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What Does Consistent Participation in 401(k) Plans Generate? Changes in 401(k) Plan Account Balances and Asset Allocations, 2016–2022

By Sarah Holden, ICI; Steven Bass, ICI; and Craig Copeland, EBRI

This paper provides an update of a longitudinal analysis of 401(k) plan participants drawn from the EBRI/ICI 401(k) database. The Employee Benefit Research Institute (EBRI)[1] and the Investment Company Institute (ICI)[2] also produce an annual cross-sectional analysis, which covers 401(k) plan participants with a wide range of participation experience.[3] But that snapshot cannot determine how 401(k) participants' asset allocations change over the years. For example, because of changing samples of providers, plans, and participants, changes in asset allocation for the entire database are not a reliable measure of how individual participants have acted. A consistent sample is necessary to accurately gauge changes, such as in exposure to equities or target date fund use, for individual 401(k) plan participants over time. This paper will examine the accounts of consistent participants, that is, those who maintained accounts in each year from 2016 through 2022.

Key Findings:

This paper provides an update of a longitudinal analysis of 401(k) plan participants drawn from the EBRI/ICI 401(k) database.

Because the annual cross sections cover participants with a wide range of participation experience in 401(k) plans, meaningful analysis of the potential for 401(k) participants to accumulate retirement assets must examine the 401(k) plan accounts of participants who maintained accounts over all of the years being studied (consistent participants). For example, because of changing samples of providers, plans, and participants, changes in account balances for the entire database are not a reliable measure of how individual participants have fared. A consistent sample is necessary to accurately gauge changes, such as growth in account balances or changes in asset allocations, experienced by individual 401(k) plan participants over time.

A few key insights emerge from looking at the 2.1 million consistent participants in the EBRI/ICI 401(k) database over the six-year period from year-end 2016 to year-end 2022.

- **The average 401(k) plan account balance for consistent participants rose each year from year-end 2016 through year-end 2021 before falling in 2022 alongside stock and bond market declines.** Overall, the average account balance increased at a compound annual average growth rate of 13.8 percent from 2016 to 2022, rising from $70,664 to $153,680 at year-end 2022. The median 401(k) plan account balance for consistent participants followed a similar pattern and increased at a compound annual average growth rate of 20.8 percent over the period, to $68,080 at year-end 2022.

- **Younger 401(k) participants or those with smaller year-end 2016 balances experienced higher percent growth in account balances compared with older participants or those with larger year-end 2016 balances.** Three primary factors affect account balances: contributions, investment returns, and withdrawal and loan activity. The percent change in average 401(k) plan account balance of participants in their twenties was heavily influenced by the relative size of their contributions to their account balances and increased at a compound average growth rate of 48.6 percent per year between year-end 2016 and year-end 2022.

- **401(k) participants tend to concentrate their accounts in equity securities.** The asset allocation of the 2.1 million 401(k) plan participants in the consistent group was broadly similar to the asset allocation seen in the annual EBRI/ICI 401(k) database updates. On average, at year-end 2022, about 70 percent of consistent 401(k) participants' assets were invested in equities—through equity funds, the equity portion of target date funds, the equity portion of non–target date balanced funds, or company stock. Younger 401(k) participants tend to have higher concentrations in equities than older 401(k) participants.

- **Consistent 401(k) participants' exposure to equities was relatively unchanged between year-end 2016 and year-end 2022.** At year-end 2016, 92.8 percent of consistent 401(k) plan participants held some equities (equity funds, target date funds, non–target date balanced funds, or company stock). This was little changed at year-end 2022, with 94.8 percent of consistent 401(k) plan participants holding equities.

- **Consistent 401(k) participants increased their exposure to target date funds between year-end 2016 and year-end 2022.** At year-end 2016, 55.3 percent of consistent 401(k) participants held at least some target date fund investments in their 401(k) accounts, and that share increased to 60.0 percent at year-end 2022. The net movement toward target date fund use over the period occurred among consistent 401(k) participants in all age groups. Participants in their twenties had the highest use of target date funds in both periods but experienced the smallest net change.

- **Most consistent 401(k) participants who were fully invested in target date funds at year-end 2016 remained fully invested in target date funds at year-end 2022.** Among consistent 401(k) plan participants who were fully invested in target date funds at year-end 2016, nearly 90 percent were fully invested in target date funds at year-end 2022. This high level of persistence in target date fund investing was observed across all participant age groups.

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For all of the figures in this report, components may not add to the totals presented because of rounding.

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What Does Consistent Participation in 401(k) Plans Generate? Changes in 401(k) Plan Account Balances and Asset Allocations, 2016–2022

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Introduction

The EBRI/ICI 401(k) database, which is constructed from the administrative records of 401(k) plans, represents a large cross section, or snapshot, of 401(k) plans at the end of each year. It is a cross section of the entire population of 401(k) plan participants, and it represents a wide range of participants—including those who are young and individuals who are new to their jobs, as well as older participants and those who have been with their current employers for many years.[4] Participants in the consistent sample are both older and longer tenured than participants in the overall database by the end of the period of analysis, year-end 2022.

Although annual updates of the EBRI/ICI 401(k) database provide valuable perspectives of 401(k) plan account balances, asset allocation, and loan activity across wide cross sections of participants, cross-sectional analyses are not well suited to examining the impact of consistent participation in 401(k) plans. Cross sections change in composition from year to year because the selection of data providers and sample of plans using a given provider vary and because 401(k) participants join or leave plans.[5] In addition, the analysis covers account balances held in 401(k) plans at participants' current employers. Retirement savings held in plans at previous employers or rolled over into individual retirement accounts (IRAs) are not included in the analysis.[6]

To explore the full impact of ongoing participation in 401(k) plans and to understand how 401(k) plan participants have fared over an extended period, it is important to analyze a consistent group of participants (a longitudinal sample) who have been part of the database for an extended period. This paper provides an analysis of the account balances of 2.1 million consistent participants in the EBRI/ICI 401(k) database over the six-year period from year-end 2016 through year-end 2022.

Sample of Consistent 401(k) Participants, 2016–2022

Among the 401(k) participants with accounts at the end of 2016 in the EBRI/ICI 401(k) database, 2.1 million are in the consistent sample.[7] These consistent participants had accounts at the end of each year from 2016 through 2022; they make up a longitudinal sample, which removes the effect of participants and plans entering and leaving the database.

Initially, this group was demographically similar to the entire EBRI/ICI 401(k) database at year-end 2016.[8] However, by year-end 2022, these participants had grown older, accrued longer job tenures, and accumulated larger account balances compared with participants in the year-end 2022 cross section. At year-end 2016, the median participant in the consistent sample was 45 years old, the same as in the entire database. By year-end 2022, the median participant in the consistent sample had aged six years (the length of time for the longitudinal analysis), while the median participant for the entire database was 44 years old (Figure A1). Similarly, while the median tenure in the entire database was seven years at year-end 2016 and six years at year-end 2022, the median tenure for the consistent panel rose from seven years to 13 years over the same period (Figure A2).[9]

401(k) Plan Participants Can Accumulate Sizable Account Balances

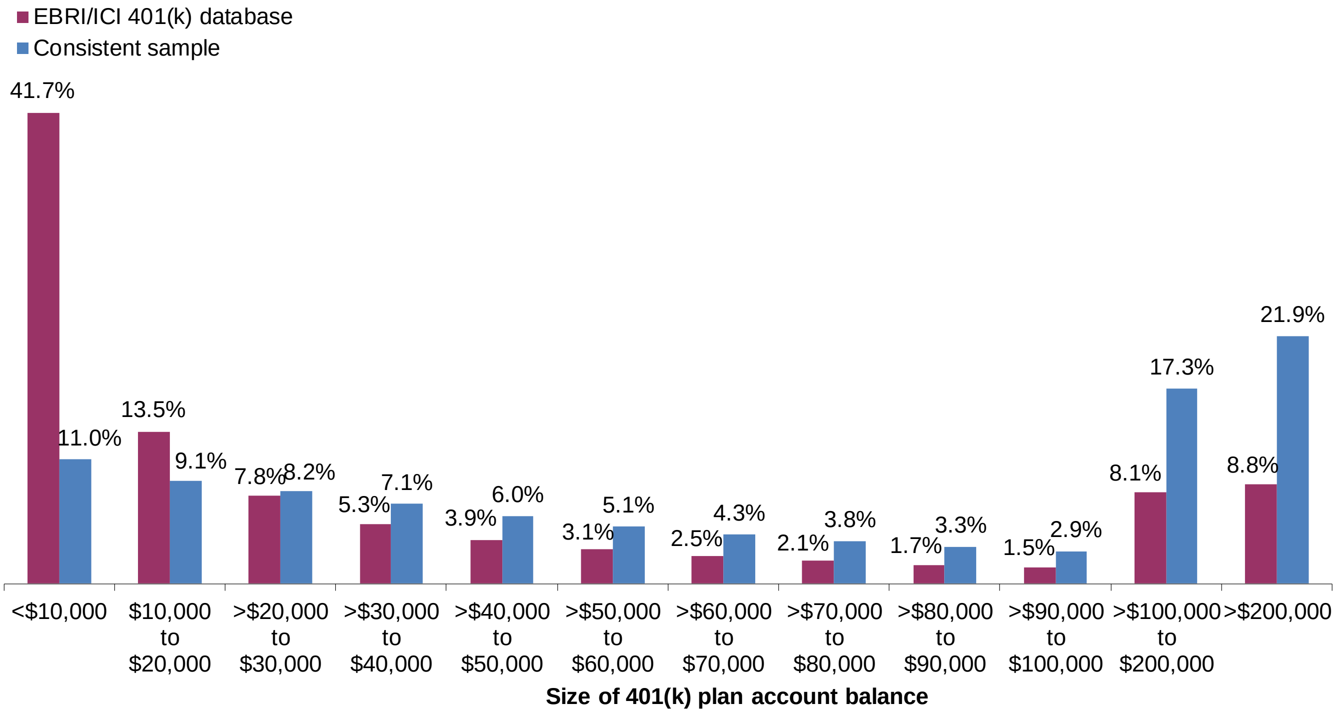
Trends in the consistent group's account balances highlight the accumulation effect of ongoing 401(k) participation. At year-end 2022, 21.9 percent of the consistent group had more than $200,000 in their 401(k) plan accounts at their current employers, while another 17.3 percent had between $100,000 and $200,000 (Figure 1). In contrast, in the broader EBRI/ICI 401(k) database, 8.8 percent had accounts with more than $200,000, and 8.1 percent had between $100,000 and $200,000.

