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Issue BRIEF

401(k) Plan Asset Allocation, Account Balances, and Loan Activity in 2008

By Jack VanDerhei, EBRI; Sarah Holden, ICI; and Luis Alonso, EBRI

EXECUTIVE SUMMARY

Because 401(k) balances can fluctuate with market returns from year to year, meaningful analysis of 401(k) plans must examine how participants' accounts have performed over the long term. Looking at consistent participants in the EBRI/ICI 401(k) database over the five-year period from 2003 to 2008 (which included one of the worst bear markets for stocks since the Great Depression), the study found:

- After rising in 2003 and for the next four consecutive years, the average 401(k) retirement account fell 24.3 percent in 2008.
- The average 401(k) account balance moved up and down with stock market performance, but over the entire five-year time period increased at an average annual growth rate of 7.2 percent, attaining $86,513 at year-end 2008.
- The median (mid-point) 401(k) account balance increased at an average annual growth rate of 11.4 percent over the 2003–2008 period to $43,700 at year-end 2008.

THE BULK OF 401(K) ASSETS CONTINUED TO BE INVESTED IN STOCKS. On average, at year-end 2008, 56 percent of 401(k) participants' assets were invested in equity securities through equity funds, the equity portion of balanced funds, and company stock. Forty-one percent was in fixed-income securities such as stable-value investments and bond and money market funds.

THREE-QUARTERS OF 401(K) PLANS INCLUDED LIFECYCLE FUNDS IN THEIR INVESTMENT LINEUP AT YEAR-END 2008. At year-end 2008, nearly 7 percent of the assets in the EBRI/ICI 401(k) database were invested in lifecycle funds and 31 percent of 401(k) participants held lifecycle funds. Also known as "target-date" funds, they are designed to simplify investing and automate account rebalancing.

NEW EMPLOYEES CONTINUED TO USE BALANCED FUNDS, INCLUDING LIFECYCLE FUNDS. Across all age groups, more new or recent hires invested their 401(k) assets in balanced funds, including lifecycle funds. At year-end 2008, 36 percent of the account balances of recently hired participants in their 20s were invested in balanced funds, compared with 28 percent in 2007, and about 7 percent in 1998. At year-end 2008, almost 23 percent of the account balances of recently hired participants in their 20s were invested in lifecycle funds, compared with almost 19 percent at year-end 2007.

401(K) PARTICIPANTS CONTINUED TO SEEK DIVERSIFICATION OF THEIR INVESTMENTS. The share of 401(k) accounts invested in company stock continued to shrink, falling by nearly 1 percentage point (to 9.7 percent) in 2008. That continued a steady decline that started in 1999. Recently hired 401(k) participants contributed to this trend: they were less likely to hold employer stock.

PARTICIPANTS' 401(K) LOAN ACTIVITY WAS STABLE. In 2008, 18 percent of all 401(k) participants eligible for loans had a loan outstanding against their 401(k) account, the same percentage as at year-end 2007 and year-end 2006. Loans outstanding amounted to 16 percent of the remaining account balance, on average, at year-end 2008; this is similar to the year-end 2002 level.

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401(k) Plan Asset Allocation, Account Balances, and Loan Activity in 2008

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Introduction

Over the past two decades, 401(k) plans have grown to be the most widespread private-sector employer-sponsored retirement plan in the United States,[1] and now serve as the most popular defined contribution (DC) plan, representing the largest number of participants and assets. In 2008, 49.8 million American workers were active 401(k) plan participants.[2] By year-end 2008, 401(k) plan assets had grown to represent 16 percent of all retirement assets, amounting to $2.3 trillion.[3] In an ongoing collaborative effort, the Employee Benefit Research Institute (EBRI)[4] and the Investment Company Institute (ICI)[5] collect annual data on millions of 401(k) plan participants as a means to accurately portray how these participants manage their accounts.

This report is an update of EBRI and ICI's ongoing research into 401(k) plan participants' activity through year-end 2008.[6] The report is divided into five sections: The first describes the EBRI/ICI 401(k) database; the second focuses on changes in participant account balances over time, analyzing a group of consistent 401(k) participants; the third presents a snapshot of participant account balances at year-end 2008; the fourth looks at participants' asset allocations, including analysis of 401(k) participants' use of lifecycle, or target-date, funds; and the fifth focuses on participants' 401(k) loan activity.

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, 2008, the database included statistical information about:

- 24.0 million 401(k) plan participants, in
- 54,765 employer-sponsored 401(k) plans, holding
- $1.092 trillion in assets.

The 2008 database covered 48 percent of the universe of active 401(k) plan participants, 12 percent of plans, and 47 percent of 401(k) plan assets. The EBRI/ICI project is unique because it includes data provided by a wide variety of plan recordkeepers and, therefore, portrays the activity of participants in 401(k) plans of varying sizes—from very large corporations to small businesses—with a variety of investment options.

EBRI/ICI 401(k) Database

Sources and Type of Data

Several recordkeeping organizations provided records on active participants in 401(k) plans at year-end 2008. These plan recordkeepers include mutual fund companies, insurance companies, and consulting firms. Although the EBRI/ICI project has collected data from 1996 through 2008, the universe of data providers varies from year to year. In addition, the sample of plans at any given provider can change. Thus, aggregate figures in this report generally should not be used to estimate time trends, unless otherwise indicated. Records were encrypted prior to inclusion in the database to conceal the identity of employers and employees, but were coded so that both could be tracked by researchers over multiple years. 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.[7] Plan balances are constructed as the sum of all participant balances in the plan. Plan size is estimated as the sum of active participants in the plan and, as such, does not necessarily represent the total number of employees at the sponsoring firm.

Investment Options

Investment options are grouped into eight broad categories.[8] *Equity funds* consist of pooled investments primarily invested in stocks; these funds include 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: *lifecycle funds* and *non-lifecycle balanced funds*. A lifecycle fund pursues a long-term investment strategy, using a mix of asset classes, or asset allocation, that the fund provider adjusts to become more conservative over time.[9] Non-lifecycle balanced funds include asset allocation or hybrid funds, in addition to lifestyle funds.[10] *Company stock* is equity in the plan's sponsor (the employer). *Money funds* consist of those funds designed to maintain a stable share price. Stable-value products, such as *guaranteed investment contracts* (GICs)[11] and *other stable-value funds*,[12] 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.[13]

Distribution of Plans, Participants, and Assets by Plan Size

The 2008 EBRI/ICI 401(k) database contains information on 54,765 401(k) plans with $1.092 trillion in assets and 24.0 million participants (Figure 1). Most of the plans in the database are small: 42 percent of the plans have 25 or fewer participants, and 31 percent have 26 to 100 participants. In contrast, only 6 percent of the plans have more than 1,000 participants. However, participants and assets are concentrated in large plans. For example, 80 percent of participants are in plans with more than 1,000 participants, and these same plans account for 84 percent of all plan assets. Because most of the plans have a small number of participants, the asset size for many plans is modest. About 22 percent of the plans have assets of $250,000 or less, and another 32 percent have plan assets between $250,001 and $1,250,000 (Figure 2).

Relationship of EBRI/ICI 401(k) Database Plans to the Universe of All 401(k) Plans

The 2008 EBRI/ICI 401(k) database is a representative sample of the estimated universe of 401(k) plans. At year-end 2008, all 401(k) plans held a total of $2.3 trillion in assets, and the database represents about 47 percent of that total.[14] The database also covers 48 percent of the universe of active 401(k) plan participants and 12 percent of all 401(k) plans.[15] The distribution of assets, participants, and plans in the database for 2008 is similar to that reported for the universe of plans as estimated by Cerulli Associates (Figure 3).

The Typical 401(k) Plan Participant

The database includes 401(k) participants across a wide range of age and tenure. Fifty-three percent of participants were in their 30s or 40s, while 13 percent of participants were in their 20s and 9 percent were in their 60s (Figure 4). The median age of the participants in the 2008 database is 44 years, the same as in 2007. In 2008, 38 percent of the participants had five or fewer years of tenure and 5 percent had more than 30 years of tenure, the same as in 2007. The median tenure at the current employer was seven years in 2008. The tenure composition in the year-end 2008 database is similar to the tenure composition of the year-end 2007 database, but both recent years show an increase in lower-tenured participants, compared with 2006 and earlier. Although the database does not contain information on automatic enrollment, it is likely that automatic enrollment is playing a role in bringing in newly hired workers, which lowers the average tenure.[16]

Figure 1

401(k) Plan Characteristics, by Number of Plan Participants, 2008

Number of Plan Participants	Total Plans	Total Participants	Total Assets	Average Account Balance
1–10	11,185	63,104	$2,650,922,836	$42,009
11–25	11,796	202,518	$7,875,847,719	$38,890
26–50	9,241	336,060	$12,661,215,376	$37,675
51–100	7,585	538,981	$19,970,796,991	$37,053
101–250	6,713	1,064,768	$38,929,948,815	$36,562
251–500	3,195	1,125,450	$39,531,956,652	$35,125
501–1,000	1,979	1,392,504	$52,280,568,769	$37,544
1,001–2,500	1,576	2,459,048	$95,548,091,882	$38,856
2,501–5,000	713	2,488,013	$103,723,290,034	$41,689
5,001–10,000	402	2,754,383	$132,004,861,661	$47,925
>10,000	380	11,575,551	$587,290,238,333	$50,735
All	54,765	24,000,380	$1,092,467,739,068	$45,519

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

Note: The median account balance at year-end 2008 was $12,655.

Figure 2

401(k) Plan Characteristics, by Plan Assets, 2008

Total Plan Assets	Total Plans	Total Participants	Total Assets	Average Account Balance
$0–$250,000	12,202	138,324	$1,230,472,046	$8,896
>$250,000–$625,000	9,119	209,235	$3,843,726,220	$18,370
>$625,000–$1,250,000	8,345	326,741	$7,538,513,942	$23,072
>$1,250,000–$2,500,000	7,617	536,364	$13,599,899,951	$25,356
>$2,500,000–$6,250,000	7,513	1,040,572	$29,975,536,933	$28,807
>$6,250,000–$12,500,000	3,750	1,076,028	$33,138,482,593	$30,797
>$12,500,000–$25,000,000	2,351	1,293,808	$41,108,120,576	$31,773
>$25,000,000–$62,500,000	1,909	2,313,950	$75,398,663,795	$32,584
>$62,500,000–$125,000,000	780	1,916,154	$68,713,915,724	$35,860
>$125,000,000–$250,000,000	508	2,192,644	$87,958,146,715	$40,115
>$250,000,000	671	12,956,560	$729,962,260,572	$56,339
All	54,765	24,000,380	$1,092,467,739,068	$45,519

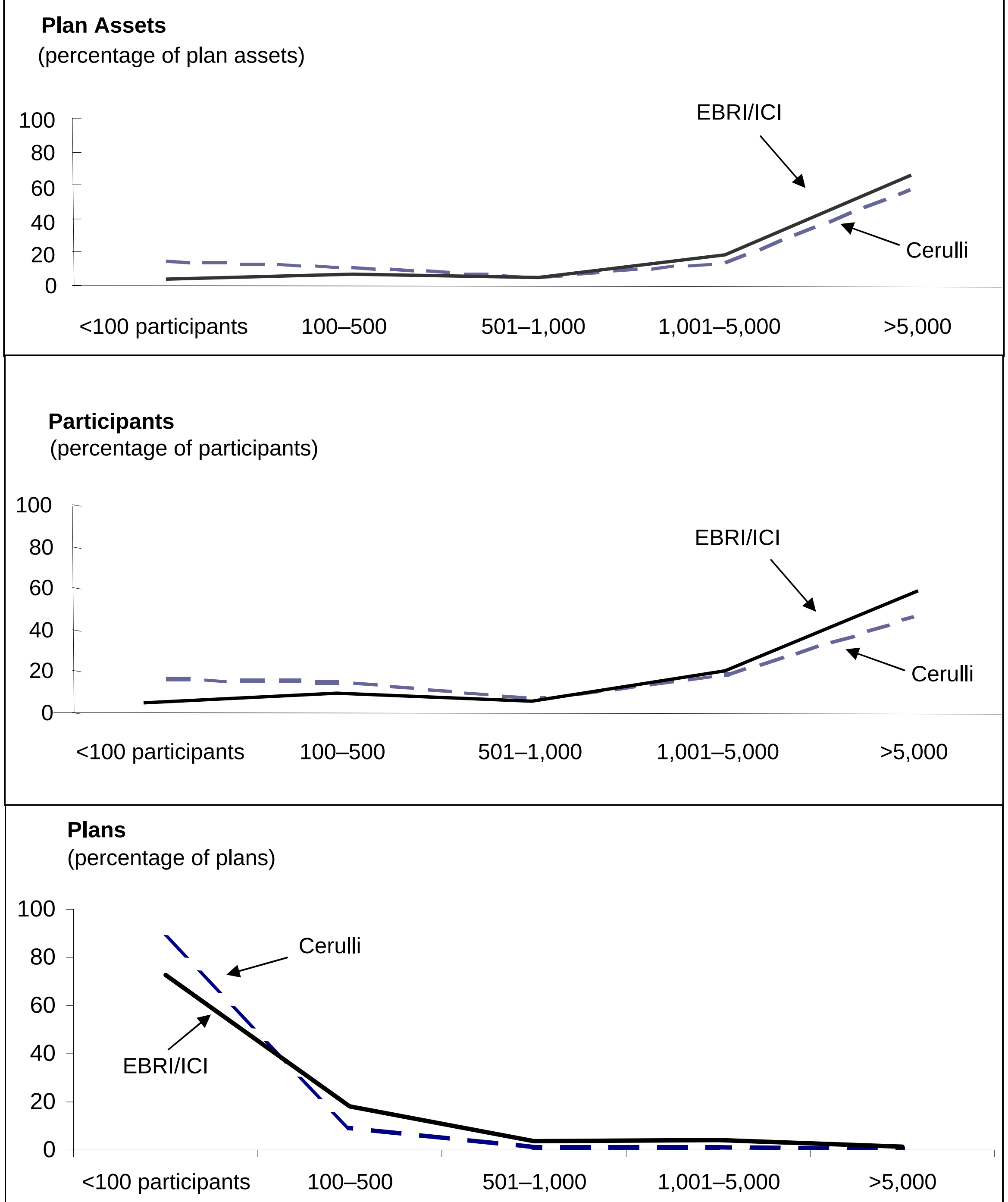
Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project.

Note: The median account balance at year-end 2008 was $12,655.

Figure 3

EBRI/ICI 401(k) Database Represents Wide Cross-Section of 401(k) Universe

401(k) plan characteristics by number of participants:
EBRI/ICI 401(k) database vs. Cerulli estimates for all 401(k) plans, 2008

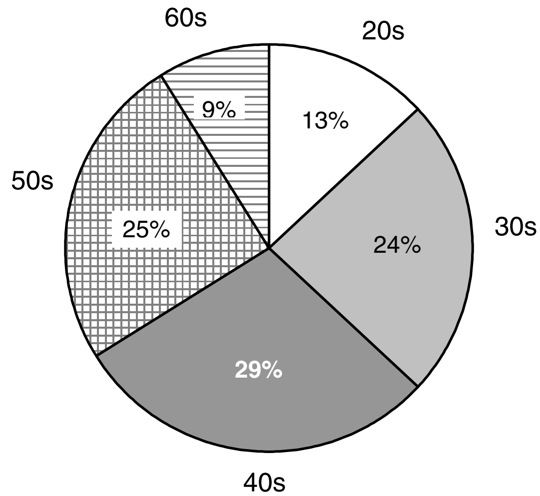


Sources: Tabulations from the EBRI/ICI Participant-Directed Retirement Plan Data Collection Project, Cerulli Associates.

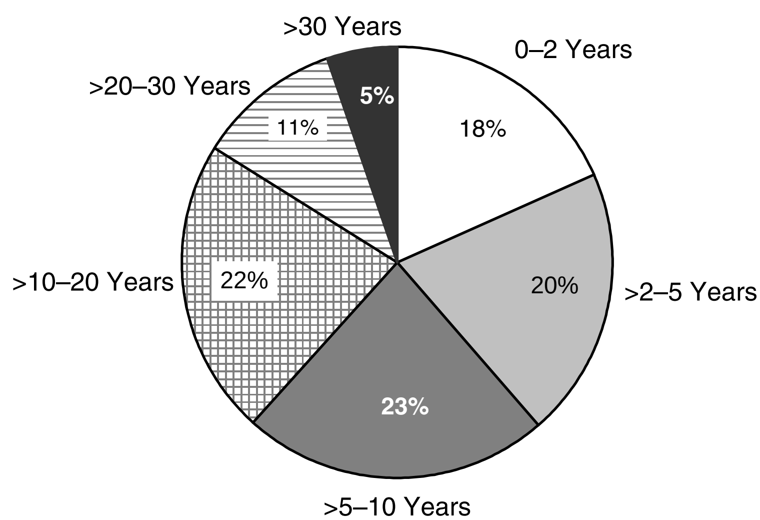
Figure 4
More Than One-Third of 401(k) Participants Are in Their 20s or 30s or Have Short Job Tenure

Percentage of 401(k) plan participants by age or tenure, 2008

By Age Group
(Median Age: 44 Years)



By Tenure
(Median Tenure: 7 Years)



Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project.
Note: Components may not add to 100 percent because of rounding. The Tenure variable is generally years working at current employer, and thus may overstate years of participation in the 401(k) plan.

Changes in 401(k) Participants' Account Balances

As a cross-section, or snapshot, of the entire population of 401(k) plan participants, the database includes 401(k) participants 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. These annual updates of the database provide snapshots of 401(k) account balances, asset allocation, and loan activity across wide cross-sections of participants. However, the cross-sectional analysis is not well-suited to addressing the question of the impact of participation in 401(k) plans over time. Cross-sections change in composition over time because the selection of data providers and sample of plans using a given provider vary from year to year and because 401(k) participants join or leave plans.[17] In addition, the database contains only the account balances held in the 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.[18, 19]

To explore the questions of the impact of ongoing participation in 401(k) plans and to understand how typical 401(k) plan participants have fared over a given time period, it is important to analyze a group of consistent participants (a longitudinal sample). This consistent group of participants is drawn from the annual cross-sections. This report, for the first time, analyzes *two different consistent groups* drawn from the database: (1) a group of 6.0 million participants with account balances at the end of each year at least from year-end 2003 through year-end 2008, and (2) a consistent group of 2.1 million participants with accounts at the end of each year at least from year-end 1999 through year-end 2008. The "2003–2008 consistent group" is introduced because the tenure of the "1999–2008 consistent group" has grown longer, and the age composition has gotten significantly older compared with the cross-sectional snapshots of participants.[20] The results from the 1999–2008 consistent group are presented in the appendix of this report.

Comparison of Consistent Group of 401(k) Participants to EBRI/ICI 401(k) Database

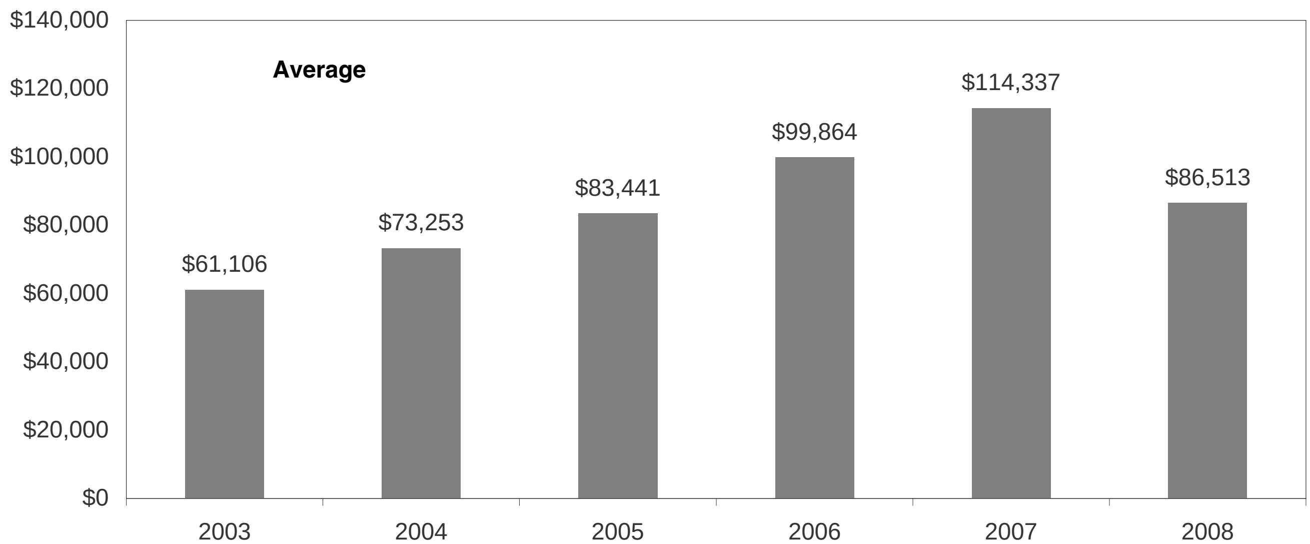
About 2 in 5, or 6.0 million, of the 401(k) participants with accounts at the end of 2003 in the EBRI/ICI 401(k) database had accounts at the end of each year from 2003 through 2008.[21] These 6.0 million 401(k) participants make up a group of consistent participants (or a longitudinal sample), which removes the effect of participants and plans entering and leaving the database. This group is similar with respect to age and tenure composition to the entire database at year-end 2003. By year-end 2008, these participants had a minimum tenure of five years and were slightly older in age composition when compared with the year-end 2008 cross-sectional database.[22] In addition, the 2003–2008 consistent group's account balances tended to be higher compared with account balances in the cross-sectional database at year-end 2008. Nevertheless, with respect to average asset allocation at year-end 2008, the 2003–2008 consistent group had similar asset allocation by participant age as participants in the entire year-end 2008 database.[23]

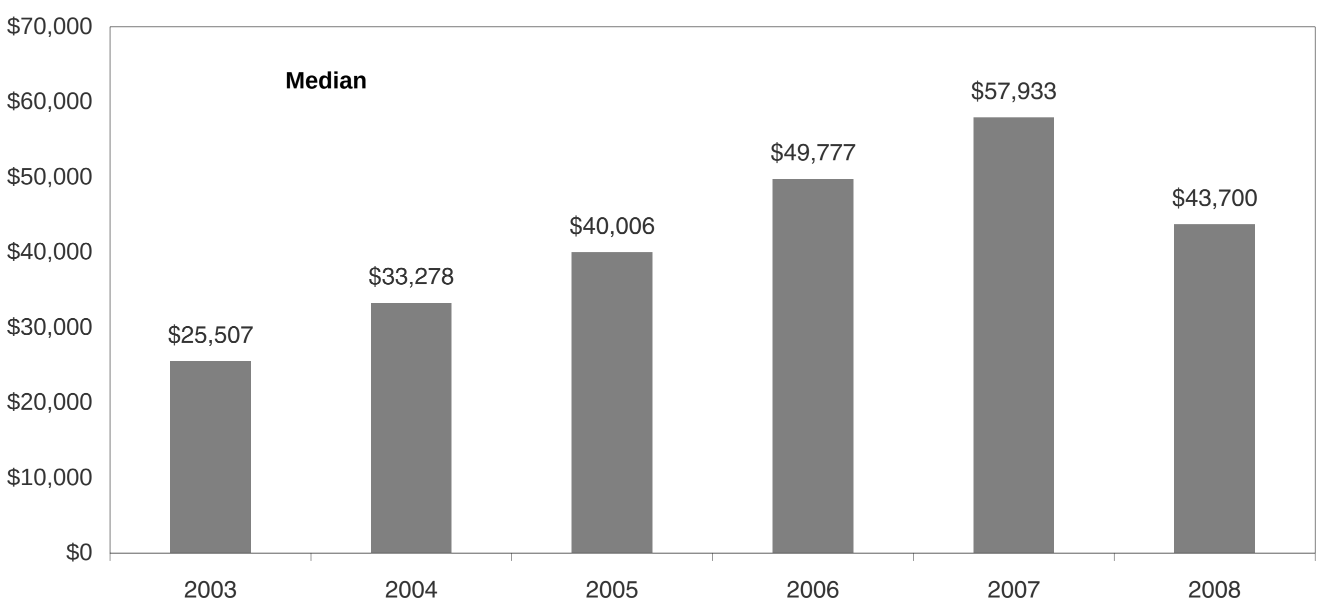
Reflecting their higher average age and tenure, the 2003–2008 consistent group also had median and average account balances that were much higher than the median and average account balances of the broader database (Figure 5). At year-end 2008, the average 401(k) account balance of the consistent group was $86,513, almost double the average account balance of $45,519 among participants in the entire database. The median 401(k) account balance among the consistent participants was $43,700 at year-end 2008, nearly three-and-one-half times the median account balance of $12,655 among participants in the entire database.[24]

401(k) account balances varied with both age and tenure among the consistent group of participants, as they do in the cross-sectional database. Younger participants or those with shorter job tenure tended to have smaller account balances, while those who were older or had longer job tenure tended to have higher account balances. For example, within the consistent group, participants in their 20s at year-end 2008 had an average account balance of $18,598, compared with an average of $125,052 for participants in their 60s (Figure 6).

Figure 5

401(k) Account Balances[a] Among 401(k) Participants Present From Year-End 2003 Through Year-End 2008[b]





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

[a] 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.

[b] The analysis is based on a sample of 6.0 million participants with account balances at the end of each year from 2003 through 2008.

Figure 6

Average Account Balances Among 401(k) Participants Present From Year-End 2003 Through Year-End 2008,[a] by Participant Age and Tenure[b]

Age Group[b]	Tenure (years)[b]	2003	2004	2005	2006	2007	2008
20s	All	$4,579	$8,286	$12,335	$17,568	$22,851	$18,598
	>2-5	$1,594	$5,634	$10,315	$15,999	$21,825	$17,909
	>5–10	$4,776	$8,491	$12,498	$17,735	$23,024	$18,779
30s	All	$19,316	$26,660	$33,816	$43,915	$53,464	$39,883
	>2-5	$6,210	$13,630	$21,547	$31,456	$41,072	$32,336
	>5–10	$14,289	$21,320	$28,381	$37,911	$47,121	$35,789
	>10–20	$27,792	$35,616	$42,881	$53,881	$63,989	$46,629
40s	All	$48,092	$59,727	$70,115	$86,165	$100,744	$74,148
	>2-5	$13,240	$23,320	$33,471	$46,380	$58,732	$45,960
	>5–10	$22,002	$31,270	$40,337	$52,627	$64,286	$48,848
	>10–20	$49,714	$61,158	$71,347	$87,298	$101,782	$73,976
	>20–30	$87,148	$103,135	$116,162	$138,666	$158,358	$116,064
50s	All	$79,627	$95,049	$107,945	$129,073	$148,043	$113,070
	>2-5	$19,952	$31,122	$41,772	$56,042	$70,177	$57,050
	>5–10	$25,434	$35,399	$45,165	$58,373	$71,096	$56,282
	>10–20	$56,952	$69,714	$80,981	$98,397	$114,090	$86,560
	>20–30	$120,920	$141,472	$158,138	$186,832	$212,560	$160,521
	>30	$121,514	$140,254	$153,928	$179,468	$201,302	$155,309
60s	All	$105,663	$120,541	$130,743	$148,882	$162,290	$125,052
	>2-5	$28,990	$40,279	$50,635	$64,075	$77,142	$62,956
	>5–10	$27,535	$37,533	$46,961	$59,262	$70,201	$55,831
	>10–20	$61,052	$73,844	$84,527	$100,068	$112,393	$85,587
	>20–30	$128,691	$147,324	$160,313	$182,439	$197,671	$150,787
	>30	$171,417	$188,257	$196,590	$217,459	$231,880	$179,573
All[a]	All	$61,106	$73,253	$83,441	$99,864	$114,337	$86,513

Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project.
[a] The analysis is based on a sample of 6.0 million participants with account balances at the end of each year from 2003 through 2008.
[b] Age and tenure groups are based on participant age and tenure at year-end 2008.

