Exploring the Impact of Homebuyer Education and Counseling on Debt, Savings, and Nonhousing Wealth

HUD FIRST-TIME HOMEBUYER EDUCATION AND COUNSELING DEMONSTRATION SPECIAL TOPIC PAPER

Exploring the Impact of Homebuyer Education and Counseling on Debt, Savings, and Nonhousing Wealth

HUD First-Time Homebuyer Education and Counseling Demonstration Special Topic Report

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Executive Summary

This report builds on the First-Time Homebuyer Education Counseling demonstration's Long-Term Impact Report to explore whether homebuyer education and counseling increased nonhousing wealth and savings for low-, moderate-, and middle-income prospective first-time homebuyers. The demonstration's Long-Term Impact Report found that, overall, study participants who were offered homebuyer education and counseling services built more savings and had lower levels of credit card debt—but also had *higher* levels of student loan debt—than those who did not receive the offer of services. This report examines whether this pattern reflects strategic debt management, such as shifting away from higher-cost consumer debt toward lower-cost student loan debt to build savings and nonhousing wealth.

To do so, we construct and analyze a new variable (nonhousing wealth) that was not part of the Long-Term Impact Report. Additionally, we explore additional outcomes by subgroup, also not part of the prior report. Those analyses intend to expose whether patterns of impacts emerge that might add insights to the Long-Term Impact Report's overall results.

This report conducted additional analyses—including nonhousing wealth and additional exploratory subgroup impacts—to explore this possibility further. The results of these analyses lead to the conclusion that no subgroup pattern offers evidence of strategic debt management. Instead, the LTIR's overall findings with respect to debt and savings stand without additional insights or interpretation from these supplemental analyses.

1. Introduction

Homebuyer education and counseling services are designed to help homebuyers think about the benefits and risks of homeownership, understand how to choose a home and an appropriate mortgage, and build the financial knowledge and behaviors needed for sustainable homeownership. However, homebuyer education and counseling may support financial health more generally by enhancing participants' financial capability such as debt management skills and savings habits. This enhanced financial capability has the potential to benefit all recipients of homebuyer education and counseling services, regardless of whether they purchase homes or not.

This report leverages data from the First-Time Homebuyer Education and Counseling demonstration to investigate whether homebuyer education and counseling increase the likelihood of individuals' strategic management of debt—shifting away from higher-cost toward lower-cost debt—to increase savings and nonhousing wealth.

The remainder of this section provides a brief overview of the demonstration. Section 2 presents the overall impact of homebuyer education and counseling on nonhousing debt levels and compositions, as well as the impact on savings and nonhousing wealth, followed by these impacts for select subgroups. Section 3 summarizes the findings and discusses implications.

Background

The First-Time Homebuyer Education and Counseling demonstration used a randomized experimental design to evaluate the effectiveness of offering voluntary, free homebuyer education and counseling services. The demonstration randomly assigned low-, moderate-, and middle-income prospective first-time homebuyers into control or treatment groups, with treatment group participants offered free homebuyer education and counseling services. Differences in outcomes between treatment and control group members—who were not offered services—reflect the estimated impact of homebuyer education and counseling.

The demonstration collected data from several sources, including the Federal Housing Administration (FHA), a credit bureau, three national mortgage lenders, and service provider agencies. The demonstration also collected survey data via a baseline and two followup surveys of study participants.[1] The analysis in the demonstration's Long-Term Impact Report (LTIR; Peck et al., forthcoming) estimates the impact of homebuyer education and counseling across a host of outcomes, including several in the domain of financial capability.[2] The study found that individuals who received the offer of homebuyer education and counseling had, on average,

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[1] The Long-Term Follow-Up Survey collected information from participants roughly 4 to 6 years after study enrollment and had a 72 percent response rate. The survey data were collected between October 2019 and July 2020, with about one-half of the completions occurring in 2019, and the administrative data are from December 2019.

[2] This report reports impacts using an intent-to-treat (ITT) impact estimate. ITT estimates reflect the *impact of the offer of services*, whether or not the treatment group members "take up" that offer.

lower levels of credit card debt, higher levels of student loan debt, and higher levels of savings compared to their control group counterparts.

This pattern of findings led to a hypothesis that homebuyer education and counseling may change how service recipients use and manage debt as a way to increase their savings and build wealth.

> **The Intervention in Brief**
>
> **Homebuyer education** is instruction in buying a home and financial management; **homebuyer counseling** is one-on-one guidance tailored to the needs of the individual homebuyer. Both education and counseling can be offered either in person or remotely (online and by telephone). All agencies participating in the study—whether they provided in-person or remote services—were HUD-approved and adhered to the National Industry Standards (NIS) for Homeownership Education and Counseling, offering services that were standard at that time (2012–14).
>
> In theory, providing education and counseling to prospective homebuyers on these topics should enhance outcomes related to (1) the decision of whether to purchase a home, the process of searching for homes, and selection of appropriate mortgages; (2) general financial capability financial indicators such as levels of debt and savings, access to affordable credit, and credit profile; and (3) mortgage payment behaviors, including those behaviors that can play a role in avoiding foreclosure and accruing and protecting home equity. However, the intervention at the core of this demonstration is a relatively "light-touch" financial education intervention. For homebuyer education, the NIS suggest that 8 hours of education are required, and for homebuyer counseling, the NIS suggest 30 to 60 minutes of individualized counseling.

Research Question and Methodology

This report addresses the following research question: ***To what extent does homebuyer education and counseling result in strategic management of debt to increase savings and build wealth?***

This report uses the demonstration's randomized experimental design to estimate the impact of homebuyer education and counseling services on patterns of savings and debt to address the research question.[3]

We expand on the impact findings from the LTIR in two important ways. First, we include nonhousing wealth as an outcome of focus. If homebuyer education and counseling result in individuals strategically managing debt to save more, we would expect this to translate into greater wealth. Second, we estimate these same impacts for key subgroups of interest. If the overall pattern from the LTIR is reflective of the treatment group employing deliberate debt management strategies to increase savings, then we would expect to observe the same pattern among at least some subgroups. These specific outcome measures are defined in exhibit 1. Appendix A.1 presents details of these measures' construction and data sources.

