports

Listed here chronologically are prior reports from this study, available at https://www.huduser.gov/portal/home.html.

The First-Time Homebuyer Education and Counseling Demonstration: Early Insights reported impacts on four outcomes observed 12 to 18 months after study enrollment for early entrants into the study (DeMarco et al., 2016).

The First-Time Homebuyer Education and Counseling Demonstration Baseline Report: Study Design and Implementation provided a complete documentation of the demonstration's implementation, including describing the evaluation design, the intervention's operations, the study participants, and treatment group members' experiences with the intervention and with the study (DeMarco et al., 2017).

Who Participates in Homebuyer Education and Counseling Services and Why? Insights from HUD's First-Time Homebuyer Education and Counseling Demonstration, a special topic analysis, reported the characteristics of treatment group members who were most likely to take up and complete the offer of services (Moulton et al., 2018).

Short-Term Impact Report: The HUD First-Time Homebuyer Education and Counseling Demonstration reported impacts on many outcomes across three domains—homebuyer preparedness and search, financial capability, and homeownership sustainability—as of 12 to 18 months after enrollment for the full study sample (Peck et al., 2019).

Long-Term Impact Report: The HUD First-Time Homebuyer Education and Counseling Demonstration reported impacts on many outcomes across three domains—homebuyer preparedness and search, financial capability, and homeownership sustainability—as of 48 to 72 months after enrollment for the full study sample (Peck et al., 2021).

The Influence of the COVID-19 Pandemic on Recent Homebuyers: A Report from HUD First-Time Homebuyer Education and Counseling Demonstration analyzed financial outcomes for study participants who had purchased a home to understand how they fared during the COVID-19 pandemic (Moulton et al., forthcoming).

As the seventh major report from this project, this **6- to 7-Year Followup Report** draws heavily, sometimes verbatim where needed, from these prior reports.

Chapter 2. Evaluation Design and Analysis

This chapter describes The First-Time Homebuyer Education and Counseling Demonstration's recruitment process and baseline characteristics of study sample members. It then describes the demonstration's design and methods used to estimate the impact of homebuyer education and counseling on participants during the COVID-19 pandemic.

2.1 Participant Recruitment and Baseline Characteristics

From September 2013 through February 2016, the demonstration recruited participants into the study via three major national mortgage lenders. As fully detailed in the study's Baseline Report (DeMarco et al., 2017), those lenders identified potential participants by screening their home loan databases of prospective homebuyers for low- to middle-income first-time homebuyers (that is, people who had not owned a home in the prior 3 years) who were living in one of the study's 28 metropolitan areas. The lenders contacted these prospective homebuyers and, if they agreed, referred them to the study team. The lenders contacted 136,874 customers and referred 18,279 to the study team. The authors conducted an additional eligibility assessment of each prospective homebuyer and, if all criteria were met, reviewed the study's consent agreement with them.[13] From among those prospective homebuyers who were referred, 5,854 were ultimately eligible and consented to be in the study.

Exhibit 2.1 summarizes the sample's baseline characteristics. The study sample was racially and ethnically diverse, with somewhat more men than women. The study participants reflected a wide range of educational attainments, with about one-half holding at least a bachelor's degree. Most participants were working full-time (at least 30 hours per week) as of the study's baseline survey. The median income for study participants and their co-borrowers was $54,000 in the 12 months prior to study enrollment, with 10.6 percent making more than $100,000 and 8.1 percent making less than $25,000. The mean credit score of study participants at the time of study enrollment was 706.

[13] For example, prospective homebuyers who had been required to attend a homebuyer education and counseling program as part of a downpayment assistance program were ineligible for the demonstration, among other eligibility criteria.

Exhibit 2.1. Characteristics of the Study Sample of Low-, Moderate-, and Middle-Income Prospective First-Time Homebuyers at Enrollment

Baseline Variable	Study Sample
Race and Ethnicity of Study Participant (%)	
Hispanic	25.1
White, non-Hispanic	38.5
African-American, non-Hispanic	20.5
Asian, non-Hispanic	12.1
Other	3.9
Men (%)	60.2
Age greater than or equal to 30 (%)	68.3
Marital Status of Study Participant (%)	
Married	38.2
Divorced, widowed, or separated	14.8
Single and never married	47.1
Plans to purchase the home with a co-borrower (%)	26.3
Household Size (%)	
One	22.7
Two	32.0
Three	19.8
Four or more	25.5
Education of Study Participant (%)	
Bachelor's degree or higher	53.4
Associate's degree	12.9
Some college, but no degree	16.1
High school diploma or less	17.6
Employment (%)	
Full-time employment (30+ hours per week)	89.9
Part-time employment (1–29 hours per week)	4.1
Unemployed and looking for work	0.5
Not working, homemaker, retired, student, or other	5.5
Income Received by Study Participant and Any Co-Borrowers in Past 12 Months	
$24,999 or less (%)	8.1
$25,000 to $49,999 (%)	34.0
$50,000 to $74,999 (%)	32.7
$75,000 to $99,999 (%)	14.6
$100,000 or more (%)	10.6
Mean income ($)	59,527
Median income ($)	54,000

Baseline Variable	Study Sample
Credit Score (range is 300–850)	
Mean	706
Median	711
Stage in the Homebuying Process (%)	
Not yet started home search	11.2
Started home search, but no offer	37.0
Made an offer on a home or signed a purchase agreement, but no purchase	38.5
Purchased a home	13.2

Notes: All measures are shown for the full sample of 5,759 study participants (after excluding study participants who withdrew from the study). Measure-specific sample sizes might vary due to item nonresponse. Due to rounding, not all reported percentages precisely equal 100 percent. Low-income denotes incomes less than 50 percent of local area median income (AMI), moderate-income is between 50 and 80 percent of AMI, and middle-income is between 80 and 120 percent of AMI.
Sources: Baseline survey of study participants; credit bureau data

No published source cites nationally representative characteristics of low- to middle-income prospective first-time homebuyers. The study's Baseline Report considered how this study's sample compares with other relevant segments of the population, including renters, first-time homeowners, and the population of homebuyer education and counseling clients (DeMarco et al., 2017). The Baseline Report found that the study sample is more educated and has a higher income than the typical population of pre-purchase homebuyer education and counseling clients.

2.2 The Experimental Evaluation Design

The First-Time Homebuyer Education and Counseling Demonstration used a randomized experimental design.[14] As illustrated in exhibit 2.2, eligible prospective first-time homebuyers were randomly assigned to a control group or to a treatment group: 2,560 treatment group members were offered free remote homebuyer education and counseling services; 836 treatment group members were offered free in-person homebuyer education and counseling services; and the 2,458 members of the control group were not offered services through the demonstration.

Exhibit 2.2. Study Participants by Group

[14] Prior reports have documented the evaluation's implementation in detail (DeMarco et al., 2017; Moulton et al., 2018; Peck et al., 2019).

The randomization process ensures that there are no systematic differences between the treatment and control groups.[15] Therefore, differences in the mean outcomes between the groups can be attributed to the intervention as its "impact."

2.3 The Intervention

This study evaluates the offer of free homebuyer education and counseling. **Homebuyer education** is instruction in buying a home and financial management; **homebuyer counseling** is one-on-one guidance tailored to the particular needs of the individual homebuyer.

To provide services, the study team partnered with **63 HUD-approved local housing counseling agencies** across 28 large metropolitan areas throughout the United States. These local agencies delivered in-person homebuyer education in group workshops and in-person homebuyer counseling in one-on-one, face-to-face sessions. The study team partnered with **two HUD-approved national agencies** to provide remote services—that is, online education and telephone-based counseling.[16]

All agencies participating in the study—whether they provided in-person or remote services—adhered to the **National Industry Standards (NIS) for Homeownership Education and Counseling**.[17] For homebuyer education, NIS does not dictate a specific curriculum; rather, it provides core topic areas to be covered. NIS suggests that 8 hours of education are required to adequately cover the content, and the minimum is 4 hours.

2.4 Service Takeup and Completion Rates

Treatment group members were offered the demonstration's free homebuyer education and counseling services. Of them, 55.1 percent took up services—that is, they used either some or all the education curriculum and one-on-one counseling (exhibit 2.3)—and one-fourth (25 percent) completed all services offered.

Exhibit 2.3. Takeup and Completion Rates, by Offer of In-Person or Remote Services

	Sample Size	Took Up Any Services (%)	Completed All Services (%)
Offered in-person services	804	28.1	14.7
Offered remote services	2,513	63.8	28.5
Full treatment group	**3,317**	**55.1**	**25.2**

Note: Of the 3,396 participants assigned to the treatment group, 79 withdrew from the study and were excluded.
Sources: eHome America; ClearPoint; local housing counseling agencies

[15] DeMarco et al. (2017) report a baseline balance test confirming that this is the case.
[16] The two national agencies were eHome America, which provided online homebuyer education, and ClearPoint Credit Counseling Solutions, which provided telephone counseling.
[17] The demonstration's selection of HUD-approved agencies that adhere to the NIS and are HUD approved ensured that the intervention services provided through the study were reasonably consistent in structure and content and were administered by programs reviewed by HUD to meet quality standards. The study's Baseline Report and chapter 3 in its Short-Term Impact Report provide additional detail on the intervention's implementation and operations, as well as participants' experiences with services and the housing market conditions in which the demonstration took place (DeMarco et al., 2017; Peck et al., 2019).

The takeup rates and completion rates differed meaningfully by service mode, with both rates being higher for those offered remote services. Nearly two-thirds of those offered remote services (63.8 percent) took up online education and telephone counseling. In contrast, about one-fourth (28.1 percent) of those offered in-person services took up an in-person education workshop and in-person counseling.[18] In both treatment groups, about one-half of those who took up services completed all the services by completing the entire education curriculum and meeting with a counselor.

Personal Characteristics that Predict Participation

Moulton et al. (2018) explored how a wide range of measures—including study participants' demographics, attitudes and beliefs, housing arrangements, financial capability and knowledge, and creditworthiness—predict the takeup and completion of the homebuyer education and counseling services offered through the demonstration. That report found that—

- **Women were more likely to participate** in homebuyer education and counseling services.
- Study participants with relatively **greater education were more likely to participate** in homebuyer education and counseling services.
- Race or ethnicity, age, marital status, and household size were not statistically significant predictors of participation—either at takeup or completion—in homebuyer education and counseling services.

2.5 Impact Analyses

The key question for this study is whether the treatment group, *because of its access* to homebuyer education and counseling, was any better prepared for the economic stresses of the COVID-19 pandemic than the control group. To address this research question, the authors estimated the impact of the intervention on outcomes measured in December 2021, the latest observed time point after the onset of COVID-19, for which data could be collected for the full study sample.[19] In addition to estimating impacts for the full sample of study participants, the authors estimated the impact of offering homebuyer education and counseling on subgroups defined by age, race and ethnicity, gender, income, and credit score, and for the subset of those who received Federal Housing Administration (FHA) loans.[20]

2.5.1 Impacts for the Full Study Sample

For the full sample analysis, the authors report both the impact of offering homebuyer education and counseling services, as measured by the intent-to-treat (ITT) impact estimate, and the impact

[18] The Long-Term Impact Report tested whether the effect of offering in-person services is statistically different from the effect of offering remote services and found no evidence that either mode of service delivery was more effective than the other (Peck et al., 2021). Given the lack of differences in impacts by delivery mode and the reduction in statistical power due to lower sample sizes (due to informed consent timeout), this report pools the study participants who were offered in-person and remote services, comparing outcomes of those offered either mode of services with outcomes for the control group.

[19] The authors also estimate impacts on outcomes measured in July 2022, although the sample for this analysis is limited to study participants who enrolled in the study in August 2014 or later due to informed consent timing out. That sample comprises about three-fourths of the full study sample.

[20] As section A.3 elaborates, estimating the impact of homebuyer education and counseling for the subset of study participants with an FHA loan is a nonexperimental analysis because whether someone received an FHA loan is measured after study enrollment and, therefore, could have been influenced by the intervention.

of taking up services, as measured by the treatment-on-the-treated (TOT) impact estimate. As the study has previously established, the pattern of results is the same regardless of whether it is the ITT or TOT impact. That is, the TOT impact is only statistically significant when the ITT impact is, and the magnitude of the TOT impact always will be larger than the ITT. In this analysis, the authors can interpret the ITT estimate as the causal impact of making homebuyer education and counseling services available but not mandatory. In contrast, the TOT impact describes the impact the intervention had only on those individuals who took up services. Therefore, the TOT estimate could be especially relevant for programs interested in understanding their impacts on clients who use their services. In addition, the TOT impact is relevant to understanding the impact of policies or programs that require prospective homebuyers to participate in homebuyer education and counseling services—for example, as a condition of mortgage approval—as opposed to simply making those services available.

The authors estimate the ITT and TOT impact of homebuyer education and counseling using the same modeling approach used for the study's long-term impact analyses (see appendix sections A.1 and A.2; also see Peck et al., 2021).

2.5.2 Subgroup Impacts

The analysis estimates the impacts of homebuyer education and counseling for *subgroups* defined by age, race and ethnicity, gender, income, and credit score. The authors analyze the subgroup impacts by pooling all the sample with the identified subgroup characteristic in the treatment group and then comparing their mean outcome with the mean outcome for those in the control group with that subgroup characteristic.[21] Where there is systematic evidence of differences in impact between subgroups, the authors report those results in the executive summary and chapter 4 of this part of the report. Complete subgroup impact tables appear in appendix D.

2.5.3 Nonexperimental Impacts on the Subset of FHA Loan Recipients

The analysis estimates the impacts of homebuyer education and counseling for the subset of study participants who received an FHA loan. Findings for the subset of study participants who held an FHA loan are described in chapter 5. Complete impact tables for the subset of FHA loan recipients appear in appendix E.

Estimating the impact of homebuyer education and counseling for the subset of study participants who received an FHA loan is a nonexperimental analysis, because whether someone received an FHA loan is measured after study enrollment and, therefore, could have been influenced by the intervention. As section A.3 describes, the authors conducted analyses to explore (1) whether homebuyer education and counseling influenced the share of study participants who received an FHA loan and (2) whether the treatment group members and control group members who received an FHA loan are different in their baseline characteristics. The authors find that homebuyer education and counseling did not affect the likelihood that treatment group members received an FHA loan or the type of treatment group members who received an FHA loan. Given these findings, the authors estimate the impact of homebuyer

[21] In alignment with standard practice and prior study reports (Peck et al., 2019; 2021), the authors report only ITT impacts for subgroups, with the goal of focusing the presentation and discussion on those effects where a statistically significant difference exists between the subgroups of interest.

education and counseling for the subset of study participants with an FHA loan using the same methods used to estimate impacts for subgroups defined by baseline characteristics.

2.6 Data Sources

As described in more detail in appendix B, the authors use a mix of primary and secondary data sources to construct the measures used in the impact analysis. Data sources for the COVID-19 impact analyses include—

- The **baseline survey of study participants,** which captures the characteristics of study participants at the time of study enrollment. Baseline survey data construct subgroups of interest, and baseline covariates are included as controls in the impact model.
- **Data on services that treatment group members received** from eHome America, ClearPoint, and the 63 local housing counseling agencies. These data capture whether study participants participated in homebuyer education and counseling services within 12 months of enrolling in the study and are used to determine who participated in services for the TOT analysis.
- **Credit data on study participants** from one of the three major credit bureaus. The study team collected credit bureau data every 2 months during the enrollment period to capture study participants' baseline credit attributes 0 to 2 months prior to their enrollment in the study. The authors then routinely collected credit bureau data every 6 months during the 6 to 7-year followup period to capture outcome measures for the impact analyses.
- **FHA Loan Origination and Servicing Data**. For the impact analysis, FHA data captures FHA loan recipient loan performance in December 2021.

When estimating the impact of homebuyer education and counseling in the context of COVID-19, the authors constructed outcomes of interest using credit bureau and FHA data through December 2021—the latest data available for which data could be collected for the full study sample.[22] Matching each study participant to December 2021 administrative data from the credit bureau and FHA means that outcomes are observed between 70 and 95 months (about 6 to 7 years) after random assignment. If it is assumed that COVID-19 started having an effect on the U.S. economy in late March 2020, then December 2021 administrative data capture study participant outcomes about 21 months after the onset of COVID-19.[23] Because the timing of outcome measurement will be the same, on average, between the treatment and control groups, the variation in the timing of the original random assignment does not pose a risk of bias for impact estimates.

[22] The authors also estimate impacts on outcomes measured through July 2022, although the sample for this analysis is limited to study participants who enrolled in the study in August 2014 or later due to informed consent timing out.
[23] The total number of hours worked fell by about 60 percent in March 2020. From March 2020 to April 2020, the number of people ages 25 to 54 participating in the labor force but not working (that is, unemployed or employed but not at work) surged from 7.9 million to 19.6 million (Bauer et al., 2020). This rise was associated with a 10.3 percentage point increase in the seasonally adjusted unemployment rate during the same time period, from 4.4 percent to 14.7 percent. By December 2021, the unemployment rate had fallen to 3.9 percent, below its pre-COVID-19 level (BLS, n.d.).

2.7 Outcomes

The authors used the study's administrative data sources to construct outcome measures, which the authors used to assess the impact of homebuyer education and counseling for this followup analysis. Seventeen outcomes were identified for analysis across these two domains:

- The **financial indicators** domain includes 10 outcomes, such as levels of debt and credit profile.
- The **mortgage performance** domain includes seven outcomes related to whether the study participant was ever delinquent on a mortgage since enrolling in the study and whether the study participant received a loan forbearance during the pandemic.

Because this study has a large number of outcomes, the risk of "false positives" is high—that is, that the impact estimate on at least one outcome will appear as statistically significant purely as a result of chance.[24] To mitigate this problem, the authors divided outcomes into two categories prior to conducting any analysis. In consultation with HUD and the project's expert panel during the planning phase for the Long-Term Impact Report, the authors identified two outcomes as being particularly critical to the study. These two ***confirmatory outcomes*** serve as the most important outcomes of interest for the study and are—[25]

A Note About Delinquencies During COVID-19

In March 2020, Congress passed the Coronavirus Aid, Relief, and Economic Security (CARES) Act to blunt the economic impact of the COVID-19 pandemic on individuals and families. Among the key provisions in the CARES Act were (1) servicers had to provide forbearances to any borrower facing hardships who requested one, regardless of the status of the mortgage and (2) servicers could not include the delinquency status of a mortgage in its reporting to credit agencies once it was in forbearance. As a result, in the months after the enactment of the CARES Act, millions of homeowners received mortgage forbearance and stopped making their mortgage payments. However, by law, these nonpayments should not have resulted in additional or more advanced delinquencies in credit bureau data.

It is important to understand this policy when interpreting the study's mortgage delinquency measures. The authors report two measures for each of three mortgage delinquency outcome (that is, had ever been 30, 60, and 90 days delinquent). The first measure uses credit bureau and Federal Housing Administration (FHA). The second measure uses only credit bureau data. The discrepancy between the two is the result of how data were reported for loans in forbearance during the pandemic. Although servicers could not include the delinquency status of mortgages in forbearance in reports to credit bureaus under the CARES Act, they could code nonpayments for mortgages in forbearance as delinquent in internal data and in reporting to FHA. As a result, the delinquency measures that include FHA data are uniformly higher than the credit bureau-only measures.

Although the measures that include both credit bureau and FHA data may seem more "comprehensive" than the credit bureau-only data, important caveats and limitations are to be considered when interpreting these measures. First, these measures treat nonpayments on FHA mortgages that were in forbearance after implementing the CARES Act the same as any other delinquency. Second, because these measures do not include servicer data for non-FHA loans, they will disproportionately capture the nonpayment on mortgages for subgroups who disproportionately received FHA mortgages (for example, African-Americans).

[24] For example, if 10 hypothesis tests are conducted using a significance level of 0.10, then the probability of detecting at least one statistically significant result due to chance is 65 percent.

[25] Common practice dictates that statistical tests for *multiple* confirmatory outcomes in any given domain should be adjusted to account for that multiplicity. Given that the confirmatory outcomes are in different domains, the study does not need to make a statistical adjustment.

- Study participants' credit score as of December 2021 (in the financial indicators domain).[26]
- An indicator for whether the study participant was ever 60 days delinquent on a mortgage from the time they enrolled in the study through December 2021 (in the mortgage performance domain).

All the remaining outcomes are **exploratory outcomes.**[27] Exploratory outcomes are of two types: (1) alternative specifications of confirmatory outcomes and (2) additional outcomes of interest that are less directly (or more ambiguously) tied to the logic of the intervention but still might be influenced by the program. Exhibit 2.4 lists all the outcomes in this report, along with their outcome classification designation (confirmatory or exploratory). Additional details on the construction of these outcomes appear in section B.2.

Exhibit 2.4. Outcomes for Impact Analysis, by Outcome Domain

Outcome Label	Outcome Definition	Data Sources	Classification for Impact Analysis
Panel A. Financial Indicators Domain			
Credit score (range is 300–850)	Continuous Credit score (range is 300–850) as of December 2021	Credit bureau	Confirmatory
Study participant has a credit score greater than or equal to 620 (%)	Study participant has a credit score greater than or equal to 620 as of December 2021(%)	Credit bureau	Exploratory
Total nonhousing debt ($)	Total nonhousing debt as of December 2021 ($)	Credit bureau	Exploratory
Student loan balance ($)	Student loan balance as of December 2021 ($)	Credit bureau	Exploratory
Student loan account 30 or more days past due in the past 6 months (%)	An indicator for whether the study participant was ever 30 days delinquent on a student loan in the past 6 months as of December 2021 (%)	Credit bureau	Exploratory
Total consumer debt ($)	Total consumer debt balance, including credit card, auto, and medical debt as of December 2021 ($)	Credit bureau	Exploratory
Credit card debt ($)	Credit card balance as of December 2021 ($)	Credit bureau	Exploratory
Major nonmortgage derogatory event (charge-offs, repossessions, bankruptcies) (%)	An indicator for whether the study participant ever had a major nonmortgage derogatory event (charge-off, repossession, bankruptcy) from the time they enrolled in the study through December 2021 (%)	Credit bureau	Exploratory
Any account 60 or more days past due in the past 12 months (%)	An indicator for whether the study participant had any account 60 or more days past due in the past 12 months as of December 2021 (%)	Credit bureau	Exploratory

[26] These confirmatory outcomes were measured in December 2019 for the Long-Term Impact Report.
[27] The Long-Term Impact Report classified as outcomes as confirmatory, secondary, or exploratory. In contrast, this report classifies outcomes as confirmatory or exploratory. The study team used three different classification categories for the Long-Term Impact Report given the large number of outcomes (more than 40) constructed from both survey data and administrative data. This report considers outcomes in only two domains using only administrative data, and therefore, it foregoes the use of the secondary classification.

Outcome Label	Outcome Definition	Data Sources	Classification for Impact Analysis
Total past due amount for all accounts ($)	Total past due amount for all accounts as of December 2021 ($)	Credit bureau	Exploratory
Panel B. Mortgage Performance Domain			
Ever 30 days delinquent on any mortgage (%)	An indicator for whether the study participant was ever 30 days delinquent on any mortgage from the time they enrolled in the study through December 2021 according to either credit bureau or FHA data (%)	Credit bureau; FHA	Exploratory
Ever 30 days delinquent on any mortgage, credit data only (%)	An indicator for whether the study participant was ever 30 days delinquent on any mortgage from the time they enrolled in the study through December 2021 according to credit bureau data (%)	Credit bureau	Exploratory
Ever 60 days delinquent on any mortgage (%)	An indicator for whether the study participant was ever 60 days delinquent on any mortgage from the time they enrolled in the study through December 2021 according to either credit bureau or FHA data (%)	Credit bureau; FHA	Confirmatory
Ever 60 days delinquent on any mortgage, credit data only (%)	An indicator for whether the study participant was ever 60 days delinquent on any mortgage from the time they enrolled in the study through December 2021 according to credit bureau data (%)	Credit bureau	Exploratory
Ever 90 days delinquent on any mortgage (%)	An indicator for whether the study participant was ever 90 days delinquent on any mortgage from the time they enrolled in the study through December 2021 according to either credit bureau or FHA data (%)	Credit bureau; FHA	Exploratory
Ever 90 days delinquent on any mortgage, credit data only (%)	An indicator for whether the study participant was ever 90 days delinquent on any mortgage from the time they enrolled in the study through December 2021 according to credit bureau data (%)	Credit bureau	Exploratory
Received mortgage forbearance, a loan modification, or other accommodation (%)	An indicator for whether the study participant received a mortgage forbearance, a loan modification, or other accommodation during the pandemic (%)	Credit bureau	Exploratory

FHA = Federal Housing Administration.
Note: Two versions of each outcome were constructed, one that captures study participant outcomes in December 2021 and a second set of exploratory outcomes that capture study participant outcomes using July 2022 credit bureau data.

2.8 Tradeoffs and Limitations

Given the experimental design of this study, the authors are confident that the impacts presented in this report have strong *internal validity*—that is, they are not biased by variation between the characteristics of those study participants offered homebuyer education and counseling and those assigned to the control group. However, the programmatic and policy implications of the findings also are influenced by the study's *external validity*—that is, the degree to which they can be generalized beyond the intervention, population, and setting of this analysis. Here, the authors elaborate on some tradeoffs and limitations of the analysis presented in this report.

2.8.1 Data Sources and Timing

This analysis relies on December 2021 credit bureau- and FHA-administrative data to construct all outcomes for the impact analysis. Although this 6- to 7-year followup window offers insights into how the intervention's impacts were experienced deep into the pandemic, the time window is substantially removed from the treatment group's access to and participation in homebuyer education and counseling. Moreover, the outcomes the authors focus on as of this final followup of the study sample are those only available from administrative data sources. In contrast, the study's long-term impact report also included findings based on survey data, which offered a fuller assessment of the intervention's impacts after 4 to 6 years of followup (Peck et al., 2021). The survey also enabled the study to consider the sample's direct reported experiences with some aspects of the intervention. Although this study does not have a 6- to 7-year followup survey, the authors have supplemented this final analysis with insights from a small number of qualitative interviews of study members with varied experiences relevant to interpreting the impact results.

2.8.2 Generalizability of Findings

The findings are limited to the *specific* first-time homebuyer education and counseling programs analyzed in this study. Findings should not be extrapolated to other *types* of housing counseling and education, such as counseling associated with rental assistance programs, counseling directed at preventing foreclosures, or prepurchase first-time homebuyer education and counseling programs that are materially different than those studied here.[28] Furthermore, the study population, although diverse along many dimensions, is distinctive: participants came into the study by way of a referral from one of three major national lenders, rather than as people seeking out and securing or being required to participate in homebuyer education and counseling services. The study also took place under specific housing and credit market conditions, including those present during the COVID-19 pandemic. The findings should be interpreted within the context of the housing, labor, and credit markets in which the demonstration took place.

This analysis's findings will be most relevant to populations that are similar to the study sample at baseline: low- to middle-income households that contacted one of three major national banks about acquiring a mortgage for a first-time home purchase. The findings might not carry over for groups that differ in meaningful ways from this study sample. For example, one key aspect of the study's sample is that participants were recruited through lenders *after* they reached out for information about a mortgage—as a result, a sizeable number of the study's participants were fairly far along in the homebuying process when they were enrolled in the study. The study recruitment also excluded people for whom homebuyer education or counseling was required (for example, those in a downpayment assistance program) because the requirement would preclude their random assignment to the control group. The impact of the intervention could be different for people who seek counseling before reaching out to lenders or who are at earlier stages of the homebuying process.

[28] Testing for HUD's Housing Counseling Certification became available in 2017, after the study participants completed education and counseling. Such testing might have had a material effect on the quality of housing counseling services—for example, by enhancing counselors' knowledge and skills.

Still, the study sample includes a large number of participants who vary in their sociodemographic composition and were recruited across 28 large metropolitan areas. Therefore, the study findings provide important evidence on the effectiveness of homebuyer education and counseling for a robust sample with characteristics similar to those of a sizeable share of the population of low- to middle-income prospective first-time homebuyers.[29]

2.8.3 Statistical Power

Although the study is adequately powered to detect *overall* impacts of modest magnitude, the threshold is higher —that is, the magnitude of the impact has to be bigger—for detecting a statistically significant impact for each subgroup, simply because of the smaller sample sizes available for estimating subgroup impacts.

Two reasons explain why this study might not detect an impact on a given outcome. First, the null hypothesis might be true—that is, an impact simply might not exist. Second, an impact could exist but it may be smaller than is detectable given the study design and available data. Understanding the minimum detectable effect is helpful for understanding impacts that are not statistically significant. Therefore, the authors do not interpret impacts that are not statistically significantly different from zero as evidence of “no impacts.” Rather, the authors use the interpretation that “no detectable impacts” exist, because smaller impacts might be present than what this analysis is able to detect.

Given the importance of subgroup impact findings to this analysis, this point about statistical power is especially relevant. The study is powered to detect small to moderate impacts on key outcomes for the full study sample. However, the study is only generally powered to detect large effects within larger sized subgroups and very large effects within smaller sized subgroups. That is to say, as the sample of interest becomes smaller, the estimated impacts need to be larger to be detected. The authors use this observation in their interpretation and discussion of within-subgroup impacts and between-subgroup impact differences.

2.8.4 Focus on the Impact of Homebuyer Education and Counseling

This report focuses on the impact of offering homebuyer education and counseling on the outcomes listed previously, not on the levels of the outcomes. It is beyond the scope of this report to provide a normative assessment of whether the average values of each outcome for the treatment and control groups are “good” or not. However, Moulton et al. (forthcoming) describes changes in these financial outcomes for the overall sample from July 2017 through December 2021. That information may provide useful context by providing information on changes in the levels and trajectories of these outcomes over time for this sample.

[29] For further discussion of the external validity of the demonstration’s sample, see chapter 5 of the Demonstration’s Baseline Report (DeMarco et al., 2017).

How to Read the Impact Exhibits in This Report

The following sample table presents the impact of homebuyer education and counseling services on the credit scores of study participants as measured in December 2021.The table reports the mean level of the outcome for the entire treatment group and the control group: the average credit score for all treatment group members was 735.9 and the average credit score for control group members was 735.0.

The *difference* between the two mean outcomes is the **impact of being *offered* homebuyer education and counseling services**. This intent-to-treat (ITT) estimate appears in the table's "Impact of Being Offered Services" column, showing that the average credit score of the entire treatment group was 0.9 points higher than the average credit score of the control group.

The authors also report the **impact of *taking up* homebuyer education and counseling services.** This treatment-on-the-treated (TOT) estimate appears in the table's "Impact of Taking Up Services" column, showing that the subset of those in the treatment group who actually *participated* in homebuyer education and counseling services had credit scores 1.5 points higher than the control group score.[a]

Because taking up services was less than 100 percent, the TOT estimate will always be larger in magnitude than the ITT estimate. The two estimates will always have the same sign and will generally have the same level of statistical significance.

Impacts marked with one or more asterisks are statistically significant, indicating that it is unlikely that the impact was due to chance. The number of asterisks indicates whether the impact is statistically significant at the 10 percent (*), 5 percent (**), or 1 percent (***) level. The more asterisks, the less likely the finding was due to chance. In the sample following table, the impacts are not statistically different from zero as indicated by the lack of asterisks attached to the impact estimates.

Appendix A provides technical details related to the analytic methods used to estimate the impacts. Appendix B provides additional detail on the construction of measures, including outcomes, covariates used to improve the precision of the estimates, and subgroup identifiers.

Sample Table. Overall Impact of the Demonstration's Homebuyer Education and Counseling Credit Scores

Outcome	Treatment Group Mean	Control Group Mean	Impact of Being Offered Services	Impact of Taking Up Services
Credit score (range is 300–850)	**735.9**	**735.0**	**0.9**	**1.5**

Notes: The confirmatory outcomes appear in bold. A one-sided test was used to determine the statistical significance of the impact on the confirmatory outcomes. All other tests were two-sided. Due to rounding, reported impacts (T-C differences) could differ from differences between reported means for the treatment and control groups. Appendix A details the analytic methods and appendix B provides additional detail on the construction of measures.
Statistical significance levels for one-sided tests are indicated with hashtags as follows: ### = 1 percent; ## = 5 percent; # = 10 percent.
Statistical significance levels for two-sided tests are indicated with asterisks as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.
Sources: Credit bureau; Federal Housing Administration

[a] One way to compute the TOT estimate is to divide the ITT estimate (that is, the difference between the average outcome for the treatment and control groups) by the treatment group's takeup rate. To ascertain the TOT estimate's statistical significance, the standard error is also divided by the takeup rate (Bloom, 1984). In practice, the authors used two-stage least squares regression to compute the TOT estimate, controlling for baseline characteristics.