Reflecting their higher average age and tenure, the consistent group also had average and median account balances that were much higher than the average and median account balances of the broader EBRI/ICI 401(k) database (Figure 2). At year-end 2022, the average 401(k) plan account balance of the consistent group was $153,680, more than twice the average account balance of $70,320 among participants in the entire EBRI/ICI 401(k) database. The median 401(k) plan account balance among the consistent participants was $68,080 at year-end 2022, more than four times the median account balance of $15,331 for participants in the entire EBRI/ICI 401(k) database.

Figure 1

Distribution of 401(k) Account Balances by Size of Account Balance

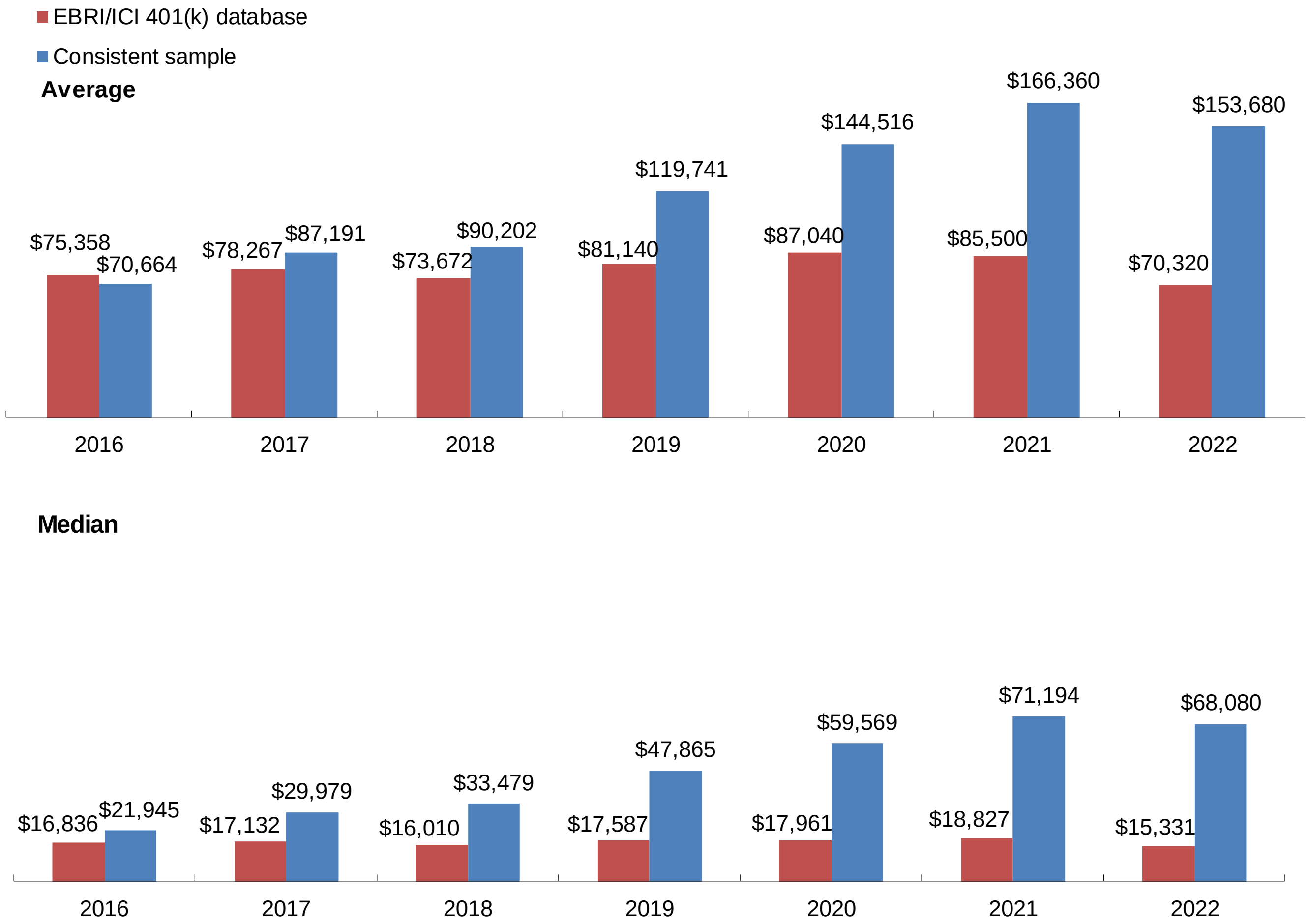
Percentage of participants with account balances in specified ranges, year-end 2022



Note: The consistent sample is 2.1 million 401(k) plan participants with account balances at the end of each year from 2016 through 2022. The year-end 2022 EBRI/ICI 401(k) database represents 12.3 million 401(k) plan participants. Account balances are participant account balances held in 401(k) plans at the participants' current employers and are net of plan loans. Retirement savings held in plans at previous employers or rolled over into IRAs are not included.

Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project

Figure 2
Consistent 401(k) Participants Accumulate Significant Account Balances



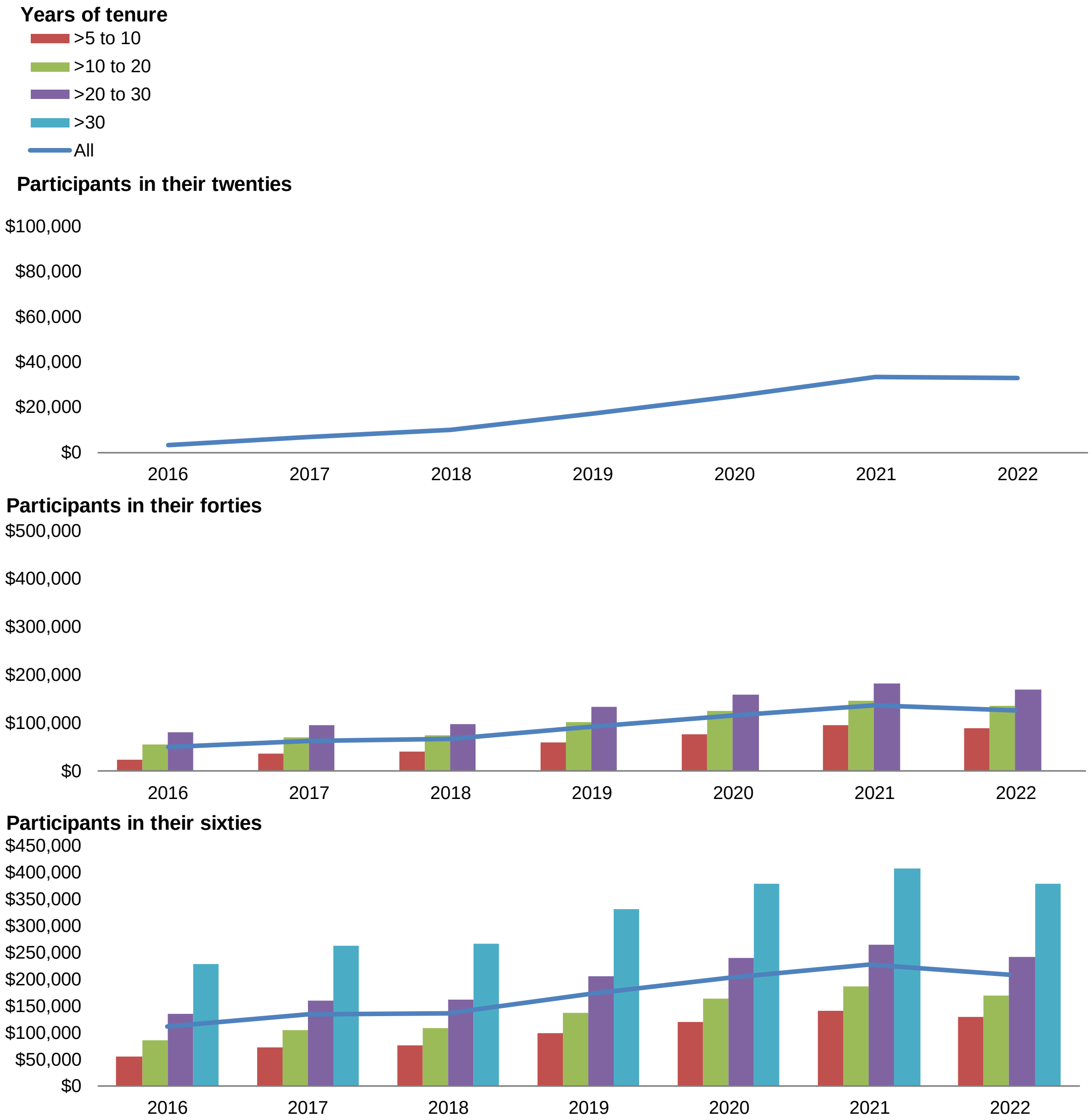
Note: Account balances are participant account balances held in 401(k) plans at the participants' current employers and are net of plan loans. Retirement savings held in plans at previous employers or rolled over into IRAs are not included. See Figure A3 for additional detail.

Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project

401(k) plan account balances tend to increase with both age and tenure among the consistent group of participants, as they do in the cross-sectional EBRI/ICI 401(k) database. Younger participants or those with shorter job tenures at their current employers tended to have smaller account balances, while those who were older or had longer job tenures tended to have higher account balances.[10] For example, within the consistent group, among 401(k) participants with more than 5 to 10 years of tenure at year-end 2022, older participants tended to have higher balances than younger participants: those in their forties with more than 5 to 10 years of tenure had an average account balance of $89,597, compared with an average of $128,867 for participants in their sixties with more than 5 to 10 years of tenure (Figures 3 and A3). Among consistent participants in their sixties at year-end 2022, those with more than 5 to 10 years of tenure had a lower average 401(k) plan balance ($128,867) than those with more than 30 years of tenure ($377,462).

Figure 3
Account Balances Tend to Increase with Age and Tenure

Average 401(k) plan account balance for consistent 401(k)
participants by selected age and tenure, year-end



Note: Age and tenure groups are based on participant age and tenure at year-end 2022. The *all* category includes participants with missing tenure information. Account balances are participant account balances held in 401(k) plans at the participants' current employers and are net of plan loans. Retirement savings held in plans at previous employers or rolled over into IRAs are not included. See Figure A3 for additional detail.

Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project

Changes in Consistent 401(k) Participants' Account Balances

Factors Influencing Changes in Consistent Participants' Account Balances

In any given year, the change in a participant's account balance is a combination of three factors:

- new contributions by the participant (+), the employer (+), or both;
- total investment return on account balances (±), which depends on the performance of financial markets and on the allocation of assets in an individual's account; and
- withdrawals (-), borrowing (-), and loan repayments (+).

The change in any individual participant's 401(k) plan account balance is influenced by the magnitudes of these three factors relative to the starting account balance. For example, a contribution of a given dollar amount produces a larger growth rate when added to a smaller account than it would if added to a larger one. On the other hand, investment returns of a given percentage produce larger dollar increases (or decreases) when compounded on a larger asset base. In other words, growth rates are a function of the relative size of the dollar adjustment to the size of the individual account.

Changes in Consistent 401(k) Participants' Account Balances Between 2016 and 2022

Altogether, from year-end 2016 through year-end 2022, the average 401(k) plan account balance among the group of consistent participants more than doubled (increasing by 118 percent; Figure 4), rising from $70,664 at year-end 2016 to $153,680 at year-end 2022 (Figures 2 and A3). This translates into a compound annual average growth rate of 13.8 percent over the six-year period (Figure 4). The median account balance among this consistent group also grew, more than tripling from $21,945 in 2016 to $68,080 in 2022 (a compound annual average growth rate of 20.8 percent) (Figure 2).

Among the consistent group, individual 401(k) participants experienced a wide range of outcomes, often influenced by the relationship among contributions, investment returns, and withdrawal or loan activity. Participants who were younger or had fewer years of tenure experienced the largest percent increases in average account balance between year-end 2016 and year-end 2022. For example, the average account balance of 401(k) participants in their thirties rose 299.3 percent (a 26.0 percent compound annual average growth rate) between the end of 2016 and the end of 2022 (Figure 4). Because younger participants' account balances tended to be smaller (Figures 3 and A3), their contributions produced significant percentage growth in their account balances.

In contrast, the average account balance of older participants, or those with longer tenures—both of whom tended to have larger balances at the beginning of the study period than younger workers or those with shorter tenures—showed more modest percentage growth in account size (Figure 4). For example, the average account balance of 401(k) participants in their sixties increased 87.2 percent (an 11.0 percent compound annual average growth rate) between year-end 2016 and year-end 2020). Investment returns, rather than annual contributions,[11] generally account for most of the change in accounts with larger balances.

Figure 4

Changes in 401(k) Plan Account Balances Among Consistent 401(k) Participants

Percent change in average 401(k) plan account balance among consistent 401(k) participants by age and tenure

Age group	Tenure (years)	2016–2017	2017–2018	2018–2019	2019–2020	2020–2021	2021–2022	2016–2022	Compound annual average growth rate, 2016–2022
20s	**All**	**124.5%**	**42.1%**	**73.4%**	**45.6%**	**35.1%**	**-1.0%**	**976.5%**	**48.6%**
30s	**All**	**46.2**	**14.3**	**51.0**	**31.7**	**25.6**	**-4.4**	**299.3**	**26.0**
	>5 to 10	71.4	23.2	58.2	37.4	29.6	-3.8	472.4	33.7
	>10 to 20	32.4	8.7	45.2	26.8	21.4	-4.7	206.6	20.5
40s	**All**	**28.3**	**5.2**	**39.1**	**23.9**	**18.4**	**-7.0**	**156.2**	**17.0**
	>5 to 10	49.3	12.6	46.4	30.6	25.0	-6.8	274.3	24.6
	>10 to 20	26.9	4.3	37.5	23.2	17.3	-7.0	144.7	16.1
	>20 to 30	19.1	2.6	36.7	19.8	13.9	-6.4	113.2	13.4
50s	**All**	**22.8**	**2.9**	**33.6**	**20.7**	**14.7**	**-7.5**	**116.3**	**13.7**
	>5 to 10	38.5	8.2	38.7	26.5	21.5	-7.8	194.4	19.7
	>10 to 20	24.7	3.1	33.1	21.3	16.0	-8.0	121.7	14.2
	>20 to 30	19.1	1.7	33.0	19.1	12.1	-7.2	99.5	12.2
	>30	15.7	1.5	31.8	17.4	10.1	-5.5	89.0	11.2
60s	**All**	**20.1**	**2.1**	**27.1**	**17.5**	**11.7**	**-8.5**	**87.2**	**11.0**
	>5 to 10	30.9	5.6	31.8	21.9	17.7	-8.7	138.7	15.6
	>10 to 20	22.6	2.7	27.9	18.8	13.9	-9.0	98.3	12.1
	>20 to 30	18.2	1.3	26.8	16.7	10.3	-8.8	78.3	10.1
	>30	15.2	1.1	24.6	14.8	7.5	-7.3	66.0	8.8
All	**All**	**23.4**	**3.5**	**32.7**	**20.7**	**15.1**	**-7.6**	**117.5**	**13.8**

Note: Age and tenure groups are based on participant age and tenure at year-end 2022. The *all* category includes participants with missing tenure information. Account balances are participant account balances held in 401(k) plans at the participants' current employers and are net of plan loans. Retirement savings held in plans at previous employers or rolled over into IRAs are not included.

Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project

Investment returns, which vary with 401(k) plan account asset allocation, also influence the changes in participants' accounts. Although asset allocation varied with age, and many participants held a range of investments, stock market performance tends to have an impact on these balances because, in large part, 401(k) plan participants' balances tended to be weighted toward equities. Altogether, at year-end 2022, equities—equity funds, the equity portion of target date funds, the equity portion of non–target date balanced funds,[12] and company stock—represented about 70 percent of consistent 401(k) plan participants' assets (Figures 5 and A4).[13]

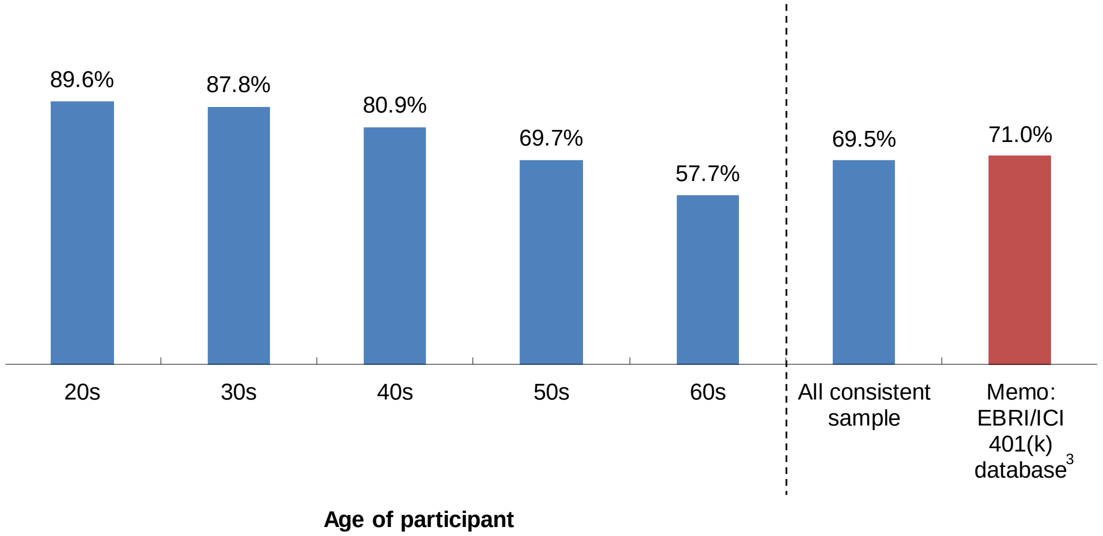
The asset allocation of participants in the consistent sample varied with participant age, a pattern that also is observed in the cross-sectional EBRI/ICI 401(k) database.[14] Younger participants generally tended to be more invested in equity funds and target date funds, while older participants were more likely to invest in fixed-income securities such as bond funds, money funds, or guaranteed investment contracts (GICs) and other stable value funds.

Finally, loan or withdrawal activities can have an impact on 401(k) plan account balances. Although in general, very few active 401(k) plan participants take withdrawals,[15] participants in their sixties tend to have a higher propensity to make withdrawals as they approach retirement.[16]

Figure 5

Younger Participants Tend to Have Larger Shares Allocated to Equities

Percentage of 401(k) plan account balances allocated to equities[1] by age,[2] 2022



[1]Equities include equity funds, company stock, the equity portion of target date funds, and the equity portion of non–target date balanced funds. A target date fund typically rebalances its portfolio to become less focused on growth and more focused on income as it approaches and passes the target date of the fund, which is usually included in the fund's name.

[2]Asset allocation by age group is among the consistent sample of 2.1 million 401(k) plan participants with account balances at the end of each year from 2016 through 2022. Age group is based on the participant's age at year-end 2022.