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[3] As in the LTIR, the difference between treatment and control groups' mean outcomes is the estimated impact of homebuyer education and counseling.
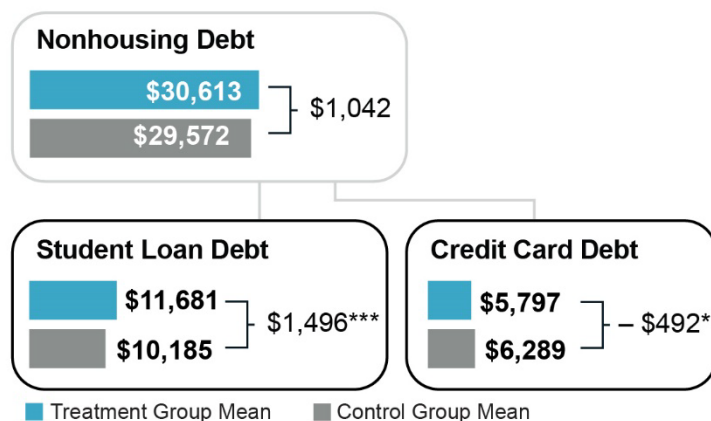
Exhibit 1. Outcome Measures of Interest

Measure	Definition
Cohousing Debt	The sum of student loan debt + consumer debt
Student Loan Debt	• Balance on all student loans
Consumer debt	• Balance of all debt other than housing debt and student loan debt
Credit Card Debt	• Balance of all credit card debt (one subset of consumer debt)
Savings	Total reported values for checking accounts, savings accounts, retirement accounts, and other savings and investment accounts
Nonhousing Wealth	Total savings minus total nonhousing debt (the value is positive for people with more savings than debt and negative for people with more debt than savings)

2. Overall Impacts on Nonhousing Wealth

This section first presents the findings from the LTIR on the overall impact of being offered homebuyer education and counseling on debt and savings outcomes. Then we explore the hypothesis that the observed pattern may reflect treatment group members employing a deliberate debt management strategy to increase savings by assessing whether there is also a positive impact on nonhousing wealth.

Exhibit 2 shows the impact of the offer of homebuyer education and counseling on total nonhousing debt, as well as two components of nonhousing debt, student loan debt and credit debt. As reported in the LTIR, there is no detectable difference between the treatment and control groups' average (total) nonhousing debt at long-term followup. However, homebuyer education and counseling resulted in an increase in the treatment group's student loan debt ($1,496) and a decrease in its credit card debt (-$492) relative to the control group.

Exhibit 2. Homebuyer education and counseling services did not detectably impact total nonhousing debt for the full study sample.

Nonhousing Debt
- $30,613
- $29,572
- $1,042

Student Loan Debt
- $11,681
- $10,185
- $1,496***

Credit Card Debt
- $5,797
- $6,289
- $492*

■ Treatment Group Mean   ■ Control Group Mean

Notes: Appendix A.1 provides additional details on the construction of measures. Statistical significance levels for two-sided tests are indicated with asterisks as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.
Source: Credit Bureau

At the same time, the offer of homebuyer education and counseling had a large and positive impact on savings (exhibit 3). Overall, treatment group members had $4,739 more in savings than their control group counterparts as of the long-term followup.

Exhibit 3. Homebuyer education and counseling services increased savings.

Savings and Investments

- Treatment Group Mean: $71,231
- Control Group Mean: $66,492
- $4,739**

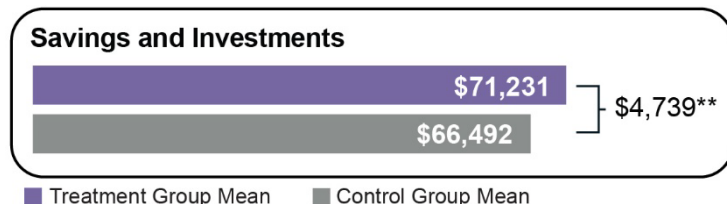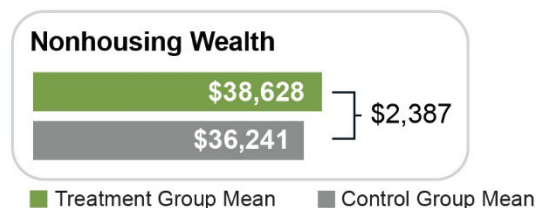■ Treatment Group Mean ■ Control Group Mean

Notes: Appendix A.1 provides additional details on the construction of measures. Statistical significance levels for two-sided tests are indicated with asterisks as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.
Source: Long-Term Follow-Up Survey

This specific combination of findings in the LTIR—higher student debt, lower credit card debt, and greater savings of the overall treatment group—generated the hypothesis that homebuyer education and counseling might result in strategic debt management as a way to increase savings.

To test this hypothesis, we estimate the overall impact of homebuyer education and counseling on nonhousing wealth. As shown in exhibit 4, the offer of homebuyer education and counseling did not have a detectable impact on nonhousing wealth. The treatment and control groups had roughly $37,000 in nonhousing wealth as of the long-term followup.

Exhibit 4. There is no evidence of an impact of homebuyer education and counseling on nonhousing wealth.

Nonhousing Wealth

- Treatment Group Mean: $38,628
- Control Group Mean: $36,241
- $2,387

■ Treatment Group Mean ■ Control Group Mean

Notes: Appendix A.1 provides additional details 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: Long-Term Follow-Up Survey; Credit Bureau

3. Subgroup Impacts on Debt, Savings, and Nonhousing Wealth

This section provides additional exploration into whether the overall observed pattern of impacts reflects the strategic management of debt to increase savings. To do so, we estimate the impact of homebuyer education and counseling on debt, savings, and nonhousing wealth for select subgroups defined by gender, age, race, and ethnicity. We chose to look at the gender and age subgroups because the LTIR revealed that homebuyer education and counseling positively impacted women and younger prospective homebuyers. Race and ethnicity were chosen because

of the importance of understanding the equity implications of programs and policies more generally.[4]

Impacts by Gender

Key Finding: Analysis of subgroups by gender does not produce evidence that homebuyer education and counseling resulted in strategic debt management to improve savings.

Homebuyer education and counseling increased savings and nonhousing wealth for women in the treatment group. However, it had no detectable difference in debt levels for women (exhibit 5).

- **Nonhousing Debt**: Homebuyer education and counseling had no detectable impact on women's total nonhousing debt or its subcomponents (student loan debt or total consumer debt, including credit card debt).

- **Savings**: Women in the treatment group reported $9,662 more in savings and investments than their control group counterparts. That difference is relatively large—an 18.3-percent increase.

- **Nonhousing Wealth**: The nonhousing wealth of women in the treatment group increased by $8,862, a large 40.0-percent increase relative to their control group counterparts.