Figure 7

Percent Change in Average Account Balances Among 401(k) Participants Present From Year-End 2003 Through Year-End 2008,[a] by Participant Age and Tenure[b]

Age Group[b]	Tenure (years)[b]	2003–2004	2004–2005	2005–2006	2006–2007	2007–2008	2003–2008
20s	All	81.0%	48.9%	42.4%	30.1%	-18.6%	306.2%
	>2-5	253.5%	83.1%	55.1%	36.4%	-17.9%	1023.5%
	>5–10	77.8%	47.2%	41.9%	29.8%	-18.4%	293.2%
30s	All	38.0%	26.8%	29.9%	21.7%	-25.4%	106.5%
	>2-5	119.5%	58.1%	46.0%	30.6%	-21.3%	420.7%
	>5–10	49.2%	33.1%	33.6%	24.3%	-24.0%	150.5%
	>10–20	28.2%	20.4%	25.7%	18.8%	-27.1%	67.8%
40s	All	24.2%	17.4%	22.9%	16.9%	-26.4%	54.2%
	>2-5	76.1%	43.5%	38.6%	26.6%	-21.7%	247.1%
	>5–10	42.1%	29.0%	30.5%	22.2%	-24.0%	122.0%
	>10–20	23.0%	16.7%	22.4%	16.6%	-27.3%	48.8%
	>20–30	18.3%	12.6%	19.4%	14.2%	-26.7%	33.2%
50s	All	19.4%	13.6%	19.6%	14.7%	-23.6%	42.0%
	>2-5	56.0%	34.2%	34.2%	25.2%	-18.7%	185.9%
	>5–10	39.2%	27.6%	29.2%	21.8%	-20.8%	121.3%
	>10–20	22.4%	16.2%	21.5%	15.9%	-24.1%	52.0%
	>20–30	17.0%	11.8%	18.1%	13.8%	-24.5%	32.7%
	>30	15.4%	9.7%	16.6%	12.2%	-22.8%	27.8%
60s	All	14.1%	8.5%	13.9%	9.0%	-22.9%	18.3%
	>2-5	38.9%	25.7%	26.5%	20.4%	-18.4%	117.2%
	>5–10	36.3%	25.1%	26.2%	18.5%	-20.5%	102.8%
	>10–20	21.0%	14.5%	18.4%	12.3%	-23.9%	40.2%
	>20–30	14.5%	8.8%	13.8%	8.3%	-23.7%	17.2%
	>30	9.8%	4.4%	10.6%	6.6%	-22.6%	4.8%
All[a]	All	19.9%	13.9%	19.7%	14.5%	-24.3%	41.6%

Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project.
[a] The analysis is based on a sample of 6.0 million participants with account balances at the end of each year from 2003 through 2008.
[b] Age and tenure groups are based on participant age and tenure at year-end 2008.

Factors That Affect 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 or 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. On the other hand, investment returns of a given percentage produce larger dollar increases (or decreases) when compounded on a larger asset base.

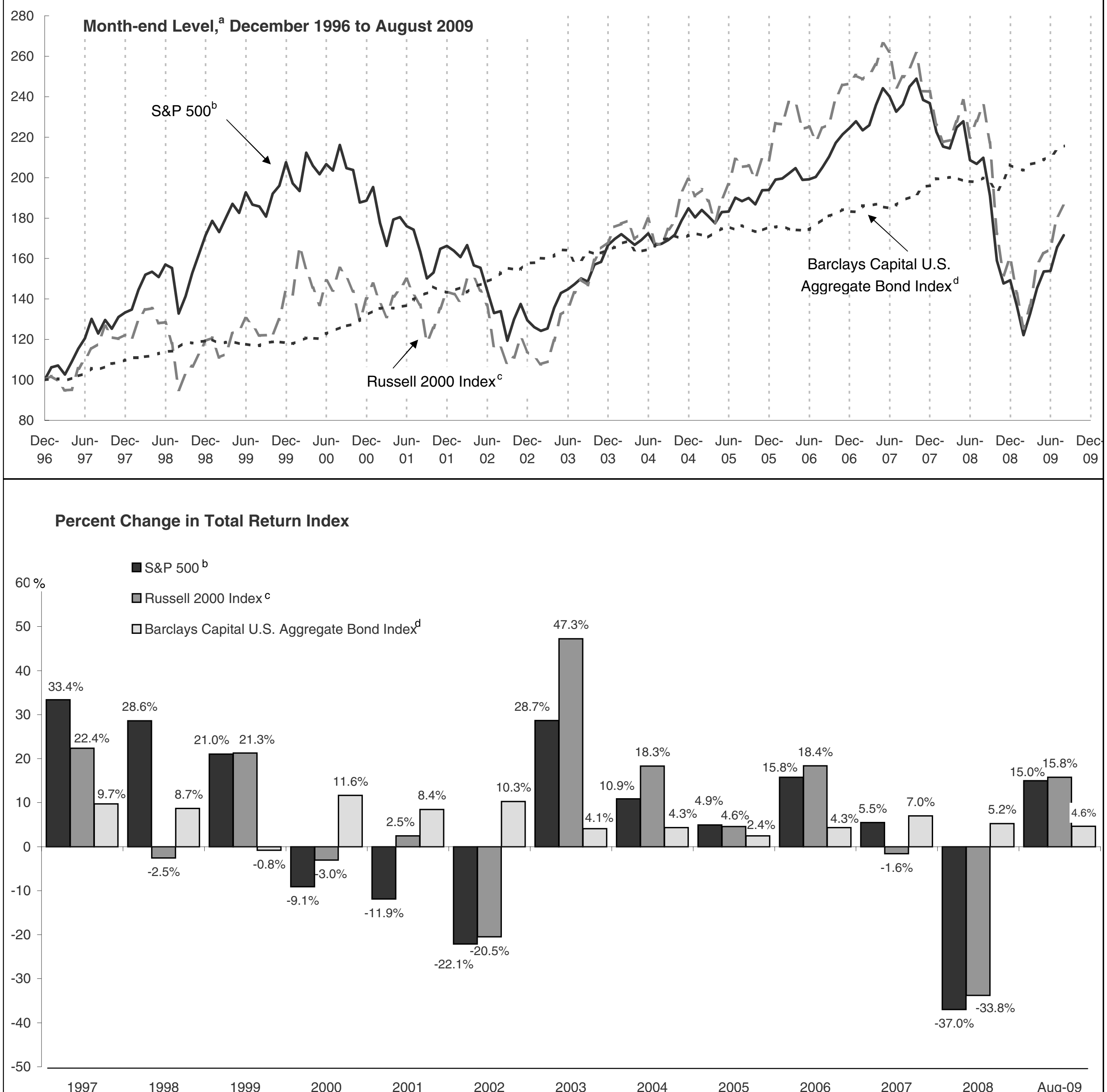
All told, from year-end 2003 through year-end 2008, the average account balance among the group of consistent participants grew 41.6 percent, rising from $61,106 at year-end 2003 to $86,513 at year-end 2008 (Figures 5 and 7). This translates into an annual average growth rate of 7.2 percent over the five-year period. The median account balance (or midpoint, with half above and half below) among this consistent group also grew, rising 71.3 percent from $25,507 in 2003 to $43,700 in 2008 (an annual average growth rate of 11.4 percent; Figure 5).

Among the consistent group, there was a wide range of individual participant experience, often influenced by the relationship among the three factors mentioned above: contributions, investment returns, and withdrawal and loan activity. Participants who were younger or had fewer years of tenure experienced the largest increases in average account balance between year-end 2003 and year-end 2008. For example, the average account balance of participants in their 20s rose 306.2 percent (a 32.4 percent annual average growth rate) between the end of 2003 and the end of 2008 (Figures 6 and 7). Because younger participants' account balances tended to be small (Figure 6), contributions produced significant account balance growth. In contrast, the average account balance of older participants or those with longer tenures showed more modest growth (Figure 7). For example, the average account balance of participants in their 60s increased 18.3 percent (a 3.4 percent annual average growth rate) between year-end 2003 and year-end 2008. Investment returns, rather than annual contributions, generally account for most of the change in accounts with larger balances. In addition, participants in their 60s tend to have a higher propensity to make withdrawals.[25]

These changes in participant account balances also reflect changes in asset values during the five-year time period (Figure 8). Although asset allocation varied with age and many participants held a range of investments, the impact of stock market performance showed through in 401(k) accounts because 401(k) plan participants tended to be heavily invested in equity securities. At year-end 2008, whether looking at the 2003–2008 consistent group or the entire EBRI/ICI 401(k) database, altogether, equity securities—equity funds, the equity portion of balanced funds,[26] and company stock—represented 56 percent of 401(k) plan participants' assets.[27] The asset allocation of participants in the consistent group varied with participant age, a pattern that is also observed in the cross-sectional EBRI/ICI 401(k) database. Younger participants generally tended to favor equity funds, while older participants were more likely to invest in fixed-income securities such as bond funds, GICs and other stable-value funds, or money funds.

Given these investment patterns, the growth pattern of 401(k) balances is influenced by stock market returns. As stock market values generally moved upward between 2003 and 2007, the average account balance of the 2003–2008 consistent group rose, on average, 17.0 percent per year over that four-year time period. In 2008, stock market performance turned sharply negative, with the S&P 500 total return index falling 37.0 percent (only in 1931, when the S&P 500 total return index fell 43.3 percent, did that measure perform as poorly on an annual basis as the market did in 2008)[28] and the Russell 2000 Index falling 33.8 percent (Figure 8). In 2008, the average 401(k) account balance of the 2003–2008 consistent group fell by a smaller amount—24.3 percent—likely reflecting diversified portfolios and ongoing contributions.[29]

Figure 8
Domestic Stock and Bond Market Indexes



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

[a] All indexes are set to 100 in December 1996.

[b] The S&P 500 index consists of 500 stocks chosen for market size, liquidity, and industry group representation.

[c] 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).

[d] 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.

Year-End 2008 Snapshot of 401(k) Participants' Account Balances

Definition of 401(k) Account Balance

In any given year, the EBRI/ICI 401(k) database provides a snapshot of the 401(k) account balances across all active participants' accounts. The database contains only the account balances held in the 401(k) plans at participants' current employers and reflects the entrance of new plans and new participants and the exit of participants who retire or change jobs. Retirement savings held in plans at previous employers or rolled over into IRAs are not included in the database. Furthermore, account balances are net of unpaid loan balances. Because of all these factors, it is not correct to presume that the change in the average or median account balance for the database as a whole reflects the experience of "typical" 401(k) plan participants.

Size of 401(k) Account Balances

At year-end 2008, the average account balance was $45,519 and the median account balance was $12,655 (Figure 9). There is wide variation in 401(k) plan participants' account balances at year-end 2008. About three-quarters of the participants in the 2008 EBRI/ICI 401(k) database had account balances that were lower than $45,519, the size of the average account balance. In fact, 45.6 percent of participants had account balances of less than $10,000, while 12.6 percent of participants had account balances greater than $100,000 (Figure 10). The variation in account balances partly reflects the effects of participant age, tenure, salary, contribution behavior, rollovers from other plans, asset allocation, withdrawals, loan activity, and employer contribution rates. This research report examines the relationship between account balances and participants' age, tenure, and salary.

Relationship of Age and Tenure to Account Balances

There is a positive correlation between age and account balance among participants covered by the 2008 database.[30] Examination of the age composition of account balances finds that 52 percent of participants with account balances of less than $10,000 were in their 20s or 30s (Figure 11). Similarly, 62 percent of participants with account balances greater than $100,000 were in their 50s or 60s. The positive correlation between age and account balance is expected because younger workers are likely to have lower incomes and to have had less time to accumulate a balance with their current employer. In addition, they are less likely to have rollovers from a previous employer's plan in their current plan accounts.

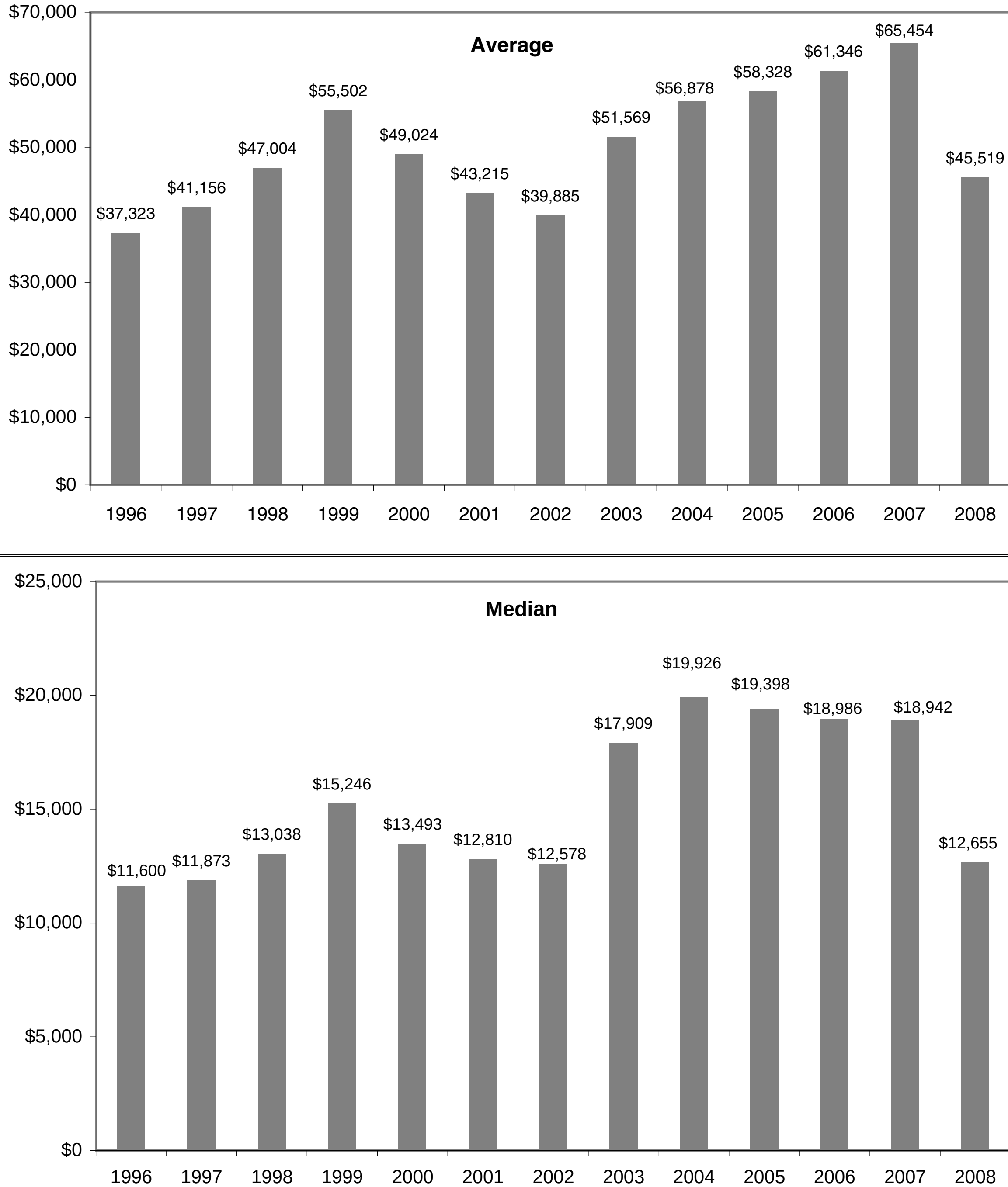
There is also a positive correlation between account balance and tenure among participants represented by the 2008 database. A participant's tenure with an employer serves as a proxy for the length of time a worker has participated in the 401(k) plan.[31] Indeed, 62 percent of participants with account balances of less than $10,000 had five or fewer years of tenure, while 83 percent of participants with account balances greater than $100,000 had more than 10 years of tenure (Figure 12).[32] Examining the interaction of both age and tenure with account balances reveals that, for a given age group, average account balances tend to increase with tenure. For example, the average account balance of participants in their 60s with up to two years of tenure was $17,619, compared with $172,555 for participants in their 60s with more than 30 years of tenure (Figure 13).[33] Similarly, the average account balance of participants in their 40s with up to two years of tenure was $11,224, compared with $101,625 for participants in their 40s with more than 20 years of tenure.

The distribution of account balances underscores the effects of age and tenure on account balances. In a given age group, shorter tenure tends to mean that a higher percentage of participants will have account balances of less than $10,000. For example, 93 percent of participants in their 20s with two or fewer years of tenure had account balances of less than $10,000 in 2008, compared with 65 percent of participants in their 20s with between five and 10 years of tenure (Figure 14). Older workers display a similar pattern. For example, 66 percent of participants in their 60s with two or fewer years of tenure had account balances of less than $10,000. In contrast, only 19 percent of those in their 60s with more than 20 years of tenure had account balances of less than $10,000.[34]

Figure 9

Snapshot of Year-End Account Balances

401(k) plan participant account balances,* 1996–2008



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

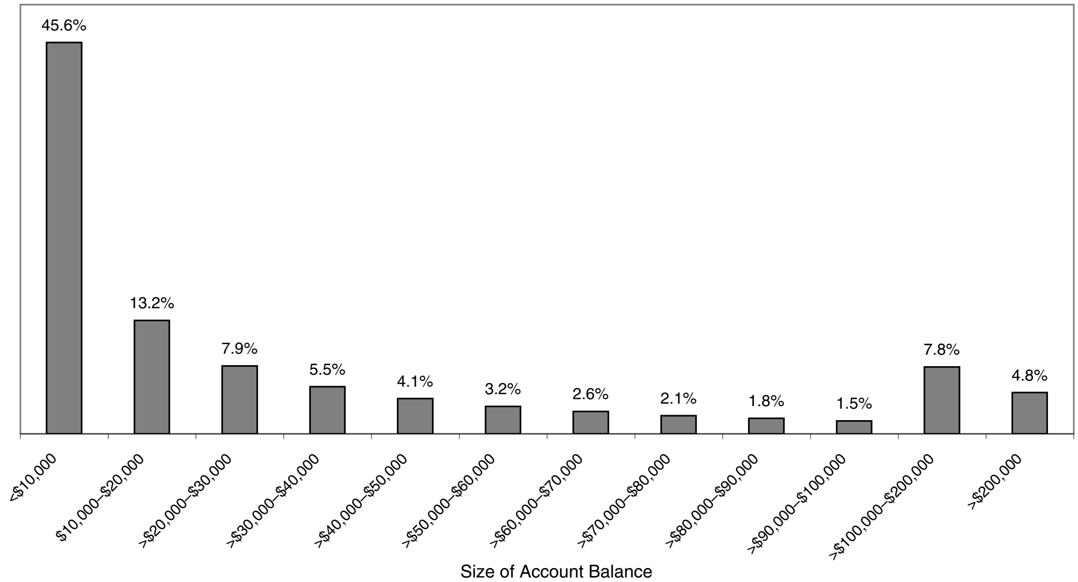
*Account balances are participant account balances held in 401(k) plans at the participants' current employers and are net of plan loans. Retirement savings held in plans at previous employers or rolled over into IRAs are not included.

Note: The sample of participants changes over time.

Figure 10

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

Percentage of participants with account balances in specified ranges,* 2008

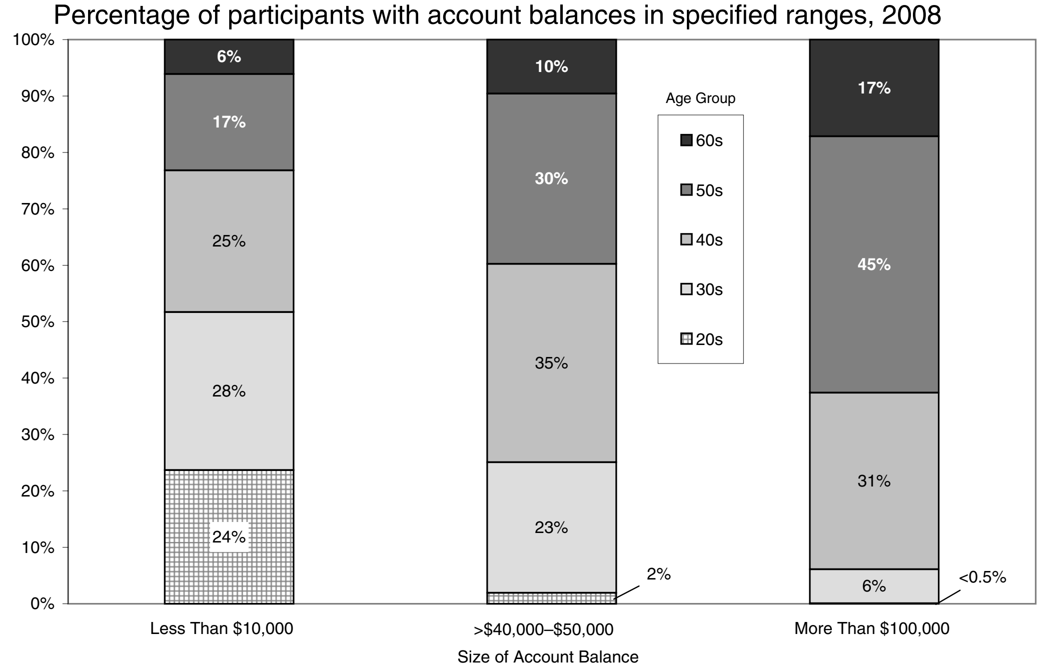


Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project.
* Percentages do not add to 100 percent because of rounding.
Note: At year-end 2008, the average account balance among all 24.0 million 401(k) plan participants was $45,519; the median account balance was $12,655.

Figure 11

Age Composition of Selected 401(k) Account Balance Categories

Percentage of participants with account balances in specified ranges, 2008

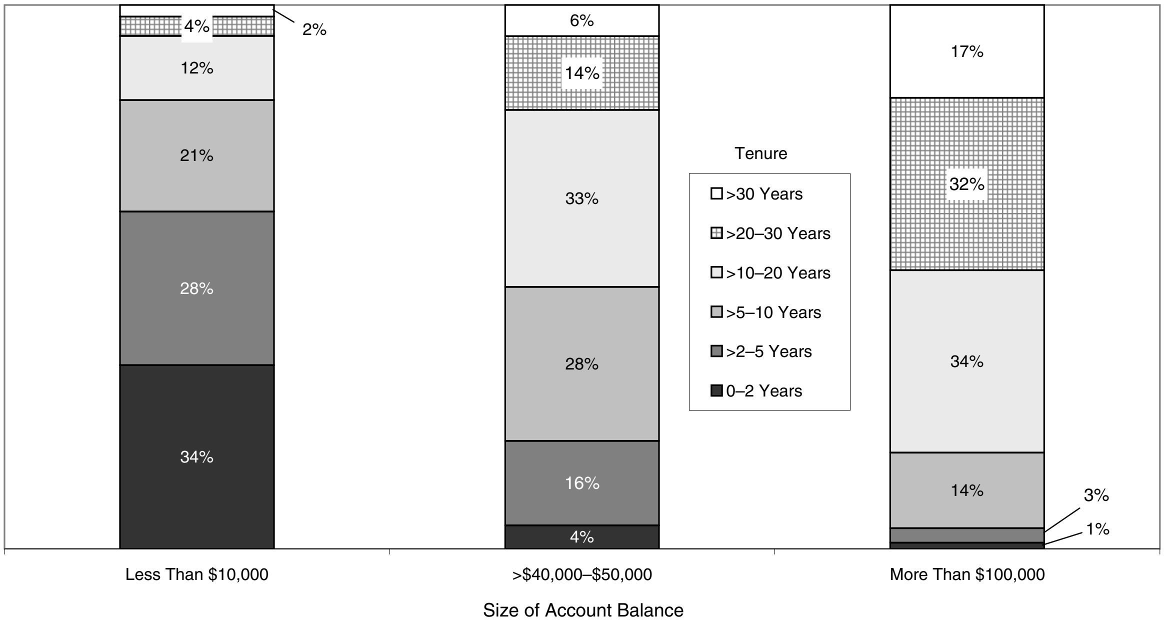


Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project.
Note: Percentages may not add to 100 percent because of rounding.

Figure 12

Tenure Composition of Selected 401(k) Account Balance Categories

Percentage of participants with account balances in specified ranges, 2008



Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project.
Note: Percentages do not add to 100 percent because of rounding. Job tenure is generally years working at current employer, and thus may overstate years of participation in the 401(k) plan.

Figure 13

Account Balances Increase With Age and Tenure

Average 401(k) account balance, by age and tenure, 2008

	Tenure (years)					
Age Group	0–2	>2–5	>5–10	>10–20	>20–30	>30
20s	$3,237	$7,001	$11,491			
30s	$7,642	$14,952	$27,809	$39,414		
40s	$11,224	$20,385	$38,510	$65,512	$101,625	
50s	$14,670	$24,004	$43,746	$76,057	$140,407	$145,990
60s	$17,619	$25,130	$42,938	$74,284	$135,018	$172,555

Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project.
Note: At year-end 2008, the average account balance among all 24.0 million 401(k) particiants was $45,519; the median account balance was $12,655. The tenure variable is generally years working at current employer, and thus may overstate years of participation in the 401(k) plan.

In a given age group, longer tenure tends to mean that a higher percentage of participants will have account balances greater than $100,000. For example, about 8 percent of participants in their 60s with 10 or fewer years of tenure had account balances in excess of $100,000 in 2008 (Figure 15). However, about 39 percent of participants in their 60s with between 20 and 30 years of tenure with their current employer had account balances greater than $100,000. The percentage increases to 45 percent for participants in their 60s with more than 30 years of tenure.

Relationship Between Account Balances and Salary

Participants' account balances vary not only with age and tenure, but also with salary. Figure 16 reports the account balances of long-tenured participants at their current employers' 401(k) plans. Retirement savings held at previous employers or amounts rolled over to IRAs are not included in the analysis. To capture as long a savings history as possible, only long-tenured participants are included in this analysis. However, it is important to note that the tenure variable is the time that individuals have been at their current jobs and may not reflect the length of time they have participated in a 401(k) plan (particularly among older participants, since 401(k) plans were introduced only about 28 years ago).[35]

Older, longer-tenured, and higher-income participants tend to have larger account balances, which are important for meeting their income-replacement needs in retirement. For long-tenured participants in their 20s with salaries between $20,000 to $40,000, the median account balance was $4,757 in 2008 (Figure 16). Longer-tenured participants in their 20s earning more than $100,000 had a median account balance of $31,342. Among long-tenured participants in their 60s with $20,000 to $40,000 in salary in 2008, the median account balance was $50,707. For longer-tenured participants in their 60s earning more than $100,000, the median account balance was $258,841.

The ratio of participant account balance to salary is positively correlated with age and tenure.[36] Participants in their 60s—having had more time to accumulate assets—tend to have higher ratios, while those in their 20s had the lowest ratios (Figure 17). In addition, for any given age and tenure combination, the ratio of account balance to salary varies somewhat with salary. For example, among participants in their 20s, the ratio tends to increase slightly with salary for low-to-moderate salary groups (Figure 18). However, at high salary levels the ratio tends to decline somewhat. A similar pattern occurs among participants in their 60s (Figure 19).[37]

Year-End 2008 Snapshot of 401(k) Asset Allocation

As tends to occur when the stock market contracts in value, the percentage of 401(k) assets invested in equities fell in 2008. At year-end 2008, 37 percent of 401(k) plan participants' account balances were invested in equity funds, on average, compared with 48 percent at year-end 2007 and 40 percent at year-end 2002 (Figure 20, top panel). Altogether, equity securities—equity funds, the equity portion of balanced funds,[38] and company stock—represented about 56 percent of 401(k) plan participants' assets.

