ICI RESEARCH PERSPECTIVE

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What Does Consistent Participation in 401(k) Plans Generate? Changes in 401(k) Account Balances, 2007–2012

KEY FINDINGS

The annual EBRI/ICI 401(k) database update report is based on large cross sections of 401(k) plan participants. The cross sections cover participants with a wide range of participation experience in 401(k) plans; therefore, meaningful analysis of the potential for 401(k) participants to accumulate retirement assets must examine how a consistent group of participants' 401(k) accounts change over time. Two major insights emerge from looking at consistent participants in the EBRI/ICI 401(k) database over the five-year period from year-end 2007 to year-end 2012.

- The average 401(k) account balance fell 34.7 percent in 2008, then rose from 2009 through year-end 2012. Overall, the average account balance increased at a compound annual average growth rate of 6.8 percent from 2007 to 2012, to $107,053 at year-end 2012.
- The median 401(k) account balance increased at a compound annual average growth rate of 11.9 percent over the period, to $49,814 at year-end 2012.

Analysis of a consistent group of 401(k) participants highlights the impact of ongoing participation in 401(k) plans. At year-end 2012, the average account balance among consistent participants was 67 percent higher than the average account balance among all participants in the EBRI/ICI 401(k) database. The consistent group's median balance was almost three times the median balance across all participants at year-end 2012.

Younger participants or those with smaller initial balances experienced higher percent growth in account balances compared with older participants or those with larger initial balances. Three primary factors impact account balances: contributions, investment returns, and withdrawal/loan activity. The percent change in average 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 41.8 percent per year between year-end 2007 and year-end 2012.

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Key findings continued on the next page

401(k) participants tend to concentrate their accounts in equity securities. The asset allocation of the 7.5 million 401(k) plan participants in the consistent group was broadly similar to the asset allocation of the 24.0 million participants in the entire year-end 2012 EBRI/ICI 401(k) database. On average, about three-fifths of 401(k) participants' assets were invested in equities, either 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.

There was a slight increase in the number of younger consistent 401(k) participants who held at least some equities at year-end 2012 compared with year-end 2007, although slightly fewer had their 401(k) balance highly or fully invested in equities. For example, 87.5 percent of consistent 401(k) participants in their twenties held at least some equities at year-end 2012, compared with 84.5 percent of that group at year-end 2007. All age groups in the consistent sample moved away from high or full allocations to equities between year-end 2007 and year-end 2012. For example, 57.8 percent of consistent 401(k) participants in their twenties had more than 80 percent of their account invested in equities at year-end 2012, compared with 60.2 percent at year-end 2007. Those figures include 12.1 percent of consistent 401(k) participants in their twenties who had 100 percent of their account invested in equities at year-end 2012, compared with 12.7 percent at year-end 2007.

Slightly fewer older consistent participants held at least some equities at year-end 2012 compared with year-end 2007, and fewer had their 401(k) balance mostly or fully invested in equities. For example, 82.1 percent of consistent 401(k) participants in their sixties held at least some equities at year-end 2012, compared with 87.4 percent of that group at year-end 2007. This age group also moved away from high concentrations in equities over the period in question: 23.5 percent of consistent 401(k) participants in their sixties had more than 80 percent of their account invested in equities at year-end 2012, compared with 32.6 percent at year-end 2007. Those figures include 11.7 percent of consistent 401(k) participants in their sixties who had 100 percent of their account invested in equities at year-end 2012, compared with 13.4 percent at year-end 2007.

More consistent 401(k) plan participants held target date funds at year-end 2012 than at year-end 2007, on net; many of those with target date funds held all of their 401(k) account in target date funds. At year-end 2007, 27.6 percent of consistent 401(k) plan participants held at least some target date fund assets in their 401(k) accounts. At year-end 2012, that share had risen to 32.1 percent as more 401(k) participants added some target date fund assets to their 401(k) accounts than removed them entirely, around a substantial core that held them in both periods. At year-end 2012, 10.0 percent of consistent 401(k) plan participants, or nearly one-third of those holding any target date fund assets, exclusively held target date fund assets.

The December 2013 *ICI Research Perspective* reported year-end 2012 account balance, asset allocation, and loan activity results for the EBRI/ICI 401(k) database, which consists of a large cross section of 24.0 million 401(k) plan participants. This paper presents a longitudinal analysis—the analysis of 401(k) participants who maintained accounts each year from 2007 through 2012—that was not included in the previous report. The longitudinal analysis tracks the account balances of 7.5 million 401(k) plan participants who had accounts in the year-end 2007 EBRI/ICI 401(k) database and each subsequent year through year-end 2012.

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.[1] The EBRI/ICI 401(k) database 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. For example, at year-end 2012, 12 percent of 401(k) participants in the EBRI/ICI 401(k) database were in their twenties, while 11 percent were in their sixties (Figure 1); 17 percent of participants had two or fewer years of tenure at their current jobs, while 5 percent had more than 30 years of tenure (Figure 2).

Although annual updates of the EBRI/ICI 401(k) database provide an invaluable perspective of 401(k) account balances, asset allocation, and loan activity across wide cross sections of participants, the cross-sectional analysis is not well suited to examining the impact of participation in 401(k) plans over time. 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.[2] 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.[3, 4] 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 group of participants who have been part of the database for an extended period. This consistent group of participants (a longitudinal sample) is drawn from the annual cross sections.

Sample of Consistent 401(k) Participants, 2007–2012

About 34 percent, or 7.5 million, of the 401(k) participants with accounts at the end of 2007 in the EBRI/ICI 401(k) database are in the consistent sample. These consistent participants had accounts at the end of each year from 2007 through 2012.[5] These 7.5 million 401(k) participants make up a group of consistent participants (or 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 2007. However, by year-end 2012, these participants had grown older, accrued longer job tenures, and accumulated larger account balances compared with participants in the year-end 2012 cross section.

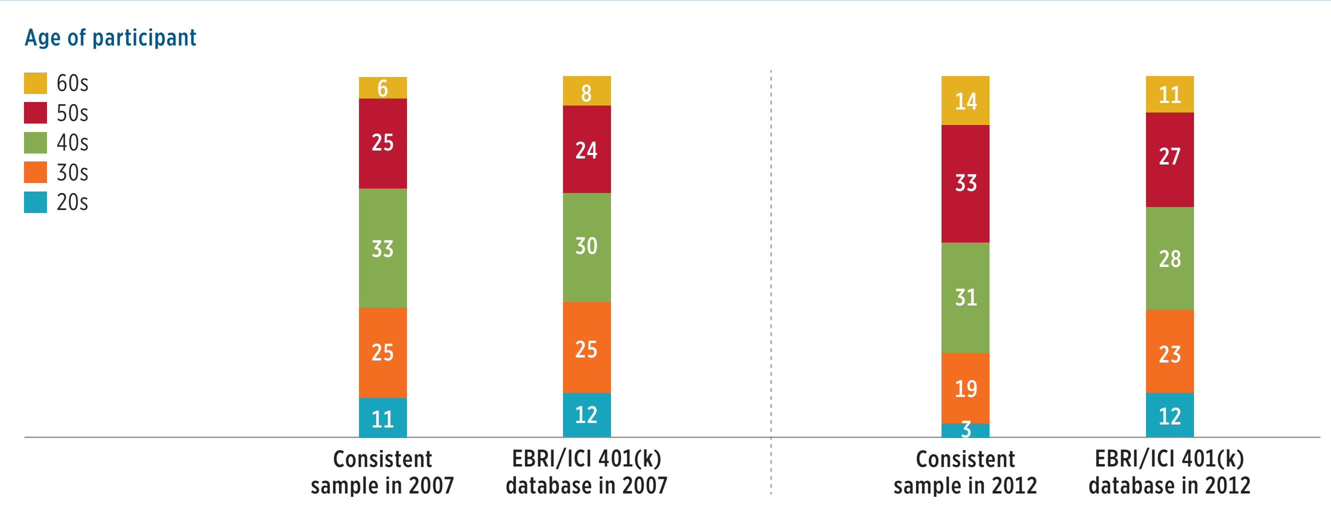
Age and Tenure of Consistent 401(k) Participants

At year-end 2007, the consistent group was similar in age to the participants in the entire EBRI/ICI database. For example, 36 percent of the participants in the consistent sample were in their twenties or thirties in 2007, compared with 37 percent of the 21.8 million participants in the entire database (Figure 1).[6] Thirty-three percent of the participants in the consistent sample were in their forties in 2007, while 30 percent of participants in the entire database were in their forties. Thirty-one percent of the participants in the consistent sample were in their fifties or sixties, compared with 32 percent of participants in the EBRI/ICI database overall.

