BANK OF AMERICA

CHIEF INVESTMENT OFFICE

2024: Gender Lens in Defined Contribution (DC) Plans

Gender Lens Plan Participant Series

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INTRODUCTION

We have embarked on a series of studies to understand potential gender differences in financial behavior of plan participants. These include topics such as retirement, health and education.

The adverse economic consequences of the pandemic disproportionally affected women. Women have dropped out of the workforce at record numbers to take on additional caregiving responsibilities. Our studies using data from 2019 to 2023 have shown that:

- Participation rates of women remain lower than those of men.
- Women and men contribute at the same rates.
- Women continue to invest more conservatively. However, both women's and men's allocations to equity have increased.
- Women continue to claim hardship at greater rates and have higher loan-to-balance ratios than to men.
- 401(k) balances of women continue to lag those of men.

The plan participant data reviewed in the study is from 4.8 million participants in Bank of America's record-keeping systems. We examine participation rates, contribution rates, investment allocations, loan behavior, and hardship claims and balances. We also provide retirement guidance for participants, with a special focus on considerations for women.

Women who are planning for retirement encounter the same worries and concerns as do men—outliving assets, not saving enough, needing long-term care, or losing a spouse. Although women are covered by the same employee benefits as men are, women have longer life spans, are more likely to be caregivers, and are often likely to spend their last years of life alone. With all of that in mind, these diverging life paths heighten the importance of examining the decisions women make as they save for retirement.

GENDER AND THE FINANCIAL BEHAVIOR OF PARTICIPANTS

In this section, we examine the financial behavior of participants and examine whether there are gender differences in participation rates, contributions rates, investment allocations, loan balances, hardship claims and 401(k) balances.

KEY INSIGHTS

Participation rates:
Women's participation rates are slightly lower than men's
Takeaway: Start saving early

Contribution rates:
Women and men save at comparable rates
Takeaway: Maximize your contributions

Asset Allocation decisions:
Women tend to allocate less to equity
Takeaway: Carefully consider investment choices

Loan activity and hardship claims:
Women are claiming hardship at greater rates and have higher loan-to-balance ratios
Takeaway: Avoid tapping into your savings

Balances:
Women have significantly lower 401(k) balances than men
Takeaway: Pay attention to savings

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$$$$$

Median 401(k) balances for women are approximately **72%** that for men

$$$$$
$$$$$

Source: Bank of America. Data as of December 2023. Based on the records of 3.1 million 401(k) participants

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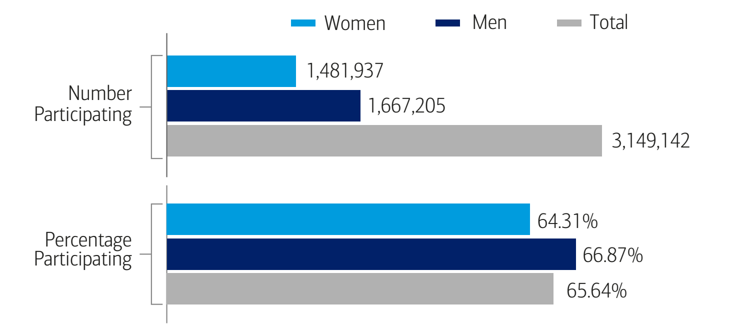
1. STUDY PARTICIPATION RATES: WOMEN'S PARTICIPATION RATES ARE SLIGHTLY LOWER THAN MEN'S

There are 1.48 million women participating in plans versus 1.67 million men, as shown in Exhibit 1. Participation rates of women are 2.6% lower than those of men. The total number of participants that Bank of America services is 4.8 million participants of these 3.1 million have a non-zero balance. The participation rates are consistent with pre-pandemic levels. Total participation rates are in line with industry studies. According to analysis completed by the Federal Reserve, 32% of U.S. households do not participate in any retirement savings plan.[1]

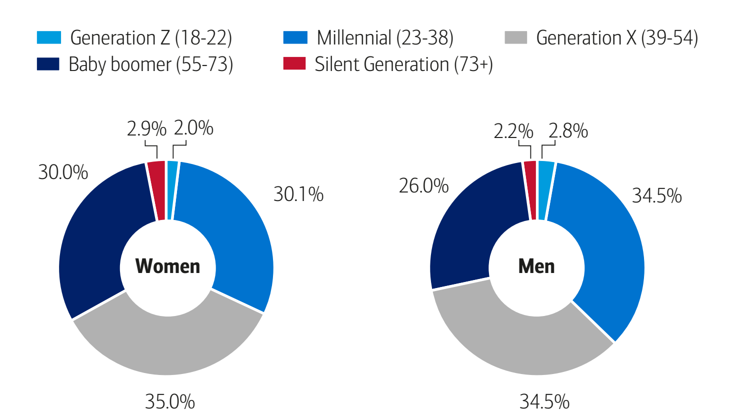
Exhibit 1: Number of participants and participation rates by gender



Source: Bank of America. Data as of December 2023. Based on the records of 4.8 million 401(k) participants.The number of participants with a non-zero balance is 3.1 million. Note: 401(k) plan balance amount contains the sum of fund-market-values for all funds within participant's account. Percentage participating is the percentage of the 4.8 million participants with non-zero balances.

The majority of the 3.1 million participants are either millennials, Generation Xers or baby boomers. Men slightly outnumber women across all generations with the exception of the older generations, baby boomer, Generation Xers and silent generation, in which women outnumber men, as shown in Exhibit 2a.

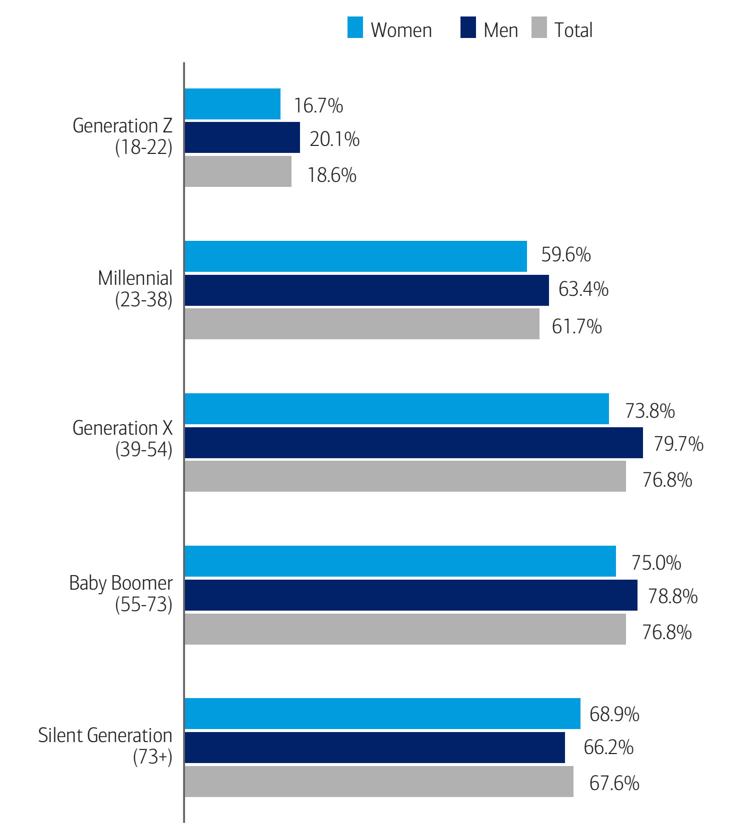
Exhibit 2a: Distribution of participants by gender and generation



Source: Bank of America. Data as of December 2023. Based on the records of 3.1 million 401(k) participants. Note: 401(k) plan balance amount contains the sum of fund-market-values for all funds within participant's account.

Participation rates of women are lower than those of men across generations with the exception of the silent generation as shown in Exhibit 2b. Generation Z has the lowest participation rates. Unfortunately, this reverses a trend we saw pre-pandemic, where milennial women's participation rates were higher than those of milennial men.