Changes in Asset Allocation Between Year-End 2007 and Year-End 2008

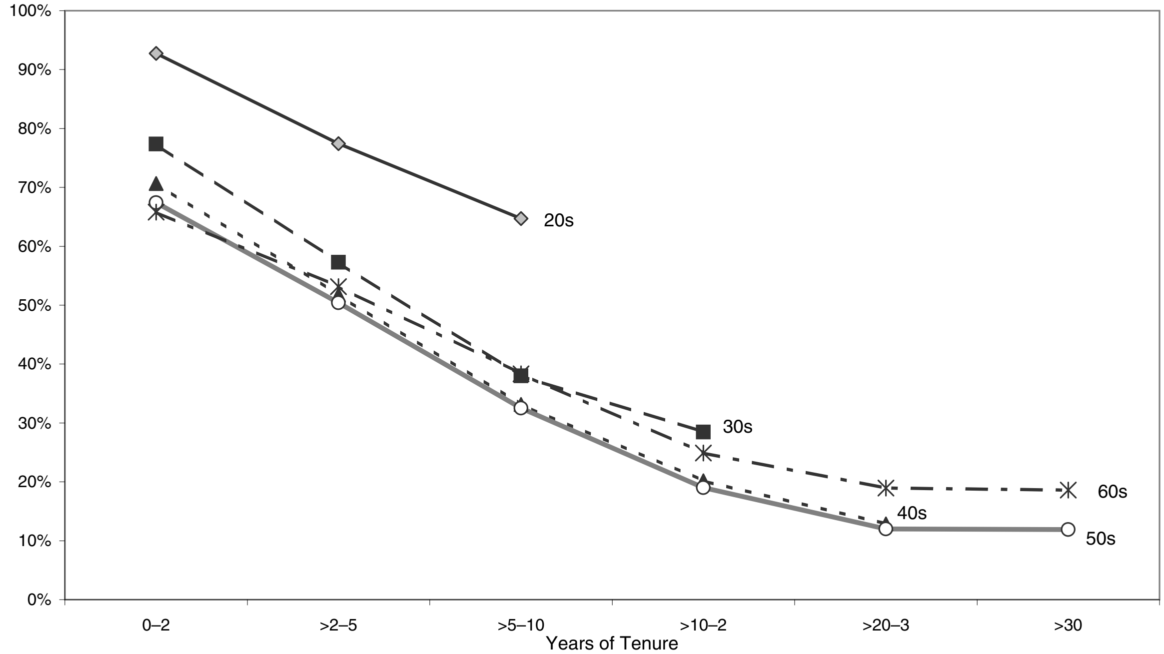
Investment performance likely explains much of the changes in 401(k) participants' asset allocations over time. Much of the movement in the largest component, equity funds, tends to reflect overall equity market prices, which generally rose from 1996 through 1999, before falling through 2002, rising again from 2003 through 2007, and then dropping in 2008 (Figures 8 and 20). At year-end 2008, equity funds were 37 percent of the assets in the EBRI/ICI 401(k) database, compared with a 40 percent share at year-end 2002, near the bottom of that bear market. Despite the decrease in equities' share and the increases in shares of bond funds, GICs and other stable-value funds, and money funds, most 401(k) participants appeared not to have made dramatic shifts in their asset allocations in 2008.[39]

Transaction activity is not tracked in the EBRI/ICI 401(k) database; nevertheless, some participant asset allocation activity can be inferred by analyzing the year-end snapshots of a consistent group of participants. For example, participant action can be discerned by studying the cases of a change from either a 0 percent (none) or a 100 percent allocation to any other allocation. Between year-end 2007 and year-end 2008, among the 18.0 million 401(k) participants with account balances

Figure 14

401(k) Account Balances Less Than $10,000, by Participant Age and Tenure

Percentage of participants with account balances less than $10,000 at year-end 2008

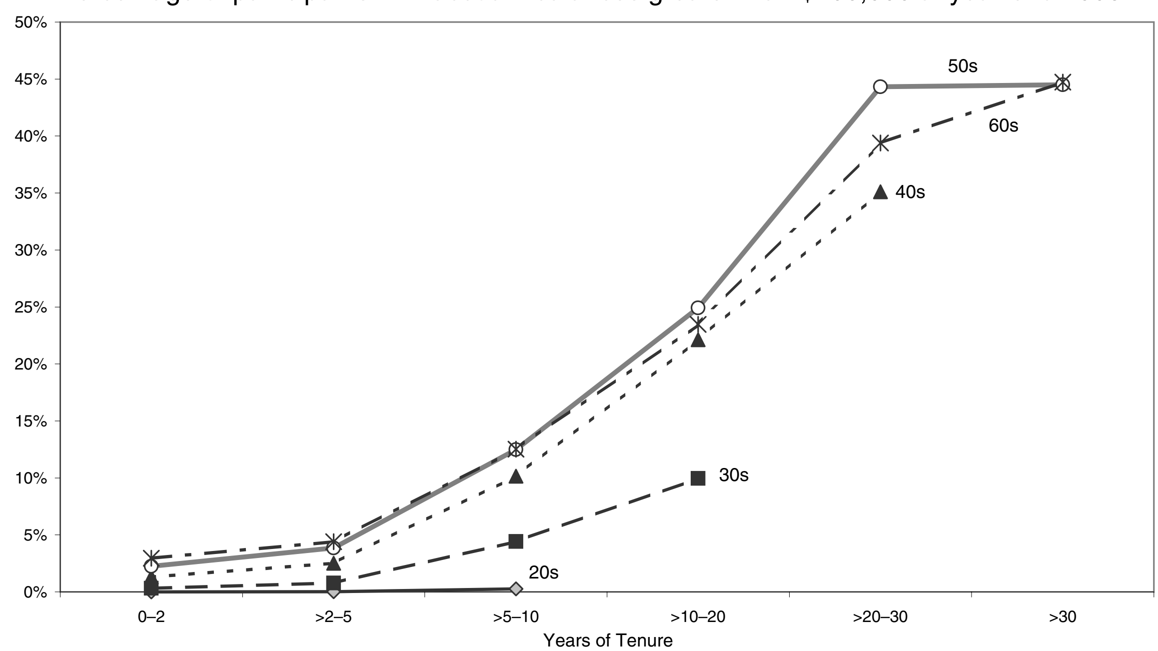


Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project.
Note: The tenure variable is generally years working at current employer, and thus may overstate years of participation in the 401(k) plan.

Figure 15

401(k) Account Balances Greater Than $100,000, by Participant Age and Tenure

Percentage of participants with account balances greater than $100,000 at year-end 2008



Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project.
Note: The tenure variable is generally years working at current employer, and thus may overstate years of participation in the 401(k) plan.

Figure 16

Median Account Balance[a] Among Long-Tenured[b] Participants, by Age and Salary, 2008

	Participant Age Group				
Salary Range	20s	30s	40s	50s	60s
$20,000–$40,000	$4,757	$15,458	$42,933	$59,457	$50,707
>$40,000–$60,000	$9,107	$23,154	$52,893	$71,591	$73,834
>$60,000–$80,000	$20,590	$40,359	$87,259	$111,732	$119,904
>$80,000–$100,000	$31,851	$64,267	$129,489	$162,674	$174,981
>$100,000	$31,342	$92,098	$194,227	$250,800	$258,841

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

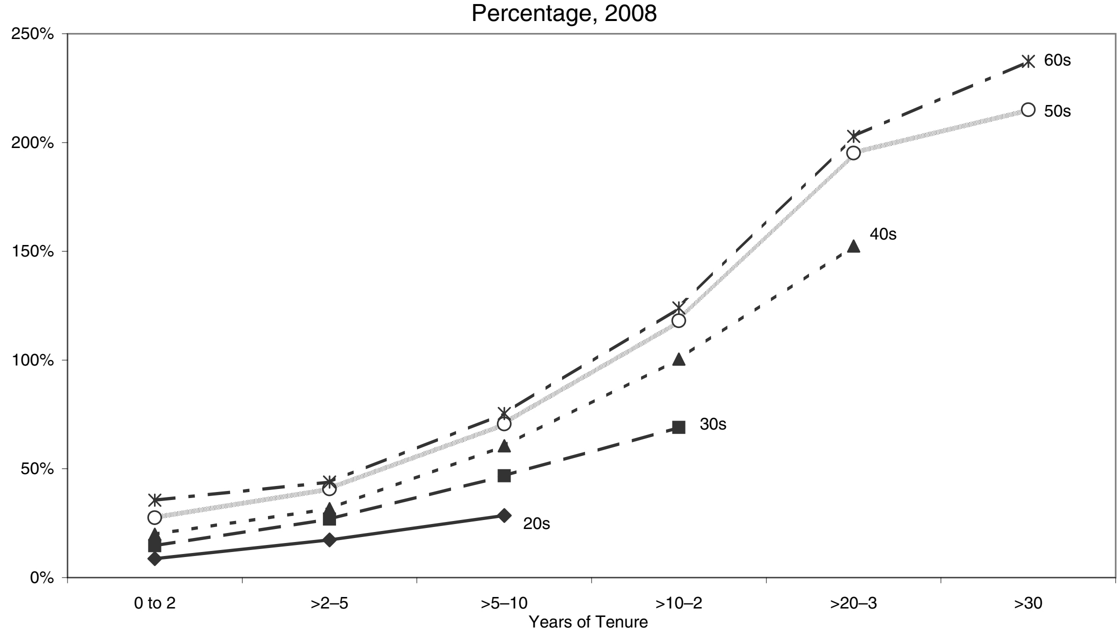
[a] Account balances are based on administrative records and cover the account balance at the 401(k) plan participant's current employer. Retirement savings held in plans at previous employers or rolled over into IRAs are not included. Account balances are net of loan balances.

[b] Long-tenured participants are used in this analysis to capture as long a work and savings history as possible. The tenure variable tends to be years with the current employer rather than years of participation in the 401(k) plan. Particularly among older participants, job tenure may not reflect length of participation in the 401(k) plans; the regulations for the 401(k) plans were introduced about 28 years ago.

Figure 17

Ratio of 401(k) Account Balance to Salary, by Age and Tenure

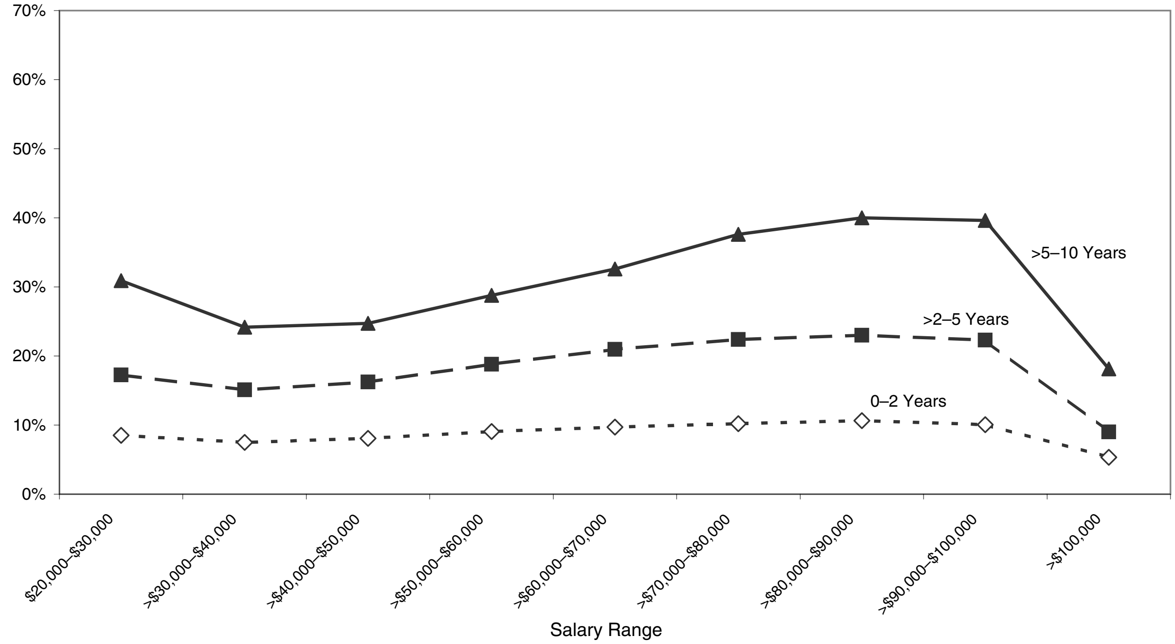
Percentage, 2008



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

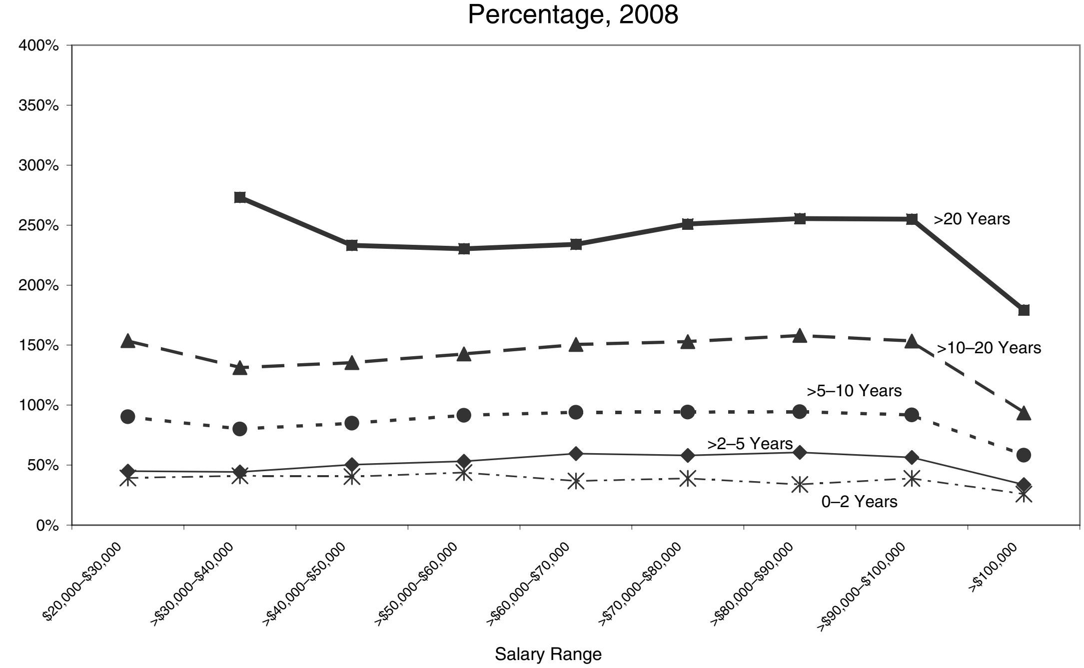
Note: The tenure variable is generally years working at current employer, and thus may overstate years of participation in the 401(k) plan.

Figure 18
Ratio of 401(k) Account Balance to Salary for Participants in Their 20s, by Tenure
Percentage, 2008



Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project.
Note: The tenure variable is generally years working at current employer, and thus may overstate years of participation in the 401(k) plan.

Figure 19
Ratio of 401(k) Account Balance to Salary for Participants in Their 60s, by Tenure
Percentage, 2008



Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project.
Note: The tenure variable is generally years working at current employer, and thus may overstate years of participation in the 401(k) plan.

in both years, the percentages of participants holding either all or none of their account balances in any particular investment option were little changed (Figure 20, lower panel).[40] For example, at year-end 2007, 37.2 percent of these participants held no equity funds. At year-end 2008, 35.0 percent continued to hold no equity funds, but 2.2 percent of participants were holding equity funds at year-end 2008 when they had held none at year-end 2007.[41] Conversely, the asset allocation to equity funds changed for 3.6 percent of 401(k) participants from holding equity funds at year-end 2007 to holding none at year-end 2008. On net, the percentage of participants holding no equity funds edged up only slightly from 37.2 percent to 38.6 percent between year-end 2007 and year-end 2008 (Figure 20, lower panel).

Similarly, there was a small decline in the percentage of participants allocating 100 percent of their accounts to equity funds (Figure 20, lower panel). At year-end 2007, 11.1 percent of participants with accounts in both 2007 and 2008 were 100 percent invested in equity funds. At year-end 2008, 8.5 percent continued to hold 100 percent of their accounts in equity funds.[42] In addition, 1.2 percent of participants had increased their asset allocation to equity funds to 100 percent at year-end 2008 from lower allocations at year-end 2007. However, 2.6 percent of participants reduced their allocation to equity funds from 100 percent to less than all of their account. On net, the percentage of participants with their full account balance allocated to equity funds edged down slightly in 2008 to 9.7 percent of participants.

The net changes in percentages of participants 100 percent invested in the non-equity fund EBRI/ICI investment categories were generally small. The largest net change involved the share of participants completely eschewing bond funds, which declined 4.1 percentage points between 2007 and 2008 (Figure 20, lower panel). At year-end 2007, 70.9 percent of participants held no bond funds. At year-end 2008, 65.1 percent of participants continued to hold no bond funds, but 5.8 percent of participants held at least some of their accounts in bond funds at year-end 2008 when they had held no bond funds at year-end 2007.[43] Conversely, only 1.7 percent of participants held no bond funds at year-end 2008 when they had held bond funds at year-end 2007. On net, the percentage of participants holding no bond funds declined to 66.8 percent at year-end 2008. Between year-end 2007 and year-end 2008, on net, the percentage of participants allocating 100 percent of their account balance to bond funds increased from 1.9 percent to 2.9 percent of participants.

In sum, the EBRI/ICI 401(k) database does not contain information on participant transaction activity but can be used to analyze the year-end asset allocations of the consistent group of participants with accounts at year-end 2007 and year-end 2008. The analysis suggests that there is no evidence of a significant shift by a large percentage of participants away from their year-end 2007 asset allocations.

Asset Allocation and Participant Age

As in previous years, the database for year-end 2008 finds that participants' asset allocation varied considerably with age.[44] Younger participants tended to favor equity funds, while older participants were more likely to invest in fixed-income securities such as bond funds, GICs and other stable-value funds, or money funds (Figure 21). For example, among participants in their 20s, the average allocation to equity funds was 38 percent of assets, compared with 28 percent of assets among participants in their 60s. Younger participants also had higher allocations to balanced funds, particularly to lifecycle funds. Lifecycle, or target-date funds, pursue long-term investment strategies, using a mix of asset classes that follow a predetermined reallocation, typically rebalancing to be more conservative and income-producing over time.[45] At year-end 2008, nearly 7 percent of 401(k) assets in the database were invested in lifecycle funds. Among participants in their 20s, 15 percent of their 401(k) assets were invested in lifecycle funds, while among participants in their 60s, almost 6 percent of their 401(k) assets were invested in lifecycle funds.

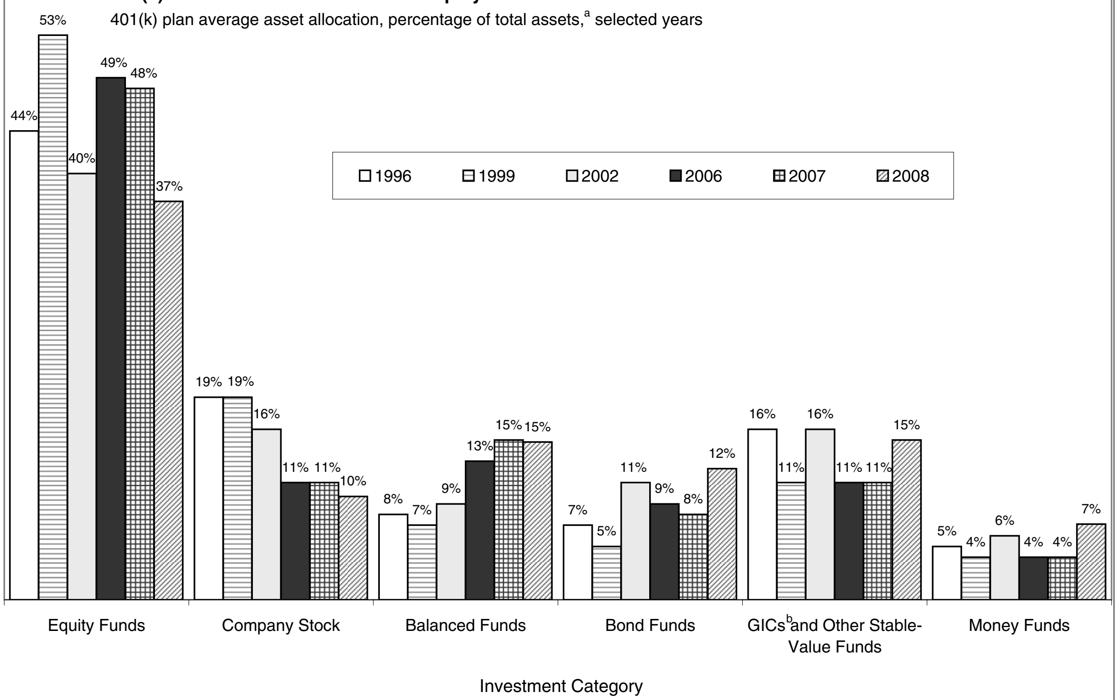
Asset Allocation and Investment Options

The investment options that a plan sponsor offers significantly affect how participants allocate their 401(k) assets. Figure 22 presents the distribution of plans, participants, and assets by four combinations of investment offerings. The first category is the base group, which consists of plans that do not offer company stock, GICs, or other stable-value funds. Twenty-nine percent of participants in the 2008 database were in these plans, which generally offer equity funds, bond funds, money funds, and balanced funds as investment options. Another 25 percent of participants were in plans that offer GICs and/or

Figure 20
Asset Allocation of 401(k) Participants

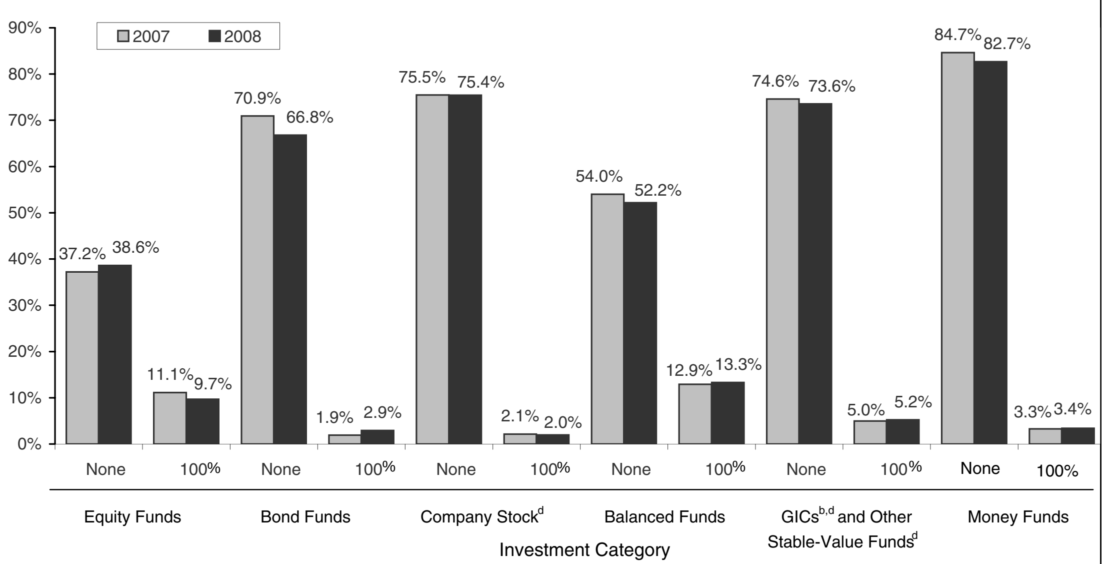
401(k) Plan Assets Concentrated in Equity Funds

401(k) plan average asset allocation, percentage of total assets,[a] selected years



Changes in All or Nothing 401(k) Plan Participant Asset Allocation, by Investment Category,[a] 2007–2008

Percentage of participants[c]



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

[a] Minor investment options are not shown; therefore, percentages do not add to 100 percent. Percentages are dollar-weighted averages.

[b] GICs are guaranteed investment contracts.

[c] Includes the 18.0 million participants with accounts at the end of each year from 2007 through 2008. A given participant may be counted in multiple investment categories. For example, a participant who is 100 percent invested in equities will be counted as "none" in each of the other investment categories.

[d] Not all participants are offered this investment option. See Figure 22.

Note: “Funds” include mutual funds, bank collective trusts, life insurance separate accounts, and any pooled investment product primarily invested in the security indicated.

other stable-value funds as an investment option, in addition to the “base” options. Alternatively, 17 percent of participants were in plans that offer company stock, but no stable-value products, while the remaining 29 percent of participants were offered both company stock and stable-value products, in addition to the base options.

Lifecycle funds were available in three-quarters of 401(k) plans in the year-end 2008 database (Figure 22), up from 67 percent of plans in the year-end 2007 EBRI/ICI 401(k) database.[46] These plans offered lifecycle funds to 17.4 million, or 72 percent, of the participants.[47] Among participants offered lifecycle funds, 42 percent held them at year-end 2008. Lifecycle fund assets represented 9 percent of the assets of plans offering such funds in their investment lineups.

Asset Allocation by Investment Options and Age, Salary, and Plan Size

As discussed above, asset allocation varies with participant age. Thus, Figure 23 presents the analysis of asset allocation by investment options and also by participants’ age. Salary information is available for a subset of participants in the 2008 EBRI/ICI 401(k) database. Because asset allocation is influenced by the investment options available to participants, Figure 24 presents asset allocation by salary range and by investment options. Participant asset allocation also varies with plan size (Figure 25, top panel), but much of the variation can be explained by differences in the investment options offered by plan sponsors. For example, the percentage of plan assets invested in company stock rises with plan size. A portion of this trend occurs because few small plans offered company stock as an investment option. For example, less than 1 percent of participants in small plans were offered company stock as an investment option, while 66 percent of participants in plans with more than 5,000 participants were offered company stock as an investment option in 2008. Thus, to analyze the potential effect of plan size, the remaining panels of Figure 25 group plans by investment options and plan size.

Distribution of Equity Fund Allocations and Participant Exposure to Equities

The year-end 2008 EBRI/ICI 401(k) database finds that, on average, 37 percent of participant account balances were allocated to equity funds (Figure 21). However, individual asset allocations varied widely across participants. For example, about 41 percent of participants held no equity funds, while nearly 16 percent of participants held more than 80 percent of their balances in equity funds (Figures 26 and 27). Furthermore, the percentage of participants holding no equity funds varied with age, with 55 percent of participants in their 20s, 37 percent of participants in their 40s, and 45 percent of participants in their 60s holding no equity funds. The percentage of 401(k) participants holding no equity funds also varied with tenure, with the lowest and highest tenure groups being more likely not to be invested in equity funds. The percentage of participants holding no equity funds tends to fall as salary increases (Figure 27).

Participants with no equity fund balances may still have exposure to the stock market through company stock or balanced funds, which include lifecycle funds. Indeed, 70 percent of participants with no equity funds had investments in either company stock or balanced funds at year-end 2008 (Figure 28). For example, 79 percent of participants in their 20s without equity funds held equities through company stock, balanced funds, or both. Indeed, 51 percent of participants in their 20s without equity funds held lifecycle funds—which will tend to be highly concentrated in equity securities for that age group—as their only equity investment. Another 8 percent of participants in their 20s without equity funds had equity exposure through non-lifecycle balanced funds, and another 4 percent held company stock as their only equity investment. Fifteen percent held some combination of lifecycle funds, non-lifecycle balanced funds, or company stock as their equity investment. As a result, many participants with no equity funds had exposure to equity-related investments through company stock or balanced funds or both (Figure 29).

Among individual participants, the allocation of account balances to equities (equity funds, company stock, and the equity portion of balanced funds) varies widely around the average of 56 percent for all participants in the 2008 database. Thirty-eight percent of participants had more than 80 percent of their account balances invested in equities, while 12 percent held no equities at all in 2008 (Figure 30).

Figure 21

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

Percentage of account balances, 2008

Age Group	Equity Funds	Lifecycle Funds[a]	Non-lifecycle Balanced Funds	Bond Funds	Money Funds	GICs[b]/Stable-Value Funds	Company Stock	Other	Unknown	Total[c]
20s	38.0%	15.3%	12.7%	9.3%	5.5%	8.4%	7.8%	1.3%	1.3%	100%
30s	47.0%	9.1%	8.8%	10.3%	5.2%	7.4%	8.7%	1.9%	1.4%	100%
40s	44.1%	6.8%	8.2%	10.9%	5.7%	10.4%	10.1%	2.3%	1.2%	100%
50s	35.2%	6.2%	8.3%	12.7%	7.3%	16.2%	10.5%	2.5%	0.9%	100%
60s	28.0%	5.5%	7.7%	14.5%	9.4%	23.2%	8.4%	2.6%	0.7%	100%
All	37.4%	6.6%	8.2%	12.3%	7.1%	15.2%	9.7%	2.4%	1.0%	100%

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

[a] A lifecycle fund typically rebalances to an increasingly conservative portfolio as it approaches and passes the target date of the fund, which is usually included in the fund's name.

[b] GICs are guaranteed investment contracts.

[c] Row percentages may not add up to 100 percent because of rounding. Percentages are dollar-weighted averages.

Note: "Funds" include mutual funds, bank collective trusts, life insurance separate accounts, and any pooled investment product primarily invested in the security indicated.

Figure 22

Distribution of 401(k) Plans, Participants, and Assets, by Investment Options, 2008

Investment Options Offered by Plan	Plans	Participants	Assets
Equity, bond, money, and/or balanced funds	29,101	7,051,309	$242,732,441,135
Of which: lifecycle[a] funds an option	22,123	5,597,630	$191,009,728,327
Equity, bond, money, and/or balanced funds, and GICs[b] and/or other stable-value funds	24,024	5,916,952	$229,842,664,062
Of which: lifecycle[a] funds an option	17,955	4,255,714	$163,209,208,715
Equity, bond, money, and/or balanced funds, and company stock	698	3,988,551	$195,334,039,667
Of which: lifecycle[a] funds an option	513	2,476,573	$132,472,692,442
Equity, bond, money, and/or balanced funds, and company stock, and GICs[b] and/or other stable-value funds	942	7,043,568	$424,558,594,204
Of which: lifecycle[a] funds an option	720	5,046,863	$306,969,178,014
All	54,765	24,000,380	$1,092,467,739,069
Of which: lifecycle[a] funds an option	41,311	17,376,780	$793,660,807,499

Investment Options Offered by Plan	Percentage of plans	Percentage of participants	Percentage of assets
Equity, bond, money, and/or balanced funds	53.1%	29.4%	22.2%
Of which: lifecycle[a] funds an option	40.4%	23.3%	17.5%
Equity, bond, money, and/or balanced funds, and GICs[b] and/or other stable-value funds	43.9%	24.7%	21.0%
Of which: lifecycle[a] funds an option	32.8%	17.7%	14.9%
Equity, bond, money, and/or balanced funds, and company stock	1.3%	16.6%	17.9%
Of which: lifecycle[a] funds an option	0.9%	10.3%	12.1%
Equity, bond, money, and/or balanced funds, and company stock, and GICs[b] and/or other stable-value funds	1.7%	29.3%	38.9%
Of which: lifecycle[a] funds an option	1.3%	21.0%	28.1%
All	100%	100%	100%
Of which: lifecycle[a] funds an option	75.4%	72.4%	72.6%

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

[a] A lifecycle fund typically rebalances to an increasingly conservative portfolio as it approaches and passes the target date of the fund, which is usually included in the fund's name.

