

THE COLLABORATIVE FOR EQUITABLE RETIREMENT SAVINGS

How Large are Racial and Gender Disparities in 401(k) Account Balances and What is Causing Them: Initial Findings from the Collaborative for Equitable Retirement Savings

March 2024

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Executive Summary

The Collaborative for Equitable Retirement Savings, or CFERS, initiated in 2022 by the Defined Contribution Institutional Investment Association, or DCIIA, the Aspen Institute Financial Security Program, and Morningstar Retirement, aims to examine the dynamics of defined-contribution retirement savings and identify disparities in outcomes based on race and gender by analyzing anonymized defined-contribution transactional plan data. Over time, this data, coupled with qualitative research to understand the people-centered context behind retirement plan usage, will provide the platform and tools for employers, recordkeepers, researchers, and policymakers to continue to shape the defined-contribution system and related employer benefits to work effectively for all workers who take advantage of the programs. This report presents initial findings from the year-end 2022 CFERS data, focusing on phases one and two of the research (see Appendix for a brief explanation of the five phases of the CFERS project).

Key Findings:

1. Account Balance Disparities: The analysis reveals significant race and gender disparities in account balances, persisting even after adjusting for salary and tenure. These differences are attributed to variations in contribution, loan, and preretirement withdrawal behavior.

2. Income and Tenure Impact: Controlling for income and tenure does not fully explain the observed differences in account balances. Disparities widen for workers closer to retirement, emphasizing the desire for targeted interventions.

3. Contribution Disparities: Black and Hispanic females contribute lower percentages of their salaries than their counterparts, after controlling for age, salary, tenure and plan design variables, influencing long-term retirement savings outcomes.

4. Preretirement Withdrawals: Black and Hispanic workers exhibit higher frequencies of preretirement withdrawals as well as a tendency to take larger percentages of their account balance, affecting the overall accumulation of retirement savings.

5. Loan Usage Disparities: Black participants are more likely to have outstanding loans compared with their white counterparts, contributing to disparities in account balances.

6. Mitigating Disparities: Simulation results indicate that eliminating preretirement withdrawals would substantially mitigate race and gender disparities, particularly for early- and mid-career 401(k) participants.

CFERS aims to create a collaborative platform for employers, recordkeepers, researchers, and policymakers to address disparities in the defined-contribution system and improve future retirement outcomes, particularly for racial and gender groups at risk of lower retirement savings.

Introduction

The defined-contribution system, vital for American retirement security, leaves Black, Hispanic, and female workers with lower average account balances even after controlling for salary and tenure. To make retirement savings plans effective tools for savings and wealth creation for all workers who take advantage of the plan, there is a need to better understand the specific drivers of the disparate savings outcomes the defined-contribution retirement savings system is currently producing for workers from different racial and gender groups.

To date, this type of exploration by race and gender has been difficult, as employee demographic information is stored in systems that are separate from defined-contribution plan recordkeeping data. Linking this information is critical to better understanding how plan design and participant behavior may lead to disparate outcomes.

CFERS seeks to achieve our research goals through the five phases detailed in the Appendix. The first phase focuses on identifying existing race and gender disparities in account balances after controlling for salary and tenure, while the second phase attempts to identify the causes of such disparities by analyzing race and gender differences in participation, contribution, asset allocation, and loan and preretirement withdrawal behavior. The third phase will incorporate a stochastic accumulation model to simulate how these disparities will evolve by retirement age. The fourth phase will focus on the manner in which plan design changes as well as legislative and/or regulatory modifications are likely to influence these disparities. Finally, the fifth phase will incorporate a stochastic decumulation module to allow for the analysis of various risk-management techniques for longevity risks, postretirement investment risk, and potential catastrophic long-term care expenses.

This report provides the initial findings from the year-end 2022 CFERS data for phase one and certain portions of phase two. Because of its technical nature, the impact of asset allocation on race and gender account balance disparities will be analyzed in a separate publication later in 2024. Also, the impact of race and gender differentials for participation and their impact on overall retirement income adequacy will need to be deferred until the year-end 2023 data is available, given the relatively small number of plans using voluntary enrollment in the current dataset.

The analysis in this report shows that, among people lucky enough to have a retirement plan at work, there are major race and gender disparities in account balances even after adjusting for salary and tenure. These differences appear to be the result of differences in contribution, loan, and preretirement withdrawal behavior.

The eventual impact of these differentials on retirement income will be demonstrated later in 2024 with our phase three analysis, but we include analysis on some potential good news with respect to recent efforts to reduce preretirement withdrawals. Specifically, we provide initial estimates by race and gender of the simulated disparities in the ratio of account balance to salary at age 65 under the status quo versus what would happen if preretirement withdrawals were eliminated.

The report concludes with a discussion of the future projects scheduled for CFERS analysis.

Previous Research on How 401(k) Participants Utilize Plans

Researchers have analyzed administrative data on participant behavior in 401(k) plans for nearly 30 years.¹ Although early studies were limited to a small number of 401(k) plans,² by the late 1990s analysis of multi-recordkeeper data on account balances, asset allocation, and loan activity was available for more than 6.6 million participants from 27,000 plans.³ This was followed by the analysis of contribution data in 2001⁴ and simulation analysis on the impact of 401(k) plans on retirement income adequacy in 2002.⁵

Unfortunately, none of this analysis was able to break out the participant behavior by either race or gender. Then, in 2009 Ariel Investments and Hewitt Associates published “401(k) Plans in Living Color” using year-end 2007 information and then updated it with year-end 2010 information three years later.⁶ The second study collected data from nearly 2.4 million eligible employees working for 60 US companies. They analyzed each of the following for the four race/ethnicity categories available (African American, Asian, Hispanic, and white) and found substantial variations by race/ethnicity:

- Participation rates (ranging from 66% for Hispanics to 80% for Asians)
- Employee contribution rates (ranging from 5.6% for African Americans to 8.8% for Asians)
- Percentage in equities (ranging from 68% for African Americans to 71% for whites)
- Hardship withdrawals (ranging from 1.2% for Asians to 8.8% for African Americans)
- Percentage with loans (ranging from 16% for Asians to 39% for African Americans)
- Average account balance by salary (with the ratio of white average balance to African American average balance ranging from 1.42 to 2.07 depending on salary)⁷

Given widespread changes in the retirement system since then, particularly the widespread adoption of automatic enrollment after the passage of the Pension Protection Act, we believed we might find evidence of ways employers could close the lingering racial wealth gap. We also believed that a longitudinal dataset would build an evidence base about the efficacy of plan design, benefits, or other solutions.

More recently, the US Government Accountability Office⁸ uses SCF⁹ data from 2007 through 2019 to show how retirement account disparities have changed over time. It estimates that in 2019, 62.9% of white households aged 51-64 had a retirement account balance, but the similar number was only 38.8% for Black households and 30.5% for Hispanic households.¹⁰ It also estimated a median retirement account for white households with an account in this age cohort of \$164,361 in 2019 compared with \$80,349 for all races other than white.

Suarez, Thompson, & Volz (2023) use the Distributional Financial Accounts of the US¹¹ to extrapolate from the 2019 SCF results. By the first quarter of 2023, defined-contribution balances for Black households were up nearly 60% over 2019 levels, while Hispanic households had nearly a 25% increase, but white households increased only 17%. They also use the 2019 SCF results to show that for households with heads ages 40-59, the average defined-contribution account balance was \$196,254 for white households but only \$147,321 for Black households and \$92,953 for Hispanic households. They also show that for the same age cohort, white households have a defined-contribution coverage of 50% but only 38% for Black households and 25% for Hispanic households.

Aladangady et al.¹² use new data from the 2022 SCF to show that for families in which the reference person was 35-64, the mean retirement savings among those families with an individual retirement account or a defined-contribution plan had increased from \$312,500 in 2019 to \$333,400 in 2022.¹³

Choukhmane et al.¹⁴ link 2008-17 American Community Surveys to other administrative data using protected identification keys and find that the average contribution rate of Black and Hispanic workers is roughly 40% lower than that of white workers. Moreover, they find that before the age 55, on average 12.3% of the white retirement savers in their sample take an early distribution each year, compared with 14.5% and 23.3% of Hispanic and Black savers, respectively.

Why Is There a Need for This Type of Study?

Although publicly available data, such as the SCF data GAO used, demonstrates a significant racial disparity in the percentage of older households with a defined-contribution account balance, we can see that there are gaps even among people lucky enough to have a plan at work. Unfortunately, the number of observations for nonwhite households is relatively small and there is only limited information on contribution, loan, withdrawal, and asset-allocation activity for the participants and extremely limited plan-specific details.