FIGURE 1

Consistent Sample Was Older Than All Participants in the EBRI/ICI 401(k) Database at Year-End 2012

Percentage of participants by age, year-end 2007 and year-end 2012



Note: The EBRI/ICI 401(k) database contains 21.8 million 401(k) plan participants at year-end 2007 and 24.0 million at year-end 2012. The consistent sample consists of 7.5 million 401(k) plan participants with account balances at the end of each year from 2007 through 2012. Participant age is age as of the year-end indicated. Components may not add to 100 percent because of rounding.

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

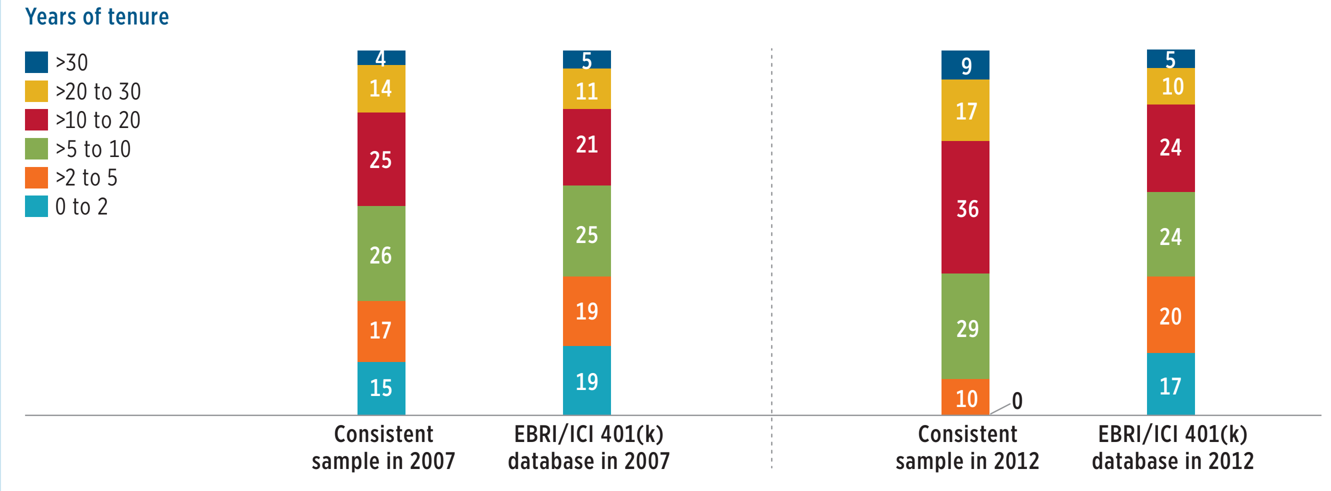
The tenure composition of the consistent sample also was similar to the tenure composition of 401(k) participants in the year-end 2007 EBRI/ICI 401(k) database.[7] For example, 32 percent of the consistent sample had five or fewer years of tenure in 2007, compared with 38 percent of participants in the entire EBRI/ICI 401(k) database (Figure 2). Eighteen percent of the consistent sample had more than 20 years of tenure in 2007, as did 16 percent of the participants in the entire EBRI/ICI 401(k) database.

As expected, the consistent participants who were followed over the five-year period tended to be older and to have longer tenure by year-end 2012, compared with the broader base of 401(k) participants in the EBRI/ICI 401(k) database. Participants in the consistent sample, by definition, had a minimum tenure of five years in 2012 (the length of time for the longitudinal analysis), with 10 percent having five years of tenure, 29 percent having between five and 10 years, 36 percent having between 10 and 20 years, and 26 percent having more than 20 years (Figure 2). In contrast, in the entire EBRI/ICI 401(k) database in 2012, 37 percent of participants had five or fewer years of tenure, 24 percent had between five and 10 years, 24 percent had between 10 and 20 years, and 15 percent had more than 20 years.

FIGURE 2

Consistent Sample Had Longer Tenure Than All Participants in the EBRI/ICI 401(k) Database at Year-End 2012

Percentage of participants by years of tenure, year-end 2007 and year-end 2012



Note: The EBRI/ICI 401(k) database contains 21.8 million 401(k) plan participants at year-end 2007 and 24.0 million at year-end 2012. The consistent sample consists of 7.5 million 401(k) plan participants with account balances at the end of each year from 2007 through 2012. Participant tenure is tenure as of the year-end indicated. Components may not add to 100 percent because of rounding.

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

By year-end 2012, the consistent sample of 401(k) participants also was older, on average, compared with the 24.0 million participants in the entire EBRI/ICI 401(k) database. For example, only 3 percent of the participants in the consistent group were in their twenties and 19 percent were in their thirties at year-end 2012 (Figure 1). In the entire EBRI/ICI 401(k) database at year-end 2012, 12 percent of participants were in their twenties and 23 percent were in their thirties. Thirty-three percent of the participants in the consistent sample were in their fifties and 14 percent were in their sixties, compared with 27 percent and 11 percent, respectively, in the entire database.

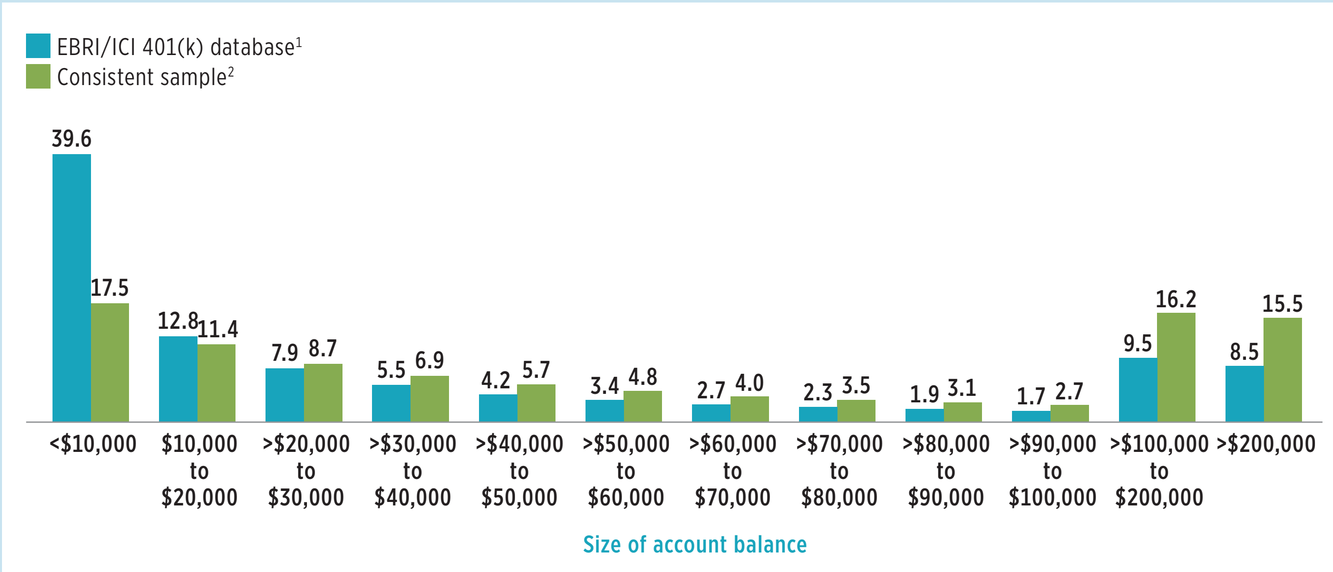
Consistent Participants Have Accumulated Sizable 401(k) Account Balances

Trends in the consistent group's account balances highlight the accumulation effect of ongoing 401(k) participation. At year-end 2012, 15.5 percent of the consistent group had more than \$200,000 in their 401(k) accounts at their current employers, while another 16.2 percent had between \$100,000 and \$200,000 (Figure 3). In contrast, in the broader EBRI/ICI 401(k) database, 8.5 percent had accounts with more than \$200,000, and 9.5 percent had between \$100,000 and \$200,000.

FIGURE 3

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

Percentage of participants with account balances in specified ranges, year-end 2012



[1] The year-end 2012 EBRI/ICI 401(k) database represents 24.0 million 401(k) plan participants.

[2] Participants include the 7.5 million 401(k) plan participants with account balances at the end of each year from 2007 through 2012.

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.