Exhibit 2b: Participation rates by gender and generation



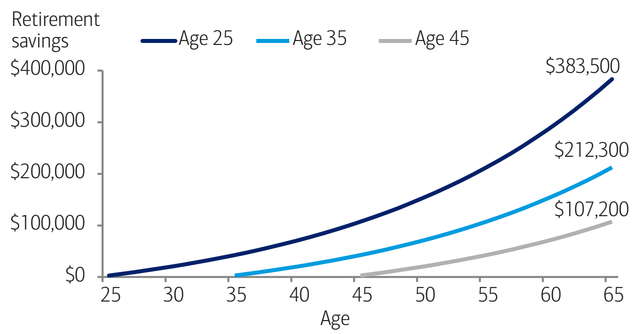
Source: Bank of America. Data as of December 2023. Based on the records of 4.8 million 401(k) participants.

[1] Federal Reserve Bulletin "Changes in US Family Finances from 2019 to 2022: Evidence from the Survey of Consumer Finances", October 2023.

TAKEAWAY: START SAVING EARLY

Both women and men should participate in a 401(k) to accumulate wealth in order to meet their needs in retirement. Saving early can increase a woman's chances of having enough money to last through her retirement years. Consider the case of three people starting to save $250 per month into a retirement account at ages, 25, 35 and 45 and continuing until they retire at age 65 (Exhibit 3). Accumulated savings vary dramatically depending on when each started saving for retirement. Starting at age 25, you will have $383,500 in retirement savings; starting at age 35, you will have about half that amount; and at age 45, you will have about one quarter.[2]

Exhibit 3: Starting retirement savings at age 25 vs. 35 vs. 45



Note: Assumes a hypothetical annual rate of return of 5%. The analysis is on a pre-tax basis. Figures rounded to the nearest $100.

Source: Calculations by the Chief Investment Office. This is a hypothetical example meant for illustrative purposes only. It does not reflect an actual investment, nor does it account for the effects of taxes, any investment expenses or withdrawals.

Returns are not guaranteed and results will vary. Investment returns cannot be predicted and will fluctuate. Investor results may be more or less. It is not intended to serve as investment advice, since the availability and effectiveness of any strategy are dependent upon your individual facts and circumstances.

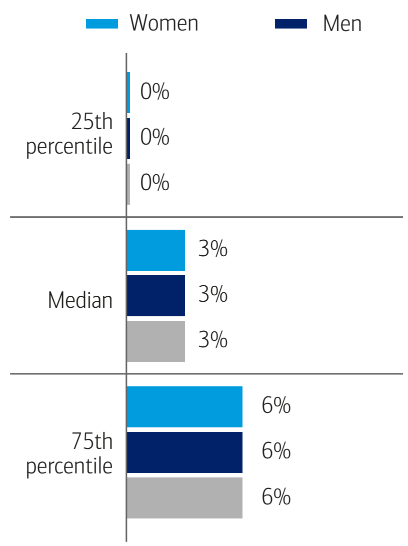
2. STUDY CONTRIBUTION RATES: WOMEN AND MEN SAVE AT COMPARABLE RATES

As women and men save for retirement, the rate at which they save can possibly have a significant impact on their ability to achieve their goals and ensure they do not run out of money in retirement.

The contribution rates in Exhibit 4 represent the rate at which the participant elects to contribute and does not include employer matches. Contribution rates for women and men are the same at the 25th percentile, median and 75th percentile. Contribution rates by gender and generational groupings are in line with pre-pandemic levels. The median contributions rates are modest for both women and men at 3%. The average contribution rate is 4% for both women and men. At the 75th percentile, the contribution rates of women and men are 6%.

Contribution rates for women and men are the same at the 25th percentile, median and 75th percentile.

Exhibit 4: 401(k) contribution rates by gender

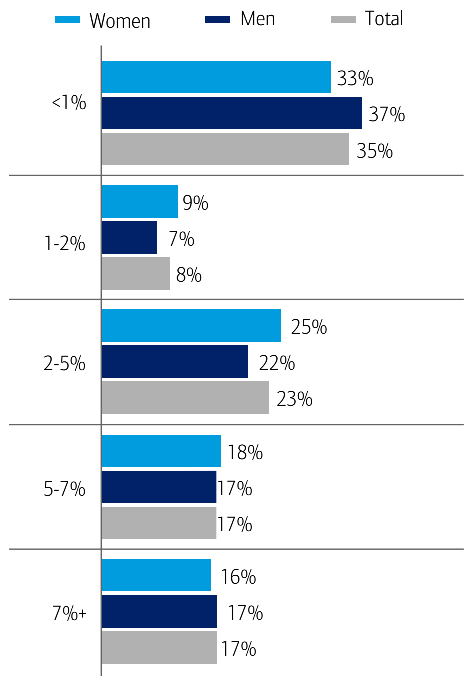


Source: Bank of America. Data as of December 2023. Based on the records of 3.1 million 401(k) participants.

Exhibit 5 shows the distribution of contribution rates for women and men for different levels of contribution. The percentage of women participants is greater than men with contribution rates of 1% to 2% and 2% to 7%. In contrast, the percentages of women are lower, in the <1% and 7%+ contribution rate groups. Contribution rates of women are comparable to those of men for all generation groups, with the exception of older generations (see Exhibit 6). The median contribution rate for women and men is 3% for Generation Z and millennials. Men contribute at higher rates than women do among Generation X, at 4% for men versus 3% for women. The median contribution rate for women and men is 4% for baby boomers.

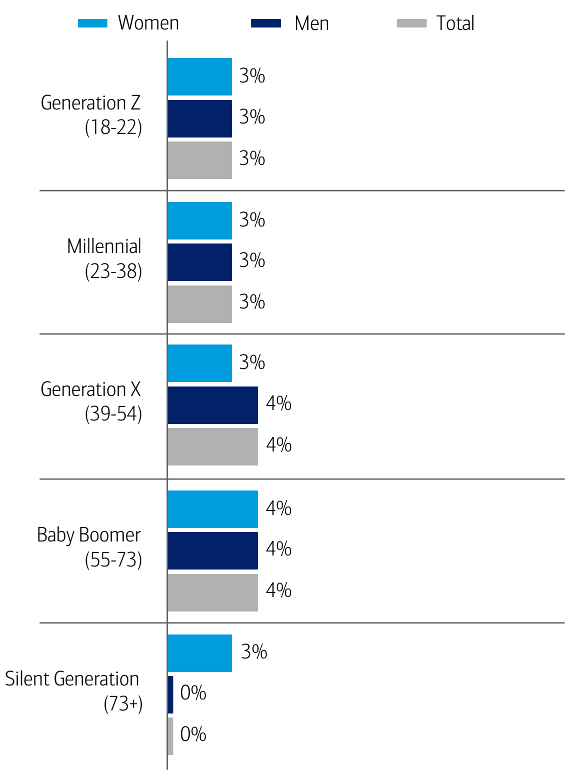
[2] Please see "Women and Life-Defining Financial Decisions" Chief Investment Office, for additional examples of how starting to save for retirement early can make a significant difference over time, 2024.

Exhibit 5: 401(k) contribution groupings by gender



Source: Bank of America. Data as of December 2023. Based on the records of 3.1 million 401(k) participants.