The CFERS database is based on administrative data, not survey data, so the information is more reliable. Moreover, it includes complete information on plan design, which will help us model solutions in future phases.

Although the current CFERS database is limited to the year-end 2022 dataset, we are currently collecting year-end 2023 data, which will allow us to analyze how these disparities evolve over time as participants' situations and the financial markets change.

Dataset for This Study

The dataset used for this analysis consists of 2022 data from nine 401(k) plan sponsors. In each case, the typical 401(k) plan administrative data from the recordkeeper was merged with human resources data from the plan sponsor to provide information on race and gender. This resulted in a dataset of 180,684 active plan participants with a positive account balance under the age of 65.

Exhibit 1 shows the distribution by gender and the four race/ethnicity categories available for each of the plan sponsors. White males represented the largest category and made up 51.01% of the sample, followed by white females with 17.68%. Black males and females made up 7.04% and 3.24% of the sample, respectively, while Hispanic males and females represented 8.10% and 3.05%. Asian males represented 6.57% of the sample, and Asian females were 3.31%.

Exhibit 1 Distribution by Race and Gender

Race / Gender	Frequency
White Male	92,163
White Female	31,944
Black Male	12,716
Black Female	5,856
Hispanic Male	14,627
Hispanic Female	5,516
Asian Male	11,877
Asian Female	5,985
Total	180,684

Source: Collaborative for Equitable Retirement Savings 2022 data

Exhibit 2 shows that the average ages for all eight categories were between 41.6 and 45.3 years. Exhibit 3 demonstrates that white males and females had much larger average tenure (11.7 and 11.2 years, respectively) than the remaining six categories, which varied from 8.4 to 9.4 years.

Exhibit 2 Average Age by Race and Gender

Race / Gender	Mean
White Male	44.9
White Female	44.9
Black Male	43.9
Black Female	45.3
Hispanic Male	41.6
Hispanic Female	41.8
Asian Male	43.4
Asian Female	42.6

Source: Collaborative for Equitable Retirement Savings 2022 data

Exhibit 3 Average Tenure by Race and Gender

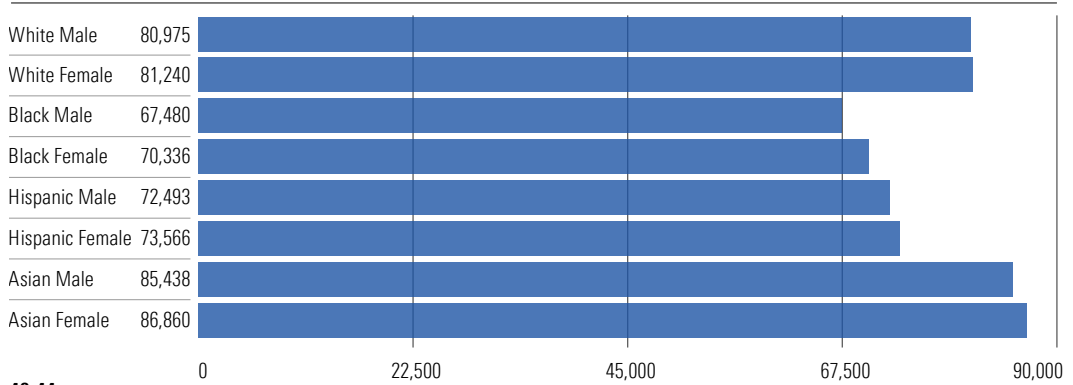
Race / Gender	Mean
White Male	11.7
White Female	11.2
Black Male	8.7
Black Female	9.4
Hispanic Male	9.4
Hispanic Female	8.6
Asian Male	9.1
Asian Female	8.4

Source: Collaborative for Equitable Retirement Savings 2022 data

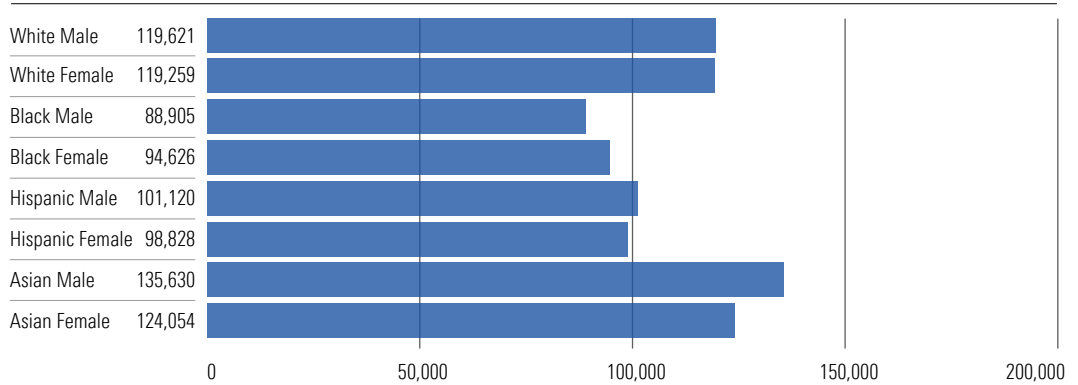
Exhibit 4 shows the average salary by race and gender for the three age cohorts primarily analyzed in this study. For the early 401(k) participants (ages 25-29), the Asian males and females had the highest average salaries with ratios 6% and 7% higher than the white male average, respectively. White females had averages virtually identical to white males, while the averages for Hispanic males and females were 10% and 9% lower. Black males and females had the lowest average salaries, 17% and 13% lower than white males.

Exhibit 4 Average Salary by Race and Gender for the Three Age Groups Analyzed

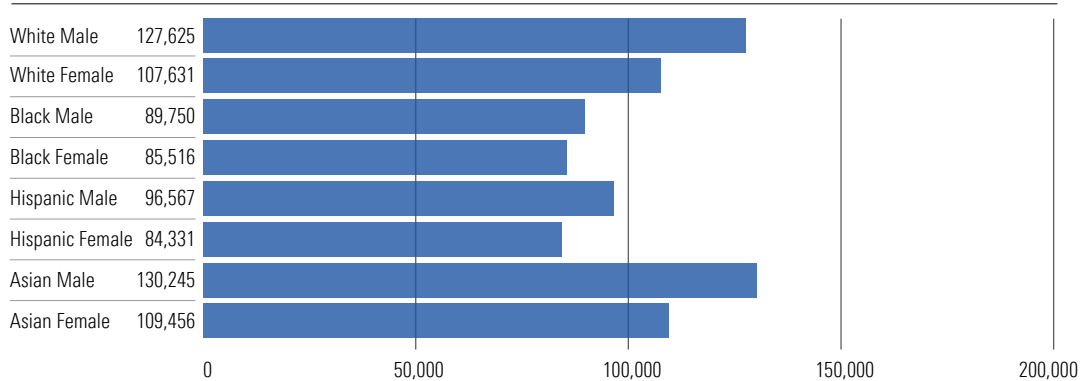
25-29



40-44



55-59



Source: Collaborative for Equitable Retirement Savings 2022 data

When the average salaries for mid-career 401(k) participants (ages 40-44) are analyzed, a similar type of distribution is found. Asian males and females have averages larger than white males (by 13% and 4%), while white women have essentially the same average salary as white males. Hispanic males and females have averages that are 15% and 17% lower than white males, while Black males and females have averages that are 26% and 21% lower.

When the average salaries for late-career 401(k) participants (ages 55-59) are analyzed, Asian males have averages that are 2% larger than white males, but Asian females have averages that are 14% lower. White women have an average salary that is 16% lower than white males. Hispanic males and females have averages that are 24% and 34% lower than white males, while Black males and females have averages that are 30% and 33% lower.