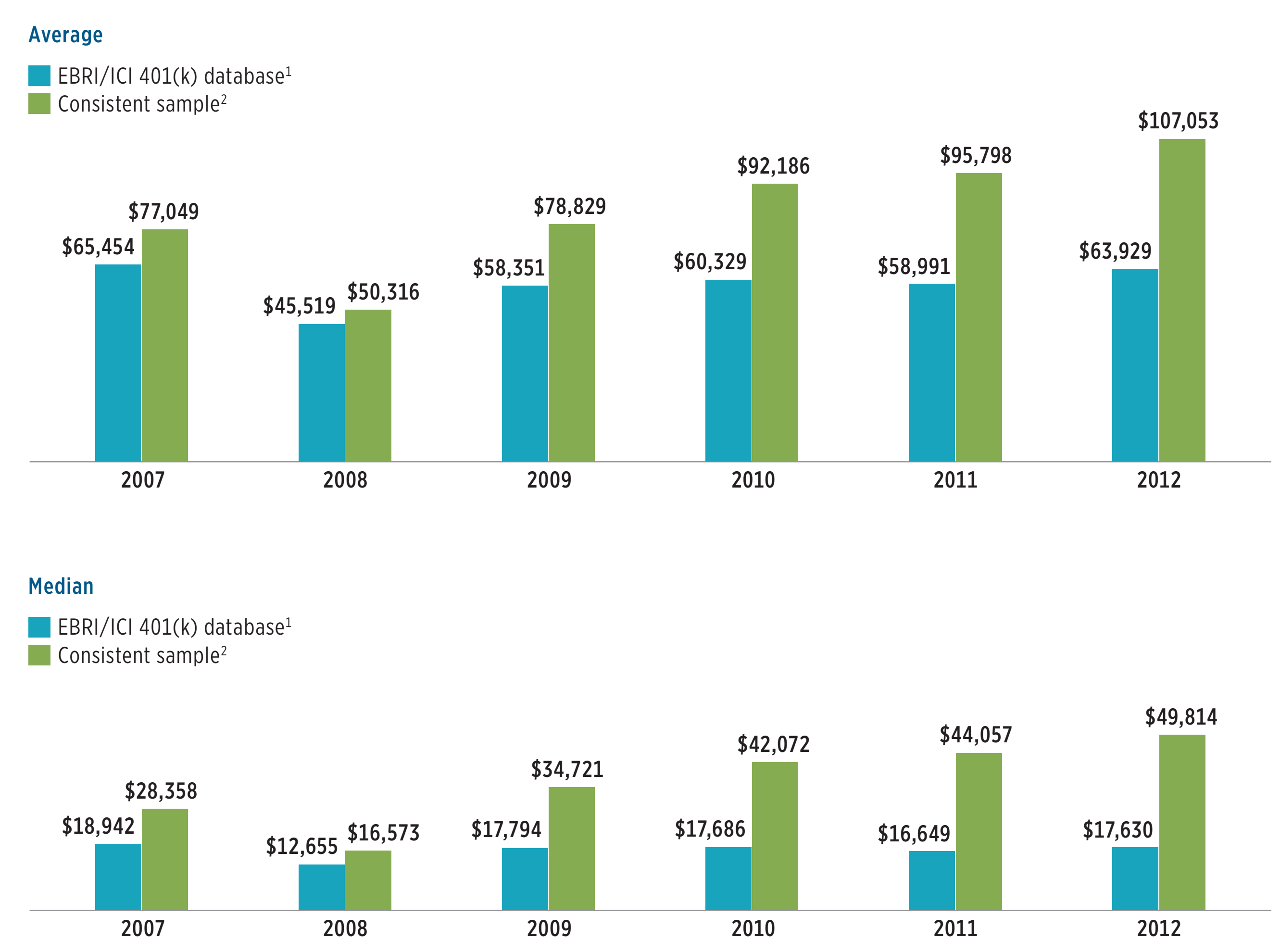
Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project

Reflecting their higher average age and tenure, the consistent group also had median and average account balances that were much higher than the median and average account balances of the broader EBRI/ICI 401(k) database (Figure 4). At year-end 2012, the average 401(k) account balance of the consistent group was $107,053, 67 percent larger than the average account balance of $63,929 among participants in the entire EBRI/ICI 401(k) database. The median 401(k) account balance among the consistent participants was $49,814 at year-end 2012, almost three times the median account balance of $17,630 for participants in the entire EBRI/ICI 401(k) database.

401(k) account balances tended 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 tenure at their current employers tended to have smaller account balances, while those who were older or had longer job tenure tended to have higher account balances.[8] For example, within the consistent group, among 401(k) participants with five years of tenure at year-end 2012, older participants tended to have higher balances than younger participants: those in their twenties with five years of tenure had an average account balance of $22,147, compared with an average of $53,565 for participants in their sixties with five years of tenure (Figure 5). Among consistent participants in their sixties at year-end 2012, those with five years of tenure had a lower average 401(k) balance ($53,565) than those with more than 30 years of tenure ($239,425).

FIGURE 4

Consistent 401(k) Participants Accumulate Significant Balances



[1] The year-end 2012 EBRI/ICI 401(k) database represents 24.0 million 401(k) plan participants.

[2] Participants include the 7.5 million 401(k) plan participants with account balances at the end of each year from 2007 through 2012.

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.

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

FIGURE 5

401(k) Account Balances Among Consistent 401(k) Participants from 2007 Through 2012

Average 401(k) balance for consistent 401(k) participants by age and tenure, year-end 2007–2012

Age group	Tenure (years)	2007	2008	2009	2010	2011	2012
20s	**All**	**$3,871**	**$4,192**	**$10,284**	**$14,993**	**$17,802**	**$22,161**
	>2 to 5	2,535	3,364	10,444	15,544	18,567	22,147
	>5 to 10	4,301	4,643	11,138	16,371	19,673	24,971
30s	**All**	**22,472**	**15,802**	**29,978**	**38,753**	**42,432**	**50,536**
	>2 to 5	11,764	8,342	18,995	24,853	27,237	31,601
	>5 to 10	16,673	12,439	26,376	35,472	39,929	48,534
	>10 to 20	38,429	25,681	44,892	56,216	60,499	71,082
40s	**All**	**58,769**	**37,474**	**63,275**	**76,649**	**80,726**	**93,061**
	>2 to 5	24,355	15,104	29,857	36,928	39,338	44,530
	>5 to 10	33,099	21,884	42,230	53,735	58,297	69,039
	>10 to 20	71,023	44,111	75,469	91,030	95,705	110,309
	>20 to 30	113,072	72,077	111,157	130,211	135,288	152,900
50s	**All**	**103,946**	**67,240**	**104,286**	**121,539**	**126,524**	**141,402**
	>2 to 5	30,628	19,312	36,266	44,118	47,196	52,952
	>5 to 10	40,108	26,678	49,068	61,230	66,635	77,808
	>10 to 20	86,988	54,588	89,869	106,365	111,578	126,448
	>20 to 30	163,479	103,500	157,610	180,003	185,088	205,255
	>30	191,482	127,047	183,393	209,061	216,456	235,093
60s	**All**	**131,032**	**86,037**	**125,019**	**138,918**	**139,744**	**147,600**
	>2 to 5	35,611	23,034	39,915	46,773	49,263	53,565
	>5 to 10	44,148	29,878	52,345	63,126	67,649	75,797
	>10 to 20	93,275	59,302	93,658	107,120	109,879	118,635
	>20 to 30	178,460	114,160	164,977	180,535	179,765	188,321
	>30	237,361	157,390	217,117	234,987	232,522	239,425
All	**All**	**77,049**	**50,316**	**78,829**	**92,186**	**95,798**	**107,053**

Note: The analysis is based on a sample of 7.5 million 401(k) plan participants with account balances at the end of each year from 2007 through 2012. Age and tenure groups are based on participant age and tenure at year-end 2012. 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 6

Changes in 401(k) Account Balances Among Consistent 401(k) Participants from 2007 Through 2012

Percent change in average 401(k) account balance among consistent 401(k) participants by age and tenure, 2007–2012