[b] GICs are guaranteed investment contracts.

Note: "Funds" include mutual funds, bank collective trusts, life insurance separate accounts, and any pooled investment product primarily invested in the security indicated.

Figure 23

Average Asset Allocation of Accounts, by Participant Age and Investment Options

Percentage of account balances,[a] 2008

	Equity Funds	Lifecycle Funds[b]	Non-Lifecycle Balanced Funds	Bonds Funds	Money Funds	GICs[c]/Stable-Value Funds	Company Stock
Investment Options, All Ages							
Equity, bond, money, and/or balanced funds	44.7%	11.9%	8.1%	19.8%	12.1%		
Equity, bond, money, and/or balanced funds; and GICs[c] and/or other stable-value funds	39.8%	5.3%	12.6%	8.3%	4.9%	25.5%	
Equity, bond, money, and/or balanced funds; and company stock	34.8%	4.8%	5.7%	18.9%	12.0%		20.5%
Equity, bond, money, and/or balanced funds, company stock; and GICs[c] and/or other stable-value funds	33.2%	5.3%	7.1%	7.1%	3.1%	25.4%	15.5%
Plans Without Company Stock, GICs,[c] or Other Stable-Value Funds							
Age Group							
20s	42.2%	23.8%	8.5%	14.1%	9.3%		
30s	52.7%	14.6%	7.2%	15.0%	8.1%		
40s	51.0%	11.6%	7.9%	16.7%	9.5%		
50s	42.5%	11.5%	8.6%	21.0%	12.8%		
60s	34.5%	10.7%	8.3%	25.3%	17.1%		
Plans With GICs[c] and/or Other Stable-Value Funds							
20s	38.0%	10.8%	21.4%	6.7%	3.4%	16.1%	
30s	48.4%	6.7%	14.2%	7.4%	3.7%	14.7%	
40s	46.5%	5.3%	12.6%	7.7%	4.1%	19.3%	
50s	37.6%	5.1%	12.3%	8.6%	5.0%	27.3%	
60s	30.2%	4.4%	11.4%	9.2%	6.3%	35.1%	
Plans With Company Stock							
20s	39.2%	14.5%	8.9%	11.6%	7.7%		16.4%
30s	45.7%	7.0%	6.2%	12.6%	7.3%		19.0%
40s	41.4%	5.1%	5.9%	14.6%	8.7%		21.5%
50s	32.3%	4.4%	5.9%	19.9%	12.6%		21.6%
60s	25.2%	3.7%	4.8%	26.1%	17.6%		18.9%
Plans With Company Stock and GICs,[c] and/or Other Stable-Value Funds							
20s	34.2%	12.2%	12.2%	6.1%	2.9%	14.0%	14.5%
30s	42.4%	7.4%	8.2%	7.1%	2.6%	12.8%	15.1%
40s	39.9%	5.5%	7.1%	7.2%	2.7%	16.9%	16.6%
50s	31.4%	4.9%	7.0%	7.5%	3.3%	25.9%	16.3%
60s	24.5%	4.0%	6.6%	6.7%	3.7%	38.4%	13.1%

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

[a] Minor investment options are not shown; therefore, row percentages will not add to 100 percent. Percentages are dollar-weighted averages.

[b] A lifecycle fund typically rebalances to an increasingly conservative portfolio as it approaches and passes the target date of the fund, which is usually included in the fund's name.

[c] GICs are guaranteed investment contracts.

Note: "Funds" include mutual funds, bank collective trusts, life insurance separate accounts, and any pooled investment product primarily invested in the security indicated.

Figure 24

Average Asset Allocation of 401(k) Accounts, by Participant Salary and Investment Options

Percentage of account balances,[a] 2008

Salary[b]	Equity Funds	Lifecycle Funds[c]	Non-Lifecycle Balanced Funds	Bonds Funds	Money Funds	GICs[d]/Stable-Value Funds	Company Stock
Plans Without Company Stock, GICs,[d] or Other Stable-Value Funds							
$20,000–$40,000	38.1%	19.7%	7.2%	21.1%	11.3%		
>$40,000–$60,000	41.2%	17.2%	6.9%	20.6%	11.0%		
>$60,000–$80,000	43.4%	15.3%	6.7%	19.3%	11.4%		
>$80,000–$100,000	45.8%	14.9%	5.6%	19.8%	10.9%		
>$100,000	46.8%	11.8%	6.7%	22.0%	9.5%		
All	44.7%	11.9%	8.1%	19.8%	12.1%		
Plans With GICs[d] and/or Other Stable-Value Funds							
$20,000–$40,000	33.3%	13.2%	8.5%	9.1%	3.5%	28.7%	
>$40,000–$60,000	35.5%	10.9%	10.3%	8.6%	3.7%	27.5%	
>$60,000–$80,000	38.6%	8.7%	11.0%	8.4%	3.3%	26.4%	
>$80,000–$100,000	40.8%	8.6%	8.9%	8.5%	2.7%	27.0%	
>$100,000	42.5%	8.4%	8.6%	8.8%	3.8%	24.5%	
All	39.8%	5.3%	12.6%	8.3%	4.9%	25.5%	
Plans With Company Stock							
$20,000–$40,000	36.2%	7.4%	2.5%	13.3%	16.9%		21.5%
>$40,000–$60,000	34.8%	8.1%	4.7%	19.7%	11.8%		18.0%
>$60,000–$80,000	35.6%	8.1%	5.6%	16.2%	10.8%		20.6%
>$80,000–$100,000	36.0%	7.2%	5.7%	13.8%	11.0%		23.0%
>$100,000	37.8%	6.0%	7.3%	13.2%	10.4%		19.4%
All	34.8%	4.8%	5.7%	18.9%	12.0%		20.5%
Plans With Company Stock and GICs[d] and/or Other Stable-Value Funds							
$20,000–$40,000	33.2%	7.8%	5.6%	7.7%	2.8%	24.4%	17.4%
>$40,000–$60,000	29.9%	6.1%	6.1%	6.1%	2.6%	28.3%	19.0%
>$60,000–$80,000	30.4%	6.5%	8.5%	6.6%	3.7%	24.2%	17.6%
>$80,000–$100,000	32.4%	6.5%	8.0%	6.9%	3.7%	22.1%	17.8%
>$100,000	34.1%	5.9%	7.9%	7.5%	3.5%	20.4%	17.6%
All	33.2%	5.3%	7.1%	7.1%	3.1%	25.4%	15.5%

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

[a] Minor investment options are not shown; therefore, row percentages will not add to 100 percent. Percentages are dollar-weighed averages.

[b] Salary information is available for a subset of participants in the EBRI/ICI database.

[c] A lifecycle fund typically rebalances to an increasingly conservative portfolio as it approaches and passes the target date of the fund, which is usually included in the fund's name.

[d] GICs are guaranteed investment contracts.

Distribution of Participants' Balanced Fund Allocations by Age

Individual 401(k) participants' asset allocation to balanced funds varies widely around an average of 15 percent (Figure 20, top panel). For example, 49 percent of participants held no balanced funds, while 20 percent of participants held more than 80 percent of their accounts in balanced funds in 2008 (Figure 31). At year-end 2008, 51 percent of 401(k) participants held balanced funds, compared with 47 percent of participants at year-end 2007.[48] At year-end 2008, balanced fund use by participants was about evenly split between lifecycle funds and non-lifecycle balanced funds: 31 percent of 401(k) participants held lifecycle funds, 23 percent held non-lifecycle balanced funds, and nearly 3 percent held both. The increase in balanced fund use between year-end 2007 and year-end 2008 resulted from the increased use of lifecycle funds; at year-end 2007, 25 percent of 401(k) participants held lifecycle funds.

Lifecycle fund use varies with participant age and tenure. Younger participants were more likely to hold lifecycle funds than older participants. At year-end 2008, 43 percent of participants in their 20s held lifecycle funds (up from 29 percent of participants in their 20s at year-end 2007), compared with 22 percent of participants in their 60s in 2008 (Figure 31). More recently hired participants were more likely to hold lifecycle funds than participants with more years on the job: At year-end 2008, 44 percent of participants with two or fewer years of tenure held lifecycle funds, compared with 27 percent of participants with five to 10 years of tenure, and 16 percent of participants with more than 30 years of tenure (Figure 32).

Distribution of Participants' Company Stock Allocations, by Age

Participants' allocations to company stock remained in line with previous years. Forty-six percent (or 11.0 million) of the 401(k) participants in the 2008 EBRI/ICI 401(k) database were in plans that offered company stock as an investment option (Figure 22). Among these participants, 72 percent held 20 percent or less of their account balances in company stock, including 47 percent who held none (Figure 33). On the other hand, nearly 7 percent had more than 80 percent of their account balances invested in company stock.

Asset Allocation of Recently Hired Participants

Comparing snapshots of newly hired 401(k) plan participants' asset allocations provides further insight into the recent investment allocation activity of plan participants. Balanced funds, which include lifestyle and lifecycle funds, have increased in popularity among 401(k) participants. More recently hired participants held balanced funds: 60 percent of recently hired participants in 2008 held balanced funds, compared with 53 percent of recently hired participants in 2007, 33 percent of recent hires in 2002, and 29 percent of recent hires in 1998 (Figure 34). At year-end 2008, 44 percent of recently hired 401(k) participants held lifecycle funds, while almost one-fifth held non-lifecycle funds, and 2 percent held both lifecycle and non-lifecycle balanced funds (Figure 35). All of the increase in balanced fund use among recently hired participants between year-end 2007 and year-end 2008 resulted from increased use of lifecycle funds: At year-end 2007, 34 percent of recently hired 401(k) participants held lifecycle funds, 22 percent held non-lifecycle balanced funds, and 3 percent held both.

Among those who held balanced funds, recently hired participants in 2008 were more likely to hold a high concentration of their accounts in balanced funds compared with past years. At year-end 2008, more than half (56 percent) of recently hired participants holding balanced funds had more than 90 percent of their account balance invested in balanced funds, compared with 48 percent in 2007, 43 percent in 2006, and 7 percent in 1998 (Figure 36). Concentration is highest among recently hired participants with lifecycle funds; at year-end 2008, 61 percent of recently hired participants holding lifecycle funds held more than 90 percent of their account balance in lifecycle funds (Figure 37). Thirty-five percent of recently hired participants holding non-lifecycle balanced funds had more than 90 percent of their account balance invested in non-lifecycle balanced funds at year-end 2008.

Balanced, lifecycle, and non-lifecycle fund use varied little by age group among recently hired participants, with the exception of recently hired participants in their 20s who were more likely to be highly concentrated in such funds. For example, 40 percent of recently hired participants in their 20s held more than 90 percent of their account balances in balanced funds, compared with 30 percent to 32 percent of recently hired participants in the other age groups in 2008 (Figure 38). Concentrated lifecycle fund use ranged from 31 percent of recent hires in their 20s holding more than 90 percent of their

Figure 25

Average Asset Allocation of 401(k) Accounts, by Plan Size and Investment Options

Percentage of account balances,[a] 2008

	Equity Funds	Lifecycle Funds[b]	Non-Lifecycle Balanced Funds	Bond Funds	Money Funds	GICs[c]/Stable-Value	Company Stock
Plan Size by Number of Participants							
All Plans							
1–100	40.7%	9.0%	12.9%	11.9%	13.8%	9.4%	0.1%
101–500	42.4%	9.9%	9.8%	14.7%	11.2%	8.8%	0.5%
501–1,000	41.0%	9.2%	9.8%	14.8%	9.6%	9.8%	2.8%
1,001–5,000	40.0%	8.6%	9.3%	14.2%	7.8%	11.6%	4.8%
>5,000	35.6%	5.4%	7.3%	11.3%	5.8%	17.6%	13.1%
All	37.4%	6.6%	8.2%	12.3%	7.1%	15.2%	9.7%
Plans Without Company Stock, GICs[c]/Stable-Value Funds							
1–100	42.3%	14.9%	7.5%	15.6%	16.5%		
101–500	44.4%	13.3%	6.8%	18.6%	13.9%		
501–1,000	43.7%	11.8%	8.1%	20.3%	13.1%		
1001–5,000	44.7%	11.7%	8.4%	20.4%	11.3%		
>5,000	46.2%	10.3%	9.0%	21.0%	9.6%		
All	44.7%	11.9%	8.1%	19.8%	12.1%		
Plans With GICs[c]/Stable-Value Funds							
1–100	38.8%	1.3%	20.3%	7.1%	10.3%	21.8%	
101–500	40.1%	3.8%	15.5%	8.0%	6.5%	24.2%	
501–1,000	40.4%	5.0%	14.1%	7.7%	4.2%	25.6%	
1,001–5,000	38.8%	6.8%	13.0%	8.3%	3.5%	25.8%	
>5,000	39.8%	5.5%	10.1%	8.6%	4.4%	26.0%	
All	39.8%	5.3%	12.6%	8.3%	4.9%	25.5%	
Plans With Company Stock							
1–100[d]	36.3%	8.1%	3.7%	11.5%	15.6%		18.5%
101–500	37.4%	9.8%	5.3%	15.1%	17.9%		12.6%
501–1,000	35.8%	7.8%	3.8%	15.5%	13.7%		20.6%
1,001–5,000	38.9%	7.1%	5.5%	18.6%	10.8%		16.0%
>5,000	33.9%	4.2%	5.8%	19.1%	12.2%		21.6%
All	34.8%	4.8%	5.7%	18.9%	12.0%		20.5%
Plans With Company Stock and GICs[c]/Stable-Value Funds							
1–100	31.2%	8.8%	9.7%	12.1%	7.9%	17.8%	5.7%
101–500	35.0%	8.4%	10.6%	9.3%	5.2%	19.5%	6.7%
501–1,000	31.7%	8.6%	9.7%	6.3%	3.9%	20.9%	13.8%
1,001–5,000	33.8%	7.0%	8.9%	6.8%	4.6%	22.9%	11.2%
>5,000	33.1%	4.9%	6.8%	7.1%	3.0%	25.7%	16.0%
All	33.2%	5.3%	7.1%	7.1%	3.1%	25.4%	15.5%

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

[a] Minor investment options are not shown; therefore, row percentages will not add to 100 percent. Percentages are dollar-weighted averages.

[b] A lifecycle fund typically rebalances to an increasingly conservative portfolio as it approaches and passes the target date of the fund, which is usually included in the fund's name.

[c] GICs are guaranteed investment contracts.

[d] Because few plans fall into this category, these percentages may be heavily influenced by a few outliers.

Note: "Funds" include mutual funds, bank collective trusts, life insurance separate accounts, and any pooled investment product primarily invested in the security indicated.

Figure 26

Asset Allocation Distribution of 401(k) Account Balance to Equity Funds, by Participant Age

Percentage of participants,[a,b] 2008

	Percentage of Account Balance Invested in Equity Funds										
Age Group	Zero	1–10%	11–20%	21–30%	31–40%	41–50%	51–60%	61–70%	71–80%	81–90%	91–100%
20s	54.9%	2.4%	2.8%	4.6%	4.4%	4.8%	4.7%	4.2%	4.5%	3.4%	9.3%
30s	39.8%	3.5%	3.8%	5.3%	5.2%	6.3%	6.2%	6.0%	6.3%	4.8%	12.8%
40s	36.5%	4.5%	4.3%	5.6%	5.6%	6.8%	6.5%	6.3%	6.2%	4.5%	13.3%
50s	38.6%	5.9%	5.1%	6.3%	6.1%	7.0%	6.2%	5.6%	4.9%	3.3%	11.0%
60s	44.9%	6.5%	5.3%	6.5%	5.7%	6.2%	4.9%	4.1%	3.5%	2.3%	10.1%
All	41.4%	4.5%	4.3%	5.6%	5.5%	6.4%	5.9%	5.5%	5.4%	3.9%	11.7%

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

[a] The analysis includes the 24.0 million participants in the year-end 2008 EBRI/ICI database.

[b] Row percentages may not add to 100 percent because of rounding.

Note: "Equity funds" include mutual funds, bank collective trusts, life insurance separate accounts, and any pooled investment product primarily invested in stocks.

Figure 27

Asset Allocation Distribution of 401(k) Participant Account Balance to Equity Funds, by Participant Age, Tenure, or Salary

Percentage of participants, 2008

	Percentage of Account Balance Invested in Equity Funds			
	Zero	1–20%	>20%–80%	>80%
All	41.4%	8.8%	34.3%	15.6%
Age Group				
20s	54.9%	5.3%	27.1%	12.7%
30s	39.8%	7.3%	35.3%	17.6%
40s	36.5%	8.8%	37.0%	17.8%
50s	38.6%	11.0%	36.1%	14.3%
60s	44.9%	11.8%	30.9%	12.4%
Tenure (years)				
0–2	54.5%	4.7%	26.4%	14.4%
>2–5	44.0%	6.5%	34.2%	15.3%
>5–10	35.4%	9.1%	39.0%	16.6%
>10–20	30.6%	11.8%	39.9%	17.8%
>20–30	33.5%	14.2%	37.7%	14.7%
>30	43.1%	14.0%	31.4%	11.5%
Salary				
$20,000–$40,000	49.4%	9.7%	30.3%	10.7%
>$40,000–$60,000	39.7%	11.5%	35.4%	13.4%
>$60,000–$80,000	32.5%	12.3%	40.6%	14.7%
>$80,000–$100,000	28.0%	12.4%	43.8%	15.8%
>$100,000	23.1%	12.5%	47.4%	17.1%

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

Note: Row percentages may not add to 100 percent because of rounding. "Equity funds" include mutual funds, bank collective trusts, life insurance separate accounts, and any pooled investment product primarily invested in stocks.

The tenure variable is generally years working at current employer, and thus may overstate years of participation in the 401(k) plan.

Figure 28

Percentage of 401(k) Plan Participants Without Equity Fund Balances Who Have Equity Exposure, by Participant Age and Tenure, 2008

	Percentage of Participants Without Equity Funds				
	Company stock and/or balanced funds[a]	Lifecycle funds[b] as only equity investment	Non-lifecycle balanced funds as only equity investment	Company stock as only equity investment	Combination of company stock and/or lifecycle funds,[b] and/or non-lifecycle balanced funds
Age Group					
20s	79.1%	51.4%	8.3%	4.4%	15.0%
30s	74.3%	43.2%	7.4%	7.3%	16.3%
40s	70.0%	35.8%	6.8%	10.4%	17.0%
50s	66.2%	29.3%	6.4%	13.3%	17.2%
60s	58.6%	21.7%	6.4%	16.3%	14.2%
All	70.0%	36.8%	7.1%	10.1%	16.0%
Tenure (years)					
0–2	78.5%	51.8%	9.0%	4.2%	13.5%
>2–5	72.6%	38.5%	8.4%	6.8%	18.8%
>5–10	66.5%	29.1%	6.7%	10.6%	20.0%
>10–20	63.1%	21.8%	6.9%	15.6%	18.8%
>20–30	59.8%	13.6%	6.0%	23.7%	16.5%
>30	55.7%	9.5%	4.7%	28.2%	13.3%
All	70.0%	36.8%	7.1%	10.1%	16.0%

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

[a] Components may not add to the total in the first column because of rounding.

[b] A lifecycle fund typically rebalances to an increasingly conservative portfolio as it approaches and passes the target date of the fund, which is usually included in the fund's name.

Note: "Funds" include mutual funds, bank collective trusts, life insurance separate accounts, and any pooled investment product primarily invested in the security indicated. The tenure variable is generally years working at current employer, and thus may overstate years of participation in the 401(k) plan.

account balances in lifecycle funds to 24 percent of recently hired participants in their 60s with that concentration. In addition, at year-end 2008, 36 percent of the account balances of recently hired participants in their 20s were invested in balanced funds, compared with 28 percent in 2007, 24 percent in 2006, 19 percent in 2005, and about 7 percent among that age group in 1998 (Figure 39).[49] At year-end 2008, among recently hired participants in their 20s, lifecycle funds accounted for 63 percent of their balanced fund assets, or almost 23 percent of their account balances overall. The increase in asset allocation to balanced funds occurred in both the lifecycle fund and non-lifecycle fund categories: lifecycle fund assets accounted for 19 percent of the account balance assets of recently hired participants in their 20s at year-end 2007; non-lifecycle funds were 9 percent.[50] The pattern of lifecycle and non-lifecycle fund use varied with participant age and lineup of plan investment options.

Comparing recently hired participants in 2008 with their similar age groups in 1998 also illustrates that asset allocation to company stock and equity funds was lower in 2008 than in 1998, while asset allocation to fixed-income securities tended to increase (Figure 39). Recently hired 401(k) participants generally were less likely to hold company stock (Figure 40) and tended not to hold a high concentration of their account balance in company stock (Figures 41 and 42).[51]

Year-End 2008 Snapshot of 401(k) Plan Loan Activity

Availability and Use of 401(k) Plan Loans by Plan Size

Fifty-nine percent of the 401(k) plans for which loan data were available in the 2008 EBRI/ICI 401(k) database offered a plan loan provision to participants (Figure 43).[52] The loan feature was more commonly associated with large plans (as measured by the number of participants in the plan). Ninety-three percent of plans with more than 10,000 participants included a loan provision, compared with 33 percent of plans with 10 or fewer participants. There is little variation in participant loan activity by plan size (Figure 44). Loan ratios vary only slightly when participants are grouped based on the size of their 401(k) plans (as measured by the number of plan participants). Among participants in plans with 100 or fewer participants, the loan ratio was 20 percent of the remaining assets, while in plans with more than 500 participants, the loan ratio was 16 percent (Figure 45).

In the 13 years that the database has been tracking loan activity among 401(k) plan participants, there has been little variation. On average, less than one-fifth of 401(k) participants with access to loans had a loan outstanding, and, on average, over the past 13 years, about 14 percent of the remaining account balance was taken out as a loan (Figure 46). Not all participants have access to 401(k) plan loans—factoring in all 401(k) participants with and without loan access in the database, only 16 percent had a loan outstanding at year-end 2008.[53] U.S. Department of Labor data indicate that loan amounts tend to be a negligible portion of plan assets and that very little of loan amounts gets converted into distributions in any given year.[54]

Characteristics of Participants With Outstanding 401(k) Plan Loans

In the 2008 EBRI/ICI 401(k) database, 88 percent of participants were in plans offering loans. However, as has been the case for the 13 years that the database has tracked 401(k) plan participants, relatively few participants made use of this borrowing privilege. At year-end 2008, only 18 percent of those eligible for loans had 401(k) plan loans outstanding (Figure 46). As in previous years, loan activity varies with age, tenure, account balance, and salary. Of those participants in plans offering loans, the highest percentages of participants with outstanding loan balances were among participants in their 30s, 40s, or 50s (Figure 47). In addition, participants with five or fewer years of tenure or with more than 30 years of tenure were less likely to use the loan provision than other participants. Only 12 percent of participants with account balances of less than $10,000 had loans outstanding.

Average Loan Balances

Among participants with outstanding 401(k) loans at the end of 2008, the average unpaid balance was $7,191, compared with $7,495 in the year-end 2007 database (Figure 48). The median loan balance outstanding was $3,889 at year-end 2008, compared with $4,167 in the year-end 2007 database. With account balances generally pulled down by the stock market, the ratio of the loan outstanding to the remaining account balance edged up in 2008, although within ranges seen in other years of analysis. Similar to year-end 2002, loan balances as a percentage of account balances (net of the unpaid loan balance) for participants with loans was 16 percent at year-end 2008 (Figures 46 and 49). In addition, as in previous years, there is variation around this average that corresponds with age (lower the older the participant), tenure (lower the higher the tenure of the participant), account balance (lower the higher the account balance), and salary (lower the higher the participant's salary). Overall, loans from 401(k) plans tended to be small, with the vast majority of 401(k) participants in all age groups having no loan at all (Figure 50).

Figure 29

Average Asset Allocation for 401(k) Plan Participants Without Equity Fund Balances, by Participant Age or Tenure

Percentage of account balances, 2008

	Lifecycle Funds[a]	Non-Lifecycle Balanced Funds	Bond Funds	Money Funds	GICs[b]/Stable-Value Funds	Company Stock	Other	Unknown	Total[c]
Age Group									
20s	34.5%	24.4%	7.4%	9.7%	14.9%	7.6%	1.1%	1.3%	100.0%
30s	27.1%	19.1%	10.7%	11.7%	16.8%	10.8%	2.6%	1.5%	100.0%
40s	19.1%	15.2%	12.4%	12.6%	22.5%	13.7%	3.8%	1.3%	100.0%
50s	13.5%	12.0%	14.0%	13.8%	30.0%	12.9%	3.6%	0.9%	100.0%
60s	9.3%	8.9%	15.6%	15.6%	37.3%	9.6%	3.2%	0.7%	100.0%
All[d]	14.6%	12.3%	13.8%	13.9%	29.4%	11.6%	3.4%	1.0%	100.0%
Tenure (years)									
0–2	34.6%	21.9%	10.6%	11.8%	14.6%	5.1%	0.9%	1.0%	100.0%
>2–5	29.2%	18.4%	11.5%	13.6%	18.0%	6.9%	1.8%	1.1%	100.0%
>5–10	21.2%	15.0%	13.7%	15.3%	22.1%	9.4%	2.2%	1.1%	100.0%
>10–20	15.8%	12.2%	13.7%	14.4%	26.5%	12.4%	4.2%	1.1%	100.0%
>20–30	10.4%	10.2%	13.6%	12.7%	33.8%	14.6%	4.3%	0.9%	100.0%
>30	6.6%	7.8%	13.6%	14.4%	40.4%	13.3%	3.8%	0.7%	100.0%
All[d]	14.6%	12.3%	13.8%	13.9%	29.4%	11.6%	3.4%	1.0%	100.0%

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

[a] A lifecycle fund typically rebalances to an increasingly conservative portfolio as it approaches and passes the target date of the fund, which is usually included in the fund's name.

[b] GICs are guaranteed investment contracts.

[c] Row percentages may not add up to 100 percent because of rounding. Percentages are dollar-weighted averages.

[c] The analysis includes the 9.9 million participants with no equity funds at year-end 2008.

Note: "Funds" include mutual funds, bank collective trusts, life insurance separate accounts, and any pooled investment product primarily invested in the security indicated.

The tenure variable is generally years working at current employer, and thus may overstate years of participation in the 401(k) plan.

Figure 30
Asset Allocation to Equities Varied Widely Among Participants
Asset allocation distribution of 401(k) participant account balance to equities,[a] by age, percentage of participants,[b] 2008

Age Group	Percentage of Account Balance Invested in Equities: Zero	1–20%	>20–40%	>40–60%	>60–80%	>80–100%
20s	11.5%	2.9%	4.2%	7.4%	21.0%	53.0%
30s	10.3%	4.2%	5.4%	9.6%	21.1%	49.5%
40s	10.9%	5.6%	6.6%	10.7%	31.1%	35.1%
50s	13.0%	8.2%	8.4%	20.7%	22.8%	26.8%
60s	18.6%	10.9%	11.9%	19.0%	16.5%	23.1%
All	12.4%	6.1%	7.0%	13.1%	23.8%	37.5%

Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project.
[a] 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.
[b] Participants include the 24.0 million 401(k) plan participants in the year-end 2008 EBRI/ICI 401(k) database.
Note: Row percentages may not add to 100 percent because of rounding.