[3]The year-end 2022 EBRI/ICI 401(k) database represents 12.3 million 401(k) plan participants.

Note: Funds include mutual funds, bank collective trusts, life insurance separate accounts, and any pooled investment product primarily invested in the security indicated. Percentages are dollar-weighted averages. See Figure A4 for additional detail.

Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project

Background on Factors Influencing 401(k) Plan Account Balances

Aggregate data on 401(k) plans provide insight into the possible influence of each of the factors that cause changes in account balances: contributions, investment returns, and withdrawal or loan activity. Between year-end 2016 and year-end 2021 (the latest data available), contributions to 401(k) plans have averaged $498 billion a year, and benefits paid (including rollovers) have averaged $542 billion (Figure A5). Investment returns—interest, dividends, and realized and unrealized asset appreciation/depreciation—vary significantly from year to year. For example, they provided a significant boost as the stock market rose sharply in 2017, 2019, 2020, and 2021 but had a negative effect on assets in 2018 and 2022 when the stock market was down. From year-end 2016 through year-end 2021, investment returns averaged $711 billion per year.

Contributions—which positively affect 401(k) plan account balances—include both employer and employee contributions, and most 401(k) participants are in plans where the employer contributes.[17] In 2021, nine in 10 participants were in 401(k) plans where the employer made contributions (Figure A6). This figure was relatively unchanged during the longitudinal study. Regarding individual participants' contribution activity, defined contribution (DC) plan participants tend to continue contributing to their plans in any given year.[18] The pattern of 401(k) plan account balance growth rates from year to year also reflects the stock market performance. Between year-end 2016 and year-end 2021, the US stock market generally rose (Figure A7), which tends to provide a boost to 401(k) plan accounts holding equities. On average, about 70 percent of the consistent sample of 401(k) participants' account balances were invested in equities (Figures 5 and A4).

Withdrawals and borrowing reduce 401(k) plan account balances in the EBRI/ICI 401(k) database, while loan repayment has a positive impact. Withdrawal activity among active DC plan participants is relatively rare. Typically, fewer than 5 percent of active DC plan participants take any withdrawal in a given year, with fewer than 2 percent taking hardship withdrawals.[19] Data from the EBRI/ICI 401(k) database indicate that 15 percent of 401(k) plan participants in plans offering loans had loans outstanding at year-end 2022, with the youngest and oldest—those in their twenties (6 percent and sixties (12 percent)—less likely to have loans outstanding than those in their thirties, forties, or fifties.[20] In the database, a participant's account balance is reduced in the year that the loan is originated, but repayment of the loan in the ensuing years contributes to account growth.

Over this period, the consistent participants' aggregate allocation to equities increased modestly, from 65.2 percent of 401(k) plan assets at year-end 2016 to 69.5 percent at year-end 2022 (Figure A4). Over the same time period, their allocation to target date funds also increased, from 30.4 percent of aggregate 401(k) plan assets to 35.2 percent.

Changes in Consistent 401(k) Participants' Asset Allocations

Factors Influencing Changes in Consistent 401(k) Participants' Asset Allocations

Changes in 401(k) plan asset allocation are determined by three factors:

- gains or losses on the investments held in the 401(k) plan account,
- contributions to or withdrawals from the account in a different proportion than the existing mix of assets, and
- changes to the assets held inside of the account (including rebalancing and changes in the underlying asset allocation of funds, such as target date funds).

Between year-end 2016 and year-end 2022, stock markets generally appreciated more than bond markets (Figure A7). All else equal, this would have tended to increase the proportion of 401(k) plan assets invested in equities. However, allocation to equities only increased modestly over the period (65.2 percent at year-end 2016 and 69.5 percent at year-end 2022) (Figure A4). While it is not possible to directly observe the impact of each of these factors inside the EBRI/ICI 401(k) database, it is possible to observe whether participants entered or exited an asset class entirely over the period analyzed.

To gain insight into participant behavior, changes in allocation to equities overall—and to target date funds, in particular—are examined. For the most part, there were relatively small changes in consistent 401(k) plan participants' exposure to equities between year-end 2016 and year-end 2022.

Changes in Consistent 401(k) Participants' Allocations to Equities

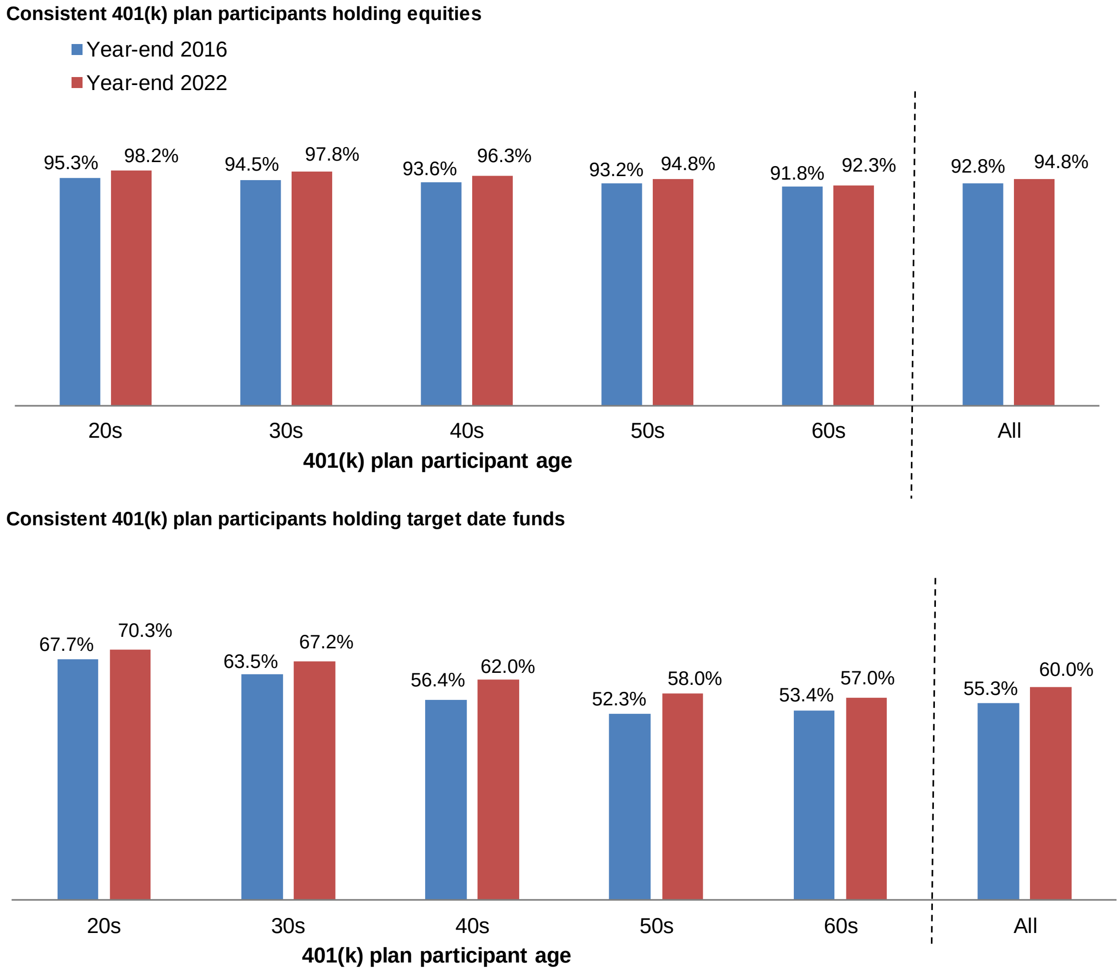
At both year-end 2016 and year-end 2022, more than 90 percent of consistent 401(k) plan participants had at least some exposure to equities, whether through equity funds, the equity portion of target date funds, the equity portion of non–target date balanced funds, or company stock. The share of consistent 401(k) participants who held at least some equities in their 401(k) accounts increased modestly from year-end 2016 (92.8 percent) to year-end 2022 (94.8 percent) (Figure 6). Increased equity exposure was found among participants of all ages, but those in their sixties showed the smallest increases: 91.8 percent of them held equities at year-end 2016, and that share increased to 92.3 percent at year-end 2023. Slightly larger increases were observed across the remaining age groups.

Evidence of Reallocation Activity to or from Equities Among Consistent 401(k) Participants

Movement in the concentration of equities in 401(k) participants' accounts results from changes in stock values and from reallocation activity by participants. Although information on specific trading activity of 401(k) participants is not available in the EBRI/ICI 401(k) database,[21] it is possible to observe activity away from or to 100 percent or zero equity holdings at year-end. Among consistent 401(k) participants between year-end 2016 and year-end 2022, few moved to, or away from, these extremes of equity holdings.

Figure 6
Consistent 401(k) Participants' Investment in Equities and Target Date Funds

Percentage of consistent 401(k) participants by age, year-end 2016 and year-end 2022



Note: Equities include equity funds, company stock, the equity portion of target date funds, and the equity portion of non–target date balanced funds. A target date fund typically rebalances its portfolio to become less focused on growth and more focused on income as it approaches and passes the target date of the fund, which is usually included in the fund's name. Funds include mutual funds, bank collective trusts, life insurance separate accounts, and any pooled investment product primarily invested in the security indicated. The consistent sample is 2.1 million 401(k) plan participants with account balances at the end of each year from 2016 through 2022. Age group is based on the participant's age at year-end 2022.

Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project

Few consistent 401(k) participants had their entire 401(k) balances invested in equities, and slight net movement to that full concentration occurred between year-end 2016 and year-end 2022. To be 100 percent invested in equities, the 401(k) investor would have allocated their full 401(k) balance to equity funds and/or company stock. Analyzing the group of consistent 401(k) participants at year-end 2022, the data show that 0.7 percent, on net, moved to a 100 percent equities allocation—4.9 percent of this group at year-end 2016 and 5.6 percent at year-end 2022 were 100 percent invested in equities (Figure 7). This net change reflects 1.7 percent moving away from the 100 percent allocation to something less, 2.4 percent moving to a 100 percent allocation, and 3.2 percent sticking with 100 percent allocation to equities in both 2016 and 2022. In other words, 65 percent of consistent 401(k) participants with their 401(k) accounts fully invested in equities at year-end 2016 were fully invested in equities at year-end 2022.