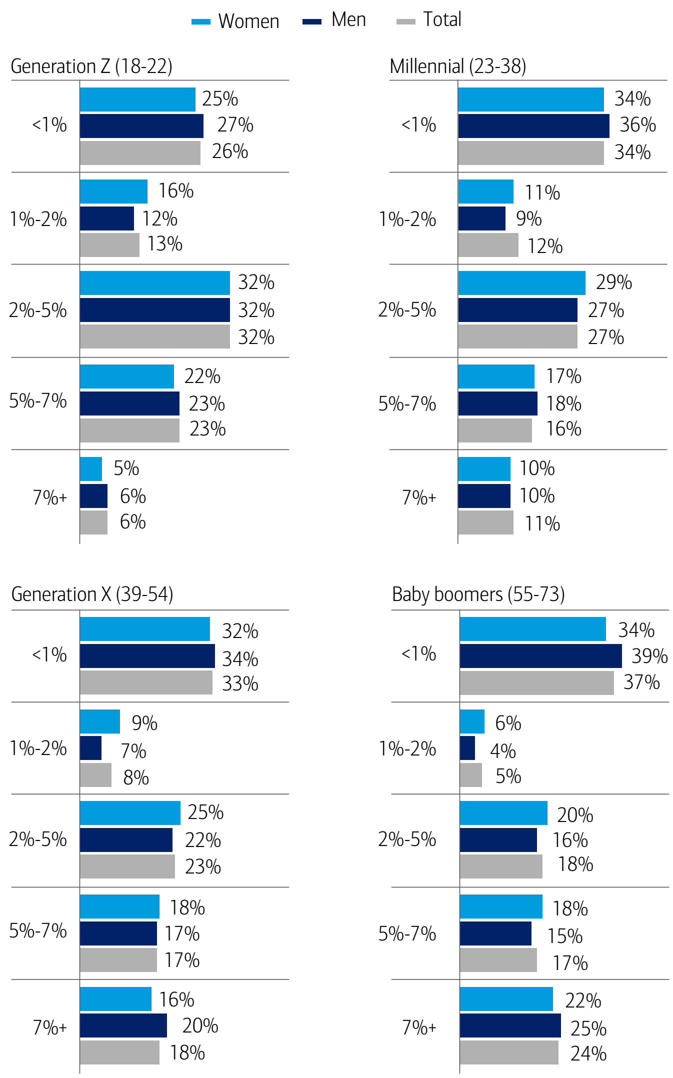
Exhibit 6: 401(k) contribution rates by gender and generation



Source: Bank of America. Data as of December 2023. Based on the records of 3.1 million 401(k) participants. Based on median values.

Across generational groupings, a higher percentage of women than men are in the 1% to 5% contribution group. At lower (<1%) and higher (>5%) contribution rates, there are more men than women (Exhibit 7).

Exhibit 7: 401(k) contribution groupings by gender and generation

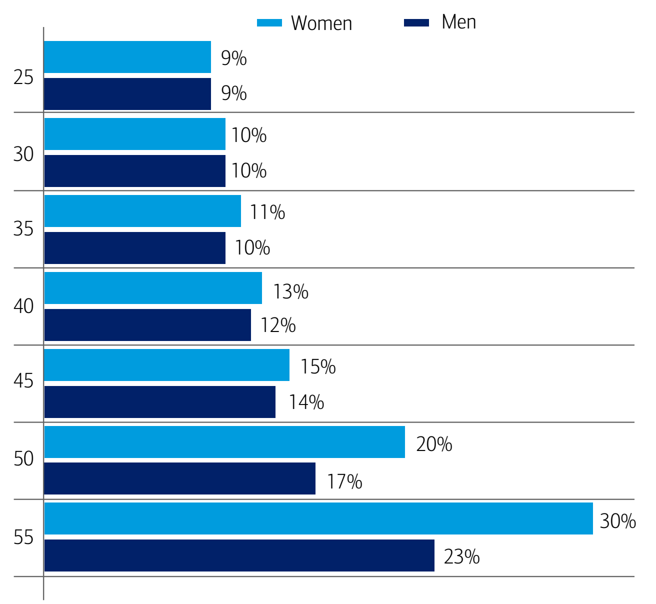


Source: Bank of America. Data as of December 2023. Based on the records of 3.1 million 401(k) participants.

TAKEAWAY: MAXIMIZE YOUR CONTRIBUTIONS

Make sure you fully understand your 401(k) choices, then start to decide how much to contribute and how to invest it. Employer matching contributions are free dollars that you shouldn't leave on the table. Make it a priority to contribute up to the full level of your employer's matching percentage. Exhibit 8 shows how much of their income women and men should be saving at various ages. The analysis assumes women have a longer life expectancy and are expected to retire earlier. At age 65, women can expect to live an average of 21.8 more years and men an average of 19.2 more years.[3] Women, on average, retire at age 63 versus men at age 65.[4] As a result of these differences, for example, a 40-year-old woman should be saving more than a man of the same age, 13% vs. 12%.

Exhibit 8: Recommended contribution rates at various ages



Note: See Appendix I for details on the assumptions. Based on Chief Investment Office assumptions, and performance is not guaranteed.

Source: Calculations by the Chief Investment Office.

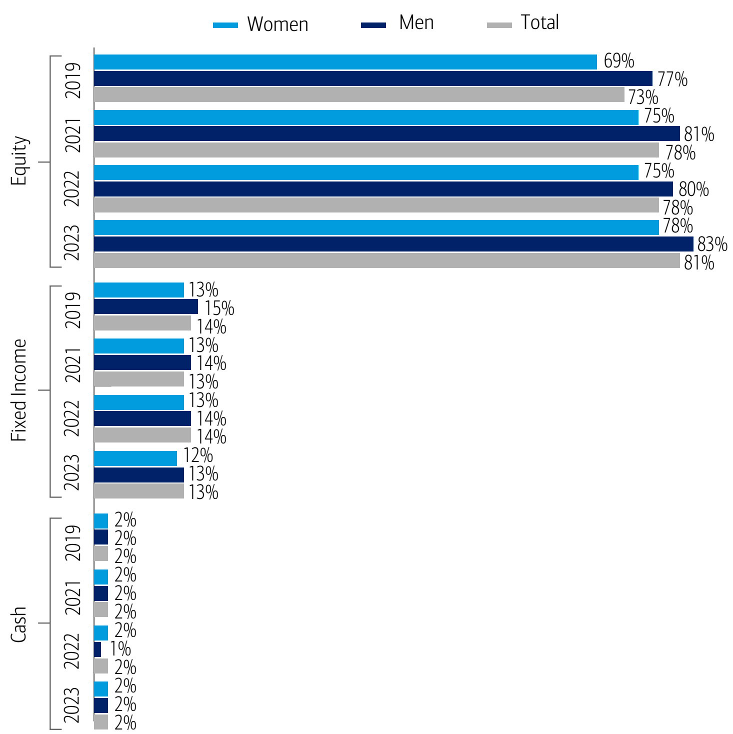
3. STUDY ASSET ALLOCATION DECISIONS: WOMEN TEND TO ALLOCATE LESS TO EQUITY

The allocation to equity among women continues to be lower than that among men. Both women's and men's allocations to equity have increased since 2022. Exhibit 9 shows that the average equity allocation is 78% for women versus 83% for men. This is consistent with research that shows that women tend to take on less investment risk than men.[5] When choosing investments for a retirement plan, one needs to understand the implications of being invested more conservatively over a long period of time. Women in particular should focus on understanding these investment choices because they need their money to last longer. Exhibit 10 shows the 90%, 75%, 50%, 25% and 5% likelihood of potential wealth at retirement for different asset allocations, illustrating the risks associated with being invested too conservatively—or too aggressively.

Average equity allocation is 78% for women versus 83% for men.

Research by by Bank of America showed that nearly a third of women participating in the study shared that their biggest financial regret was not saving and investing sooner. Getting started sooner with saving and investing also tops the list of what women say they would do differently. Nearly half of women say they feel confident about their finances, yet only 28% feel empowered to take action on them.[6]

Exhibit 9: Asset allocation by gender



Source: Bank of America. Data as of Dec 2019; Mar 2021; Apr 2022; Dec 2023. Based on the records of 3.1 million 401(k) participants.

3 www.ssa.gov/OACT/population/longevity.html, accessed February, 2024.