Chapter 3. Impact Findings for the Full Sample

Key Findings: Overall Impact of the Demonstration's Homebuyer Education and Counseling on Outcomes During the Pandemic

For the study's full sample of prospective low- to middle-income first-time homebuyers:

- **Homebuyer education and counseling services did not lead to changes in credit scores.** There is no detectable impact on the credit scores (one of the study's two confirmatory outcomes) of treatment group members.
- **Homebuyer education and counseling services did not affect mortgage performance.** Homebuyer education and counseling services did not have a detectable impact on the percentage of study participants who had ever been 30, 60, or 90 days delinquent on their mortgage (60 days delinquent was the study's other confirmatory outcome).
- **Homebuyer education and counseling services decreased receipt of mortgage accommodation during the pandemic.** Treatment group members were less likely to receive a forbearance, loan modification, or other accommodation than control group members were.
- Homebuyer education and counseling services did not detectably change any other outcomes in the financial indicators or mortgage performance domains.
- The impacts of homebuyer education and counseling services on outcomes measured in December 2021 are similar to impacts on outcomes measured in July 2022. In both time periods the authors find that treatment group members were less likely to receive a forbearance, loan modification, or other accommodation during the pandemic than control group members. In both time periods, homebuyer education and counseling services did not detectably change any other outcomes in the financial indicators or mortgage performance domains.

An important question for this analysis is whether the treatment group, *because of the offer* of homebuyer education and counseling, was better prepared for the economic stresses of the COVID-19 pandemic than the control group. To address this research question, the authors estimated the impact of the offer of homebuyer education and counseling on outcomes measured in December 2021, some 6 to 7 years after study participants enrolled in the study. This followup window is many years after the treatment group's access to and participation in homebuyer education and counseling.

Exhibit 3.1 presents the impact of offering the demonstration's homebuyer education and counseling services on outcomes measured in December 2021 for the full sample of study participants. Appendix exhibit C.1 presents additional information related to these impacts, including sample sizes, standard errors, and other outputs.

- For the study's full sample of prospective low- to middle-income first-time homebuyers, homebuyer education and counseling services did not have a detectable impact on the study's two confirmatory outcomes.

Exhibit 3.1. Overall Impact of the Demonstration's Homebuyer Education and Counseling

Outcome	Treatment Group Mean	Control Group Mean	Impact of Being Offered Services	Impact of Taking Up Services
Panel A. Financial Indicators Domain				
Credit score (range is 300–850)	**735.9**	**735.0**	**0.9**	**1.5**
Study participant has a credit score greater than or equal to 620 (%)	87.8	87.1	0.7	1.3
Total nonhousing debt ($)	27,413	26,729	684	1,244
Student loan balance ($)	9,068	8,453	614	1,117
Student loan account 30 or more days past due in the past 6 months (%)	1.8	2.0	– 0.2	– 0.3
Total consumer debt ($)	16,299	16,610	– 311	– 565
Credit card debt ($)	4,718	4,967	– 249	– 454
Major nonmortgage derogatory event (charge-offs, repossessions, bankruptcies) (%)	24.6	24.5	0.1	0.2
Any account 60 or more days past due in the past 12 months (%)	7.1	8.1	– 1.0	– 1.9
Total past due amount for all accounts ($)	632	695	– 63	– 114
Panel B. Mortgage Performance Domain				
Ever 30 days delinquent on any mortgage (%)	12.6	13.3	– 0.7	– 1.2
Ever 30 days delinquent on any mortgage, credit data only (%)	9.4	9.4	– 0.1	– 0.1
Ever 60 days delinquent on any mortgage (%)	**7.5**	**8.0**	**– 0.5**	**– 0.9**
Ever 60 days delinquent on any mortgage, credit data only (%)	4.7	4.8	– 0.1	– 0.2
Ever 90 days delinquent on any mortgage (%)	6.1	6.1	0.0	0.0
Ever 90 days delinquent on any mortgage, credit data only (%)	3.4	3.4	– 0.0	– 0.0
Received mortgage forbearance, a loan modification, or other accommodation (%)	9.1	11.2	– 2.1**	– 3.9**

Notes: The confirmatory outcomes appear in bold. A one-sided test determined the statistical significance of the impact on the confirmatory outcomes. All other tests were two-sided. Due to rounding, reported impacts (T-C differences) could differ from differences between reported means for the treatment and control groups. Appendix A details the analytic methods, and appendix B provides additional detail on the construction of measures.
Statistical significance levels for one-sided tests are indicated with hashtags as follows: ### = 1 percent; ## = 5 percent; # = 10 percent.
Statistical significance levels for two-sided tests are indicated with asterisks as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.
Sources: Credit bureau; Federal Housing Administration

There is no detectable impact on the credit scores of treatment group members, the confirmatory outcome in the financial indicators' domain. Similarly, homebuyer education and counseling services did not have a detectable impact on the percentage of study participants who were ever 60 days delinquent on their mortgage, the confirmatory outcome in the mortgage performance domain.[30] Taken together, these findings indicate that homebuyer education and counseling did not improve the study's most important outcomes as measured in December 2021, some 6 to 7 years after study participants enrolled in the study.

- Treatment group members were less likely to receive a forbearance, loan modification, or other accommodation during the pandemic.

Some 9.1 percent of the treatment group members received a mortgage forbearance, a loan modification, or other accommodation during the pandemic, a rate 2.1 percentage points less than the corresponding rate for the control group. It is unclear whether this outcome is a favorable or unfavorable impact. If the lower rate of forbearance, loan modifications, or other accommodations for the treatment group is indicative of a lower incidence of experiencing difficulty making mortgage payments, it would be favorable. If, however, the lower rate is indicative of treatment group participants being less likely to reach out to their servicer when facing difficulties, it would be an unfavorable impact.

- Homebuyer education and counseling services did not detectably change any other outcomes as of this followup analysis.[31]

To assess whether findings are similar for outcomes measured at a later point in the pandemic (after government stimulus and the forbearance period largely expired), appendix exhibit C.2 presents the impact of offering the demonstration's homebuyer education and counseling services on outcomes measured in July 2022 for the subset of participants who enrolled in the study in August 2014 or later.[32] The findings based on December 2021 impacts are quite similar to the findings based on July 2022 impacts. At both time points, the authors find that treatment group members were less likely to receive a forbearance, loan modification, or other accommodation during the pandemic than control group members were. At both time points, homebuyer education and counseling services did not detectably change any other outcome in the financial indicators or mortgage performance domains.

[30] To understand whether the intervention affected mortgage performance during the pandemic, the authors also estimated the impact of offering homebuyer education and counseling on three alternative mortgage performance measures: ever 30, ever 60, and ever 90 days delinquent in the past 12 months as measured in December 2021. The authors did not detect a statistically significant impact of homebuyer education and counseling on these three alternative measures of mortgage performance for the full study sample. Among the full study sample, 1.8 percent of the study participants were ever 30 days delinquent in the past 12 months; 0.8 percent was ever 60 days delinquent in the past 12 months; and 0.6 percent was ever 90 days delinquent in the past 12 months.
[31] As Peck et al. (2021) report, the treatment group had a higher level of student loan debt than the control group when measured in December 2019. In contrast, the authors find no detectable impact of homebuyer education and counseling on student loan debt as measured in December 2021.
[32] The sample for this analysis is limited to study participants who enrolled in the study in August 2014 or later due to informed consent timing out.

Impact of Homebuyer Education and Counseling on Refinancing

About 14 million homeowners, or roughly one-third, refinanced their mortgages during 2020 and 2021, the result of historically low-interest rates (Haughwout et al., 2023). Researchers have estimated that the typical homeowner who refinanced during the first several months of the pandemic saved $279 per month (Gerardi, Lambie-Hanson, and Willen, 2021).

During the design of this followup study, the authors did not include home refinancing as an outcome of interest, because credit bureau data did not contain information that explicitly identifies whether a mortgage was used to refinance a property. However, given the large decreases in interest rates that occurred during the pandemic and the financial benefits that homeowners could have obtained from refinancing during this time, the authors constructed a refinancing proxy variable. Using credit bureau data, the authors assumed that a study participant had refinanced if both of the following conditions were true: (1) they opened a new first mortgage account between March 2020 and December 2021; and (2) they had the same number of (nonzero) first mortgage accounts in December 2021 as in December 2019 (to rule out capturing first-time home purchases and purchases of second properties). Based on this proxy for refinancing during the pandemic, approximately 23.6 percent of the study's overall study sample refinanced between March 2020 and December 2021. Although at first this number might seem high, a recent analysis from the Federal Reserve Bank of New York estimated that balances on refinances during the 7 quarters, starting with the second quarter of 2020, accounted for approximately one-third of all outstanding mortgage balances (Haughwout et al., 2023).

Using this proxy variable, the authors estimated the impact of homebuyer education and counseling on the likelihood of refinancing. The authors find a positive and statistically significant impact of 2.7 percentage points, with 24.7 percent of the treatment group members versus 22.0 percent of the control group refinancing according to this measure at that followup point. This outcome reflects about a 12 percent *higher* rate of refinance among treatment group members relative to their control group counterparts.

Chapter 4. Impact Findings for Subgroups by Baseline Characteristics

Key Findings: Impact of the Demonstration's Homebuyer Education and Counseling on Subgroups Defined by Baseline Characteristics

- From among many tests of within- and between-group impacts, the findings that stand out being unlikely to be due to chance are summarized here as key findings.
- The impact of homebuyer education and counseling differed by subgroups defined by age, with the intervention primarily benefiting (or having an ambiguous effect on) younger participants. Despite having more nonhousing debt (including credit card debt) relative to their control group counterparts, treatment group members aged 29 or younger—
  - Had fewer major nonmortgage derogatory events.
  - Had less past due for all accounts.
  - Had lower 60-day mortgage delinquency rates.
- The impact of homebuyer education and counseling differed by subgroups defined by race and ethnicity, with the intervention primarily benefiting White prospective homebuyers. Relative to their control group counterparts, treatment group members who were White—
  - Had higher credit scores (and a greater share had a credit score greater than or equal to 620).
  - Had fewer major nonmortgage derogatory events.
  - Had less total amount past due for all accounts.
  - Had lower 30-, 60-, and 90-day mortgage delinquency rates.
  - Were less likely to receive mortgage accommodation during the pandemic.
- African-American treatment group members appear to have experienced some unfavorable impacts from homebuyer education and counseling. Relative to their control group counterparts, Non-Hispanic African-American treatment group members—
  - Had more major nonmortgage derogatory events.
  - Had higher 90-day mortgage delinquency rates.
- Homebuyer education and counseling did not generally have a detectable impact on Hispanics or Asians.
- The differences between the impacts for Whites and for the non-White subgroups indicate that the intervention was successful, according to COVID-19 pandemic-timed outcomes, for Whites but not for their non-White counterparts.
- Homebuyer education and counseling did not have statistically significant differential impacts for subgroups defined by gender, income, or credit score.

In addition to estimating impacts for the full sample of study participants, the authors estimated impacts for subgroups defined by age, race and ethnicity, gender, income, and credit score at baseline, as well as for the subset of study participants who received Federal Housing Administration (FHA) loans. This chapter reports key findings from these analyses for the subgroups defined by baseline characteristics.[33] Appendix D reports detailed impacts for all subgroups. The next chapter reports key findings for the subset of study participants who received FHA loans.

For subgroups defined by gender, income, and credit score, the analysis revealed no systematic between-subgroup differences in impacts. The following sections discuss findings for subgroups defined by age and race and ethnicity, for which between-subgroup differences in impacts were detected.

4.1 Impacts on Subgroups Defined by Age at Baseline

During the pandemic, the impact of homebuyer education and counseling differed by subgroups defined by age (see exhibit D.1). The authors observed five differences in impacts, statistically significant at the 10 percent level, between the younger and older subgroups at the December 2021 followup.

- **Homebuyer education and counseling increased nonhousing debt levels for those age 29 or younger.** Relative to control group members, treatment group members age 29 or younger had $2,931 more in total nonhousing debt and $692 more in credit card debt. These impacts on debt levels for those age 29 or younger at baseline are all statistically different from the corresponding impacts on those age 30 or older at baseline, where the estimated impacts for the older subgroup are either not detectably different from zero (total nonhousing debt) or are negative (credit card debt).
- **Homebuyer education and counseling helped those age 29 or younger avoid major nonmortgage derogatory events.** Among those age 29 or younger at baseline, 16.5 percent of treatment group members had a major nonmortgage derogatory event (charge-offs, repossessions, bankruptcies), a rate 3.4 percentage points less than the corresponding rate for the control group.
- **Those age 29 or younger who were offered homebuyer education and counseling had lower amounts past due across all accounts.** According to December 2021 credit bureau data, treatment group members aged 29 or younger at baseline had an average of $501 past due across all accounts (mortgage and nonmortgage), whereas control group members had an average of $685 past due across all accounts.
- **Homebuyer education and counseling improved mortgage performance for those age 29 or younger at baseline.** Treatment group members age 29 or younger at baseline were 2.0

[33] This subgroup analysis contains a substantial number of tests. It estimates and reports the effect of being offered services on 17 outcomes for each of 12 different subgroups, resulting in 204 tests of whether impacts are statistically significant for a given subgroup. Tests were also conducted to determine whether the impacts were statistically different between subgroups for 17 outcomes and 7 subgroup comparisons, resulting in 119 tests of whether impacts are statistically different between subgroups. The key findings in this chapter focus only on those groups with at least 4 of 17 detectable differential impacts at the 10-percent significance level, a threshold that protects from interpreting false positives (described further in section A.5).

percentage points less likely than their control group counterparts to be ever 60 days delinquent on any mortgage.

Taken together, this evidence indicates that homebuyer education and counseling had a generally favorable impact at the 6- to 7-year followup on study participants who were age 29 or younger at baseline. They were less likely than their control group counterparts to have a major nonmortgage derogatory event, had lower amounts past due across all accounts, and had better mortgage performance. Although treatment group members who were age 29 or younger at baseline had higher levels than the control group of nonhousing debt at this 6- to 7-year followup, these higher levels of debt did not translate into delinquencies. The lack of detectable impacts on delinquencies for younger study participants could be explained by either the student loan debt payment moratorium or the Long-Term Impact Report's finding that younger treatment group members had higher levels of savings and investments relative to their control group counterparts 4 to 6 years after enrolling in the study.[34]

4.2 Impacts on Subgroups Defined by Race and Ethnicity

The impact of homebuyer education and counseling differed by subgroups defined by race and ethnicity, with the intervention primarily benefiting White prospective first-time homebuyers.[35] Where *between-group* differences in impacts exist—that is, one group's treatment-control difference (impact) differs from the opposing group's treatment-control difference (impact)—the authors discuss the *within-group* impact as a means to help explain what drives those between-group differences.

Relative to their control group counterparts, White treatment group members who were offered homebuyer education and counseling services:

- **Had Higher Credit Scores.** White treatment group members had an average credit score 5.6 points higher than their control group counterparts. There is no detectable impact on this outcome for Hispanic, African-American, or Asian treatment group members relative to their respective control group counterparts.
- **Were Less Likely to Experience Major Nonmortgage Derogatory Events.** Among White treatment group members, 16.5 percent had a major nonmortgage derogatory event (charge-offs, repossessions, bankruptcies), a rate 2.5 percentage points less than the corresponding rate for the control group. In contrast, African-American treatment group members were 7.0 percentage points more likely to experience a major nonmortgage derogatory event than their

[34] As Peck et al. (2021) described, among those age 29 or younger, treatment group members had $12,050 more in total savings and investments than control group members at long-term followup. This higher level of savings and investments for treatment group members age 29 or younger more than offsets the higher debt levels for this group. The impact on total savings and investments was not detectable for those aged 30 or older at baseline.

[35] In the text, for parsimony and to be consistent with prior reports, the authors abbreviate the labels for subgroups defined by race and ethnicity. Exhibit titles include the complete labels for the subgroups. The subgroups that are White, non-Hispanic; African-American, non-Hispanic; Asian, non-Hispanic, or Hispanic (in exhibit titles) are referred to in the text as simply White, African-American, Asian, or Hispanic, respectively. Each of these four groups—those who are White, African-American, Asian, or Hispanic—are mutually exclusive in this study and together cover 100 percent of the study sample.

control group counterparts. There is no detectable impact on this outcome for Hispanics or Asians.

- **Had Lower Amounts Past Due Across All Accounts.** According to December 2021 credit bureau data, White treatment group members had an average of $364 past due debt across all accounts (mortgage and nonmortgage), whereas control group members had an average of $605 past due across all accounts, $241 more than the treatment group. There is no detectable impact on this outcome for African-Americans, Hispanics, or Asians.

The Impact of Homebuyer Education and Counseling on Refinance Rates During the Pandemic for Subgroups Defined by Race and Ethnicity

Chapter 3 highlights the overall impact of homebuyer education and counseling on a variable that proxies for whether a study participant refinanced their home mortgage during the pandemic, according to a proxy measure. Using that same proxy, the authors estimated the impact of homebuyer education and counseling on the rate of refinancing between March 2020 and December 2021 for subgroups defined by race and ethnicity. The findings are:

- Of White treatment group members, 31.1 percent refinanced a rate 4.0 percentage points higher than the corresponding rate for their control group counterparts.
- Of Hispanic treatment group members, 20.1 percent refinanced a rate 4.2 percentage points higher than the corresponding rate for their control group counterparts.
- No detectable difference was observed between the treatment and control groups for either the African-American or Asian subgroups.
- The refinance rates for African-American study participants and Asian study participants were 14.2 and 31.8 percent, respectively. Although the *level* of refinance among African-American study participants was low relative to other subgroups defined by race and ethnicity—aligning with findings from Gerardi, Willen, and Zhang (2020) and Lambie-Hanson and Reid (2018)—no evidence exists of a treatment-control *differential* that implies a favorable or unfavorable response to the intervention.

These findings show that the overall impact of homebuyer education and counseling on the rate of refinancing (by the study's proxy measure) was driven by the impact on two specific subgroups—White and Hispanic study participants—and that the intervention helped these groups better access the historically low-interest rates that prevailed during this time. Research estimates that the typical savings accrued to homeowners as a result of refinancing during the first several months of the pandemic were $279 per month (Gerardi, Lambie-Hanson, and Willen, 2021).

Although homebuyer education and counseling did not have a detectable impact on treatment group members in the Asian subgroup, it is worth noting that the overall rate of refinancing for this subgroup was the highest among the four subgroups (31.8 percent). Therefore, Asian study participants overall (that is, in both the treatment and control groups) actually benefited the most from these low-interest rates.

African-American treatment group members did not experience a favorable impact on refinancing and African-American study participants, regardless of their experimental group status, had the lowest overall refinance rate (again, by the study's proxy measure) and, therefore, were least likely to financially benefit from falling interest rates during the pandemic.

- **Had Lower 30-, 60-, and 90-Day Mortgage Delinquency Rates.** According to credit data and FHA data, White treatment group members were less likely than their control group counterparts to be recorded as ever 30 days, 60 days, or 90 days delinquent on any mortgage. In contrast, African-American treatment group members were more likely to be ever 90 days delinquent on any mortgage than were their control group counterparts.[36] There is no detectable impact on any mortgage performance measures for Hispanics or Asians.

- **Were Less Likely to Receive a Mortgage Forbearance, a Loan Modification, or Other Accommodation During the Pandemic.** During the pandemic, 5.9 percent of White treatment group members received a mortgage forbearance, a loan modification, or other accommodation, a rate 3.0 percentage points less than the corresponding rate for the control group. There is no detectable impact on this outcome for African-Americans, Hispanics, or Asians.

Although homebuyer education and counseling had multiple favorable impacts for Whites, there is evidence that African-Americans experienced some unfavorable impacts from homebuyer education and counseling. Based on credit data combined with FHA data, African-Americans who were offered homebuyer education and counseling had a higher 90-day mortgage delinquency rate and higher rate of major nonmortgage derogatory events than did their control group counterparts.[37] Further, the Long-Term Impact Report's impact analysis indicates that, among African-Americans, about 67 percent of control group members purchased a home, and about 61 percent of treatment group members purchased a home (Peck et al., 2021). This report's impact analysis indicates that, since enrolling in the study, 9.1 percent of African-American control group members were ever 90 days delinquent on any mortgage, whereas 12.7 percent of African-American treatment group members were ever 90 days delinquent on any mortgage. Given that the home purchase rate is lower for African-American treatment group members relative to the control group, these findings imply that the unfavorable impact on the 90-day delinquency rate among African-Americans who purchased a home is larger in magnitude than the impact for the full African-American sample. Among African-Americans, about 14 percent of control group members who purchased a home were

Racial Disparities in the Impact on Refinancing

Chapter 3 highlights the overall impact of homebuyer education and counseling on a variable that proxies for whether a study participant refinanced their home mortgage during the pandemic. Using that same proxy variable, the authors find that homebuyer education and counseling resulted in a 4.0-percentage point higher rate of refinancing for White treatment group members relative to their White control group counterparts—31.1 percent for White participants in the treatment group versus 27.1 percent for their counterparts in the control group. The refinance rates were not statistically significant different (by our proxy measure) between the treatment and control group members in the African-American subgroup.

[36] To understand whether the intervention affected mortgage performance during the pandemic, the authors also estimated the impact of offering homebuyer education and counseling on three alternative mortgage performance measures: ever 30, ever 60, and ever 90 days delinquent in the past 12 months as measured in December 2021. The authors did not detect a statistically significant impact of homebuyer education and counseling on these three alternative measures of mortgage performance for White study participants or African-American study participants.

[37] The authors tested whether key baseline and followup measures were different between African-American home purchasers in the treatment group versus African-American home purchasers in the control group. Among African-American home purchasers, the following measures are not detectably different between treatment and control group members: age at the time of study enrollment, baseline savings, baseline nonhousing debt, baseline credit score, savings at long-term followup, credit score in December 2021, and nonhousing debt in December 2021. This finding implies that the unfavorable impact of homebuyer education and counseling on mortgage performance for African-Americans is not due to differences between the type of African-Americans who purchased in the treatment and control groups.

ever 90 days delinquent, and about 21 percent of treatment group members who purchased a home were ever 90 days delinquent, implying a 7-percentage-point impact on the ever 90-day delinquency rate among African-American homeowners.

The unfavorable impact on the 90-day mortgage delinquency rate for African-American treatment group members is driven by a large unfavorable impact on the 90-day delinquency rate among African-Americans who entered the study with credit scores less than 680. Among African-Americans who had a credit score less than 680 when they enrolled in the study, 17.2 percent of treatment group members were ever 90 days delinquent on a mortgage, whereas 10.9 percent of their control group counterparts were ever 90 days delinquent.

Homebuyer education and counseling did not generally have a detectable impact on outcomes for Hispanic or Asian study participants.

4.3 Supplemental Qualitative Analysis on Race

To uncover possible explanations for the differential impacts for racial subgroups, the study team conducted semi-structured interviews with 18 treatment group participants; eight research participants identified as Black or African-American, and 10 identified as White. At some point during the study period, one-half of the respondents had been 30 or more days delinquent on their mortgage payments, and the other one-half had never been delinquent on their mortgage payments (exhibit 4.1).[38]

Exhibit 4.1. Racial Identity and Mortgage Status of the Interview Sample

Racial Identity	Never Delinquent (n)	Ever Delinquent (n)
White	6	4
Black or African-American	3	5
Total	**9**	**9**

During the interviews, the study team asked research participants a wide range of questions about the intervention, the homebuying process, and their experiences as homeowners. Overall, participants of both races were largely pleased with their experiences with homebuyer education and counseling. Furthermore, no participants reported observing or experiencing racially biased behaviors or materials during homebuyer education and counseling. However, most African-American participants (five of eight) described first-hand encounters with racial bias during their homebuying process. These experiences ranged from blatantly racist behaviors, such as realtors treating African-American participants as "less than," to subtler forms of racial bias, such as a lack of timely service for pressing financial matters by an underwriter.

[38] Of the nine "ever delinquent" respondents, five had been less than 30 days delinquent. Because of their short delinquency period, none of these research participants realized that they had ever been delinquent, and the authors did not find meaningful differences between their experiences with the homebuyer education and counseling or in the housing market. Because of this apparent lack of difference, the authors aggregated the results across the delinquent and nondelinquent groups for most in reporting from this analysis.

Given the small number of interviews, these findings may not be representative of the perceptions and experiences of African-American treatment group members more broadly. See appendix F and G for more details about the interviews and qualitative analysis.

Chapter 5. Nonexperimental Impacts on the Subset of Federal Housing Administration Loan Recipients

Key Findings: Impact of the Demonstration's Homebuyer Education and Counseling on Federal Housing Administration (FHA) Loan Recipients

For the study's subset of FHA loan recipients:

- Homebuyer education and counseling services **did not detectably change any of the 10 outcomes in the financial indicators' domain.**
- Evidence suggests that homebuyer education and counseling services influenced outcomes in the mortgage performance domain—
  - Increased the ever 90-day delinquency rate as measured through December 2021.
  - Increased the share who received a mortgage forbearance, a loan modification, or other accommodation during the pandemic.
- However, the small number of statistically significant impacts for the FHA subsample leads us to the conclusion that the intervention did not meaningfully influence the outcomes of study participants who received an FHA loan.

Estimating the impact of homebuyer education and counseling for the subset of study participants who received Federal Housing Administration (FHA) loans is a nonexperimental analysis because whether someone received an FHA loan is measured after study enrollment and randomization to the study's treatment and control groups and, therefore, could have been influenced by the intervention. For example, it is possible that homebuyer education and counseling influenced the share of or type of treatment group members who received an FHA loan. It could be that better (or worse) qualified borrowers were more likely to get an FHA loan as a result of the intervention. If either of these outcomes was the case, then it would be a methodological challenge to disentangle the effects of homebuyer education and counseling from any observed differences in the type of borrower who received an FHA loan between those in the treatment group versus the control group.

However, as described in appendix section A.3, the authors find that homebuyer education and counseling did not affect the share of study participants who received an FHA loan. About 19 percent of study participants received an FHA loan, with no detectable difference between the treatment and control groups. Further, treatment group members who received an FHA loan are not systematically different from control group members who received an FHA loan in their baseline characteristics. When analyzing the impact of homebuyer education and counseling services on outcomes for the subset of study participants who received an FHA loan, this observed balance across experimental groups provides reassurance that impact estimates computed by the study's standard methodology isolate an unbiased impact of homebuyer education and counseling. As a result, the impact for the subset of FHA loan recipients can be interpreted as if it was an experimental impact estimate.

As presented in exhibit E.1, for the study's subset of FHA loan recipients, the authors find that the offer of homebuyer education and counseling services:

- **Increased the Ever 90-Day Mortgage Delinquency Rate.** Among FHA loan recipients, 10.8 percent of treatment group members were ever 90 days delinquent on any mortgage, according to December 2021 credit bureau data, a rate 2.6 percentage points higher than the corresponding rate for the control group.[39]

- **Increased the Share Who Received a Mortgage Forbearance, a Loan Modification, or Other Accommodation.** Among FHA loan recipients, 20.7 percent of treatment group members received an accommodation during the pandemic, a rate 3.0 percentage points higher than the corresponding rate for the control group.

The offer of homebuyer education and counseling services did not detectably change any other outcomes in the financial indicators or mortgage performance domains for FHA loan recipients as measured through December 2021.

Using credit bureau data through July 2022 for the subset of FHA loan recipients who were eligible for July 2022 data collection, the authors find that the magnitude of the impacts on the *ever 90-day mortgage delinquency rate* and *share who received a mortgage forbearance, a loan modification, or other accommodation* are exactly the same as the impacts reported previously based on December 2021 data but are not detectably different from zero (as reported in exhibit E.2 and the right column of exhibit E.3). This change in statistical significance is likely a result of the drop in statistical precision from the decreased sample size where about a one-fourth of the sample for the analysis of July 2022 outcomes is lost due to informed consent timeout.

In contrast to the December 2021 findings, where the study did not detect an impact on any other outcomes in the financial indicators and mortgage performance domains, the findings based on credit bureau data through July 2022 indicate that the offer of homebuyer education and counseling had a relatively large and unfavorable impact on the ever 30-day delinquency rate of FHA loan recipients. Among FHA loan recipients, 25.6 percent of treatment group members were ever 30 days delinquent on any mortgage loan according to credit bureau data through July 2022, a rate 6.4 percentage points higher than the corresponding rate for the control group.

[39] To understand whether the intervention affected mortgage performance during the pandemic, the authors also estimated the impact of offering homebuyer education and counseling on three alternative mortgage performance measures: ever 30, ever 60, and ever 90 days delinquent in the past 12 months as measured in December 2021. The authors did not detect an impact of homebuyer education and counseling on these three alternative measures of mortgage performance for FHA loan holders.

Insights from Interviews with Some Treatment Group Participants

As described elsewhere in this report (appendix F for example), the primary focus of the qualitative data collection was to explore two distinct topics: (1) the differential impacts of the intervention between African-American and White subgroups, and (2) participants' experiences during and after the forbearance process. Eighteen people participated in the interviews to explore subgroup differences, and eight participated in the interviews focused on forbearance. Although the interview protocols for each topic differed, a common theme that emerged through the analysis of all 26 participant interviews was the utility of the education and counseling services.

Valuable Skills and Information

Research participants consistently noted that they used and appreciated material covered through counseling and education at some point during their homebuying journey. The elements that participants found most useful varied. Some highlighted learning about the homebuying process and how home insurance works, while others focused on concrete actions or tools related to building and maintaining credit and creating a budget and savings plan. Finally, gaining "soft skills" emerged as important to some research participants, including developing their understanding of the importance of communicating with their mortgage servicer. Appendices G and H provide specific examples of the features of the education and counseling services most valued by these research participants.

That most of the 26 participants in this qualitative research indicated that they gained useful knowledge through education and counseling, suggests that these services provide useful information to first-time homebuyers. This finding is particularly compelling given the relatively light touch of the housing and counseling intervention and the relatively long period of time between the completion of the intervention and the interviews.

Racial Bias and Homebuyer Education and Counseling

A primary aim of the interviews with delinquent and nondelinquent respondents was to identify plausible mechanisms or hypotheses to explain the differential impacts of homebuyer education and counseling across racial and ethnic subgroups. One line of questioning was to explore whether the respondents had experienced racially biased messaging or behaviors during homebuyer education and counseling. None of the eight African-American respondents asked about racial bias had experienced or observed racially biased information or behaviors associated with the services. In fact, multiple respondents commented on the inclusive nature of the homebuyer education and counseling materials and delivery, in their experience. One characterized it as "[the homebuyer education and counseling] for everybody."

The interview results suggest that the education and counseling services provided participants with useful information for their homebuying journey. In addition, the interviews indicate that participants who identify as African-American did not perceive racial bias in education and counseling services or associated materials. This finding suggests the differential impacts of the intervention on African-American versus White subgroups in the HUD First-Time Homebuyer and Education Counseling Demonstration were not caused by racially biased programming. Taken together, these findings indicate that the first-time homebuyer education and counseling services provided value across racial subgroups to most participants in this followup interview research.

Chapter 6. Conclusion and Implications

This report documents the impacts of offering homebuyer education and counseling on outcomes experienced during the COVID-19 pandemic, approximately 6 to 7 years after prospective first-time homebuyers enrolled in the study.

6.1 Summary of Findings

Overall, the intervention did not improve the treatment group's outcomes relative to the control group's as of 6 to 7 years after study enrollment, based on followup during the economic downturn caused by the COVID-19 pandemic. There is no detectable difference between the treatment and control groups for either of the two confirmatory outcomes—credit score or the 60-day delinquency rate. Furthermore, there is no detectable difference in other mortgage performance outcomes (for example, 30- or 90-day delinquency rate) or other financial indicators (for example, total nonhousing debt, consumer debt delinquency rate). There does seem to be an overall impact on the incidence of mortgage forbearances, loan modifications, or other accommodations, with treatment group participants having lower rates of such accommodations. In addition, there is a positive impact of the intervention on refinancing. These two findings could suggest a positive impact of the intervention—i.e., treatment group participants were more likely to refinance and, as a result, were less likely to experience financial hardships that would necessitate a forbearance. However, without a consistent pattern of positive impacts on other financial indicators, the authors are hesitant to put much weight on these findings.

- **Homebuyer education and counseling appear to have provided benefits to younger adults during the pandemic.** The offer of homebuyer education and counseling might have provided some benefits to participants age 29 and younger. At followup, despite having more nonhousing debt (including credit card debt), younger treatment group members had fewer nonmortgage derogatory events, less past due nonmortgage debt, and lower 60-day mortgage delinquency rates than did their control group counterparts.
- **The impact of homebuyer education and counseling appears to vary by race and ethnicity.** White participants appear to have benefited from homebuyer education and services during the pandemic. White treatment group members had higher credit scores, fewer nonmortgage derogatory events, and less past due nonmortgage debt than did the White control group. Homebuyer education and counseling also appear to have increased the rate of refinancing for White participants at a time when interest rates fell to historic lows. Meanwhile, the analysis suggests that the intervention did not help African-American participants at all (and might have had some unfavorable impacts, given that African-American treatment group members had higher nonmortgage derogatory events and higher 90-day delinquencies than did the African-American control group.) The intervention's differential impacts for these two subgroups served to exacerbate already unequal barriers to homeownership resulting from longstanding structural and systemic discrimination that have created racial disparities in income, credit scores, wealth, and other financial circumstances.
- **Our qualitative analysis shed little light on the differential impacts by race.** Based on a small number of interviews with treatment group participants, African-American and White respondents were largely pleased with their experiences with the intervention, although they wished homebuyer education and counseling had covered additional topics (see appendix G).