Few consistent 401(k) participants had no part of their 401(k) balances invested in equities, and net movement away from that zero holding occurred between year-end 2016 and year-end 2022. To have zero investment in equities, the 401(k) investor would have allocated none of their 401(k) balance to equity funds, target date funds, non−target date balanced funds, or company stock. Analyzing the group of consistent 401(k) participants at year-end 2022, the data show that 2.0 percent, on net, moved away from a zero equities allocation—7.2 percent of this group had no equities at year-end 2016, and 5.2 percent had no equities at year-end 2022 (Figure 7). This net change reflects 3.5 percent moving from zero equities to at least some, 1.5 percent moving from some to zero, and 3.7 percent sticking with zero holdings in both 2016 and 2022.

Figure 7

Changes in Allocation to Equities Among Consistent 401(k) Participants

Percentage of consistent 401(k) participants by age, year-end 2016 and year-end 2022

	Changes in 100 percent allocation to equities					
Age	**100 percent in 2016**	**Moved away from 100 percent by 2022**	**Remained at 100 percent**	**Moved to 100 percent by 2022**	**Net change**	**100 percent in 2022**
20s	2.7	-0.7	2.0	2.3	1.6	4.3
30s	3.5	-1.2	2.3	3.0	1.8	5.3
40s	4.7	-1.5	3.2	2.5	1.0	5.7
50s	5.8	-2.1	3.7	2.3	0.2	6.0
60s	4.9	-1.8	3.1	1.8	0.0	4.9
All	4.9	-1.7	3.2	2.4	0.7	5.6

	Changes in zero allocation to equities					
Age	**Zero in 2016**	**Moved away from zero by 2022**	**Remained at zero**	**Moved to zero by 2022**	**Net change**	**Zero in 2022**
20s	4.7	-3.3	1.4	0.4	-2.9	1.8
30s	5.5	-3.8	1.7	0.5	-3.3	2.2
40s	6.4	-3.7	2.7	1.0	-2.7	3.7
50s	6.8	-3.2	3.6	1.6	-1.6	5.2
60s	8.2	-3.0	5.2	2.5	-0.5	7.7
All	7.2	-3.5	3.7	1.5	-2.0	5.2

Note: Equities include equity funds, company stock, the equity portion of target date funds, and the equity portion of non–target date balanced funds. Funds include mutual funds, bank collective trusts, life insurance separate accounts, and any pooled investment product primarily invested in the security indicated. The consistent sample is 2.1 million 401(k) plan participants with account balances at the end of each year from 2016 through 2022. Age group is based on the participant's age at year-end 2022.

Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project

Changes in Consistent 401(k) Participants' Allocations to Target Date Funds

Between year-end 2016 and year-end 2022, consistent 401(k) participants' use of target date funds increased, with more participants moving into than out of these funds, on net. At year-end 2016, 55.3 percent of consistent 401(k) participants held at least some target date fund investments in their 401(k) accounts, and that share increased to 60.0 percent at year-end 2022, with the net increase occurring across participants in all age groups (Figure 6). In both years, younger 401(k) participants were more likely to hold some target date fund investments compared with older participants: 70.3 percent of consistent 401(k) participants in their twenties had target date funds in their 401(k) accounts at year-end 2022, compared with 57.0 percent of consistent 401(k) participants in their sixties. Nevertheless, the largest net movement toward target date fund use over the period occurred among consistent 401(k) participants in their forties and fifties.[22]

Evidence of Reallocation Activity to or from Target Date Funds Among Consistent 401(k) Participants

As with equities, movement in the concentration of target date funds in 401(k) participants' accounts results from changes in asset values, in addition to reallocation activity by participants. Although information on specific trading activity of 401(k) participants is not available in the EBRI/ICI 401(k) database,[23] it is possible to observe activity away from or to 100 percent or zero target date fund holdings at year-end. Among consistent 401(k) participants between year-end 2016 and year-end 2022, few moved to, or away from, these extremes of target date fund holdings.

A substantial share of consistent 401(k) participants had their entire 401(k) balances invested in target date funds, and some net movement toward that full concentration occurred between year-end 2016 and year-end 2022. Analyzing the group of consistent 401(k) participants at year-end 2022, the data show that 0.8 percent, on net, moved to a 100 percent target date fund allocation—35.5 percent of this group at year-end 2016 and 36.3 percent at year-end 2022 only held target date funds (Figure 8). This net change reflects 4.2 percent moving away from the 100 percent allocation to something less, 5.0 percent moving to a 100 percent allocation, and 31.3 percent with 100 percent allocation to target date funds in both 2016 and 2022. In other words, 88 percent of consistent 401(k) participants with their 401(k) accounts fully invested in target date funds at year-end 2016 were fully invested in target date funds at year-end 2022.

Younger age groups in the sample of consistent 401(k) participants, who were much more likely to be fully invested in target date funds in both years, had some net movement away from full allocations to target date funds between year-end 2016 and year-end 2022. Older investors on the other hand had some net movement toward a full allocation to target date funds. For example, 61.5 percent of consistent 401(k) participants in their twenties had 100 percent of their account invested in target date funds at year-end 2016, compared with 58.2 percent at year-end 2022 (Figure 8). Consistent 401(k) participants in their forties were the most likely to move to a 100 percent concentration to target date funds: 36.1 percent of consistent 401(k) participants in their forties had 100 percent of their account invested in target date funds at year-end 2016, compared with 37.6 percent at year-end 2022.

Fewer consistent 401(k) participants had none of their 401(k) balances invested in target date funds at year-end 2022 than at year-end 2016. Analyzing the group of consistent 401(k) participants at year-end 2022, the data show that 4.7 percent, on net, moved away from a zero target date fund allocation—44.7 percent of this group had no investments in target date funds at year-end 2016 and 40.0 percent had no investments in target date funds at year-end 2022 (Figure 8). This net change reflects 8.6 percent moving from zero target date fund ownership to at least some, 3.9 percent moving from some to zero, and 36.1 percent with zero holdings in both 2016 and 2022.

Consistent 401(k) participants in all age groups moved, on net, toward target date fund ownership between year-end 2016 and year-end 2022, with participants in their forties and fifties having the largest net movement. For example, 47.7 percent of consistent 401(k) participants in their fifties had held no target date funds at year-end 2016, compared with 42.0 percent at year-end 2022 (Figure 8). Among participants in their twenties, 32.3 percent held no target date funds at year-end 2016, compared with 29.7 percent at year-end 2022.

Figure 8
Changes in Allocation to Target Date Funds Among Consistent 401(k) Participants
Percentage of consistent 401(k) participants by age, year-end 2016 and year-end 2022

Changes in 100 percent allocation to target date funds

Age	100 percent in 2016	Moved away from 100 percent by 2022	Remained at 100 percent	Moved to 100 percent by 2022	Net change	100 percent in 2022
20s	61.5	-6.5	55.0	3.2	-3.3	58.2
30s	51.2	-6.1	45.1	5.3	-0.8	50.4
40s	36.1	-4.2	31.9	5.7	1.5	37.6
50s	30.0	-3.6	26.4	4.9	1.3	31.3
60s	30.6	-3.7	26.9	4.2	0.5	31.1
All	35.5	-4.2	31.3	5.0	0.8	36.3

Changes in zero allocation to target date funds

Age	Zero in 2016	Moved away from zero by 2022	Remained at zero	Moved to zero by 2022	Net change	Zero in 2022
20s	32.3	-5.8	26.5	3.2	-2.6	29.7
30s	36.5	-7.6	28.9	3.9	-3.7	32.8
40s	43.6	-9.1	34.5	3.5	-5.6	38.0
50s	47.7	-9.3	38.4	3.6	-5.7	42.0
60s	46.6	-7.9	38.7	4.3	-3.6	43.0
All	44.7	-8.6	36.1	3.9	-4.7	40.0

Note: A target date fund typically rebalances its portfolio to become less focused on growth and more focused on income as it approaches and passes the target date of the fund, which is usually included in the fund's name. Funds include mutual funds, bank collective trusts, life insurance separate accounts, and any pooled investment product primarily invested in the security indicated. The consistent sample is 2.1 million 401(k) plan participants with account balances at the end of each year from 2016 through 2022. Age group is based on the participant's age at year-end 2022.

Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project

About the EBRI/ICI 401(k) Database

The EBRI/ICI project is unique because of its inclusion of data provided by a wide variety of plan recordkeepers, permitting the analysis of the activity of participants in 401(k) plans of varying sizes—from very large corporations to small businesses—with a variety of investment options.

Sources and Types of Data

Several EBRI and ICI members provided records on active participants in 401(k) plans for which they kept records for year-end 2016 through year-end 2022.[24] These plan recordkeepers include mutual fund companies, banks, insurance companies, and consulting firms. Although the EBRI/ICI 401(k) project has collected data from 1996 through 2022, the universe of data providers varies from year to year. In addition, the plans using a particular provider can change over time. Records were encrypted to conceal the identity of employers and employees, but were coded so that both could be tracked over multiple years.[25] For each participant, data include date of birth, from which an age group is assigned; date of hire, from which a tenure range is assigned; outstanding loan balance; funds in the participant's investment portfolios; and asset values attributed to those funds. An account balance for each participant is the sum of the participant's assets in all funds.[26] Plan balances are constructed as the sum of all participant balances in the plan.