4 Center for Retirement Research at Boston College crr.bc.edu/wp-content/uploads/2015/10/Avg_ret_age_men.pdf.

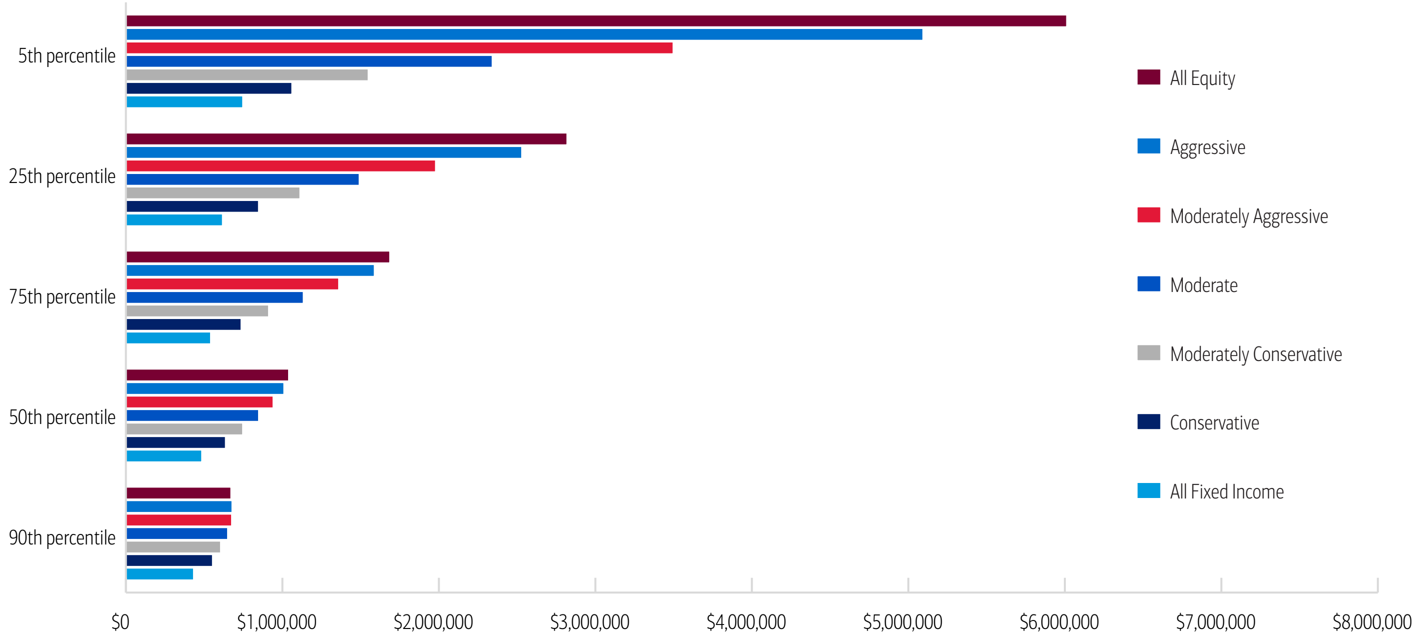
5 Arano, K.C. Parker and R. Terry, "Gender-Based Risk Aversion and Retirement Asset Allocation," *Economic Inquiry* 48, no.1 (January 2010), pp 147-155.

6 Bank of America, "Women, money, confidence: A lifelong relationship," June 2022.

TAKEAWAY: CAREFULLY CONSIDER INVESTMENT CHOICES

When choosing investments for a retirement plan, one needs to understand the implications of being invested conservatively over a long period of time. Women in particular should focus on understanding these investment choices because they need their money to last longer. Exhibit 10 shows the 90%, 75%, 50%, 25% and 5% likelihood of potential wealth at retirement for different asset allocations, illustrating the risks associated with being invested too conservatively—or too aggressively.

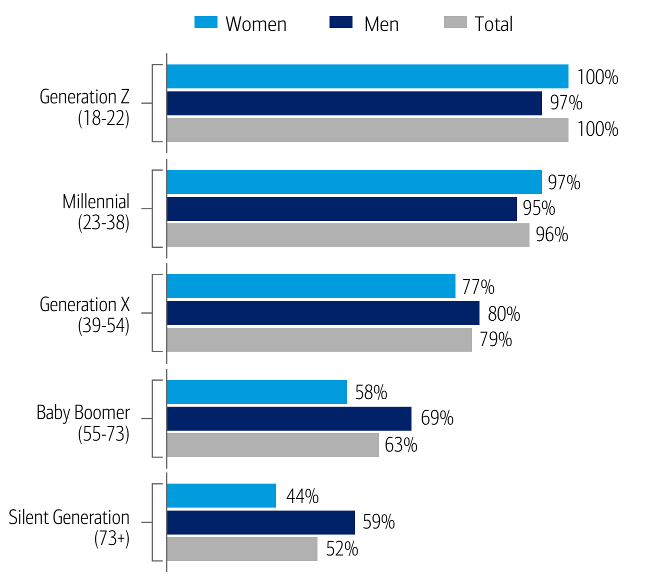
Exhibit 10: Potential wealth at retirement



Note: It is assumed the individuals current age is 22 and retirement age is 63. The initial annual income is $27,000. Income grows in line with inflation of 2.8%. Annual contributions are 9%. See Appendix II for additional details on the index proxies and risk profile asset allocations. The outcomes shown are hypothetical, are not guaranteed, and your actual results could differ significantly for many reasons. The data merely reflects long-term estimates or projections. Such projections are based on numerous assumptions and estimates. Those assumptions and estimates may not be realized for a variety of reasons, ranging from general economic conditions to investment-specific considerations. As a consequence, the projected performance is merely illustrative of potential returns, and actual realized performance may be materially lower than such projections and/or not realized in the period hypothesized. Source: Chief Investment Office.

Exhibit 11 below shows that the equity allocations of women are higher than those of men for the Generation Z and millennial generation group. Equity allocations of women are lower than those of men for the Generation X, baby boomer and silent generation age groups. For Generation X and baby boomers, women allocate 3% and 10% less to equity, respectively. The most notable difference is among baby boomers, for whom women's equity allocation is 58% versus 69% for men.[7]

Exhibit 11: Equity allocation by gender and generation



Source: Bank of America. Data as of December 2023. Based on the records of 3.1 million 401(k) participants.

[7] Please see Suri, Vrdoljak, Yong and Homescu (2024), "Target Date Asset Allocation: A Goals-Based Approach," Chief Investment Office provides a discussion of appropriate asset allocations for different life stages.

4. STUDY LOAN ACTIVITY AND HARDSHIP CLAIMS

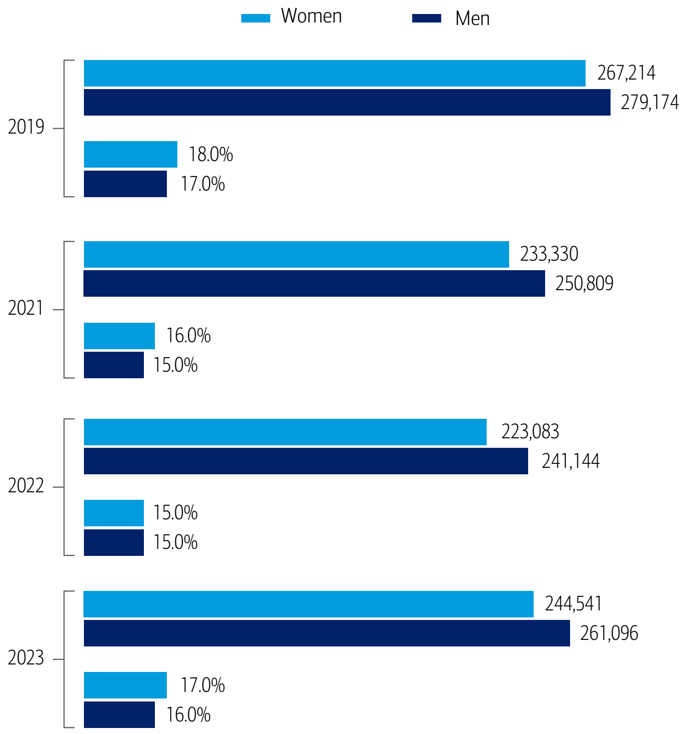
Loan activity: As a percentage, 401(k) loans are the same for women and men.

401(k) participants can borrow from their 401(k). You could take out as much as 50% of your savings, up to a maximum of $50,000, within a 12-month period. Participants could face taxes and penalties, as well as the loss of compounded growth of their retirement savings. However, in certain cases it may make sense to use a 401(k) loan, as the rates on a 401(k) loan are significantly less than other credit solutions, like a credit card or payday loan.