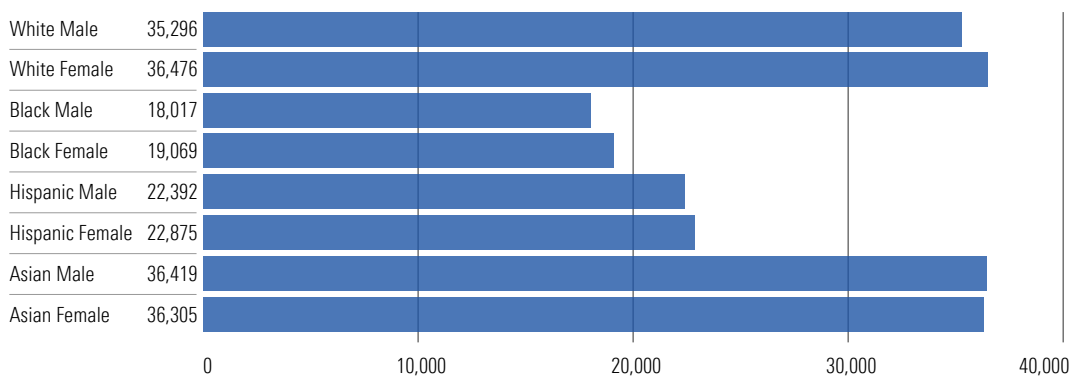
FINDING 1

Income and Tenure Do Not Fully Explain the Significant Differences in Account Balances by Race and Gender

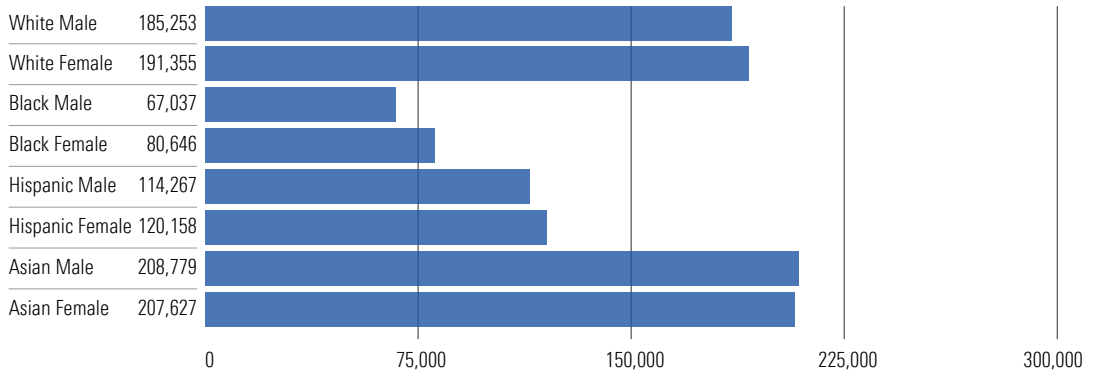
Black and Hispanic workers have much less in retirement savings than their white counterparts, with white workers accumulating hundreds of thousands more in retirement savings on average by retirement. Exhibit 5 shows the mean account balance by race and gender for early-, mid-, and late-career 401(k) participants. The age cohorts are defined as age bands 25-29, 40-44, and 55-59 inclusive.

Exhibit 5 Mean Account Balance by Race and Gender for Early-, Mid-Career, and Late-Career Workers

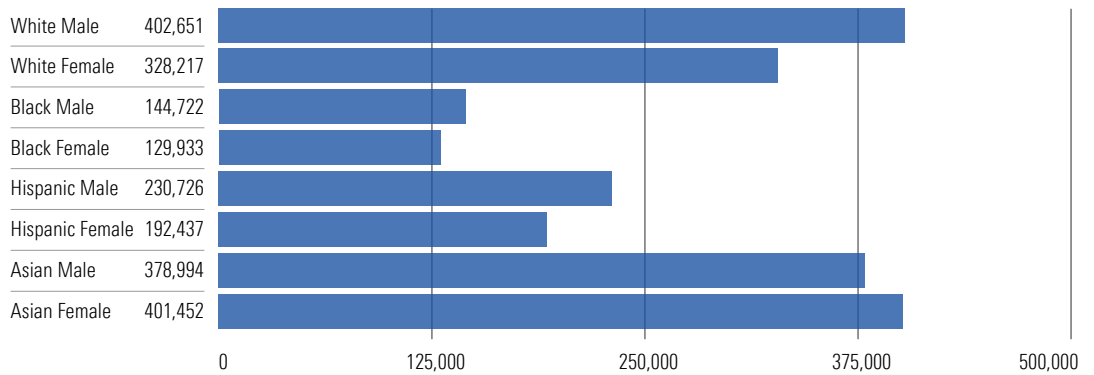
25-29



40-44



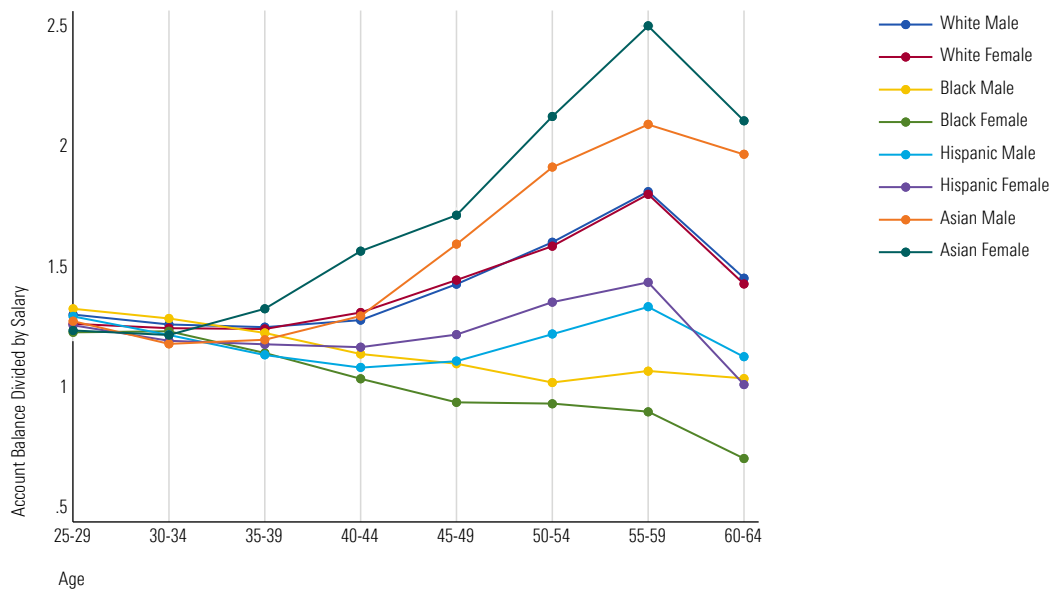
55-59



Source: Collaborative for Equitable Retirement Savings 2022 data

These differences in account balances are still significant even when controlling for income and tenure. Exhibit 6 shows the predicted account balances for each race and gender by age cohort divided by salary. The model used to generate the graph regresses the ratio of account balance to salary against interaction terms for race, gender, and age as well as categorical variables for salary and tenure and a plan sponsor dummy variable.¹⁵ The model has a good deal of explanatory power, with an adjusted R-squared of 49.5%. The graph generates predicted margins using estimated coefficients from the estimated model. This technique provides an estimate of the change in the predicted values of account balance to salary by age for the eight different race and gender categories keeping salary, tenure, and plan effects constant.

Exhibit 6 Predicted Account Balances Divided by Salary for Each Race and Gender at Different Ages

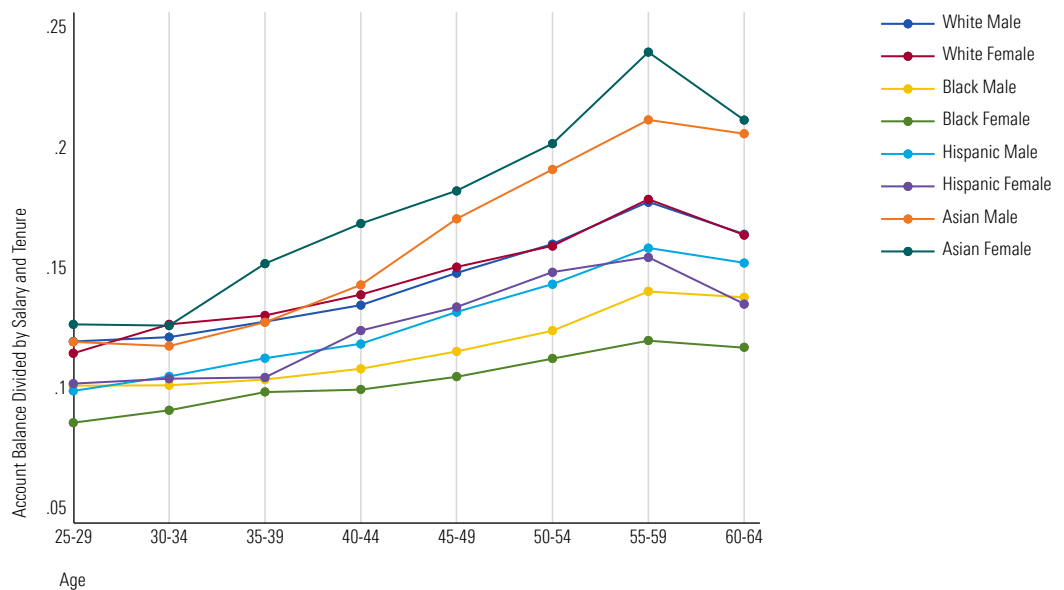


Source: Collaborative for Equitable Retirement Savings 2022 data

Gaps in account balances between workers of different races and ethnicities are much higher for workers closer to retirement. Controlling for salary, tenure, and plan effects, the predicted margins of account balance to salary for the youngest cohort (25-29) fall within a narrow range. For those near retirement but not yet eligible for penalty-free distributions (ages 55-59), the gap widens considerably, ranging from 0.896 for Black females and 1.06 for Black males to 2.50 for Asian females and 2.09 for Asian males. Hispanics (1.33 for males and 1.43 for females) significantly lag their white counterparts (1.81 for males and 1.80 for females).