For men, there were no detectable impacts on any of these measures: nonhousing debt, savings, or nonhousing wealth. One component of nonhousing debt—student loan debt—was $1,747 greater for men in the treatment group than their control group counterparts.

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[4] Appendix B provides impact estimates for subgroups defined by other characteristics such as baseline student and consumer debt.

Exhibit 5. Homebuyer education and counseling services increased savings and nonhousing wealth for women, but not men.
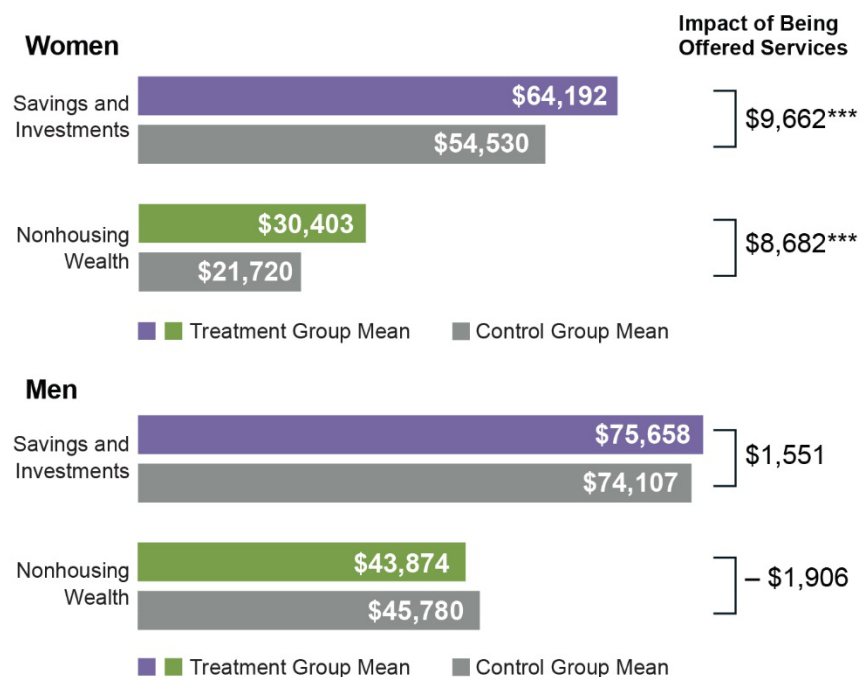
Notes: Appendix A.1 and A.2 provide additional details on the construction of measures and the subgroups. Statistical significance levels for two-sided tests are indicated with asterisks as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.
Sources: Long-Term Follow-Up Survey; Credit Bureau
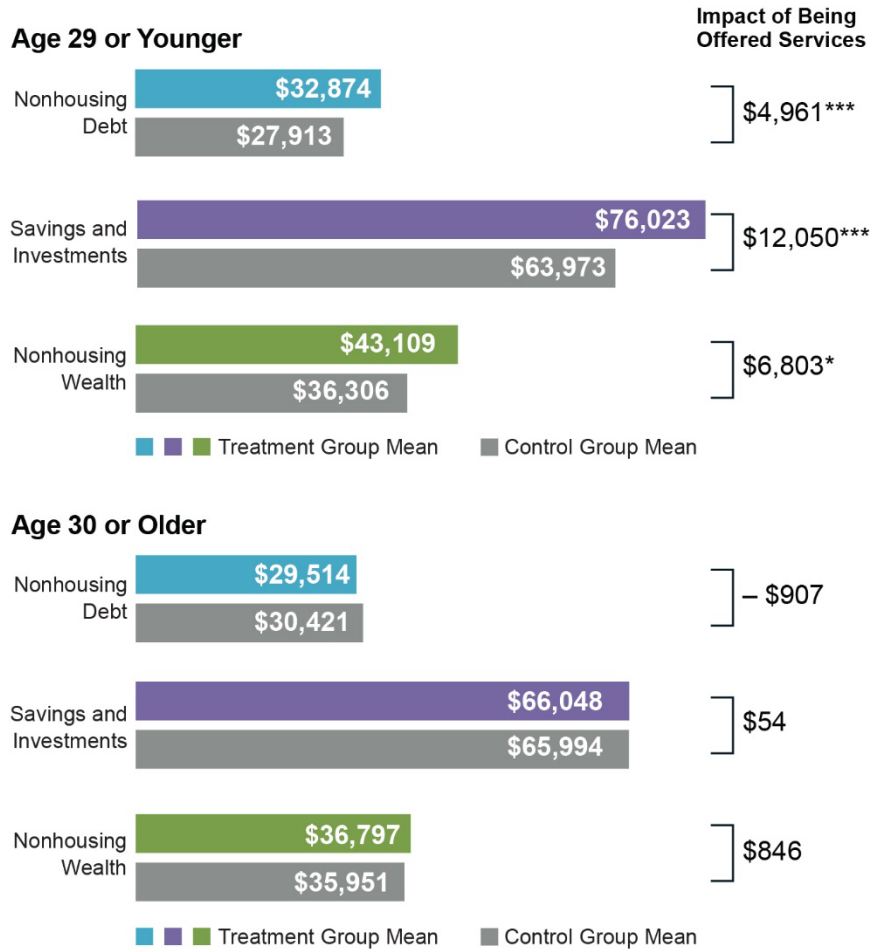
Impacts by Age

Key Finding: Analysis of subgroups by age does not produce evidence that homebuyer education and counseling resulted in strategic debt management to improve savings.

Although homebuyer education and counseling increased savings and nonhousing wealth for younger treatment group members, it also resulted in higher nonhousing debt. The offer of homebuyer education and counseling did alter the composition of total nonhousing loan debt, increasing student loan debt and decreasing student loan debt. However, there was no detectable increase in savings or nonhousing wealth for this group.

- **Nonhousing Debt**: Younger treatment group members increased their nonhousing debt, including $2,423 more in student loan debt and $2,529 more in total consumer debt (credit card debt increased by $828) relative to their control group counterparts.

- **Savings**: The increase in debt was offset by a $12,050 increase in savings and investments for younger treatment group members, an 18.8-percent relative increase over their control group counterparts.

- **Nonhousing Wealth**: The nonhousing wealth of younger treatment group members increased by $6,803 compared to the control group counterparts.

For older treatment group members (those 30 and older), the offer of homebuyer education and counseling resulted in a change in the composition of nonhousing debt. Older members of the treatment group had greater student loan debt of $1,076 and less total consumer debt of $1,983 (of which $1,093 was credit card debt) relative to their control group counterparts. However, the offer of homebuyer education and counseling did not detectably change either total nonhousing debt or the savings or wealth of older treatment group members.