As shown in Exhibit 12, in total number, more men than women have 401(k) loans. However, the percentage of women that have a 401(k) loan is greater than men 17% versus 16%. The number of women and men with 401(k) loans has declined during the pandemic period. This is in line with rates from 2016 as shown in the Employee Benefit Research Institute (EBRI) study, which showed that 19% of all 401(k) participants who were eligible for loans from their plan had one.[8]

In total more men than women have 401(k) loans

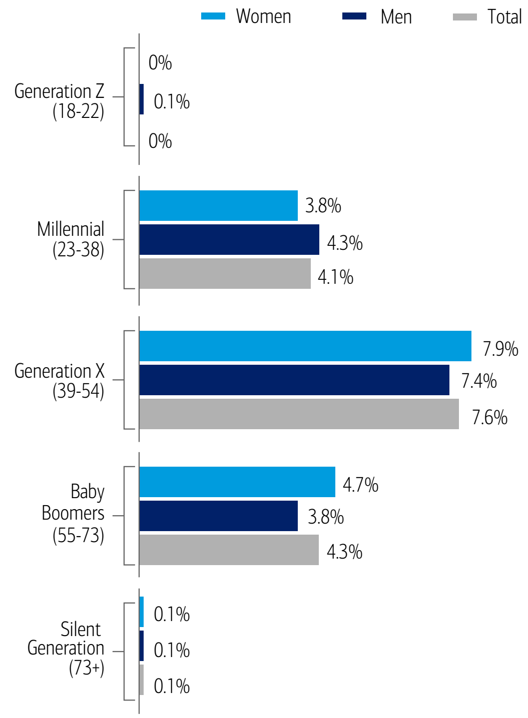
Exhibit 12: Number and percentage of participants with 401(k) loans



Source: Bank of America. Data as of Dec 2019; Mar 2021; Apr 2022 and Dec 2023. Based on the records of 3.1 million 401(k) participants. Note: The total balance amount of all loans against the account, including any loan interest in arrears.

Unlike other generational groups, for Gen Z and Millennials the proportion of women with 401(k) loans is lower than the proportion of men. (Exhibit 13).

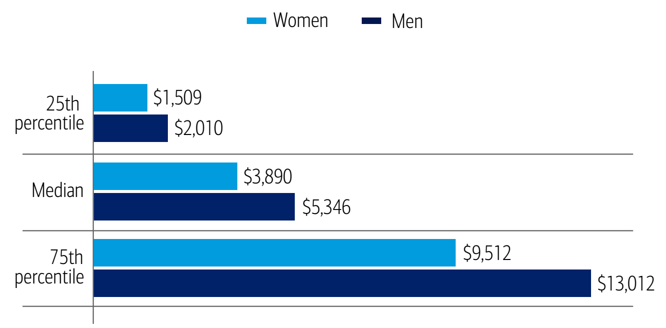
Exhibit 13: Percentage of participants with 401(k) loans by generation



Source: Bank of America. Data as of December 2023. Based on the records of 3.1 million 401(k) participants. Note: The total balance amount of all loans against the account, including any loan interest in arrears.

Loan balance amounts of men are higher than those of women. The differences are most notable at the 75th percentile (see Exhibit 14). The median loan balance is $3,890 for women and $5,346 for men. The average loan balances are $7,340 for women versus $9,293 for men.

Exhibit 14: Balances of participants with 401(k) loans



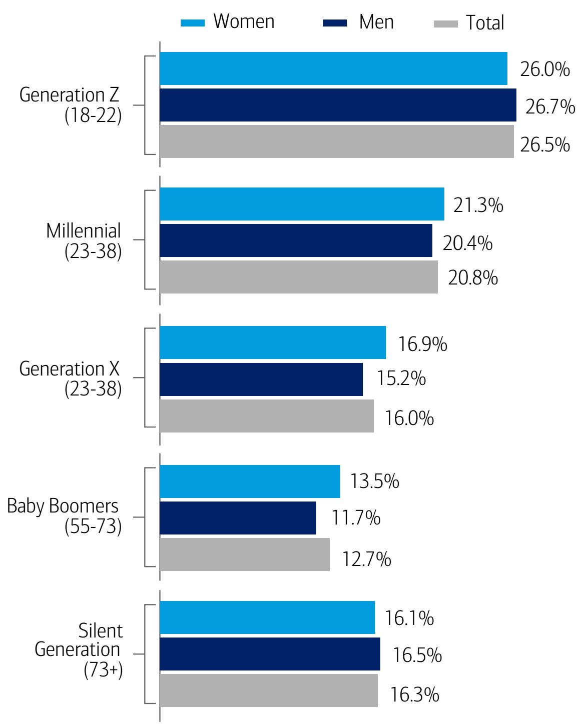
Source: Bank of America. Data as of December 2023. Based on the records of 505,635 401(k) participants with 401(k) loans. Note: The total balance amount of all loans against the account, including any loan interest in arrears. The maximum amount that the plan can permit as a loan is (1) 50% of your vested account balance, or (2) $50,000, whichever is less.

[8] Employee Benefit Research Institute, "401(k) Plan Asset Allocation, Account Balances, and Loan Activity in 2016," September 2018.

Loan-to-balance ratios: Women have higher loan-to-balance ratios

Loan-to-balance ratios of women are higher than or equal to those of men for all groups except Generation Z and the silent generation. Loan-to-balance ratios of younger age groups are generally higher than those of older age groups (Exhibit 15).

Exhibit 15: 401(k) loan-to-balance ratios by generation



Source: Bank of America. Data as of December 2023. Based on the records of 505,635 401(k) participants with 401(k) loans.

Note: The loan-to-balance ratios represents the ratio of total balance amount of all loans against the account, including any loan interest in arrears, divided by the total amount of 401(k) plan balance amount. The maximum amount that the plan can permit as a loan is (1) 50% of the vested account balance, or (2) $50,000, whichever is less.

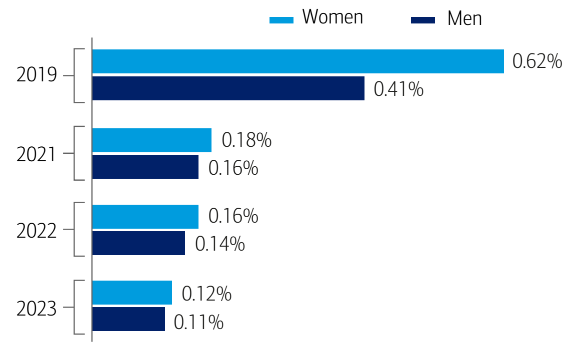
Based on median values.

Hardship activity: Women are claiming hardship at greater rates

Participants in 401(k) plans can claim hardship for a number of reasons. These include certain medical expenses, the purchase of a principal residence, educational expenses, payments necessary to prevent eviction from or foreclosure on a principal residence, burial or funeral expenses, and certain expenses for the repair of damage to a principal residence.

The number of participants who have claimed hardship is relatively low (less than 1%), yet more women than men claim hardship. The number of women and men with hardship claims declined. The low rate of hardship withdrawals is consistent with industry findings of about 1% of participants (Exhibit 16).

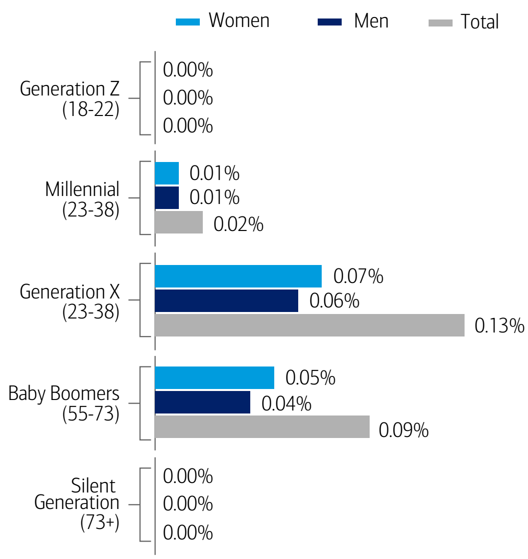
Exhibit 16: Percentage of participants claiming hardship



Source: Bank of America. Data as of Dec 2019; Mar 2021; Apr 2022; Dec 2023. Based on the records of 3.1 million 401(k) participants. Note: A hardship withdrawal is a distribution from a 401(k) plan to be "made on account of an immediate and heavy financial need of the employee, and the amount must be necessary to satisfy the financial need," according to the IRS. Certain expenses are deemed to be immediate and heavy, including: (1) certain medical expenses; (2) costs relating to the purchase of a principal residence; (3) tuition and related educational fees and expenses; (4) payments necessary to prevent eviction from, or foreclosure on, a principal residence; (5) burial or funeral expenses; and (6) certain expenses for the repair of damage to the employee's principal residence.