Figure 31
Asset Allocation Distribution of 401(k) Participant Account Balance to Balanced Funds, by Age
Percentage of Participants,[a,b] 2008

Age Group	Percentage of Account Balance Invested in Balanced Funds: Zero	1–10%	11–20%	21–30%	31–40%	41–50%	51–60%	61–70%	71–80%	81–90%	91–100%
20s	37.8%	4.5%	5.1%	4.8%	3.2%	2.8%	2.9%	1.6%	1.5%	1.4%	34.3%
30s	46.4%	7.1%	6.7%	6.0%	3.5%	2.8%	2.6%	1.6%	1.4%	1.3%	20.6%
40s	50.3%	7.8%	6.7%	6.2%	3.6%	2.8%	2.5%	1.5%	1.3%	1.2%	16.0%
50s	52.3%	8.1%	6.4%	6.0%	3.7%	2.9%	2.5%	1.5%	1.3%	1.2%	14.2%
60s	57.4%	7.4%	5.6%	5.4%	3.2%	2.6%	2.3%	1.3%	1.1%	1.1%	12.7%
All	49.2%	7.2%	6.3%	5.8%	3.5%	2.8%	2.5%	1.5%	1.3%	1.2%	18.7%
Age Group	**Percentage of Account Balance Invested in Lifecycle Funds[c]: Zero**	**1–10%**	**11–20%**	**21–30%**	**31–40%**	**41–50%**	**51–60%**	**61–70%**	**71–80%**	**81–90%**	**91–100%**
20s	57.3%	2.6%	2.4%	2.3%	1.4%	1.5%	1.6%	1.1%	1.1%	1.2%	27.4%
30s	66.0%	4.1%	3.2%	2.8%	1.7%	1.5%	1.5%	1.0%	1.0%	1.0%	16.2%
40s	70.9%	4.3%	3.0%	2.6%	1.6%	1.4%	1.3%	0.9%	0.9%	0.8%	12.4%
50s	73.4%	4.4%	2.7%	2.4%	1.5%	1.3%	1.2%	0.8%	0.8%	0.8%	10.8%
60s	78.0%	3.5%	2.0%	1.9%	1.2%	1.1%	1.0%	0.6%	0.6%	0.7%	9.3%
All	69.5%	3.9%	2.8%	2.4%	1.5%	1.4%	1.3%	0.9%	0.9%	0.9%	14.5%
Age Group	**Percentage of Account Balance Invested in Non-Lifecycle Balanced Funds: Zero**	**1–10%**	**11–20%**	**21–30%**	**31–40%**	**41–50%**	**51–60%**	**61–70%**	**71–80%**	**81–90%**	**91–100%**
20s	78.1%	3.3%	3.5%	2.9%	1.8%	1.4%	1.2%	0.5%	0.4%	0.3%	6.5%
30s	77.5%	4.9%	4.5%	3.7%	1.8%	1.3%	1.1%	0.5%	0.4%	0.3%	4.1%
40s	76.7%	5.3%	4.6%	4.0%	2.1%	1.4%	1.2%	0.6%	0.4%	0.3%	3.4%
50s	76.1%	5.5%	4.6%	4.1%	2.2%	1.6%	1.3%	0.6%	0.4%	0.4%	3.2%
60s	77.4%	5.2%	4.1%	3.9%	2.1%	1.5%	1.3%	0.6%	0.4%	0.4%	3.1%
All	77.1%	5.0%	4.4%	3.8%	2.0%	1.4%	1.2%	0.6%	0.4%	0.3%	3.9%

Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project.
[a] The analysis includes the 24.0 million 401(k) plan participants in the year-end 2008 EBRI/ICI 401(k) database.
[b] Row percentages may not add up to 100 percent because of rounding.
[c] A lifecycle fund typically rebalances to an increasingly conservative portfolio as it approaches and passes the target date of the fund, which is usually included in the fund's name.
Note: "Funds" include mutual funds, bank collective trusts, life insurance separate accounts, and any pooled investment product primarily invested in the security indicated.

Figure 32

Asset Allocation Distribution of 401(k) Participant Account Balance to Balanced Funds, by Tenure

Percentage of Participants,[a,b] 2008

	Percentage of Account Balance Invested in Balanced Funds										
Tenure (years)	Zero	1–10%	11–20%	21–30%	31–40%	41–50%	51–60%	61–70%	71–80%	81–90%	91–100%
0–2	40.1%	4.0%	5.2%	4.4%	2.6%	2.4%	2.8%	1.8%	1.7%	1.4%	33.7%
>2–5	45.4%	5.8%	5.7%	5.7%	3.9%	3.7%	3.3%	1.6%	1.6%	1.5%	21.7%
>5–10	50.7%	7.9%	7.0%	7.6%	4.2%	2.9%	2.5%	1.5%	1.3%	1.3%	13.2%
>10–20	53.6%	10.1%	8.2%	6.6%	3.7%	2.8%	2.4%	1.4%	1.1%	1.0%	9.3%
>20–30	59.3%	10.5%	6.5%	5.5%	3.4%	2.5%	2.0%	1.3%	1.0%	0.9%	7.1%
>30	65.9%	8.3%	5.4%	4.5%	2.9%	2.2%	1.8%	1.1%	0.9%	0.8%	6.3%
All	49.2%	7.2%	6.3%	5.8%	3.5%	2.8%	2.5%	1.5%	1.3%	1.2%	18.7%

	Percentage of Account Balance Invested in Lifecycle Funds[c]										
Tenure (years)	Zero	1–10%	11–20%	21–30%	31–40%	41–50%	51–60%	61–70%	71–80%	81–90%	91–100%
0–2	56.4%	2.6%	2.6%	2.7%	1.6%	1.6%	2.0%	1.3%	1.3%	1.2%	26.7%
>2–5	66.9%	3.4%	2.8%	2.7%	1.7%	1.6%	1.6%	1.1%	1.1%	1.2%	16.0%
>5–10	73.2%	4.5%	3.1%	2.6%	1.7%	1.4%	1.3%	0.9%	0.9%	0.9%	9.5%
>10–20	77.6%	5.0%	2.9%	2.3%	1.4%	1.2%	1.0%	0.7%	0.6%	0.6%	6.6%
>20–30	80.9%	5.1%	2.7%	2.0%	1.3%	1.0%	0.8%	0.6%	0.5%	0.5%	4.7%
>30	84.1%	4.4%	2.2%	1.6%	1.0%	0.8%	0.7%	0.5%	0.4%	0.4%	3.9%
All	69.5%	3.9%	2.8%	2.4%	1.5%	1.4%	1.3%	0.9%	0.9%	0.9%	14.5%

	Percentage of Account Balance Invested in Non-Lifecycle Balanced Funds										
Tenure (years)	Zero	1–10%	11–20%	21–30%	31–40%	41–50%	51–60%	61–70%	71–80%	81–90%	91–100%
0–2	81.3%	2.7%	3.4%	2.2%	1.0%	0.8%	0.8%	0.5%	0.4%	0.3%	6.6%
>2–5	75.8%	4.1%	3.9%	3.6%	2.3%	2.1%	1.7%	0.6%	0.5%	0.4%	5.2%
>5–10	74.6%	5.3%	4.7%	5.4%	2.7%	1.5%	1.2%	0.6%	0.4%	0.4%	3.3%
>10–20	73.2%	7.1%	6.0%	4.6%	2.2%	1.6%	1.3%	0.7%	0.5%	0.4%	2.5%
>20–30	75.7%	7.4%	4.6%	3.8%	2.2%	1.5%	1.1%	0.7%	0.4%	0.3%	2.3%
>30	79.5%	5.6%	3.8%	3.1%	1.9%	1.3%	1.1%	0.6%	0.4%	0.3%	2.3%
All	77.1%	5.0%	4.4%	3.8%	2.0%	1.4%	1.2%	0.6%	0.4%	0.3%	3.9%

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

[a] The analysis includes the 24.0 million 401(k) plan participants in the year-end 2008 EBRI/ICI database.

[b] Row percentages may not add up to 100 percent because of rounding.

[c] A lifecycle fund typically rebalances to an increasingly conservative portfolio as it approaches and passes the target date of the fund, which is usually included in the fund's name.

Note: "Funds" include mutual funds, bank collective trusts, life insurance separate accounts, and any pooled investment product primarily invested in the security indicated. The Tenure variable is generally years working at current employer, and thus may overstate years of participation in the 401(k) plan.

Figure 33

Asset Allocation Distribution of Participant Account Balance to Company Stock in 401(k) Plans With Company Stock, by Age

Percentage of Participants,[a,b] 2008

	Percentage of Account Balance Invested in Company Stock										
Age Group	Zero	1–10%	11–20%	21–30%	31–40%	41–50%	51–60%	61–70%	71–80%	81–90%	91–100%
20s	59.1%	11.3%	7.4%	6.0%	4.2%	3.4%	2.2%	1.1%	0.7%	0.5%	4.2%
30s	48.4%	14.5%	8.9%	7.1%	5.7%	4.3%	2.8%	1.6%	1.1%	0.8%	4.7%
40s	44.5%	16.4%	9.2%	7.2%	5.8%	4.2%	2.9%	2.0%	1.4%	1.1%	5.4%
50s	42.8%	18.0%	9.0%	6.9%	5.7%	4.0%	2.8%	2.0%	1.5%	1.1%	6.2%
60s	45.5%	17.7%	7.7%	5.8%	5.2%	3.5%	2.4%	1.8%	1.4%	1.2%	7.9%
All	47.1%	15.8%	8.6%	6.8%	5.5%	4.0%	2.7%	1.8%	1.3%	1.0%	5.6%

Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project.
[a] The analysis includes the 11.0 million participants in plans with company stock at year-end 2008.
[b] Row percentages may not add up to 100 percent because of rounding.

Figure 34

More Recently Hired 401(k) Plan Participants[a] Hold Balanced Funds[b]

Percentage of recently hired participants holding balanced funds, 1998–2008

Age Group	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
20s	27.0%	28.3%	27.1%	27.3%	32.7%	35.1%	38.9%	43.5%	48.5%	51.1%	63.6%
30s	29.0%	31.0%	28.3%	26.5%	33.1%	36.2%	39.8%	42.8%	47.9%	54.2%	59.6%
40s	30.5%	33.6%	30.8%	27.9%	33.7%	35.7%	39.8%	42.1%	46.6%	52.8%	57.8%
50s	30.9%	34.9%	32.1%	29.2%	33.9%	35.5%	40.3%	43.3%	47.8%	53.4%	58.0%
60s	28.4%	34.9%	33.2%	29.1%	30.2%	30.7%	36.3%	41.6%	45.5%	50.1%	53.9%
All	28.9%	31.3%	29.1%	27.4%	33.0%	35.4%	39.3%	42.8%	47.6%	52.7%	59.9%

Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project.
[a] The analysis includes participants with two or fewer years of tenure in the year indicated
[b] "Balanced funds" include mutual funds, bank collective trusts, life insurance separate accounts, and any pooled investment product primarily invested in a mix of equities and fixed-income securities.

Figure 35

Many Recently Hired 401(k) Plan Participants Hold Lifecycle[a] Funds

Percentage of recently hired participants, 2006, 2007, and 2008

	Holding Balanced Funds			Holding Lifecycle Funds[a]			Holding Non-Lifecycle Balanced Funds		
Age Group	2006	2007	2008	2006	2007	2008	2006	2007	2008
20s	48.5%	51.1%	63.6%	29.4%	31.7%	46.5%	22.5%	21.8%	19.3%
30s	47.9%	54.2%	59.6%	28.5%	35.1%	43.5%	22.5%	22.2%	18.8%
40s	46.6%	52.8%	57.8%	27.4%	34.2%	41.8%	21.3%	21.4%	18.3%
50s	47.8%	53.4%	58.0%	28.1%	34.9%	42.2%	21.4%	21.2%	18.1%
60s	45.5%	50.1%	53.9%	26.1%	32.1%	38.4%	19.8%	20.3%	17.3%
All	47.6%	52.7%	59.9%	28.3%	33.8%	43.6%	21.9%	21.7%	18.7%

Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project.
[a] A lifecycle fund typically rebalances to an increasingly conservative portfolio as it approaches and passes the target date of the fund, which is usually included in the fund's name.
Note: The analysis includes the 4.0 million recently hired participants (those with two or fewer years of tenure) in 2008, the 3.8 million recently hired participants in 2007, and the 2.8 million recently hired participants in 2006. "Funds" include mutual funds, bank collective trusts, life insurance separate accounts, and any pooled investment product primarily invested in the security indicated.

Figure 36

Recently Hired Participants Now Hold Higher Concentrations in Balanced Funds[a]

Percentage of recently hired participants holding balanced fund assets,[a,b] 1998, 2006, 2007, and 2008

	Percentage of Account Balance Invested in Balanced Funds		
	1998		
Age Group	>0–50 percent	>50–90 percent	>90 percent
20s	84.9%	7.3%	7.8%
30s	86.0%	7.6%	6.4%
40s	84.1%	8.9%	7.0%
50s	81.1%	10.7%	8.2%
60s	77.0%	12.4%	10.6%
All	84.5%	8.2%	7.3%
	2006		
Age Group	>0–50 percent	>50–90 percent	>90 percent
20s	40.1%	13.7%	46.2%
30s	47.7%	12.8%	39.5%
40s	46.0%	13.1%	40.9%
50s	43.3%	13.3%	43.4%
60s	39.5%	12.6%	47.9%
All	43.9%	13.3%	42.8%
	2007		
Age Group	>0–50 percent	>50–90 percent	>90 percent
20s	36.3%	14.7%	49.0%
30s	40.9%	12.6%	46.5%
40s	40.1%	12.9%	47.0%
50s	38.1%	13.0%	48.8%
60s	36.4%	12.8%	50.8%
All	38.8%	13.3%	47.9%
	2008		
Age Group	>0–50 percent	>50–90 percent	>90 percent
20s	26.1%	11.8%	62.2%
30s	33.5%	13.3%	53.2%
40s	33.9%	13.5%	52.6%
50s	32.8%	13.5%	53.6%
60s	32.1%	12.8%	55.1%
All	31.0%	12.9%	56.1%

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

[a] The analysis includes the 0.4 million recently hired participants (those with two or fewer years of tenure) holding balanced funds in 1998; the 1.4 million recently hired participants holding balanced funds in 2006; the 2.0 million recently hired participants holding balanced funds in 2007; and the 2.4 million recently hired participants holding balanced funds in 2008.

[b] Row percentages may not add to 100 percent because of rounding.

Note: “Balanced funds” include mutual funds, bank collective trusts, life insurance separate accounts, and any pooled investment product primarily invested in a mix of equities and fixed-income securities.

Figure 37

Many Recently Hired Participants Hold High Concentrations in Lifecycle Funds[a]

Percentage of recently hired participants holding the type of fund indicated,[b, c] 2008

Age Group	Percentage of Account Balance Invested in Balanced Funds		
	>0–50 percent	>50–90 percent	>90 percent
20s	26.1%	11.8%	62.2%
30s	33.5%	13.3%	53.2%
40s	33.9%	13.5%	52.6%
50s	32.8%	13.5%	53.6%
60s	32.1%	12.8%	55.1%
All	31.0%	12.9%	56.1%

Age Group	Percentage of Account Balance Invested in Lifecycle Funds[a]		
	>0–50 percent	>50–90 percent	>90 percent
20s	21.1%	12.1%	66.8%
30s	28.5%	13.4%	58.1%
40s	28.1%	13.6%	58.4%
50s	26.7%	13.4%	59.9%
60s	25.7%	12.7%	61.6%
All	25.7%	13.0%	61.4%

Age Group	Percentage of Account Balance Invested in Non-Lifecycle Balanced Funds		
	>0–50 percent	>50–90 percent	>90 percent
20s	47.9%	9.9%	42.2%
30s	56.6%	10.5%	32.9%
40s	57.6%	11.1%	31.3%
50s	57.6%	11.6%	30.8%
60s	55.4%	11.4%	33.2%
All	54.1%	10.6%	35.3%

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

[a] The analysis includes the 2.4 million recently hired participants (those with two or fewer years of tenure) holding balanced funds in 2008; the 1.8 million recently hired participants holding lifecycle funds in 2008; and the 0.8 million recently hired participants holding non-lifecycle balanced funds in 2008.

[b] Row percentages may not add to 100 percent because of rounding.

[c] A lifecycle fund typically rebalances to an increasingly conservative portfolio as it approaches and passes the target date of the fund, which is usually included in the fund's name.

Note: “Funds” include mutual funds, bank collective trusts, life insurance separate accounts, and any pooled investment product primarily invested in the security indicated.

Figure 38

Asset Allocation Distribution of Account Balance to Balanced Funds Among Recently Hired Participants, by Age

Percentage of Recently Hired Participants,[a,b] 2008

	Percentage of Account Balance Invested in Balanced Funds										
Age Group	Zero	1–10%	11–20%	21–30%	31–40%	41–50%	51–60%	61–70%	71–80%	81–90%	91–100%
20s	36.5%	3.5%	4.9%	3.7%	2.2%	2.1%	2.7%	1.7%	1.6%	1.4%	39.7%
30s	40.6%	4.3%	5.4%	4.8%	2.8%	2.4%	2.9%	1.9%	1.7%	1.4%	31.9%
40s	42.5%	3.9%	5.2%	4.8%	2.7%	2.4%	2.9%	1.8%	1.7%	1.4%	30.7%
50s	42.2%	3.7%	5.0%	4.6%	2.7%	2.4%	2.9%	1.8%	1.7%	1.5%	31.5%
60s	46.4%	3.5%	4.4%	3.9%	2.4%	2.2%	2.6%	1.5%	1.4%	1.4%	30.3%
All	40.2%	3.8%	5.1%	4.4%	2.6%	2.3%	2.8%	1.8%	1.7%	1.4%	33.9%

	Percentage of Account Balance Invested in Lifecycle Funds[c]										
Age Group	Zero	1–10%	11–20%	21–30%	31–40%	41–50%	51–60%	61–70%	71–80%	81–90%	91–100%
20s	53.6%	2.2%	2.4%	2.3%	1.4%	1.4%	2.0%	1.3%	1.2%	1.1%	31.0%
30s	56.6%	2.9%	3.0%	3.0%	1.8%	1.7%	2.0%	1.3%	1.3%	1.2%	25.2%
40s	58.4%	2.6%	2.7%	2.9%	1.7%	1.6%	2.0%	1.2%	1.3%	1.1%	24.4%
50s	57.9%	2.6%	2.4%	2.8%	1.7%	1.6%	2.0%	1.2%	1.2%	1.2%	25.4%
60s	61.7%	2.4%	1.9%	2.3%	1.5%	1.4%	1.7%	1.0%	1.0%	1.1%	23.9%
All	56.5%	2.6%	2.6%	2.7%	1.6%	1.6%	2.0%	1.3%	1.2%	1.1%	26.8%

	Percentage of Account Balance Invested in Non-Lifecycle Balanced Funds										
Age Group	Zero	1–10%	11–20%	21–30%	31–40%	41–50%	51–60%	61–70%	71–80%	81–90%	91–100%
20s	80.7%	2.6%	3.3%	1.8%	0.8%	0.7%	0.8%	0.5%	0.4%	0.3%	8.2%
30s	81.2%	3.0%	3.5%	2.3%	1.0%	0.8%	0.8%	0.5%	0.4%	0.3%	6.2%
40s	81.7%	2.6%	3.5%	2.5%	1.1%	0.8%	0.9%	0.5%	0.4%	0.2%	5.7%
50s	81.9%	2.4%	3.5%	2.5%	1.1%	0.9%	0.9%	0.5%	0.4%	0.3%	5.6%
60s	82.7%	2.2%	3.2%	2.1%	1.1%	0.9%	0.9%	0.5%	0.3%	0.2%	5.7%
All	81.3%	2.7%	3.4%	2.2%	1.0%	0.8%	0.8%	0.5%	0.4%	0.3%	6.6%

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

[a] The analysis includes the 4.0 million recently hired participants (those with two or fewer years of tenure) in 2008.

[b] Row percentages may not add up to 100 percent because of rounding.

[c] A lifecycle fund typically rebalances to an increasingly conservative portfolio as it approaches and passes the target date of the fund, which is usually included in the fund's name.

Note: "Funds" include mutual funds, bank collective trusts, life insurance separate accounts, and any pooled investment product primarily invested in the security indicated.

Figure 39

Average Asset Allocation of 401(k) Accounts by Participant Age and Investment Options Among Participants With Two or Fewer Years of Tenure[a]

Percentage of account balances,[b] 1998 and 2008

Age Group	Equity Funds 1998	Equity Funds 2008	Balanced Funds: Total 1998	Balanced Funds: Total 2008	Balanced Funds: Lifecycle funds[c] 2008	Balanced Funds: Non-lifecycle balanced funds 2008	Bond Funds 1998	Bond Funds 2008	Money Funds 1998	Money Funds 2008	GICs[d] and Other Stable-Value Funds 1998	GICs[d] and Other Stable-Value Funds 2008	Company Stock 1998	Company Stock 2008
ALL														
20s	66.9%	36.3%	7.4%	35.8%	22.6%	13.2%	5.1%	8.9%	4.0%	4.6%	3.7%	6.1%	10.5%	5.8%
30s	67.8%	43.1%	8.0%	28.4%	17.1%	11.3%	5.1%	10.3%	4.1%	5.5%	3.2%	5.7%	9.4%	5.0%
40s	64.5%	41.9%	9.7%	26.5%	15.2%	11.3%	5.9%	10.9%	5.1%	5.9%	4.4%	7.4%	8.0%	5.2%
50s	60.5%	35.1%	11.3%	26.4%	14.5%	11.9%	6.6%	12.8%	5.9%	7.6%	6.7%	11.2%	6.5%	4.9%
60s	50.0%	29.3%	12.1%	23.0%	11.5%	11.5%	8.7%	13.8%	7.8%	9.5%	13.3%	17.8%	5.7%	4.8%
All	64.8%	38.8%	9.1%	27.6%	16.0%	11.6%	5.7%	11.2%	4.9%	6.4%	4.6%	8.6%	8.6%	5.1%
PLANS WITHOUT COMPANY STOCK, GICs,[d] OR OTHER STABLE-VALUE FUNDS														
20s	77.8%	40.2%	7.8%	37.5%	30.5%	7.0%	7.7%	13.0%	4.9%	7.4%				
30s	77.9%	46.7%	8.4%	29.7%	23.2%	6.5%	7.2%	14.4%	4.8%	7.8%				
40s	74.0%	45.9%	9.9%	28.3%	21.1%	7.1%	8.3%	15.6%	6.0%	8.8%				
50s	70.3%	39.2%	11.3%	28.9%	21.0%	7.9%	10.0%	19.6%	6.5%	11.1%				
60s	59.4%	34.9%	11.8%	27.0%	18.2%	8.8%	13.5%	23.1%	12.2%	13.7%				
All	75.0%	43.0%	9.3%	29.7%	22.4%	7.3%	8.2%	16.6%	5.7%	9.3%				
PLANS WITH GICs[d] AND/OR OTHER STABLE-VALUE FUNDS														
20s	73.4%	35.2%	7.3%	40.4%	15.3%	25.1%	3.9%	6.6%	2.9%	2.8%	9.1%	11.9%		
30s	73.5%	41.2%	8.1%	34.0%	12.1%	22.0%	4.1%	6.9%	2.8%	3.5%	7.9%	11.5%		
40s	69.0%	40.6%	9.4%	31.3%	9.8%	21.5%	5.0%	6.9%	3.4%	4.1%	9.5%	14.8%		
50s	63.6%	34.7%	10.2%	30.6%	8.7%	21.9%	5.9%	7.5%	4.6%	5.2%	11.9%	20.3%		
60s	52.7%	29.7%	11.2%	27.4%	6.4%	20.9%	6.8%	8.1%	7.2%	7.1%	19.2%	26.4%		
All	69.7%	37.6%	7.9%	32.2%	10.3%	21.9%	5.0%	7.1%	3.5%	4.4%	10.1%	16.2%		
PLANS WITH COMPANY STOCK														
20s	51.8%	39.0%	6.1%	30.4%	23.2%	7.2%	5.0%	10.8%	5.4%	6.5%			29.5%	11.5%
30s	56.0%	45.8%	6.6%	22.1%	14.8%	7.3%	5.3%	12.4%	5.2%	7.2%			24.6%	10.6%
40s	54.4%	43.2%	8.2%	20.2%	13.0%	7.1%	6.5%	13.7%	6.4%	9.2%			22.6%	11.4%
50s	53.2%	34.3%	9.8%	19.7%	12.8%	6.9%	6.9%	18.0%	8.6%	14.4%			19.4%	10.6%
60s	47.2%	25.4%	11.1%	17.3%	9.6%	7.6%	14.3%	21.6%	6.4%	21.8%			19.3%	10.3%
All	54.2%	40.3%	7.2%	21.7%	14.5%	7.2%	6.3%	14.6%	6.1%	10.2%			24.1%	10.9%
PLANS WITH COMPANY STOCK AND GICs[d] AND/OR OTHER STABLE-VALUE FUNDS														
20s	56.2%	31.7%	8.2%	33.7%	19.2%	14.5%	2.3%	5.2%	2.5%	2.2%	6.7%	11.3%	22.0%	12.6%
30s	56.3%	38.7%	8.9%	26.5%	15.1%	11.4%	2.6%	7.0%	3.3%	3.5%	5.9%	11.2%	20.6%	11.1%
40s	53.8%	37.8%	11.0%	24.3%	13.9%	10.4%	2.8%	7.3%	5.0%	2.3%	7.8%	14.0%	17.3%	11.6%
50s	49.3%	31.5%	13.8%	23.4%	13.3%	10.1%	3.3%	7.5%	5.3%	2.8%	11.8%	20.8%	14.5%	11.5%
60s	38.0%	25.3%	14.3%	18.0%	10.0%	8.0%	2.6%	6.5%	4.9%	2.7%	27.8%	34.4%	10.7%	11.1%
All	54.1%	34.6%	10.1%	25.0%	14.2%	10.8%	2.4%	6.9%	2.4%	2.8%	10.1%	16.6%	18.6%	11.4%

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

[a] The analysis is based on samples of 1.2 million participants with two or fewer years of tenure in 1998 and 4.0 million participants with two or fewer years of tenure in 2008.

[b] Minor investment options are not shown; therefore, row percentages will not add to 100 percent. Percentages are dollar-weighted averages.

[c] A lifecycle fund typically rebalances to an increasingly conservative portfolio as it approaches and passes the target date of the fund, which is usually included in the fund's name.

[d] GICs are guaranteed investment contracts.

Note: "Funds" include mutual funds, bank collective trusts, life insurance separate accounts, and any pooled investment product primarily invested in the security indicated.

Figure 40

Recently Hired 401(k) Plan Participants Are Less Likely to Hold Company Stock

Percentage of recently hired participants offered and holding company stock by participant age,1998–2008

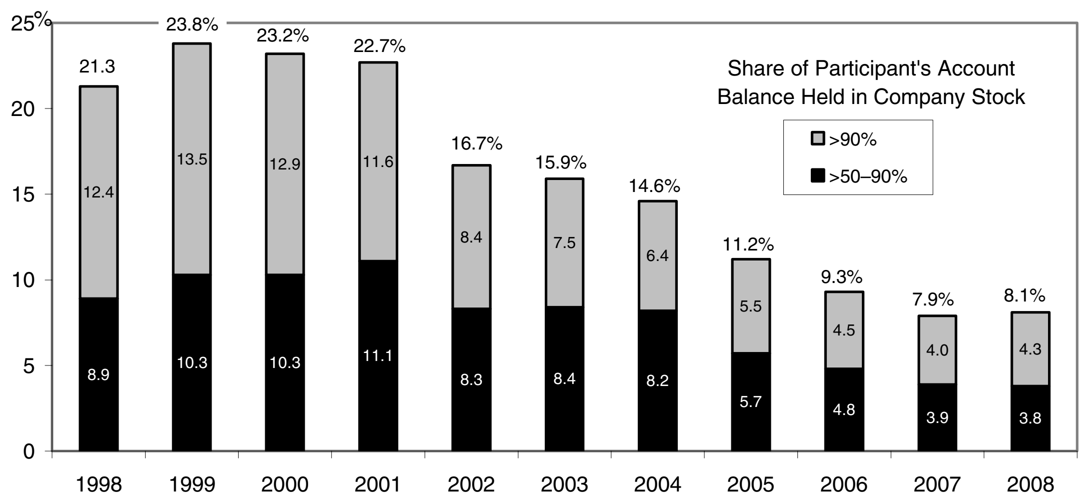
Age Group	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
20s	60.8%	61.1%	60.5%	58.1%	53.9%	49.6%	49.8%	45.4%	40.0%	35.4%	32.9%
30s	61.9%	62.3%	61.6%	60.0%	57.2%	53.3%	52.3%	47.6%	43.6%	40.4%	37.4%
40s	59.8%	60.6%	59.5%	58.8%	55.9%	52.6%	52.0%	47.3%	43.6%	40.7%	37.9%
50s	57.6%	58.8%	57.4%	57.9%	53.9%	51.2%	49.5%	45.2%	42.3%	39.6%	37.8%
60s	54.1%	55.5%	53.6%	55.7%	51.0%	49.5%	47.8%	43.9%	40.4%	38.4%	38.7%
All	60.5%	61.0%	60.0%	58.7%	55.3%	51.6%	51.0%	46.3%	42.0%	38.7%	36.2%

Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project.
Note: The analysis includes 401(k) plan participants with two or fewer years of tenure in the year indicated and in a plan offering company stock as an investment option.

Figure 41

New Participants Tend Not to Hold High Concentrations in Company Stock

Percentage of recently hired participants offered company stock holding the percentage of their account balance indicated in company stock, 1998–2008



Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project.
Note: The analysis includes 401(k) plan participants with two or fewer years of tenure in the year indicated and in a plan offering company stock as an investment option.