Age group	Tenure (years)	2007–2008	2008–2009	2009–2010	2010–2011	2011–2012	2007–2012	Compound annual average growth rate, 2007–2012
20s	**All**	**8.3%**	**145.3%**	**45.8%**	**18.7%**	**24.5%**	**472.5%**	**41.8%**
	>2 to 5	32.7	210.5	48.8	19.4	19.3	773.6	54.3
	>5 to 10	8.0	139.9	47.0	20.2	26.9	480.6	42.2
30s	**All**	**-29.7**	**89.7**	**29.3**	**9.5**	**19.1**	**124.9**	**17.6**
	>2 to 5	-29.1	127.7	30.8	9.6	16.0	168.6	21.9
	>5 to 10	-25.4	112.0	34.5	12.6	21.6	191.1	23.8
	>10 to 20	-33.2	74.8	25.2	7.6	17.5	85.0	13.1
40s	**All**	**-36.2**	**68.9**	**21.1**	**5.3**	**15.3**	**58.4**	**9.6**
	>2 to 5	-38.0	97.7	23.7	6.5	13.2	82.8	12.8
	>5 to 10	-33.9	93.0	27.2	8.5	18.4	108.6	15.8
	>10 to 20	-37.9	71.1	20.6	5.1	15.3	55.3	9.2
	>20 to 30	-36.3	54.2	17.1	3.9	13.0	35.2	6.2
50s	**All**	**-35.3**	**55.1**	**16.5**	**4.1**	**11.8**	**36.0**	**6.3**
	>2 to 5	-36.9	87.8	21.7	7.0	12.2	72.9	11.6
	>5 to 10	-33.5	83.9	24.8	8.8	16.8	94.0	14.2
	>10 to 20	-37.2	64.6	18.4	4.9	13.3	45.4	7.8
	>20 to 30	-36.7	52.3	14.2	2.8	10.9	25.6	4.7
	>30	-33.7	44.4	14.0	3.5	8.6	22.8	4.2
60s	**All**	**-34.3**	**45.3**	**11.1**	**0.6**	**5.6**	**12.6**	**2.4**
	>2 to 5	-35.3	73.3	17.2	5.3	8.7	50.4	8.5
	>5 to 10	-32.3	75.2	20.6	7.2	12.0	71.7	11.4
	>10 to 20	-36.4	57.9	14.4	2.6	8.0	27.2	4.9
	>20 to 30	-36.0	44.5	9.4	-0.4	4.8	5.5	1.1
	>30	-33.7	37.9	8.2	-1.0	3.0	0.9	0.2
All	**All**	**-34.7**	**56.7**	**16.9**	**3.9**	**11.7**	**38.9**	**6.8**

Note: The analysis is based on a sample of 7.5 million 401(k) plan participants with account balances at the end of each year from 2007 through 2012. Age and tenure groups are based on participant age and tenure at year-end 2012. 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

Changes in Consistent 401(k) Participants' Account Balances

In any given year, the change in a participant's account balance is the sum 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 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.

Altogether, from year-end 2007 through year-end 2012, the average account balance among the group of consistent participants increased by nearly 40 percent, rising from $77,049 at year-end 2007 to $107,053 at year-end 2012 (Figures 4, 5, and 6). This translates into a compound annual average growth rate of 6.8 percent over the five-year period. The median account balance among this consistent group also grew, rising 76 percent from $28,358 in 2007 to $49,814 in 2012 (a compound annual average growth rate of 11.9 percent) (Figure 4).

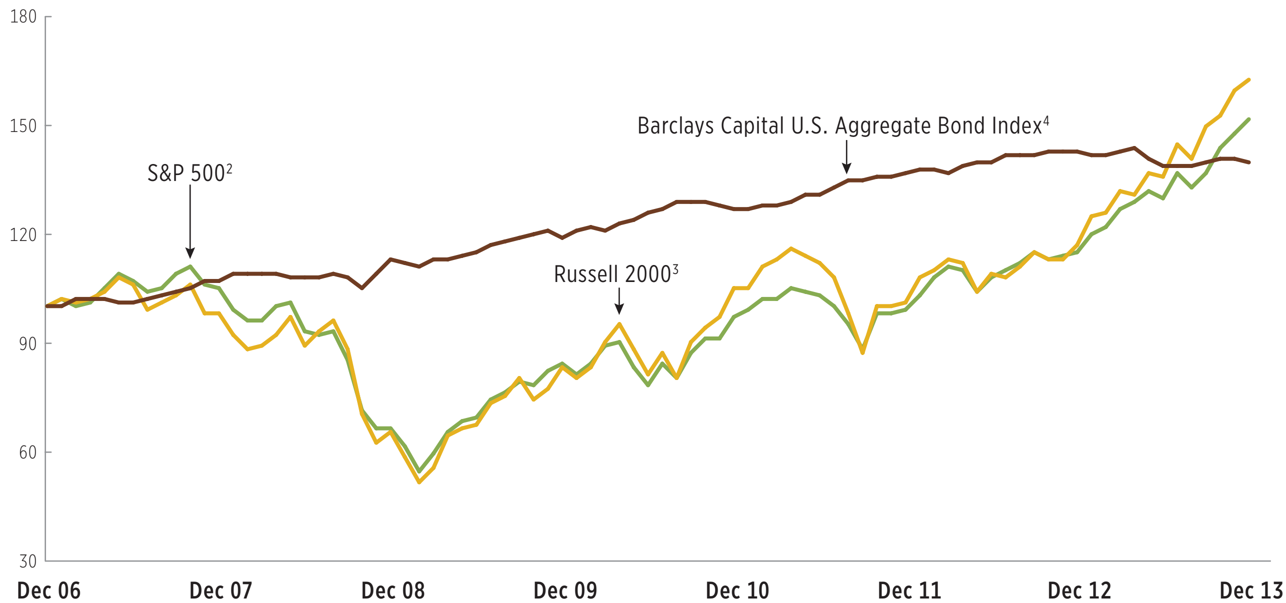
Among the consistent group, individual 401(k) participants experienced a wide range of outcomes, often influenced by the relationship among the three factors mentioned above: contributions, investment returns (Figure 7), and withdrawal/loan activity. Participants who were younger or had fewer years of tenure experienced the largest percent increases in average account balance between year-end 2007 and year-end 2012. For example, the average account balance of 401(k) participants in their twenties rose 472.5 percent (a 41.8 percent compound annual average growth rate) between the end of 2007 and the end of 2012 (Figures 5 and 6). Because younger participants' account balances tended to be small (Figure 5), their contributions produced significant percent growth in their account balances. In contrast, the average account balance of older participants, or those with longer tenures—both of which tended to have larger balances at the beginning of the study period than younger workers or those with shorter tenures—showed more modest percent growth in account size (Figure 6). For example, the average account balance of 401(k) participants in their sixties increased 12.6 percent (a 2.4 percent compound annual average growth rate) between year-end 2007 and year-end 2012. Investment returns, rather than annual contributions, generally account for most of the change in accounts with larger balances. In addition, participants in their sixties tend to have a higher propensity to make withdrawals, as they approach retirement.[9]

These percent changes in 401(k) participant account balances also reflect changes in asset values during the five-year period. Although asset allocation varied with age, and many participants held a range of investments, stock market performance had an impact on these balances because, in large part, 401(k) plan participants' balances tended to be weighted toward equities. Altogether, at year-end 2012, whether looking at the consistent group or the entire EBRI/ICI 401(k) database, equities—equity funds, the equity portion of target date funds, the equity portion of non–target date balanced funds,[10] and company stock—represented about three-fifths of 401(k) plan participants' assets (Figure 8, lower panel).[11] However, 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. Younger participants generally tended to favor 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. The decline in stock market values that occurred in 2008 (Figure 7) tended to pull 401(k) account balances lower, although diversified portfolios and ongoing contributions[12, 13] helped offset the impact. In the case of the youngest 401(k) participants, ongoing contributions more than offset the impact of the stock market decline on their balances (Figures 5 and 6).