Exhibit 7 provides similar results as Exhibit 6 but controlling for the years of service a worker has at their current employer. We do this by dividing account balances by both salary and tenure. Adding tenure is important especially at later ages to better control for job turnover. For example, if two 40-year-olds with the same salary were analyzed but one had 15 years of tenure and the other had recently changed jobs and not rolled over any previous 401(k) balance to the new plan, one would expect a significantly higher account balance in the former case.

Exhibit 7 Predicted Account Balances Divided by Salary and Tenure for Each Race and Gender at Different Ages



Source: Collaborative for Equitable Retirement Savings 2022 data

The model used to generate the graph in Exhibit 7 regresses the ratio of account balance to (salary times tenure) against interaction terms for race, gender, and age, as well as categorical variables for salary and tenure and a plan sponsor dummy variable. Similar to Exhibit 6, the predicted margins of account balance to (salary times tenure), controlling for salary, tenure, and plan effects, for the youngest cohort (25-29) fall within a narrow range. For those near retirement but not yet eligible for penalty-free distributions (ages 55-59), the gap widens considerably ranging from 0.119 for Black females and 0.139 for Black males to 0.238 for Asian females and 0.210 for Asian males. Hispanics (0.157 for males and 0.153 for females) significantly lag their white counterparts (0.176 for males and 0.177 for females).

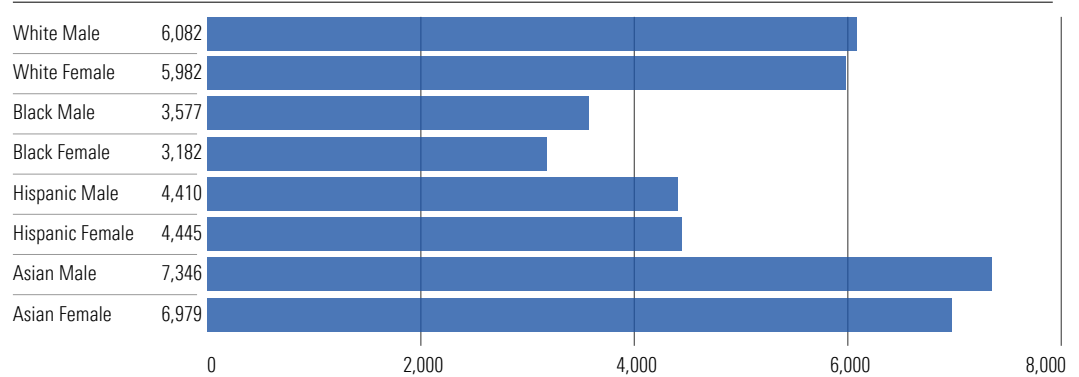
FINDING 2

Black and Hispanic Females Contribute Lower Percentages of Their Salaries Than Their Counterparts, After Controlling for Age, Salary, Tenure and Plan Design Variables

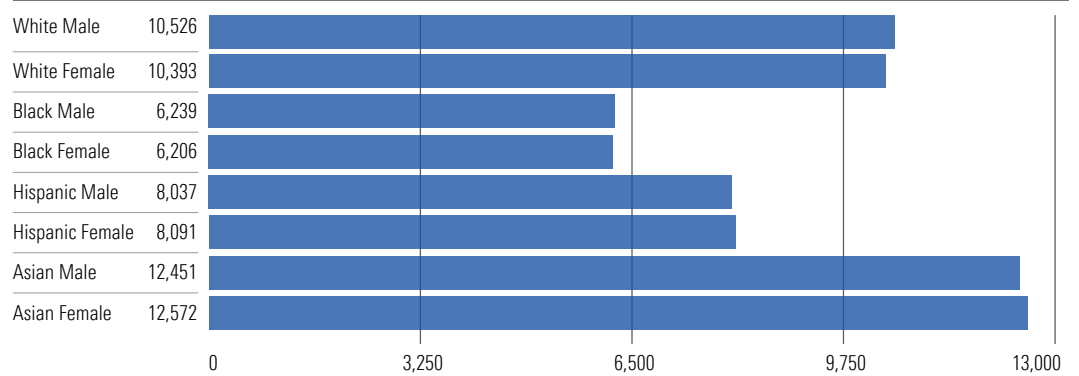
In general, Hispanic and Black workers contribute less as a percentage of their salary and in absolute dollars at each of the three age groups on average, although mean contributions trend up for all workers as they age. Exhibit 8 shows the mean employee contribution by race and gender for early-, mid-, and late-career workers, and Exhibit 9 shows similar information for the employee contribution rate.

Exhibit 8 Mean Contribution by Race and Gender for Early-, Mid-Career, and Late-Career Workers

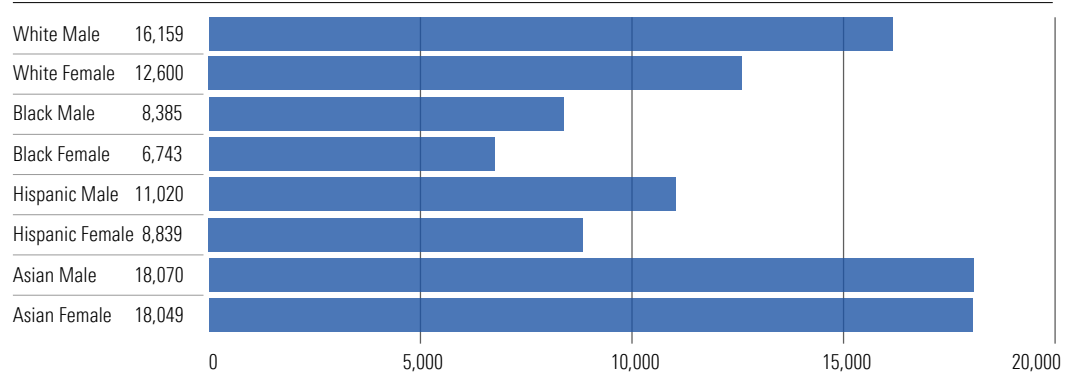
25-29



40-44



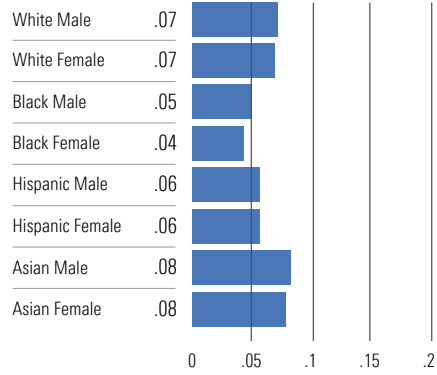
55-59



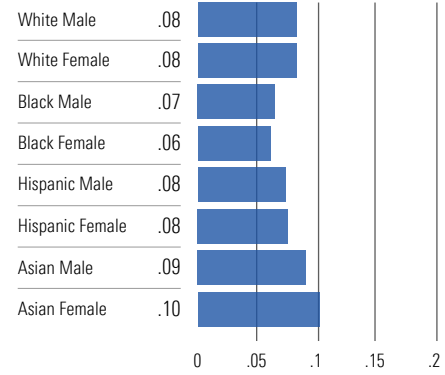
Source: Collaborative for Equitable Retirement Savings 2022 data

Exhibit 9 Mean Contribution Rate by Race and Gender for Early-, Mid-Career, and Late-Career Workers