The percentage of women claiming a hardship is greatest for Generation X (Exhibit 17).

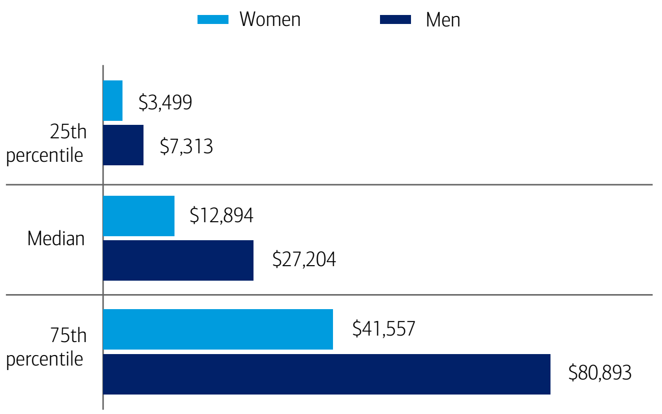
Exhibit 17: Percentage of participants claiming hardship



Source: Bank of America. Data as of December 2023. Based on the records of 3.1 million 401(k) participants. Note: A hardship withdrawal is a distribution from a 401(k) plan to be "made on account of an immediate and heavy financial need of the employee, and the amount must be necessary to satisfy the financial need," according to the IRS. Certain expenses are deemed to be immediate and heavy, including: (1) certain medical expenses; (2) costs relating to the purchase of a principal residence; (3) tuition and related educational fees and expenses; (4) payments necessary to prevent eviction from, or foreclosure on, a principal residence; (5) burial or funeral expenses; and (6) certain expenses for the repair of damage to the employee's principal residence.

Of participants who have claimed hardship, the 401(k) account balances are greater for men than for women. The median 401(k) account balance is $12,894 for women and $27,204 for men (Exhibit 18).

Exhibit 18: Balances of participants claiming hardship



Source: Bank of America. Data as of December 2023. Based on the records of 3.1 million 401(k) participants.

Note: A hardship withdrawal is a distribution from a 401(k) plan to be "made on account of an immediate and heavy financial need of the employee, and the amount must be necessary to satisfy the financial need," according to the IRS. Certain expenses are deemed to be immediate and heavy, including: (1) certain medical expenses; (2) costs relating to the purchase of a principal residence; (3) tuition and related educational fees and expenses; (4) payments necessary to prevent eviction from, or foreclosure on, a principal residence; (5) burial or funeral expenses; and (6) certain expenses for the repair of damage to the employee's principal residence.

TAKEAWAY: AVOID TAPPING INTO YOUR SAVINGS

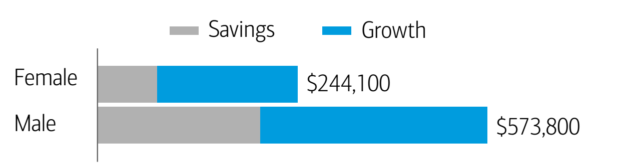
The example below shows the consequences of tapping into retirement savings. The figures show the annual retirement contributions for a female and a male from age 25 to when they both retire at 65. The male consistently saves and progressively increases his annual contributions. The female initially contributes $3,000 but then takes time off, from age 31 to 45, to care for her children and elderly parents (Exhibit 19). Due in part to compound interest, his total accumulated savings at retirement is $573,800. In contrast, her savings at retirement is $244,100. The difference between the two is significant — a total of $329,700 (Exhibit 20).[9]

Exhibit 19: Retirement contributions

Age	23-35	31-35	36-44	45-50	51-65
Female	$3,000	$0	$2,500	$0	$2,000
Male	$3,000	$4,000	$4,500	$5,000	$6,000

Source: Chief Investment Office.

Exhibit 20: Retirement savings at retirement



Note: Assumes a hypothetical annual rate of return of 5%. Figures rounded to the nearest $1000. This is a hypothetical example meant for illustrative purposes only. It does not reflect an actual investment, nor does it account for the effects of taxes, any investment expenses or withdrawals. Returns are not guaranteed and results will vary. Investment returns cannot be predicted and will fluctuate. Investor results may be more or less. It is not intended to serve as investment advice since the availability and effectiveness of any strategy is dependent upon your individual facts and circumstances.

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Source: Calculations by the Chief Investment Office.

[9] Chief Investment Office 2024, "Financial Security for the Caregiver," for additional examples of how work reduction impacts women's financial security.

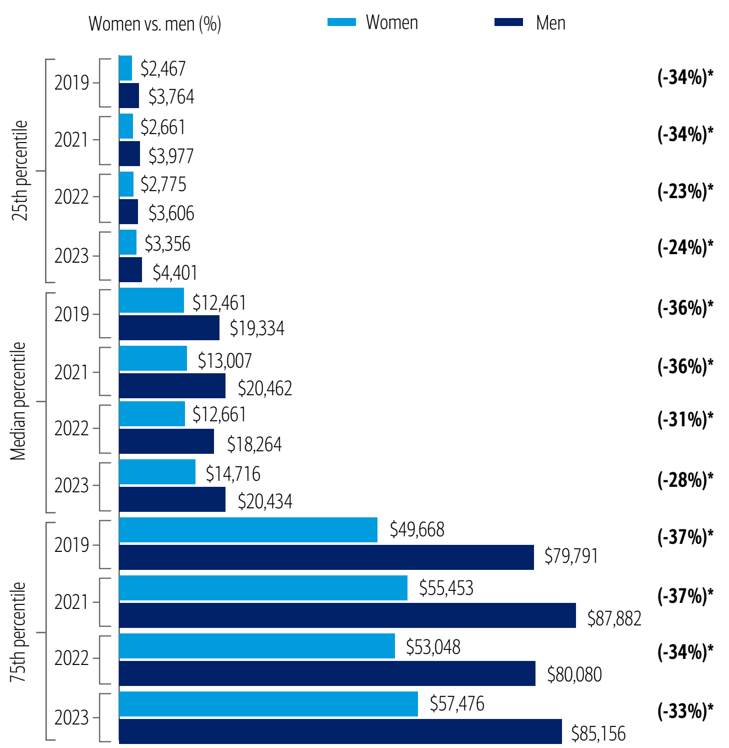
5. STUDY BALANCES: WOMEN HAVE SIGNIFICANTLY LOWER 401(K) BALANCES THEN MEN

The median 401(k) plan balances are $14,716 for women versus $20,434 for men. The average 401(k) plan balances are $70,676 for women versus $105,095 for men. Total 401(k) balances for women continue to be approximately two-thirds those for men at the 25th percentile, median and 75th percentile (Exhibit 21).

The lower balances of women relative to those of men can be attributed to lower income and tenure in plans. Women continue to earn less than men in the workplace. U.S. Department of Labor data shows that women make 83 cents for every $1 that a man earns.[10]

Women are more likely to take the off-ramp to assist with caregiving needs, resulting in fewer working years. An estimated 61% of caregivers are female, and their average age is 49.[11] Taking time off to provide care for a loved one can disrupt a woman's sustained accumulation of retirement funds. A Bank of America study highlights shows the average time women spend out of the workforce is four years, and when women return to the workforce, 36% face a reduced salary.