Exhibit 6. Homebuyer education and counseling services increased nonhousing debt, savings, and nonhousing wealth for younger people, but not for older people.

Age 29 or Younger

Impact of Being Offered Services

	Treatment	Control	Impact
Nonhousing Debt	$32,874	$27,913	$4,961***
Savings and Investments	$76,023	$63,973	$12,050***
Nonhousing Wealth	$43,109	$36,306	$6,803*

Treatment Group Mean Control Group Mean

Age 30 or Older

	Treatment	Control	Impact
Nonhousing Debt	$29,514	$30,421	– $907
Savings and Investments	$66,048	$65,994	$54
Nonhousing Wealth	$36,797	$35,951	$846

Treatment Group Mean Control Group Mean

Notes: Appendix A.1 and A.2 provide additional details on the construction of measures and the subgroups. Statistical significance levels for two-sided tests are indicated with asterisks as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.
Sources: Long-Term Follow-Up Survey; Credit Bureau

Impacts by Race and Ethnicity

Key Finding: Analysis of subgroups by race and ethnicity does not produce evidence that homebuyer education and counseling resulted in strategic debt management to improve savings.

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This section discusses findings for each of four race- and ethnicity-defined subgroups: White non-Hispanics, Hispanics, African Americans, and Asians.

White Non-Hispanic Potential Homebuyers

Homebuyer education and counseling led to increased **savings** and **nonhousing wealth** for White non-Hispanic treatment group members. However, White non-Hispanic treatment group members did not experience any change in their total nonhousing debt level or composition.

- **Nonhousing Debt**: There was no detectable impact on the total nonhousing debt of White Non-Hispanic treatment group members, nor on their student loan debt, total consumer debt, or credit card debt.

- **Savings**: White non-Hispanic treatment group members reported $7,368 more in savings and investments, an 8.2-percent relative increase over their control group counterparts.

- **Nonhousing Wealth**: White non-Hispanic treatment group members' nonhousing wealth increased by $7,654, a 12.8-percent relative increase over their control group counterparts.

Exhibit 7. Homebuyer education and counseling services increased savings and nonhousing wealth for Whites.
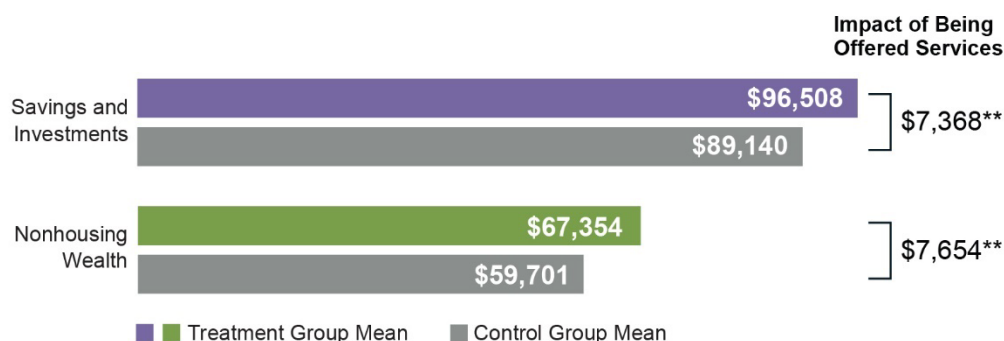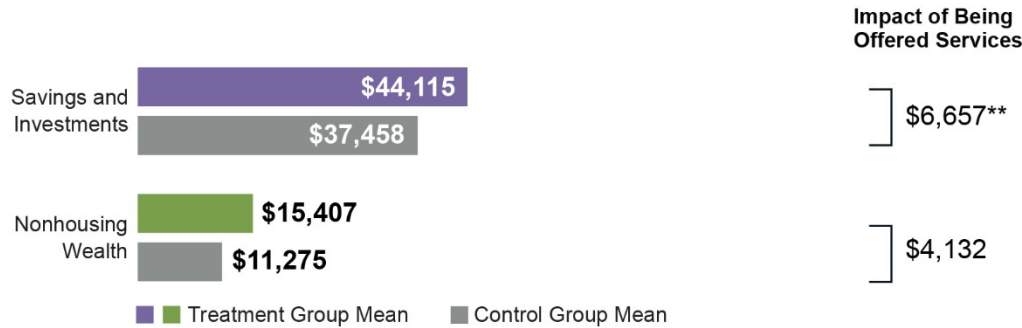

Notes: Appendix A.1 and A.2 provide additional details on the construction of measures and the subgroups. Statistical significance levels for two-sided tests are indicated with asterisks as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.
Sources: Long-Term Follow-Up Survey; Credit Bureau

Hispanic Potential Homebuyers

For Hispanic treatment group members (of any race), being offered homebuyer education and counseling *increased* their **savings** by $6,657 compared to their control group counterparts, as shown in exhibit 8. However, the offer of homebuyer education and counseling had no detectable impact on the level or composition of nonhousing debt or nonhousing wealth for Hispanic treatment group members.

Exhibit 8. Homebuyer education and counseling services increased savings but did not detectably increase nonhousing wealth for Hispanics.
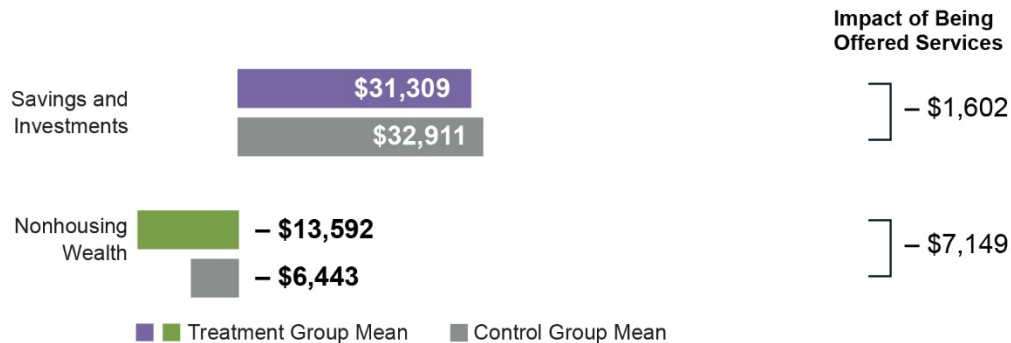
Impact of Being Offered Services

Savings and Investments
$44,115
$37,458
$6,657**

Nonhousing Wealth
$15,407
$11,275
$4,132

■ Treatment Group Mean ■ Control Group Mean

Notes: Appendix A.1 and A.2 provide additional details on the construction of measures and the subgroups. Statistical significance levels for two-sided tests are indicated with asterisks as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.
Sources: Long-Term Follow-Up Survey; Credit Bureau

African-American Potential Homebuyers

The offer of homebuyer education and counseling affected the composition of nonhousing debt for African Americans: African Americans in the treatment group had $2,967 more in student loan debt and $1,066 less in credit card debt than their control group counterparts. However, there was no detectable impact on total nonhousing debt for African Americans, nor was there a detectable impact on savings or nonhousing wealth.