Investment Options

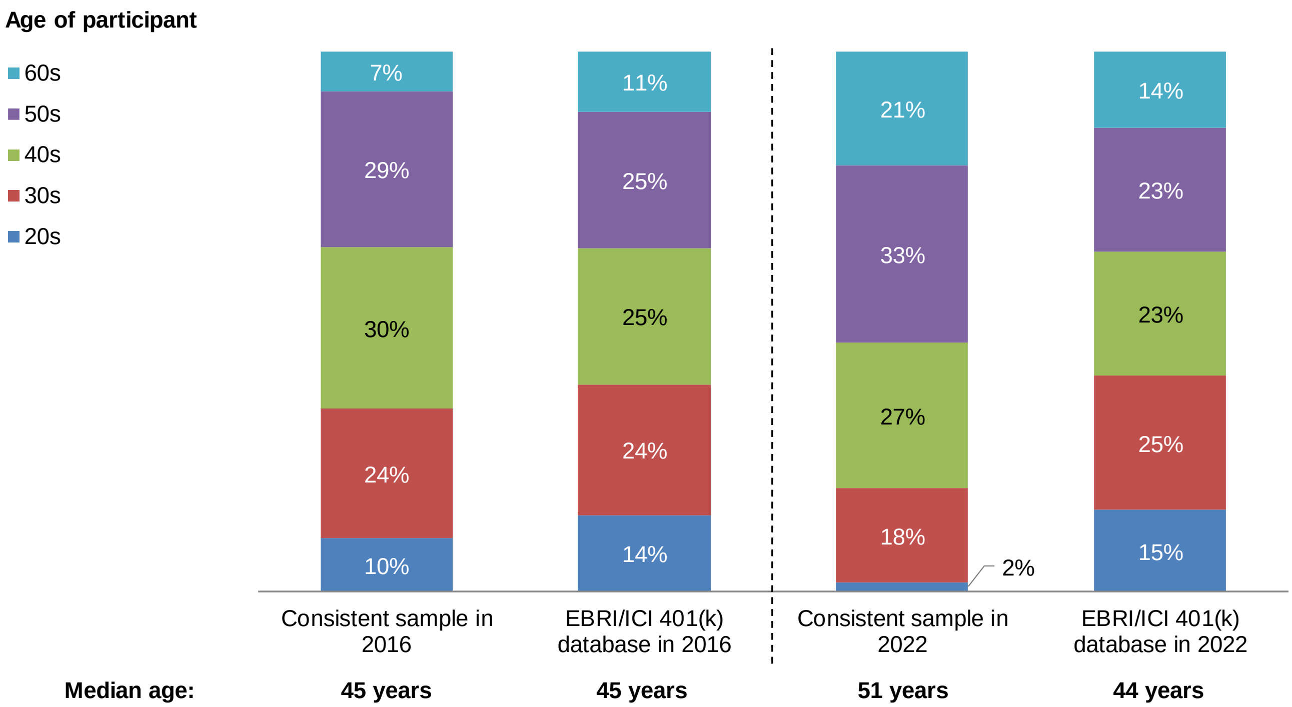
In the EBRI/ICI 401(k) database, investment options are grouped into eight broad categories.[27]

- Equity funds consist of pooled investments primarily invested in stocks, including equity mutual funds, bank collective trusts, life insurance separate accounts, and other pooled investments.
- Similarly, bond funds are any pooled account primarily invested in bonds.

- Balanced funds are pooled accounts invested in both stocks and bonds. They are classified into two subcategories: target date funds and non–target date balanced funds.
    - A target date fund typically rebalances its portfolio to become less focused on growth and more focused on income as it approaches and passes the target date of the fund, which is usually included in the fund's name.
    - Non-target date balanced funds include asset allocation or hybrid funds, in addition to lifestyle funds.[28]
- Company stock is equity in the 401(k) plan's sponsor (the employer).
- Money funds consist of those funds designed to maintain a stable share price.
- Stable value products, such as GICs[29] and other stable value funds,[30] are reported as one category.
- The other category is the residual for other investments, such as real estate funds.
- The final category, unknown, consists of funds that could not be identified.[31]

Appendix

Figure A1
Consistent Sample Was Older Than Participants in the EBRI/ICI 401(k) Database at Year-End 2022
Percentage of participants by age, year-end

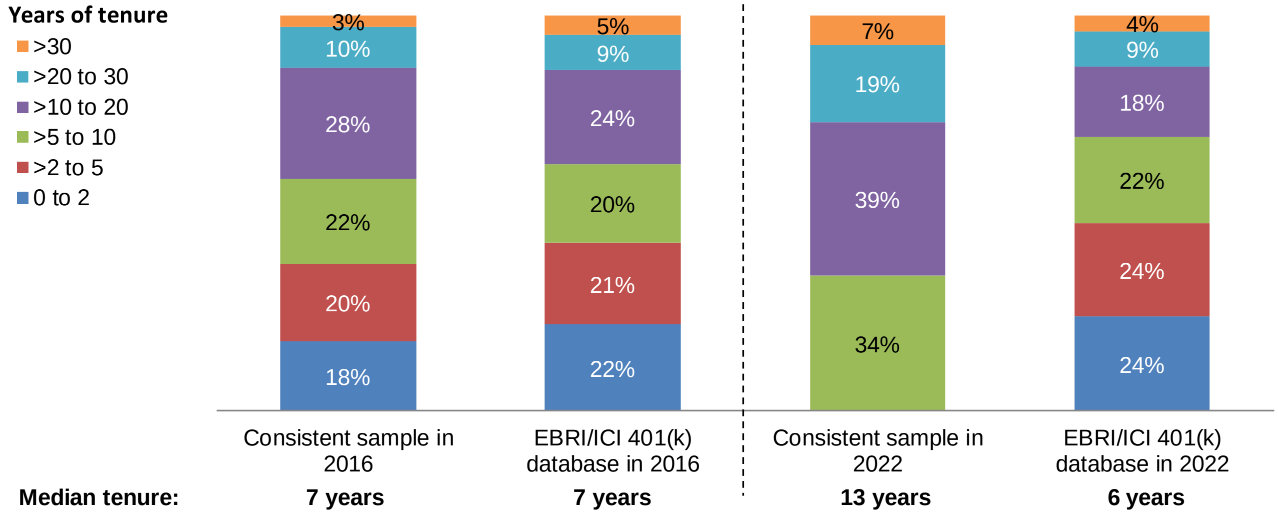


Note: The consistent sample is 2.1 million 401(k) plan participants with account balances at the end of each year from 2016 through 2022. Participant age is age as of the year-end indicated.
Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project

Figure A2

Consistent Sample Had Longer Tenure Than Participants in the EBRI/ICI 401(k) Database at Year-End 2022

Percentage of participants by years of tenure, year-end



Note: The consistent sample is 2.1 million 401(k) plan participants with account balances at the end of each year from 2016 through 2022. Participant tenure is tenure as of the year-end indicated.

Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project

Figure A3

401(k) Plan Account Balances Among Consistent 401(k) Participants

Average 401(k) plan account balance for consistent 401(k) participants by age and tenure, year-end

Age group	Tenure (years)	2016	2017	2018	2019	2020	2021	2022
20s	**All**	**$3,067**	**$6,885**	**$9,784**	**$16,967**	**$24,698**	**$33,356**	**$33,017**
30s	**All**	**17,138**	**25,048**	**28,638**	**43,248**	**56,967**	**71,566**	**68,439**
	>5 to 10	10,257	17,582	21,659	34,268	47,096	61,023	58,712
	>10 to 20	26,726	35,397	38,486	55,900	70,868	86,008	81,954
40s	**All**	**49,340**	**63,318**	**66,626**	**92,679**	**114,804**	**135,893**	**126,388**
	>5 to 10	23,939	35,748	40,242	58,903	76,939	96,169	89,597
	>10 to 20	55,333	70,220	73,272	100,769	124,120	145,639	135,407
	>20 to 30	79,510	94,712	97,173	132,813	159,116	181,158	169,514
50s	**All**	**87,023**	**106,863**	**109,943**	**146,928**	**177,286**	**203,412**	**188,192**
	>5 to 10	39,528	54,730	59,198	82,098	103,829	126,202	116,379
	>10 to 20	75,297	93,909	96,867	128,959	156,459	181,505	166,967
	>20 to 30	123,887	147,561	150,095	199,586	237,689	266,490	247,205
	>30	163,493	189,178	191,991	253,092	297,115	326,977	309,043
60s	**All**	**110,556**	**132,786**	**135,620**	**172,436**	**202,572**	**226,323**	**207,002**
	>5 to 10	53,993	70,699	74,626	98,382	119,922	141,112	128,867
	>10 to 20	85,030	104,211	107,068	136,967	162,651	185,187	168,610
	>20 to 30	135,248	159,815	161,952	205,292	239,629	264,427	241,105
	>30	227,419	262,006	264,864	329,948	378,807	407,254	377,462
All	**All**	**70,664**	**87,191**	**90,202**	**119,741**	**144,516**	**166,360**	**153,680**

Note: Age and tenure groups are based on participant age and tenure at year-end 2022. The *all* category includes participants with missing tenure information. Account balances are participant account balances held in 401(k) plans at the participants' current employers and are net of plan loans. Retirement savings held in plans at previous employers or rolled over into IRAs are not included.

Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project

Figure A4

Average Asset Allocation of 401(k) Plan Accounts by Participant Age

Percentage of 401(k) plan account balances

Year-end 2016

Age group	Equity funds	Balanced funds: Target date funds[1, 2]	Balanced funds: Non–target date balanced funds	Bond funds	Money funds	GICs[2, 3] and other stable value funds	Company stock[2]	Other	Unknown	Memo: equities[4]
20s	23.5%	61.2%	2.4%	3.7%	0.3%	2.0%	1.0%	2.8%	3.0%	80.4%
30s	32.1	50.7	2.6	4.5	0.5	2.5	2.0	3.2	1.8	80.5
40s	41.1	36.8	2.9	6.2	0.7	4.0	2.8	3.6	1.8	76.2
50s	44.3	28.6	3.3	7.9	0.9	6.1	3.3	3.8	1.8	68.1
60s	39.2	28.0	3.6	10.3	1.2	9.3	3.0	3.9	1.6	57.3
All consistent sample[5]	40.9	30.4	3.4	8.6	1.0	7.2	3.0	3.9	1.7	65.2
2016 EBRI/ICI 401(k) database[6]	43.5	21.3	6.1	8.2	3.1	5.8	5.9	5.1	0.9	67.4

Year-end 2022

Age group	Equity funds	Balanced funds: Target date funds[1, 2]	Balanced funds: Non–target date balanced funds	Bond funds	Money funds	GICs[2, 3] and other stable value funds	Company stock[2]	Other	Unknown	Memo: equities[4]
20s	29.1	63.2	1.5	2.9	0.3	1.4	0.9	0.7	0.1	89.6
30s	36.3	52.9	1.7	4.0	0.3	2.1	1.9	0.8	0.1	87.8
40s	42.3	41.1	2.2	6.1	0.6	3.9	2.6	1.1	0.2	80.9
50s	43.9	32.8	2.7	8.1	0.9	7.1	3.0	1.3	0.2	69.7
60s	38.2	30.8	3.4	10.4	1.3	11.6	2.7	1.3	0.3	57.7
All consistent sample[5]	41.1	35.2	2.9	8.1	0.9	7.6	2.7	1.2	0.2	69.5
2022 EBRI/ICI 401(k) database[7]	37.9	38.0	3.0	7.4	0.7	8.0	3.6	1.1	0.2	71.0

[1]A target date fund typically rebalances its portfolio to become less focused on growth and more focused on income as it approaches and passes the target date of the fund, which is usually included in the fund's name.

[2]Not all participants are offered this investment option.

[3]GICs are guaranteed investment contracts.

[4]Equities include equity funds, company stock, the equity portion of target date funds, and the equity portion of non–target date balanced funds.

[5]Asset allocation by age group is among the consistent sample of 2.1 million 401(k) plan participants with account balances at the end of each year from 2016 through 2022.

[6]The year-end 2016 EBRI/ICI 401(k) database represents 27.1 million 401(k) plan participants.

[7]The year-end 2022 EBRI/ICI 401(k) database represents 12.3 million 401(k) plan participants.

Note: Funds include mutual funds, bank collective trusts, life insurance separate accounts, and any pooled investment product primarily invested in the security indicated. Age group is based on the participant's age at year-end 2022. Percentages are dollar-weighted averages.

Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project

Figure A5

401(k) Plan Contributions, Investment Returns, Benefits Disbursed, and Assets

Annual flows reported on Form 5500 and year-end assets, billions of dollars, 2000–2023

	Total contributions[1]	Total benefits disbursed[2]	Interest, dividends, gains, and other items[3]	Assets at year-end[4]
2000	$169	$172	-$79	$1,738
2001	174	147	-119	1,701
2002	182	147	-203	1,565
2003	186	141	300	1,932
2004	204	167	204	2,193
2005	223	189	146	2,393
2006	251	228	303	2,773
2007	273	261	215	2,975
2008	285	233	-770	2,203
2009	256	206	431	2,718
2010	265	243	337	3,119
2011	283	250	-1	3,112
2012	303	282	357	3,495
2013	325	326	645	4,148
2014	349	366	278	4,406
2015	378	386	-1	4,377
2016	399	391	335	4,741
2017	429	425	763	5,486
2018	464	474	-251	5,207
2019	499	519	1,074	6,256
2020	517	615	900	7,033
2021	582	680	1,068	7,899
2022	N/A	N/A	N/A	6,435
2023	N/A	N/A	N/A	7,410

[1]Total contributions include both employer and employee contributions.

[2]Total benefits disbursed include both benefits paid directly from trust funds and premium payments made by plans to insurance carriers. Amounts exclude benefits paid directly by insurance carriers.

[3]This category includes interest, dividends, rent, net gains or losses on sale of assets, unrealized appreciation or depreciation of assets, and other income and expenses. The bulk of this category is net investment gains or losses.

[4]Estimates through 2021 are based on the Department of Labor Form 5500 Research File.

Note: Data exclude plans covering only one participant.

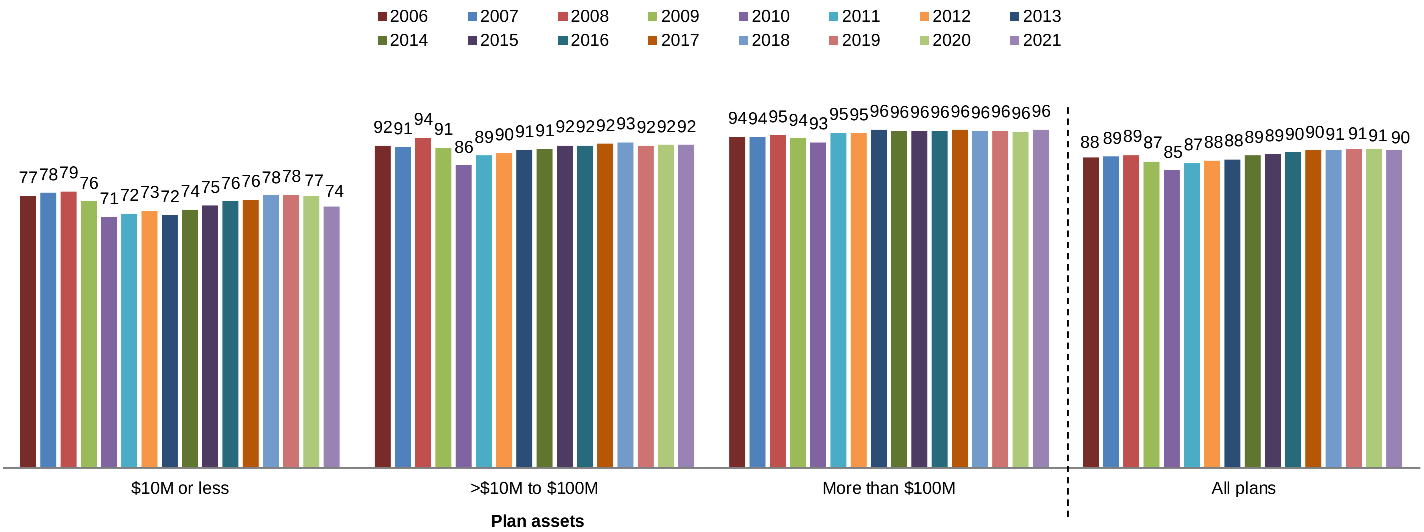
N/A = not available

Sources: Investment Company Institute and Department of Labor

Figure A6

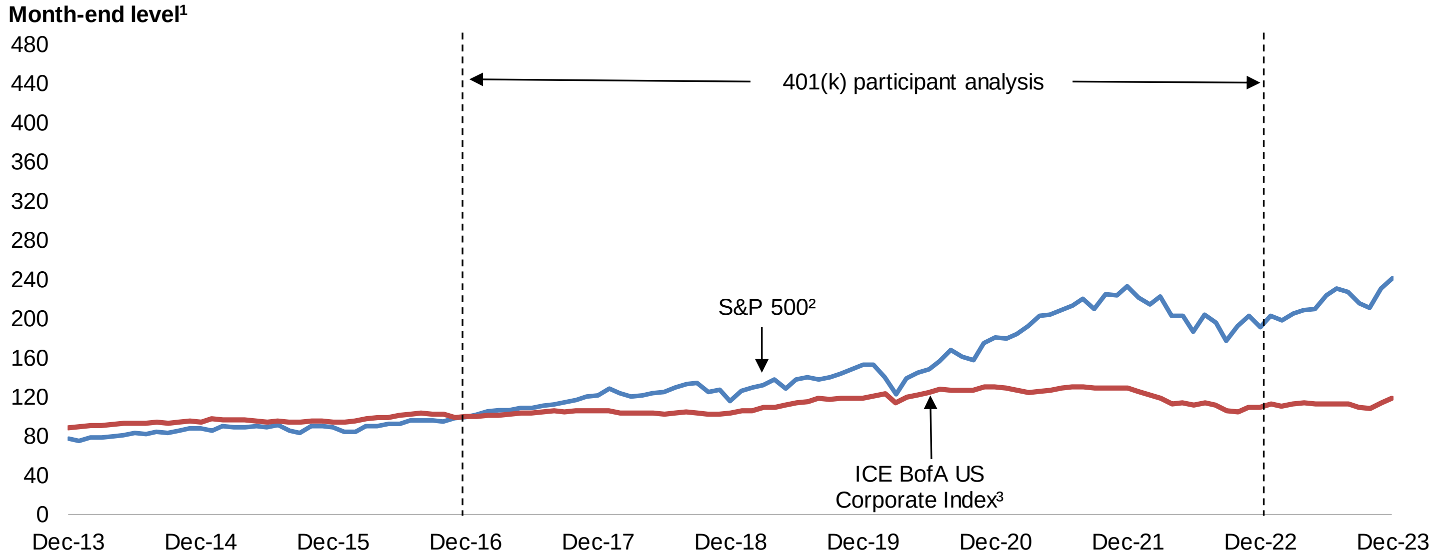
Most 401(k) Plan Participants Are in Plans with Employer Contributions