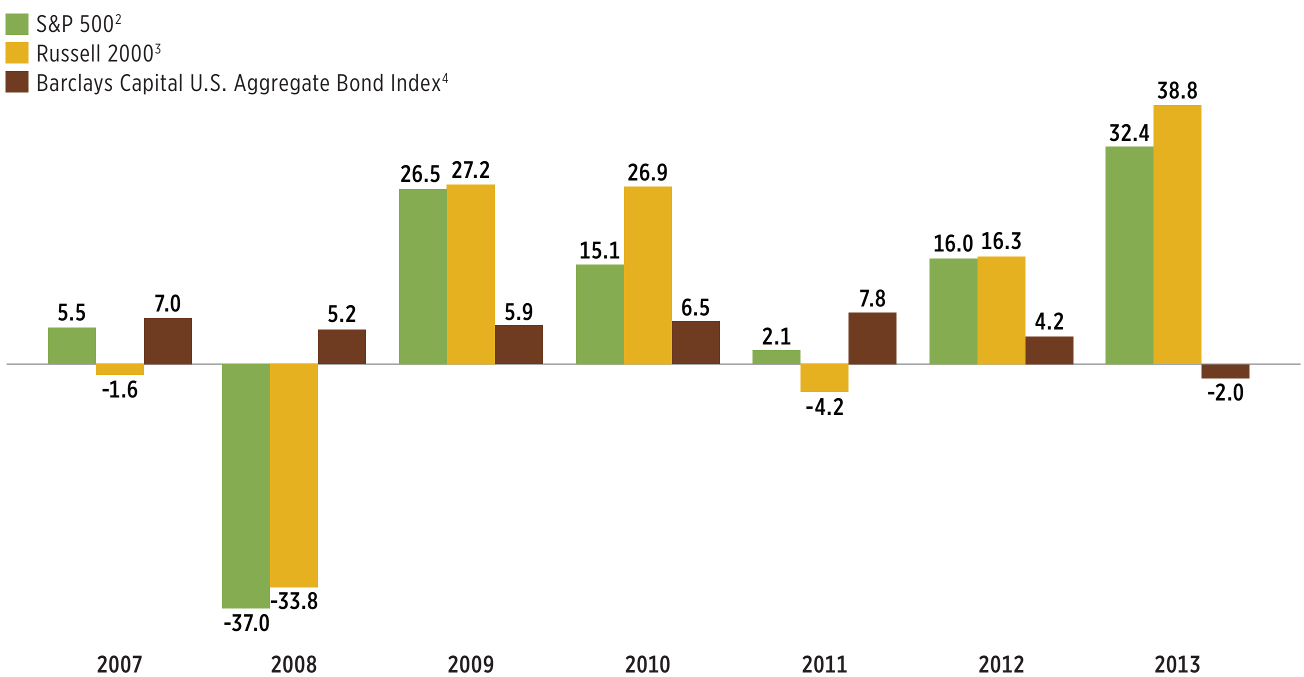
FIGURE 7

Domestic Stock and Bond Market Indexes

Month-end level,[1] December 2006 to December 2013



Annual percent change in total return index



[1] All indexes are set to 100 in December 2006.

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

[3] The Russell 2000 index measures the performance of the 2,000 smallest U.S. companies (based on total market capitalization) included in the Russell 3000 index (which tracks the 3,000 largest U.S. companies).

[4] Formerly the Lehman Brothers U.S. Aggregate Bond Index, the Barclays Capital U.S. Aggregate Bond Index is composed of securities covering government and corporate bonds, mortgage-backed securities, and asset-backed securities (rebalanced monthly by market capitalization). The index's total return consists of price appreciation/depreciation plus income as a percentage of the original investment.

Sources: Bloomberg, Barclays Global Investments, Frank Russell Company, and Standard & Poor's

FIGURE 8

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

Percentage of account balances, year-end 2007 and year-end 2012

Age group	Equity funds	Target date funds[1, 2]	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]
Year-end 2007										
20s	42.1	22.2	7.3	6.5	5.0	6.7	8.9	0.7	0.6	75.2
30s	55.3	11.6	6.9	7.7	2.9	4.2	10.0	0.8	0.6	79.3
40s	57.5	8.2	6.4	7.8	2.8	4.7	10.9	1.2	0.5	78.2
50s	50.9	7.3	7.1	8.6	3.5	8.0	12.4	1.7	0.4	71.7
60s	43.6	7.5	7.5	10.8	4.9	12.8	10.7	1.9	0.3	61.8
All consistent sample[5]	49.9	7.6	7.0	9.2	3.9	9.0	11.4	1.6	0.4	70.1
EBRI/ICI 401(k) database[6]	48.2	7.4	8.0	8.3	4.2	10.6	10.6	2.1	0.7	68.0
Year-end 2012										
Age group	Equity funds	Target date funds[1, 2]	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	36.0	28.4	8.5	7.9	2.8	3.9	9.2	1.3	2.0	75.8
30s	42.2	15.0	16.2	8.0	2.8	3.5	7.3	1.6	3.4	72.7
40s	47.8	12.7	6.4	10.6	3.8	5.5	9.2	2.4	1.6	71.3
50s	39.1	11.7	6.5	13.2	5.3	10.0	9.8	3.2	1.3	60.6
60s	31.9	11.1	6.4	16.0	6.9	15.4	8.4	2.8	1.1	49.6
All consistent sample[5]	39.8	12.1	7.5	12.6	5.1	9.6	9.0	2.7	1.6	62.0
EBRI/ICI 401(k) database[7]	39.2	14.9	7.2	11.8	4.1	9.6	7.2	3.5	2.4	61.0

[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 7.5 million 401(k) plan participants with account balances at the end of each year from 2007 through 2012.

[6] The year-end 2007 EBRI/ICI 401(k) database represents 21.8 million 401(k) plan participants.

[7] The year-end 2012 EBRI/ICI 401(k) database represents 24.0 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 2012. Row percentages may not add to 100 percent because of rounding. Percentages are dollar-weighted averages.

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

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

Analysis of a group of consistent 401(k) plan participants provides insight into how these investors reacted to the financial crisis of 2008, because the same investors can be observed before (year-end 2007) and after (year-end 2012) the financial market crisis. The annual EBRI/ICI 401(k) database updates provide a snapshot of all participants at a given year-end; some of those participants are new to their 401(k) plans and perhaps new to investing, and thus may not have experienced a direct impact of the financial market crisis on their savings. In other words, new participants might be willing to invest in equities because they did not directly experience the impact of the financial market crisis on a retirement account, while those who held 401(k) accounts through the stock market volatility might have a different reaction. To gain insight into the reaction of 401(k) plan participants to the financial market crisis and events of 2008 through 2012, changes in their allocations to equities overall—and to target date funds, in particular—are examined. For the most part, despite periods of market uncertainty and volatility, there were relatively small changes in consistent 401(k) plan participants' exposure to equities or target date funds between year-end 2007 and year-end 2012.

Exposure to Equities Has Declined Slightly Among Consistent 401(k) Participants Between 2007 and 2012

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

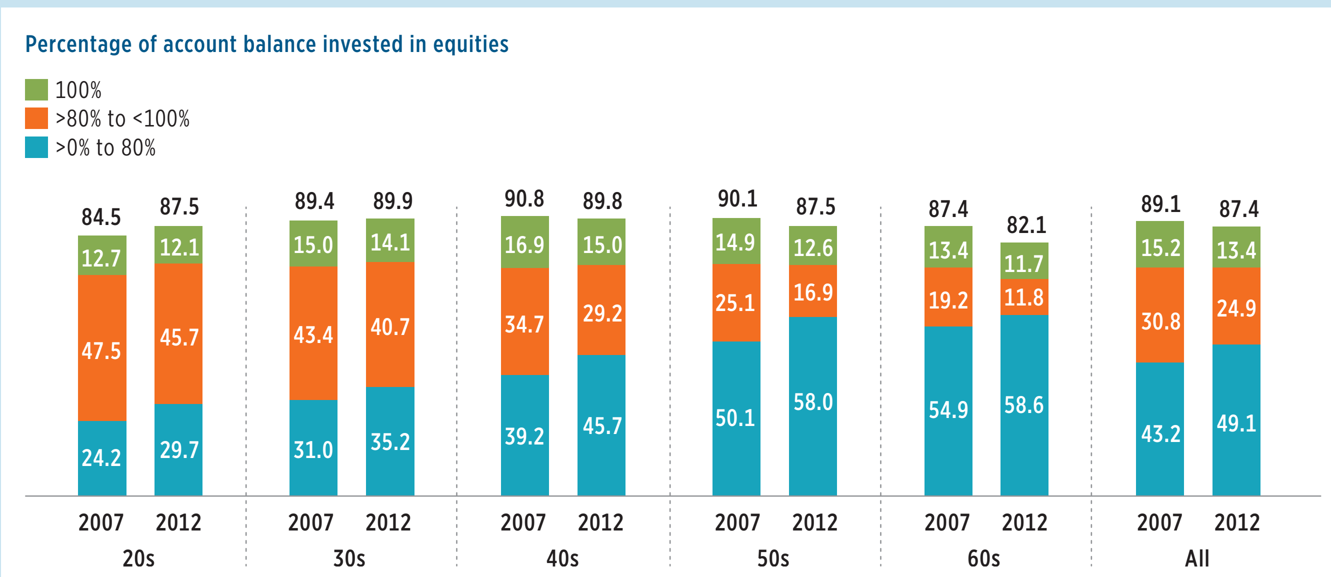
At both year-end 2007 and year-end 2012, the vast majority of consistent 401(k) plan participants had at least some exposure to equities, whether through equity funds, the equity portion of target date funds, the equity portion of non–target date balanced funds, or company stock. At year-end 2007, 89.1 percent of consistent 401(k) participants held at least some equities in their 401(k) accounts; that share edged down slightly to 87.4 percent at year-end 2012 (Figure 9). The downward movement was concentrated among participants in their fifties and sixties, while the fraction holding equities remained stable among those in their thirties and forties (hovering right around 90 percent in both years), and edged up a bit among participants in their twenties (from 84.5 percent at year-end 2007 to 87.5 percent holding equities at year-end 2012). The decline in the ownership of equities among older participants is consistent with standard financial advice emphasizing decreasing investment risk as individuals approach retirement.[14]