Exhibit 9. Homebuyer education and counseling services did not increase savings or nonhousing wealth for African Americans.

Impact of Being Offered Services

Savings and Investments
$31,309
$32,911
− $1,602

Nonhousing Wealth
− $13,592
− $6,443
− $7,149

■ Treatment Group Mean ■ Control Group Mean

Notes: Appendix A.1 and A.2 provide additional details on the construction of measures and the subgroups. Statistical significance levels for two-sided tests are indicated with asterisks as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.
Sources: Long-Term Follow-Up Survey; Credit Bureau

Asian Potential Homebuyers

Homebuyer education and counseling did not detectably change the debt, savings, or nonhousing wealth of Asian treatment group members compared to their control group counterparts.

Discussion

In this report, we consider whether the overall pattern of higher student loan debt, lower credit card debt, and greater savings among treatment group members may be the result of homebuyer education and counseling encouraging the strategic management of debt—i.e., shifting from the use of higher-cost to lower-cost debt—to increase savings and build nonhousing wealth.

Had there been support for this hypothesis, we would have expected to see an overall increase in nonhousing wealth and, for at least some subgroups, higher savings and nonhousing wealth *coupled with* lower nonhousing debt or a change in the composition of debt (away from higher-cost consumer debt toward lower-cost student debt). However, we find no evidence of either. Rather, for the overall treatment group, nonhousing wealth is not detectably different from the control group. Moreover, for the subgroups whose impacts we examined, the treatment groups that built greater savings and nonhousing wealth than their control group counterparts did not show differences in their nonhousing debt (and vice versa).

Therefore, it appears that the overall patterns in savings and debt that we observed in the LTIR—homebuyer education and counseling resulting in higher student loan debt, lower credit card debt, and higher savings—arise from different impacts on different groups. To shed additional light on this, we analyzed subgroups defined by their debt at baseline. We examined impacts by subgroups defined by total consumer debt at baseline ($10,000 or more in consumer debt versus less than $10,000 in consumer debt). We found that those with more consumer debt paid down credit card debt, but those with less credit card debt took on more student debt. This calls into question the hypothesis that homebuyer education and counseling led to a pattern of strategic management of debt:

- For those with **$10,000 or more in consumer debt at baseline**, treatment group members had lower **credit card debt** ($1,089 less) than their control group counterparts but did not experience any detectable change in their **student loan debt** or **savings** levels.

- For those with **less than $10,000 in consumer debt at baseline,** treatment group members had higher **student loan debt** ($2,029 more) and greater **savings** ($8,326 more) than their control group counterparts at long-term followup.

When examining the subgroup defined by their student debt at baseline, we found a pattern that does not reveal a deliberate debt management strategy (appendix exhibit B.1).

Summary

Homebuyer education and counseling are intended to help prospective homebuyers understand whether homeownership is right for them and, if so, build the knowledge and skills to become successful homeowners. More broadly, homebuyer education and counseling can support wealth building beyond home equity by improving participants' general financial capability, such as their debt management and savings behaviors.

Findings from the First-Time Homebuyer Education and Counseling demonstration found evidence that homebuyer education and counseling did, in fact, change debt and savings outcomes for those who were offered access. At the time of the long-term followup, treatment group members had, on average, higher student loan debt, lower levels of credit card debt, and higher levels of savings compared to the control group. This implies that the treatment group might have adjusted their use of debt to build savings.

This report conducted additional analyses—including nonhousing wealth and additional exploratory subgroup impacts—to explore this possibility further. The results of these analyses lead to the conclusion that no subgroup pattern offers evidence of strategic debt management. Instead, the LTIR's overall findings with respect to debt and savings stand without additional insights or interpretation from these supplemental analyses.

Appendix A: Measures' Operationalization

This section provides additional details on constructing the key outcome measures (exhibit A.1) and subgroup identifiers (exhibit A.2).

Exhibit A.1. Outcome Measures' Definitions, Operationalizations, and Data Source(s)

Outcome Label	Coding Outline	Data Source(s)	Full Sample Mean (Standard Deviation) [Sample Size]
Total nonhousing debt ($)	Total nonhousing debt equals the total balance on open installment accounts plus open revolving accounts minus the balance on open mortgage accounts. This measure is set equal to 0 if the study participant was included in the credit file, but there were no open debt accounts on file (top coded at 99th percentile)	Credit bureau data	29,753 (37,609) [5,286]
Student loan debt ($)	Student loan balance (top coded at 99th percentile)	Credit bureau data	10,817 (27,579) [5,286]
Total consumer debt (all debt besides housing and student loan debt) ($)	Total consumer debt includes credit card, auto, and medical debt (top coded at 99th percentile)	Credit bureau data	18,937 (23,042) [5,286]
Credit card debt ($)	Credit card balance (top coded at 99th percentile)	Credit bureau data	5,966 (8,735) [5,286]
Total monthly debt-to-income ratio (back-end ratio)	We constructed this measure using data on total monthly debt expense from the credit bureau and household income from the Long-Term Follow-Up Survey. Total monthly debt expense from the credit bureau data was top coded at its 99th percentile. Household income was top coded at its 99th percentile and bottom coded at its 1st percentile (to eliminate incomes of $0 appearing in the denominator).	Credit bureau data; Long-Term Follow-Up Survey	28.2 (24.6) [3,307]
Total monthly debt-to-income ratio exceeds 0.43 (%)	Binary variable that takes on value: • 1 if total monthly debt-to-income ratio is greater than 0.43 • 0 if total monthly debt-to-income ratio is less than or equal to 0.43	Credit bureau data; Long-Term Follow-Up Survey	16.4 (37.0) [3,307]
Nonhousing wealth ($)	Total savings and investments (as outlined above) minus total nonhousing debt (as outlined above).	Credit bureau data; Long-Term Follow-Up Survey	35,349 (117,540) [3,685]