Furthermore, although many of the African-American respondents reported experiencing racial bias during their homebuying process (for example, by realtors or underwriters), none felt that they experienced or observed racially biased behaviors during the homebuyer education and counseling services or received racially biased information.

6.2 Limitations

Because of the evaluation's experimental design and careful procedures designed to generate quality evidence, its findings support the conclusion that *the specific intervention studied* (i.e., the offer of homebuyer education and counseling to low-, moderate-, and middle-income prospective first-time homebuyers who initiated contact with a lender) *led to* the confirmatory impacts observed—that is, no effect on credit score or rate of ever 60 days delinquent.

However, the programmatic and policy implications of these findings—which the authors discuss in the following section—also depend on the study's **external validity—**that is, the degree to which the findings are generalizable beyond the specific intervention, time, and population studied. Therefore, it is critical that this study explicitly establish the limitations with respect to external validity.

- **Findings might not be applicable to HUD's current housing counseling program or mandatory housing counseling programs**. The demonstration's purpose was to understand the potential impact of broadly offering all borrowers homebuyer education and counseling services that followed the industry standards at the time of the study design, circa 2013, on a free and voluntary basis. However, HUD's current program primarily supports agencies that, for the most part, serve clients who are *required to attend and complete* counseling by their lenders or as part of a state housing finance agency program. In addition, many agencies that HUD supports have likely updated and enhanced their programming to reflect new research and understanding of best practices in financial education.
- **Findings might not be applicable to "typical" clients of homebuyer education and counseling.** Many prospective homebuyers who use homebuyer education and counseling services (1) are receiving downpayment assistance (that is, they are required to participate in homeownership education and counseling as a condition of receiving assistance), and (2) take up services early in the homebuying process. In contrast, the demonstration excluded potential homebuyers who received downpayment assistance.[40] In addition, many participants in the demonstration took up services late in their homebuying process. Findings could be different for populations that differ along these factors or other factors that are distinct to the study's sample.

6.3 Discussion

Although it could be disappointing to policymakers that the offer of homebuyer education and counseling does not affect the two confirmatory outcomes—credit score and ever 60 days delinquent—it is worth remembering that the specific intervention analyzed in this study was

[40] Any individuals participating in a downpayment assistance or other program that required homebuyer education or counseling were excluded from the study because the requirement would preclude their random assignment to the control group.

extremely “light touch:” approximately 6 to 8 hours of education plus 1 hour of counseling. With this limited instruction in mind, it might be surprising that some participants—for example, younger borrowers—appear to have benefited so many years after receiving the service and during a time of economic upheaval.

That said, it is concerning that the study’s subgroup analyses find disparate impacts of the intervention between racial and ethnic groups—with White treatment group members benefiting from homebuyer education and counseling more than treatment group members from other racial and ethnic groups, most notably African-American treatment group members. These subgroup analyses are considered exploratory in nature, given the caution this study exercises when estimating large numbers of impacts, some of which may reflect chance rather than real impacts. In addition, the study’s interviews with a small group of study participants did not reveal any evidence of discriminatory or biased information or behaviors in the intervention. On the other hand, these findings are consistent with other recent research that shows returns to financial education can be higher for Whites than for other groups (Al-Bahrani, Weathers, and Patel, 2019).[41] If true, the study’s findings suggest that light touch interventions such as the homebuyer education and counseling that is the focus of this study not only do not help narrow the disparities that exist between White and other groups but might even widen them, at least during a period of great economic instability.

Given the implications of these findings, more research is needed—to confirm these findings with more robust analyses and, if confirmed, to understand the underlying causes. More importantly, when combined with the findings from the demonstration’s Long-Term Impact Report (Peck et al., 2021), it seems clear that larger, bolder policies are needed to overcome the structural barriers to homeownership and wealth accumulation faced by historically disadvantaged groups.[42]

[41] By way of potential explanation, those authors suggest that many financial education programs could be misaligned with the needs of non-White participants, citing prior research findings that show (1) that financial education programs often do not include minorities in the curriculum design and (2) high financial education attrition among marginalized groups.
[42] Policies that policymakers have suggested include restorative housing reparations, expanding housing affordability through changes to zoning, and reforming credit and appraisal practices to eliminate discriminatory impacts.

Appendix A. Analytic Methods

This appendix provides additional details related to the analytical methods used for this report's statistical analyses. Section A.1 presents the model used to estimate the impact of being *offered* homebuyer education and counseling services. Section A.2 presents the models used to estimate the impact of *taking up* homebuyer education and counseling services. Section A.3 presents baseline balance tests for the subset of Federal Housing Administration (FHA) loan recipients. Section A.4 describes the methods used to address missing data. Section A.5 describes the study's approach to hypothesis testing and strategy for addressing the multiple comparisons problem. Section A.6 describes the study's ability to detect impacts and how minimum detectable effects can help with the interpretation of null findings.

A.1 Estimating the Impact of Being Offered Services

The unbiased estimated impact of being in a treatment group (that is, of being offered homebuyer education and counseling services) is the difference between treatment group and control group mean outcomes. That is, if the study finds that study participants in the treatment group, for example, have higher average credit scores than those in the control group, then the difference in these scores represents the causal impact of the intervention. To operationalize this concept, the study follows common practice and uses multiple regression, which uses baseline variables as covariates to increase the precision with which the intervention's impact is estimated.

In addition to controlling for a set of baseline characteristics, the impact model includes a single binary variable for whether the study participant was randomly assigned before or after the September 2014 study redesign. This variable serves to control for any possible differences across the time periods that could influence the outcome. The impact model also includes a set of site-fixed effects, which control for both observable and unobservable differences across the 28 metropolitan areas from which study participants were recruited.

The regression model for estimating the impact of being offered homebuyer education and counseling services is—

$$Y_{is} = \alpha + \delta T_{is} + \beta X_{is} + \theta Time_{is} + \mu_s + \varepsilon_{is} \qquad \text{(equation A.1)}$$

where—

Y_{is} is the outcome of interest for study participant i in site s.

T_{is} is a dummy variable that equals 1 if study participant i in site s was assigned to a treatment group; T_{is} equals 0 if the study participant was assigned to the control group.

X_{is} is a vector of individual background characteristics for study participant i in site s.[43]

[43] Exhibit B.2 describes the set of baseline covariates included in the impact analysis model. The baseline covariates capture the demographic characteristics, the stage in the homebuying process, employment and income, financial responsibility, credit worthiness, and whether the study participant reported a baseline preference for remote services.

$Time_{is}$ is a dummy variable that equals 1 if study participant i in site s was randomly assigned prior to September 16, 2014; T_{is} equals 0 if the study participant was randomly assigned on or after this date.

μ_s is a set of site fixed effects.[44]

ε_{is} is a random error term.

The coefficient, δ, provides an intent-to-treat (ITT) estimate of the impact of *being offered* free homebuyer education and counseling services, and it is the parameter of central interest. This coefficient provides a regression-adjusted estimate of the difference in mean outcomes between treatment group members, including both those who took up intervention services and those who did not, and control group members. The authors estimated the equation A.1 model using least squares regression for both continuous and binary outcomes so that the coefficient δ has the same interpretation for different types of outcomes. To account for the possibility that study participants from the same site (that is, metropolitan statistical area) may have correlated error terms, following standard practice, standard errors are clustered at the site level.[45]

Equation A.1 depicts the model specification used to estimate the ITT impact of homebuyer education and counseling services for the full study sample. To produce subgroup impacts, the authors add an "interaction term" to the model: the treatment indicator is interacted with a subgroup identifier (as defined by baseline traits), allowing the study team to estimate both the impact within each subgroup of interest and the difference in impacts between subgroups.

A.2 Estimating the Impact of Taking Up Services

The ITT estimate provides the impact of being assigned to a treatment group regardless of whether services are actually received, but there may also be interest in estimating the impact of actually taking up the services that were offered, which is referred to as the treatment-on-the-treated (TOT) impact. For this study, the authors estimate the impact of taking up services by two-stage least squares (for example, Angrist and Imbens, 1995; Angrist, Imbens, and Rubin, 1996), which is functionally the same as using the division-based Bloom (1984) approach.[46] In the first stage, the authors estimate a linear regression model that predicts the probability that a given study participant takes up homebuyer education and counseling services. As depicted by equation A.2, the dependent variable in the model, P, is an indicator for whether the study participant *took up any* homebuyer education and counseling services. The model includes the same set of regressors included in the equation A.1 model used to estimate the impact of being

[44] Here, "site" refers to the 28 large metropolitan areas where study participants enrolled.
[45] As Cameron and Miller (2015) describe, failure to control for within-site error correlation can lead to misleading standard errors, confidence intervals, and *p*-values.
[46] The conventional Bloom adjustment, which computes the impact of taking up services by dividing the ITT estimate (and corresponding standard error) by the takeup rate, assumes that the takeup rate has no sampling variability (that is, that the takeup rate would be constant across different samples from the universe of potential study participants). This assumption could lead to a biased TOT variance estimate. In contrast, the two-stage least squares model used to compute the TOT estimate accounts for the sampling variability of the takeup rate when computing the TOT variance estimate, allowing the authors to produce an asymptotically unbiased estimate of the TOT variance (Litwok and Peck, 2018; Schochet and Chiang, 2009). That said, the magnitude of the TOT impact estimate is the same whether one uses the Bloom (simple division) approach or the regression-based approach.

offered services: a treatment group indicator, a vector of baseline characteristics, a binary time variable, and a set of site fixed effects.

$$P_{is} = \pi_1 + \pi_2 T_{is} + \pi_3 X_{is} + \pi_4 Time_{is} + \mu_s + \varepsilon_{1is} \qquad \text{(equation A.2)}$$

In the second stage, the authors model the outcome of interest as a function of the predicted probability of taking up services from the first stage regression and a similar set of observed covariates. The second stage model embeds the predicted takeup indicator within it as:

$$Y_{is} = \gamma_1 + \gamma_2 \widehat{P_{is}} + \gamma_3 X_{is} + \gamma_4 Time_{is} + \mu_s + \varepsilon_{2is} \qquad \text{(equation A.3)}$$

In equation A.3, $\widehat{P_{is}}$ is the predicted probability that study participant *i* in site *s* takes up any of the offered homebuyer education and counseling services, as estimated from equation A.2, and the other terms remain the same, as defined in section A.1. In this model, the coefficient γ_2 is the estimate of the impact of taking up homebuyer education and counseling services and is the parameter of central interest.[47]

A.3 Baseline Balance Testing for Sample for FHA Loan Recipients

Estimating the impact of homebuyer education and counseling for the subset of study participants with an FHA loan is a nonexperimental analysis because whether someone received an FHA loan is measured after study enrollment and, therefore, could have been influenced by the intervention. For example, it is possible that homebuyer education and counseling influenced the share of or type of treatment group members who receive an FHA loan. It may be that better (or worse) qualified borrowers were more likely to get an FHA loan as a result of the intervention. If this were the case, then it would be a methodological challenge to disentangle the effects of homebuyer education and counseling from any observed differences in the type of borrower that received an FHA loan between those in the treatment and control groups.

To address this challenge, the authors conducted analyses to explore (1) whether homebuyer education and counseling influenced the share of study participants who received an FHA loan and (2) whether the treatment group members who received an FHA loan are statistically different from control group members who received an FHA loan in terms of their baseline characteristics. If homebuyer education and counseling did not affect the likelihood that treatment group members receive an FHA loan or the type of treatment group members who receive an FHA loan, then the study will be better positioned to identify the causal impact of homebuyer education and counseling for the subset of study participants with an FHA loan using the same methods used to estimate impacts for subgroups defined by baseline characteristics.

[47] Angrist, Imbens, and Rubin (1996) and Schochet and Chiang (2009) provide a detailed description of the assumptions required to identify the Complier Average Causal Effect, which is defined as the average impact of intervention services on those who comply with their treatment assignments. Following their terminology, *compliers* are those who take up services only if they were assigned to the treatment group; *never-takers* are those who would never take up services; *always-takers* are those who would always take up services; and *defiers* are those who would take up services only if assigned to the control group. Under standard assumptions, the authors can identify the average causal effect of the treatment for compliers if no defiers are present and the intervention has no impact on never-takers and always-takers (Schochet and Chiang, 2009).

The authors find that homebuyer education and counseling did not affect the share of study participants who received an FHA loan. About 19 percent of study participants received an FHA loan, with no detectable difference between the treatment and control groups. Further, treatment group members who received an FHA loan are not systematically different from control group members who received an FHA loan in terms of their baseline characteristics. Exhibits A.1 and A.2 present baseline characteristics for the pooled treatment group and the control group for the subset of study participants who received an FHA loan. These exhibits also report results of a statistical test of whether baseline characteristics of FHA loan recipients differ between the treatment and control groups, which leads to the conclusion that there is no systematic imbalance. Just 3 out of the 51 tests (6 percent) for between-group differences were statistically significant at the 5 percent level. This result is about how many differences one would expect due to random chance, providing evidence that there are no systematic differences between treatment group and control group members who received FHA loans.

Exhibit A.1. Baseline Balance Testing for Study Participants With FHA Loans, Demographic Characteristics

Baseline Variable	Pooled Treatment Group With FHA Loan	Control Group With FHA Loan	Statistically Significant Difference
Race and Ethnicity of Household Head			
Hispanic	28.2	30.2	
White non-Hispanic	32.9	36.4	
African-American non-Hispanic	29.5	26.5	
Asian non-Hispanic	4.7	2.7	
Other race	4.7	4.1	
Men	58.0	58.6	
Age greater than or equal to 30	67.5	71.3	
Marital Status of Household Head			
Married	40.6	40.0	
Divorced, widowed, or separated	14.4	13.9	
Single and never married	45.0	46.1	
Plans to purchase the home with a co-borrower	25.9	28.0	
Household Size			
One	17.8	17.6	
Two	28.2	32.2	
Three	23.2	19.2	
Four	17.1	18.6	
Five	9.1	6.9	
Six or more	4.6	5.5	
Education of Household Head			

Bachelor's degree or higher	42.9	43.9	
Associate's degree	14.7	14.5	
Some college, but no degree	20.8	19.0	
High school diploma or less	21.5	22.7	
Employment			
Full-time employment (30+ hours per week)	94.1	91.0	*
Part-time employment (1–29 hours per week)	2.9	4.5	
Unemployed and looking for work	0.5	0.4	
Not working, homemaker, retired, student, or other	2.6	4.1	
Income Received by Household Head and Any Co-Borrowers in Past 12 Months			
$24,999 or less	8.2	7.0	
$25,000 to $49,999	40.7	39.8	
$50,000 to $74,999	31.5	34.4	
$75,000 to $99,999	13.9	12.7	
$100,000 or more	5.7	6.1	

* The pooled treatment group is statistically significantly different from control group at the $p < .05$ level.
FHA = Federal Housing Administration.
Notes: The sample includes 626 treatment group members and 490 control group members who had FHA loans as of December 2019. Appendix B provides additional detail on the construction of measures.
Sources: Baseline survey of study participants; credit bureau data

Exhibit A.2. Baseline Balance Testing for Study Participants With FHA Loans, Measures of Homebuying Stage, Financial Capability, and Creditworthiness

Baseline Variable	Pooled Treatment Group with FHA Loan	Control Group with FHA Loan	Statistically Significant Difference
Stage in the Homebuyer Process (%)			
Not yet started home search	7.9	8.7	
Started home search, but no visits	11.0	11.0	
Visited homes, but no offer	20.6	18.3	
Made an offer on a home, but no purchase	12.9	13.9	
Signed a purchase agreement	34.7	34.9	
Purchased a home	12.9	13.1	
Uses a written budget (%)	78.5	80.6	
Usually pays credit card balance in full to avoid interest charges (%)	71.6	66.7	
During the past year, was short on money sometimes or often (%)	17.7	20.2	
Sets aside extra money for retirement, education, or to build a financial cushion sometimes or often (%)	90.6	88.6	
Everyone in Household has health insurance (%)	86.2	86.4	
Level of total savings and investments ($)	24,162	25,819	

Baseline Variable	Pooled Treatment Group with FHA Loan	Control Group with FHA Loan	Statistically Significant Difference
Credit Score (%)			
Less than 580	2.5	3.2	
580 to 619	10.8	8.8	
620 to 659	22.6	25.9	
660 to 699	24.9	26.4	
700 to 739	21.0	20.7	
740 or more	18.3	15.1	
Cash on hand for down payment and closing costs ($)	12,567	14,014	
Amount of nonhousing debt ($)	20,911	24,687	*
Monthly payment nonhousing debt ($)	368	414	*

* The pooled treatment group is statistically significantly different from control group at the $p < .05$ level.
FHA = Federal Housing Administration.
Notes: The sample includes 626 treatment group members and 490 control group members who had FHA loans as of December 2019. Appendix B provides additional detail on the construction of measures.
Sources: Baseline survey of study participants; credit bureau data

When analyzing the impact of homebuyer education and counseling services on outcomes for the subset of study participants with an FHA loan, this observed balance across experimental groups provides reassurance that impact estimates computed by the study's standard methodology isolate an unbiased impact of homebuyer education and counseling, and one can interpret the impact for the subset of FHA loan recipients as if it were an experimental impact estimate. Beyond this assurance, and as detailed in section A.1, the authors also include baseline covariates in the study's impact analysis to control for variation in these baseline measures across the groups. Although one cannot test whether unobservable characteristics are different across the experimental groups (because they are, by definition, unobservable), the authors are comforted that this issue is not a serious concern by the lack of systematic differences in a very wide range of baseline characteristics that are observable. Therefore, the authors estimate impacts for the subset of study participants with an FHA loan using the same methods used in prior reports for estimating impacts on subgroups defined by baseline characteristics (Peck et al., 2021).

A.4 Methods for Handling Missing Baseline and Outcome Data

Baseline covariates are included in the model used to produce impact estimates to control for any observed, chance differences in these baseline measures. To avoid dropping observations from the impact analysis due to missing baseline data, the authors use the "dummy variable adjustment" approach. This strategy sets missing cases to a constant and includes a set of "missing data flags" in the impact model. As detailed by Puma et al. (2009), this method is appropriate for handling missing baseline data from experimentally designed evaluations, and it is straightforward to implement and is easily replicated. The method involves the following three steps for each baseline covariate, X, with missing data:

Step 1. Create a new variable, *Z*, that is set equal to *X* for all cases where *X* is nonmissing and is set to a constant value, *C*=the mean of *X*, for those cases when *X* is missing.

Step 2. Create a new variable, *D*, that is set equal to 1 for cases where *X* is missing and is set equal to 0 for cases when *X* is not missing.

Step 3. Replace the baseline covariate, *X*, in the impact analysis model with *Z* and *D*. This step will allow the impact model to estimate the relationship between *Y* and *X* when *X* is not missing, and to estimate the relationship between *Y* and *D* when *X* is missing.

When outcome data are missing for a given sample member, the authors follow the recommendation of Puma et al. (2009) to conduct a "full-case" analysis. When estimating the impact on a given outcome, this method excludes (or "case deletes") any observations with missing data for that outcome rather than imputing the value of the missing observation. This method has the benefit of ease of implementation and interpretation. Similarly, the authors conduct a full-case subgroup analysis, excluding observations with missing subgroup identifiers.

A.5 Approach to Hypothesis Testing

This analysis classifies outcomes as *confirmatory* or *exploratory* as a means to focus the analyses and protect the integrity of the interpretation of statistical tests.[48] The analysis's outcome classifications are:

The **confirmatory outcome** is the main indicator of the extent to which homebuyer education and counseling are effective in the context of COVID-19 within a given outcome domain. For this COVID-19 impact analysis, the study's analysis plan prespecified two confirmatory outcomes, one in each of the two outcome domains as:

- The continuous measure of *credit score* is the single confirmatory outcome in the financial indicators' domain.
- *The ever 60-day mortgage delinquency rate* is the single confirmatory outcome in the mortgage performance domain.[49]

[48] With multiple outcomes, the likelihood is high that at least one of the outcomes will show a significant impact purely as a result of chance. This problem pertains to the potential for drawing a false positive conclusion that increases as a result of making multiple hypothesis tests. If the statistical test for each impact estimate is based on a 95 percent confidence interval, for example, then 1 in every 20 random samples will show a statistically significant "impact" purely as a result of chance. As a result, an evaluation that tests for statistically significant impacts on a large number of outcomes faces a high likelihood that at least one of the outcomes will show a significant impact due to chance. By identifying the specific confirmatory outcomes prior to conducting the impact analyses, this approach designates a "central" outcome in the financial indicators and mortgage performance domains to provide strong evidence on the overall impact of offering homebuyer education and counseling on each of these two domains.

[49] These confirmatory outcomes align with those selected for the study's long-term impact analysis, as reported in Peck et al. (2021). However, the confirmatory outcomes for this COVID-19 impact analysis differ from the outcomes used for the Long-Term Impact Report in two ways. First, the timing of outcome measurement is

Exploratory outcomes are of two types: (1) alternative specifications of confirmatory outcomes, and (2) additional outcomes of interest that are less directly tied (or are more ambiguously tied) to the logic of the intervention but that still might be influenced by the program.

This analysis prespecified two confirmatory tests of the impact of homebuyer education and counseling as:

- Estimating the impact of offering homebuyer education and counseling on *credit score measured in December 2021* for the full sample provides strong evidence on whether services lead to improved financial indicators in the context of COVID-19.
- Estimating the impact on *the ever 60-day mortgage delinquency rate as of December 2021* for the full sample provides strong evidence on whether homebuyer education and counseling services lead to improved homeownership sustainability in the context of COVID-19.

All other tests of whether the impact of homebuyer education and counseling is statistically significant—including the impact on exploratory outcomes for the full sample and all subgroup impacts—provide an "exploratory" level of evidence.

Within each domain, the authors established a limit of no more than one confirmatory hypothesis test. Following standard practice, the authors do not adjust the study's statistical tests for these confirmatory hypotheses, because a given domain has a single test. Also, following standard practice, the authors do not perform statistical adjustments for exploratory hypothesis tests. Rather, the authors limit their number and present the results with appropriate caveats regarding the exploratory nature of those analyses and the increased risk of rejecting a true null hypothesis, also known as a "false positive" or "Type I" error.[50] The authors conducted a one-sided test for the two confirmatory hypothesis tests and a two-sided test for all other tests. This method is the longstanding practice of this study. The authors do so because they unequivocally have a directional hypothesis for the confirmatory tests, but the authors are open to evidence in either direction regarding the exploratory outcomes.

For each subgroup of interest, the authors test whether a difference exists in impacts between subgroups for each of 17 outcomes. Given the large number of tests, the authors impose an additional restraint to prevent overinterpreting results that might arise by chance alone. Specifically, the authors discuss a subgroup's impacts only if a statistically significant impact *differential* exists (using a significance level of 0.10) for 4 or more of the 17 outcomes analyzed. The authors contend that the four-or-more threshold indicates "systematic evidence" of between-group differences, thereby warranting the discussion of those subgroups as having experienced

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different. The confirmatory outcomes in the Long-Term Impact Report were measured in December 2019 (about 4 to 6 years after study enrollment), while the confirmatory outcomes for the COVID-19 impact analysis were measured in December 2021 (about 6 to 7 years after study enrollment). Second, the data sources used to construct the ever 60-day mortgage delinquency rate are different. In Peck et al. (2021), loan performance measures (including the ever 60-day mortgage delinquency rate) used credit bureau, FHA, and lender data, while for the COVID-19 impact analysis, the authors used credit bureau and FHA data, foregoing the use of lender data.

[50] For example, Schochet (2008) recommends that nonconfirmatory hypotheses need not be subject to multiple comparison corrections, provided the appropriate caveats to interpretation are provided. Similarly, the What Works Clearinghouse, an initiative of the U.S. Department of Education's Institute of Education Sciences, states in its *Procedures Handbook, Version 4.1,* that it does not adjust supplementary findings for multiple comparisons.

different impacts of the intervention. If three or fewer between-group differences are present (out of 17 total tests for each subgroup), then the authors conclude that the evidence is not sufficient between-group differences in impacts to warrant discussion of differences in impacts of the intervention between those subgroups.

The authors report only impact findings for a given subgroup comparison in the main text if the evidence is systematic between-subgroup differences. If the study does not find systematic evidence of between-subgroup differences for a given subgroup comparison, then the findings will be reported in appendix D but not described in the main text as being differential subgroup impacts. Instead, subgroups in which no systematic evidence exists between-subgroup impact differentials will be characterized as the groups having statistically comparable impacts.

The decision to use a threshold of four was informed by the likelihood that a given number of differentials might arise by chance alone. When the null hypotheses of 17 independent tests are exactly true (that is, when real differences among the 17 tests are zero), then it is expected that four or more tests will be statistically significant by chance 8.3 percent of the time (using a 10 percent significance level for each test). The threshold of four or more statistically significant tests is used as a criterion to interpret results as it provides a relatively strong guard against falsely concluding that between-subgroup differences are systematic. As a result, we can be more comfortable discussing the subgroup results as meaningful when this systematic evidence of impact differentials exists.

A.6 Ability to Detect Impacts: Minimum Detectable Effects

The minimum detectable effect (MDE) is the smallest *true* intervention impact that can be detected with a given level of confidence. MDEs are helpful for understanding findings that are not statistically significant because MDEs indicate how large the impact *would have needed to be* to be detected at a given level of confidence. MDEs are a function of a variety of factors, including—

Statistical Significance Level. The statistical significance level is the probability of identifying a “false positive” result (also referred to as “type I error”). The MDE becomes larger as the statistical significance level decreases. In this application, the authors have set the statistical significance level to 10 percent.

Statistical Power. The statistical power is equal to the probability of rejecting the null hypothesis if the alternative hypothesis is true (or, 1 minus the probability of a “false negative” result; “type II error”). The MDE becomes larger as statistical power increases. In this application, the authors set statistical power to 80 percent.

Variance of the Impact Estimate. Variance is essentially a measure of the “noisiness” of the impact estimate. The MDE becomes larger as the variance of the impact estimate increases. Because the variance of the impact estimate is inversely related to sample size, the MDE is also inversely related to sample size.[51] The sample size varies depending on the specific subset of the full study sample used for a given analysis.

Given that MDEs increase as sample size decreases, it is more difficult to detect statistically significant impacts on subgroups of the study sample (as distinct from the overall impact on the full study sample), given that smaller sample sizes are available for estimating impacts on a given subgroup. Further, it is more difficult to detect impacts on subgroups with smaller sample sizes than for those with larger sample sizes.

This report presents impacts that are statistically significantly different from 0. For outcomes where the impacts are *not* statistically significantly different from 0, this outcome does not necessarily mean that there are no impacts. Instead, more accurately, "no *detectable* impacts" are evident. The impacts may be smaller than this study is powered to detect for a variety of reasons, as this section discusses.

Appendix C reports MDEs for the overall impact of offering homebuyer education and counseling. For example, the MDE that corresponds to the impact of being offered homebuyer education and counseling on the share of study participants who were ever 60 days delinquent on any mortgage loan is 1.5 percentage points. That is, the true impact of being offered homebuyer education and counseling on the 60-day delinquency rate needs to be at least ±1.5 percentage points to be detected as statistically significantly different from zero (at the 10-percent significance level 80 percent of the time). However, this study's estimate of the impact of being offered services on the 60-day delinquency rate is -0.5 percentage points and is not statistically significantly different from zero. It is possible that the lack of significance means that there is no real impact. However, it is also possible that there is a real impact, but it is too small to be detected.

[51] The variance of the impact estimate (and, therefore, the MDE) is also influenced by the amount of variability in the outcome that can be explained by baseline covariates, the distribution of observations between treatment and control groups, and adjustments to the standard error of the impact estimate for clustering at the site level.

Appendix B. Data Sources and Measures

This section provides additional detail on the study's data sources and measures. Section B.1 describes the data sources used for the impact analysis. Section B.2 provides additional details on the construction of covariates, subgroups, and outcome measures used for the study's COVID-19 impact analyses.

B.1 Data Sources and Timing

The authors use a mix of primary and secondary data sources in the analyses. Data sources for the COVID-19 impact analyses include—

- The **baseline survey of study participants,** which captures the characteristics of study participants at the time of study enrollment. Baseline survey data construct subgroups of interest, and baseline covariates will be included as controls in the impact model.
- **Data on services that treatment group members received** from eHome America, ClearPoint, and the 63 local housing counseling agencies. These data capture whether study participants participated in homebuyer education and counseling services within 12 months of enrolling in the study. This data is used to construct an indicator for whether each study participant took up services—the dependent variable in the first stage regression equation used to estimate treatment-on-the-treated impacts.
- **Credit data on study participants** from one of the three major credit bureaus. The study team collected credit bureau data every 2 months during the enrollment period to capture study participants' baseline credit attributes 0 to 2 months prior to their enrollment in the study. The authors then routinely collected credit bureau data during the followup period to capture outcome measures for the impact analyses. For the impact analysis reported here, the authors use credit bureau data that capture study participant outcomes in December 2021 and July 2022.
- **Federal Housing Administration (FHA) Loan Origination and Servicing Data.** For the impact analysis reported here, the authors use FHA data that capture FHA loan recipient loan performance in December 2021.

When estimating the impact of homebuyer education and counseling in the context of COVID-19, the authors focus on outcomes constructed using December 2021 credit bureau and FHA data—the latest data available for which data could be collected for the full post-pilot study sample. Matching each study participant to December 2021 administrative data from the credit bureau- and FHA implies that outcomes will be observed between 70 and 95 months (about 6 to 7 years) after random assignment (exhibit B.1). Relatedly, if it is assumed that COVID-19 started having an effect on the U.S. economy in late March 2020, then December 2021 administrative data capture study participant outcomes about 21 months after the onset of COVID-19. Because the timing of outcome measurement will be the same, on average, between the treatment and control groups, this variation in timing does not pose a risk of bias for impact estimates.

The authors also estimate impacts on outcomes measured in July 2022 for the full sample and for the subset of FHA loan recipients, although the sample for this analysis is limited to study participants who enrolled in the study in August 2014 or later due to informed consent timing out. July 2022 outcomes capture study participants' outcomes between 77 and 95 months (about 6 to 7 years) after random assignment (exhibit B.1).

Exhibit B.1. Timing of Outcomes for COVID-19 Impact Analysis

Random Assignment Month of Study Participant	Number of Study Participants	Months After Random Assignment that Outcome is Observed in December 2021 Admin Data	Months After Random Assignment that Outcome is Observed in July 2022 Admin Data
October 2013	6	Not included in analysis	Not included in analysis
November 2013	40	Not included in analysis	Not included in analysis
December 2013	32	Not included in analysis	Not included in analysis
January 2014	4	95	Not included in analysis
February 2014	22	94	Not included in analysis
March 2014	115	93	Not included in analysis
April 2014	127	92	Not included in analysis
May 2014	382	91	Not included in analysis
June 2014	429	90	Not included in analysis
July 2014	332	89	Not included in analysis
August 2014	256	88	95
September 2014	215	87	94
October 2014	207	86	93
November 2014	201	85	92
December 2014	212	84	91
January 2015	165	83	90
February 2015	192	82	89
March 2015	379	81	88
April 2015	314	80	87
May 2015	256	79	86
June 2015	243	78	85
July 2015	362	77	84
August 2015	216	76	83
September 2015	202	75	82
October 2015	282	74	81
November 2015	185	73	80
December 2015	257	72	79
January 2016	131	71	78
February 2016	6	70	77

Source: Authors' calculations based on study participants' random assignment date, date of December 2021, and July 2022 administrative data pulls

B.2 Measure Construction

This section provides additional details on the construction of outcome measures used for the study's impact analyses (exhibit B.2), subgroup identifiers (exhibit B.3), and baseline covariates (exhibit B.4).