Figure 42

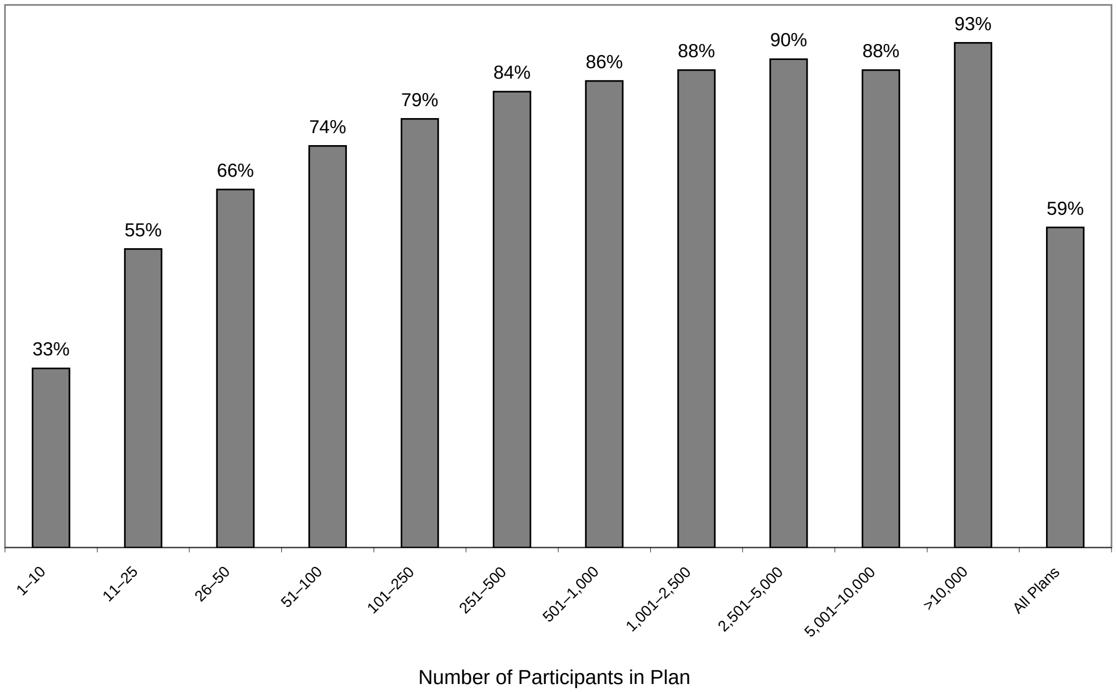
Asset Allocation Distribution of Recently Hired Participant Account Balance to Company Stock in 401(k) Plans with Company Stock, by Participant Age

Percentage of recently hired participants in plans offering company stock as an investment option,[a,b] 2008

Age	Percentage of Account Balance Invested in Company Stock										
Group	Zero	1–10%	11–20%	21–30%	31–40%	41–50%	51–60%	61–70%	71–80%	81–90%	91–100%
20s	67.1%	8.4%	5.7%	4.7%	3.3%	3.0%	1.8%	0.8%	0.6%	0.4%	4.2%
30s	62.6%	9.8%	7.0%	5.5%	3.8%	3.3%	2.0%	0.9%	0.6%	0.5%	4.0%
40s	62.1%	9.6%	6.8%	5.6%	4.0%	3.3%	2.0%	1.0%	0.7%	0.5%	4.4%
50s	62.2%	10.0%	6.7%	5.5%	3.9%	3.1%	1.9%	0.9%	0.6%	0.5%	4.8%
60s	61.3%	10.4%	6.4%	4.8%	3.7%	3.0%	1.7%	1.0%	0.7%	0.6%	6.5%
All	63.8%	9.4%	6.5%	5.2%	3.7%	3.2%	1.9%	0.9%	0.6%	0.4%	4.3%

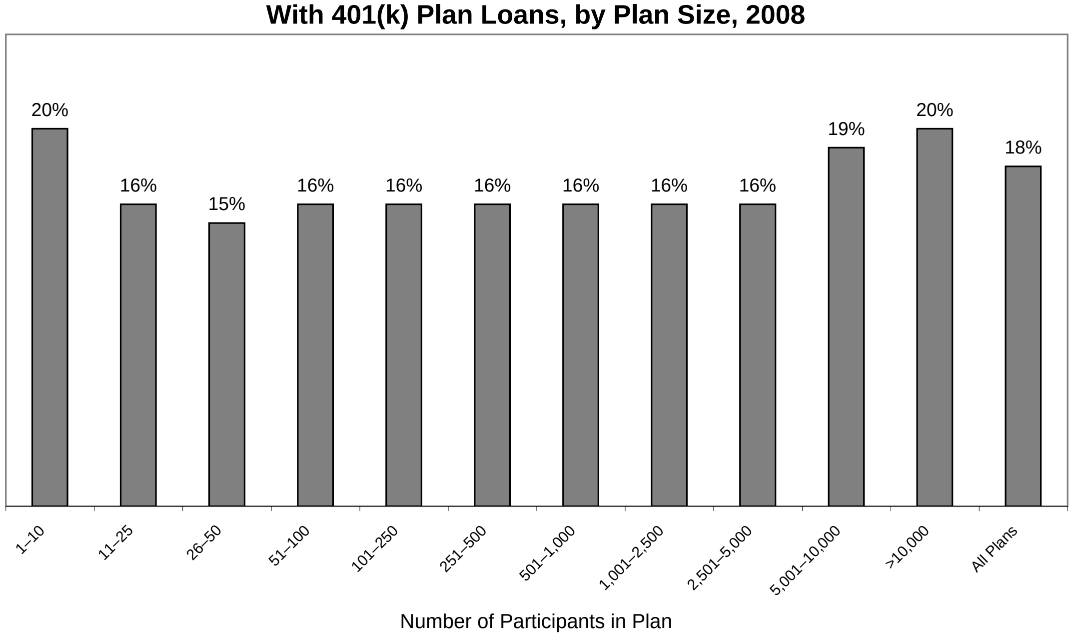
Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project.
[a] The analysis includes the 1.7 million participants with two or fewer years of tenure in 2008 and in plans offering company stock as an investment option.
[b] Row percentages may not add up to 100 percent because of rounding.

Figure 43
Percentage of 401(k) Plans Offering Loans, by Plan Size, 2008



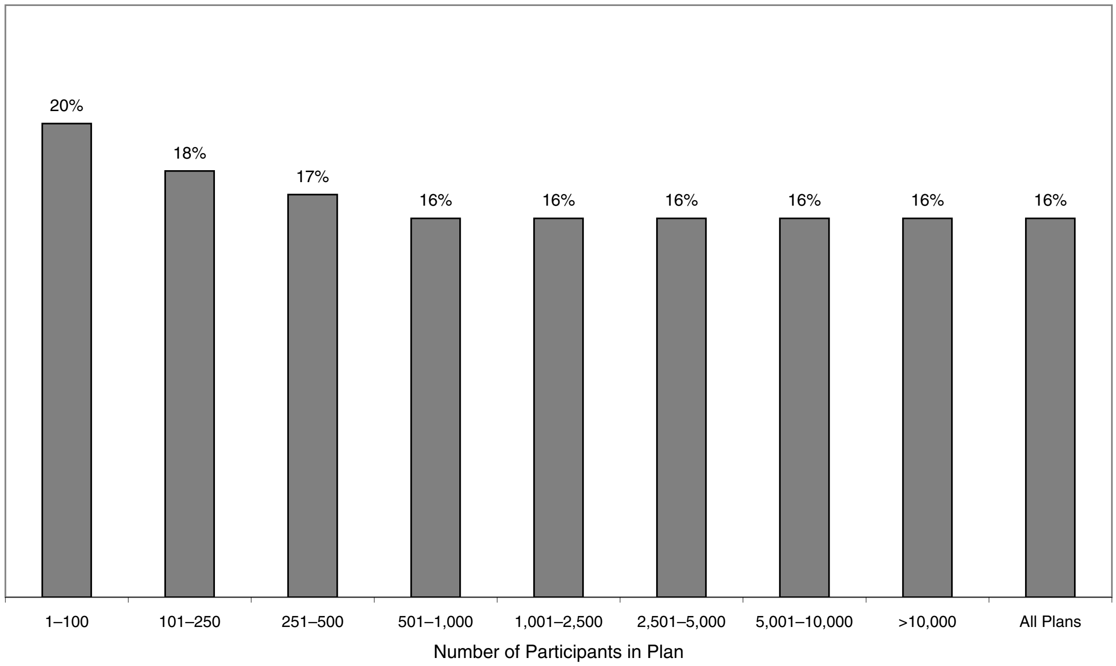
Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project.

Figure 44
Percentage of Eligible 401(k) Plan Participants With 401(k) Plan Loans, by Plan Size, 2008



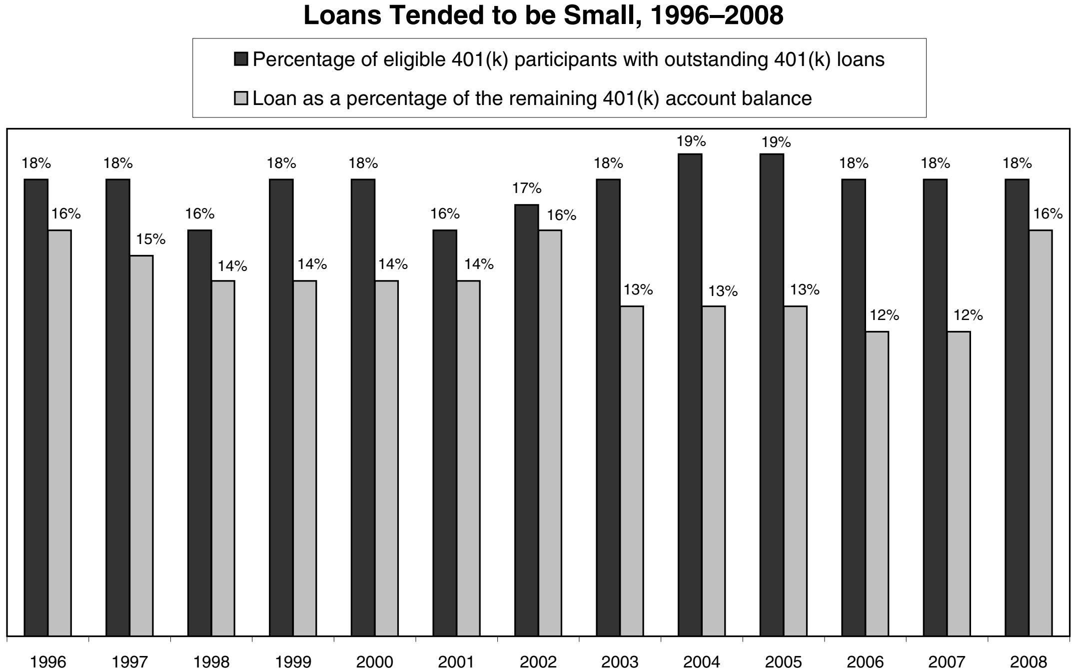
Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project.

Figure 45
Loan Balances as a Percentage of 401(k) Account Balances for Participants With 401(k) Plan Loans, by Plan Size, 2008



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

Figure 46
Few 401(k) Participants Had Outstanding 401(k) Loans; Loans Tended to be Small, 1996–2008



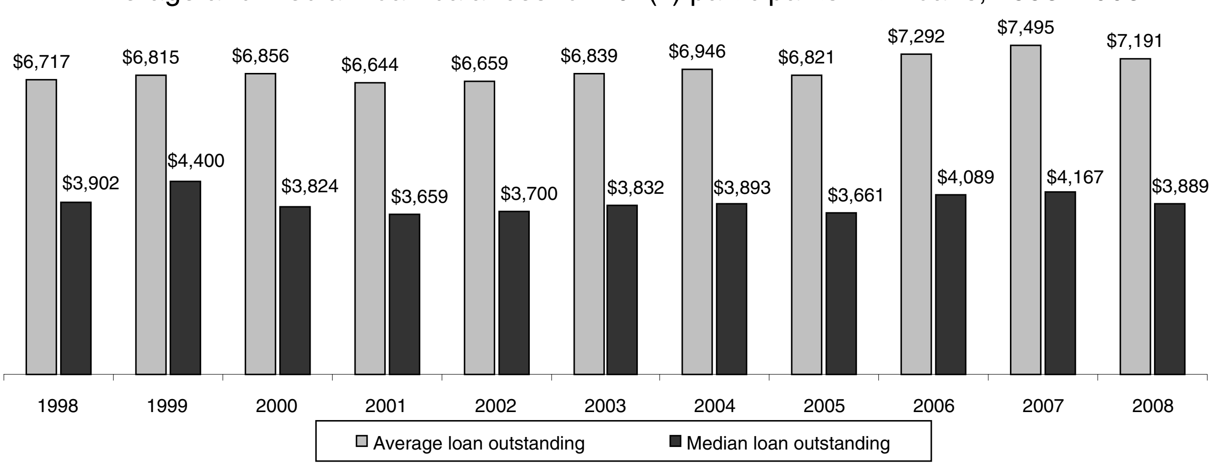
Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project.

Figure 47
Percentage of Eligible Participants With 401(k) Loans, By Participant Age, Tenure, Account Size, or Salary, Selected Years

	1996	2000	2002	2005	2007	2008
All	18%	18%	17%	19%	18%	18%
Age Group						
20s	12%	11%	10%	11%	10%	10%
30s	20%	19%	18%	20%	20%	20%
40s	22%	21%	20%	22%	22%	22%
50s	17%	17%	17%	19%	19%	19%
60s	9%	9%	9%	10%	10%	11%
Tenure (years)						
0–2	6%	5%	4%	5%	7%	6%
>2–5	15%	14%	12%	14%	15%	15%
>5–10	24%	23%	21%	22%	23%	23%
>10–20	27%	26%	26%	26%	26%	26%
>20–30	25%	26%	25%	24%	24%	25%
>30	13%	16%	15%	17%	17%	18%
Account Size						
<$10,000	12%	11%	11%	12%	11%	12%
$10,000–$20,000	26%	23%	22%	26%	25%	26%
>$20,000–$30,000	26%	25%	22%	27%	26%	26%
>$30,000–$40,000	25%	25%	23%	26%	26%	26%
>$40,000–$50,000	24%	25%	23%	25%	26%	25%
>$50,000–$60,000	24%	24%	22%	24%	25%	24%
>$60,000–$70,000	23%	24%	22%	23%	24%	23%
>$70,000–$80,000	26%	23%	22%	22%	23%	22%
>$80,000–$90,000	23%	23%	21%	21%	23%	21%
>$90,000–$100,000	22%	22%	21%	20%	22%	20%
>$100,000–$200,000	22%	20%	19%	18%	19%	18%
>$200,000	18%	15%	13%	13%	13%	12%
Salary Range						
$40,000 or less	18%	17%	13%	19%	20%	19%
>$40,000–$60,000	20%	23%	21%	26%	28%	27%
>$60,000–$80,000	18%	23%	20%	24%	24%	24%
>$80,000–$100,000	17%	21%	17%	22%	21%	20%
>$100,000	14%	16%	13%	16%	14%	14%

Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project.
Note: The tenure variable is generally years working at current employer, and thus may overstate years of participation in the 401(k) plan.

Figure 48
401(k) Loan Balances
Average and median loan balances for 401(k) participants with loans, 1998–2008



Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project.
Note: Average and median 401(k) loan amounts are calculated among participants with 401(k) loans.

Figure 49
Loan Balances as a Percentage of 401(k) Account Balances for Participants With Loans, by Participant Age, Tenure, Account Size, or Salary, Selected Years

	1996	2000	2002	2005	2007	2008
All	16%	14%	16%	13%	12%	16%
Age Group						
20s	30%	30%	28%	24%	25%	29%
30s	22%	20%	22%	19%	19%	25%
40s	16%	15%	16%	13%	13%	18%
50s	12%	11%	12%	10%	10%	13%
60s	10%	9%	10%	8%	8%	11%
Tenure (years)						
0–2	27%	24%	27%	23%	21%	25%
>2–5	24%	25%	25%	21%	22%	26%
>5–10	23%	21%	23%	19%	18%	24%
>10–20	15%	14%	16%	13%	13%	17%
>20–30	11%	10%	11%	9%	8%	12%
>30	7%	8%	10%	8%	7%	9%
Account Size						
<$10,000	39%	39%	37%	35%	36%	39%
$10,000–$20,000	32%	32%	31%	29%	30%	33%
>$20,000–$30,000	28%	28%	28%	25%	26%	29%
>$30,000–$40,000	23%	24%	25%	22%	23%	26%
>$40,000–$50,000	22%	21%	22%	20%	21%	24%
>$50,000–$60,000	19%	19%	20%	18%	19%	21%
>$60,000–$70,000	16%	17%	18%	16%	17%	19%
>$70,000–$80,000	16%	15%	16%	15%	16%	18%
>$80,000–$90,000	14%	14%	15%	14%	14%	16%
>$90,000–$100,000	13%	13%	13%	13%	13%	15%
>$100,000–$200,000	10%	9%	10%	9%	10%	11%
>$200,000	5%	5%	5%	4%	5%	5%
Salary Range						
$40,000 or less	17%	19%	18%	18%	17%	21%
>$40,000–$60,000	17%	16%	16%	16%	15%	19%
>$60,000–$80,000	15%	13%	14%	13%	12%	17%
>$80,000–$100,000	14%	12%	12%	11%	11%	14%
>$100,000	14%	10%	10%	9%	9%	11%

Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project.
Note: The tenure variable is generally years working at current employer, and thus may overstate years of participation in the 401(k) plan.

Figure 50
Loans From 401(k) Plans Tended to be Small
Percentage of eligible participants, by age, 2008

Loan as a Percentage of Remaining Account Balance	Age Group 20s	40s	60s	All
Zero (No Loan)	90%	78%	89%	82%
1–10%	1%	6%	4%	5%
>10%–20%	2%	5%	2%	4%
>20–30%	2%	3%	1%	3%
>30–80%	4%	7%	3%	6%
>80%	1%	1%	*	1%

Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project.
* Less than 0.5 percent.
Note: Column percentages may not add to 100 percent because of rounding.

Appendix

This year's update of the EBRI/ICI 401(k) database introduced a new consistent group of participants, or longitudinal sample. This appendix includes additional information on the new 2003–2008 consistent group (Figures A1–A5, which were discussed in conjunction with the main report). For completeness, it also contains all of the usual annual updates for the older 1999–2008 consistent group of participants (Figures A3 and A6–A12). In addition, changes in asset allocation for a consistent group of participants with accounts at year-end 2007 and year-end 2008 are presented in Figures A13 and A14.

Comparison of 2003–2008 Consistent Group of 401(k) Participants to EBRI/ICI 401(k) Database

About 2 in 5, or 6.0 million, of the 401(k) participants with accounts at the end of 2003 in the EBRI/ICI 401(k) database had accounts at the end of each year from 2003 through 2008.[55] Figures A1 and A2 compare the age and tenure distributions of the 2003–2008 consistent group with the cross-sectional database. Figure A3 highlights the distribution of account balance sizes across the database at year-end 2008, the 2003–2008 consistent group, and the 1999–2008 consistent group. Figures A4 and A5 provide information on the asset allocation of participants in the 2003–2008 consistent group by age.

Analysis of the 1999–2008 Consistent Group

PARTICIPANTS' AGES, TENURES, AND ACCOUNT BALANCES IN THE 1999–2008 CONSISTENT GROUP: About 1 in 5, or 2.1 million, of the 401(k) participants with accounts at the end of 1999 in the database had accounts at the end of each year from 1999 through 2008.[56] These 2.1 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 1999. However, by year-end 2008, these participants had grown older (Figure A6), accrued longer job tenures (Figure A7), and accumulated larger account balances compared with the cross-section of participants in the entire year-end 2008 database (Figures A3 and A8).

The 1999–2008 consistent group's account balances highlight the accumulation effect of ongoing 401(k) participation. At year-end 2008, 22 percent of the consistent group had more than $200,000 in their 401(k) accounts at their current employers, while another 22 percent had between $100,000 and $200,000 (Figure A3). In contrast, in the broader database, 5 percent of participants had accounts with more than $200,000, and 8 percent had accounts between $100,000 and $200,000 (Figures A3 and 10).

Reflecting their higher average age and tenure, the 1999–2008 consistent group also had median and average account balances that were much higher than the median and average account balances of the broader database (Figure A8). At year-end 2008, the average 401(k) account balance of the 1999–2008 consistent group was $104,734 (Figure A8), more than double the average account balance of $45,519 among participants in the entire database (Figure 9). The median 401(k) account balance among the consistent participants was $58,797 at year-end 2008 (Figure A8), more than four times the median account balance of $12,655 among participants in the entire database (Figure 9).

At year-end 2008, 401(k) account balances varied with both age and tenure among the 1999–2008 consistent group of participants, as they do in the cross-sectional database. Younger participants or those with shorter job tenure tended to have smaller account balances, while those who were older or had longer job tenure tended to have higher account balances. For example, with the 1999–2008 consistent group, participants in their 20s at year-end 2008 had an average account balance of $21,137, compared with an average of $137,337 for participants in their 60s (Figure A9).

CHANGES IN PARTICIPANTS' ACCOUNT BALANCES IN THE 1999–2008 CONSISTENT GROUP: In any given year, the change in a participant's account balance is the sum of three factors: new contributions by the participant or 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. On the other hand, investment returns of a given percentage produce larger dollar increases (or decreases) when compounded on a larger asset base.

All told, from year-end 1999 through year-end 2008, the average account balance among the group of consistent participants grew 56.0 percent, rising from $67,142 at year-end 1999 to $104,734 at year-end 2008 (Figures A8 and A10). This translates into an annual average growth rate of 5.1 percent over the nine-year period. The median account balance (or midpoint, with half above and half below) among this consistent group also grew, rising 132.5 percent from $25,292 in 1999 to $58,797 in 2008 (an annual average growth rate of 9.8 percent; Figure A8).

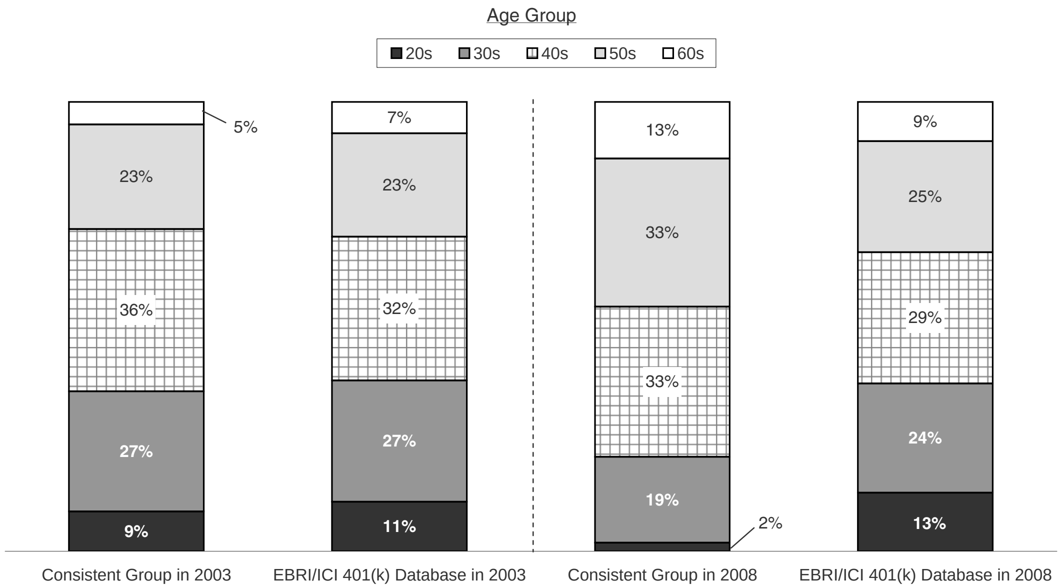
Among the 1999–2008 consistent group, there was a wide range of individual participant experience, often influenced by the relationship among the three factors mentioned above: contributions, investment returns, and withdrawal and loan activity. Participants who were younger or had fewer years of tenure experienced the largest increases in average account balance between year-end 1999 and year-end 2008. For example, the average account balance of participants in their 20s rose 700.0 percent (a 26.0 percent annual average growth rate) between the end of 1999 and the end of 2008 (Figures A9 and A10). Because younger participants' account balances tended to be small (Figure A9), contributions produced significant account balance growth. In contrast, the average account balance of older participants or those with longer tenures showed more modest growth (Figure A10). For example, the average account balance of participants in their 60s increased 19.7 percent (a 2.0 percent annual average growth rate) between year-end 1999 and year-end 2008. Investment returns, rather than annual contributions, generally account for most of the change in accounts with larger balances. In addition, participants in their 60s tend to have a higher propensity to make withdrawals.[57]

These changes in participant account balances also reflect changes in asset values during the nine-year time period (Figure 8). Although asset allocation varied with age and many participants held a range of investments, the impact of stock market performance showed through in 401(k) accounts because 401(k) plan participants tended to be heavily invested in equity securities. At year-end 2008, altogether, equity securities—equity funds, the equity portion of balanced funds,[58] and company stock—represented close to 56 percent of the 1999–2008 consistent group of 401(k) plan participants' assets (Figure A11). The asset allocation of participants in the consistent group varied with participant age, a pattern that is also observed in the cross-sectional EBRI/ICI 401(k) database. Younger participants generally tended to favor equity funds, while older participants were more likely to invest in fixed-income securities such as bond funds, GICs and other stable-value funds, or money funds.

Among individual 401(k) participants in the consistent group, the allocation of account balances to equities varied widely around the average of 56 percent for the 1999–2008 consistent group as a whole. Thirty-seven percent of participants in the 1999–2008 consistent group had more than 80 percent of their accounts invested in equities, while 11 percent held no equities at all in 2008 (Figure A12).

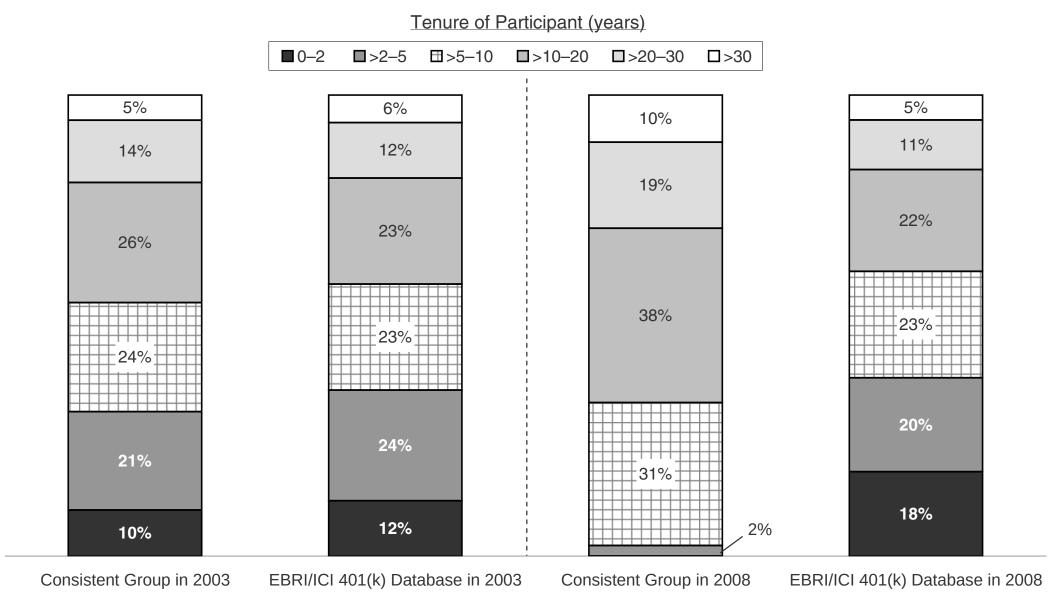
The growth pattern of the 1999–2008 consistent group's average account balances reflects stock market performance over the nine-year time period. The three-year bear market of 2000–2002 pulled 401(k) account balances down. Diversified portfolios and ongoing contributions[59] helped offset the impact of the stock market decline. The average account among the consistent group of participants fell 7.2 percent between year-end 1999 and year-end 2002 (Figure A9), while the S&P 500 total return index fell 37.6 percent and the Russell 2000 Index fell 21.0 percent (Figure 8). Between year-end 2002 and year-end 2007, the S&P 500 total return index climbed 82.9 percent and the Russell 2000 Index more than doubled. The average account balance among the 1999–2008 consistent group of participants increased 128.0 percent between year-end 2002 and year-end 2007 (Figure A9). In 2008, as the S&P 500 total return index fell 37.0 percent and the Russell 2000 Index fell 33.8 percent, the average account balance among the 1999–2008 consistent group of participants decreased 26.3 percent. The 1999–2008 consistent group's average balance at year-end 2008 was up 56.0 percent compared with year-end 1999 (Figure A10); over the nine-year period, the average account balance grew at an annual average rate of 5.1 percent.