Exhibit A.2. Operationalization of Subgroups

Subgroup Comparison	Operationalization	Data Source(s)
Men compared with women	Binary variable that takes on value: • 0 if woman • 1 if man	Baseline survey
Age 30 or older at baseline compared with age 29 or younger 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
White non-Hispanic compared with African-American non-Hispanic	Binary variable that takes on value: • 0 if African American non-Hispanic • 1 if White non-Hispanic	Baseline survey
White non-Hispanic compared with Hispanic	Binary variable that takes on value: • 0 if Hispanic (any race) • 1 if White non-Hispanic	Baseline survey
White non-Hispanic compared with Asian non-Hispanic	Binary variable that takes on value: • 0 if Asian non-Hispanic • 1 if White non-Hispanic	Baseline survey
Nonhousing wealth greater than zero at baseline compared with nonhousing wealth zero or below at baseline	Binary variable that takes on value: • 0 if nonhousing wealth greater than zero at baseline • 1 if nonhousing wealth zero or below at baseline	Long-Term Follow-Up Survey; credit bureau data

Appendix B: Detailed Impact Results

This appendix provides detailed subgroup impacts and reviews how to interpret the contents of exhibit B.1 (the overall impact table) and exhibits B.2 through B.9 (the subgroup impact tables).

Overall Impacts

Exhibit B.1 shows the Overall Impacts of the Demonstration and includes the following:

- 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 described in appendix section A. 2.

- 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.

Exhibit B.1. Overall Impact of the Demonstration's Homebuyer Education and Counseling

Outcome	Treatment Sample Size	Control Sample Size	Treatment Group Mean	Control Group Mean	Impact of Being Offered Services (Standard Error)
Total nonhousing debt($)[b]	3,044	2,242	30,613	29,572	1,042 (855)
Student loan debt($)[b]	3,044	2,242	11,681	10,185	1,496*** (515)
Total consumer debt (all debt besides housing and student) ($)[b]	3,044	2,242	18,933	19,387	− 454 (699)
Credit card debt ($)[b]	3,044	2,242	5,797	6,289	− 492* (269)
Total monthly debt-to-income ratio (back-end ratio)[c]	1,847	1,460	28.1	28.5	− 0.4 (0.7)
Total monthly debt-to-income ratio exceeds 0.43 (%)[c]	1,847	1,460	16.8	16.0	0.8 (1.0)
Total savings and investments ($)[a]	2,218	1,769	71,231	66,492	4,739** (1,885)
Nonhousing wealth ($) [c]	2,053	1,632	38,628	36,241	2,387 (2,122)

Notes: A two-sided was used to determine the statistical significance. Due to rounding, reported impacts (T-C differences) could differ from differences between reported means for the treatment and control groups.
Statistical significance levels for two-sided tests are indicated with asterisks as follows: *** = 1 percent; ** = 5 percent; * = 10 percent.
Sources: [a] Long-Term Follow-Up Survey; [b] Credit Bureau;[c] Long-Term Follow-Up Survey; Credit Bureau

Subgroup Impacts

Exhibits in this section show the impacts by subgroup and include the following:

- 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 it 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 10 percent, 5 percent, and 1 percent levels.

Exhibit B.2. Comparison of Impacts on Subpopulations Defined by Gender

Outcome	Male (N = 3,459)		Female (N = 2,286)		Difference in the 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)	
Total nonhousing debt($)[b]	27,548.6	1,169.4 (1,061.1)	32,719.7	883.2 (1,151.4)	286.2 (1,402.4)
Student loan debt($)[b]	7,801.2	1,747.0** (769.5)	13,906.0	1,125.3 (694.7)	621.6 (1,081.2)
Total consumer debt (all debt besides housing and student) ($)[b]	19,747.4	– 577.6 (755.7)	18,813.6	– 242.1 (891.0)	– 335.5 (872.9)
Credit card debt ($)[b]	6,095.6	– 360.2 (258.5)	6,615.7	– 703.0 (452.2)	342.8 (449.8)
Total monthly debt-to-income ratio (back-end ratio)[c]	26.7	1.4 (0.8)	31.1	– 2.9** (1.4)	4.3** (1.6)
Total monthly debt-to-income ratio exceeds 0.43 (%)[c]	12.9	2.8* (1.4)	20.6	– 2.2 (2.2)	5.0* (2.9)
Total savings and investments ($)[a]	74,106.8	1,550.8 (2,449.5)	54,529.6	9,662.1*** (3,323.1)	– 8,111.3* (4,320.3)
Nonhousing wealth ($)[c]	45,779.8	– 1,905.7 (2,671.3)	21,720.7	8,681.6*** (2,753.4)	– 10587.3*** (3,406.0)

Notes: 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: [a] Long-Term Follow-Up Survey; [b] Credit Bureau; [c] Long-Term Follow-Up Survey; Credit Bureau

Exhibit B.3. Comparison of Impacts on Subpopulations Defined by Age at Baseline

Outcome	Age 30 or Older (N = 3,622)		Age 29 or Younger (N = 1,684)		Difference in the 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)	
Total nonhousing debt($)[b]	30,420.5	− 907.1 (892.0)	27,912.8	4,960.9*** (1,307.0)	− 5,867.9*** (1,309.6)
Student loan debt($)[b]	9,689.8	1,075.8* (581.2)	11,273.8	2,432.3** (1,121.9)	− 1,356.5 (1,287.1)
Total consumer debt (all debt besides housing and student) ($)[b]	20,730.7	− 1,982.9** (726.7)	16,639.0	2,528.6** (1,169.1)	− 4,511.4*** (1,191.3)
Credit card debt ($)[b]	6,906.1	− 1,092.5*** (313.3)	4,982.6	828.4** (321.7)	− 1,920.9*** (387.0)
Total monthly debt-to-income ratio (back-end ratio)[c]	30.4	− 0.8 (0.9)	24.4	0.2 (1.1)	− 1.0 (1.4)
Total monthly debt-to-income ratio exceeds 0.43 (%)[c]	18.2	1.3 (1.5)	11.5	− 0.6 (1.7)	2.0 (2.6)
Total savings and investments ($)[a]	65,993.5	53.5 (3,326.4)	63,972.6	12,050.0*** (3,931.3)	− 11,996.4* (6,166.5)
Nonhousing wealth ($)[c]	35,950.8	846.1 (3,411.5)	36,306.1	6,803.3* (3,693.3)	− 5,957.1 (5,834.5)