All age groups in the sample of consistent 401(k) participants moved away from high or full allocations to equities between year-end 2007 and year-end 2012, with older participants moving more than younger ones.[15] For example, 57.8 percent of consistent 401(k) participants in their twenties had more than 80 percent of their account invested in equities at year-end 2012, compared with 60.2 percent at year-end 2007 (Figures 9 and 10). Those figures include 12.1 percent of consistent 401(k) participants in their twenties who had 100 percent of their account invested in equities at year-end 2012, compared with 12.7 percent fully invested in equities at year-end 2007. At the other end of the age spectrum, consistent 401(k) participants in their sixties moved away from high concentrations in equities: 23.5 percent of consistent 401(k) participants in their sixties had more than 80 percent of their account invested in equities at year-end 2012, compared with 32.6 percent at year-end 2007. Those figures include 11.7 percent of consistent 401(k) participants in their sixties who had 100 percent of their account invested in equities at year-end 2012, compared with 13.4 percent fully invested in equities at year-end 2007. Although the financial crisis that occurred during this period[16] may have influenced participants' allocation to equities, some of this movement may have simply been normal reallocation as participants approached retirement.[17]

FIGURE 9

Changes in 401(k) Participants' Allocation to Equities Between 2007 and 2012

Percentage of consistent 401(k) plan participants by age, year-end 2007 and year-end 2012



Note: Equities include equity funds, company stock, and the equity portion of balanced funds. Funds include mutual funds, bank collective trusts, life insurance separate accounts, and any pooled investment product primarily invested in the security indicated. Participants include the 7.5 million 401(k) plan participants with account balances at the end of each year from 2007 through 2012. Age group is based on the participant's age at year-end 2012. See Figures 10 and 12 for additional detail. Percentages may not add to the total because of rounding.

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

FIGURE 10

Younger 401(k) Participants Have Higher Concentrations in Equities

Asset allocation distribution of 401(k) participant account balance to equities by age, percentage of participants, year-end 2007 and year-end 2012

	Percentage of account balance invested in equities at year-end 2007					
Age group	**Zero**	**1 to 20 percent**	**>20 to 40 percent**	**>40 to 60 percent**	**>60 to 80 percent**	**>80 percent**
20s	15.5	1.7	2.4	4.8	15.3	60.2
30s	10.6	2.2	3.3	6.9	18.6	58.4
40s	9.2	2.8	4.0	7.8	24.6	51.6
50s	9.9	4.2	5.5	14.6	25.8	40.0
60s	12.6	6.3	10.0	18.6	20.0	32.6
All consistent sample[1]	10.9	3.8	5.4	11.3	22.7	46.0
2007 EBRI/ICI 401(k) database[2]	13.2	3.8	5.3	11.2	23.0	43.4

	Percentage of account balance invested in equities at year-end 2012					
Age group	**Zero**	**1 to 20 percent**	**>20 to 40 percent**	**>40 to 60 percent**	**>60 to 80 percent**	**>80 percent**
20s	12.5	2.7	3.0	6.2	17.8	57.8
30s	10.1	3.5	4.1	8.0	19.6	54.8
40s	10.2	4.6	5.2	9.5	26.4	44.2
50s	12.5	7.1	7.7	17.8	25.4	29.5
60s	17.9	9.7	12.6	20.5	15.8	23.5
All consistent sample[1]	12.6	6.1	7.0	13.3	22.7	38.3
2012 EBRI/ICI 401(k) database[3]	10.2	4.1	5.9	13.0	25.7	41.0

[1] Participants include the 7.5 million 401(k) plan participants with account balances at the end of each year from 2007 through 2012.

[2] The year-end 2007 EBRI/ICI 401(k) database represents 21.8 million 401(k) plan participants.

[3] The year-end 2012 EBRI/ICI 401(k) database represents 24.0 million 401(k) plan participants.

Note: Equities include equity funds, company stock, and the equity portion of balanced funds. 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 2012. Row percentages may not add to 100 percent because of rounding.

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

FIGURE 11

Changes in Zero Allocation to Equities Among Consistent 401(k) Participants Between 2007 and 2012

Percentage of consistent 401(k) participants by age, year-end 2007 and year-end 2012

Age	Zero in 2007	Moved away from zero by 2012	Remained at zero	Moved to zero by 2012	Net change	Zero in 2012
20s	15.5	-5.5	10.0	2.5	-3.0	12.5
30s	10.6	-3.8	6.8	3.3	-0.5	10.1
40s	9.2	-3.1	6.1	4.1	1.0	10.2
50s	9.9	-2.9	7.0	5.5	2.6	12.5
60s	12.6	-2.8	9.8	8.1	5.3	17.9
All	10.9	-3.3	7.6	5.0	1.7	12.6

Note: Equities include equity funds, company stock, and the equity portion of balanced funds. Funds include mutual funds, bank collective trusts, life insurance separate accounts, and any pooled investment product primarily invested in the security indicated. Participants include the 7.5 million 401(k) plan participants with account balances at the end of each year from 2007 through 2012. Age group is based on the participant's age at year-end 2012.

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

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, 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, it is possible to observe activity away from or to zero or 100 percent equity holdings at year-end.

Among consistent 401(k) participants between year-end 2007 and year-end 2012, few moved toward, or away from, these extremes of equity holdings; in addition, there was only a slight net movement toward reduced exposure to equities. For example, analyzing the group of consistent 401(k) participants at year-end 2012, the data show that 1.7 percent, on net, moved to a zero equities allocation—10.9 percent of this group had no equities at year-end 2007 and 12.6 percent had no equities at year-end 2012 (Figure 11). This net change reflects 3.3 percent moving from zero equities to at least some, 5.0 percent moving from some to zero, and 7.6 percent sticking with zero holdings in both 2007 and 2012. While younger 401(k) participants were more likely to move to holding some equities than older 401(k) participants, older 401(k) participants displayed slightly higher reallocation activity toward a zero equities allocation. Some of these older participants' activity could have been in anticipation of retirement rather than in response to financial market movements. Indeed, household survey information indicates that households anticipate rebalancing their portfolios as they age.[18]

Very few consistent 401(k) participants had their entire 401(k) balances invested in equities, and only a small net movement away from that full concentration occurred between year-end 2007 and year-end 2012. 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.[19] Analyzing the group of consistent 401(k) participants at year-end 2012, the data show that 1.8 percent, on net, moved away from a 100 percent equities allocation—15.2 percent of this group at year-end 2007 and 13.4 percent at year-end 2012 were 100 percent invested in equities (Figure 12). This net change reflects 6.2 percent moving away from the 100 percent allocation to something less, 4.4 percent moving to a 100 percent allocation, and 9.0 percent sticking with 100 percent allocation to equities in both 2007 and 2012. In other words, nearly 60 percent of consistent 401(k) participants with their 401(k) accounts fully invested in equities at year-end 2007 were fully invested in equities at year-end 2012.

FIGURE 12

Changes in 100 Percent Allocation to Equities Among Consistent 401(k) Participants Between 2007 and 2012

Percentage of consistent 401(k) participants by age, year-end 2007 and year-end 2012

Age	100 percent in 2007	Moved away from 100 percent by 2012	Remained at 100 percent	Moved to 100 percent by 2012	Net change	100 percent in 2012
20s	12.7	-6.3	6.4	5.7	-0.6	12.1
30s	15.0	-6.3	8.7	5.4	-0.9	14.1
40s	16.9	-6.6	10.3	4.7	-1.9	15.0
50s	14.9	-6.3	8.6	4.0	-2.3	12.6
60s	13.4	-5.5	7.9	3.8	-1.7	11.7
All	15.2	-6.2	9.0	4.4	-1.8	13.4

Note: Equities include equity funds, company stock, and the equity portion of balanced funds. Funds include mutual funds, bank collective trusts, life insurance separate accounts, and any pooled investment product primarily invested in the security indicated. Participants include the 7.5 million 401(k) plan participants with account balances at the end of each year from 2007 through 2012. Age group is based on the participant's age at year-end 2012.