Exhibit B.2. Construction of Outcomes

Outcome Definition	Operationalization	Data Sources	Classification for Impact Analysis
Panel A. Financial Indicators Domain			
Credit score (range is 300–850)	Credit score (continuous variable)	Credit bureau	Confirmatory
Study participant has a credit score greater than or equal to 620 (%)	Binary variable that takes on value: 1 if credit score is greater than or equal to 620 0 if credit score is less than 620	Credit bureau	Exploratory
Total nonhousing debt ($)	Total nonhousing debt equals the total debt balance minus the balance on open mortgage accounts (top coded at its 99th percentile)	Credit bureau	Exploratory
Student loan balance ($)	Student loan balance (top coded at 99th percentile)	Credit bureau	Exploratory
Student loan account 30 or more days past due in the past 6 months (%)	Binary variable that takes on value: 1 if 30 or more days past due on student loans in past 6 months 0 otherwise	Credit bureau	Exploratory
Total consumer debt ($)	Total consumer debt balance, including credit card, auto, and medical debt (top coded at 99th percentile)	Credit bureau	Exploratory
Credit card debt ($)	Credit card balance (top coded at 99th percentile)	Credit bureau	Exploratory
Major nonmortgage derogatory event (charge-offs, repossessions, bankruptcies) (%)	Binary variable that takes on value: 1 if experienced a major nonmortgage derogatory event (charge-offs, repossessions, bankruptcies) since enrolling in the study 0 otherwise	Credit bureau	Exploratory
Any account 60 or more days past due in the past 12 months (%)	Binary variable that takes on value: 1 if 60 days or more past due in the past 12 months 0 otherwise	Credit bureau	Exploratory
Total past due amount for all accounts ($)	Total past due amount for all accounts (top coded at 99th percentile)	Credit bureau	Exploratory
Panel B. Mortgage Performance Domain			
Ever 30 days delinquent on any mortgage (%)	Binary variable that takes on value: 1 if ever 30 days delinquent on any mortgage, home equity loan, or home equity line of credit 0 otherwise	Credit bureau; FHA	Exploratory
Ever 30 days delinquent on any mortgage, credit data only (%)	Binary variable that takes on value: 1 if ever 30 days delinquent on any mortgage, home equity loan, or home equity line of credit 0 otherwise	Credit bureau	Exploratory
Ever 60 days delinquent on any mortgage (%)	Binary variable that takes on value: 1 if ever 60 days delinquent on any mortgage, home equity loan, or home equity line of credit 0 otherwise	Credit bureau; FHA	Confirmatory
Ever 60 days delinquent on any mortgage, credit data only (%)	Binary variable that takes on value: 1 if ever 60 days delinquent on any mortgage, home equity loan, or home equity line of credit 0 otherwise	Credit bureau	Exploratory
Ever 90 days delinquent on any mortgage (%)	Binary variable that takes on value: 1 if ever 90 days delinquent on any mortgage, home equity loan, or home equity line of credit 0 otherwise	Credit bureau; FHA	Exploratory

Outcome Definition	Operationalization	Data Sources	Classification for Impact Analysis
Ever 90 days delinquent on any mortgage, credit data only (%)	Binary variable that takes on value: 1 if ever 90 days delinquent on any mortgage, home equity loan, or home equity line of credit 0 otherwise	Credit bureau	Exploratory
Received mortgage forbearance, a loan modification, or other accommodation (%)	Binary variable that takes on value: 1 if received mortgage forbearance, a loan modification, or other accommodation during the pandemic 0 otherwise	Credit bureau	Exploratory

FHA = Federal Housing Administration.
Note: Two versions of each outcome were constructed, one that captures study participant outcomes in December 2021 and a second set of exploratory outcomes that capture study participant outcomes using July 2022 credit bureau data.

Exhibit B.3. Construction of Subgroups

Subgroup Category	Subgroup Impact Analysis Comparisons	Data Sources
Race and ethnicity	White non-Hispanic compared with African-American non-Hispanic	Baseline survey
	White non-Hispanic compared with Hispanic	Baseline survey
	White non-Hispanic compared with Asian non-Hispanic	Baseline survey
Gender	Male compared with female	Baseline survey
Age	Age 30 or older at baseline compared with age 29 or younger at baseline	Credit bureau data
Income	Income higher than 80 percent of area median compared with income lower than 80 percent of area median	Baseline survey and FFIEC (2023)[a]
Credit Score	Credit score 680 or more at study enrollment compared with credit score less than 680 at study enrollment	Credit bureau data
FHA loan recipient	FHA loan recipients (impacts not compared with non-FHA loan recipients)	December 2019 FHA data

[a] The family area median incomes are from the 2013 Median Family Income Report (FFIEC, 2023). The addresses used to determine which area median income is matched to each study participant are from the baseline survey.
FHA = Federal Housing Administration.

Exhibit B.4. Construction of Baseline Covariates

Domain	Variable Description	Operationalization	Data Sources
Demographic Characteristics	Race and ethnicity of study participant	Series of mutually exclusive binary variables: Hispanic White non-Hispanic African-American non-Hispanic Asian non-Hispanic Other race	Baseline survey
Demographic Characteristics	Gender of study participant	Binary variable that takes on value: 0 if woman 1 if man	Baseline survey
Demographic Characteristics	Age 30 or older at baseline	Binary variable that takes on value: 0 if age 29 or younger at baseline 1 if age 30 or older at baseline	Credit bureau data
Demographic Characteristics	Marital status of study participant	Series of mutually exclusive binary variables: Married Divorced, widowed, or separated Single and never married	Baseline survey
Demographic Characteristics	Plans to purchase the home with a co-borrower	Binary variable that takes on value: 0 if does not plan to purchase the home with a co-borrower 1 if plans to purchase the home with a co-borrower	Baseline survey
Demographic Characteristics	Household size	Series of mutually exclusive binary variables: One Two Three Four Five Six or more	Baseline survey
Demographic Characteristics	Education of study participant	Series of mutually exclusive binary variables that capture educational attainment: Bachelor's degree or higher Associate's degree Some college, but no degree High school diploma or less	Baseline survey
Stage in the Homebuying Process	Stage in the homebuying process	Series of mutually exclusive binary variables that capture the stage in the homebuying process: Not yet started home search Started home search, but no visits Visited homes, but no offer Made an offer on a home, but no purchase Signed a purchase agreement Purchased a home	Baseline survey
Employment and Income	Employment	Series of mutually exclusive binary variables for employment status of the study participant: Full-time employment (30+ hours per week) Part-time employment (1–29 hours per week) Unemployed and looking for work Not working, homemaker, retired, student, or other	Baseline survey

Domain	Variable Description	Operationalization	Data Sources
Employment and Income	Income received by study participant and any co-borrowers in past 12 months	Series of mutually exclusive binary variables defined based on the reported income received by study participant and any co-borrowers in past 12 months: $24,999 or less $25,000 to $49,999 $50,000 to $74,999 $75,000 to $99,999 $100,000 or more Note: If the study participant reported an income range rather than a specific value (for example, $40,000 to less than $55,000), the authors used the midpoint of the reported range to determine the appropriate income category. If neither a value nor a range was reported, then the variable was set to missing.	Baseline survey
Financial Responsibility	Uses a written budget	Binary variable that takes on value: 0 if does not have a budget of monthly household expenses 1 if has a budget of monthly household expenses	Baseline survey
Financial Responsibility	Usually pays credit card balance in full to avoid interest charges	Binary variable that takes on value: 0 if does not usually pay credit card balance in full to avoid interest charges 1 if does usually pay credit card balance in full to avoid interest charges	Baseline survey
Financial Responsibility	During the past year, was short on money sometimes or often	Binary variable that takes on value: 0 if reports being short on money rarely or never 1 if reports being short on money sometimes or often	Baseline survey
Financial Responsibility	Sets aside extra money for retirement, education, or to build a financial cushion sometimes or often	Binary variable that takes on value: 0 if reports setting aside extra money rarely or never 1 if reports setting aside extra money sometimes or often	Baseline survey
Financial Responsibility	Everyone in household has health insurance	Binary variable that takes on value: 0 if at least one household member does not have health insurance 1 if everyone in the household has health insurance	Baseline survey
Financial Responsibility	Level of total savings and investments	Sum of reported values for checking accounts, savings accounts, retirement accounts, and other savings and investment accounts. This measure does not include home equity (continuous variable) Note: The responses were capped at $999,999 for each of these separate categories, and the level of total savings and investments was top coded at its 99th percentile.	Baseline survey

Domain	Variable Description	Operationalization	Data Sources
Credit Worthiness	Credit score	Series of mutually exclusive binary variables defined based on credit score of the study participant at baseline: Less than 580 580 to 619 620 to 659 660 to 699 700 to 739 740 or more Note: For each study participant, the person's baseline credit bureau data is captured within 2 months prior to their enrollment.	Credit bureau data
Credit Worthiness	Cash on hand for downpayment and closing costs	Total cash on hand for downpayment and closing costs (continuous variable) *Note:* If study participant did not provide an exact amount but reported a range, the authors used the midpoint of the range and included this value in the continuous measure. Cash on hand for downpayment and closing costs was top coded at its 99th percentile	Baseline survey
Credit Worthiness	Total nonhousing debt	Total nonhousing debt equals the total balance on open installment accounts plus open revolving accounts minus the balance on open mortgage accounts. This measure is set equal to 0 if the study participant was included in the credit file, but no open debt accounts were on file. Note: Total nonhousing debt was top coded at its 99th percentile	Credit bureau data
Credit Worthiness	Monthly payment nonhousing debt	Monthly scheduled payments for nonhousing debt equals the total scheduled monthly payments for all open accounts besides mortgage accounts. This measure is set equal to 0 if the study member was included in the credit file, but no open debt accounts were on file. Note: Monthly payment nonhousing debt was top coded at its 99th percentile	Credit bureau data
Service Mode Preference	Baseline preference for remote services	Binary variable that takes on value: 0 if enrolled prior to study redesign or if baseline preference for in-person services 1 if enrolled after study redesign and baseline preference for remote services	Baseline eligibility assessment

Exhibit B.2 lists the outcomes for the study's COVID-19 impact analyses in each of two groups of variables that the authors call "domains;" (1) financial indicators and (2) mortgage performance.[52] Exhibit B.2 also describes how each outcome will be operationalized, the data source(s) used to construct each measure, and the classification of each outcome as "confirmatory" or "exploratory."

[52] Prior study reports considered the impact on outcomes constructed using both survey data and administrative data in three domains. In contrast, the outcomes for this longer term COVID-19 impact analysis use only administrative data in two domains. This longer term COVID-19 impact analysis uses different domain names to align with the types of outcomes available solely from the administrative data sources available for this analysis.

Appendix C. Impact Findings for the Full Sample, Expanded Results

This appendix presents expanded results for the overall impact of the demonstration's homebuyer education and counseling, including additional information related to the overall impacts presented in the main text for outcomes measured in December 2021 (exhibit C.1). The reason for this additional information is that the authors expect that some readers will be interested not just in the main results (mean outcome levels for treatment and control groups and impact estimates) but also in some of the finer details such as sample sizes, standard errors, and *post hoc* minimum detectable effects (MDEs), the added details of which the authors explain in section C.1. In addition, exhibit C.2 presents the impact of the demonstration's homebuyer education and counseling on outcomes measured in July 2022 for the subset of the study sample that enrolled in August 2014 or later.

C.1 Overall Impact on December 2021 Outcomes and How to Read Exhibits Reporting Impacts

Exhibit C.1 reports detailed impacts of homebuyer education and counseling on outcomes measured through December 2021 for the full study sample. The findings from this analysis are described in chapter 3. This section reviews how to interpret the contents of exhibit C.1 as a model for how to interpret the elements of the impact tables that contain similar information. Considering each column of exhibit C.1, from left to right:

- The **Treatment Sample Size** and **Control Sample Size** columns report the number of treatment group and control group observations with nonmissing data for each outcome.
- The **Treatment Group Mean** and **Control Group Mean** columns report the regression-adjusted mean level of the outcome for the treatment and control groups, respectively.
- The difference between the treatment and control group means is the **Impact of Being Offered Services**, and it is estimated using multiple regression, as section A.1 describes. It is the intent-to-treat (ITT) impact.
- The **Standard Error** of the impact estimate is reported in parentheses. The standard error provides a measure of the accuracy of the impact estimate (technically, the standard deviation of the sampling distribution of the impact estimate).
- In the **Impact of Being Offered Services** column, impacts marked with one or more asterisks are statistically significant, indicating that it is unlikely that the impact is due to chance. The number of asterisks indicates whether the impact is statistically significant at the $p < .10$ level (*), $p < .05$ level (**), or $p < .01$ level (***) level. The more asterisks, the less likely the finding is due to chance.
- The **Percentage Impact,** calculated as the impact divided by the control group mean, provides context for interpreting the relative magnitude of the treatment-control difference.
- The ***p*-Value** indicates how strong the evidence is in favor of rejecting the null hypothesis. The smaller the *p*-value, the stronger the evidence that the null hypothesis should be rejected.
- The **90-Percent Confidence Interval** places bounds on the impact of being offered services. Values that fall within the confidence interval are not statistically different from the estimated impact of having been offered services. Values outside the interval are statistically different from the impact.

- The **MDE** is the smallest *true* intervention impact that can be detected with a given level of confidence. MDEs are helpful for understanding findings that are not statistically significant because MDEs indicate how large the impact *would have needed to be* to be detected at a given level of confidence. The MDEs presented in this report assume a significance level to 10 percent and statistical power to 80 percent.
- The **Impact of Taking Up Services** column provides an estimate of the impact on study participants who participate in homebuyer education and counseling services, where service takeup is measured using administrative data. Similar to the **Impact of Being Offered Services** column, the corresponding standard error is reported in parentheses, and impacts marked with one or more asterisks are statistically significant. The more asterisks, the less likely the finding is due to chance. The ITT impact analysis and treatment-on-the-treated (TOT) impact analysis both yield the same pattern of results: the sign of the ITT and TOT estimates (that is, whether the impact is positive or negative, or favorable or unfavorable) will always be the same, and the level of statistical significance of the ITT and TOT estimates will generally be the same.
- The **Classification** column indicates whether each statistical test is categorized as confirmatory or exploratory. As section A.5 describes, this analysis prespecified two **confirmatory** tests of the impact of homebuyer education and counseling as:
  - Estimating the impact of offering homebuyer education and counseling on *credit score measured in December 2021* for the full sample provides strong evidence on whether services lead to improved financial indicators in the context of COVID-19.
  - Estimating the impact on *the ever 60-day mortgage delinquency rate as of December 2021* for the full sample provides strong evidence on whether homebuyer education and counseling services lead to improved homeownership sustainability in the context of COVID-19.
  - All other tests of whether the impact of homebuyer education and counseling is statistically significant—including the impact on exploratory outcomes for the full sample and all subgroup impacts—provide an "exploratory" level of evidence.

The study designates only one test within each outcome domain as confirmatory as a means to focus the analyses and protect the integrity of the interpretation of statistical tests. This technique is because, with a large number of statistical tests, it is highly likely that at least one of the tests will appear as statistically significant purely as a result of chance. Categorizing tests as confirmatory or exploratory helps to mitigate this problem by identifying a narrow set of tests that are most important to the study and treating other tests as less definitive.

Exhibit C.1. Overall Impact of the Demonstration's Homebuyer Education and Counseling on December 2021 Outcomes, Expanded Results

Outcome	Treatment Sample Size	Control Sample Size	Treatment Group Mean	Control Group Mean	Impact of Being Offered Services (Standard Error)	Percentage Impact	*p*-Value	90 Percent Confidence Interval	Minimum Detectable Effect	Impact of Taking Up Services (Standard Error)	Classification
Panel A. Financial Indicators Domain											
Credit score (range is 300–850)	2,948	2,162	735.9	735.0	0.9 (1.7)	0.1%	0.312	(– 2.1, 3.8)	3.6	1.5 (3.0)	Confirmatory
Study participant has a credit score greater than or equal to 620 (%)	2,948	2,162	87.8	87.1	0.7 (0.9)	0.8%	0.439	(– 0.8, 2.2)	2.2	1.3 (1.6)	Exploratory
Total nonhousing debt ($)	2,965	2,179	27,413	26,729	684 (740)	2.6%	0.364	(– 577, 1,945)	1,843	1,244 (1,309)	Exploratory
Student loan balance ($)	2,965	2,179	9,068	8,453	614 (368)	7.3%	0.106	(– 12, 1,241)	916	1,117 (655)	Exploratory
Student loan account 30 or more days past due in the past 6 months (%)	2,985	2,191	1.8	2.0	– 0.2 (0.3)	– 8.9%	0.580	(– 0.7, 0.4)	0.8	– 0.3 (0.6)	Exploratory
Total consumer debt ($)	2,965	2,179	16,299	16,610	– 311 (471)	– 1.9%	0.515	(– 1,114, 492)	1,174	– 565 (836)	Exploratory
Credit card debt ($)	2,965	2,179	4,718	4,967	– 249 (147)	– 5.0%	0.101	(– 500, 1)	366	– 454 (261)	Exploratory
Major nonmortgage derogatory event (charge-offs, repossessions, bankruptcies) (%)	3,018	2,209	24.6	24.5	0.1 (1.0)	0.4%	0.925	(– 1.6, 1.7)	2.4	0.2 (1.7)	Exploratory
Any account 60 or more days past due in the past 12 months (%)	2,985	2,191	7.1	8.1	– 1.0 (0.9)	– 12.9%	0.242	(– 2.5, 0.4)	2.2	– 1.9 (1.6)	Exploratory
Total past due amount for all accounts ($)	2,965	2,179	632	695	– 63 (56)	– 9.0%	0.272	(– 158, 33)	139	– 114 (99)	Exploratory
Panel B. Mortgage Performance Domain											

Outcome	Treatment Sample Size	Control Sample Size	Treatment Group Mean	Control Group Mean	Impact of Being Offered Services (Standard Error)	Percentage Impact	*p*-Value	90 Percent Confidence Interval	Minimum Detectable Effect	Impact of Taking Up Services (Standard Error)	Classification
Ever 30 days delinquent on any mortgage (%)	3,069	2,239	12.6	13.3	– 0.7 (0.8)	– 5.1%	0.419	(– 2.1, 0.7)	2.0	– 1.2 (1.5)	Exploratory
Ever 30 days delinquent on any mortgage, credit data only (%)	3,018	2,209	9.4	9.4	– 0.1 (0.9)	– 0.6%	0.952	(– 1.6, 1.5)	2.3	– 0.1 (1.6)	Exploratory
Ever 60 days delinquent on any mortgage (%)	3,069	2,239	7.5	8.0	– 0.5 (0.7)	– 6.2%	0.235	(– 1.7, 0.7)	1.5	– 0.9 (1.2)	Confirmatory
Ever 60 days delinquent on any mortgage, credit data only (%)	3,018	2,209	4.7	4.8	– 0.1 (0.5)	– 2.5%	0.819	(– 1.0, 0.8)	1.3	– 0.2 (0.9)	Exploratory
Ever 90 days delinquent on any mortgage (%)	3,069	2,239	6.1	6.1	0.0 (0.6)	0.3%	0.975	(– 1.0, 1.1)	1.5	0.0 (1.1)	Exploratory
Ever 90 days delinquent on any mortgage, credit data only (%)	3,018	2,209	3.4	3.4	– 0.0 (0.6)	– 0.0%	0.999	(– 1.0, 1.0)	1.4	– 0.0 (1.0)	Exploratory
Received mortgage forbearance, a loan modification, or other accommodation (%)	3,027	2,220	9.1	11.2	– 2.1** (1.0)	– 19.0%	0.048	(– 3.9, – 0.4)	2.6	– 3.9** (1.8)	Exploratory

Notes: A one-sided test was used to determine the statistical significance of the impact on the confirmatory outcomes. All other tests were two-sided. Due to rounding, reported impacts (T-C differences) could differ from differences between reported means for the treatment and control groups. Appendix A details the analytic methods, and appendix B provides additional detail on the construction of measures. Statistical significance levels for one-sided tests are indicated with hashtags as follows: ### = 1 percent; ## = 5 percent; # = 10 percent. Statistical significance levels for two-sided tests are indicated with asterisks as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.
Sources: Credit bureau; Federal Housing Administration

C.2 Overall Impact on July 2022 Outcomes

In addition to estimating impacts on outcomes constructed based on December 2021 administrative data, the authors conducted supplemental analyses to explore the impact on outcomes constructed using July 2022 administrative data. This additional analysis of the impact of the intervention on outcomes constructed based on July 2022 administrative data is important for understanding the impact of the intervention on key measures of financial indicators and mortgage performance after the forbearance period largely expired.

Due to informed consent timeout, the sample available for analysis of July 2022 outcomes is about three-fourths the size of the sample available for analysis of December 2021 outcomes. As a result, there could be multiple reasons for differences in findings between the two time periods, including: (1) differences in the characteristics of the sample of first-time homebuyers available for the analysis; (2) differences in statistical power due to differences in sample sizes available for the analysis; and (3) differences due to the timing of when outcomes are measured, where the July 2022 outcomes capture outcomes after the forbearance period largely expired and during a different calendar month.[53,54]

Exhibit C.2 reports impacts on July 2022 for all study participants who enrolled in the study after July 2014 and, therefore, were eligible for July 2022 data collection. The findings based on December 2021 impacts are quite similar to the findings based on July 2022 impacts. In both time periods, the authors found that treatment group members were less likely to receive a forbearance, loan modification, or other accommodation during the pandemic than control group members. In both time periods, homebuyer education and counseling services did not detectably change any other outcomes in the financial indicators or mortgage performance domains.

[53] Regarding the comparability of the two samples, the sample of 5,227 study participants available for the analysis of outcomes constructed using December 2021 credit bureau data is similar to the sample of 3,927 study participants available for the analysis of outcomes constructed using July 2022 outcomes on a variety of baseline characteristics. For instance, the sample used for the analysis of December 2021 outcomes had an average age at study enrollment of 37.2, a baseline mean credit score of 707.3, and baseline mean income with co-borrowers of $59,796. The characteristics of the sample used for the analysis of July 2022 outcomes are quite similar, with an average age at study enrollment of 37.3, a baseline mean credit score of 707.9, and a baseline mean income with co-borrowers of $59,398. This similarity suggests that any differences in findings between the impacts on December 2021 outcomes and July 2022 outcomes are not likely to be due to differences between the set of study participants in each sample.

[54] To address issues (1) and (2) related to differences in sample and statistical power, exhibit C.3 reports impacts on December 2021 outcomes for the subsample of study participants who were eligible for July 2022 data collection. These impacts are included in the middle columns of the exhibit for comparison with impacts on December 2021 outcomes for the full sample (as shown in the left columns) or impacts on July 2022 outcomes for the subsample of study participants who were eligible for July 2022 data collection. The magnitude of the impact estimates is generally similar across the three sets of impact estimates.

Exhibit C.2. Overall Impact of the Demonstration's Homebuyer Education and Counseling on July 2022 Outcomes

Outcome	Treatment Sample Size	Control Sample Size	Treatment Group Mean	Control Group Mean	Impact of Being Offered Services (Standard Error)	Percentage Impact	*p*-Value	90 Percent Confidence Interval	Minimum Detectable Effect	Impact of Taking Up Services (Standard Error)	Classification
Panel A. Financial Indicators Domain											
Credit score (range is 300–850)	2,207	1,621	740.2	738.9	1.3 (2.0)	0.2%	0.524	(– 2.1, 4.7)	5.0	2.2 (3.4)	Exploratory
Study participant has a credit score greater than or equal to 620 (%)	2,207	1,621	88.8	88.2	0.6 (0.9)	0.7%	0.508	(– 0.9, 2.1)	2.2	1.0 (1.5)	Exploratory
Total nonhousing debt ($)	2,224	1,638	27,548	26,878	670 (1,124)	2.5%	0.556	(– 1,244, 2,584)	2,798	1,157 (1,885)	Exploratory
Student loan balance ($)	2,224	1,638	8,655	7,788	867 (534)	11.1%	0.116	(– 43, 1,777)	1,330	1,498 (903)	Exploratory
Student loan account 30 or more days past due in the past 6 months (%)	2,237	1,648	1.9	1.9	– 0.1 (0.4)	– 3.5%	0.863	(– 0.7, 0.6)	1.0	– 0.1 (0.7)	Exploratory
Total consumer debt ($)	2,224	1,638	17,035	17,712	– 677 (773)	– 3.8%	0.389	(– 1,995, 640)	1,926	– 1,170 (1,298)	Exploratory
Credit card debt ($)	2,224	1,638	5,095	5,344	– 249 (278)	– 4.7%	0.379	(– 722, 225)	692	– 430 (464)	Exploratory
Major nonmortgage derogatory event (charge-offs, repossessions, bankruptcies) (%)	2,266	1,660	23.5	24.8	– 1.3 (1.0)	– 5.2%	0.214	(– 3.0, 0.4)	2.5	– 2.2 (1.7)	Exploratory
Any account 60 or more days past due in the past 12 months (%)	2,237	1,648	7.2	7.6	– 0.4 (1.0)	– 4.7%	0.727	(– 2.1, 1.4)	2.5	– 0.6 (1.7)	Exploratory
Total past due amount for all accounts ($)	2,224	1,638	1,517	1,283	234 (198)	18.3%	0.246	(– 102, 571)	492	405 (331)	Exploratory
Panel B. Mortgage Performance Domain											
Ever 30 days delinquent on any mortgage, credit data only (%)	2,266	1,660	9.6	9.5	0.2 (1.0)	1.7%	0.880	(– 1.6, 1.9)	2.6	0.3 (1.8)	Exploratory
Ever 60 days delinquent on any mortgage, credit data only (%)	2,266	1,660	4.8	4.5	0.3 (0.6)	6.9%	0.596	(– 0.7, 1.3)	1.4	0.5 (1.0)	Exploratory

Outcome	Treatment Sample Size	Control Sample Size	Treatment Group Mean	Control Group Mean	Impact of Being Offered Services (Standard Error)	Percentage Impact	*p*-Value	90 Percent Confidence Interval	Minimum Detectable Effect	Impact of Taking Up Services (Standard Error)	Classification
Ever 90 days delinquent on any mortgage, credit data only (%)	2,266	1,660	3.5	3.3	0.2 (0.5)	6.2%	0.697	(– 0.7, 1.1)	1.3	0.3 (0.9)	Exploratory
Received mortgage forbearance, a loan modification, or other accommodation (%)	2,339	1,737	12.3	14.9	– 2.6* (1.3)	– 17.2%	0.052	(– 4.7, – 0.4)	3.1	– 4.5** (2.1)	Exploratory

Notes: A two-sided test was used to determine the statistical significance of the impact on all outcomes. Due to rounding, reported impacts (T-C differences) could differ from differences between reported means for the treatment and control groups. Appendix A details the analytic methods and appendix B provides additional detail on the construction of measures. Statistical significance levels for two-sided tests are indicated with asterisks as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.
Sources: Credit bureau; Federal Housing Administration

Exhibit C.3. Comparison of the Impact of the Demonstration's Homebuyer Education and Counseling on December 2021 Outcomes Versus July 2022 Outcomes, Full Sample

Outcome	Outcomes Measured in December 2021, All Study Participants		Outcomes Measured in December 2021, Study Participants Enrolled After July 2014		Outcomes Measured in July 2022, Study Participants Enrolled After July 2014	
	Control Group Mean	Impact of Being Offered Services (Standard Error)	Control Group Mean	Impact of Being Offered Services (Standard Error)	Control Group Mean	Impact of Being Offered Services (Standard Error)
Panel A. Financial Indicators Domain						
Credit score (out of 850)	735.0	0.9 (1.7)	735.2	1.7 (1.9)	738.9	1.3 (2.0)
Study participant has a credit score greater than or equal to 620 (%)	87.1	0.7 (0.9)	87.1	1.2 (1.0)	88.2	0.6 (0.9)
Total nonhousing debt ($)	26,729	684 (740)	26,174	1,307 (983)	26,878	670 (1,124)
Student loan balance ($)	8,453	614 (368)	8,249	1,113** (473)	7,788	867 (534)
Student loan account 30 or more days past due in the past 6 months (%)	2.0	– 0.2 (0.3)	1.9	0.1 (0.3)	1.9	– 0.1 (0.4)
Total consumer debt ($)	16,610	– 311 (471)	16,421	– 402 (611)	17,712	– 677 (773)
Credit card debt ($)	4,967	– 249 (147)	4,898	– 213 (217)	5,344	– 249 (278)
Major nonmortgage derogatory event (charge-offs, repossessions, bankruptcies) (%)	24.5	0.1 (1.0)	23.9	– 0.8 (1.0)	24.8	– 1.3 (1.0)
Any account 60 or more days past due in the past 12 months (%)	8.1	– 1.0 (0.9)	7.9	– 1.1 (0.9)	7.6	– 0.4 (1.0)
Total past due amount for all accounts ($)	695	– 63 (56)	700	– 73 (69)	1,283	234 (198)
Panel B. Mortgage Performance Domain						
Ever 30 days delinquent on any mortgage, credit data only (%)	9.4	– 0.1 (0.9)	8.6	0.4 (1.0)	9.5	0.2 (1.0)

Ever 60 days delinquent on any mortgage, credit data only (%)	4.8	– 0.1 (0.5)	4.2	0.1 (0.5)	4.5	0.3 (0.6)
Ever 90 days delinquent on any mortgage, credit data only (%)	3.4	– 0.0 (0.6)	3.1	0.1 (0.5)	3.3	0.2 (0.5)
Received mortgage forbearance, a loan modification, or other accommodation (%)	11.2	– 2.1** (1.0)	10.6	– 1.6 (1.1)	14.9	– 2.6* (1.3)

Notes: Appendix A details the analytic methods, and appendix B provides additional detail on the construction of measures. Outcome-specific sample sizes vary due to missing data. Statistical significance levels for two-sided tests are indicated with asterisks as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.
Source: Credit bureau

C.3 Supplemental Exploration of Performance Based on Data Source

The study's confirmatory outcome in the mortgage performance domain is an indicator of whether the study participant was ever 60 days delinquent on their mortgage as of December 2021 based on either Federal Housing Administration (FHA) or credit bureau data. The authors also consider whether the intervention had an impact on an indicator of whether the study participant was ever 60 days delinquent on their mortgage as of December 2021 based on credit bureau data alone. For the full study sample, the authors do not detect an impact on either version of the ever 60 day delinquency rate.

The delinquency rates are generally higher for the version of the measure that captures delinquencies using either FHA or credit bureau data. About 8 percent of study participants were ever 60 days delinquent on their mortgages based on confirmatory measures, whereas only about 5 percent of study participants were ever 60 days delinquent based on credit bureau alone. The difference in delinquency rates between these two measures can largely be explained by FHA loan recipients who were behind on their mortgage during the pandemic but received a loan modification or forbearance and were, therefore, reported as behind on their mortgage according to FHA data but current on their mortgage according to credit bureau data.

In total, 130 study participants, (who were all FHA loan recipients), were 60 days delinquent on their mortgages during the pandemic based on FHA data but had never been 60 days delinquent on their mortgages based on credit bureau data. For this subset of the study sample, the authors find that—

- Sixty-eight percent had a loan modification or forbearance during the pandemic, according to credit bureau data through July 2022, viewed as a lower bound, given that some loan modifications and forbearances may not be reported to the credit bureau.
- Two percent ended up 60 days delinquent on their mortgages, according to July 2022 credit bureau data.

Relatedly, based on July 2022 FHA data, among study participants who were 60 days delinquent on their mortgages during the pandemic based on FHA data but had never been 60 days delinquent on their mortgages based on credit bureau data—

- Fifty-five percent were current on their mortgage.
- Twenty-nine percent closed their accounts, although 66 percent of those who closed their accounts were recorded as ever 90 days delinquent.
- Four percent were classified as "defaulted" or "defaulted and in bankruptcy."
- Twelve percent were classified as "defaulted and in loss mitigation."

Appendix D. Impact Findings by Subgroup, Expanded Results

The baseline survey data and baseline credit bureau data offer a rich set of demographic and financial characteristics from which the team defined subgroups of interest. This appendix reports the impacts on subgroups defined by baseline age, race and ethnicity, gender, income, and credit score.

The authors report impacts on individual subgroups based on the comparison of mean outcomes between the pooled treatment group and the control group. Additionally, the authors report whether the impact of the intervention differs across subgroups. Appendix A details the analytic methods, and appendix B provides additional detail on the construction of measures.

The authors conduct a substantial number of tests in this subgroup analysis. The authors estimate and report the impact of being offered services on 17 outcomes for each set of subgroups. When conducting a large number of tests, some impacts might appear simply due to random chance. Therefore, in this appendix, the authors focus on subgroups for which evidence of *systematic* between-subgroup differences in impacts exists. As section A.6 describes in more detail, the authors operationalize this strategy by setting the minimum threshold for evidence of systematic between-subgroup differences in impacts as follows. For a given subgroup of interest, we must find a statistically significant between-subgroup difference in impacts (at the 10-percent significance level) for four or more of the 17 outcomes analyzed. If there are three or fewer between-subgroup differences (out of 17 total tests for each subgroup), then the authors conclude that there is not sufficient evidence to conclude that impacts for the subgroups are different.

The authors did find evidence of systematic between-subgroup differences in impacts for four subgroup comparisons defined by characteristics at the time of study enrollment: aged above or below 30 (exhibit D.1); White compared with African-American (exhibit D.2); white compared with Hispanics (exhibit D.3); and white compared with Asian (exhibit D.4). For the other sets of subgroup impacts, the analysis revealed no systematic between-subgroup differences in impacts although the findings are reported in this appendix (exhibits D.5–D.7).