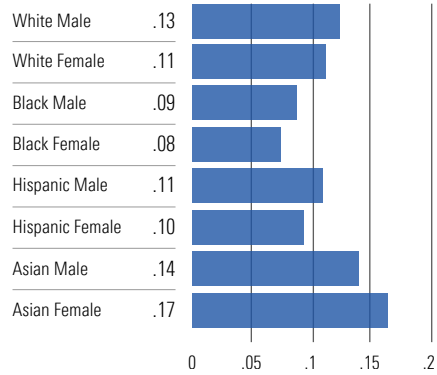
25-29



40-44



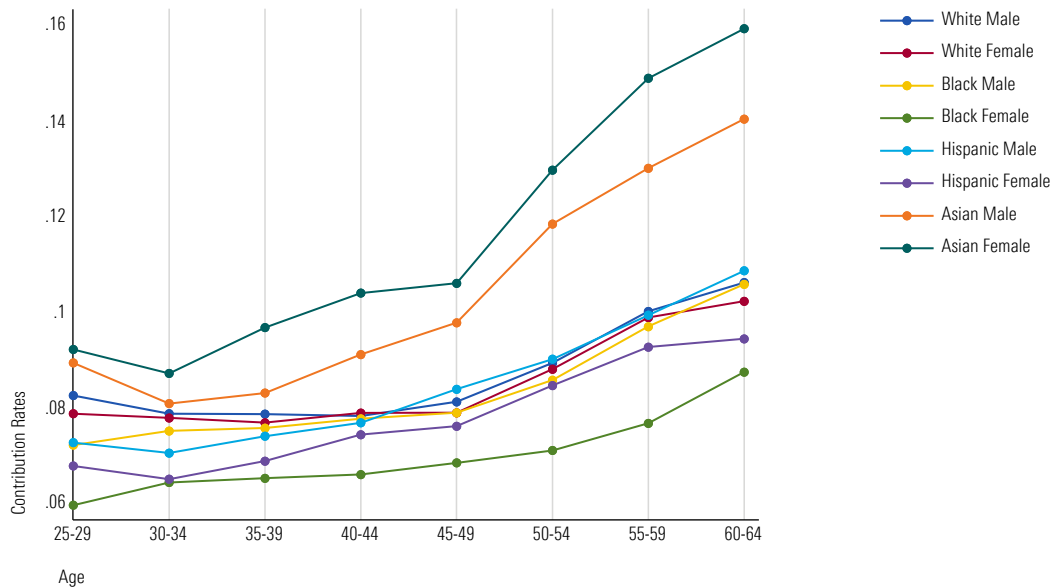
55-59



Source: Collaborative for Equitable Retirement Savings 2022 data

Exhibit 10 shows the predicted employee contribution rates for each race and gender at different ages holding constant the impact of age, salary, tenure, and plan effects. The model generates an adjusted R-squared of 18.9%. Asian workers contribute much more of their salary to retirement plans, holding age, salary, tenure, and plan effects constant. For the oldest age cohort (60-64), Asian females have the largest predicted value of 0.159 followed by Asian males (0.140). Black females and Hispanic females have the lowest predicted rates (0.087 and 0.094, respectively). The other four race and gender combinations fall within a narrow range from 0.102 to 0.108. There is a similar rank ordering at younger ages as well, with Asian females and Asian males having the highest predicted values and Black females and Hispanic females having the lowest predicted values.

Exhibit 10 Predicted Contribution Rates for Each Race and Gender at Different Ages



Source: Collaborative for Equitable Retirement Savings 2022 data

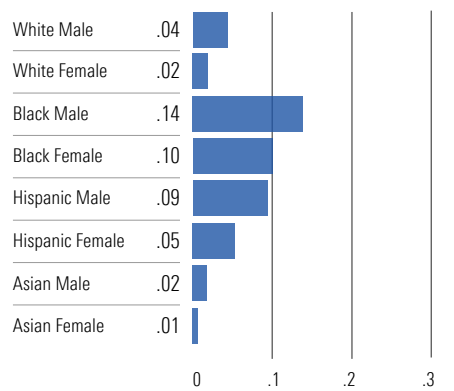
FINDING 3

Black and Hispanic Workers Withdraw More of Their Account Balances More Frequently Before Retirement Than Their White Counterparts

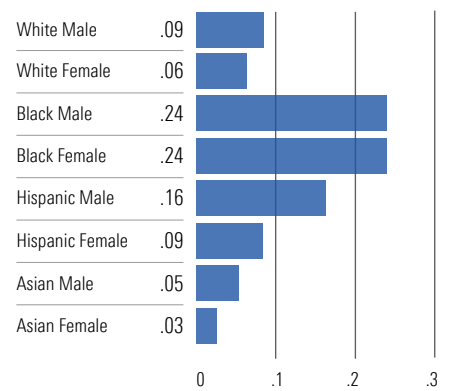
Exhibit 11 shows the annual percentage of participants taking a preretirement withdrawal in 2022 by race and gender for early-, mid- and late-career workers. At ages 55-59, Black females (29%) were more likely to withdraw money in 2022 than any other group, and Black males (25%) were the second most likely to do so. However, at ages 40-44 Black males were as likely as Black females to have a withdrawal (24%) and much more likely at ages 25-29 (14% versus 10%).¹⁶

Exhibit 11 Probability of Taking a Preretirement Withdrawal in 2022 by Race and Gender for Early-, Mid-Career, and Late-Career Workers

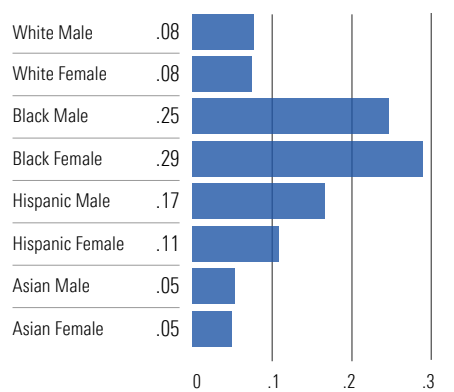
25-29



40-44



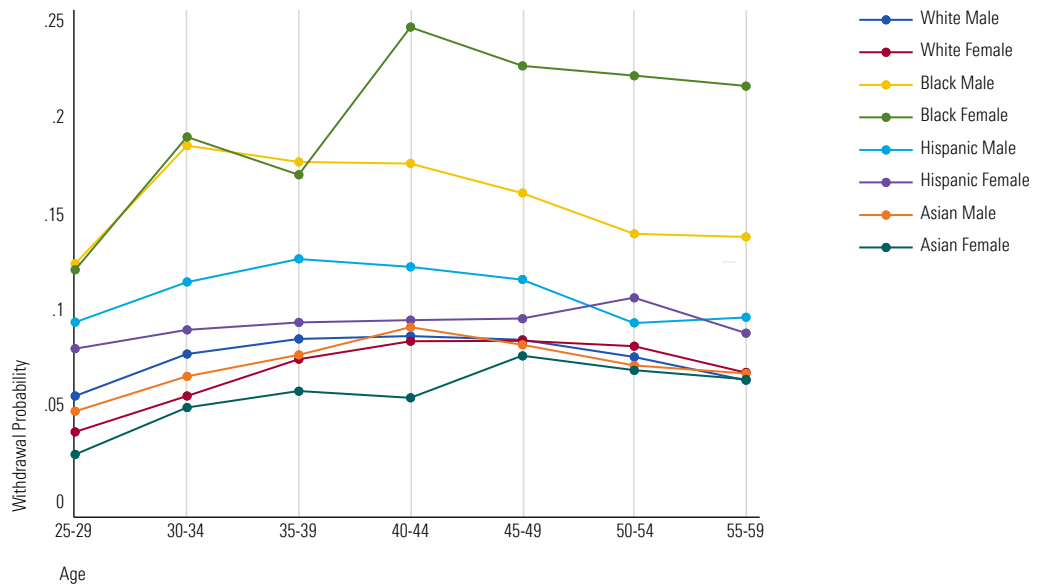
55-59



Source: Collaborative for Equitable Retirement Savings 2022 data

Some of this differential may be explained by differences in other factors. Exhibit 12 shows the probability of taking a withdrawal in 2022 by race and gender for workers controlling for age, salary, tenure, and plan effects. A probit model was run with a pseudo R-squared of 21%. After controlling for these factors, the estimated annual probability of taking a preretirement withdrawal for a Black female is much higher than for a Black male for the 40-44 age cohort (24.8% versus 17.7%), with the gap widening for older cohorts.

Exhibit 12 Probability of Taking a Withdrawal in 2022 for Workers Controlling for Age, Salary, Tenure, and Plan Effects

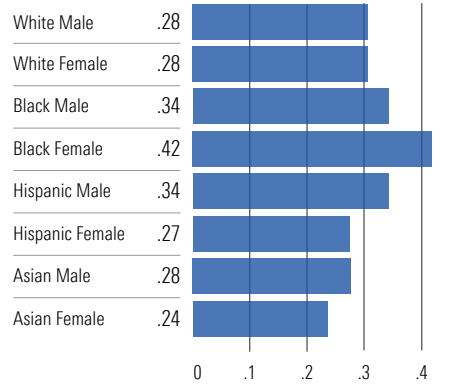


Source: Collaborative for Equitable Retirement Savings 2022 data

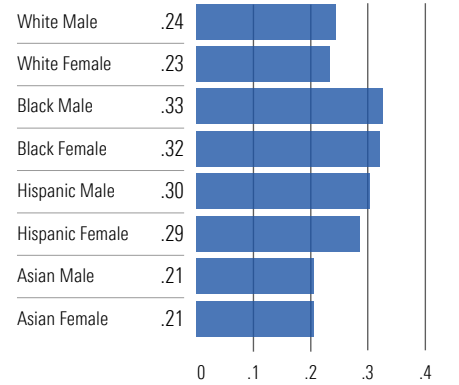
Exhibit 13 shows the mean conditional percentage of account balance withdrawn by race and gender for early-, mid-, and late-career workers. In addition to the frequency of withdrawals, Black workers take higher portions of their accounts out in withdrawals than white workers.