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

Exposure to Target Date Funds Has Increased Slightly Among Consistent 401(k) Participants Between 2007 and 2012

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

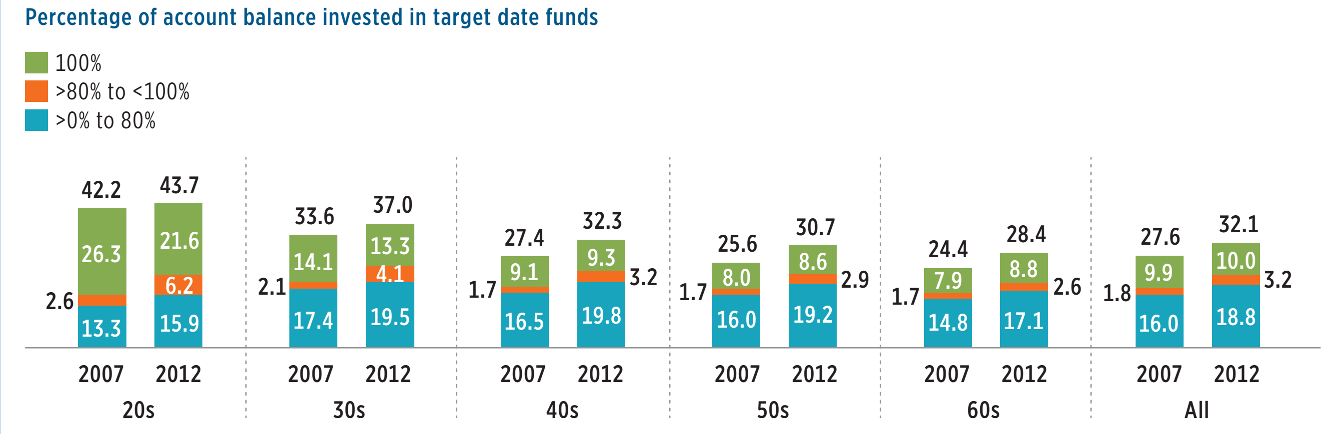
Between year-end 2007 and year-end 2012, consistent 401(k) participants' use of target date funds increased slightly, with few participants moving into or out of these funds. At year-end 2007, 27.6 percent of consistent 401(k) participants held at least some target date fund investments in their 401(k) accounts, and that share increased slightly to 32.1 percent at year-end 2012, with the growth occurring across all age groups (Figure 13). In both years, younger 401(k) participants were more likely to hold some target date fund investments, compared with older participants: 43.7 percent of consistent 401(k) participants in their twenties had target date funds in their 401(k) accounts at year-end 2012, compared with 28.4 percent of consistent 401(k) participants in their sixties. Nevertheless, the largest movement toward target date fund use over the period occurred among consistent 401(k) participants in their forties and fifties, and was lowest among those in their twenties.

At year-end 2007, 9.9 percent of consistent 401(k) participants had their entire account balance invested in target date funds, essentially the same share as at year-end 2012, but small movements to or away from such a full allocation varied by participant age. Younger consistent 401(k) participants moved slightly away from a 100 percent allocation, on net, while older consistent 401(k) participants edged toward a 100 percent allocation to target date funds, on net. For example, 21.6 percent of consistent 401(k) participants in their twenties had 100 percent of their 401(k) account invested in target date funds at year-end 2012, compared with 26.3 percent at year-end 2007 (Figure 13). At the other end of the age spectrum, consistent 401(k) participants in their sixties moved toward a 100 percent concentration in target date funds, on net: 8.8 percent of consistent 401(k) participants in their sixties had 100 percent of their 401(k) account invested in target date funds at year-end 2012, compared with 7.9 percent at year-end 2007.

FIGURE 13

Changes in 401(k) Participants' Allocation to Target Date Funds Between 2007 and 2012

Percentage of consistent 401(k) plan participants by age, year-end 2007 and year-end 2012



Note: A target date fund—whether a mutual fund, bank collective trust, life insurance separate account, or other pooled investment product—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. Age group is based on the participant's age at year-end 2012. See Figures 14 and 16 for additional detail.

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

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

Movement in the share of target date funds in 401(k) participants' accounts results from changes in the value of their target date fund assets relative to the other investments in the 401(k) account, which depends on the relative performance of stocks versus fixed-income securities, 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, it is possible to observe activity into or out of zero or 100 percent investment in target date funds at year-end.

Among consistent 401(k) participants between year-end 2007 and year-end 2012, few moved toward, or away from, these extremes of equity holdings; in addition, there was only slight net movement toward increased exposure to target date funds. For example, analyzing the group of consistent 401(k) participants at year-end 2012, the data show that 4.5 percent, on net, moved away from a zero target date funds allocation—72.4 percent of this group had no target date funds at year-end 2007 and 67.9 percent had no target date funds at year-end 2012 (Figure 15). This net change reflects 10.4 percent moving from zero target date funds to at least some, 5.9 percent moving from some to zero, and 62.0 percent sticking with zero holdings in both 2007 and 2012. Allocation activity did not vary much by participant age.

FIGURE 14

Younger 401(k) Participants Have Higher Concentrations in Target Date Funds

Asset allocation distribution of 401(k) participant account balance to target date funds by age, percentage of participants, year-end 2007 and year-end 2012

	Percentage of account balance invested in target date funds at year-end 2007					
Age group	Zero	1 to 20 percent	>20 to 40 percent	>40 to 60 percent	>60 to 80 percent	>80 percent
20s	57.8	4.1	3.5	3.1	2.6	28.9
30s	66.4	7.2	4.7	3.2	2.3	16.2
40s	72.6	7.6	4.4	2.7	1.8	10.8
50s	74.4	7.4	4.2	2.7	1.7	9.7
60s	75.6	6.7	3.9	2.6	1.6	9.6
All consistent sample[1]	72.4	7.2	4.2	2.8	1.8	11.7
2007 EBRI/ICI 401(k) database[2]	74.9	6.3	4.0	2.5	1.6	10.9

	Percentage of account balance invested in target date funds at year-end 2012					
Age group	Zero	1 to 20 percent	>20 to 40 percent	>40 to 60 percent	>60 to 80 percent	>80 percent
20s	56.3	5.4	3.9	3.2	3.4	27.8
30s	63.0	7.9	5.0	3.6	3.0	17.4
40s	67.7	8.7	5.1	3.4	2.6	12.5
50s	69.3	8.6	4.9	3.3	2.4	11.5
60s	71.6	7.6	4.3	3.1	2.1	11.4
All consistent sample[1]	67.9	8.2	4.8	3.3	2.5	13.2
2012 EBRI/ICI 401(k) database[3]	59.0	5.3	3.6	3.0	2.4	26.7

[1] Participants include the 7.5 million 401(k) plan participants with account balances at the end of each year from 2007 through 2012.

[2] The year-end 2007 EBRI/ICI 401(k) database represents 21.8 million 401(k) participants.

[3] The year-end 2012 EBRI/ICI 401(k) database represents 24.0 million 401(k) participants.

Note: A target date fund—whether a mutual fund, bank collective trust, life insurance separate account, or other pooled investment product—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. Age group is based on the participant's age at year-end 2012. Row percentages may not add to 100 percent because of rounding.

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

FIGURE 15

Changes in Zero Allocation to Target Date Funds Among Consistent 401(k) Participants Between 2007 and 2012

Percentage of consistent 401(k) participants by age, year-end 2007 and year-end 2012

Age	Zero in 2007	Moved away from zero by 2012	Remained at zero	Moved to zero by 2012	Net change	Zero in 2012
20s	57.8	-9.1	48.7	7.6	-1.5	56.3
30s	66.4	-9.9	56.5	6.5	-3.4	63.0
40s	72.6	-10.5	62.1	5.6	-4.9	67.7
50s	74.4	-10.9	63.5	5.8	-5.1	69.3
60s	75.6	-10.0	65.6	6.0	-4.0	71.6
All	72.4	-10.4	62.0	5.9	-4.5	67.9

Note: A target date fund—whether a mutual fund, bank collective trust, life insurance separate account, or other pooled investment product—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. Participants include the 7.5 million 401(k) plan participants with account balances at the end of each year from 2007 through 2012. Age group is based on the participant's age at year-end 2012.