How to Read the Exhibits in This Appendix

Exhibits in this appendix show the impacts by subgroup and include:

- The **Control Group Mean** indicates the mean value for the control group for a given subgroup.
- The difference between the treatment and control group means for a given subgroup is presented as the **Impact of Being Offered Services** and is estimated using multiple regression.
- The **Difference in the Impact of Being Offered Services** is the difference in impacts between the two subgroups.
- Each impact has a corresponding **Standard Error** reported in parentheses. The standard error provides a measure of the accuracy of the impact estimate.
- **Asterisks** flag statistically significant differences at the 1-percent, 5-percent, and 10-percent levels.

D.1 Subgroup Impacts on December 2021 Outcomes

Exhibit D.1. Comparison of Impacts on Subpopulations Defined by Age at Baseline

Outcome	Age 30 or Older (N = 3,498) Control Group Mean	Age 30 or Older (N = 3,498) Impact of Being Offered Services (Standard Error)	Age 29 or Younger (N = 1,633) Control Group Mean	Age 29 or Younger (N = 1,633) Impact of Being Offered Services (Standard Error)	Difference in the Impact of Being Offered Services (Standard Error)
Panel A. Financial Indicators Domain					
Credit score (range is 300–850)	731.5	0.3 (2.0)	743.7	1.7 (3.4)	– 1.3 (3.9)
Study participant has a credit score greater than or equal to 620 (%)	86.6	0.3 (1.0)	88.2	1.9 (1.5)	– 1.6 (1.5)
Total nonhousing debt ($)	27,123	– 114 (859)	25,693	2,931** (1,177)	– 3,045** (1,433)
Student loan balance ($)	8,384	406 (390)	8,474	1,417* (829)	– 1,011 (975)
Student loan account 30 or more days past due in the past 6 months (%)	1.7	0.2 (0.4)	2.7	– 1.0 (0.6)	1.1 (0.8)
Total consumer debt ($)	17,047	– 731 (667)	15,536	809 (671)	– 1,540 (1,032)
Credit card debt ($)	5,250	– 631*** (202)	4,325	692** (254)	– 1,323*** (348)
Major nonmortgage derogatory event (charge-offs, repossessions, bankruptcies) (%)	26.6	1.7 (1.3)	19.9	– 3.4* (1.7)	5.1** (2.3)
Any account 60 or more days past due in the past 12 months (%)	8.7	– 0.7 (1.1)	6.9	– 1.8 (1.1)	1.1 (1.4)
Total past due amount for all accounts ($)	709	– 25 (67)	685	– 184** (78)	159* (86)
Panel B. Mortgage Performance Domain					
Ever 30 days delinquent on any mortgage (%)	14.4	– 0.6 (1.0)	11.0	– 0.9 (1.5)	0.3 (1.9)
Ever 30 days delinquent on any mortgage, credit data only (%)	10.1	0.3 (1.2)	7.8	– 0.6 (1.3)	0.9 (1.8)
Ever 60 days delinquent on any mortgage (%)	8.7	0.2 (0.8)	6.7	– 2.0* (1.1)	2.2* (1.2)
Ever 60 days delinquent on any mortgage, credit data only (%)	5.5	0.3 (0.7)	3.3	– 0.9 (0.7)	1.3 (1.0)
Ever 90 days delinquent on any mortgage (%)	6.7	0.5 (0.8)	4.8	– 1.0 (0.9)	1.5 (1.1)
Ever 90 days delinquent on any mortgage, credit data only (%)	4.1	0.1 (0.8)	1.9	– 0.3 (0.6)	0.5 (1.0)
Received mortgage forbearance, a loan modification, or other accommodation (%)	11.8	– 1.4 (1.2)	10.1	– 3.7** (1.4)	2.3 (1.6)

Notes: Appendix A details the analytic methods, and appendix B provides additional detail on the construction of measures. Outcome-specific sample sizes vary due to missing data. Statistical significance levels for two-sided tests are indicated with asterisks as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.
Sources: Credit bureau; Federal Housing Administration

Exhibit D.2. Comparison of Impacts on Subpopulations Defined by Race and Ethnicity: White Non-Hispanic Versus African-American Non-Hispanic

Outcome	White Non-Hispanic (N = 2,039)		African-American Non-Hispanic (N = 1,080)		
	Control Group Mean	Impact of Being Offered Services (Standard Error)	Control Group Mean	Impact of Being Offered Services (Standard Error)	Difference in the Impact of Being Offered Services (Standard Error)
Panel A. Financial Indicators Domain					
Credit score (range is 300–850)	751.6	5.6** (2.7)	693.7	– 4.4 (4.0)	10.1** (4.7)
Study participant has a credit score greater than or equal to 620 (%)	90.4	2.3* (1.1)	76.9	– 0.9 (2.3)	3.2 (2.7)
Total nonhousing debt ($)	24,736	1,683 (1,168)	37,090	227 (1,844)	1,455 (2,171)
Student loan balance ($)	7,245	839 (551)	16,571	1,396 (996)	– 556 (1,332)
Student loan account 30 or more days past due in the past 6 months (%)	1.7	– 0.4 (0.6)	3.9	– 0.4 (0.9)	0.0 (1.1)
Total consumer debt ($)	15,860	316 (620)	18,610	– 1,883 (1,183)	2,199* (1,175)
Credit card debt ($)	5,106	– 165 (193)	5,385	– 962** (456)	797 (539)
Major nonmortgage derogatory event (charge-offs, repossessions, bankruptcies) (%)	19.0	– 2.5* (1.4)	40.8	7.0*** (2.5)	– 9.5*** (2.7)
Any account 60 or more days past due in the past 12 months (%)	5.2	– 1.4 (1.2)	16.3	– 2.4 (1.9)	1.0 (2.2)
Total past due amount for all accounts ($)	605	– 241*** (79)	1,135	36 (110)	– 277** (114)
Panel B. Mortgage Performance Domain					
Ever 30 days delinquent on any mortgage (%)	10.5	– 2.5** (1.0)	20.9	0.3 (2.5)	– 2.8 (2.6)
Ever 30 days delinquent on any mortgage, credit data only (%)	8.2	– 1.8** (0.8)	13.9	0.4 (2.5)	– 2.1 (2.3)
Ever 60 days delinquent on any mortgage (%)	6.1	– 2.0** (0.9)	13.6	1.4 (2.0)	– 3.4 (2.1)
Ever 60 days delinquent on any mortgage, credit data only (%)	4.4	– 1.6** (0.7)	7.1	2.4 (1.8)	– 4.0** (1.8)
Ever 90 days delinquent on any mortgage (%)	5.3	– 2.1*** (0.7)	9.1	3.6* (1.9)	– 5.6*** (1.9)
Ever 90 days delinquent on any mortgage, credit data only (%)	3.5	– 1.4** (0.5)	5.0	2.2 (1.6)	– 3.5** (1.6)
Received mortgage forbearance, a loan modification, or other accommodation (%)	8.9	– 3.0*** (0.9)	15.2	– 2.1 (2.1)	– 0.9 (1.8)

Notes: Appendix A details the analytic methods, and appendix B provides additional detail on the construction of measures. Outcome-specific sample sizes vary due to missing data. Statistical significance levels for two-sided tests are indicated with asterisks as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.
Sources: Credit bureau; Federal Housing Administration

Exhibit D.3. Comparison of Impacts on Subpopulations Defined by Race and Ethnicity: White Non-Hispanic Versus Hispanic

	White Non-Hispanic (N = 2,039)		Hispanic (N = 1,298)		
Outcome	Control Group Mean	Impact of Being Offered Services (Standard Error)	Control Group Mean	Impact of Being Offered Services (Standard Error)	Difference in the Impact of Being Offered Services (Standard Error)
Panel A. Financial Indicators Domain					
Credit score (range is 300–850)	751.6	5.6** (2.7)	721.4	2.1 (4.1)	3.5 (4.5)
Study participant has a credit score greater than or equal to 620 (%)	90.4	2.3* (1.1)	85.3	1.4 (1.8)	0.8 (1.5)
Total nonhousing debt ($)	24,736	1,683 (1,168)	25,673	– 1,267 (1,647)	2,949 (2,021)
Student loan balance ($)	7,245	839 (551)	5,959	– 548 (953)	1,387 (1,050)
Student loan account 30 or more days past due in the past 6 months (%)	1.7	– 0.4 (0.6)	1.7	0.5 (0.5)	– 0.9 (0.8)
Total consumer debt ($)	15,860	316 (620)	17,929	– 596 (1,062)	912 (1,281)
Credit card debt ($)	5,106	– 165 (193)	4,579	– 47 (372)	– 117 (432)
Major nonmortgage derogatory event (charge-offs, repossessions, bankruptcies) (%)	19.0	– 2.5* (1.4)	27.4	– 1.6 (1.8)	– 0.9 (2.3)
Any account 60 or more days past due in the past 12 months (%)	5.2	– 1.4 (1.2)	9.2	– 1.7 (1.7)	0.3 (2.1)
Total past due amount for all accounts ($)	605	– 241*** (79)	760	– 2 (121)	– 239* (131)
Panel B. Mortgage Performance Domain					
Ever 30 days delinquent on any mortgage (%)	10.5	– 2.5** (1.0)	14.7	0.8 (1.4)	– 3.3* (2.0)
Ever 30 days delinquent on any mortgage, credit data only (%)	8.2	– 1.8** (0.8)	9.1	2.5 (1.7)	– 4.3** (1.8)
Ever 60 days delinquent on any mortgage (%)	6.1	– 2.0** (0.9)	8.6	0.5 (1.1)	– 2.5* (1.5)
Ever 60 days delinquent on any mortgage, credit data only (%)	4.4	– 1.6** (0.7)	4.4	0.8 (1.5)	– 2.5 (1.9)
Ever 90 days delinquent on any mortgage (%)	5.3	– 2.1*** (0.7)	6.6	– 0.0 (0.9)	– 2.0* (1.0)
Ever 90 days delinquent on any mortgage, credit data only (%)	3.5	– 1.4** (0.5)	3.1	0.0 (1.3)	– 1.4 (1.4)
Received mortgage forbearance, a loan modification, or other accommodation (%)	8.9	– 3.0*** (0.9)	12.6	– 1.1 (1.8)	– 1.9 (1.8)

Notes: Appendix A details the analytic methods, and appendix B provides additional detail on the construction of measures. Outcome-specific sample sizes vary due to missing data. Statistical significance levels for two-sided tests are indicated with asterisks as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.
Sources: Credit bureau; Federal Housing Administration

Exhibit D.4. Comparison of Impacts on Subpopulations Defined by Race and Ethnicity: White Non-Hispanic Versus Asian Non-Hispanic

	White Non-Hispanic (N = 2,039)		Asian Non-Hispanic (N = 621)		
Outcome	Control Group Mean	Impact of Being Offered Services (Standard Error)	Control Group Mean	Impact of Being Offered Services (Standard Error)	Difference in the Impact of Being Offered Services (Standard Error)
Panel A. Financial Indicators Domain					
Credit score (range is 300–850)	751.6	5.6** (2.7)	783.3	– 5.3 (4.6)	11.0** (5.2)
Study participant has a credit score greater than or equal to 620 (%)	90.4	2.3* (1.1)	97.7	– 1.9 (1.6)	4.1** (1.8)
Total nonhousing debt ($)	24,736	1,683 (1,168)	17,725	1,883 (1,346)	– 200 (1,890)
Student loan balance ($)	7,245	839 (551)	3,443	1,096 (1,011)	– 256 (1,182)
Student loan account 30 or more days past due in the past 6 months (%)	1.7	– 0.4 (0.6)	0.4	– 0.3 (0.4)	– 0.1 (0.7)
Total consumer debt ($)	15,860	316 (620)	13,246	– 149 (1,087)	465 (1,378)
Credit card debt ($)	5,106	– 165 (193)	4,792	– 189 (527)	25 (588)
Major nonmortgage derogatory event (charge-offs, repossessions, bankruptcies) (%)	19.0	– 2.5* (1.4)	5.0	3.9 (2.4)	– 6.4* (3.2)
Any account 60 or more days past due in the past 12 months (%)	5.2	– 1.4 (1.2)	1.6	2.2* (1.2)	– 3.6*** (1.2)
Total past due amount for all accounts ($)	605	– 241*** (79)	112	156 (103)	– 397*** (143)
Panel B. Mortgage Performance Domain					
Ever 30 days delinquent on any mortgage (%)	10.5	– 2.5** (1.0)	4.2	1.8 (1.9)	– 4.4** (2.0)
Ever 30 days delinquent on any mortgage, credit data only (%)	8.2	– 1.8** (0.8)	4.3	1.3 (1.7)	– 3.1* (1.7)
Ever 60 days delinquent on any mortgage (%)	6.1	– 2.0** (0.9)	1.9	0.6 (1.3)	– 2.6* (1.5)
Ever 60 days delinquent on any mortgage, credit data only (%)	4.4	– 1.6** (0.7)	1.9	– 0.3 (1.3)	– 1.4 (1.2)
Ever 90 days delinquent on any mortgage (%)	5.3	– 2.1*** (0.7)	1.5	0.8 (1.3)	– 2.8** (1.3)
Ever 90 days delinquent on any mortgage, credit data only (%)	3.5	– 1.4** (0.5)	1.2	0.3 (1.1)	– 1.7 (1.1)
Received mortgage forbearance, a loan modification, or other accommodation (%)	8.9	– 3.0*** (0.9)	10.0	– 2.6 (2.3)	– 0.4 (2.2)

Notes: Appendix A details the analytic methods, and appendix B provides additional detail on the construction of measures. Outcome-specific sample sizes vary due to missing data. Statistical significance levels for two-sided tests are indicated with asterisks as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.
Sources: Credit bureau; Federal Housing Administration

Exhibit D.5. Comparison of Impacts on Subpopulations Defined by Gender

Outcome	Male (N = 3,178) Control Group Mean	Male (N = 3,178) Impact of Being Offered Services (Standard Error)	Female (N = 2,117) Control Group Mean	Female (N = 2,117) Impact of Being Offered Services (Standard Error)	Difference in the Impact of Being Offered Services (Standard Error)
Panel A. Financial Indicators Domain					
Credit score (range is 300–850)	740.9	– 1.7 (2.2)	726.3	4.5 (2.9)	– 6.2 (3.7)
Study participant has a credit score greater than or equal to 620 (%)	87.6	0.8 (0.9)	86.4	0.5 (1.5)	0.4 (1.5)
Total nonhousing debt ($)	24,787	755 (1,013)	29,791	583 (1,010)	172 (1,407)
Student loan balance ($)	6,380	770* (414)	11,680	410 (720)	360 (853)
Student loan account 30 or more days past due in the past 6 months (%)	1.7	– 0.2 (0.5)	2.3	0.0 (0.7)	– 0.3 (0.9)
Total consumer debt ($)	16,724	– 352 (688)	16,459	– 265 (528)	– 87 (863)
Credit card debt ($)	4,786	– 160 (170)	5,272	– 405* (234)	245 (273)
Major nonmortgage derogatory event (charge-offs, repossessions, bankruptcies) (%)	22.4	1.0 (1.5)	27.6	– 1.3 (1.7)	2.3 (2.6)
Any account 60 or more days past due in the past 12 months (%)	7.9	– 1.1 (1.0)	8.2	– 0.9 (1.2)	– 0.2 (1.3)
Total past due amount for all accounts ($)	639	– 5 (83)	775	– 146 (89)	140 (132)
Panel B. Mortgage Performance Domain					
Ever 30 days delinquent on any mortgage (%)	12.1	0.1 (1.0)	15.1	– 1.6 (1.2)	1.6 (1.3)
Ever 30 days delinquent on any mortgage, credit data only (%)	8.6	0.0 (1.0)	10.5	– 0.0 (1.2)	0.1 (1.1)
Ever 60 days delinquent on any mortgage (%)	6.9	0.1 (0.8)	9.6	– 1.3 (0.9)	1.4 (1.0)
Ever 60 days delinquent on any mortgage, credit data only (%)	4.1	0.1 (0.7)	5.8	– 0.5 (0.7)	0.6 (1.0)
Ever 90 days delinquent on any mortgage (%)	5.4	– 0.1 (0.7)	7.0	0.3 (1.1)	– 0.4 (1.2)
Ever 90 days delinquent on any mortgage, credit data only (%)	3.1	– 0.2 (0.8)	3.9	0.3 (0.7)	– 0.5 (1.0)
Received mortgage forbearance, a loan modification, or other accommodation (%)	11.3	– 2.5** (1.0)	11.0	– 1.4 (1.6)	– 1.2 (1.4)

Notes: Appendix A details the analytic methods, and appendix B provides additional detail on the construction of measures. Outcome-specific sample sizes vary due to missing data. Statistical significance levels for two-sided tests are indicated with asterisks as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.
Sources: Credit bureau; Federal Housing Administration

Exhibit D.6. Comparison of Impacts on Subpopulations Defined by Borrower Income Relative to Area Median Income at Baseline

Outcome	Income Higher Than 80 Percent of Area Median (N = 2,356) Control Group Mean	Income Higher Than 80 Percent of Area Median (N = 2,356) Impact of Being Offered Services (Standard Error)	Income Lower Than 80 Percent of Area Median (N = 2,909) Control Group Mean	Income Lower Than 80 Percent of Area Median (N = 2,909) Impact of Being Offered Services (Standard Error)	Difference in the Impact of Being Offered Services (Standard Error)
Panel A. Financial Indicators Domain					
Credit score (range is 300–850)	751.5	0.6 (2.7)	721.0	0.9 (2.9)	– 0.3 (4.5)
Study participant has a credit score greater than or equal to 620 (%)	91.0	0.3 (1.1)	83.7	1.1 (1.4)	– 0.8 (1.9)
Total nonhousing debt ($)	28,729	231 (1,123)	25,141	978 (732)	– 747 (1,141)
Student loan balance ($)	8,845	– 92 (581)	8,153	1,168** (460)	– 1,260* (727)
Student loan account 30 or more days past due in the past 6 months (%)	1.7	– 0.4 (0.6)	2.3	0.0 (0.4)	– 0.5 (0.8)
Total consumer debt ($)	17,855	169 (625)	15,621	– 750 (538)	918 (675)
Credit card debt ($)	5,588	– 267 (281)	4,441	– 246 (159)	– 20 (345)
Major nonmortgage derogatory event (charge-offs, repossessions, bankruptcies) (%)	19.5	– 0.9 (1.3)	28.6	0.9 (1.6)	– 1.8 (2.2)
Any account 60 or more days past due in the past 12 months (%)	5.9	– 0.4 (1.3)	9.9	– 1.5 (1.3)	1.1 (1.9)
Total past due amount for all accounts ($)	552	– 22 (74)	825	– 100 (90)	78 (124)
Panel B. Mortgage Performance Domain					
Ever 30 days delinquent on any mortgage (%)	12.1	– 0.1 (1.0)	14.2	– 1.0 (1.3)	0.9 (1.8)
Ever 30 days delinquent on any mortgage, credit data only (%)	9.3	– 0.1 (1.0)	9.4	0.1 (1.3)	– 0.2 (1.5)
Ever 60 days delinquent on any mortgage (%)	6.7	0.4 (1.1)	9.0	– 1.3 (1.1)	1.7 (1.7)
Ever 60 days delinquent on any mortgage, credit data only (%)	5.3	– 0.6 (0.9)	4.3	0.3 (0.7)	– 0.9 (1.3)
Ever 90 days delinquent on any mortgage (%)	5.8	0.2 (1.2)	6.2	– 0.1 (0.8)	0.3 (1.6)
Ever 90 days delinquent on any mortgage, credit data only (%)	4.0	– 0.2 (1.0)	2.9	0.2 (0.6)	– 0.3 (1.1)
Received mortgage forbearance, a loan modification, or other accommodation (%)	11.4	– 3.0** (1.3)	11.1	– 1.7 (1.2)	– 1.3 (1.4)

Notes: Appendix A details the analytic methods, and appendix B provides additional detail on the construction of measures. Outcome-specific sample sizes vary due to missing data. Statistical significance levels for two-sided tests are indicated with asterisks as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.
Sources: Credit bureau; Federal Housing Administration

Exhibit D.7. Comparison of Impacts on Subpopulations Defined by Credit Score at Baseline

Outcome	Credit Score 680 or Above (N = 3,136) Control Group Mean	Credit Score 680 or Above (N = 3,136) Impact of Being Offered Services (Standard Error)	Credit Score Below 680 (N = 1,667) Control Group Mean	Credit Score Below 680 (N = 1,667) Impact of Being Offered Services (Standard Error)	Difference in the Impact of Being Offered Services (Standard Error)
Panel A. Financial Indicators Domain					
Credit score (range is 300–850)	766.3	0.7 (2.3)	677.6	1.9 (3.5)	– 1.2 (4.6)
Study participant has a credit score greater than or equal to 620 (%)	94.5	1.2 (0.9)	73.6	0.4 (2.1)	0.8 (2.2)
Total nonhousing debt ($)	23,754	375 (870)	32,962	1,889 (1,768)	– 1,514 (2,058)
Student loan balance ($)	6,943	458 (459)	11,664	1,197 (837)	– 739 (1,022)
Student loan account 30 or more days past due in the past 6 months (%)	1.0	– 0.3 (0.3)	4.2	– 0.3 (0.8)	0.0 (0.9)
Total consumer debt ($)	15,122	– 161 (518)	19,538	– 349 (1,013)	188 (1,148)
Credit card debt ($)	4,890	– 196 (181)	5,304	– 409 (300)	213 (359)
Major nonmortgage derogatory event (charge-offs, repossessions, bankruptcies) (%)	12.2	– 0.1 (1.0)	47.6	– 0.3 (2.2)	0.3 (2.4)
Any account 60 or more days past due in the past 12 months (%)	4.1	– 0.9 (0.6)	15.6	– 1.4 (2.0)	0.5 (1.9)
Total past due amount for all accounts ($)	428	– 134* (71)	1,224	60 (125)	– 194 (152)
Panel B. Mortgage Performance Domain					
Ever 30 days delinquent on any mortgage (%)	8.6	– 0.7 (0.8)	22.2	– 0.0 (1.8)	– 0.7 (2.0)
Ever 30 days delinquent on any mortgage, credit data only (%)	5.7	– 0.0 (0.8)	15.8	1.2 (1.9)	– 1.2 (2.0)
Ever 60 days delinquent on any mortgage (%)	4.5	– 0.7 (0.8)	14.1	0.8 (1.8)	– 1.5 (2.1)
Ever 60 days delinquent on any mortgage, credit data only (%)	2.4	– 0.2 (0.4)	8.7	0.7 (1.5)	– 0.9 (1.7)
Ever 90 days delinquent on any mortgage (%)	3.6	– 0.7 (0.8)	10.8	1.5 (1.3)	– 2.2 (1.5)
Ever 90 days delinquent on any mortgage, credit data only (%)	1.8	– 0.4 (0.5)	6.4	0.7 (1.3)	– 1.0 (1.3)
Received mortgage forbearance, a loan modification, or other accommodation (%)	10.0	– 2.5* (1.3)	13.2	– 0.4 (1.3)	– 2.1 (1.6)

Notes: Appendix A details the analytic methods, and appendix B provides additional detail on the construction of measures. Outcome-specific sample sizes vary due to missing data. Statistical significance levels for two-sided tests are indicated with asterisks as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.
Sources: Credit bureau; Federal Housing Administration

Appendix E. Federal Housing Administration Loan Recipient Impact Findings

For the subset of study participants with Federal Housing Administration (FHA) loans, this appendix reports impacts on December 2021 outcomes (section E.1) and July 2022 outcomes (section E.2).

E.1 FHA Loan Recipient Impacts on December 2021 Outcomes

Exhibit E.1 reports detailed impacts of homebuyer education and counseling on outcomes measured through December 2021 for the subset of FHA loan recipients. Chapter 5 describes the findings from this analysis.

Exhibit E.1. Impact of the Demonstration's Homebuyer Education and Counseling for FHA Loan Recipients, December 2021 Outcomes

Outcome	Treatment Sample Size	Control Sample Size	Treatment Group Mean	Control Group Mean	Impact of Being Offered Services (Standard Error)	Percentage Impact	*p*-Value	90 Percent Confidence Interval	Minimum Detectable Effect
Panel A. Financial Indicators Domain									
Credit score (range is 300–850)	562	445	711.3	714.9	– 3.5 (4.5)	– 0.5%	0.438	(– 11.2, 4.1)	11.2
Study participant has a credit score greater than or equal to 620 (%)	562	445	83.9	84.5	– 0.6 (2.3)	– 0.7%	0.811	(– 4.5, 3.4)	5.8
Total nonhousing debt ($)	563	447	35,857	35,125	732 (1,505)	2.1%	0.631	(– 1,832, 3,296)	3,748
Student loan balance ($)	563	447	13,367	12,940	428 (780)	3.3%	0.588	(– 901, 1,756)	1,942
Student loan account 30 or more days past due in the past 6 months (%)	565	450	2.6	3.3	– 0.7 (1.3)	– 22.4%	0.579	(– 3.0, 1.5)	3.3
Total consumer debt ($)	563	447	19,798	20,156	– 358 (1,182)	– 1.8%	0.765	(– 2,372, 1,656)	2,944
Credit card debt ($)	563	447	5,452	6,059	– 608 (411)	– 10.0%	0.151	(– 1,309, 93)	1,025
Bankruptcy or repossession due to nonhousing debt (%)	572	452	34.5	31.2	3.3 (2.3)	10.7%	0.163	(– 0.6, 7.3)	5.8
Any account 60 or more days past due in the past 12 months (%)	565	450	12.1	12.4	– 0.3 (2.4)	– 2.7%	0.892	(– 4.5, 3.8)	6.1
Total past due amount for all accounts ($)	563	447	935	1,006	– 71 (156)	– 7.1%	0.652	(– 337, 195)	389
Panel B. Mortgage Performance Domain									
Ever 30 days delinquent on any mortgage (%)	619	479	38.3	37.0	1.3 (2.3)	3.5%	0.582	(– 2.7, 5.3)	5.8
Ever 30 days delinquent on any mortgage, credit data only (%)	572	452	24.1	20.6	3.5 (2.5)	17.0%	0.177	(– 0.8, 7.8)	6.3
Ever 60 days delinquent on any mortgage (%)	619	479	27.4	25.1	2.3 (2.6)	9.4%	0.368	(– 2.0, 6.7)	6.4
Ever 60 days delinquent on any mortgage, credit data only (%)	572	452	14.3	11.7	2.6 (1.6)	22.4%	0.111	(– 0.1, 5.3)	4.0
Ever 90 days delinquent on any mortgage (%)	619	479	22.9	19.4	3.5 (2.2)	18.0%	0.117	(– 0.2, 7.2)	5.4

Outcome	Treatment Sample Size	Control Sample Size	Treatment Group Mean	Control Group Mean	Impact of Being Offered Services (Standard Error)	Percentage Impact	*p*-Value	90 Percent Confidence Interval	Minimum Detectable Effect
Ever 90 days delinquent on any mortgage, credit data only (%)	572	452	10.8	8.2	2.6* (1.5)	32.2%	0.092	(0.1, 5.2)	3.8
Received mortgage forbearance, a loan modification, or other accommodation (%)	574	457	20.7	17.7	3.0* (1.7)	16.9%	0.097	(0.0, 6.0)	4.3

FHA = Federal Housing Administration.

Notes: Due to rounding, reported impacts (T-C differences) could differ from differences between reported means for the treatment and control groups. Appendix A details the analytic methods, and appendix B provides additional detail on the construction of measures. Statistical significance levels for two-sided tests are indicated with asterisks as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

Sources: Credit bureau; Federal Housing Administration

E.2 FHA Loan Recipient Impacts on July 2022 Outcomes

In addition to estimating impacts on outcomes constructed based on December 2021 administrative data, supplemental analyses explore the impact on outcomes constructed using July 2022 administrative data. This additional analysis of the impact of the intervention on outcomes constructed based on July 2022 administrative data is important for understanding the intervention's impact of the intervention on key measures of financial indicators and mortgage performance after the forbearance period largely expired.

Due to informed consent timeout, the sample available for analysis of July 2022 outcomes is about three-fourths the size of the sample available for analysis of December 2021 outcomes. As a result, there could be multiple reasons for differences in findings between the two time periods, including (1) differences in the characteristics of the sample of FHA loan recipients available for the analysis; (2) differences in statistical power due to differences in sample sizes available for the analysis; and (3) differences due to the timing of when outcomes are measured, where the July 2022 outcomes capture outcomes after the forbearance period largely expired and during a different calendar month.

To address issues (1) and (2) related to differences in sample and statistical power, exhibit E.3 reports impacts on December 2021 outcomes for the subset of study participants who were eligible for July 2022 data collection. These impacts are included in the middle column of the exhibit for comparison with December 2021 outcomes for FHA loan recipients (as the left column of exhibit E.3 shows and exhibit E.1 reports) or impacts on July 2022 outcomes for FHA loan recipients who were eligible for July 2022 data collection (as the right column of exhibit E.3 shows and exhibit E.2 reports).

Exhibit E.2. Impact of the Demonstration's Homebuyer Education and Counseling for FHA Loan Recipients, July 2022 Outcomes

Outcome	Treatment Sample Size	Control Sample Size	Treatment Group Mean	Control Group Mean	Impact of Being Offered Services (Standard Error)	Percentage Impact	*p*-Value	90 Percent Confidence Interval	Minimum Detectable Effect
Panel A. Financial Indicators Domain									
Credit score (range is 300–850)	420	339	715.3	721.4	– 6.0 (4.6)	– 0.8%	0.203	(– 13.9, 1.8)	11.5
Study participant has a credit score greater than or equal to 620 (%)	420	339	86.1	85.3	0.9 (2.4)	1.0%	0.711	(– 3.2, 5.0)	5.9
Total nonhousing debt ($)	421	341	37,850	35,084	2,765 (2,231)	7.9%	0.226	(– 1,035, 6,566)	5,556
Student loan balance ($)	421	341	13,511	12,269	1,243 (1,376)	10.1%	0.375	(– 1,101, 3,587)	3,427
Student loan account 30 or more days past due in the past 6 months (%)	421	342	3.6	3.5	0.1 (1.6)	1.6%	0.973	(– 2.7, 2.8)	4.1
Total consumer debt ($)	421	341	21,695	21,006	689 (1,579)	3.3%	0.666	(– 2,000, 3,378)	3,931
Credit card debt ($)	421	341	6,489	5,996	493 (630)	8.2%	0.441	(– 580, 1,565)	1,568
Bankruptcy or repossession due to nonhousing debt (%)	427	343	32.8	32.1	0.8 (3.3)	2.3%	0.820	(– 4.8, 6.4)	8.2
Any account 60 or more days past due in the past 12 months (%)	421	342	12.0	12.0	0.0 (3.1)	0.4%	0.989	(– 5.2, 5.3)	7.7
Total past due amount for all accounts ($)	421	341	2,375	1,775	601 (587)	33.9%	0.315	(– 399, 1,601)	1,462
Panel B. Mortgage Performance Domain									
Ever 30 days delinquent on any mortgage, credit data only (%)	427	343	25.6	19.2	6.4** (3.0)	33.1%	0.044	(1.2, 11.5)	7.5
Ever 60 days delinquent on any mortgage, credit data only (%)	427	343	13.5	10.8	2.7 (2.1)	25.3%	0.212	(– 0.9, 6.4)	5.3
Ever 90 days delinquent on any mortgage, credit data only (%)	427	343	10.2	7.6	2.6 (1.6)	34.6%	0.106	(– 0.1, 5.3)	3.9
Received mortgage forbearance, a loan modification, or other accommodation (%)	459	370	25.9	23.0	3.0 (2.2)	12.9%	0.198	(– 0.9, 6.8)	5.6

FHA = Federal Housing Administration.

Notes: Due to rounding, reported impacts (T-C differences) could differ from differences between reported means for the treatment and control groups. Appendix A details the analytic methods, and appendix B provides additional detail on the construction of measures. Statistical significance levels for two-sided tests are indicated with asterisks as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.