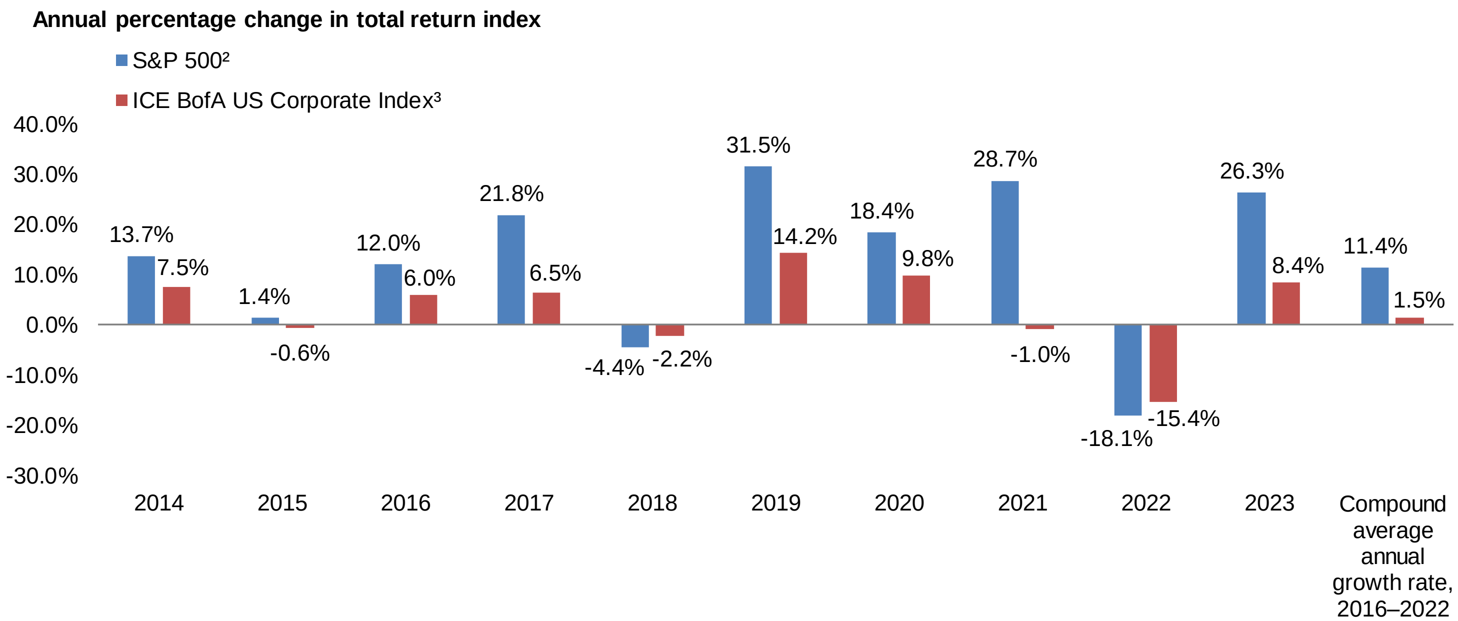
Percentage of active 401(k) participants in plans with employer contributions by plan assets, plan year



Source: ICI tabulations of US Department of Labor Form 5500 Research File

Figure A7
Domestic Stock and Bond Market Total Return Indexes





[1]Indexes are set to 100 in December 2016.

[2]The S&P 500 index measures the performance of 500 stocks chosen for market size, liquidity, and industry group representation.

[3]The ICE BofA US Corporate Index tracks the performance of investment grade corporate debt that is publicly issued in the US domestic market and denominated in US dollars.

Sources: LSEG Data & Analytics, Federal Reserve Bank of St. Louis, Standard & Poor's, and ICE Data Indices

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Endnotes

[1] The Employee Benefit Research Institute (EBRI) is a nonprofit, nonpartisan, public policy research organization that does not lobby or take positions on legislative proposals.

[2] The Investment Company Institute (ICI) is the leading association representing the asset management industry in service of individual investors. ICI's members include mutual funds, exchange-traded funds (ETFs), closed-end funds, and unit investment trusts (UITs) in the United States, and UCITS and similar funds offered to investors in other jurisdictions. ICI also represents its members in their capacity as investment advisers to certain collective investment trusts (CITs) and retail separately managed accounts (SMAs). ICI has offices in Washington DC, Brussels, and London and carries out its international work through ICI Global.

[3] See Holden, Bass, and Copeland 2024.

[4] For example, at year-end 2022, 15 percent of 401(k) participants in the EBRI/ICI 401(k) database were in their twenties, while 14 percent were in their sixties (Figure A1); 24 percent of participants had two or fewer years of tenure at their current jobs, while 4 percent had more than 30 years of tenure (Figure A2).

[5] Because of these changes in the cross sections, comparing average account balances across different year-end cross-sectional snapshots can lead to false conclusions. For example, newly formed plans would tend to pull down the average account balance, but would tell us nothing about consistently participating workers. Similarly, the aggregate average account balance would tend to be pulled down if a large number of participants retire and roll over their account balances to other tax-qualified accounts.

[6] Account balances are net of unpaid loan balances.

[7] This number is lower than it would have been if it merely reflected employee turnover and retirement. For example, if 401(k) plan sponsors change their service providers, all participants in those plans would be excluded from the consistent sample.

[8] For the report on the year-end 2016 EBRI/ICI 401(k) database, see Holden et al. 2018.

[9] Tenure refers to years at the current employer and is generally derived from date of hire reported for the participant. Tenure will not reflect the years of participation in the 401(k) plan if the 401(k) plan was added by the employer at a later date or if there are restrictions on participating in the 401(k) plan immediately upon hire.

[10] The cross-sectional EBRI/ICI 401(k) database also shows that younger participants and those with shorter tenures tend to have lower 401(k) balances than those who are older or have longer tenures. See Holden, Bass, and Copeland 2024.

[11] Contribution amounts and contribution rates tend to increase with age and earnings. See Figures A3 and A4 in Brady and Bass 2021 or data tables in Internal Revenue Service, Statistics of Income Division 2021.

[12] At year-end 2022, 59 percent of non–target date balanced fund assets were assumed to be invested in equities (see Investment Company Institute, Quarterly Supplementary Data). The allocation to equities in target date funds varies with the funds' target dates. For target date funds, investors were assumed to be in a fund whose target date was nearest to their 65th birthday. Allocation to equities in target date funds is assumed to vary with investor age. The equity portion was estimated using the industry average equity percentage for the assigned target date fund, which was calculated using the Morningstar Lifecycle Allocation Indexes (see Morningstar 2022).

[13] For a description of the investment options, see page 16.

[14] See Holden, Bass, and Copeland 2024.

[15] See Holden, Schrass, and Chism 2023.

[16] For statistics indicating the higher propensity of withdrawals among participants in their sixties, see Holden and VanDerhei 2002. In addition, nonhardship withdrawals, which are generally limited to employees who are aged 59½ or older, constitute a majority of all withdrawals (see Clark 2024).

[17] See BrightScope and Investment Company Institute 2024.

[18] Data from the ICI Survey of Defined Contribution Plan Recordkeepers find that DC plan participants generally stay the course. During each year from 2016 through 2022, fewer than 3 percent of DC plan participants stopped contributing to their 401(k) plan accounts. Some of these participants may have stopped contributing because they reached the contribution limit. See Holden, Schrass, and Chism 2023 for DC plan participants' annual activities between 2008 and 2022. For an analysis of contribution activity during the bear market of 2000–2002 using the cross-sectional EBRI/ICI 401(k) databases, see Holden and VanDerhei 2004. The analysis finds that, overall, 401(k) participants' contribution rates were little changed in 2000, 2001, and 2002 when compared to 1999. On average, 401(k) participants' contribution behavior does not appear to have been materially affected by the bear market in equities from 2000 through 2002, whether measured in dollar amounts or percentage of salary they contributed.

[19] See Holden, Schrass, and Chism 2023.

[20] See Holden, Bass, and Copeland 2024. For an analysis of 401(k) participant loan activity over time, see Holden, Bass, and Copeland 2023.

[21] The Investment Company Institute tracks reallocation of account balances and changes to the asset allocation of contributions for a sample of recordkeepers. The survey results indicate a minority of DC plan participants change their asset allocation in any given period. For example, 8.0 percent of DC plan participants changed the asset allocation of their account balances, and 4.0 percent changed the asset allocation of their contributions in 2022 (see Holden, Schrass, and Chism 2023).

[22] For a detailed analysis of 401(k) plan participants' use of target date funds by participant age or job tenure in the year-end 2022 cross-sectional EBRI/ICI 401(k) database, see Holden, Bass, and Copeland 2024. Among 401(k) plan participants holding target date funds at year-end 2018, 88 percent held one age-appropriate target date fund (see Holden, VanDerhei, and Bass 2021).

[23] See note 21.

[24] For the complete update from the year-end 2022 EBRI/ICI 401(k) database, see Holden, Bass, and Copeland 2024.

[25] The EBRI/ICI 401(k) database environment is certified to be fully compliant with the ISO-27002 Information Security Audit standard. Moreover, EBRI has obtained a legal opinion that the methodology used meets the privacy standards of the Gramm-Leach-Bliley Act. At no time has any nonpublic personal information that is personally identifiable, such as a Social Security number, been transferred to or shared with EBRI.

[26] Account balances are net of unpaid loan balances. Thus, unpaid loan balances are not included in any of the eight asset categories described.

[27] This system of classification does not consider the number of distinct investment options presented to a given participant, but rather, the types of options presented. Plan Sponsor Council of America 2023 indicates that in 2022, the average number of investment fund options available for participant contributions was 21 among the more than 687 plans surveyed. BrightScope and Investment Company Institute 2024 reports an average of 28 investment options in 2021, and an average of 20 investment options when a target date fund suite is counted as a single investment option.

[28] Lifestyle funds maintain a predetermined risk level and generally use words such as "conservative," "moderate," or "aggressive" in their name to indicate the fund's risk level. Lifestyle funds generally are included in the non–target date balanced fund category.

[29] GICs are insurance company products that guarantee a specific rate of return on the invested capital over the life of the contract.

[30] Other stable value funds include synthetic GICs, which consist of a portfolio of fixed-income securities "wrapped" with a guarantee (typically by an insurance company or a bank) to provide benefit payments according to the plan at book value.

[31] Some recordkeepers supplying data were unable to provide complete asset allocation detail on certain pooled asset classes for one or more of their clients. The final EBRI/ICI 401(k) database includes only plans for which at least 90 percent of all plan assets could be identified.