Exhibit 13 Mean Conditional Percentage of Account Withdrawn by Race and Gender for Early-, Mid-Career, and Late-Career Workers

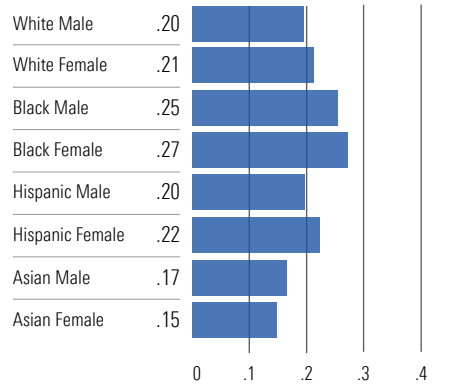
25-29



40-44



55-59



Source: Collaborative for Equitable Retirement Savings 2022 data

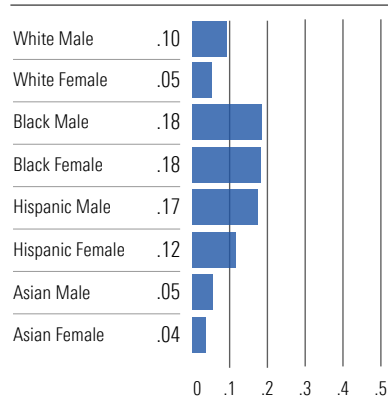
FINDING 4

Black Participants Have a Higher Probability of Having an Outstanding Loan Than Their White Counterparts

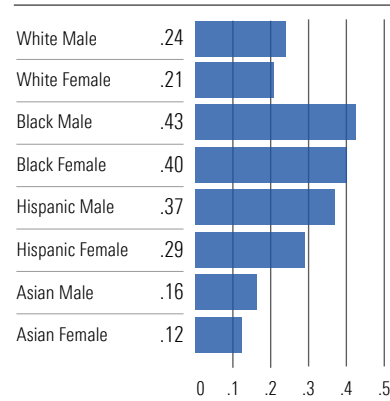
Exhibit 14 shows the probability of having a loan outstanding by race and gender for early-, mid-, and late-career workers. At ages 55-59, Black men and Black women (49%) are more likely to have a loan outstanding than any other group. At ages 40-44, Black males are more likely than Black females to have an outstanding loan (43% versus 40%), and Hispanic males have a 37% probability.

Exhibit 14 Probability of Having a Loan Outstanding by Race and Gender for Early-, Mid-Career, and Late-Career Workers

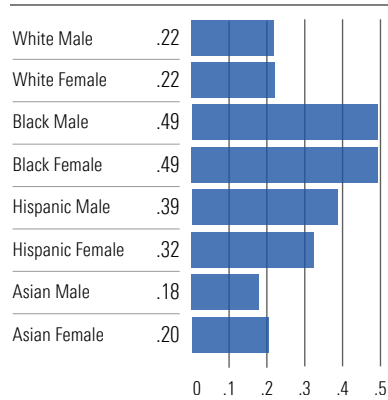
25-29



40-44



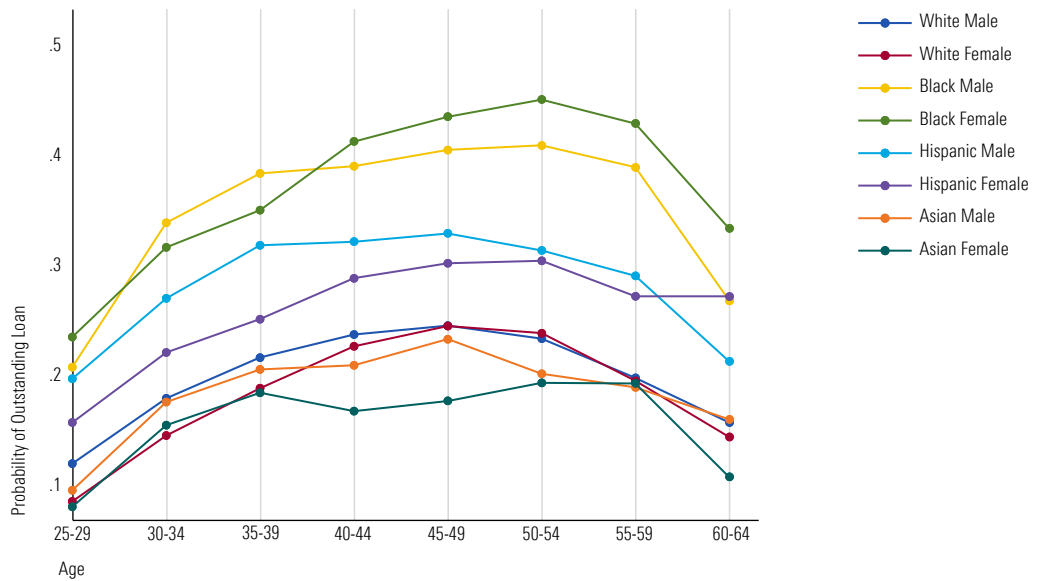
55-59



Source: Collaborative for Equitable Retirement Savings 2022 data

Some of this differential may be explained by differences in other factors. Exhibit 15 shows the probability of having a loan outstanding by race and gender for workers controlling for age, salary, tenure, and plan effects. A probit model was run with a pseudo R-squared of 13.8%. After controlling for these factors, the estimated probability for having an outstanding loan for a Black female is higher than for a Black male for the 55-59 age cohort (42.8% versus 38.8%).

Exhibit 15 Probability of Having a Loan Outstanding by Race and Gender for Controlling for Age, Salary, Tenure, and Plan Effects



Source: Collaborative for Equitable Retirement Savings 2022 data

FINDING 5

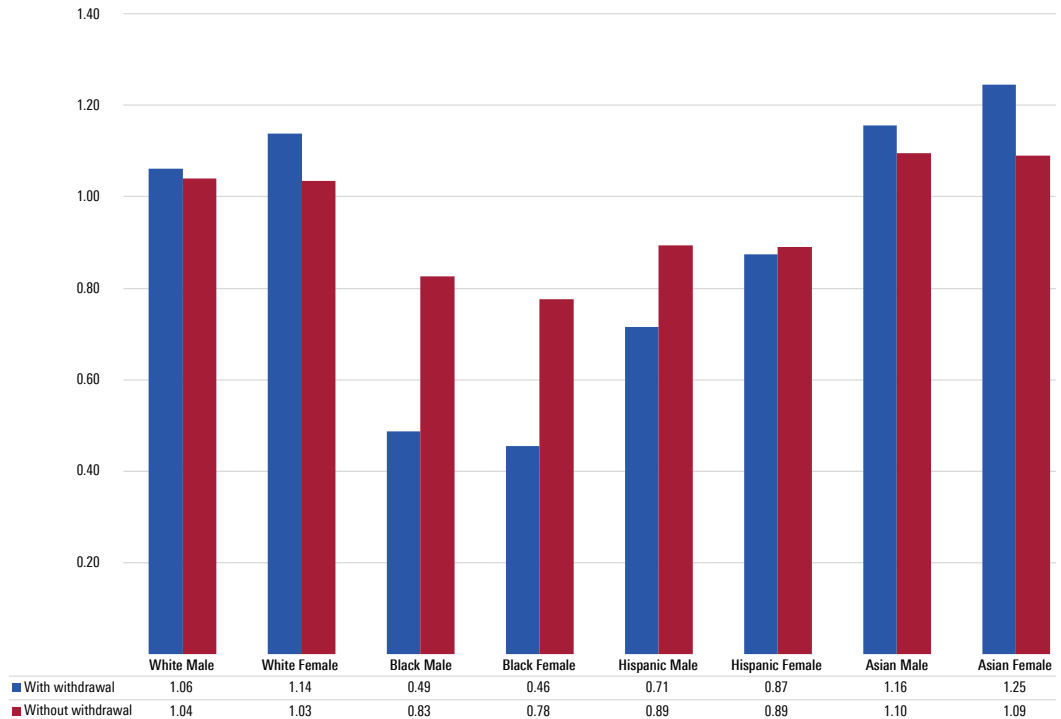
Significant Reductions in Preretirement Withdrawal Frequencies Would Substantially Mitigate Race and Gender Disparities for Early-Career 401(k) Participants and Would Noticeably Affect the Disparities for Mid-Career 401(k) Participants

As mentioned in the Introduction, phase four of our project will allow us to analyze the impact of various legislative or plan design modifications on the disparities simulated to take place at retirement age if the status quo persists. Exhibit 11 suggests that one of the areas that would be most likely to mitigate race and gender disparities is reducing the frequency of preretirement withdrawals. Black males and Black females had the highest annual probability of taking a preretirement withdrawal for all three age cohorts analyzed. Moreover, this is not simply a function of wages since Exhibit 12 shows that after controlling for age, wage, tenure, and plan-specific factors, Black males and Black females had much higher predictive margins than any of the other race and gender categories for all age cohorts.