Sources: Credit bureau; Federal Housing Administration

Exhibit E.3. Comparison of the Impact of the Demonstration's Homebuyer Education and Counseling on December 2021 Outcomes Versus July 2022 Outcomes, FHA Loan Recipients

Outcome	Outcomes Measured in December 2021, All FHA Loan Recipients		Outcomes Measured in December 2021, FHA Loan Recipients Enrolled After July 2014		Outcomes Measured in July 2022, FHA Loan Recipients Enrolled After July 2014	
	Control Group Mean	Impact of Being Offered Services (Standard Error)	Control Group Mean	Impact of Being Offered Services (Standard Error)	Control Group Mean	Impact of Being Offered Services (Standard Error)
Panel A. Financial Indicators Domain						
Credit score (range is 300–850)	714.9	– 3.5 (4.5)	716.1	– 2.8 (5.4)	721.4	– 6.0 (4.6)
Study participant has a credit score greater than or equal to 620 (%)	84.5	– 0.6 (2.3)	84.8	– 0.4 (2.4)	85.3	0.9 (2.4)
Total nonhousing debt ($)	35,125	732 (1,505)	35,321	2,015 (2,271)	35,084	2,765 (2,231)
Student loan balance ($)	12,940	428 (780)	13,653	869 (1,113)	12,269	1,243 (1,376)
Student loan account 30 or more days past due in the past 6 months (%)	3.3	– 0.7 (1.3)	3.8	– 0.2 (1.7)	3.5	0.1 (1.6)
Total consumer debt ($)	20,156	– 358 (1,182)	19,847	74 (1,508)	21,006	689 (1,579)
Credit card debt ($)	6,059	– 608 (411)	5,845	– 294 (531)	5,996	493 (630)
Major nonmortgage derogatory event (charge-offs, repossessions, bankruptcies) (%)	31.2	3.3 (2.3)	29.9	2.8 (3.3)	32.1	0.8 (3.3)
Any account 60 or more days past due in the past 12 months (%)	12.4	– 0.3 (2.4)	12.5	– 2.1 (2.7)	12.0	0.0 (3.1)
Total past due amount for all accounts ($)	1,006	– 71 (156)	1,038	– 134 (212)	1,775	601 (587)
Panel B. Mortgage Performance Domain						
Ever 30 days delinquent on any mortgage, credit data only (%)	20.6	3.5 (2.5)	18.6	5.3 (3.2)	19.2	6.4** (3.0)
Ever 60 days delinquent on any mortgage, credit data only (%)	11.7	2.6 (1.6)	10.8	2.2 (2.3)	10.8	2.7 (2.1)
Ever 90 days delinquent on any mortgage, credit data only (%)	8.2	2.6* (1.5)	7.3	2.8* (1.6)	7.6	2.6 (1.6)
Received mortgage forbearance, a loan modification, or other accommodation (%)	17.7	3.0* (1.7)	16.9	3.4 (2.0)	23.0	3.0 (2.2)

FHA = Federal Housing Administration.
Notes: Appendix A details the analytic methods, and appendix B provides additional detail on the construction of measures. Outcome-specific sample sizes vary due to missing data. Statistical significance levels for two-sided tests are indicated with asterisks as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.
Source: Credit bureau

The findings, based on credit bureau data through July 2022, indicate that the offer of homebuyer education and counseling increased the ever 30-day delinquency of FHA loan recipients. Among FHA loan recipients, 25.6 percent of treatment group members were ever 30 days delinquent on any mortgage according to credit bureau data through July 2022, a rate 6.4 percentage points higher than the corresponding rate for the control group (see exhibit E.2). The authors did not detect an impact on any other outcomes in the financial indicators and mortgage performance domains,

As presented in exhibit E.1 and the left column of exhibit E.3, for the study's sample of FHA loan recipients, the authors find that homebuyer education and counseling services had the following impacts on outcomes measured through December 2021:

- Increased the ever 90-day delinquency rate as measured through December 2021. Among FHA loan recipients, 10.8 percent of treatment group members were ever 90 days delinquent on any mortgage according to December 2021 credit bureau data, a rate 2.6 percentage points higher than the corresponding rate for the control group.
- Increased the share who received a mortgage forbearance, a loan modification, or other accommodation as measured through December 2021. Among FHA loan recipients, 20.7 percent of treatment group members received a mortgage forbearance, a loan modification, or other accommodation during the pandemic, a rate 3.0 percentage points higher than the corresponding rate for the control group.

Using credit bureau through July 2022 for the subset of FHA loan recipients eligible for July 2022 data collection, the authors find that the magnitude of the impacts on these two outcomes are exactly the same as those reported previously but are no longer detectably different from zero (as reported in exhibit E.2 and the right column of exhibit E.3). This change in statistical significance is likely a result of the drop in statistical precision from the decreased sample size where about one-fourth of the sample for the analysis of July 2022 outcomes is lost due to informed consent timeout.

Appendix F. Qualitative Data Collection and Analysis Methods

This appendix describes the qualitative data collection and analytic methods used to explore the differential impacts of the intervention on African-American and White subgroups, as well as participants' experiences during and after the forbearance process.

F.1 Qualitative Data Collection

To explore the differential impacts of the homebuyer education and counseling on African-American and White subgroups, interviews were conducted with two sets of participants—those who had never been delinquent on their mortgage and those who had been delinquent on their mortgage—according to the data. Interviews were also conducted with a set of participants to explore their experiences during and after the forbearance process. More information is provided about these three sets of interviews in the following sections. Interviews were conducted from February through April 2023.

Interviews to Explore Racial Differences in Impact

Analysis of December 2021 administrative data show that the impact of homebuyer education and counseling differed by subgroups defined by race and ethnicity, with the intervention benefiting White prospective homebuyers but not African-American prospective homebuyers. Relative to their control group counterparts, White participants in the treatment group had lower 30-, 60-, and 90-day mortgage delinquency rates; higher credit scores; were less likely to experience bankruptcy or repossession resulting from nonhousing debt; and had a lower total amount past due for all accounts. In contrast, these same favorable impacts were not found for African-Americans in the treatment group, and, in fact, two unfavorable impacts for this subgroup were detected. African-American treatment group members had a higher 90-day mortgage delinquency rate *and* higher rate of bankruptcy or repossession resulting from nonhousing debt relative to their control group counterparts.

Through a series of followup interviews with a small sample of study participants, Abt explored possible reasons for these differential impacts. In this analysis, the sampling strategy was motivated by the need to make comparisons across two key areas. The first issue is to understand how the experiences of homebuyer education and counseling services might have influenced respondents' ability to stay current on their home mortgage. Accordingly, one-on-one interviews with two samples of study participants who completed homebuyer education and counseling services and purchased homes were conducted with (1) those who were never recorded as delinquent on a mortgage and (2) those who were recorded as delinquent on their mortgages.[55,56] Second, the study team explored how respondents' experiences with services might have differed by participant race. Given this objective, within each of these two samples defined by mortgage performance, a mix of African-American and White interview respondents were recruited.

Abt conducted interviews with nine respondents from each of these two groups defined by mortgage performance. Despite this small sample size, the interviews generated valuable insight and enabled the study team to capture how African-American and White study participants understand and describe the factors—including potentially varying experiences with homebuyer education and counseling services—that shaped their ability to remain current on a home mortgage or not.

Each subgroup was asked a set of interview questions that were tailored to their mortgage delinquency status (for example, "never delinquent" or "ever delinquent"). Abt also engaged respondents directly in aiding the interpretation of research results.[57] Respondents were presented with a short, nontechnical summary of the final impact analysis' racially disparate findings and asked to reflect on the factors that might explain the pattern of results in light of their own experiences. Respondents were then asked to reflect on whether and how they felt that their own racial identity had shaped their experience of services and subsequent path to homeownership stability (for the nondelinquent group) or instability (for the delinquent group).

A total 75 study participants from the demonstration's sample were identified as an eligible subgroup of participants who had participated in the education and counseling services and had purchased a home. Interviews were conducted with nine eligible participants who had never been delinquent on their mortgage payments and nine eligible participants who had been 30 or more days delinquent on their mortgage payments.

Interviews to Explore Forbearance Experiences

To explore study participants' experiences before, during, and after the forbearance process, interviews were conducted with eight respondents to understand their experiences with the mortgage forbearance process. Study participants eligible for these interviews included those who (1) received a mortgage forbearance, modification, or other accommodation during the

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[55] We began by recruiting study participants who were ever 60 days delinquent on their mortgages and had completed all the services. Given the small sample size, the study team was unable to recruit nine study participants who met all these criteria. The criteria were modified to include study participants who had participated in at least some of both the education and counseling components of the intervention and those who were ever 30 days delinquent on their mortgage.

[56] Study participants were only eligible for the interviews if their informed consent had not expired. Through the informed consent process, study participants agreed to participate in the demonstration for 7 years following their enrollment date in the study. Because these interviews were conducted near the end of the 7-year period for many of our study participants, many of them were no longer eligible.

[57] This type of interaction enlists respondents as "participant researchers" (Cargo and Mercer, 2008). Participatory research refers broadly to approaches that recognize both the ethical and intellectual importance of inclusively engaging study participants throughout the research process. Participatory approaches can be especially important when attempting to give adequate voice to marginalized individuals or groups and can improve research quality by integrating new or overlooked perspectives into the interpretation and contextualization of key findings.

pandemic based on credit bureau data and (2) whose informed consent had not expired.[58] Respondents were asked to describe their experience with the forbearance process in full, including how they found out about the forbearance option, who they contacted, their experience with the process, whether they continued to make payments after receiving a forbearance and after the forbearance expired, and their assessment of the impact of the forbearance on their nonhousing debt.

A total 20 study participants from the demonstration's sample were identified as an eligible subgroup of participants who obtained a mortgage forbearance. From this group, eight participants agreed to participate in interviews.

Interview Scheduling and Format

Abt developed interview guides for this task that included a tailored set of questions to ask each of the three groups of respondents. The study team also drafted a consent form that described why these participants had been recruited for this qualitative exploration and how the information collected during the interview would be used. Once the Abt Associates' Institutional Review Board approved these materials, the study team reached out by e-mail to all the study participants who met the interview eligibility criteria described previously to determine whether they would be willing to take part in a 60-minute one-on-one virtual interview using a video conferencing application or over the phone. If the study team was not able to reach the participant by e-mail, the study team sent a letter, and then followed up with telephone calls. The potential respondents were informed that they would receive a $50 e-gift card for participating. For those who agreed to participate in the interviews, the study team scheduled a time to conduct the interview.

Teams of two Abt staff conducted each interview: one served as the primary interviewer and the other as the notetaker. Verbal consent was requested from each respondent to record the call prior to the start of the interview to allow the study team to review the accuracy and completeness of the study team's call notes. Recordings were deleted once the study team finalized the call notes.[59] After the interview was completed, the respondent was e-mailed a $50 e-gift card for participating.

F.2 Qualitative Analysis

After completing each interview, the qualitative data were prepared for analysis by cleaning the interview notes and appending researcher observed contextual data, such as body language and unspoken interactions. Upon completing all 18 interviews, the data were coded and analyzed in NVivo to identify key themes.[60]

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[58] The credit bureau data indicated that 529 study participants received either a mortgage forbearance, modification, or other accommodation during the pandemic. However, these data alone do not make it possible to distinguish participants who received a forbearance from those who may have received some other form of loan modification.
[59] If the respondent did not consent to being recorded, the study team relied on the call notes.
[60] NVivo is qualitative data analysis software produced by Lumivero, which allows qualitative researchers to organize, analyze, and find insights in unstructured or qualitative data.

F.3 Interview Guides

The interview guides used for each of the three groups are:

- Interview Guide—Experiences with Counseling and Mortgage Delinquency.
- Interview Guide—Experiences with Counseling and Sustainable Homeownership.
- Interview Guide—Borrower Experience with COVID-19 Mortgage Forbearance.

Interview Guide – Experiences with Counseling and Mortgage Delinquency

Interview Information (To be completed at least 24 hours prior to the interviews):

Name of Interviewer: ____

Name Notetaker: ____

Time and Date: ____

Interviewee Name: ____

Interviewee Race (as recorded on baseline survey):______________________________

Interviewee Gender (as recorded on baseline survey):____________________________

Type of treatment offered (online or in-person): _____________________________

If in-person: Program location and provider/organization name: ______________________

FOR INTERVIEWERS: Note on recruitment criteria.

All participants interviewed using this protocol:

1. Completed[61] homebuyer education and counseling services; AND
2. Purchased a home with a mortgage; AND
3. Were at some point during the study recorded as delinquent on their mortgage; AND
4. Indicated that they were either African-American non-Hispanic or White non-Hispanic on the study's baseline survey; AND
5. Enrolled in the study less than 8 years ago; AND
6. Responded to an interview recruitment email sent on [DATE].

FOR INTERVIEWERS: Note on questions specific to African-American interview respondents.

Several questions in this guide are designed to explore experiences of discrimination and differential treatment that African-American homebuyers may have encountered. These questions are noted in the interview guide and should be skipped for White respondents. Interviewee race (as recorded on the study's baseline survey) is noted above.

Introduction, Informed Consent

Introduction

My name is _________________ and this is my colleague, _______________. We are part of the research team for the ongoing study of homebuyers being conducted by the U.S. Department of Housing and Urban Development. We are grateful for your continued participation in this study and your willingness to speak with us today about your experiences receiving homebuyer education or counseling services and experiences with homeownership. As we mentioned in the initial email you received, we are especially interested in learning about the experiences of borrowers who may have encountered financial hardship

[61] It was the study team's preference to include those who *completed* all services. The study team did not get a sufficient number of people within this category to respond. Therefore, the study team invited those who at least *initiated* both the education and counseling components of the intervention.

that caused them to miss a mortgage payment. We are also interested in hearing your thoughts on how the homebuyer education and counseling services you were offered were experienced by people of different races. In appreciation of your time, we will email you an e-gift card for $75, which may be used wherever and however you like. Before we can get started, there is some information about the study that we need to review. This will just take a couple of minutes.

Along with the meeting invitation for this interview, you should have received an attachment with study information, which provided details about this study. Did you receive this document and have a chance to review it?

[If yes]

Do you have any questions about the study? If no, proceed. If yes, answer all questions.

[If no]

I can share the information about the study on my screen and we can read through it together.

If respondent is agreeable, interviewer should their screen and show the slide with a summary of the study information. Ask the respondent if they would like you to read the text aloud or if they prefer to read the text themselves. If they are unable to see the interviewers screen, the interviewer should read them the following bullet points:

Information Related to Participation in Study

- Your participation in this interview is voluntary.
- Participating in the interview will involve answering questions about your experiences with the homebuying process during the COVID-19 pandemic.
- You may withdraw from the interview at any time or decline to answer any question that you do not wish to answer.
- With your permission, we will make a video recording of this interview. The audio will be transcribed and then the recording will be deleted.
- The study team will have access to the administrative data that you consented to share when you joined the housing counseling study about 5 years ago. This data will not be shared with anyone outside of the study team and will not be linked to your name in any reports.
- No information discussed during the interview will ever be shared with your lender, nor will they have any knowledge of your decision to participate in this interview.
- Your name will never appear in any internal or published reports from this study.
- We do not anticipate any risks for interview participants. However, some interview questions may ask about personal or sensitive topics. Again, you can decide not to answer any question or decide to terminate the interview at any time.
- The interview will last about 60 minutes and you will be provided an e-gift card for $75 in appreciation of your time.

After reviewing the information ask: "do you have any questions?" Answer all questions

The information that you share with us today will help HUD and Abt your experiences with the homebuying process and how the HUD Homebuyers program you participated in influenced these experiences. Again, we will not share your name or other information that could identify you in our reporting. Before we begin, do you confirm that you consent to participating interview?

Yes *[Thank them, proceed to recording consent.]*

No *[Thank them for their time, indicate result in spreadsheet.]*

FOR INTERVIEWERS:

- *Respondent agreed to participate: Yes / No [If no, thank them for their consideration and conclude the interview.]*
- *Respondent agreed to be recorded: Yes / No*

We would like to record this interview through the [WebEx/Microsoft Teams] software we're using today. The recording will capture everything on the screen - including your video if you have it turned on - as well as the audio from this meeting. The recording will be used only by our research team to prepare a report for HUD and to develop the draft tool. We will delete the recording after we have transcribed the interview. Is it ok with you that we record the interview?

Yes *[Thank them, begin recording.]*
No *[Say it is no problem, do not record. Note taker needs to do their best to capture everything]*

My colleague, ______, will be taking notes. From time to time, he/she/they may ask a question or for clarification about something we are discussing. We would appreciate your candid responses to our questions. There are no right or wrong answers. Please note if you don't want to answer a question, just let us know and we can move on. If you need more clarification or context before answering our questions, please feel free to ask. You can also end this interview at any time if you choose to.

This interview should take approximately 1 hour.

Do you have any questions before we begin?
[Answer all their questions. Make a note of the questions to share with the other interviewers.]

Part 1. Respondent Narratives

1. We'd like to begin by learning about your experience with the home you purchased – starting from when you started to think about buying a home all the way through to closing on your home.
   a. Thinking back to when you decided to try to buy a home, what factors made you decide to buy instead of rent?
   b. What factors made you choose the particular home that you purchased?
   c. Overall, how satisfied are you with your home purchase?
      i. Tell me why you feel that way.
   d. During the homebuying process, how did you determine whether this was a home that you would be able to afford?
      i. At the time you purchased your home, did you feel that the price you paid was within your budget?
      ii. How do you feel about the price you paid now?
   e. Where did you get information during the homebuying process?
      Probes

- Specific people
- Books
- Online tools

f. What kinds of information did you get from [fill in source named by respondent]?
[Note to interviewer – *ask about one source of information at a time*]

g. By the time you bought your home, did you feel confident that you had enough information about the payments and costs associated with it?
    i. Looking back to when you bought your home, what do you wish you had known about buying a home that you did not know then?

h. Can you tell me about the mortgage you received to purchase your home?
    i. Do you recall the name of your lender?
    ii. What can you tell us about the terms of the mortgage?

Probes:
- Down payment amount
- Interest rate
- Adjustable vs. fixed

2. Now I want you to take a moment to think about all that you have experienced *since* you purchased your home.

    a. Can you tell me about a time since you bought your home that you have found it difficult to meet your financial obligations? These could include both housing and nonhousing related expenses.
        i. Can you tell me more about what made it difficult to meet your expenses [*fill in time described by respondent*]?
        ii. What did you do when you realized you would not be able to cover all your expenses?

    b. How did you decide what expenses to pay for when [*fill in time described by respondent*]?

    c. Did [fill in situation described in a] cause you to miss a monthly mortgage payment?

    [If no]: Move to question d.
    [If yes]:
        i. Can you tell me about your communications with the company that collects your mortgage payments – people often refer to this company as a mortgage servicer or lender?
        Probe:
    - Tone of interaction e.g., respectful, professional, understanding

        ii. Can you tell me a little bit more about how things played out with the missed mortgage in terms of your expenses?
        Probes:
    - Able to meet expenses
    - People who helped with the situation
    - Forms of assistance

    d. Thinking back to [fill in missed payment described in a] what kind of information or assistance do you wish you had had that would have made it easier for you to resolve that situation?

Thank you for sharing that experience.

e. [If situation described was *not* a missed mortgage payment]:
Since purchasing your home, were there other moments of financial stress that led you to miss a monthly mortgage payment?
    i. [*If yes*] Can you tell us about one of those times?

Part 2: Retrospective Assessment of Homebuyer Education and Counseling Services
Thank you for sharing those experiences. It is helpful for us to learn about the circumstances that can make it difficult for borrowers to meet their mortgage payments. I would like to hear about the experience you had with homebuyer education or counseling services. According to our records, you were offered access to services for first-time homebuyers several years ago when you first joined the study. These services may have included an online or in-person course, or one-on-one counseling. Topics covered in the course or counseling might have included an introduction to the homebuying process, budgeting, mortgage products, credit issues, housing affordability, and home maintenance.

3. What do you recall about the services on homebuyer education and counseling? [NOTE: If respondent did not take up services skip to **QUESTION 8**, or does not recall anything about services, skip to **QUESTION 9**].

    a. How satisfied are you with the services you received?
        i. Can you tell me why you feel that way?

    b. What was the most useful thing that you learned during the course that helped you during the homebuying process?
        i. Can you give me an example of how [fill in useful information] helped you in the homebuying process?

    c. What was the most useful thing that you learned during the course that helped you as a *homeowner*?
        i. Can you give me an example of how [fill in useful information] helped you as a homeowner?
        ii. [If they do not talk about financial challenges in I, ask]: Did you any of the material covered during homebuyer education or counseling services prove helpful when you were facing financial challenges?
            • [If yes], could you me about how you used that knowledge?

    d. In your opinion, what was the least helpful aspect of the homebuying course?

    e. During the homebuying course, what did you do if you did not understand the material or wanted more information on a certain topic?
        Probe:
    • Level of comfort asking questions

    f. Knowing what you know now about buying and owning a home, what do you wish that you had learned before purchasing a home that you don't think was part of the homebuyer education and counseling course?
        i. How might homebuyer education and counseling services be improved to better help homebuyers facing financial challenges?

[Q 4 and 5] AFRICAN-AMERICAN RESPONDENTS ONLY] Thanks for sharing those recollections about the services you were offered as part of this study. So far, we've mostly been asking about the kind of information that may have been covered in homebuyer education or counseling services. Next, we'd like to ask some additional questions about how you *felt* while engaging these homebuyer education and counseling services.

4. [**AFRICAN-AMERICAN RESPONDENTS ONLY**]:
   The purpose of this next set of questions is to try to get a sense of your impressions of the homebuyer course. Remember, there are no right or wrong answers. I am interested in learning about *your* perceptions and experiences – not what you think other people might have experienced!
   a. Thinking back to the class, what do you recall about the identity of the instructor leading the course or the counselor who you met with?
   b. Did this person say or do anything that made you feel more comfortable in the course?
   c. Did this person say or do anything that made you feel uncomfortable in the course?
   d. If this person had shared your racial identity, do you think that would have changed your experience in the course? If so, how?
   e. [If received in-person course]: Do you recall anything about the other homebuyers in the class you took?
      i. Did the other homebuyers in the course say or do anything that made you feel more comfortable or less comfortable?
      ii. If more homebuyers in the course had shared your racial identity, do you think that would have changed your experience in the course? If so, how?
5. It has been well documented that Black homebuyers in the U.S. often confront racial discrimination and unequal treatment during the process of searching for a home, obtaining a mortgage, and conducting a purchase.
   a. During the homebuying process was there anything that happened that you felt was influenced by your racial identity? If so, can you tell us about what happened?
   b. Was the issue of unfair treatment on the basis of race or identity discussed at all during the homebuyer services that you received?
   c. [If yes]: Can you tell me about which issues related to unfair treatment on the basis of race or identity were discussed?
   d. Did you feel that the way [fill in issue mentioned above] was helpful? Why or why not?

      [Note to interviewer – *ask about each issue named in c. one at a time*]

      [If no]: What topics related to unfair treatment and discrimination do you wish that the course addressed?
      a. How would this information help you as a first-time homebuyer?
6. **[All respondents that took up services]**
   Is there anything else that was particularly memorable (either positive or negative) about your experience with homebuyer education and counseling services that we have not discussed, but that you think we should be aware of?
7. **[All respondents that took up services]**
   Thinking about the homebuyer education or counseling services, are there any other ways you feel they could have been improved that we have not already discussed?

8. **[IF RESPONDENT INDICATED THEY DID NOT TAKE UP SERVICES OR ONLY MINIMALLY TOOK UP SERVICES]**
   What influenced your decision not to take up/complete the homebuyer services you were offered?
   a. Given your experiences since then, do you think it would have been helpful to have taken up those services? Why or why not?
9. **[IF RESPONDENT INDICATED THAT THEY DON'T REMEMBER ANYTHING ABOUT THE SERVICES THEY RECEIVED]**
   What types of challenges or obstacles did you face during your home search or after you purchased your home that you would have liked to be better prepared for?
   a. What kind of information or support do you think could have helped prepare you to meet [fill in challenges named above]?

Part 3: Engaging Participants as Researchers: Reflections on Identity, Counseling Services, and Homeownership

Thank you for telling us about the experience you had with homebuyer education and counseling services. This information will help us identify ways that these programs might be improved in the future. In this last part of the interview, we would appreciate your help interpreting some preliminary findings from an earlier phase of the research study. We don't expect you to be an expert on the study – we are just interested in any reactions of possible explanations that come to mind. Because these findings are still preliminary, we ask that you not share them outside of this interview.

[Review Summary of Findings]

First-Time Homebuyer Education and Counseling Study: Brief Summary of Findings

- This study examined whether homebuyer education and counseling services improved the financial well-being and loan performance of first-time homebuyers.
- Findings suggest that, in some instances, homebuyer education and counseling services had different impacts for White homebuyers than for African-American homebuyers.
- For example, White homebuyers offered services were more likely to make their mortgage payments on time compared with other White homebuyers not offered services.
- In contrast, Black homebuyers offered services were, in some cases, less likely make their mortgage payments on time compared with other Black homebuyers not offered services.
- This finding suggests that, in some cases, participation in the homebuyer education and counseling services reduced the tendency of Black homeowners to pay their mortgages on time.

10. **[AFRICAN-AMERICAN RESPONDENTS ONLY]** Can you think of any reasons that Black homebuyers might have experienced homebuyer education and counseling services differently than White homebuyers?
11. **[AFRICAN-AMERICAN RESPONDENTS ONLY]** Thinking again about your own experience with the education or counseling services offered, how do you think your racial identity influenced what you took away from the experience?
12. **[WHITE RESPONDENTS ONLY]** Thinking about your experiences as a borrower and homeowner, the challenges you faced, and how you handled those challenges, can you think of any reasons why counseling services may have had different impacts for White and African-American homebuyers?

Interview Conclusion

Thank you for sharing your reactions to those preliminary findings. That's all the questions we have today. Do you have any questions for us?

Thank you very much for your time – we appreciate this opportunity to learn from your experiences. If at any point you have any followup questions about this study, contact information for the research team is provided on your copy of the consent form.

Interview Guide – Experiences with Counseling and Sustainable Homeownership

Interview Information (To be completed at least 24 hours prior to the interviews):

Name of Interviewer: ______________________________

Name Notetaker: ______________________________

Time and Date: ______________________________

Interviewee Name: ______________________________

Interviewee Race (as recorded on baseline survey):______________________________

Interviewee Gender (as recorded on baseline survey):______________________________

Type of treatment offered (online or in-person): ______________________________

If in-person: Program location and provider/organization name: ______________________________

FOR INTERVIEWERS: Note on recruitment criteria.

All participants interviewed using this protocol:

1. Completed[62] homebuyer education and counseling services; AND
2. Purchased a home with a mortgage; AND
3. Were at some point during the study recorded as delinquent on their mortgage; AND
4. Indicated that they were either African-American non-Hispanic or White non-Hispanic on the study's baseline survey; AND
5. Enrolled in the study less than 8 years ago; AND
6. Responded to an interview recruitment email sent on [DATE].

FOR INTERVIEWERS: Note on questions specific to African-American interview respondents.

Several questions in this guide are designed to explore experiences of discrimination and differential treatment that African-American homebuyers may have encountered. These questions are noted in the interview guide and should be skipped for White respondents. Interviewee race (as recorded on the study's baseline survey) is noted above.

Introduction, Informed Consent

[62] It was the study team's preference to include those who *completed* all services. The study team did not get a sufficient number of people within this category to respond. Therefore, the study team invited those who at least *initiated* both the education and counseling components of the intervention.

Introduction

My name is _________________ and this is my colleague, _______________. We are part of the research team for the ongoing study of homebuyers being conducted by the U.S. Department of Housing and Urban Development. We are grateful for your continued participation in this study and your willingness to speak with us today about your experiences receiving homebuyer education or counseling services and experiences with homeownership. As we mentioned in the initial email you received, we are especially interested in learning about the experiences of borrowers who may have encountered financial hardship that caused them to miss a mortgage payment. We are also interested in hearing your thoughts on how the homebuyer education and counseling services you were offered were experienced by people of different races. In appreciation of your time, we will email you an e-gift card for $75, which may be used wherever and however you like. Before we can get started, there is some information about the study that we need to review. This will just take a couple of minutes.

Along with the meeting invitation for this interview, you should have received an attachment with study information, which provided details about this study. Did you receive this document and have a chance to review it?

[If yes]

Do you have any questions about the study? If no, proceed. If yes, answer all questions.

[If no]

I can share the information about the study on my screen and we can read through it together.

If respondent is agreeable, interviewer should their screen and show the slide with a summary of the study information. Ask the respondent if they would like you to read the text aloud or if they prefer to read the text themselves. If they are unable to see the interviewers screen, the interviewer should read them the following bullet points:

Information Related to Participation in Study

- Your participation in this interview is voluntary.
- Participating in the interview will involve answering questions about your experiences with mortgage forbearance during the COVID-19 pandemic.
- You may withdraw from the interview at any time or decline to answer any question that you do not wish to answer.
- With your permission, we will make a video recording of this interview. The audio will be transcribed and then the recording will be deleted.
- The study team will have access to the administrative data that you consented to share when you joined the housing counseling study about 5 years ago. This data will not be shared with anyone outside of the study team and will not be linked to your name in any reports.
- No information discussed during the interview will ever be shared with your lender, nor will they have any knowledge of your decision to participate in this interview.
- Your name will never appear in any internal or published reports from this study.
- We do not anticipate any risks for interview participants. However, some interview questions may ask about personal or sensitive topics. Again, you can decide not to answer any question or decide to terminate the interview at any time.
- The interview will last about 60 minutes and you will be provided an e-gift card for $75 in appreciation of your time.

After reviewing the information ask: "do you have any questions?" Answer all questions

The information that you share with us today will help HUD and Abt your experiences with the mortgage forbearance process and how the HUD Homebuyers program you participated in influenced these experiences. Again, we will not share your name or other information that could identify you in our reporting. Before we begin, do you confirm that you consent to participating interview?

Yes *[Thank them, proceed to recording consent.]*

No *[Thank them for their time, indicate result in spreadsheet.]*

FOR INTERVIEWERS:

- *Respondent agreed to participate: Yes / No [If no, thank them for their consideration and conclude the interview.]*
- *Respondent agreed to be recorded: Yes / No*

We would like to record this interview through the [WebEx/Microsoft Teams] software we're using today. The recording will capture everything on the screen - including your video if you have it turned on - as well as the audio from this meeting. The recording will be used only by our research team to prepare a report for HUD and to develop the draft tool. We will delete the recording after we have transcribed the interview. Is it ok with you that we record the interview?

Yes *[Thank them, begin recording.]*

No *[Say it is no problem, do not record. Note taker needs to do their best to capture everything]*

My colleague, ______, will be taking notes. From time to time, he/she/they may ask a question or for clarification about something we are discussing. We would appreciate your candid responses to our questions. There are no right or wrong answers. Please note if you don't want to answer a question, just let us know and we can move on. If you need more clarification or context before answering our questions, please feel free to ask. You can also end this interview at any time if you choose to.

This interview should take approximately 1 hour.

Do you have any questions before we begin?

[Answer all their questions. Make a note of the questions to share with the other interviewers.]

Part 1. Respondent Narratives

1. We'd like to begin by learning about your experience with the home you purchased – I am going to ask you questions that walk me through your experiences from when you first visited your home – before making an offer- all the way until now.

   a. Tell me about the features of your home that led you to make an offer.

Probes:

- Cost/affordability
- Location
- Neighborhood amenities

   b. How do you feel now about your decision to purchase your home?

Probes:

- Satisfied
- Regretful
  - i. It sounds like overall you feel [fill in emotion described in b.] Can you tell me why you feel that way?

   c. Thinking back to when you were looking for a home, did you have a particular price range in mind?

[If yes]: How did you come up with this range?

   d. At the time you purchased your home, did you feel that it was something you could afford?

      i. How do you feel about the price that you paid now?

   e. How did you get information that you needed about buying a home?

Probes

- Specific people
- Books
- Online tools

Now take a minute to think about all that you have experienced since you purchased your home.

2. What are the key factors that have enabled you to make all your mortgage payments on time throughout this period?
3. Owning a home is a huge financial commitment that can put a strain on one's finances! What has been the biggest financial challenge you have faced since becoming a homeowner?

Probes:

- Paying mortgage
- Paying credit card bills
- Healthcare costs

- Household costs

4. How did you decide which financial obligations to prioritize [fill in situation described above]?
    i. While [fill in situation described above] was going on, were there any financial obligations that you couldn't meet?
5. Can you tell us about the steps you took to avoid missing a mortgage payment during what sounds like a very challenging moment?

Probes:

- Forms of financial assistance
- Person who advised
- Information sources

Part 2: Retrospective Assessment of Homebuyer Education and Counseling Services

Thank you for sharing those experiences. Next, we'd like to learn about the experience you had with homebuyer education or counseling services. According to our records, you were offered access to [fill in service type] for first-time homebuyers several years ago when you first joined the study. Topics covered in the course or counseling might have included an introduction to the homebuying process, budgeting, mortgage products, credit issues, housing affordability, and home maintenance.

6. Can you tell me what you remember about the homebuyer education and counseling services you received? [[NOTE: For white respondents that did not take up services skip to **QUESTION 14**, or does not recall anything about services, skip to **QUESTION 15.** For African-American Respondents that did not take up services skip to **QUESTION 11** and then to **QUESTION 14**; For African-American respondents that do not recall anything about services, skip to **QUESTION 11 and then to QUESTION 15]**.
7. What topics do you remember learning about through these services?
    i. Which of these topics has been most helpful to you?

Probes

- As a homebuyer
- As a homeowner

ii. What topics did you find least useful?

Probe

- As a homebuyer
- As a homeowner

8. What challenges or obstacles did you face **<u>after</u>** you purchased your home that you wish you had been better prepared for?
    - Do you remember whether information [on topic named above] was presented?