Exhibit 21: 401(k) balances by gender

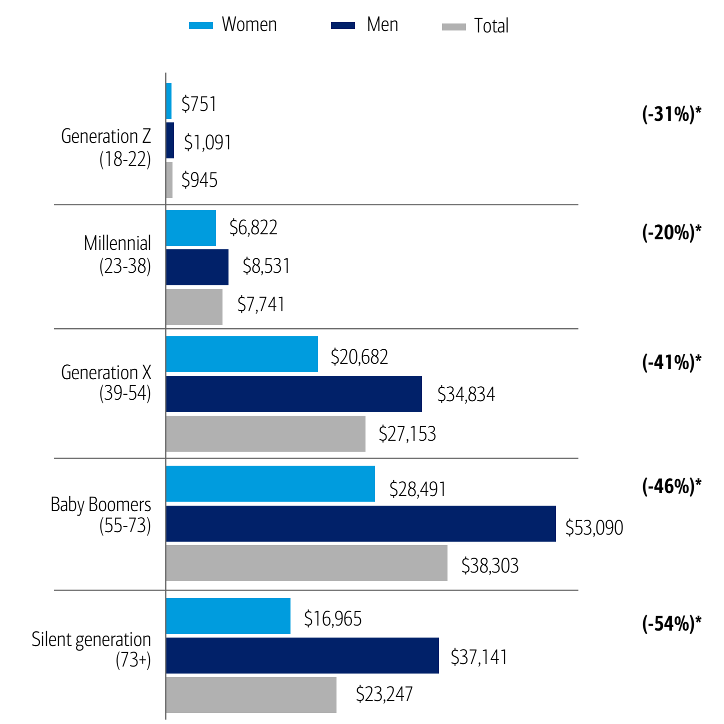


Source: Bank of America. Data as of Dec 2019; Mar 2021; Apr 2022; Dec 2023. Based on the records of 3.1 million 401(k) participants. Note: 401(k) plan balance amount contains the sum of fund-market-values for all funds within participant's account. *The numbers in parenthesis represent the percentage difference between men's and women's balances.

The 401(k) balances of women are lower than those of men across all generation groups as shown in Exhibit 22. Relative differences between women and men are greatest among older age groups. The findings are consistent with pre-pandemic participant data. For the baby boomer generation, the median balance for women is $28,491, about half of that for men at $53,090. In contrast, for millennials, women have about two-thirds as much as men.

The progressive increase in the differences in balances between women and men as they age can also be attributed to the pay gap. U.S. Bureau of Labor Statistics data shows in 2024, women ages 25-34 were earning 90% of what men in that age group were earning but by ages 45-54 women were earning 80% of what men were earning.[12]

Exhibit 22: 401(k) balances by gender and generation



Source: Bank of America. Data as of December 2023. Based on the records of 3.1 million 401(k) participants. Note: 401(k) plan balance amount contains the sum of fund-market-values for all funds within participant's account. Based on median values.

*The numbers in parenthesis represent the percentage difference between men and women balances.

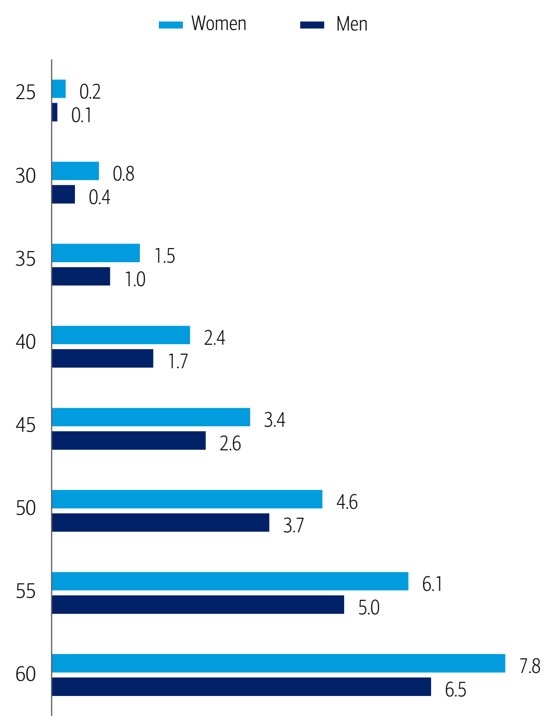
[10] U.S. Department of Labor, www.bls.gov/cps/cpsaat39.htm. Accessed, February, 2024.
[11] "Women, Money, Confidence A Lifelong Relationship," Bank of America, 2024.
[12] https://www.bls.gov/news.release/pdf/wkyeng.pdf

TAKEAWAY: PAY ATTENTION TO SAVINGS

Below are suggested retirement savings multiples for women and men for various ages. We have assumed a greater life expectancy and earlier retirement for women.

The retirement saving multiples are calculated with an assumption of 90% certainty of replacing income in retirement (see Appendix I for additional assumptions). For example, if a 45-year-old woman with gross income of $100,000 a year wanted to be on track to fund her retirement goals, she would need to have saved 3.4 times her gross salary. Thus, she would need to have saved $340,000. In contrast, a man of the same age and same income level would need to have saved less than $260,000.

Exhibit 23: Retirement saving multiples: Women vs. Men



Note: Based on Chief Investment Office assumptions, and performance is not guaranteed.

See Appendix I for details on the assumptions.

Source: Calculations by the Chief Investment Office.

KEY FINDINGS

Our updated analysis shows that for women and men participating in Bank of America 401(k) plans:

- Participation rates of women continue to be slightly lower than those of men.
- Contribution rates for women and men are comparable at the 25th, median and 75th percentile. For the middle range contribution rate groups, women's rates are higher than those for men.
- Equity allocations of women are 11% lower than those of men for older participants.
- Median balances of women continue to be lower than those of men. Differences between women's and men's balances has narrowed from a 36% difference in 2019 and 2021 to a 28% difference in 2023.
- Women continue to claim hardship and take 401(k) loans more often than men do.
- 401(k) loan balances are higher for men than for women.
- 401(k) loan-to-balance ratios of women are higher than those of men.

KEY TAKEAWAYS

1. Start saving early for your retirement

- Enroll in your employer's 401(k) plan
- Set up automatic payroll deductions for your contributions and gradually increase your contributions over time
- Try to contribute enough to get the full employer's 401(k) matching contribution

2. Maximize your contributions

- Aim to increase your contributions when you get a raise or tax refund or pay off a large expense.
- Consider making catch-up contributions if you're age 50 or older and eligible to do so.
- If you've maxed out your contributions on retirement vehicles, consider whether other types of accounts may be appropriate (such as a traditional or Roth IRA).
- Consider trying to contribute the percentage of your income, including any contributions from your employer, shown in Exhibit 8.

3. Carefully consider investment choices

- Review your plan's investment choices and select diversified investments that work for you and match your desired level of risk, goals and time horizon.
- Review your accounts periodically (ideally, at least annually) and adjust your investments if needed.

4. Avoid tapping into savings

- Think carefully before you tap long-term retirement savings to pay off short-term debt.
- Revisit your budget to identify areas where you can reduce spending.

5. Pay attention to savings

- To be financially prepared for retirement, we suggest considering saving multiples of your current household income given your age as shown in Exhibit 23.

APPENDIX I:

Assumptions: Retirement savings and contributions analysis

Parameter	Values	Source
Current age	25, 30, 35, 40, 45, 50, 55, 60	**Chief Investment Office**
Retirement age	Female: 63 Male: 65	**Center for Retirement Research at Boston College:** crr.bc.edu/wp-content/uploads/2015/10/Avg_ret_age_men.pdf
Life expectancy	Female: 92 Male: 90	**Social Security Administration Life Expectancy Tables:** ssa.gov/OACT/HistEst/Death/2019/DeathProbabilities2019.htm
CIO Confidence level	90%	Applied to the portion of income replaced by retirement savings above Social Security
Income replacement from retirement savings (pre-tax)	38%	**Total retirement income replacement: 71%** Munnell, A., Webb, A. and Hou W. (2014) How Much Should People Save? **Income replacement from Social Security:33%** Social Security Administration: ssa.gov/oact/NOTES/ran9/an2023
Total contribution rate (pre-tax)	9%	**Personal saving rates (pre-tax): 6%** federalreserve.gov/econresdata/2016-economic-well-being-of-us-households-in-2015-income-and-savings.htm **Employer's Match: 3%**
Funding status	75%	**CIO** – funding ratio levels applied to the portion of income replaced by retirement savings above Social Security
Strategic Asset Allocation (SAA)** and Capital Market Assumptions***	Moderate asset allocation*	**Chief Investment Office**

* Moderate asset allocation (See Appendix II for additional details on the Moderate asset allocation): For investors who are willing to take a moderate level of risk. Primary emphasis is to strike a balance between portfolio stability and portfolio appreciation. Investors using this model should be willing to assume a moderate level of volatility and risk of principal loss. A typical portfolio will primarily include a balance of fixed income and equities.