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

About 10 percent of consistent 401(k) participants had their entire 401(k) balances invested in target date funds, and on net, very few participants changed their positions to or from this concentration between year-end 2007 and year-end 2012. Analyzing the group of consistent 401(k) participants at year-end 2012, the data show that virtually none, on net, moved to or from a 100 percent target date funds allocation—9.9 percent of this group at year-end 2007 and 10.0 percent at year-end 2012 were 100 percent invested in target date funds (Figure 16). However, even though there was nearly no net change, some participants did reallocate their assets: 2.5 percent of consistent 401(k) participants moved away from the 100 percent allocation to something less, 2.6 percent moved to a 100 percent allocation, and 7.4 percent stuck with a 100 percent allocation to target date funds in both 2007 and 2012. In other words, three-quarters of consistent 401(k) participants with their 401(k) accounts fully invested in target date funds at year-end 2007 were fully invested in target date funds at year-end 2012. This high level of persistence in target date fund investing was observed across all participant ages, although the lowest level of participants remaining 100 percent allocated to target date funds from 2007 to 2012 (69 percent) was seen among consistent 401(k) participants in their twenties.

FIGURE 16

Changes in 100 Percent Allocation to Target Date Funds Among Consistent 401(k) Participants Between 2007 and 2012

Percentage of consistent 401(k) participants by age, year-end 2007 and year-end 2012

Age	100 percent in 2007	Moved away from 100 percent by 2012	Remained at 100 percent	Moved to 100 percent by 2012	Net change	100 percent in 2012
20s	26.3	-8.1	18.2	3.4	-4.7	21.6
30s	14.1	-3.6	10.5	2.8	-0.8	13.3
40s	9.1	-2.2	6.9	2.4	0.2	9.3
50s	8.0	-2.0	6.0	2.6	0.6	8.6
60s	7.9	-1.9	6.0	2.8	0.9	8.8
All	9.9	-2.5	7.4	2.6	0.1	10.0

Note: A target date fund—whether a mutual fund, bank collective trust, life insurance separate account, or other pooled investment product—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. Participants include the 7.5 million 401(k) plan participants with account balances at the end of each year from 2007 through 2012. Age group is based on the participant's age at year-end 2012.

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

Target Date Fund Use Rose Substantially in the Entire EBRI/ICI 401(k) Database

While target date fund use was relatively stable in the consistent sample between 2007 and 2012, edging up only slightly, target date fund use has increased substantially in the entire cross-sectional EBRI/ICI 401(k) database over the same period. At year-end 2007, 27.6 percent of 401(k) participants in the consistent sample owned target date funds, compared with 25.1 percent of the year-end 2007 cross section (Figure 14). By year-end 2012, ownership in the consistent sample had increased to 32.1 percent, while ownership of target date funds in the 2012 cross section had increased considerably more to 41.0 percent (an increase of 15.9 percentage points). Because target date funds are often used as a default investment option in 401(k) plans with automatic enrollment,[20] some of their growth is related to the spread of automatic enrollment in recent years. This helps to explain the relative stability of the consistent sample as compared to the cross sections, where newly enrolled participants are included, many of whom could have been automatically enrolled into a target date fund. In addition, the offering of target date funds in 401(k) plans' investment lineups has increased, resulting in more participants having the opportunity to select target date funds.[21]

About the EBRI/ICI 401(k) Database

The EBRI/ICI Participant-Directed Retirement Plan Data Collection Project is the largest, most representative repository of information about individual 401(k) plan participant accounts. As of December 31, 2012, the EBRI/ICI 401(k) database included statistical information about 24.0 million 401(k) plan participants, in 64,619 employer-sponsored 401(k) plans, holding $1.536 trillion in assets. The 2012 EBRI/ICI 401(k) database covered about 46 percent of the universe of active 401(k) plan participants, more than 10 percent of plans, and 44 percent of 401(k) plan assets. 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 at year-end 2012.[22] 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 2012, 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.[23]

Data provided for each participant 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.[24] 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.[25] 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.[26] 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[27] and other stable value funds,[28] 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.[29]

Notes

[1] For example, as of December 31, 2012, the EBRI/ICI 401(k) database included statistical information on 24.0 million 401(k) plan participants, in 64,619 employer-sponsored 401(k) plans, holding $1.536 trillion in assets (see Holden et al. 2013b). Using National Compensation Survey data and historical relationships and trends evident in the Form 5500 data, EBRI and ICI estimate the number of active 401(k) participants to be about 52 million in 2012 and the number of 401(k) plans to be about 515,000 (see note 2 in Holden et al. 2013b; and U.S. Department of Labor 2013). At year-end 2012, 401(k) plan assets were $3.5 trillion (see Investment Company Institute 2014). The 2012 EBRI/ICI database covered 46 percent of the universe of 401(k) plan participants, more than 10 percent of plans, and 44 percent of 401(k) plan assets.

[2] 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.

[3] About half of traditional IRA assets resulted from rollovers from employer-sponsored retirement plans. See Holden and Chism 2014.

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

[5] The value of this percentage is lower than it would have been if it merely reflected employee turnover and retirement. Any time a 401(k) plan sponsor changes service providers, all participants in the plan would be excluded from the consistent sample.

[6] For the report on the year-end 2007 EBRI/ICI 401(k) database, see Holden et al. 2008.

[7] 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.

[8] 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 et al. 2013b.

[9] 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 The Vanguard Group 2014).

[10] At year-end 2012, 60 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. The equity portion was estimated using the industry average equity percentage for the assigned target date fund calculated using the Morningstar Lifecycle Allocation Index.

[11] For a description of the investment options, see page 22.

[12] 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.

[13] Data from the ICI Survey of Defined Contribution Plan Recordkeepers find that DC plan participants generally stayed the course through the financial crisis. The vast majority of DC plan participants continued contributing and only a negligible share took withdrawals; in addition, a minority of participants rebalanced either their contribution investment allocations or their account investment allocations. See Holden and Schrass 2014 for DC plan participants' annual activities between 2008 and 2013.

[14] For discussion of how U.S. households' investments change over the life cycle, see Sabelhaus, Bogdan, and Schrass 2008.

[15] Although some movement to or away from high concentrations in equities may be due to active reallocation by participants, it also may be due to passive changes, such as the relative prices of equities and fixed-income securities or the reallocation of target date funds towards fixed-income securities over time.

[16] The National Bureau of Economic Research (NBER), which publishes its assessment of U.S. business cycles, indicated that the most recent recession occurred from December 2007 through June 2009. See National Bureau of Economic Research 2010.

[17] Household survey information indicates that households anticipate rebalancing their portfolios as they age. See Sabelhaus, Bogdan, and Schrass 2008.

[18] See Sabelhaus, Bogdan, and Schrass 2008.

[19] Because no target date funds have a 100 percent equity allocation, investors with a 100 percent allocation to target date funds would not be counted as having 100 percent equities.

[20] Plan Sponsor Council of America 2013 reports that among 401(k) plans surveyed with automatic enrollment, 73.3 percent use target date funds as the default investment in 2012, compared with 30.6 percent in 2006 (see Plan Sponsor Council of America 2007).

[21] At year-end 2012, 72 percent of plans in the EBRI/ICI 401(k) database offered target date funds in their investment lineups, 41 percent of 401(k) participants were holding target date funds, and 15 percent of the assets in the database were invested in target date funds (see Holden et al. 2013b). At year-end 2007, 67 percent of plans in the EBRI/ICI 401(k) database offered target date funds in their investment lineups, 25 percent of 401(k) participants were holding target date funds, and 7 percent of the assets in the database were invested in target date funds (see Holden et al. 2008).

[22] For the complete update from the year-end 2012 EBRI/ICI 401(k) database, see Holden et al. 2013b.

[23] 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.

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

[25] 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. Preliminary research analyzing 1.4 million participants drawn from the 2000 EBRI/ICI 401(k) database suggests that the sheer number of investment options presented does not influence participants. On average, participants had 10.4 distinct options but, on average, chose only 2.5 (see Holden and VanDerhei 2001). In addition, the preliminary analysis found that 401(k) participants are not naïve—that is, when given *n* options, they do not divide their assets among all *n*. Indeed, less than 1 percent of participants followed a 1/*n* asset allocation strategy. Plan Sponsor Council of America 2013 indicates that among the 686 plans surveyed in 2012, the average number of investment fund options available for participant contributions was 19. Aon Hewitt 2013 indicates an average of 20 investment options in 2012. Deloitte Consulting LLP, International Foundation of Employee Benefit Plans, and the International Society of Certified Employee Benefit Specialists 2013 reports that the average number of funds offered by the nearly 400 401(k) plan sponsors responding to that question in their survey was 19 in 2012. PLANSPONSOR's *2012 Defined Contribution Survey* of 5,930 plan sponsors indicated that a median of 16 fund options were offered (an average of 17.6), while a median of four (an average of 4.7) were actually held by participants.

[26] 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.

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

[28] 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.

[29] 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.

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