While there are several plan sponsor initiatives that could theoretically help with this situation (including emergency savings programs), there is currently no empirical data to predict how much of an impact they would have on preretirement withdrawals. Therefore, we have decided to illustrate a highly stylized situation in which all preretirement withdrawals are eliminated without any secondary effects on participation, contributions, loans, or asset allocation. For each participant younger than age 60 in the sample, a stochastic simulation of their 401(k) account balance and salary at retirement age (65) is generated under two scenarios. In the first scenario, the actual estimates from the probit regression of annual preretirement withdrawal frequencies as a function of race, gender, age, wage, tenure, and plan-specific factors are used.¹⁷ The second scenario is exactly the same with the exception that the probability of a preretirement withdrawal is assumed to be zero in each year. In both scenarios, the job change module was turned off for purposes of this comparison.

Exhibit 16 shows the impact of eliminating preretirement withdrawals for those currently aged 25-29. In each case, the average of the projected account balance to salary ratio at age 65 by race and gender relative to overall average under two preretirement withdrawal scenarios is shown. For example, the average simulated account balance to salary ratio for Black males is only 49% of the overall average for the age cohort if the actual preretirement withdrawal probabilities are used. However, if the preretirement withdrawals are excluded from the simulation, the value for Black males increases to 83% of the overall average. Similar results are shown for Black females, with their average ratio of account balance to salary at age 65 equal to 46% of the overall average when preretirement withdrawals are included but 78% when they are excluded.

Exhibit 16 Average of Projected Account Balance to Salary Ratio, at Age 65, Relative to Overall Average by Race and Gender Under Two Preretirement Withdrawal Scenarios: Participants Currently Ages 25-29

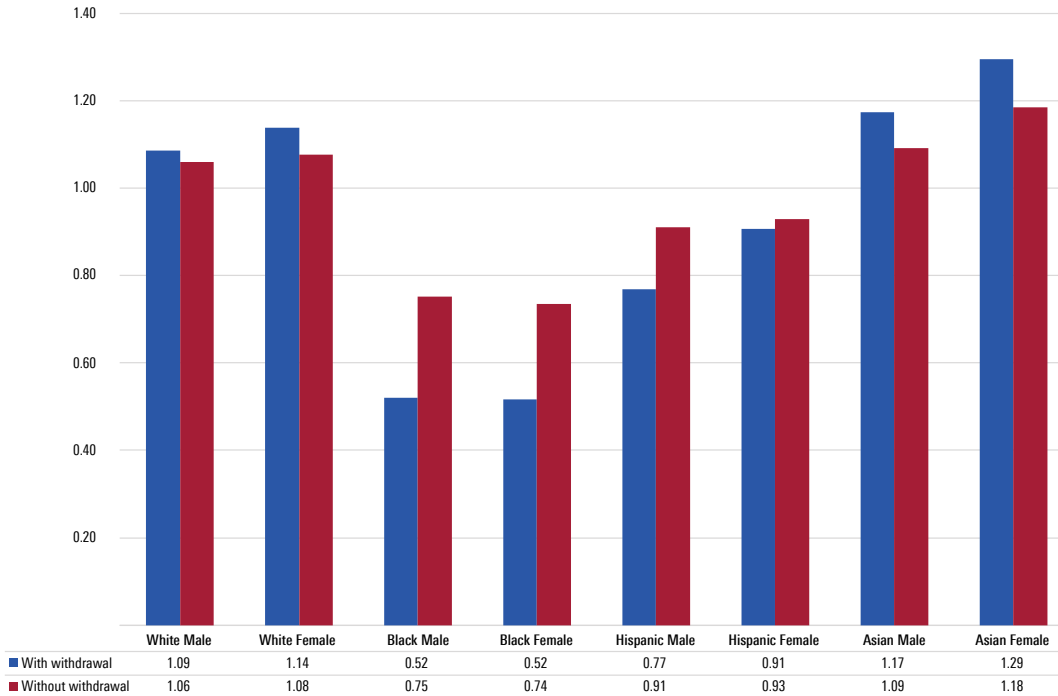


Source: Collaborative for Equitable Retirement Savings 2022 data

Note: Ratios greater than the 99th percentile for the full sample were filtered out when computing the means.

Exhibit 17 shows similar results for participants aged 40-44. As they will have less time to generate account balances under the differential treatment of preretirement withdrawal assumptions than the younger cohort, one would expect less dramatic results. In this case, the simulated account balance to salary ratio for Black males is 52% of the overall average for the age cohort if the actual preretirement withdrawal probabilities are used. However, if the preretirement withdrawals are excluded from the simulation, the ratio for Black males increases to 75% of the overall average. This 23-percentage-point differential is much smaller than the 34-percentage-point differential for the younger cohort. Similar results are shown for Black females, with their average ratio of account balance to salary at age 65 equal to 52% when preretirement withdrawals are included but 74% when they are excluded. This 22-percentage-point differential is much smaller than the 32-percentage-point differential for the younger cohort.

Exhibit 17 Average of Projected Account Balance to Salary Ratio at Age 65, Relative to Overall Average, by Race and Gender, Under Two Preretirement Withdrawal Scenarios: Participants Currently Ages 40-44

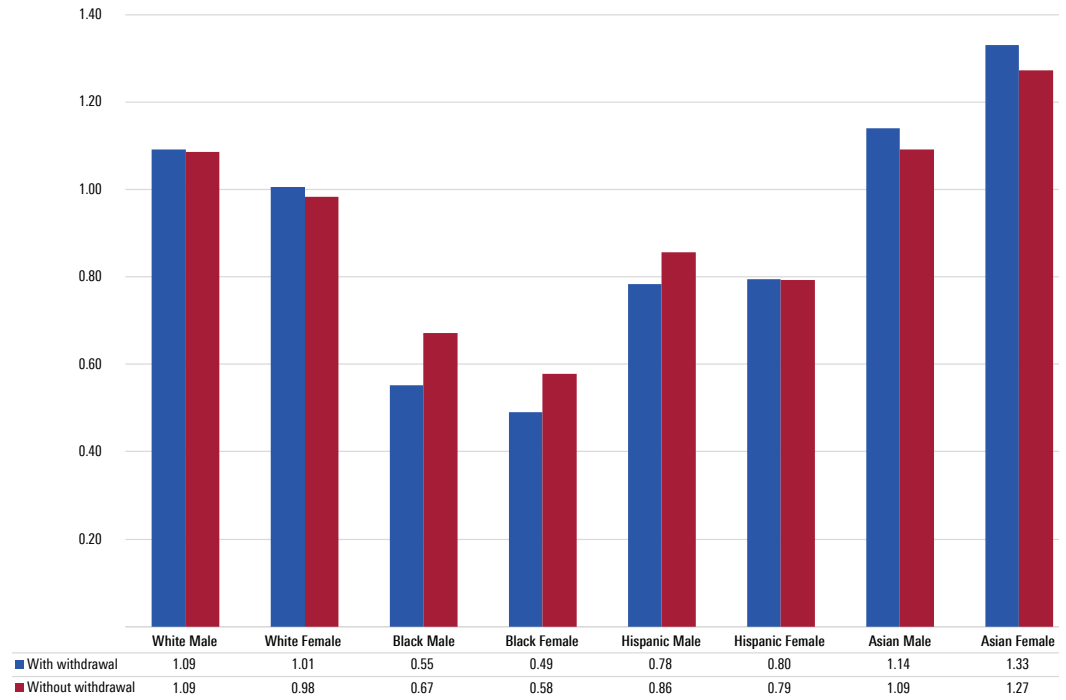


Source: Collaborative for Equitable Retirement Savings 2022 data

Note: Ratios greater than the 99th percentile for the full sample were filtered out when computing the means.