**Strategic asset allocation is a portfolio strategy whereby the investor sets target allocations for various asset classes and rebalances the portfolio periodically.

***Capital markets assumptions are expected returns, standard deviations, and correlation estimates that represent the 25-year risk/return forecasts for various asset classes.

APPENDIX II:

Strategic Asset Allocations

	All Fixed Income	Conservative	Moderately Conservative	Moderate	Moderately Aggressive	Aggressive	All Equity
Equity	0%	24%	40%	58%	75%	91%	99%
U.S. Large Cap Growth	0%	7%	12%	17%	22%	27%	29%
U.S. Large Cap Value	0%	8%	14%	20%	26%	31%	34%
U.S. Small Cap Growth	0%	1%	1%	2%	3%	4%	4%
U.S. Small Cap Value	0%	1%	1%	2%	3%	4%	4%
International Developed Equity	0%	5%	8%	11%	14%	16%	18%
Emerging Markets	0%	2%	4%	6%	7%	9%	10%
Fixed Income	99%	71%	59%	41%	24%	8%	0%
U.S. Government	28%	17%	17%	13%	8%	3%	0%
U.S. Mortgages	24%	12%	13%	10%	3%	0%	0%
U.S. Corporates	26%	17%	16%	13%	11%	5%	0%
U.S. High Yield	5%	3%	3%	2%	1%	0%	0%
International Fixed Income	16%	22%	10%	3%	1%	0%	0%
Cash	1%	5%	1%	1%	1%	1%	1%

Source: Bank of America Global Wealth & Investment Management Investment Strategy Committee (GWIM ISC). Effective January 1, 2024. For illustrative purposes only.

Index Definitions and Proxies

Securities indexes assume reinvestment of all distributions and interest payments. Indexes are unmanaged and do not take into account fees or expenses. It is not possible to invest directly in an index. Indexes are all based in U.S. dollars.

Asset Class	Index	Description
U.S. Large Cap Growth	Russell 1000 Growth TR	Russell 1000 Growth Total Return measures the performance of the large-cap growth segment of the U.S. equity universe. It includes those Russell 1000 companies with higher price-to-book ratios and higher forecasted growth values.
U.S. Large Cap Value	Russell 1000 Value TR	Russell 1000 Value Total Return measures the performance of the large-cap value segment of the U.S. equity universe. It includes those Russell 1000 companies with lower price-to-book ratios and lower expected growth values.
U.S. Small Cap Growth	Russell 2000 Growth TR	Russell 2000 Growth Total Return measures the performance of the broad growth segment of the U.S. equity universe. It includes those Russell 2000 companies with higher price-to-book ratios and higher forecasted growth values.
U.S. Small Cap Value	Russell 2000 Value TR	Russell 2000 Value Total Return measures the performance of the large-cap value segment of the U.S. equity universe. It includes those Russell 2000 companies with lower price-to-book ratios and lower expected growth values.
International Developed Equity	MSCI Daily TR Net World Ex USA USD	The MSCI World ex USA Index captures large- and mid-cap representation across 22 of 23 developed markets (DM) countries—excluding the United States. The index covers approximately 85% of the free float-adjusted market capitalization in each country.
Emerging Markets	MSCI Daily TR Net EM USD	The MSCI Emerging Markets (EM) Index captures large- and mid-cap representation across 23 EM countries and targets coverage of approximately 85% of the free float-adjusted market capitalization in each country.
U.S. Government	ICE BofA AAA U.S. Treasury/Agency Master	The ICE BofA U.S. Treasury & Agency Index tracks the performance of U.S. dollar-denominated U.S. Treasury and non-subordinated U.S. Agency debt issued in the U.S. domestic market. Qualifying securities must have an investment grade rating (based on an average of Moody's, S&P and Fitch). In addition, qualifying securities must have at least one year remaining term to final maturity, at least 18 months to maturity at time of issuance, a fixed coupon schedule, and a minimum amount outstanding of $1 billion for sovereigns and $250 million for agencies.
U.S. Mortgages	ICE BofA Mortgage Master	The ICE BofA U.S. Mortgage Backed Securities Index tracks the performance of U.S. dollar-denominated fixed rate and hybrid residential mortgage pass-through securities publicly issued by US agencies in the U.S. domestic market. 30-year, 20-year, 15-year and interest-only fixed rate mortgage pools are included in the Index provided they have at least one year remaining term to final maturity and a minimum amount outstanding of at least $5 billion per generic coupon and $250 million per production year within each generic coupon.
U.S. Corporates	ICE BofA U.S. Corp Master	The ICE BofA U.S. Corporate Index tracks the performance of U.S. dollar-denominated investment grade corporate debt publicly issued in the U.S. domestic market. Qualifying securities must have an investment grade rating (based on an average of Moody's, S&P and Fitch), at least 18 months to final maturity at the time of issuance, at least one year remaining term to final maturity as of the rebalancing date, a fixed coupon schedule and a minimum amount outstanding of $250 million.
U.S. High Yield	ICE BofA U.S. Cash Pay High Yield	The ICE BofA U.S. Cash Pay High Yield Index tracks the performance of U.S. dollar-denominated below-investment grade corporate debt, currently in a coupon paying period, that is publicly issued in the U.S. domestic market.
International Fixed Income	ICE BofA Global Broad Market TR ex USD (Hedged)	The ICE BofA Global Broad Market Excluding US Dollar Index tracks the performance of investment grade debt publicly issued in the major domestic and eurobond markets, including sovereign, quasi-government, corporate, securitized and collateralized securities, excluding all securities denominated in U.S. dollars.
Cash	ICE BofA U.S. Treasury Bills 3 months	For the IA SBBI U.S. Treasury Bill Index, the CRSP U.S. Government Bond File is the source from 1926 to 1976. Each month a one-bill portfolio containing the shortest-term bill having not less than one month to maturity is constructed. (The bill's original term to maturity is not relevant). The ICE BofA U.S. 3-Month Treasury Bill comprises a single issue purchased at the beginning of the month and held for a full month. At the end of the month, that issue is sold and rolled into a newly selected issue. The issue selected at each month-end rebalancing is the outstanding Treasury Bill that matures closest to, but not beyond, three months from the rebalancing date. To qualify for selection, an issue must have settled on or before the month-end rebalancing date.

Important Disclosures

The Chief Investment Office (CIO) provides thought leadership on wealth management, investment strategy and global markets; portfolio management solutions; due diligence; and solutions oversight and data analytics. CIO viewpoints are developed for Bank of America Private Bank, a division of Bank of America, N.A., ("Bank of America") and Merrill Lynch, Pierce, Fenner & Smith Incorporated ("MLPF&S" or "Merrill"), a registered broker-dealer, registered investment adviser and a wholly owned subsidiary of BofA Corp. This information should not be construed as investment advice and is subject to change. It is provided for informational purposes only and is not intended to be either a specific offer by Bank of America, Merrill or any affiliate to sell or provide, or a specific invitation for a consumer to apply for, any particular retail financial product or service that may be available.

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Investing involves risk, including the possible loss of principal. Past performance is no guarantee of future results.

All recommendations must be considered in the context of an individual investor's goals, time horizon, liquidity needs and risk tolerance. Not all recommendations will be in the best interest of all investors. Asset allocation, diversification and rebalancing do not ensure a profit or protect against loss in declining markets.