If so, how could the counseling program have better prepared you? Did you feel like the material was relevant to your situation (then, versus now?)?

9. What information did you learn from the homebuyer education and counseling services that have helped you make your mortgage payments on time? Can you provide a specific example of a time that information helped you?
10. [**AFRICAN-AMERICAN RESPONDENTS ONLY**]

Did you feel like the homebuyer services that you received were designed to support all individuals, regardless of gender, age, race, ethnicity, or sexual orientation?

[If no]: Can you tell me more about that?

Probe:

- Specific example

11. **[AFRICAN-AMERICAN RESPONDENTS ONLY]** It has been well documented that African-American homebuyers in the U.S. often confront racial discrimination and unequal treatment during the process of searching for a home, obtaining a mortgage, and executing a purchase.

During the homebuying process did you ever feel that you were discriminated against due to your race?

Probe:

- Specific example

[For African-American Respondents that did not take up services skip go to **QUESTION 14**; For African-American respondents that do not recall anything about services, skip to **go to QUESTION 15]**

- Did any of the material that was covered in the homebuyer services you received talk about racial discrimination in the homebuying process?
  - [If yes]: Can you tell me what topics were covered?

Probe:

- Which lesson
- Delivery mode
- Room for discussion
- Helpful
  - [If no] What topics related to discrimination in the homebuying process do you wish had been addressed?

Probe:

- How would this have been useful for you?

12. **[All respondents that took up services]**

Is there anything else that you remember (either positive or negative) about the services that provided homebuyer education or counseling that we have not talked about yet, but that you feel is important?

13. **[All respondents that took up services]**

Are there other ways that you think that the homebuyer education or counseling services could be improved?

14. **[IF RESPONDENT INDICATED THEY DID NOT TAKE UP SERVICES OR ONLY MINIMALLY TOOK UP SERVICES]**

What factors affected your decision not to take up/complete the homebuyer services you were offered?

Looking back now, what do you wish you had known before buying a home?

15. **[IF RESPONDENT INDICATED THAT THEY DON'T REMEMBER ANYTHING ABOUT THE SERVICES THEY RECEIVED]**

What challenges or obstacles did you face during your homebuying process that you wish you had been better prepared for?

Probe:

- Specific examples

Part 3: Engaging Participants as Researchers: Reflections on Identity, Counseling Services, and Homeownership

Thank you for telling us about the experience you had with homebuyer education and counseling services. This information can help us identify ways that these programs might be improved in the future. In this last part of the interview, we would appreciate your help interpreting some preliminary findings from an earlier phase of the research study. As we already discussed, these findings are still preliminary, and we ask that you not share them outside of this interview.

[Review Summary of Findings]

First-Time Homebuyer Education and Counseling Study: Brief Summary of Findings

- This study examined whether homebuyer education and counseling services improved the financial wellbeing and loan performance of first-time homebuyers.
- Findings suggest that, in some instances, homebuyer education and counseling services had different impacts for White homebuyers than for African-American homebuyers.
- For example, White homebuyers offered services were more likely to make their mortgage payments on time compared with other White homebuyers not offered services.
- In contrast, Black homebuyers offered services were, in some cases, less likely make their mortgage payments on time compared with other Black homebuyers not offered services.
- This finding suggests that, in some cases, participation in the homebuyer education and counseling services reduced the tendency of Black homeowners to pay their mortgages on time.

16. [**AFRICAN-AMERICAN RESPONDENTS ONLY]** How do you think your racial identity shaped what you took away from your experience with homebuyer education or counseling services you received?
17. [**AFRICAN-AMERICAN RESPONDENTS ONLY]** What are some possible reasons that people who share your racial identity might experience the homebuyer education or counseling services differently than other groups?
18. Thinking about the circumstances you have faced as well as all the steps you have taken to stay current on your mortgage, what do you think might explain why homebuyer education and counseling services appear to have had negative impacts on some black homebuyers – that is some black homebuyers that were offered counseling were *more likely* to miss a mortgage payment than black homebuyers that did not get the services?

Interview Conclusion

Thank you for sharing your reactions to those preliminary findings. That's all the questions we have today. Do you have any questions for us?

Thank you very much for your time – we appreciate this opportunity to learn from your experiences. If at any point you have any followup questions about this study, contact information for the research team is provided on your copy of the consent form.

Interview Guide – Borrower Experience with COVID-19 Mortgage Forbearance

Interview Information:

Name of Interviewer: ______________________________

Name Notetaker: ______________________________

Time and Date: ____

Interviewee Name: ____

Interviewee Race (as recorded on baseline survey):______________________________

Interviewee Gender (as recorded on baseline survey):_____________________________

Type of treatment offered (online or in-person): ___________________________

If in-person: Program location and provider/organization name: ____________________

Note on recruitment criteria (for interviewers):

All participants interviewed using this protocol:

1. Received a mortgage forbearance, modification, or other accommodation during the COVID-19 pandemic according to credit bureau data; AND
2. Enrolled in the study less than 8 years ago; AND
3. Responded to an interview recruitment email sent on [DATE].

Note on terminology (for interviewers):

Some of the questions in this interview guide ask participants about the types of interaction they had with their **mortgage servicer** —the financial institution that collects a borrower's mortgage payments. Interview respondents are provided with a definition for this term at the outset of the interview. However, many borrowers may colloquially refer to their mortgage servicer as their "lender" or "bank." Interviewers should be aware that interviewees may use these terms interchangeably and may substitute the interviewee's preferred term, as appropriate.

Introduction, Informed Consent

Introduction

My name is ________________ and this is my colleague, _______________. We are part of the research team for the ongoing study of homebuyers being conducted by the U.S. Department of Housing and Urban Development. We are grateful for your continued participation in this study and your willingness to speak with us today about your experience obtaining a mortgage forbearance during the COVID-19 pandemic. In appreciation of your time, we will email you an e-gift card for $75, which may be used wherever and however you like. Before we can get started, there is some information about the study that we need to review. This will just take a couple of minutes.

Along with the meeting invitation for this interview, you should have received an attachment with study information, which provided details about this study. Did you receive this document and have a chance to review it?

[If yes]

Do you have any questions about the study? If no, proceed. If yes, answer all questions.

[If no]

I can share the information about the study on my screen and we can read through it together.

If respondent is agreeable, interviewer should share their screen and show the slide with a summary of the study information (see slide in interview folder). Ask the respondent if they would like you to read the text aloud or if they prefer to read the text themselves. If they are unable to see the interviewers screen, the interviewer should read them the following bullet points:

After reviewing the information ask: "do you have any questions?" Answer all questions

Information Related to Participation in Study

- Your participation in this interview is voluntary.
- Participating in the interview will involve answering questions about your experiences with mortgage forbearance during the COVID-19 pandemic.
- You may withdraw from the interview at any time or decline to answer any question that you do not wish to answer.
- With your permission, we will make a video recording of this interview. The audio will be transcribed and then the recording will be deleted.
- The study team will have access to the administrative data that you consented to share when you joined the housing counseling study about 5 years ago. This data will not be shared with anyone outside of the study team and will not be linked to your name in any reports.
- No information discussed during the interview will ever be shared with your lender, nor will they have any knowledge of your decision to participate in this interview.
- Your name will never appear in any internal or published reports from this study.
- We do not anticipate any risks for interview participants. However, some interview questions may ask about personal or sensitive topics. Again, you can decide not to answer any question or decide to terminate the interview at any time.
- The interview will last about 60 minutes and you will be provided an e-gift card for $75 in appreciation of your time.

The information that you share with us today will help HUD and Abt learn about your experiences with the mortgage forbearance process and how the HUD Homebuyers program you participated in influenced these experiences. Again, we will not share your name or other information that could identify you in our reporting. Before we begin, do you confirm that you consent to participate in this interview?

Yes [Thank them, proceed to recording consent.]

No [Thank them for their time, indicate result in spreadsheet.]

FOR INTERVIEWERS:

- *Respondent agreed to participate: Yes / No [If no, thank them for their consideration and conclude the interview.]*
- *Respondent agreed to be recorded: Yes / No*

We would like to record this interview through the Microsoft Teams software we're using today. The recording will capture everything on the screen - including your video if you have it turned on - as well as the audio from this meeting. The recording will be used only by our research team to prepare a report for HUD. We will delete the recording after we have transcribed the interview. Is it ok with you that we record the interview?

Yes [Thank them, begin recording.]

No [Say it is no problem, do not record.]

My colleague, ______, will be taking notes. From time to time, he/she/they may ask a question or clarification about something we are discussing. We would appreciate your candid responses to our questions. There are no right or wrong answers. Please note if you don't want to answer a question, just let us know and we can move on. If you need more clarification or context before answering our questions, please feel free to ask. You can also end this interview at any time if you choose to.

This interview should take approximately 1 hour.

Do you have any questions before we begin?

[Answer all their questions. Make a note of the questions to share with the other interviewers.]

Part 1: Warm-up Question

As I mentioned earlier, we are interested in learning more about your experiences with getting a mortgage forbearance. As a reminder, a mortgage forbearance is when your mortgage servicer—the financial institution that collects your mortgage payments—allows you to temporarily reduce or stop your payments due to a financial hardship.

1. My understanding is that you received a mortgage forbearance sometime in the past 5 years. Is that correct?
    a. If yes: Proceed with interview.
    b. If no: *["That is no problem. Because this interview is about your experiences with a forbearance, I don't think we will need to collect any more information from you today. I really appreciate your time, and we will provide you with a $75 dollar gift card for the time you took with us today."]*

Part 2: Requesting Forbearance

2. Not everyone knows that a loan forbearance is an option. Can you tell me how you first learned about mortgage forbearances?
    a. [*If through HUD counseling program*]: Can you tell me what you remember learning about mortgage forbearances during that program?
    b. [If through another source]: Great. Can you tell me a bit about how you got connected with [source of information]?

        Probes:

        - Did you seek out the information?
        - What prompted you to engage with the information source?
            - Missed mortgage payment
            - Employment/income change

    Now that I know a bit about how you first learned that about the forbearance option, I would like you to walk me through the steps you went through to make get connected with the person or people who helped you get your mortgage forbearance.

    There were probably a lot of steps along the way - I am interested in hearing as much detail as you can remember so I can better understand your experience.

3. Before we talk through the steps you went through, I want to make sure that I am using the terms or words that you use when you talk about your loan repayment. Often, when folks talk about where they send their mortgage payments each month, they use the term ***mortgage servicer,*** but some people talk about making payments to their bank or lender.

   When you talk about who you make your payments to, what term do you like to use? [*Interviewers take note of this and use this term throughout*]

4. Let's start with the first contact that you made when you started to explore getting a mortgage forbearance and then walk through all the steps it took for you to make contact with the person or people at your [mortgage servicer] that actually processed your request.

   a. Can you tell me about what made you decide to inquire about a forbearance?

      [*Interviewer: If this was covered in question 2 b.]*

      "You mentioned that you made your first inquiry about a forbearance because of [XX circumstance. Do I have that right?"

   b. Did anyone help guide you through the forbearance process, such as a housing counselor?

      i. If yes, can you tell me about that person?

         Probes:

         - Title/organization
         - Type of assistance provided

   c. Who did you initially contact to request a forbearance?

   d. Where did you get the contact information for this initial contact?

      Probes:

      - Website of mortgage servicer
      - Number on back of statement

   e. Did your [fill in initial contact] refer you to someone else?

      i. If yes, can you tell me about who you spoke to next?

      Probe:

      - At what point in this process did you make contact with your [mortgage servicer]?

   f. By the time you contacted your mortgage servicer, what was your status in terms of your current mortgage payments?

      Probes:

      - Missed mortgage payments
      - Not enough funds for next upcoming mortgage payment

Communication with Mortgage Servicer

Now I would like to hear a bit about your interactions with your [mortgage servicer]. Starting from the time you first started talking to them about the forbearance to the time it was granted. I am very interested in learning about the kinds of information you were given by your [mortgage servicer] and the kinds of questions that you asked them. Remember, there are no right or wrong answers – I am interested in learning about your experiences.

5. Thinking back to when you started working on getting the forbearance lined up with [mortgage servicer], did you mostly work with one person, or did you speak to different people each time you called or had a meeting?

   Probes:

   - Positions of contacts?

6. When you first connected with your [mortgage servicer] about the forbearance, what kinds of information did they give you?

   Probes:

   - Risks to the borrower
   - Repayment options
   - Waiving late fees
   - Interest on unpaid mortgage period during forbearance period
   - Requirements at the end of the forbearance period

7. At any point in your interactions with [mortgage servicer] did anyone ask why you were requesting a forbearance?

   a. If yes, can you tell me about this interaction?

   Probes:

   - How did you answer their question?
   - What was the 'tone' of the question/conversation?

8. When you were setting up the forbearance, what types of documentation did your lender/bank/mortgage servicer request from you?

   If respondent can't remember, prompt: did they ask for your account number? Anything else?

   a. How difficult was it for you to gather the information they needed?

      Probe:

      - Amount of time for respondent to put together this information.

Part 3: Receiving a Forbearance and Planning Repayment

I want to shift gears one more time and focus on your experiences once you had been granted the forbearance.

9. To start off with, how did your [mortgage servicer] let you know that you had been granted a forbearance?

   Probes:

   - Letter
   - Email
   - Verbal/over the phone

10. Once you knew you had been granted the forbearance, how did your [mortgage servicer] communicate with you about how your forbearance would work?

Probes:

- Letter
- Email
- Verbal/over the phone

   a. What did your [mortgage servicer] tell you about pausing your mortgage payments?

   b. What information did your mortgage servicer provide to you on how your property taxes, homeowners' insurance, and HOA fees (if applicable) would be paid during the forbearance period?

   c. How did your [mortgage servicer] explain how you would repay the missed payments?

   d. What information do you wish your mortgage servicer had given you at the beginning of the forbearance period that you found out later on?

11. Thinking back to when you paused your mortgage payments – was that before or after you reached out to your mortgage servicer? *[If the respondent already addressed Question 5 as part of their answer to Question 2, skip directly to the probe below, as appropriate.]*

   a. How did you feel the first month you did not send in your payment?

   b. [For respondents who stopped paying before getting the forbearance only] Did it feel different to not pay once you got the forbearance?

Part 4: End of Forbearance

Now we are going to jump forward in time – I want to learn about your experiences when your forbearance period ended.

12. What kind of notification did you receive from your mortgage servicer to tell you that you were required to start making mortgage payments again?

Probes:

- Letter
- Email
- Verbal/over the phone

13. When your forbearance expired, were you able to resume making payments as agreed under your repayment plan?

    a. [If yes] Can you tell me about any challenges you faced making these payments?

    b. [If no] Can you tell me about how you handled not being able to make the payments?

        i. Did you need to request an extension to your forbearance?

        ii. [If yes] Can you walk me through all of the steps you went through to get the extension?

This next set of questions asks about how you think getting a forbearance affected your finances. Again, there are no right answers – I am interested in your experiences.

14. Imagine you had not received a forbearance and had tried to keep up with your mortgage payments. Are there other household expenses that you would not have been able to meet if you had been paying your mortgage?

Probes:

- Debt e.g., student loan, credit card
- Household expenses e.g., food and clothing
- Healthcare
- Borrow from retirement savings/get help from family and friends

15. How did receiving a forbearance affect your ability to take steps to protect your health and safety during the COVID-19 pandemic? For example, some caretakers were able to switch to part-time employment to care for children who had to stay home due to COVID school closures.

Probes:

- Being able to isolate
- Remote work from secure home
- Leave a front line job

Part 5: Influence of the First Time Homebuyer Education and Counseling Program

[Note to interviewer, you need to fill this information in prior to your interview.]

[XX] years ago, you were invited to participate in a first-time homebuyer program online/in person location]. This program covered things like budgeting and crediting, financing your home purchase and how to maintain your home, including managing your mortgage.

16. Do you remember participating in this program?

    [*If no]* No problem! We will move on to our last few questions about the benefits and challenges you experienced with the forbearance process.

    [*If yes*] What are the most memorable things that you learned during this program?

    Prompt: <*see if they remember being told to work with their service provider in case they have issues in loan payments and if they were shared any forbearance related information*>

    a. Did any of these lessons help you navigate the forbearance process?

i. [If yes]: Can you tell me about how this information helped you?
ii. [If no]: How did the information from the program influence other parts of your homebuying journey?

Part 6: Closing Questions

17. Overall, what were the biggest benefits for you of getting a forbearance?
18. Thinking through the whole forbearance process, from when you first thought about exploring the option to when the forbearance period ended, what were the most challenging parts of the process?
19. Reflecting on your own experience, how do you think that the forbearance process could have been improved for borrowers like you?
20. Before we conclude, is there anything else you can think of that you would like us to know about your experience obtaining a mortgage forbearance during the pandemic?

Interview Conclusion

That's all the questions we have today. Are there any questions that you have for us?

Thank you very much for your time – we appreciate having the opportunity to learn from your experience. If at any point you have any followup questions about this study, contact information for the research team is provided on your copy of the consent form.

Appendix G. Findings From Study Participant Interviews Regarding Findings Related to Race-Related Differences in Impacts

The study team conducted interviews with a small number of study participants to better understand (1) the differential impacts of the intervention on African-American versus White subgroups,[63] which were detected through the analysis of December 2021 administrative data, and (2) the study participants' experiences during and after the forbearance process. Appendix F discusses the recruitment process and implementation of the interviews. This appendix explores the findings from the groups of interviews with selected research participants related to the racial differential in impacts. Appendix G reports findings from the interviews related to forbearance experiences.

G.1 Background

As this report describes, the impact of the homebuyer education and counseling differed by subgroups defined by race and ethnicity, with the intervention primarily benefiting White participants. Among African-American study participants, treatment group members had a higher chance of experiencing nonmortgage derogatory events and being 90 days delinquent on a mortgage loan than did members of the control group. That is, participating in the homebuyer education and counseling seems to have resulted in some *unfavorable* outcomes for African-American treatment group members.

To better understand this impact variation, semi-structured interviews were conducted with 18 research participants; 8 identified as Black or African-American and 10 identified as White. At some point during the study period, one-half of the respondents had been 30 or more days delinquent on their mortgage payments, and the other one-half had never been delinquent on their mortgage payments, as exhibit G.1 shows.[64]

Exhibit G.1. Racial Identity and Mortgage Status of the Interview Sample

Racial Identity	Never Delinquent (n)	Ever Delinquent (n)
White	6	4
Black or African-American	3	5
Total	**9**	**9**

[63] The authors abbreviate the labels terms for subgroups defined by race and ethnicity in our discussion of impact results. This appendix uses the term "African-American" for consistency, but note that some of these research participants might identify as Black, and some might or might not be of Hispanic ethnicity. That is, in contrast to the quantitative analysis, race and ethnicity categories are not necessarily mutually exclusive.

[64] Of the nine "ever delinquent" respondents, five had been less than 30 days delinquent. Because their delinquency period had been short, most of them reported that they had ever been delinquent. The authors did not find meaningful differences between their experiences with homebuyer education and counseling or in the housing market and the experiences of "never delinquent" respondents. Because of this apparent lack of difference, the authors aggregated the results across the delinquent and nondelinquent groups for most of this report.

During the interviews, respondents were asked about their experiences with the intervention—homeownership education and counseling services. All agencies that provided services for this study followed the National Industry Standards for Homeownership Education and Counseling.[65] Specifically, they were asked to identify aspects of the homebuyer education and counseling they found useful and information that they would, in retrospect, have liked to see added. The African-American respondents were asked to share any experiences of racial bias while participating in the homebuyer education and counseling services and in the housing marketplace. The study team asked all respondents to share financial challenges they faced since becoming homeowners and how they navigated those challenges.

Each interview closed with the team sharing information about the differential impact between subgroups defined by race and ethnicity—that the intervention primarily benefited the White subgroup and negatively affected the African-American subgroup. Interviewers asked respondents to help interpret these findings.

Each interview discussed what respondents found most useful about homebuyer education and counseling. Responses to this question included a broad range of topics, including gaining knowledge about the homebuying process and how home insurance works. Other responses focused on the value of concrete actions related to building and maintaining credit and building a budget and savings plan. Some respondents appreciated the value of the "soft skills" they gained through the homebuyer education and counseling services, including the importance of communicating with their mortgage servicer.

Overview of Homebuying Process and Terminology. When asked about their experiences with homebuyer education and counseling, four respondents reported that receiving an overview of the homebuying process was helpful. Some of these respondents noted the value of this information to first-time homebuyers who are new to the process.

> *Just getting the information helped calm me down. You're going into stuff blind, and you really don't know. So, I felt like just hearing what the journey would be like. That's helpful for me because, again, I had never been through it.*

> *I remember [the homebuyer education and counseling] spelling out the different steps, which was helpful because you don't always know what being in escrow means when you're first starting this and the different parts of it.*

Three respondents reported that the information they received about home insurance through the program was particularly useful. One explained that she learned, "*You need to keep the home secure by having insurance on your home*."

[65] The National Industry Standards were created in 2005 by a coalition of housing industry partners with the goal of promoting consistent and high-quality homebuyer education and counseling services across the country. In developing the National Industry Standards, the coalition drew on a variety of sources, including existing standards used by HUD and local, regional, and national housing counseling organizations. For homebuyer education, the Standards do not dictate a specific curriculum; rather, they provide core topic areas to be covered. For more details, visit the Standards website at http://www.homeownershipstandards.org.

Finally, one valued learning about homebuying terminology, *"I remember that they went over the mortgage and explained some of the terminology; that was useful."*

Budgeting, Savings, and Credit Maintenance. Four respondents highlighted the value of the budgeting and savings component of their homebuyer education and counseling. These respondents noted that they learned the importance of having an accurate budget that includes a financial cushion. One recalled learning about the need to budget for unexpected events as part of their mortgage payment plan.

> *[They said to have] emergency funds to cover … for at least 6 months to cover the mortgage in case of an emergency.*

One respondent highlighted credit as a useful lesson from the homebuyer education and counseling. They explained how the information received about managing their credit score continues to influence their behavior.

> *They said make sure you pay off the difference between the statement date and the due date, [and] pay before the statement date because that will get reported to your credit. Make sure you don't miss a payment because that will get reported to the credit bureaus. To this day, I pay down my credit before the due date.*

Communication and Other Topics. Two respondents reported that the homebuyer education and counseling taught them the importance of communicating with lenders, including when experiencing financial challenges. One respondent explained how this knowledge was valuable after losing their employment.

> *The homebuyer education and counseling helped me know to contact my lender when I lost my job. I talked to the lender, and they gave me time to pay.*

Another respondent shared that one-on-one conversations with their counselor were the most helpful aspect of the program. They emphasized that this personalized guidance helped them navigate their first year of homeownership.

> *I remember talking to someone on the phone. We were going through how much my bills were and things like that. I was in a pretty good spot. Having a conversation with her, she helped me understand what to expect in the first year. That really stands out to me.*

Information Gaps

Most of the respondents reported gaining useful information from the homebuyer education and counseling. When asked about information they wished the program had covered, respondents identified a few topics. These included planning for the costs associated with being part of a homeowner association (HOA) and home maintenance and improvement, and information about resources and strategies to weather financial hardship.[66]

HOA and Maintenance Costs. Four respondents said they wished that the homebuyer education and counseling had provided more information on budgeting for housing-related costs, including

[66] These topics are typically covered by homebuyer education and counseling that follows the National Industry Standards.

HOA fees and home maintenance and renovation costs. One person noted that their HOA fees increased twice, which created a financial strain.

> *I wish the homebuyer education and counseling would have shared information about what you can do about an HOA increase.*

One respondent stated that information on how to assess and plan for typical home maintenance costs would have been a useful topic to cover during the program. Furthermore, this respondent said that having this knowledge would have helped inform their homebuying decision.

> *A price range of how much a plumbing or a foundation issue costs, for example, would have been helpful. Having that mind frame for going into a home and thinking about what you have to do for maintenance would be helpful.*

Resources for Financial Hardship. Two respondents suggested that the homebuyer education and counseling provide information about available resources during financial hardship. One said they had expected this topic to be covered during the program.

> *[There needs to be] information on national assistance to help homeowners facing financial challenges, to put people at ease. I expected to get more information about it because it is one of the fears that prospective homebuyers face.*

Financial Challenges

After buying their home, respondents reported experiencing a range of financial challenges, including unanticipated costs associated with renovations and home maintenance, increased HOA fees and property taxes, loss of employment and "slow work," and multiple financial pressures at the same time (that is, education costs, COVID-related sickness, and car repairs).

Renovations and Home Maintenance. Respondents' most common financial challenge related to renovations and home maintenance costs. Eight respondents reported experiencing this financial challenge.

> *When I started doing renovations, I learned that I probably shouldn't have done it all at the same time. When I first moved in, I wanted it all painted; I wanted new cabinets; I wanted to furnish the whole home. My credit card bills were up, and I realized I shouldn't do it all at once.*

Another respondent described the financial hit they experienced due to a major home repair.

> *Because it's a boiler for heating and hot water, I knew the system was going to need replacing sooner or later. The first winter when I was here—the domestic hot water coil on it [the boiler] conked out and started leaking all over the place. That was a big repair that because I had wiped myself out a little buying the house, it stung a little getting that repair.*

Increased HOA Fees and Property Taxes. Three respondents reported financial strain due to increased HOA fees and property taxes. One explained that their HOA fees increased twice unexpectedly, and this increase was above what they had originally budgeted for in their mortgage. Another explained how they felt unprepared for the increase in property taxes after the sale of their home that might affect the sales price.

> *What nobody prepared me for is that if someone has been in a house for a number of years, the taxes hold there. But once they sell the home and it gets reevaluated, the taxes can go up significantly, depending on how long they owned the home for. I don't think that's something anyone prepared me for.*

Loss of Employment and "Slow Work." Loss of employment and "slow work" created financial strain for some respondents; four described the financial stress caused by job loss. One of these individuals—who had been delinquent on their mortgage payment—noted, *"I lost my job during COVID-19, and I didn't have any savings [to pay my mortgage]"*.

Another respondent reported experiencing "slow work" due to COVID-19 and indicated that this slowdown caused financial strain.

Multiple Financial Pressures. One respondent who had been delinquent on their mortgage described multiple forms of financial strain coming at the same time. This respondent viewed that as a "regular" part of life.

> *I was paying for my daughter's college. The car breaks down. I had COVID. Regular situations like anybody has.*

Financial Management Strategies

To better understand how homebuyer education and counseling participants managed their mortgage payments when faced with financial challenges, the study team asked them about how they coped with financial strain. Respondents reported using an array of strategies to stay up to date with their mortgage. The most common strategies included prioritizing their mortgage payments, cutting down on spending, receiving Unemployment Insurance, using savings, and obtaining a personal loan.

Prioritizing Mortgage Payments. A common theme among respondents related to financial management was prioritizing their mortgage payments. Six respondents shared that they prioritized these payments above all other bills.

> *[I] prioritized the expenses, with a significant impact on my credit. I knew I had to pay my mortgage, so anything that was coming late or had the highest interest at that time, those were the ones I paid first.*
>
> *My mortgage is always paid because I lay my head there, and that's what I tell my grown kids, that you always pay for the place where you lay your head first.*

Three of the respondents who prioritized their mortgage payments did so by having them automatically paid. None of these respondents had ever been delinquent on their mortgage payments.

> *I have my mortgage payment automatically taken out, so that has been a huge help. I don't count on that money; I don't see it.*
>
> *I was that person who always had it on automatic draft. It comes out every month on the second, and I know that it's coming. I've been lucky with jobs that I've had, so I got paid biweekly or semimonthly, so I knew the paycheck would be there in time for the mortgage to get drafted. I never wanted to log in and realize I forgot to pay the mortgage.*

I set it up from the beginning to be automatically deducted from my account. I split it into payments every 2 weeks.

Reducing Spending. Four respondents shared that in order to pay their mortgage, they reduced spending when unexpected expenses (for example, home repairs) and life happenings (for example, job loss) occurred. One study participant described a "needs"-focused approach to budgeting.

[I] shopped at thrift stores, bought less-expensive foods, didn't buy unnecessary things, and focused on "needs" and not "wants."

Another described the myriad of strategies her household used to ensure they had funds to pay their mortgage.

[We] reduced spending, including eating out, economized groceries, turned the heat off during the day if no one is in the home, and got rid of subscriptions.

Unemployment Insurance. Three respondents reported that after experiencing job loss, they managed their finances by receiving Unemployment Insurance.

Getting the additional Unemployment that the government was giving in [their state] was helpful.

Using Savings. Three respondents who had never been delinquent on their mortgage payments reported using their savings to manage unexpected expenses. One described how they balanced using this money by cutting expenses.

If there was ever a month where we felt like we would be short, we would pull from savings and make sacrifices in other places.

Another respondent explained that their family had savings dedicated to covering unexpected costs.

We made some savings for an emergency fund, so we wouldn't have to make a lifestyle change just to afford a repair.

Personal Loans. Three respondents reported taking out personal loans to manage unexpected expenses. One described taking a personal loan to cover a major home repair. Their experience underscores their lack of understanding of the function of an HOA.

In my head, I thought the HOA would take care of [the foundation issue], but they said they weren't responsible. I knew it was an issue I needed to take care of because it was causing a slope in the back of my townhome. In that situation, I had to get a personal loan. The personal loan costed me $150 a month on top of my mortgage, so every time I got a little extra chunk of change from a bonus or something, I tried to pay that off so I wouldn't have to worry about it anymore.

Other Financial Strategies. A few respondents reported using additional strategies to navigate their financial challenges. Two took on second jobs. One refinanced their mortgage. One received a COVID-19 forbearance. One borrowed money from family members, and one communicated with their lender and worked out a payment plan.

Racial Bias and Homebuyer Education and Counseling

A primary aim of the interviews with delinquent and nondelinquent respondents was to identify plausible mechanisms and hypotheses to explain the differential impacts of the homebuyer education and counseling across racial and ethnic subgroups. The interviews explored a number of potential explanations, including whether the respondents had experienced racially biased messaging or behaviors in the homebuyer education and counseling or, more generally, in their housing experiences. In addition to inquiring about these mechanisms, the study team invited respondents to suggest alternative explanations for the differential impacts.

Racial Bias in Homebuyer Education and Counseling. The study team asked African-American respondents about their experiences with the services and about experiences with implicit or explicit racial bias during the homebuyer education and counseling. Respondents uniformly reported they did not experience or observe racially biased information or behaviors during the homebuyer education and counseling.

> *It's [the homebuyer education and counseling] for everybody. Before I went into the course, they didn't know what kind of background I came from. I believe it's for all people, and everyone needs the education.*

Another respondent noted they did not perceive any bias in the counseling they received.

> *I don't believe that my race impacted the counseling services that I received. I felt that they provided important information that was accessible to all who took the class, and the class was one that everyone who is buying a home should take. Everyone is given the same information, so we can't say that there is a racial bias.*

In fact, many of the African-American respondents noted they did not perceive bias in the homebuyer education and counseling, and they found the program's content useful.

> *My race had no impact on what I learned from the class. I feel great about what I learned about dealing with the mortgage and buying a house.*

Three African-American respondents reported that the homebuyer education and counseling addressed that racism was not allowed in the homebuying process. However, one of these respondents noted that minimal information of any greater substance was provided on the topic.

> *I recall them saying that [racism] wasn't allowed. I don't recall anyone specifically saying this can happen. They just stay with the law. You can't redline. Just so that people know[that] people can't tell them where to live. They grazed on it. There wasn't a lot of detail.*

Possible Explanations for the Race Subgroup Impact Differential Impacts

The study team asked African-American respondents about their experiences with racial bias in the housing market more broadly. In addition, the study team asked all 18 respondents to suggest possible reasons why the intervention might have had favorable impacts on White but not African-American study participants.

Racial Bias in the Housing Market. Although African-American respondents reported they had not observed or experienced racial bias in the homebuyer education and counseling, most of them (five of eight) reported they had experienced racial bias during their homebuying journey.

Respondents described racial discrimination by realtors and underwriters. A common theme was the lack of time and attention paid to Black homebuyers. For example, one respondent described being "pigeonholed" into particular neighborhoods and homes.

> *[My first realtor] tried to pigeonhole me. Even in neighborhoods that were predominantly Black or African-American neighborhoods. She didn't take the time to find the diamond in the rough that what would fit my budget and my needs.*

Another respondent encountered racial discrimination while viewing a home.

> *When I was looking for my first home, I realized that [there is racial discrimination]. I went to see the home with my kids, and the realtor was White. He was racist. He treated us less-than. He had no reason to.… It was discouraging. People are ignorant, and you can't change the situation; you just have to keep going.*

Some of the respondents identified subtler forms of racial bias in their homebuying experience. For example, one recounted that their underwriter was less responsive to an urgent need than they expected had they been White.