Notes: 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: [a] Long-Term Follow-Up Survey; [b] Credit Bureau; [c] Long-Term Follow-Up Survey; Credit Bureau

Exhibit B.4. Comparison of Impacts on Subpopulations Defined by Race/Ethnicity: White Non-Hispanic Versus African-American Non-Hispanic

Outcome	White Non-Hispanic (N = 2,187)		African-American Non-Hispanic (N = 1,165)		Difference in the 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)	
Total nonhousing debt($)[b]	28,945.0	790.3 (1,389.6)	40,110.3	2,708.8 (1,745.5)	– 1,918.4 (1,856.6)
Student loan debt($)[b]	9,756.2	986.7 (801.1)	19,697.5	2,967.0** (1,337.8)	– 1,980.3 (1,424.7)
Total consumer debt (all debt besides housing and student) ($)[b]	19,188.8	– 196.4 (976.6)	20,412.7	– 258.3 (1,433.0)	61.9 (1,701.8)
Credit card debt ($)[b]	6,499.1	– 282.4 (317.5)	7,041.0	– 1,066.3* (587.5)	783.9 (650.5)
Total monthly debt-to-income ratio (back-end ratio)[c]	25.4	0.4 (1.0)	31.2	– 1.5 (2.1)	1.9 (2.2)
Total monthly debt-to-income ratio exceeds 0.43 (%)[c]	10.3	1.8 (1.7)	21.1	– 0.9 (2.9)	2.7 (3.5)
Total savings and investments ($)[a]	89,140.2	7,367.9** (3,418.2)	32,911.4	– 1,601.5 (4,123.3)	8,969.4 (6,202.6)
Nonhousing wealth ($)[c]	59,700.6	7,653.8** (3,508.0)	– 6,443.4	– 7,149.0 (5,175.2)	14,802.7** (7,112.1)

Notes: 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: [a] Long-Term Follow-Up Survey; [b] Credit Bureau; [c] Long-Term Follow-Up Survey; Credit Bureau

Exhibit B.5. Comparison of Impacts on Subpopulations Defined by Race/Ethnicity: White Non-Hispanic Versus Hispanic

Outcome	White Non-Hispanic (N = 2,187)		Hispanic (N = 1,426)		Difference in the 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)	
Total nonhousing debt($)[b]	28,945.0	790.3 (1,389.6)	25,535.2	− 336.3 (1,321.5)	1,126.6 (2,084.5)
Student loan debt($)[b]	9,756.2	986.7 (801.1)	5,440.8	977.7 (687.4)	9.0 (1,137.9)
Total consumer debt (all debt besides housing and student) ($)[b]	19,188.8	− 196.4 (976.6)	20,094.4	− 1,314.0 (954.6)	1,117.6 (1,313.1)
Credit card debt ($)[b]	6,499.1	− 282.4 (317.5)	5,735.6	− 590.2 (482.5)	307.8 (630.1)
Total monthly debt-to-income ratio (back-end ratio)[c]	25.4	0.4 (1.0)	31.8	− 0.4 (1.5)	0.9 (2.1)
Total monthly debt-to-income ratio exceeds 0.43 (%)[c]	10.3	1.8 (1.7)	21.0	1.7 (2.2)	0.1 (2.9)
Total savings and investments ($)[a]	89,140.2	7,367.9** (3,418.2)	37,457.7	6,657.2** (2,716.3)	710.7 (4,996.0)
Nonhousing wealth ($)[c]	59,700.6	7,653.8** (3,508.0)	11,274.9	4,132.0 (3,665.7)	3,521.8 (4,973.6)

Notes: 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: [a] Long-Term Follow-Up Survey; [b] Credit Bureau; [c] Long-Term Follow-Up Survey; Credit Bureau

Exhibit B.6. Comparison of Impacts on Subpopulations Defined by Race/Ethnicity: White Non-Hispanic Versus Asian Non-Hispanic

Outcome	White Non-Hispanic (N = 2,187)		Asian Non-Hispanic (N = 688)		Difference in the 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)	
Total nonhousing debt($)[b]	28,945.0	790.3 (1,389.6)	20,738.4	2,012.5 (2,080.1)	− 1,222.1 (2,227.9)
Student loan debt($)[b]	9,756.2	986.7 (801.1)	4,199.2	1,818.4 (1,536.3)	− 831.7 (1,665.9)
Total consumer debt (all debt besides housing and student) ($)[b]	19,188.8	− 196.4 (976.6)	16,539.2	194.1 (1,906.7)	− 390.4 (1,940.3)
Credit card debt ($)[b]	6,499.1	− 282.4 (317.5)	5,352.6	− 113.6 (586.9)	− 168.8 (717.8)
Total monthly debt-to-income ratio (back-end ratio)[c]	25.4	0.4 (1.0)	26.4	0.3 (2.6)	0.2 (2.8)
Total monthly debt-to-income ratio exceeds 0.43 (%)[c]	10.3	1.8 (1.7)	14.7	− 0.1 (5.1)	1.9 (5.5)
Total savings and investments ($)[a]	89,140.2	7,367.9** (3,418.2)	107,294.3	4,524.8 (11,502.7)	2,843.1 (12,864.5)
Nonhousing wealth ($)[c]	59,700.6	7,653.8** (3,508.0)	85,113.7	− 1,669.9 (9,627.0)	9,323.6 (11,425.4)

Notes: 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: [a] Long-Term Follow-Up Survey; [b] Credit Bureau; [c] Long-Term Follow-Up Survey; Credit Bureau

Exhibit B.7. Comparison of Impacts on Subpopulations Defined by Nonhousing Wealth at Baseline: Nonhousing Wealth Greater Than Zero and Nonhousing Wealth Zero or Below