Figure A1
Age Distribution of 2003–2008 Consistent Group
Percentage of participants by age, year-end 2003 and year-end 2008



Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project.
Note: The EBRI/ICI 401(k) database contains 15.0 million 401(k) plan participants at year-end 2003 and 24.0 million at year-end 2008.
The consistent group consists of 6.0 million 401(k) plan participants with account balances at the end of each year from 2003 through 2008.

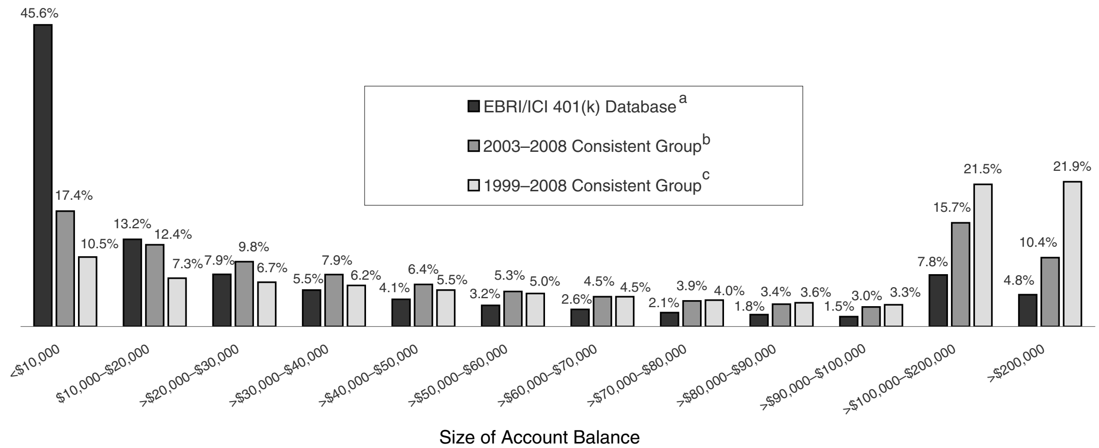
Figure A2
Tenure Distributon of 2003–2008 Consistent Group
Percentage of participants by years of tenure, year-end 2003 and year-end 2008



Source: Tabulations form EBRI/ICI Participant-Directed Retirement Plan Data Collection Project.
Note: The EBRI/ICI 401(k) database contains 15.0 million 401(k) plan participants at year-end 2003 and 24.0 million at year-end 2008.
The consistent group consists of 6.0 million 401(k) plan participants with account balances at the end of each year from 2003 through 2008.
Components may not add to 100 percent because of rounding.

Figure A3
Distribution of 401(k) Account Balances, by Size of Account Balance

Percentage of participants with account balances in specified ranges, 2008



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

[a] The EBRI/ICI 401(k) database at year-end 2008 represents 24.0 million 401(k) plan participants; the median account balance in the database was $12,655 at year-end 2008.

[b] The 2003–2008 consistent group represents the 6.0 million 401(k) plan participants with account balances at the end of each year from 2003 through 2008; the median account balance among the consistent group was $43,700 at year-end 2008.

[c] The 1999–2008 consistent group represents the 2.1 million 401(k) plan participants with account balances at the end of each year from 1999 through 2008; the median account balance among the consistent group was $58,797 at year-end 2008.

Note: Components may not add to 100 percent because of rounding.

Figure A4
Average Asset Allocation of 401(k) Accounts of 2003–2008 Consistent Group, by Participant Age

Percentage of account balances,[a] 2008

Age Group[b]	Equity Funds	Lifecycle Funds[c]	Non-Lifecycle Balanced Funds	Bond Funds	Money Funds	GICs[d]/Stable Value Funds	Company Stock	Other	Unknown	Total[a]
20s	43.4%	11.9%	6.7%	11.5%	6.7%	8.4%	9.1%	1.8%	0.6%	100%
30s	51.1%	7.7%	6.0%	11.4%	5.1%	6.6%	9.4%	2.0%	0.7%	100%
40s	46.3%	6.3%	6.5%	12.0%	5.5%	9.4%	11.1%	2.3%	0.6%	100%
50s	36.0%	6.0%	7.1%	13.9%	6.9%	15.3%	11.7%	2.6%	0.5%	100%
60s	28.4%	5.4%	6.8%	16.4%	8.4%	22.3%	9.3%	2.8%	0.4%	100%
All consistent group	38.3%	6.0%	6.7%	13.8%	6.6%	14.8%	10.8%	2.6%	0.5%	100%
EBRI/ICI 401(k) Database[e]	37.4%	6.6%	8.2%	12.3%	7.1%	15.2%	9.7%	2.4%	1.0%	100%

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

[a] Row percentages may not add to 100 percent because of rounding. Percentages are dollar-weighted averages.

[b] Age group is based on the participant's age at year-end 2008. Asset allocation by age group among the 2003–2008 consistent group of 6.0 million 401(k) plan participants with account balances at the end of each year from 2003 through 2008.

[c] A lifecycle, or target date, fund typically rebalances to an increasingly conservative portfolio as it approaches and passes the target date of the fund, which is usually included in the fund's name.

[d] GICs are guaranteed investment contracts.

[e] The year-end 2008 EBRI/ICI 401(k) database represents 24.0 million 401(k) participants.

Note: "Funds" include mutual funds, bank collective trusts, life insurance separate accounts, and any pooled investment product primarily invested in the security indicated.

Figure A5

Asset Allocation to Equities Varied Widely Among Participants in the 2003–2008 Consistent Group

Asset allocation distribution at year-end 2008 of 401(k) participant account balance to equities,[a] by age; percentage of participants[b, c]

	Percentage of Account Balance Invested in Equities[a]					
Age Group[d]	Zero	1–20 percent	>20–40 percent	>40–60 percent	>60–80 percent	>80 percent
20s	13.8%	6.1%	6.9%	11.3%	20.3%	41.6%
30s	8.6%	5.5%	6.4%	11.4%	20.9%	47.2%
40s	8.8%	6.9%	7.5%	12.5%	24.3%	39.8%
50s	11.9%	10.2%	9.7%	17.5%	20.3%	30.5%
60s	18.3%	13.3%	11.9%	16.4%	14.7%	25.4%
All consistent group[b]	11.7%	8.7%	8.6%	14.3%	20.7%	36.0%
EBRI/ICI 401(k) Database[e]	12.4%	6.1%	7.0%	13.1%	23.8%	37.5%

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

[a] 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.

[b] Participants include the 6.0 million 401(k) plan participants with account balances at the end of each year from 2003 through 2008. Asset allocation is as of year-end 2008.

[c] Row percentages may not add to 100 percent because of rounding.

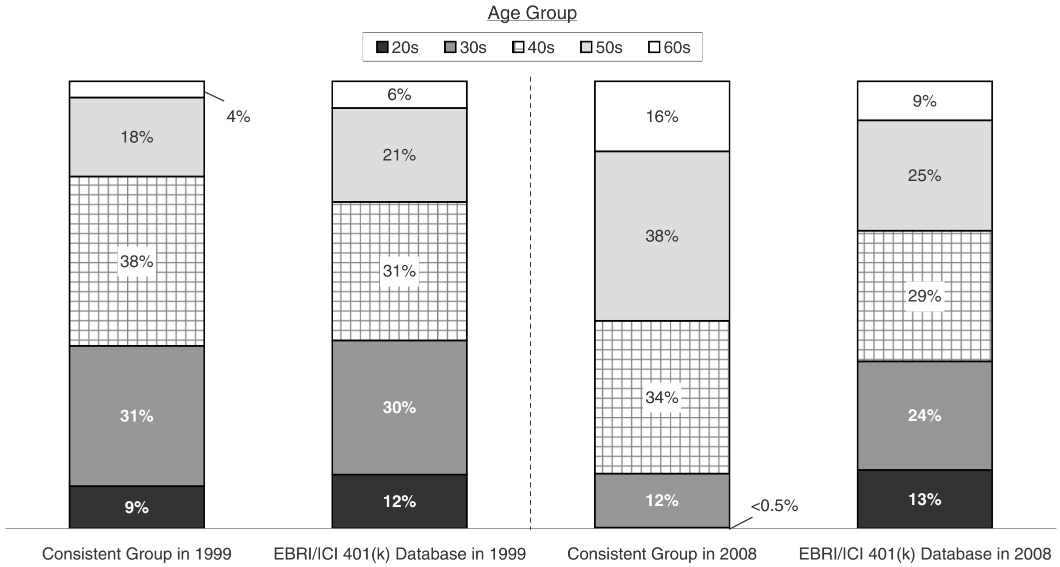
[d] Age group is based on the participant's age at year-end 2008.

[e] The year-end 2008 EBRI/ICI 401(k) database represents 24.0 million 401(k) participants.

Figure A6

1999–2008 Consistent Group Was Older Than All Participants in EBRI/ICI 401(k) Database at Year-End 2008

Percentage of participants, by age, year-end 1999 and year-end 2008

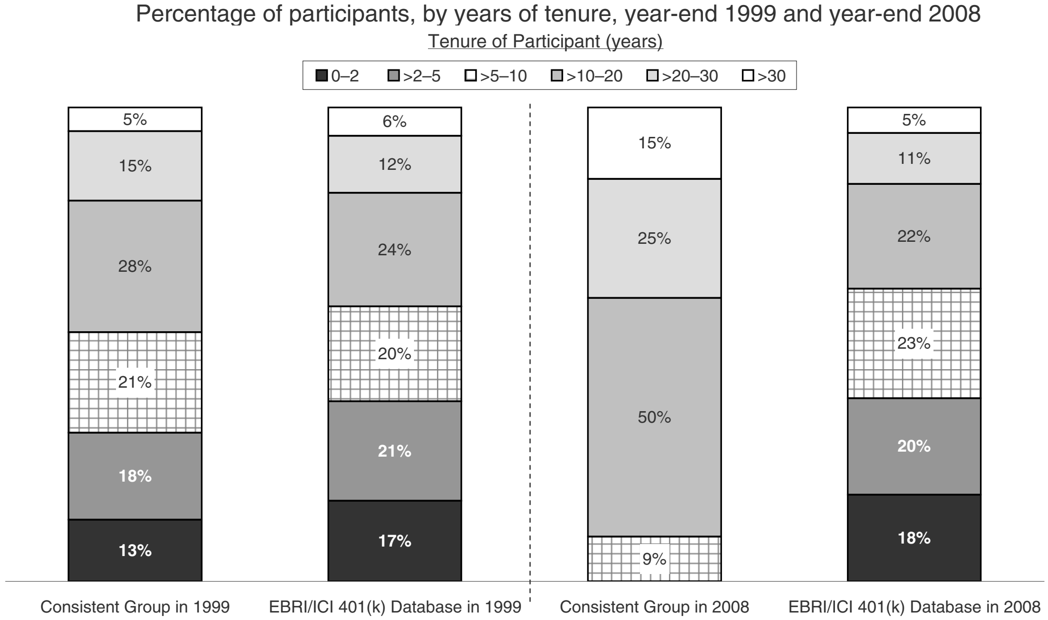


Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project.
Note: The EBRI/ICI 401(k) database contains 10.3 million 401(k) plan participants at year-end 1999 and 24.0 million at year-end 2008. The consistent group consists of 2.1 million 401(k) plan participants with account balances at the end of each year from 1999 through 2008. Components may not add to 100 percent because of rounding.

Figure A7

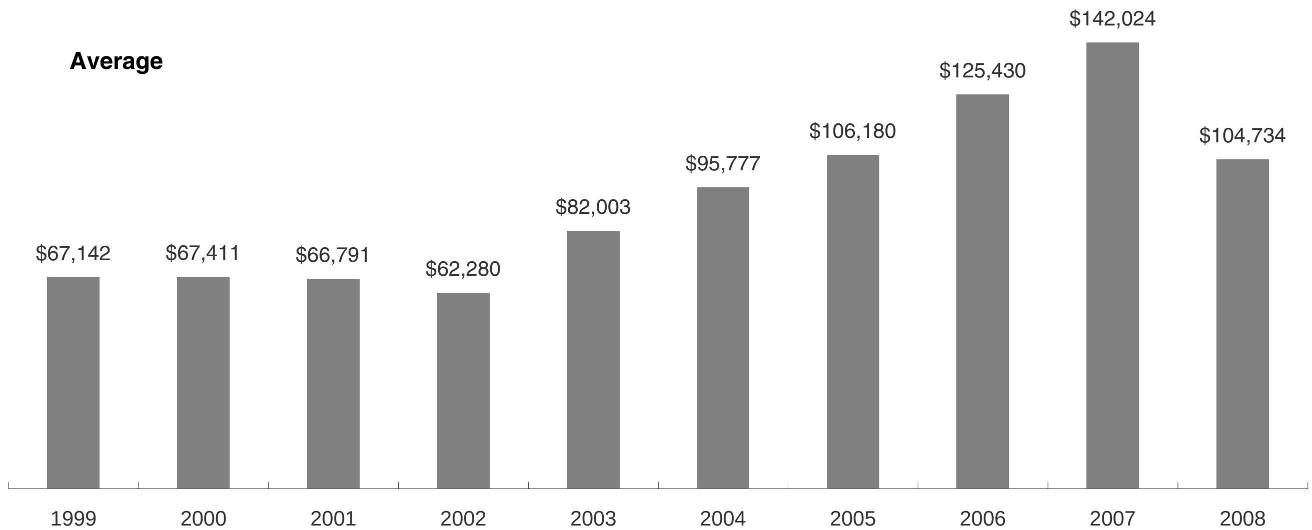
1999–2008 Consistent Group Had Longer Tenure Than All Participants in EBRI/ICI 401(k) Database at Year-End 2008

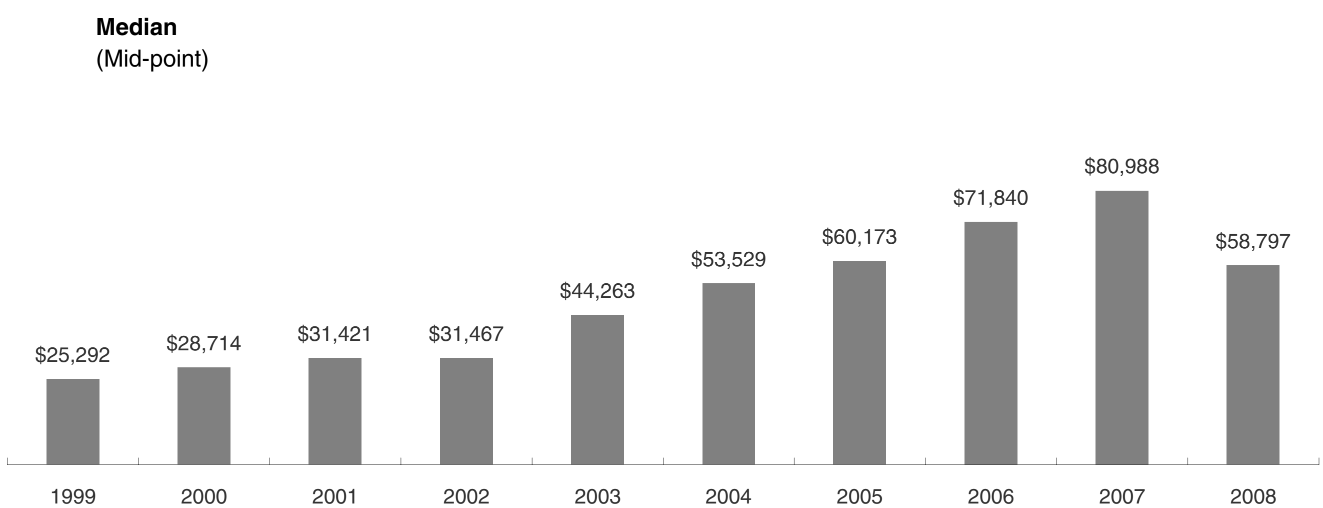
Percentage of participants, by years of tenure, year-end 1999 and year-end 2008



Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project.
Note: The EBRI/ICI 401(k) database contains 10.3 million 401(k) plan participants at year-end 1999 and 24.0 million at year-end 2008. The consistent group consists of 2.1 million 401(k) plan participants with account balances at the end of each year from 1999 through 2008. Components may not add to 100 percent because of rounding.

Figure A8
401(k) Account Balances[a] Among 401(k) Participants Present From Year-End 1999 Through Year-End 2008[b]





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

[a] 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.

[b] The analysis is based on a group of 2.1 million participants with account balances at the end of each year from 1999 through 2008.

Figure A9

Average Account Balances Among 401(k) Participants Present From Year-End 1999 Through Year-End 2008,[a] by Age and Tenure[b]

Age Group[b]	Tenure (years)[b]	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
20s	All	$2,642	$5,831	$8,190	$8,847	$12,958	$15,741	$19,229	$24,096	$29,002	$21,137
	>5–10	$1,140	$3,004	$4,918	$6,426	$10,332	$13,430	$16,602	$21,487	$26,012	$19,638
30s	All	$13,560	$16,355	$19,130	$19,879	$30,186	$38,565	$46,046	$57,880	$68,846	$49,116
	>5–10	$5,423	$9,440	$13,402	$15,689	$25,573	$34,092	$42,274	$54,352	$66,118	$47,420
	>10–20	$15,810	$18,268	$20,715	$21,047	$31,500	$39,848	$47,145	$58,919	$69,675	$49,609
40s	All	$44,714	$46,180	$47,118	$44,406	$61,650	$74,608	$85,273	$103,616	$120,134	$85,857
	>5–10	$14,545	$19,444	$23,722	$25,521	$39,160	$50,547	$61,303	$77,088	$92,100	$66,554
	>10–20	$37,661	$39,373	$40,777	$38,797	$54,678	$66,649	$76,730	$93,657	$109,059	$77,764
	>20–30	$73,695	$73,243	$71,802	$65,556	$87,753	$103,934	$116,119	$139,134	$159,149	$113,778
50s	All	$76,597	$77,397	$76,504	$71,380	$94,429	$111,191	$124,328	$147,960	$169,024	$125,959
	>5–10	$22,399	$27,940	$32,079	$33,525	$48,662	$61,503	$73,854	$91,571	$108,752	$82,285
	>10–20	$44,672	$47,194	$48,782	$46,802	$64,083	$77,715	$89,414	$108,370	$125,425	$93,722
	>20–30	$106,494	$105,475	$102,326	$93,685	$122,337	$142,831	$158,647	$188,122	$214,581	$158,359
	>30	$101,714	$101,065	$97,956	$90,895	$117,865	$135,681	$147,647	$172,456	$193,629	$145,842
60s	All	$114,762	$112,126	$108,324	$99,539	$125,088	$140,273	$149,199	$168,746	$182,556	$137,337
	>5–10	$25,923	$32,176	$36,550	$38,016	$53,369	$66,726	$78,372	$93,870	$107,405	$81,826
	>10–20	$48,744	$52,237	$53,933	$52,155	$69,840	$83,738	$95,081	$112,300	$126,068	$94,892
	>20–30	$121,063	$119,873	$116,839	$107,529	$135,782	$154,583	$166,933	$190,661	$206,475	$154,563
	>30	$171,708	$162,634	$153,316	$138,336	$169,650	$184,157	$189,152	$208,757	$221,613	$167,003
All[a]	All	$67,142	$67,411	$66,791	$62,280	$82,003	$95,777	$106,180	$125,430	$142,024	$104,734

Source: Tabulations from the EBRI/ICI Participant-Directed Retirement Plan Data Collection Project.
[a] The analysis is based on a group of 2.1 million participants with account balances at the end of each year from 1999 through 2008.
[b] Age and tenure groups are based on participant age and tenure at year-end 2008.

Figure A10

Percent Change in Average Account Balances Among 401(k) Participants Present From Year-End 1999 Through Year-End 2008,[a] by Age and Tenure[b]

Age Group[b]	Tenure (years)[b]	1999–2000	2000–2001	2001–2002	2002–2003	2003–2004	2004–2005	2005–2006	2006–2007	2007–2008	1999–2008
20s	All	120.7%	40.5%	8.0%	46.5%	21.5%	22.2%	25.3%	20.4%	-27.1%	700.0%
	>5–10	163.5%	63.7%	30.7%	60.8%	30.0%	23.6%	29.4%	21.1%	-24.5%	1622.6%
30s	All	20.6%	17.0%	3.9%	51.8%	27.8%	19.4%	25.7%	18.9%	-28.7%	262.2%
	>5–10	74.1%	42.0%	17.1%	63.0%	33.3%	24.0%	28.6%	21.6%	-28.3%	774.4%
	>10–20	15.5%	13.4%	1.6%	49.7%	26.5%	18.3%	25.0%	18.3%	-28.8%	213.8%
40s	All	3.3%	2.0%	-5.8%	38.8%	21.0%	14.3%	21.5%	15.9%	-28.5%	92.0%
	>5–10	33.7%	22.0%	7.6%	53.4%	29.1%	21.3%	25.7%	19.5%	-27.7%	357.6%
	>10–20	4.5%	3.6%	-4.9%	40.9%	21.9%	15.1%	22.1%	16.4%	-28.7%	106.5%
	>20–30	-0.6%	-2.0%	-8.7%	33.9%	18.4%	11.7%	19.8%	14.4%	-28.5%	54.4%
50s	All	1.0%	-1.2%	-6.7%	32.3%	17.8%	11.8%	19.0%	14.2%	-25.5%	64.4%
	>5–10	24.7%	14.8%	4.5%	45.2%	26.4%	20.1%	24.0%	18.8%	-24.3%	267.4%
	>10–20	5.6%	3.4%	-4.1%	36.9%	21.3%	15.1%	21.2%	15.7%	-25.3%	109.8%
	>20–30	-1.0%	-3.0%	-8.4%	30.6%	16.8%	11.1%	18.6%	14.1%	-26.2%	48.7%
	>30	-0.6%	-3.1%	-7.2%	29.7%	15.1%	8.8%	16.8%	12.3%	-24.7%	43.4%
60s	All	-2.3%	-3.4%	-8.1%	25.7%	12.1%	6.4%	13.1%	8.2%	-24.8%	19.7%
	>5–10	24.1%	13.6%	4.0%	40.4%	25.0%	17.5%	19.8%	14.4%	-23.8%	215.7%
	>10–20	7.2%	3.2%	-3.3%	33.9%	19.9%	13.5%	18.1%	12.3%	-24.7%	94.7%
	>20–30	-1.0%	-2.5%	-8.0%	26.3%	13.8%	8.0%	14.2%	8.3%	-25.1%	27.7%
	>30	-5.3%	-5.7%	-9.8%	22.6%	8.6%	2.7%	10.4%	6.2%	-24.6%	-2.7%
All[a]	All	0.4%	-0.9%	-6.8%	31.7%	16.8%	10.9%	18.1%	13.2%	-26.3%	56.0%

Source: Tabulations from the EBRI/ICI Participant-Directed Retirement Plan Data Collection Project.
[a] The analysis is based on a group of 2.1 million participants with account balances at the end of each year from 1999 through 2008.
[b] Age and tenure groups are based on participant age and tenure at year-end 2008.

Figure A11

Average Asset Allocation of 401(k) Accounts of 1999–2008 Consistent Group, by Participant Age

Percentage of account balances,[a] 2008

Age Group[b]	Equity Funds	Lifecycle Funds[c]	Non-Lifecycle Balanced Funds	Bond Funds	Money Funds	GICs[d]/Stable-Value Funds	Company Stock	Other	Unknown	Total
20s	36.7%	12.4%	6.8%	10.0%	9.5%	11.5%	10.3%	2.5%	0.3%	100%
30s	54.1%	6.3%	6.1%	10.6%	4.7%	5.9%	9.8%	2.1%	0.5%	100%
40s	48.7%	5.3%	6.9%	12.1%	5.6%	8.7%	10.1%	2.2%	0.4%	100%
50s	37.8%	5.8%	7.4%	14.2%	7.3%	15.3%	9.6%	2.3%	0.3%	100%
60s	29.3%	5.2%	7.2%	16.9%	8.9%	22.5%	7.4%	2.4%	0.2%	100%
All consistent group	39.3%	5.4%	7.1%	14.2%	7.0%	15.2%	9.2%	2.3%	0.3%	100%
EBRI/ICI 401(k) Database[e]	37.4%	6.6%	8.2%	12.3%	7.1%	15.2%	9.7%	2.4%	1.0%	100%

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

[a] Row percentages may not add to 100 percent because of rounding. Percentages are dollar-weighted averages.

[b] Age group is based on the participant's age at year-end 2008. Asset allocation by age group among the consistent group of 2.1 million 401(k) plan participants with account balances at the end of each year from 1999 through 2008.

[c] A lifecycle, or target date, fund typically rebalances to an increasingly conservative portfolio as it approaches and passes the target date of the fund, which is usually included in the fund's name.

[d] GICs are guaranteed investment contracts.

[e] The year-end 2008 EBRI/ICI 401(k) database represents 24.0 million 401(k) participants.

Note: "Funds" include mutual funds, bank collective trusts, life insurance separate accounts, and any pooled investment product primarily invested in the security indicated.

Figure A12

Asset Allocation to Equities Varied Widely Among Participants in the 1999–2008 Consistent Group

Asset allocation distribution at year-end 2008 of 401(k) participant account balance to equities,[a] by age and percentage of participants[b, c]

	Percentage of Account Balance Invested in Equities[a]					
Age Group[d]	Zero	1–20 percent	>20–40 percent	>40–60 percent	>60–80 percent	>80 percent
20s	14.8%	7.8%	8.7%	9.6%	15.2%	43.9%
30s	6.6%	5.1%	5.7%	10.8%	19.8%	52.1%
40s	7.4%	6.7%	7.1%	12.3%	23.4%	43.1%
50s	11.2%	10.7%	9.4%	16.9%	19.6%	32.2%
60s	18.3%	14.8%	11.7%	15.2%	14.1%	25.9%
All consistent group[b]	11.4%	9.6%	8.7%	14.1%	19.6%	36.7%
EBRI/ICI 401(k) Database[e]	12.4%	6.1%	7.0%	13.1%	23.8%	37.5%

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

[a] 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.

[b] Participants include the 2.1 million 401(k) plan participants with account balances at the end of each year from 1999 through 2008. Asset allocation is as of year-end 2008.

[c] Row percentages may not add to 100 percent because of rounding.

[d] Age group is based on the participant's age at year-end 2008.

[e] The year-end 2008 EBRI/ICI 401(k) database represents 24.0 million 401(k) participants.

Figure A13

Changes in Consistent Participants' Investment in Equity Funds, 2007–2008

Percentage of participants[a]

Percentage of Account Balance Invested in **Equity** Funds

Percentage in 2007		Percentage in 2008: None	1–20	21–40	41–60	61–80	81–99	100	Total in 2007[b]
	None	35.0	0.8	0.4	0.3	0.2	0.2	0.3	37.2
	1–20	0.6	4.9	0.6	0.2	0.1	*	*	6.5
	21–40	0.6	2.2	5.1	0.9	0.2	0.1	0.1	9.2
	41–60	0.7	0.6	3.4	6.9	1.0	0.2	0.1	12.9
	61–80	0.6	0.4	0.7	3.9	7.0	0.7	0.3	13.6
	81–99	0.4	0.3	0.2	0.5	2.7	4.9	0.4	9.4
	100	0.7	0.2	0.2	0.3	0.5	0.7	8.5	11.1
Total in 2008[c]		38.6	9.4	10.6	13.0	11.8	6.8	9.7	100.0

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

[a] Sample of 18.0 million participants with account balances at year-end 2007 and year-end 2008.

[b] Percentages across the row may not add to total because of rounding.

[c] Percentages in column may not add to total because of rounding.

* Less than 0.05 percent.

Sum of shaded areas: 84.5 percent of participants.

Note: "Equity funds" include mutual funds, bank collective trusts, life insurance separate accounts, and any pooled investment product primarily invested in stocks.

Figure A14

Changes in Consistent Participants' Investment in Bond Funds, 2007–2008

Percentage of participants[a]

Percentage of Account Balance Invested in **Bond** Funds

Percentage in 2007		Percentage in 2008: None	1–20	21–40	41–60	61–80	81–99	100	Total in 2007[b]
	None	65.1	2.6	1.1	0.6	0.3	0.3	0.9	70.9
	1–20	1.0	11.2	3.3	0.3	0.2	0.1	0.1	16.2
	21–40	0.4	0.5	4.6	1.4	0.2	*	0.1	7.1
	41–60	0.1	0.1	0.2	1.5	0.5	*	0.1	2.5
	61–80	*	*	*	0.1	0.5	0.3	*	0.9
	81–99	*	*	*	*	*	0.3	0.1	0.5
	100	0.1	*	*	*	*	0.1	1.7	1.9
Total in 2008[c]		66.8	14.5	9.2	3.9	1.6	1.1	2.9	100.0

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

[a] Sample of 18.0 million participants with account balances at year-end 2007 and year-end 2008.

[b] Percentages across the row may not add–total because of rounding.

[c] Percentages in column may not add–total because of rounding.

* Less than 0.05 percent.