Finally, Exhibit 18 shows similar results for participants aged 55-59. As expected, given their proximity to retirement age, elimination of preretirement withdrawals would have a much smaller impact than was found for the younger cohorts. Black males would have a 12-percentage-point differential, while Black females would have only a 9-percentage-point differential.

Exhibit 18 Average of Projected Account Balance to Salary Ratio, at Age 65, Relative to Overall Average, by Race and Gender, Under Two Preretirement Withdrawal Scenarios: Participants Currently Age 55-59



Source: Collaborative for Equitable Retirement Savings 2022 data

Note: Ratios greater than the 99th percentile for the full sample were filtered out when computing the means.

Next Steps

While this report looks at the disparities in account balances by race and gender and attempts to identify potential causes for those disparities by looking at contribution, loan, and preretirement withdrawal behavior, a complete analysis of differentials in retirement income and wealth requires modeling of additional components. In the next phase (phase three) of our project, we will take the current dataset and simulate 1,000 replacement rates based on stochastic rates of return for each active participant for a range of retirement ages. The simulation will include Social Security benefits and defined-benefit plan accruals (if applicable). In addition, it will include plan-specific age/wage curves for the simulation and break out the participants in as much detail as possible (for example, race and gender, age, salary, tenure, salary versus hourly, industry, location). Moreover, alternative methods of dealing with mid-career hires will be implemented to deal with missing information on 401(k) balances from previous employers.

The end result of this phase is to show how existing race and gender disparities are likely to increase or decrease if current employee behavior persists. This also provides the baseline information for phase four of our project, in which we are able to analyze the impact of various legislative or plan design modifications on the simulated disparities from phase three. In addition to simulating the impact of the preretirement withdrawals mentioned above, we will also analyze the impact of, *inter alia*:

- Moving from voluntary enrollment to automatic enrollment
- Automatic escalation
- Changing default deferral rates
- Changing employer matching incentives and/or nonelective contributions
- Managed account programs
- Emergency savings programs

In 2022 Congress passed, and President Biden signed into law, a retirement reform package colloquially called Secure 2.0. This creates a new “Saver’s Match”, essentially a government contribution to retirement accounts for low- and moderate-income savers. This is a race-neutral program. But, depending on assumptions, our preliminary analysis strongly suggests this new Saver’s Match could partially mitigate existing disparities across racial groups. We will follow up with a complete analysis soon.

We plan to add several additional plan sponsors when the year-end 2023 data is analyzed later this year. As we continue to add plan sponsors, we can start providing peer comparisons for the data providers as well as extrapolations to the universe of 401(k) plans.

As we continue to collect additional years of data, the analysis will add time-series analysis to the cross-sectional analysis described above. This will be particularly useful for plans that adopt design changes that will allow us to compare the race and gender differentials before and after the modifications. It will also allow us to better understand the relative race and gender impact of legislative and regulatory reforms.

¹ Goodfellow & Schieber (1997) appear to have the first published report with analysis on 36,000 participants.

² VanDerhei & Yakoboski (1996a, 1996b) analyzed asset-allocation and contribution behavior for three plans with 180,000 employees.

³ VanDerhei, Galer, Rea, & Quick (1999).

⁴ VanDerhei & Copeland (2001); Holden & VanDerhei (2001).

⁵ Holden & VanDerhei (2002).

⁶ Ariel Investments & Hewitt Associates (2009, 2012).

⁷ Note that this did not control for age or tenure.

⁸ US Government Accountability Office (2023).

⁹ The Survey of Consumer Finances, or SCF, is a triennial survey conducted by the Federal Reserve Board in the US. It is the most comprehensive survey of its kind, providing detailed information about the financial circumstances of American households.

¹⁰ SCF data provides an "other category" as well, but it is not possible to break out Asian households.

¹¹ The Distributional Financial Accounts, or DFAs, are a data set published by the Federal Reserve Board that provide quarterly estimates of the distribution of a comprehensive measure of US household wealth. For additional detail, see Batty et al. (2019).

¹² Aladangady et al. (2023a).

¹³ Aladangady et al. (2023b) have a separate analysis showing the changes in racial inequality in the SCF; however, there was no information with respect to retirement plans.

¹⁴ Choukhmane et al. (2023).

¹⁵ The plan sponsor dummy variable is used, inter alia, to control for plan-specific design variables such as automatic enrollment, default deferral rates, and match rates, as well as the maximum amount matched.

¹⁶ Voya (2023, p. 9) provides analysis by race (not gender or age) that looks at the percentage who took a loan or hardship withdrawal. This is not directly comparable with the current analysis since the CFERS dataset provides information only on whether the participant had a loan outstanding in 2022. However, when we proxied Voya's variable by dividing the outstanding loan percentages by 5 (viz., assumed no one is taking out a residential loan and no one is paying off the loan early) and added that to the withdrawal numbers for those under age 59, we have extremely similar results for Asians (8% for Voya vs. 6.4% for CFERS), whites (13% for Voya vs. 10.7% for CFERS), Blacks (32% for Voya vs. 29.8% for CFERS), and Hispanics (19% for Voya vs. 17.8% for CFERS). The fact that the numbers are somewhat larger for the Voya population no doubt partially stems from the fact that the period for its analysis was July 2020-June 2022, whereas CFERS data was from calendar 2022 and therefore less likely to be influenced by the coronavirus pandemic.

¹⁷ An age-invariant conditional percentage of account balance withdrawn of 26% was used.

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Appendix: 5 Phases of the CFERS Project

Employers receive free, state-of-the-art plan analysis for contributing their data to the CFERS project. This will include the following five phases:

- Phase One: Analyze the ratio of account balances to salary for the gender and race/ethnicity categories controlling for tenure.
- Phase Two: Provide a similar analysis looking at each of the following (controlling for age, salary, and tenure): Participation, Contribution, Asset allocation, Loans, Preretirement withdrawals.
- Phase Three: Simulate 1,000 replacement rates for each active participant for a range of retirement ages and compare the results across gender and race/ethnicity categories while controlling for mid-career hires.
- Phase Four: Show how legislative and regulatory proposals as well as plan design modifications can be used to mitigate some of the gender and race differentials.
- Phase Five: Use the Morningstar Model of US Retirement Outcomes to provide a stochastic simulation analysis during the decumulation period. This will allow for the analysis of various risk-management techniques for longevity risks, postretirement investment risk, and potential catastrophic long-term care expenses.

About The Collaborative for Equitable Retirement Savings

The Collaborative for Equitable Retirement Savings is a multi-stakeholder initiative in the U.S. that aims to make retirement savings more inclusive by addressing and mitigating race and gender disparities in 401(k) plans. The coalition analyzes challenges and opportunities for equitable retirement savings through data-driven research and analysis; champions policy changes and best practices for employers and recordkeepers to promote diverse participation and savings in 401(k) plans; provides resources and tools to raise awareness about retirement savings disparities and empower individuals to make informed decisions; and brings together key stakeholders from across the retirement industry to work towards solutions. For more information, visit <https://www.cfers.org>

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About The Morningstar Center for Retirement & Policy Studies

The Morningstar Center for Retirement & Policy Studies has the mission to help improve the U.S. retirement system by arming decision- and policy-makers with unbiased and actionable data and analysis. The Center draws on the capabilities of Morningstar Retirement to fuel its commitment to helping people achieve better retirement outcomes. For more information, visit <https://www.morningstar.com/products/retirement-research-center>

About Defined Contribution Institutional Investment Association (DCIIA)

Founded in 2010, DCIIA is a non-profit association dedicated to enhancing the retirement security of America's workers. DCIIA's 300+ member organizations include investment managers, consultants and advisors, law firms, recordkeepers, insurance companies, data providers, plan sponsors (through the Plan Sponsor Institute) and others who are collectively committed to the best interests of plan participants. DCIIA also conducts proprietary research and participates in industry collaboration on retirement topics via the DCIIA Retirement Research Center. DCIIA is the association partner of the Journal of Retirement. For more information, visit www.dciia.org

About The Aspen Institute Financial Security Program (FSP)

Aspen FSP's mission is to illuminate and solve the most critical financial challenges facing American households and to make financial security for all a top national priority. We aim for nothing less than a more inclusive economy with reduced wealth inequality and shared prosperity. We believe that transformational change requires innovation, trust, leadership, and entrepreneurial thinking. Aspen FSP galvanizes a diverse set of leaders across the public, private, and nonprofit sectors to solve the most critical financial challenges. We do this through deep, deliberate private and public dialogues and by elevating evidence-based research and solutions that will strengthen the financial health and security of financially vulnerable Americans. For more information, visit <https://www.aspeninstitute.org/programs/financial-security-program-2/>

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