Outcome	Positive NH Wealth (N = 3,214)		Negative NH Wealth (N = 1,777)		Difference in the 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)	
Total nonhousing debt($)[b]	20,511.0	966.0 (1,137.7)	46,451.8	2,112.9 (1,850.7)	– 1,146.9 (2,287.3)
Student loan debt($)[b]	3,700.5	863.5** (364.5)	22,182.9	3,027.9** (1,290.0)	– 2,164.3 (1,397.0)
Total consumer debt (all debt besides housing and student) ($)[b]	16,810.5	102.4 (944.0)	24,268.9	– 915.0 (1,101.2)	1,017.4 (1,328.7)
Credit card debt ($)[b]	5,538.2	– 264.5 (334.1)	7,877.9	– 994.3** (437.3)	729.8 (549.5)
Total monthly debt-to-income ratio (back-end ratio)[c]	26.3	0.9 (0.8)	33.4	– 2.7* (1.6)	3.6* (1.8)
Total monthly debt-to-income ratio exceeds 0.43 (%)[c]	13.7	2.3* (1.3)	21.5	– 2.0 (2.5)	4.3 (3.2)
Total savings and investments ($)[a]	84,107.8	7,080.0** (2,991.4)	27,319.4	517.9 (3,005.3)	6,562.1 (4,350.2)
Nonhousing wealth ($)[c]	64,074.0	5,652.4* (2,856.4)	– 19115.7	– 2,631.9 (3,731.2)	8,284.3* (4,658.0)

Notes: 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: [a] Long-Term Follow-Up Survey; [b] Credit Bureau; [c] Long-Term Follow-Up Survey; Credit Bureau

Exhibit B.8. Comparison of Impacts on Subpopulations Defined by Credit Score at Baseline

Outcome	Credit Score 680 or Above (N = 3,239)		Credit Score Below 680 (N = 1,751)		Difference in the 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)	
Total nonhousing debt($)[b]	26,974.7	583.4 (1,106.3)	35,307.2	2,499.6 (1,834.2)	– 1,916.2 (2,194.7)
Student loan debt($)[b]	9,209.6	601.0 (604.3)	12,462.2	3,407.0*** (1,037.6)	– 2,806.0** (1,281.5)
Total consumer debt (all debt besides housing and student) ($)[b]	17,765.1	– 17.6 (912.9)	22,845.0	– 907.4 (1,236.0)	889.8 (1,440.5)
Credit card debt ($)[b]	6,304.9	– 500.2 (295.1)	6,691.8	– 658.1 (449.8)	157.9 (464.6)
Total monthly debt-to-income ratio (back-end ratio)[c]	27.1	– 0.7 (0.9)	31.7	0.4 (1.4)	– 1.1 (1.6)
Total monthly debt-to-income ratio exceeds 0.43 (%)[c]	13.9	– 0.3 (1.1)	20.4	3.4* (1.7)	– 3.7* (2.0)
Total savings and investments ($)[a]	82,693.0	4,787.3 (2,927.3)	31,514.5	4,415.9 (2,892.7)	371.4 (4,113.5)
Nonhousing wealth ($)[c]	57,233.7	3,301.0 (2,946.4)	– 5,506.5	1,768.8 (3,369.6)	1,532.3 (4,336.2)

Notes: 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: [a] Long-Term Follow-Up Survey; [b] Credit Bureau; [c] Long-Term Follow-Up Survey; Credit Bureau

Exhibit B.9. Comparison of Impacts on Subpopulations Defined by Consumer Debt at Baseline

Outcome	Consumer Debt $10,000 or More (N = 1,856)		Consumer Debt Less Than $10,000 (N = 3,203)		Difference in the Impact of Being Offered Services (Standard Error)
	Control Group Mean	Impact of Being Offered Services (Standard Error)	Control Group Mean	Impact of Being Offered Services (Standard Error)	
Total nonhousing debt($)[b]	41,319.0	761.1 (1,568.2)	22,637.0	1,433.5* (798.5)	− 672.3 (1,400.4)
Student loan debt($)[b]	15,380.0	361.1 (931.7)	7,118.7	2,028.5*** (316.5)	− 1,667.5* (960.3)
Total consumer debt (all debt besides housing and student) ($)[b]	25,939.0	400.1 (1,245.0)	15,518.2	− 595.0 (693.6)	995.1 (1,109.6)
Credit card debt ($)[b]	8,700.8	− 1,089.0* (546.2)	4,985.8	− 211.7 (186.6)	− 877.4* (499.9)
Total monthly debt-to-income ratio (back-end ratio)[c]	31.1	-1.0 (1.3)	27.4	− 0.2 (0.8)	− 0.8 (1.5)
Total monthly debt-to-income ratio exceeds 0.43 (%)[c]	18.0	0.6 (1.9)	15.5	0.6 (1.1)	0.0 (2.3)
Total savings and investments ($)[a]	53,571.3	− 1,352.5 (3,835.3)	69,953.0	8,325.9** (3,710.7)	− 9,678.4 (6,397.8)
Nonhousing wealth ($)[c]	12,095.9	− 2,513.4 (4,351.3)	48,212.2	6,285.6* (3,563.6)	− 8,798.9 (6,594.6)

Notes: 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: [a] Long-Term Follow-Up Survey; [b] Credit Bureau; [c] Long-Term Follow-Up Survey; Credit Bureau

Exhibit B.10. Comparison of Impacts on Subpopulations Defined by Student Loan Debt at Baseline

Outcome	Any Baseline Student Loan Debt (N = 1,656)		No Baseline Student Loan Debt (N = 3,403)		Difference in the 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)	
Total nonhousing debt($)[b]	48,970.4	4,846.4** (1,895.6)	20,732.0	– 515.7 (852.0)	5,362.1*** (1,881.7)
Student loan debt($)[b]	27,493.5	3,594.7*** (1,129.7)	2,179.9	547.8 (415.7)	3,046.9** (1,135.1)
Total consumer debt (all debt besides housing and student) ($)[b]	21,476.9	1,251.7 (1,324.2)	18,552.1	– 1,063.5 (763.8)	2,315.2* (1,332.5)
Credit card debt ($)[b]	7,687.0	– 847.4 (556.4)	5,796.6	– 391.6 (264.6)	– 455.8 (575.0)
Total monthly debt-to-income ratio (back-end ratio)[c]	30.4	– 0.1 (1.6)	28.0	– 0.6 (0.8)	0.4 (1.9)
Total monthly debt-to-income ratio exceeds 0.43 (%)[c]	17.9	0.0 (2.6)	15.8	1.0 (1.4)	– 1.0 (3.4)
Total savings and investments ($)[a]	51,132.1	6,013.2 (5,538.5)	69,626.0	4,291.6 (3,079.2)	1,721.6 (7,224.3)
Nonhousing wealth ($)[b]	2,430.3	111.0 (6,589.3)	49,610.5	4,433.2 (3,087.1)	– 4,322.3 (8,303.3)

Notes: 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: [a] Long-Term Follow-Up Survey; [b] Credit Bureau; [c] Long-Term Follow-Up Survey; Credit Bureau

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