Sum of shaded areas: 90.3 percent of participants.

Note: "Bond funds" include mutual funds, bank collective trusts, life insurance separate accounts, and any pooled investment product primarily invested in bonds.

References

Barclays Capital U.S. Aggregate Bond Index. San Francisco, CA: Barclays Global Investors.

Bloomberg Data. New York, NY: Bloomberg L.P.

Brady, Peter. "Measuring Retirement Resource Adequacy." *Journal of Pension Economics and Finance*. (Published online by Cambridge University Press on September 8, 2008, doi:10.1017/S1474747208003806.) Available at http://journals.cambridge.org/action/displayAbstract?aid=2197036

Brady, Peter, Sarah Holden, and Erin Short. "The U.S. Retirement Market, 2008. " *Investment Company Institute Fundamentals.* Vol. 18, no. 5 (June 2009). Available at www.ici.org/pdf/fm-v18n5.pdf

Cerulli Associates. "Retirement Markets 2008." *Cerulli Quantitative Update*. Boston, MA: Cerulli Associates Inc., 2008.

Choi, James J., David Laibson, Brigitte C. Madrian, and Andrew Metrick. "Defined Contribution Pensions: Plan Rules, Participant Decisions, and the Path of Least Resistance." *NBER Working Paper*. No. 8655 (December 2001).

Deloitte Consulting LLP, International Foundation, and the International Society of Certified Employee Benefit Specialists. *Annual 401(k) Benchmarking Survey 2009 Edition*. New York, NY: Deloitte Consulting LLP, 2009. Available at www.deloitte.com/assets/Dcom-UnitedStates/Local%20Assets/Documents/us_consulting_401(k)AnnualBenchmarkingSurvey2009_081409.pdf

Employee Benefit Research Institute. "History of 401(k) Plans: An Update." *FACTS from EBRI* (February 2005). Available at www.ebri.org/pdf/publications/facts/0205fact.a.pdf

Fidelity Investments. "Impact of Market Volatility on Participant Exchange Behavior." *Building Futures: Impact of Market Volatility*. Boston, MA: Fidelity Investments, December 2008. Available at http://dcda.fidelity.com/static/dcle/WPSFidelityPerspectives/documents/MV_partbehavior_Final_121108_5.pdf

________. "Participants Continue to Stay the Course Amidst Market Downturn; Improvements Seen in Worker Engagement, Account Diversification and Company Stock Usage." News release, January 28, 2009. Available at http://content.members.fidelity.com/Inside_Fidelity/fullStory/1,,7669,00.html

Gustman, Alan L., and Thomas Steinmeier. "How Changes in Social Security Affect Recent Retirement Trends." *NBER Working Paper*. No. 14105 (June 2008).

Hewitt Associates. *How Well Are Employees Saving in 401(k) Plans: 2009 Hewitt Universe Benchmarks*. Lincolnshire, IL: Hewitt Associates LLC, 2009.

Holden, Sarah, Peter Brady, and Michael Hadley. "401(k) Plans: A 25-Year Retrospective." *Investment Company Institute Perspective.* Vol. 12, no. 2 (November 2006). Available at www.ici.org/pdf/per12-02.pdf

Holden, Sarah, and Jack VanDerhei. "401(k) Plan Asset Allocation, Account Balances, and Loan Activity in 1999." *Investment Company Institute Perspective* Vol. 7, no. 1 (January 2001a), and *EBRI Issue Brief*, no. 230 (February 2001a). Available at www.ici.org/pdf/per07-01.pdf and www.ebri.org/pdf/briefspdf/0201ib.pdf

________. "The Impact of Employer-Selected Investment Options on 401(k) Plan Participants' Asset Allocations: Preliminary Findings." Working paper prepared for the Center for Pension and Retirement Research (CPRR) Current Pension Policy Issues Conference, at Miami University, Oxford, OH, June 8–9 2001 (May 2001b).

________. "Contribution Behavior of 401(k) Plan Participants." *Investment Company Institute Perspective.* Vol. 7, no. 4, and *EBRI Issue Brief*, no. 238 (October 2001c). Available at www.ici.org/pdf/per07-04.pdf and www.ebri.org/pdf/briefspdf/1001ib.pdf

________. "Can 401(k) Accumulations Generate Significant Income for Future Retirees?" *Investment Company Institute Perspective.* Vol. 8, no. 3, and *EBRI Issue Brief*, no. 251 (November 2002). Available at www.ici.org/pdf/per08-03.pdf and www.ebri.org/pdf/briefspdf/1102ib.pdf

________. "401(k) Plan Asset Allocation, Account Balances, and Loan Activity in 2002." *Investment Company Institute Perspective.* Vol. 9, no. 5, and *EBRI Issue Brief*, no. 261 (September 2003). Available at www.ici.org/pdf/per09-05.pdf and www.ebri.org/pdf/briefspdf/0903ib.pdf

________. "401(k) Plan Asset Allocation, Account Balances, and Loan Activity in 2003." *Investment Company Institute Perspective.* Vol. 10, no. 2, and *EBRI Issue Brief*, no. 272 (August 2004a). Available at www.ici.org/pdf/per10-02.pdf and www.ebri.org/pdf/briefspdf/0804ib1.pdf

________. "Appendix: Additional Figures for the EBRI/ICI Participant-Directed Retirement Plan Data Collection Project for Year-End 2003." *Investment Company Institute Perspective.* Vol. 10, no. 2A (August 2004b). Available at www.ici.org/pdf/per10-02_appendix.pdf

________. "Contribution Behavior of 401(k) Plan Participants During Bull and Bear Markets." *National Tax Association Proceedings, Ninety-Sixth Annual Conference on Taxation, November 13–15, 2003, Chicago, Illinois.* Washington, DC: National Tax Association, 2004c, 44–53.

________. "The Influence of Automatic Enrollment, Catch-Up, and IRA Contributions on 401(k) Accumulations at Retirement." *Investment Company Institute Perspective.* Vol. 11, no. 2, and *EBRI Issue Brief*, no. 283 (July 2005). Available at www.ici.org/pdf/per11-02.pdf and www.ebri.org/pdf/briefspdf/ebri_ib_07-20054.pdf

Holden, Sarah, Jack VanDerhei, and Luis Alonso. "What Can Consistent Participation in 401(k) Plans Generate?*" Investment Company Institute Perspective.* Vol. 15, no. 1, and *EBRI Issue Brief*, no. 332-SR (July 2009). Available at www.ici.org/pdf/per15-01.pdf and www.ebri.org/pdf/briefspdf/EBRI_IB_7-2009_No332-SR_ConsistPart.pdf

Holden, Sarah, Jack VanDerhei, Luis Alonso, and Craig Copeland. "401(k) Plan Asset Allocation, Account Balances, and Loan Activity in 2007*." Investment Company Institute Perspective.* Vol. 14, no. 3, and *EBRI Issue Brief*, no. 324 (December 2008). Available at www.ici.org/pdf/per14-03.pdf and www.ebri.org/pdf/briefspdf/EBRI_IB_12a-2008.pdf

Holden, Sarah, Jack VanDerhei, and Carol Quick. "401(k) Plan Asset Allocation, Account Balances, and Loan Activity in 1998." *Investment Company Institute Perspective.* Vol. 9, no. 5 (January 2000), and *EBRI Issue Brief*, no. 218 (February 2000). Available at www.ici.org/pdf/per09-05.pdf and www.ebri.org/pdf/briefspdf/0200ib.pdf

Investment Company Institute. *Quarterly Supplementary Data*. Washington, DC: Investment Company Institute.

________. "ICI 401(k) Participant Activity Study Shows 2008 Activity in Line with Historical Data." News release (March 9, 2009a). Available at www.ici.org/policy/retirement/retirement/09_news_recordkeeping

________. "The U.S. Retirement Market, First Quarter 2009." *Investment Company Institute Fundamentals.* Vol. 18, no. 5-Q1 (August 2009b). Available at www.ici.org/pdf/retmrkt_update.pdf

Morningstar. *Ibbotson SBBI 2009 Classic Yearbook: Market Results for Stocks, Bonds, Bills, and Inflation 1926–2008*. Chicago, IL: Morningstar Inc., 2009.

Poterba, James, Steven F. Venti, and David A. Wise. "Rise of 401(k) Plans, Lifetime Earnings, and Wealth at Retirement." *NBER Working Paper*. No. 13091 (May 2007d).

Profit Sharing/401k Council of America. *52nd Annual Survey of Profit Sharing and 401(k) Plans Reflecting 2008 Plan Experience.* Chicago, IL: Profit Sharing/401k Council of America, 2009.

Russell 2000 Index. Tacoma, WA: Frank Russell Company.

S&P 500. New York, NY: Standard & Poor's.

U.S. Department of Labor. Bureau of Labor Statistics. *National Compensation Survey: Employee Benefits in Private Industry in the United States, March 2007.* Washington, DC: U.S. Department of Labor, Bureau of Labor Statistics, 2007. Available at www.bls.gov/ncs/ebs/sp/ebsm0006.pdf

________. *National Compensation Survey: Employee Benefits in Private Industry in the United States, March 2008*. Washington, DC: U.S. Department of Labor, Bureau of Labor Statistics, 2008a. Available at www.bls.gov/ncs/ebs/benefits/2008/ownership/private/table02a.pdf

________. "Employee Benefits in the United States, March 2008." News release, August 7, 2008b. Available at www.bls.gov/news.release/pdf/ebs2.pdf

U.S. Department of Labor, Employee Benefits Security Administration. *Private Pension Plan Bulletin, Abstract of 2005 Form 5500 Annual Reports.* Washington, DC: U.S. Department of Labor, Employee Benefits Security Administration, February 2008a. Available at www.dol.gov/ebsa/pdf/2005pensionplanbulletin.pdf

________. *Private Pension Plan Bulletin Historical Tables*. Washington, DC: U.S. Department of Labor, Employee Benefits Security Administration (February 2008b). Available at www.dol.gov/ebsa/pdf/privatepensionplanbulletinhistoricaltables.pdf

________. *Private Pension Plan Bulletin, Abstract of 2006 Form 5500 Annual Reports.* Washington, DC: U.S. Department of Labor, Employee Benefits Security Administration, December 2008c. Available at www.dol.gov/ebsa/pdf/2006pensionplanbulletin.pdf

U.S. Government Accountability Office. "401(k) Pension Plans: Loan Provisions Enhance Participation but May Affect Income Security for Some." *Letter Report*, GAO-HEHS-98-5. Washington, DC: U.S. Government Accountability Office, October 1997. Available at www.gao.gov/archive/1998/he98005.pdf

U.S. Internal Revenue Service. "Notice of Proposed Rule Making, Certain Cash or Deferred Arrangements Under Employee Plans." *Federal Register.* Vol. 46, no. 217 (November 10, 1981): 55544–55549.

U.S. Joint Committee on Taxation. *Technical Explanation of H.R. 4, the "Pension Protection Act of 2006," as Passed by the House on July 28, 2006, and as Considered by the Senate on August 3, 2006.* JCX-38-06 (August 3, 2006). Washington, DC: U.S. Joint Committee on Taxation, 2006. Available at www.jct.gov/x-38-06.pdf

VanDerhei, Jack L. *EBRI Special Report Company Stock in 401(k) Plans: Results of a Survey of ISCEBS Members.* (Employee Benefit Research Institute, January 2002). Available at www.ebri.org/pdf/iscebs.pdf

VanDerhei, Jack, and Craig Copeland. "The Impact of PPA on Retirement Savings for 401(k) Participants." *EBRI Issue Brief*, no. 318 (Employee Benefit Research Institute, June 2008). Available at www.ebri.org/pdf/briefspdf/ebri_ib_06-20087.pdf

The Vanguard Group. *How America Saves 2009: A Report on Vanguard 2008 Defined Contribution Plan Data*. Valley Forge, PA: The Vanguard Group, Vanguard Center for Retirement Research (2009). Available at https://institutional.vanguard.com/iam/pdf/HAS09.pdf

Endnotes

[1] For data on 401(k) plan assets, participants, and plans through 2006, see U.S. Department of Labor, Employee Benefits Security Administration (2008a, 2008b, and 2008c). For total retirement assets, including those in 401(k) plans, through the first quarter of 2009, see Investment Company Institute (2009b). For a discussion of trends between defined benefit (DB) and defined contribution (DC) plans, see Poterba, Venti, and Wise (2007), and Holden, Brady, and Hadley (2006).

[2] Prior to 2005, the U.S. Department of Labor private pension plan bulletin updates reported a count of active 401(k) plan participants that had been adjusted from the number of active participants that was actually reported in the Form 5500 filings to exclude: (1) individuals eligible to participate in a 401(k) plan who had not elected to have their employers make contributions; and (2) non-vested former employees who had not (at the time the Form 5500s were submitted) incurred the break in service period established by their plan (see U.S. Department of Labor, Employee Benefits Security Administration 2008a and 2008b, for further detail). This change in methodology results in a dramatic increase in the number of individuals reported as active participants in 401(k) plans; in 2004, the number of active participants increased to 53.1 million (new method) from 44.4 million (old method; see U.S. Department of Labor, Employee Benefits Security Administration 2008b). As the Department of Labor notes: "In a purely economic sense and for research purposes, individuals in these groups should not be included in the count of active participants." However, the form schedule needed to make the adjustment is no longer required. Using National Compensation Survey data and historical relationships and trends evident in the Form 5500 data, ICI estimates the number of active 401(k) participants to be 49.8 million in 2008 and the number of 401(k) plans to be 474,800. The estimate of the number of active 401(k) plan participants is based on a combination of data from U.S. Department of Labor, Bureau of Labor Statistics (2007, 2008a and 2008b) and U.S. Department of Labor, Employee Benefits Security Administration (2008a, 2008b, and 2008c).

[3] See Investment Company Institute (2009b).

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

[5] The Investment Company Institute (ICI) is the national association of U.S. investment companies, including mutual funds, closed-end funds, exchange-traded funds (ETFs), and unit investment trusts (UITs). ICI seeks to encourage adherence to high ethical standards, promote public understanding, and otherwise advance the interests of funds, their shareholders, directors, and advisers. Members of ICI manage total assets of $11.2 trillion and serve over 93 million shareholders.

[6] This update extends previous findings from the project for 1996 through 2007. For year-end 2007 results, see Holden, VanDerhei, Alonso, and Copeland (2008), and Holden, VanDerhei, and Alonso (2009). Results for earlier years are available in earlier issues of *Investment Company Institute Perspective* (www.ici.org/perspective/index.html) and *EBRI Issue Brief* (www.ebri.org/publications/ib).

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

[8] 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 have 10.4 distinct options but, on average, choose only 2.5 (Holden and VanDerhei, 2001a). In addition, the preliminary analysis finds 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. The Profit Sharing/401k Council of America (2009) indicates that in 2008, the average number of investment fund options available for participant contributions was 18; Hewitt Associates (2009) indicates an average number of investment options of 18 in 2008. Deloitte Consulting LLP, International Foundation, and the International Society of Certified Employee Benefit Specialists (2009) report that the average number of funds offered by the 606 401(k) plan sponsors in their survey was 20 in 2008.

[9] The asset allocation path that the lifecycle fund follows to become more conservative over time is typically referred to as the "glide path." Since discussions of asset allocation usually focus on the percentage of the portfolio invested in equities, the glide path generally reflects the declining percentage of equities in the portfolio as it approaches and passes the target date, which is usually indicated in the fund's name. The target date generally is the date at which the typical investor for whom that fund is designed would reach retirement age and stop making new investments in the fund.

[10] 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-lifecycle balanced fund category.

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

[12] 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.

[13] 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.

[14] For 401(k) asset figures, see Investment Company Institute (2009b) and Brady, Holden, and Short (2009).

[15] Estimates of the number of 401(k) plans and active participants are based on a combination of data from U.S. Department of Labor, Bureau of Labor Statistics, and U.S. Department of Labor, Employee Benefits Security Administration reports. See discussion in endnote 2.

[16] Automatic enrollment tends to reduce the average tenure of participants in the 401(k) plan. The Profit Sharing/401k Council of America (2009) reports that there is an upward trend in the number of plans that have automatic enrollment. Of more than 900 plans surveyed, 39.6 percent had automatic enrollment in 2008, compared with 35.6 percent of plans in 2007, about 17

percent of plans in 2005, and 10.5 percent of plans in 2004. Eighty-four percent of plans with automatic enrollment in 2008 applied automatic enrollment only to new hires, while 16 percent applied automatic enrollment to all nonparticipants.

[17] 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.

[18] About half of traditional IRA assets resulted from rollovers from employer-sponsored retirement plans. See Brady, Holden, and Short (2009).

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

[20] See Figures A6 and A7 in the appendix, which compare the age and tenure composition of the 1999–2008 group to the year-end cross-sectional EBRI/ICI 401(k) database.

[21] The value of this percentage is lower than it would have been if it were merely reflecting employee turnover and retirement. The EBRI/ICI 401(k) database has added data providers since 2003 and by definition participants in these plans would not be included in the consistent group. Moreover, any time a 401(k) plan sponsor changed service providers, all participants in the plan would be excluded from the consistent group. For the year-end 2003 EBRI/ICI 401(k) database update, see Holden and VanDerhei (2004a and 2004b).

[22] See Figures A1 and A2 in the appendix for the age and tenure distribution of the 2003–2008 consistent group of participants compared with the age and tenure distribution of the year-end 2003 and year-end 2008 EBRI/ICI 401(k) database.

[23] See Figures A4 and A5 in the appendix for asset allocation information for the 2003–2008 consistent group of participants.

[24] The distribution of account balances across the 2003–2008 consistent group also highlights their higher accumulations. At year-end 2008, 10 percent of the consistent group had more than $200,000 in their 401(k) accounts at their current employers, while another 16 percent had between $100,000 and $200,000 (see Figure A3 in the appendix). In contrast, in the broader EBRI/ICI 401(k) database, 5 percent of participants had accounts with more than $200,000, and 8 percent had accounts between $100,000 and $200,000 (Figures 10 and A3).

[25] For statistics indicating the higher propensity of withdrawals among participants in their 60s, see Holden and VanDerhei (2002).

[26] At year-end 2008, 57 percent of balanced mutual fund assets were invested in equities (see Investment Company Institute, *Quarterly Supplementary Data*).

[27] See Figure A4 in the appendix for the average dollar-weighted asset allocation of the 2003–2008 consistent group of participants by age. In addition, as observed in the cross-sectional EBRI/ICI 401(k) database, among individual 401(k) participants in the 2003–2008 consistent group, the allocation of account balances to equities varied widely around the average of 56 percent for the consistent group as a whole. Thirty-six percent of participants in the consistent group had more than 80 percent of their accounts invested in equities, while 12 percent held no equities at all in 2008 (see Figure A5).

[28] See total returns for the large company stock index reported in Morningstar (2009).

[29] Analysis of contribution activity of 401(k) plan participants in 2008 in the EBRI/ICI 401(k) database has not been conducted. However, results from an ICI survey of DC plan recordkeepers finds that only 3.7 percent of participants stopped contributing to their accounts in 2008 (see Investment Company Institute (2009a). In addition, analysis of contribution activity during the bear market of 2000–2002, using the cross-sectional EBRI/ICI 401(k) databases, finds that overall 401(k) participants' contribution rates were little changed in 2000, 2001, and 2002, when compared with 1999 (see Holden and VanDerhei, 2004c). Whether measured in dollar amounts or percentage of salary contributed, 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.

[30] Approximately 1.9 percent of the participants in the database were missing a birth date entry, were younger than age 20 or older than 69. They were not included in this analysis.

[31] Approximately 7.9 percent of the participants in the database were missing a date of hire entry and were not included in this analysis.

[32] The positive correlation between tenure and account balance is expected because long-term employees have had more time to accumulate an account balance. However, a rollover from a previous employer's plan could interfere with this positive correlation because a rollover could give a short-tenured employee a high account balance. There is some discernible evidence of rollover assets among the participants with account balances greater than $100,000 as 1 percent of them had two or fewer years of tenure, and 3 percent of them had between two and five years of tenure (see Figure 12).

[33] Because 401(k) plans were introduced about 28 years ago, even older and longer-tenured employees would not have participated in 401(k) plans for their entire careers. The Revenue Act of 1978 contained a provision that became Internal Revenue Code Sec. 401(k). The law went into effect on January 1, 1980, but it was not until November 1981 that proposed regulations were issued (see Holden, Brady, and Hadley (2006); Employee Benefit Research Institute (2005); and U.S. Internal Revenue Service (1981)).

[34] There are two possible explanations for the low account balances among this group: (1) their employer's 401(k) plan has only recently been established (80 percent of all 401(k)-type plans in existence in 2006 were established after 1989 [tabulations of U.S. Department of Labor Form 5500 data for 2006]), or (2) the employee only recently joined the plan (whether on their own or through automatic enrollment). In either event, job tenure would not accurately reflect actual 401(k) plan participation.

[35] It is possible that these older longer-tenured workers accumulated DC plan assets (e.g., possibly in a profit-sharing plan) prior to the introduction of 401(k) plan features. However, generally such DC plan arrangements did not permit employee contributions and often were designed to be supplemental to other employer plans. These participants' account balances that pre-date the 401(k) plan are not included in this analysis, which focuses on 401(k) balance amounts.

[36] The ratio of 401(k) account balance (at the current employer) to salary alone is not an indicator of preparedness for retirement. A complete analysis of preparedness for retirement would require estimating projected balances at retirement by also considering retirement income from Social Security, defined benefit plans, IRAs, and other DC plans, possibly from previous employment. For references to such research, see Holden and VanDerhei (2005). For an analysis of the possible impact of automatic increases in participants' contribution rates in automatic enrollment plans, see VanDerhei and Copeland (2008). For a discussion of the variety of factors (e.g., taxes, savings, mortgages, children) that impact replacement rates, see Brady (2008). For an analysis of the impact of changes in Social Security between 1992 and 2004 on retirement patterns, see Gustman and Steinmeier (2008).

[37] The tendency of the account balance-to-salary ratio to peak at higher salary levels and then fall off likely reflects the influence of two competing forces. First, empirical research suggests that higher earners tend to contribute higher percentages of salary; therefore, one would expect the ratio of account balance to salary to rise with salary. However, tax code contribution limits and nondiscrimination rules, which aim to ensure that employees of all income ranges attain the benefits of the 401(k) plan, constrain these high-income individuals' ability to save in the plan. See Holden and VanDerhei (2001b) for a complete discussion of EBRI/ICI findings and others' research on the relationship between contribution rates and salary. For an analysis of 401(k) participants' contribution activity during the bear market of 2000 to 2002, see Holden and VanDerhei (2004c). For summary statistics on contribution activity in 2008, see Fidelity Investments (2009), The Vanguard Group (2009), and Hewitt Associates (2009).

[38] At year-end 2008, 57 percent of balanced mutual fund assets were invested in equities (see Investment Company Institute, *Quarterly Supplementary Data*).

[39] Other research suggests that most 401(k) participants do not make active changes to their asset allocations during any given year. For example, The Vanguard Group 2009 reports that "despite the substantial market volatility of 2008, only 16 [percent] of participants made one or more portfolio trades or exchanges during the year." Hewitt Associates (2009)

reports that 19.6 percent of participants made asset transfers in their account balances during 2008, "up only marginally" from 2007 (although, they tended to move larger portions of their account balances). Fidelity Investments (2008) reports that overall only 6.6 percent of participants in their recordkeeping system made exchanges during September, October, and November, 2009, a time of stock market volatility. An ICI survey of recordkeepers covering more than 22 million DC plan participant accounts finds that 14.4 percent of DC plan participants changed the asset allocation of their account balances in 2008 and 12.4 percent changed the asset allocation of their contributions during 2008 (see Investment Company Institute, 2009a). Furthermore, Choi et al. (2001) finds that 401(k) participants rarely made changes after the initial point of enrollment.

[40] Holden and VanDerhei (2003) presents a similar analysis of changes in asset allocation among a consistent group of participants with account balances at the end of each year from 1999 through 2002 in the EBRI/ICI 401(k) database. Holden, VanDerhei, and Quick (2000) includes an analysis of changes in equity fund asset allocations among participants with account balances at the end of each year from 1996 to 1998 in the EBRI/ICI 401(k) database.

[41] See Figure A13 in the appendix for a detailed presentation of the changing percentages of account balance invested in equity funds among the 18.0 million 401(k) participants with account balances in the EBRI/ICI 401(k) database at year-end 2007 and year-end 2008.

[42] See Figure A13 in the appendix for a detailed presentation of the changing percentages of account balance invested in equity funds among the 18.0 million 401(k) participants with account balances in the EBRI/ICI 401(k) database at year-end 2007 and year-end 2008.

[43] See Figure A14 in the appendix for a detailed presentation of the changing percentages of account balance invested in bond funds among the 18.0 million 401(k) participants with account balances in the EBRI/ICI 401(k) database at year-end 2007 and year-end 2008.

[44] Participants in their 20s hold approximately 2 percent of the total assets in the 2008 EBRI/ICI 401(k) database; participants in their 30s hold 11 percent; participants in their 40s hold 29 percent; participants in their 50s hold 41 percent; and participants in their 60s hold the remaining 17 percent of the total assets.

[45] See endnote 9 for additional detail on lifecycle funds.

[46] For year-end 2007 data, see Holden, VanDerhei, Alonso, and Copeland (2008).

[47] Lifecycle funds have been increasingly used as the default investment in automatic enrollment plans and in plans' investment lineups (see Profit Sharing/401k Council of America, 2009). At year-end 2008, 68 percent of lifecycle mutual fund assets were held in DC plans (see Investment Company Institute, 2009b).

[48] For year-end 2007 data, see Holden, VanDerhei, Alonso, and Copeland (2008).

[49] For year-end 2007 data, see Holden, VanDerhei, Alonso, and Copeland (2008) for data for earlier years.

[50] For year-end 2007 data, see Holden, VanDerhei, Alonso, and Copeland (2008).

[51] In the database, there has been a downward trend in 401(k) plan participants' holdings of and concentration in company stock. In the wake of the collapse of Enron in 2001, participants' awareness of the need to diversify may have increased and some plan sponsors changed plan design (see VanDerhei, 2002). In addition, some of this movement may be the result of regulations put in place by the Pension Protection Act of 2006 (PPA), which resulted in regulations that limit the length of time participants could be required to hold company stock contributed to their accounts by their employer; specified rules regarding the notification of blackout periods; and required quarterly statements that must include notice highlighting the importance of diversification (see U.S. Joint Committee on Taxation, 2006).

[52] Plan-specific information on loan provisions is available for the majority of the plans in the sample (including virtually all of the small plans). Some plans without this information are classified as having a loan provision if any participant in the plan has an outstanding loan balance. This may understate the number of plans offering loans (or participants eligible for loans) because some plans may have offered, but no participant had taken out, a plan loan. It is likely that this omission is small as

U.S. Government Accountability Office (1997) finds that more than 95 percent of 401(k) plans that offer loans had at least one plan participant with an outstanding loan.

[53] The percentage of 401(k) participants with 401(k) loans outstanding across all participants both with and without 401(k) plan loan access was similar in earlier years. For example, in 2007, this measure was 16 percent, and in 2006, 15 percent.

[54] In plan-year 2006 (the latest data available), only 1.6 percent of the $2.8 trillion in 401(k) plan assets were participant loans. In addition, only $535 million flowed out of 401(k) plans as the result of converting a loan into a withdrawal/distribution ("deemed distribution of participant loans"). See U.S. Department of Labor, Employee Benefits Security Administration (2008c).

[55] The value of this percentage is lower than it would have been if it were merely reflecting employee turnover and retirement. The EBRI/ICI 401(k) database has added data providers since 2003 and by definition participants in these plans would not be included in the consistent group. Moreover, any time a 401(k) plan sponsor changed service providers, all participants in the plan would be excluded from the consistent group. For the year-end 2003 EBRI/ICI 401(k) database update, see Holden and VanDerhei (2004a and 2004b).

[56] The value of this percentage is lower than it would have been if it were merely reflecting employee turnover and retirement. The EBRI/ICI 401(k) database has added data providers since 1999 and by definition participants in these plans would not be included in the consistent group. Moreover, any time a 401(k) plan sponsor changed service providers, all participants in the plan would be excluded from the consistent group. For the year-end 1999 EBRI/ICI 401(k) database update, see Holden and VanDerhei (2001a).

[57] For statistics indicating the higher propensity of withdrawals among participants in their 60s, see Holden and VanDerhei (2002).

[58] At year-end 2008, 57 percent of balanced mutual fund assets were invested in equities (see Investment Company Institute, *Quarterly Supplementary Data*).

[59] For an analysis of contribution activity during the bear market of 2000–2002 using the cross-sectional EBRI/ICI 401(k) database, see Holden and VanDerhei (2004c). The analysis finds that overall 401(k) participants' contribution rates were little changed in 2000, 2001, and 2002 when compared with 1999. Whether measured in dollar amounts or percentage of salary contributed, 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.

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