> *The underwriter situation—if I was of a different race, this would not be happening. It was an urgent matter, but they did not find it to be urgent.*

Three African-American respondents reported they did not experience racial bias in the housing market. One of them attributed this lack of bias to having a Black real estate agent and loan officer and to buying their home from a Black seller.

Racial Wealth Gap and Role Models. Along with exploring potential bias embedded in the intervention, the study team invited respondents to hypothesize about the differential impacts between Whites and African-Americans in the study. The most common hypothesis that emerged from African-American respondents relates to the (well-documented) racial wealth gap in the United States. Others offered hypotheses that reflected distressing racial stereotypes about African-Americans and their ability to successfully navigate the housing market.

Several African-American respondents suggested that Whites have more financial resources, which could contribute to racial differences in mortgage payment outcomes and applying information from the course. One hypothesized how intergenerational wealth might advantage White homebuyers.

> *I feel like White people are financially in a better situation usually. Like, their parents have saved up money for them, [and]they give them downpayment money. Like their parents have set them up, whereas our parents didn't…couldn't do that.*

Another African-American respondent focused on the racial wealth gap as an explanation for why White study participants might have fared better in the housing market.

> *I think that White homebuyers were in a better position; they just needed additional funding. They already had careers, additional money set aside, [and] knowledge about the process. Whereas Black people were probably up and coming or trying to get their lives together. Their income wasn't as secure as some of the White people attending. I feel like it's more of an income thing.*

Some African-American respondents speculated that the higher homeownership rates among White people means that they are more likely to have role models in homebuying and homeownership. One study respondent reflected on their own positive experience of having homeowners in her family, noting that this type of support might be more common for White homebuyers.

> *I was a first-time homebuyer, but I wasn't the first in my family to buy a home. I saw what it took to maintain a home and do it monthly. For me, I was joining the group of my family who were already homebuyers. For [other Black people], it could be that they were the first person in their family to do this.*

Additional hypotheses about the impact differentials by race included the possibilities that the homebuyer education and counseling came too late to account for the challenges that African-American homebuyers face and of racial disparities in accessibility and useability of the online course stemming from the racial wealth gap.

Possible Explanations for the African-American Treatment-Control Group Differences

Among African-American study participants, those in the treatment group were more likely to experience nonmortgage derogatory events and be 90 days delinquent on a mortgage loan than were their control group counterparts. Generating plausible hypotheses to explain this finding proved challenging.

Both African-American and White respondents struggled to explain how the intervention could lead to unfavorable impacts for the African-American subgroup. Two hypotheses emerged: (1) that the homebuyer education and counseling gave African-American treatment group members false confidence about their readiness to purchase a home and (2) that the information provided during the homebuyer education and counseling could have been presented in a culturally inaccessible manner that did not account for the interaction between the information and African-American study participants' identities.

Four respondents (three White and one African-American) suggested that the education course could have given African-American treatment group members false hope or false confidence, potentially leading them to believe they could afford a house that they could not.

One African-American respondent speculated about unintended interactions between the identities of African-American program participants and the mode of instruction and program content. This respondent suggested that the identities of people taking the course, as well as the people teaching the course, could have influenced how information was interpreted. The respondent elaborated that the combination of African-American program participants' race, age, and socioeconomic status might be collectively influential in producing program impacts.

G.2 Summary of Interview Insights

Key findings from the interviews that explored the racial and ethnic differences in impacts include—

- Most of the respondents reported gaining useful information from the homebuyer education and counseling.
- Respondents reported that the most useful topics in the homebuyer education were the overview of the homebuying process and terminology, and budgeting, saving, and credit maintenance.

- Respondents identified missing topics they wished were covered in the program:
  - Budgeting for housing-related costs, including HOA fees and home maintenance and renovation.
  - Available resources during financial hardship.
- After buying their home, respondents reported that their most common financial challenge related to renovations and home maintenance costs. Other financial challenges were dealing with income insecurity and unexpected costs related to home ownership, such as rising HOA fees.
- Respondents used several financial management strategies during financial hardships:
  - Prioritizing their mortgage payments above all other bills.
  - Cutting back on spending.
  - Reliance on Unemployment Insurance, savings, personal loans, and second jobs.
- Respondents uniformly reported they did *not* experience or observe racially biased information or behaviors during the homebuyer education and counseling. Three African-American respondents stated the homebuyer education minimally addressed that racism was not allowed in the homebuying process.
- Most African-American respondents reported experiencing racial bias during their homebuying journey, most commonly from realtors and underwriters.
- Three African-American respondents reported they did not experience racial bias in the housing market, crediting having a Black real estate agent and loan officer and buying their home from a Black seller.
- Respondents suggested explanations for the more favorable program impacts on Whites, including—
  - Both African-American and White respondents mentioned the wealth and income gap between White and African-Americans.
  - A few African-American respondents mentioned the dearth of homeownership role models for African-American first-time homebuyers.
  - African-American and White respondents reported disparities with the accessibility and useability of the online homebuyer education and counseling, rooted in the racial wealth gap.
- Both African-American and White respondents struggled to explain how the intervention could lead to perverse impacts for the African-American subgroup. Two possibilities included—

- Services could have given African-American participants false hope or false confidence that led to worse choices.[67]
- An unintended interaction between race, mode of instruction and content could have negatively impacted African-American study participants in the treatment group.

[67] It should be noted that the data from the impact study does not support this explanation as the African American treatment group participants had a lower home purchase rate than their control group counterparts.

Appendix H. Findings From Study Participant Interviews Related to Forbearance Experiences

This appendix reports the findings from interviews with study participants about their experiences with the forbearance process during the COVID-19 pandemic.

H.1 Background

Some participants in HUD's The First-Time Homebuyer Education and Counseling Demonstration received a mortgage forbearance during the COVID-19 pandemic.[68] To better understand these homebuyers' experiences, the study team conducted semi-structured interviews with eight study participants. Each of these respondents had received a mortgage loan forbearance, modification, or other accommodation during the pandemic and had participated in homebuyer education or counseling.

"**Forbearance** is when your mortgage servicer or lender allows you to pause or reduce your mortgage payments for a limited time while you build back your finances." (CFPB, n.d.)

During the interviews, the study team asked respondents about the process of obtaining and maintaining a forbearance and how the forbearance affected their financial well-being. Questions about the forbearance experience focused on the reasons they sought a forbearance, how they learned about the forbearance option, and the mode and substance of communication they received from their mortgage servicer. The study team also probed the impact of the forbearance on the respondent's financial security and well-being during the pandemic, along with any challenges they faced related to the forbearance. Finally, the interviews provided an opportunity for these eight respondents to share their experiences with the homebuyer education and counseling, including what they found most useful in their homebuying journey.

H.2 Interview Findings

Seeking Forbearance

Most of the respondents reported that they sought a forbearance due to unanticipated financial hardships that made paying their mortgage on time difficult. Five of the eight respondents applied for a mortgage forbearance due to financial hardship as a result of job loss, illness and death in their household, maternity-related income loss, and reduced income during the pandemic. Two respondents were already behind on their mortgage payments when they applied for the forbearance; two others said that without the forbearance, they might have defaulted. One respondent summarized how their job loss had affected their ability to pay their mortgage.

> *I was behind on my mortgage because I was trying to keep up with my mortgage and car notes and bills and everything else. I lost my job, actually before the*

[68] Under the Coronavirus Aid, Relief, and Economic Security Act 2020, homeowners experiencing financial hardship directly or indirectly related to the COVID-19 pandemic were eligible for a mortgage forbearance. According to the program guidelines, homeowners are eligible for an initial forbearance of 6 months, extendable for another 6 months. Federally backed mortgages can be extended for a period of 12 months, limiting the duration of the overall forbearance to a maximum of 18 months. Homeowners could apply for forbearance directly through their mortgage servicing agency or through a housing counselor.

pandemic, so the Unemployment that I was receiving and the new job that I got wasn't enough to keep up with everything.

Not all the respondents applied for a forbearance due to an acute financial hardship. Two explained they used the forbearance to mitigate future, unforeseen financial hardships.

Honestly, I was not in any financial distress…. I used it as a mitigation to potentially missing payments. I thought it was a quick and easy way to build some sort of buffer for myself.

One respondent reported not seeking or requesting a loan forbearance. They explained that their servicer sent an e-mail to some of its clients that automatically enrolled recipients who did not actively opt out. According to this respondent, they were officially under forbearance for 12 months without even realizing it, even as they continued to make monthly payments.

Attaining Forbearance

Primary Source of Information on Forbearance Program. Most of the respondents reported learning about the forbearance option from their mortgage service providers or through the media. The study team asked whether they recalled the topic of forbearance from the homebuyer education and counseling, and none of them remembered hearing about the topic. All eight respondents reported first hearing about the forbearance option during the pandemic. These respondents uniformly said their mortgage service providers provided them with important information related to the forbearance program. Some servicers initiated the forbearance conversation; some respondents reported the servicer was responsive to their inquiries.

Four respondents said they first learned about the forbearance program directly via communication shared by their mortgage servicer.

During the pandemic, [my servicer] was promoting [forbearance] via e-mail and promoting that there was potential benefits, which is how I found out.

The other four respondents learned about the forbearance option from public sources such as social media, web articles, and on the news; three of these four respondents followed up with their mortgage servicer for more information. Only one respondent reported working with a housing counselor to arrange a forbearance with their mortgage servicer.

Initial Application. Most respondents described the process of obtaining forbearance as straightforward, that the documentation requirements were not cumbersome, and that the application process was quick.

The modality of the forbearance application varied. Three respondents reported their service provider processed their application over the phone; one received a paper application in the mail following a conversation with a customer service representative from her mortgage servicer; and another explained that his mortgage servicer used a fully web-based application process. Only one respondent worked directly with their local bank on their forbearance application. They attributed the ease of the application process to their relationships at the bank:

I didn't really have to work hard for this. I just had to know the right people, and I do. I know the people at the bank; they were awesome; they just helped me through everything I needed to go through. Even a kindergartener could've—it wouldn't have been a challenge for them because all these people were very

> *thorough; they explained everything to you.… All I had to do was follow their orders.*

The study team probed on the types of personal financial information the mortgage servicers asked for during the application process. Most respondents did not recall their servicers asking why they were seeking a forbearance. Two respondents did; both believed their mortgage servicer was within their rights to ask for this information.

> *I thought the questioning was fair. I would ask the same questions if I was lending money to someone. They asked what my situation was, how it was going, and how I was dealing with it. They asked about salary, financial status, and why I was unable to make payments.*

The time between applying for forbearance and receiving it was relatively short for all eight respondents. According to them, the time for processing varied from a couple of days to 3 weeks. One person attributed the timeliness of the process to government involvement in the program.

> *It didn't take long because [the forbearance program] was readily available and out there. I guess the government set it up with the bank to help people.*

Communication With Mortgage Servicers. The study team asked respondents to describe their communications with their servicers throughout their forbearance period. Most of them said their servicer provided clear communication, starting with information about when their forbearance period would start and end.

> *I was made aware of when the program would start and how long I could be on it, as long as I needed it. The bank would get their money another way, somehow.*

Respondents reported that most of their communication with their mortgage servicer took place over the phone. Three respondents recalled receiving additional details or followup documentation by mail.

> *I received a letter afterwards, and they explained how the process worked and how the payments were forgiven but not really forgotten.*

Seven respondents recalled contacting a central customer service number at some point during their forbearance period; they all said they spoke with a different customer representative each time they called. Respondents expressed overall satisfaction with their communication experience with their mortgage servicer's customer service, although two respondents reported moments of frustration related to conflicting information from different representatives about the repayment process.

Seven of the eight respondents reported their mortgage servicer offered them forbearance extension. In general, they characterized the extension process as straightforward. They reported that their servicers informed them about the option to extend their forbearance before it expired. Two respondents said their servicer scheduled followup calls, which they found helpful. In one case, the extension was automatically applied to the mortgage account without the homeowner's knowledge.

Information Gaps

In two areas, study participants reported they did not receive adequate information from their mortgage servicer regarding their forbearance: (1) repayment options and (2) the impact of forbearance on refinancing.

Repayment Options. Four respondents reported that their servicer did not share adequate information about the various repayment options available to them when they applied for a forbearance. Among these four, one reported their servicer required them to make a lump sum (or balloon) payment at the end of their forbearance term; two knew only about the option to repay accrued arrearages at the end of their loan term; and one knew only about the option to repay arrears as additional amounts on top of their regular mortgage payments.

Two respondents said their mortgage servicer communicated an expectation of a lump sum payment at the end of their forbearance. One of them was able to obtain a different repayment option after communicating with another representative, describing the process as confusing and fear inducing.

> *I was really scared. One guy told me that I would have to pay $14,000 and you have to pay now and that nothing had been approved yet. One guy really threw me off because he said you have to pay it and pay it now. I was really confused, and I was crying, but then I talked to someone else, and he said that that was incorrect.*

Refinancing. Three respondents reported that their forbearance had negative effects on their efforts to refinance their homes. They described substantial processing delays due to the forbearance when they attempted to refinance their mortgage.[69] Lenders required these homeowners to explain the forbearance record on their credit history and provide necessary documentation that confirmed that they paid in full all their mortgage arrearages accrued during the forbearance. One respondent said they regretted taking a forbearance.

> *I did have to justify it, so going back in time, I would never have done it if I knew I would have to justify [it] later down the road.*

All three of these respondents reported their mortgage servicer had not warned them about the effects of forbearance on refinancing. One said that, in retrospect, the communication from their lender *"felt like it was a sales pitch and not so much of an educational pitch."*

Overall Forbearance Experience

Mortgage Servicer Interactions. Respondents expressed satisfaction with their forbearance experience and said they received adequate information and help from their mortgage servicer. One praised their servicer for helping to navigate a financially stressful period.

> *[My bank] saved my house and saved me from a lot of stress. I fell behind on a lot of bills. I thank God for my mortgage company that reached out to me.*

[69] Although a forbearance does not negatively influence the homeowner's credit score or result in any direct penalties, a forbearance gets flagged on the homeowner's credit history and is examined closely by other lenders.

This respondent shared that when she fell behind on her mortgage payment, her local branch and account advisor proactively presented her with the forbearance option, and that this option made her feel cared for. She noted that she missed other financial benefits offered during COVID and appreciated that her lender made her aware of the forbearance option.

> *I wouldn't have known about [forbearance] unless my bank called me and told me about it. It's basically up to the banks, because I didn't know about a lot of the financial benefits that were going on outside of the forbearance. I missed out on a lot of financial support that I could've gotten during that time, but I didn't know about a lot of that stuff.*

This respondent's strong relationship with her local bank appears to have played a role in her positive forbearance experience.

Forbearance Benefits. Study participants reported that the forbearance offered them critical help during the pandemic, including generally managing their financial commitments, offering needed financial relief, and contributing to their overall well-being. Three of these respondents stated that without the forbearance, they believe they would have lost their homes.

> *I still have my house. Without the forbearance, I could've lost my house. The biggest benefit is that I still have my home, and my mortgage [after adding the repayment installments] is not extremely high.*

Two respondents described how the financial relief provided by the forbearance provided them with the flexibility to cover household expenses and navigate the financial uncertainty caused by the pandemic. One shared that they appreciated the opportunity to be able to make mortgage payments on a flexible schedule.

> *[Forbearance] alleviated the pressure of having to meet a certain schedule [for mortgage payments]—having to pay on time. During the pandemic, and a lot of uncertainty, the reasons that I [opted for a loan forbearance] were to have that freedom, and I did appreciate that. I was able to pay late and catch up without having the delinquency on my credit report or anything like that. I did appreciate what it was intended to do.*

Some of these respondents said the forbearance had positive spillover effects beyond their financial wellness. For example, four of them associated forbearance with a sense of relief.

> *[Not having to pay my mortgage] felt like relief. I felt a lot of relief!*

Suggestions for Improvement

Next, the study team asked how they thought the mortgage forbearance program could be improved. Four respondents said that at the outset of the forbearance process, servicers should provide a clearer explanation of the mortgage forbearance option. A couple of respondents noted that the term "forbearance" felt like a misnomer:

> *Well, I think that the word "forbearance" itself means* forgiving. *And it's not forgiving. I think if you're going to use that term, it needs to be forgiving and not included into the mortgage. Even though you don't rewrite the mortgage, it's not forgiving, it's just saying you can stop your payments for a while.*

[I was] not clear on what forbearance meant—wondered if it meant we didn't have to pay it all or pay it back due to COVID.

Three respondents suggested that the mortgage servicers provide better information on how forbearance affects refinancing.

I think they made it look so quick and easy and appealing without the understanding that there were financial obligations.

Experience With Homebuyer Education and Counseling

Of the eight respondents in this forbearance interview group, two had completed both the education and the counseling services offered, four had completed only the education services, and the other two did not complete the services that they initiated. Of the eight, one respondent had been assigned to the in-person treatment group; three to the remote treatment group; and four to the treatment choice group and had opted for the remote program access. All stated they did not clearly recall the specifics of the homebuyer education and counseling services they were offered because they participated many years ago. None of the respondents recalled learning about mortgage forbearance during homebuyer education and counseling.

Overall, respondents reported favorable experiences with the first-time homebuyer education and counseling services. Four of them said the services taught them how to budget for a mortgage and how to plan for contingencies and other unexpected costs they might face as homeowners.

[Homebuyer education and counseling] taught me how to budget, you know, because you never know what's going to happen in and around the house.

As first-time homebuyers, these respondents believed the homebuyer education clarified relevant financial terminology. One respondent shared how the homebuyer education was beneficial to them.

One thing that was great about the program for us was the education about the cost of ownership. We wouldn't have expected that the first escrow analysis would have shot up our house payment. Learning not to max out your budget with the first house payment since the rates can rise was really helpful. There's not a lot of long-term home ownership in the family. When COVID came about and the [forbearance] program was offered, we thought about that education program and thought about the long term—the month after, and the month after that.

Two respondents said they found the resources shared during the homebuyer education and counseling useful in the early years of being a first-time homebuyer.

Being a first-time homebuyer, I think the checklists for what I should do and maintenance that I felt I should have within the first year or two as a homeowner were helpful.

One respondent said the intervention taught them to contact their mortgage servicer during any financial upheaval and personal circumstances that could affect their mortgage payments. They suggested that anyone needing a forbearance or loan assistance would benefit from this approach:

With the forbearance, I would say anybody who needs one, due to COVID or whatever, connect with your bank. Have a relationship with your mortgage loan *officers, make sure you know what you need to do to pay it back. Don't get into something that you know is over your head, that you can't do, because you're going to lose your home, your mind, and everything else.*

Although other respondents did not specifically remark on this aspect of the intervention, they all reported reaching out to their mortgage servicer directly when they needed more information regarding the forbearance program.

Three respondents reported they did not find the homebuyer education and counseling services immensely helpful. One explained they were already looking for a house for 2 to 3 years prior to enrolling in the program, and they felt that they learned nothing new from the program. One said that the course was too basic, noting that the program conveyed one message: "Don't miss your payments, you could lose your house." The third said that the online format of the program was not conducive for them to learn and retain knowledge.

H.3 Summary of Forbearance Study Findings

Key findings from the interviews on forbearance include—

- Most of the respondents sought a forbearance due to unanticipated financial hardships that reduced their ability to make their mortgage payments. Most of these hardships were a result of an unanticipated financial shock, including job loss, illness, and death.
- Two of the respondents used forbearance as a way to mitigate future, unforeseen financial hardships.
- One-half of the respondents learned about the forbearance option from their mortgage service providers, and one-half learned about forbearance through the media.
- None of the respondents recalled learning about the forbearance option through the first-time homebuyer education and counseling.
- Respondents uniformly reported the process of applying for a forbearance was straightforward and that the documentation required by their servicer was not overly burdensome. The time between applying for a forbearance and receiving one was relatively short, a couple of days to 3 weeks.
- In general, respondents felt satisfied with the mode, frequency, and content of communication by their servicer during the forbearance period, as well as generally with their forbearance experience, including its outcomes for them.
- Respondents reported they did not receive adequate information from their mortgage servicers regarding (1) repayment options and (2) consequences of forbearance on refinancing.
- Respondents reported a range of benefits that accrued from the forbearance, including meeting household expenses, keeping their home, and providing a sense of relief.
- Respondents suggested areas for improvement:
  - Clearer communication about the meaning of forbearance (that it is not a loan forgiveness program).
  - More information on how the forbearance might affect other financial transactions, including the timeline for home refinancing.

- Although respondents did not recall learning about loan forbearance during homebuyer education and counseling, five reported they gained valuable information that helped them navigate the homebuying process. Three reported they did not find the services especially helpful.

Finally, it is important to note that the findings reported here reflect the study participants' recollections of their experiences from several years ago. It is possible that the education and counseling that these research participants participated in included information about loan forbearance; these participants simply may not recall this topic being covered; and current practice may or may not be similar to those experiences.

Appendix I. Addendum to Long-Term Impact Report

Discussions with HUD in late 2022 indicated that about 21 percent of the 1,424 study participants who were matched to December 2021 Federal Housing Administration (FHA) data were matched based on weak matching criteria, raising concerns that the FHA data for this subset of the study sample did not provide accurate information on their long-term outcomes. The study's Long-Term Impact Report presented impacts on four outcomes constructed using FHA data in combination with data from a credit bureau, participating lenders, and the study's Long-Term Followup survey (Peck et al., 2021):

- An indicator for whether the study participant purchased a home.
- An indicator for whether the study participant was ever 30 days delinquent.
- An indicator for whether the study participant was ever 60 days delinquent.
- An indicator for whether the study participant was ever 90 days delinquent.

The authors reconstructed the four long-term outcomes listed previously using FHA data for study participants who were matched to FHA data using strong match criteria along with the same credit bureau, lender, and survey data historically used to construct these measures. In what follows, the authors summarize how the impact findings changed after reconstructing the outcomes without using FHA data based on weak matches.

Panel A of exhibit I.1 presents updated long-term impacts for the full study sample using only FHA data based on strong match criteria (along with other administrative and primary data sources, as documented in the Long-Term Impact Report). Similar to the published findings in panel A, there remains no detectable impact on these four long-term outcomes for the full study sample.[70] Although the general conclusion about the impact of homebuyer education and counseling on these four outcomes remains unchanged for the full sample, the updated full sample means for the four outcomes are slightly lower relative to the means reported in the Long-Term Impact Report. For example, the findings published in the Long-Term Impact Report indicated that about 77 percent of study participants purchased a home by long-term followup, whereas the updated estimates indicate that about 75 percent of study participants purchased a home by long-term followup. These results are qualitatively similar.

[70] The authors also reconstructed the same four *short-term* outcomes using FHA data for study participants who were matched to FHA data using strong match criteria along with the same credit bureau, lender, and survey data historically used to construct these measures. Similar to the published findings in the Short-Term Impact Report, for the full study sample, there remains no detectable impact on these four short-term outcomes.

Exhibit I.1. Overall Impact of the Demonstration's Homebuyer Education and Counseling on Long-Term Outcomes, Updated Versus Published Findings

Outcome	Treatment Sample Size	Control Sample Size	Treatment Group Mean	Control Group Mean	Impact of Being Offered Services (Standard Error)	Impact of Taking Up Services (Standard Error)	Outcome Classification
Panel A. Updated Findings							
Study participant purchased a home (%)[b]	3,261	2,412	75.2	75.3	– 0.1 (1.3)	– 0.1 (2.4)	Secondary
Ever 60 days delinquent (%)[e] ~	3,150	2,315	4.5	4.7	– 0.1 (0.5)	– 0.3 (0.9)	Confirmatory
Ever 30 days delinquent (%)[e] ~	3,150	2,315	9.2	9.2	– 0.1 (0.7)	– 0.1 (1.2)	Secondary
Ever 90 days delinquent (%)[e] ~	3,150	2,315	3.3	3.5	– 0.2 (0.5)	– 0.3 (0.9)	Secondary
Panel B. Published Findings							
Study participant purchased a home (%)[b]	3,265	2,414	77.1	76.8	0.3 (1.2)	0.6 (2.2)	Secondary
Ever 60 days delinquent (%)[e] ~	3,164	2,320	5.0	5.5	– 0.5 (0.6)	– 0.9 (1.1)	Confirmatory
Ever 30 days delinquent (%)[e] ~	3,164	2,320	10.1	10.6	– 0.6 (0.7)	– 1.1 (1.3)	Secondary
Ever 90 days delinquent (%)[e] ~	3,164	2,320	3.6	4.0	– 0.4 (0.5)	– 0.7 (0.9)	Secondary

~ Denotes outcomes that are coded as 0 for study participants who did not purchase a home. A statistical test was not conducted to ascertain whether the results in panel A differ quantitatively from the results in panel B.
Notes: A one-sided test determined the statistical significance of the impact on the confirmatory outcome. All other tests were two-sided. Due to rounding, reported impacts (T-C differences) could differ from differences between reported means for the treatment and control groups. Appendix A details the analytic methods, and appendix B provides additional detail on the construction of measures. Statistical significance levels for one-sided tests are, ### = 1 percent, ## = 5 percent, # = 10 percent. Statistical significance levels for two-sided tests are, *** = 1 percent, ** = 5 percent, * = 10 percent.
Sources: [b] Long-Term Followup Survey; credit bureau; study lenders; Federal Housing Administration (FHA); [e] Credit bureau; study lenders; FHA

The updated impacts by delivery mode and for subgroups defined by baseline characteristics are largely consistent with the impacts presented in the Long-Term Impact Report, with one exception. In the Long-Term Impact Report, there was no evidence of systematic between-group differences in impacts between White and African-American (there were significant differences in impacts for 3 of the 24 outcomes at the 10 percent level).[71] As exhibit I.2 shows, the study team now find evidence of systematic between-group differences in impacts between White and

[71] For the Long-Term Impact Report, the authors set the threshold for evidence of systematic between-subgroup differences in impacts as follows: For a given subgroup of interest, the authors must find a statistically significant between-subgroup difference in impacts (at the 10-percent significance level) for 5 or more of the 24 outcomes analyzed. If the between-subgroup differences are 4 or fewer (out of 24 total tests for each subgroup), then the authors conclude that evidence is not sufficient to conclude that impacts for the subgroups are different.

African-American (there are significant differences in impacts for 5 of the 24 outcomes at the 10-percent level). In contrast to the Long-Term Impact Report's reported findings, the updated findings in exhibit I.2 indicate that the there is a statistically significant difference in impacts between Whites and African-Americans for the following two outcomes at long-term followup: *Ever 60 days delinquent* and *Ever 90 days delinquent*.

Exhibit I.2. Comparison of Impacts on Subpopulations Defined by Race and Ethnicity: White Non-Hispanic Versus African-American Non-Hispanic, Updated

	White Non-Hispanic (N = 2,187)		African-American Non-Hispanic (N = 1,165)		
Outcome	Control Group Mean	Impact of Being Offered Services (Standard Error)	Control Group Mean	Impact of Being Offered Services (Standard Error)	Difference in the Impact of Being Offered Services (Standard Error)
Panel A. Preparedness and Search					
Study participant was confident in ability to find information needed about the homebuying process (%)[a]	72.6	3.1** (1.4)	66.4	5.4 (4.1)	– 2.3 (4.4)
Study participant purchased a home (%)[b]	82.5	0.1 (1.6)	66.6	– 5.7** (2.8)	5.9** (2.8)
Study participant was very satisfied with the homebuying process (%)[a]	43.4	0.2 (2.5)	38.9	– 3.9 (2.5)	4.0 (3.4)
Study participant was satisfied with decision to buy or rent (%)[a]	91.4	1.1 (1.2)	82.0	– 1.3 (2.7)	2.5 (3.1)
Panel B. Financial Knowledge, Behaviors, and Skills					
If in financial difficulty, the study participant would contact lender for assistance prior to missing a mortgage payment (%)[a] ~	63.2	4.0* (2.2)	44.8	– 1.9 (4.2)	5.9 (4.5)
If in financial difficulty, the study participant would contact counseling agency, consumer credit counseling agency, or other nonprofit organization for assistance prior to missing a mortgage payment (%)[a] ~	21.9	4.8* (2.4)	21.1	0.9 (3.7)	3.9 (4.0)
Financial skill score (ranges from 0 to 100)[a]	63.3	0.4 (0.7)	64.7	– 0.1 (0.7)	0.5 (1.0)
Panel C. Financial Indicators					
Credit score as of December 2019 (out of 850)[c]	738.6	4.6 (3.0)	670.6	– 7.1 (4.3)	11.7** (5.3)
Study participant has a credit score greater than or equal to 620 (%)[c]	87.1	2.3* (1.2)	67.3	– 1.3 (2.1)	3.7* (2.1)
Financial well-being score (ranges from 0 to 100)[a]	64.5	– 0.5 (0.7)	61.9	0.1 (1.2)	– 0.6 (1.5)
Total nonhousing debt($)[c]	28,945.0	693.8 (1,420.0)	40,110.3	2,569.7 (1,871.5)	– 1,875.9 (1,975.8)

Outcome	White Non-Hispanic (N = 2,187) Control Group Mean	White Non-Hispanic (N = 2,187) Impact of Being Offered Services (Standard Error)	African-American Non-Hispanic (N = 1,165) Control Group Mean	African-American Non-Hispanic (N = 1,165) Impact of Being Offered Services (Standard Error)	Difference in the Impact of Being Offered Services (Standard Error)
Student loan debt($)[c]	9,756.2	1,037.0 (789.6)	19,697.5	3,186.8** (1,461.1)	– 2,149.9 (1,406.9)
Total consumer debt (all debt besides housing and student) ($)[c]	19,188.8	– 343.2 (946.9)	20,412.7	– 617.1 (1,393.0)	273.9 (1,620.9)
Credit card debt[c] ($)	6,499.1	– 254.0 (319.3)	7,041.0	– 1,204.7** (553.7)	950.7 (630.1)
Total monthly debt-to-income ratio (back-end ratio)[d]	25.4	0.7 (1.1)	31.2	– 1.9 (2.4)	2.7 (2.4)
Student loan 30-day delinquency indicator (%)[c]	3.3	– 0.3 (0.7)	8.1	1.3 (2.0)	– 1.6 (2.3)
Total savings and investments ($)[a]	89,140.2	6,763.5* (3,442.1)	32,911.4	– 902.3 (4,645.7)	7,665.7 (6,681.7)
Panel D. Sustainable Homeownership					
Ever 60 days delinquent (%)[e] ~	4.0	– 1.5** (0.6)	7.5	2.1 (1.9)	– 3.6* (1.9)
Ever 30 days delinquent (%)[e] ~	7.7	– 1.6 (1.1)	14.2	0.8 (2.3)	– 2.4 (2.6)
Ever 90 days delinquent (%)[e] ~	3.4	– 1.5** (0.6)	5.4	2.3 (1.8)	– 3.8** (1.8)
Ratio of monthly housing costs to monthly income[a]	21.7	0.8 (1.0)	26.5	– 0.8 (1.3)	1.6 (1.9)
Study participant described the condition of current home or apartment as good or excellent (%)[a]	89.9	– 1.3 (1.7)	82.2	– 0.0 (2.4)	– 1.3 (3.1)
Study participant is satisfied with current neighborhood (%)[a]	94.2	1.3 (1.1)	90.6	1.9 (1.5)	– 0.6 (2.0)
Study participant is confident in ability to make housing payments over the next 6 months (%)[a]	89.7	1.1 (1.5)	83.0	– 1.1 (3.0)	2.2 (3.3)

~ Denotes outcomes that are coded as 0 for study participants who did not purchase a home.
Notes: Appendix A details the analytic methods, and appendix B provides additional detail on the construction of measures. Outcome-specific sample sizes vary due to missing data. Statistical significance levels for two-sided tests *** = 1 percent, ** = 5 percent, * = 10 percent.
Sources: [a] Long-term followup survey; [b] Long-term followup survey; credit bureau; study lenders; Federal Housing Administration (FHA); [c] Credit bureau; [d] Long-term followup survey; credit bureau. [e] Credit bureau; study lenders; FHA

Our interpretation of impact findings by subgroups defined by race has changed to reflect differences in patterns of those impacts between the Long-Term Impact Report and this report (exhibit I.2). In the Long-Term Impact Report, there was no evidence of a systematic statistically significant subgroup impact differentials by race. That is, across the 24 outcomes analyzed, between-group impact differences did not appear to occur more frequently than would be expected due to random chance. However, the study did highlight the striking financial disadvantages that African-American and Hispanic study participants were at—in terms of debt, savings, and credit scores—compared with White participants at baseline. Because the study's findings suggested that the intervention did not help narrow these financial disadvantages, the authors focused the discussion of the race subgroup findings around this "missed opportunity"—that is, the intervention did not appear to reduce preexisting race-based financial inequalities. In the current report, the authors observe a higher number of subgroup impact differentials, which compels the authors to go beyond this "missed opportunity" discussion to raise questions about why the intervention had different impacts for race-defined subgroups. Although these impact findings are exploratory, and the insights based on a small number of interviews provide some reassurance that these findings may not be robust, the unexpected—and in some cases unfavorable—impact on African-American participants warrants deeper exploration in the future.

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