

## The Impact of the Recent Financial Crisis on 401(k) Account Balances

By Jack VanDerhei, EBRI

---

### EXECUTIVE SUMMARY

**401(k) losses from the economic crisis:** During 2008, major U.S. equity indexes were sharply negative, with the S&P 500 Index losing 37.0 percent for the year, which translated into corresponding losses in 401(k) retirement plan assets. But how individual 401(k) participants are affected by the crisis is largely determined by their account balance, age, and job tenure.

**Impact varies by account balance:** This *Issue Brief* estimates changes in average 401(k) balances from Jan. 1, 2008, to Jan. 20, 2009, using the EBRI/ICI 401(k) database of more than 21 million participants. Not surprisingly, how the recent financial market losses affect individual 401(k) account balances is strongly affected by the size of a participant's account balance. Those with low account balances relative to contributions experienced minimal investment losses that were typically more than made up by contributions: Those with less than \$10,000 in account balances had an average growth of 40 percent during 2008, since contributions had a bigger impact than investment losses. However, those with more than \$200,000 in account balances had an average loss of more than 25 percent.

**Impact varies by age and job tenure:** 401(k) participants on the verge of retirement (ages 56–65) had average changes during this period that varied between a positive 1 percent for short-tenure individuals (one to four years with the current employer) to more than a 25 percent loss for those with long tenure (with more than 20 years).

**Short-term vs. long-term:** While much of the focus has been on market fluctuations in the last year, investing for retirement security is (or should be) a long-term proposition. When a consistent sample of 2.2 million participants who had been with the same 401(k) plan sponsor for the seven years from 1999–2006 was analyzed, the average estimated growth rates for the period from Jan. 1, 2000 through Jan. 20, 2009, ranged from 29 percent for long-tenure older participants to more than 500 percent for short-tenure younger participants.

**Recovery time and future stock market performance:** This analysis also calculates how long it might take for end-of-year 2008 401(k) balances to recover to their beginning-of-year 2008 levels, before the sharp stock market declines. Because future performance is unknown, this analysis provides a range of equity returns: At a 5 percent equity rate-of-return assumption, those with longest tenure with their current employer would need nearly two years at the median to recover, but approximately five years at the 90<sup>th</sup> percentile. If the equity rate of return is assumed to drop to zero for the next few years, this recovery time increases to approximately 2.5 years at the median and nine to 10 years at the 90<sup>th</sup> percentile.

**Near-elderly with very high equity exposure:** Estimates from the EBRI/ICI 401(k) database show that many participants near retirement had exceptionally high exposure to equities: Nearly 1 in 4 between ages 56–65 had more than 90 percent of their account balances in equities at year-end 2007, and more than 2 in 5 had more than 70 percent. As a result of the Pension Protection Act of 2006, many 401(k) plan sponsors appear to be offering lifecycle/target-date funds, which automatically rebalance asset investments into more "age appropriate" allocations. Had all 401(k) participants been in the average target date fund at the end of 2007, 40 percent of the participants would have had at least a 20 percent decrease in their equity concentrations, and consequently, may have mitigated their losses, sometimes to an appreciable extent.

Jack VanDerhei is research director at EBRI. Any views expressed in this report are those of the author and should not be ascribed to the officers, trustees, or other sponsors of EBRI, EBRI-ERF, or their staffs. Neither EBRI nor EBRI-ERF lobbies or takes positions on specific policy proposals. EBRI invites comment on this research.

**Copyright Information:** This report is copyrighted by the Employee Benefit Research Institute (EBRI). It may be used without permission but citation of the source is required.

**Recommended Citation:** Jack VanDerhei, "The Impact of the Recent Financial Crisis on 401(k) Account Balances," *EBRI Issue Brief*, no. 326, February 2009.

**Report availability:** This report is available on the Internet at [www.ebri.org](http://www.ebri.org)

## Table of Contents

Introduction .....	3
Average Account Balances .....	4
Time for Recovery.....	7
Equity Concentrations .....	11
Conclusion .....	11
References .....	19
Endnotes.....	20

## Figures

Figure 1, Change in Average Account Balances From Jan. 1, 2008–Jan. 20, 2009, by Level of Account Balance, Among 401(k) Participants With Account Balances as of Dec. 31, 2007 .....	5
Figure 2, Change in Average Account Balances From Jan. 1, 2008–Jan. 20, 2009, by Age and Tenure, Among 401(k) Participants With Account Balances as of Dec. 31, 2007 .....	5
Figure 3, Change in Average Account Balances Among a Consistent Sample of 401(k) Participants, by Age and Tenure, Jan. 1, 2000 Through Jan. 20, 2009 .....	6
Figure 4, Time Needed to Recover From 2008 401(k) Losses, Using Various Equity Return Assumptions and a 6.3 Percent Non-equity Return Assumption .....	8
Figure 5, Time Needed to Recover From 2008 401(k) Losses, Using Various Equity Return Assumptions and a 3.15 Percent Non-equity Return Assumption.....	9
Figure 6, Time Needed to Recover From 2008 401(k) Losses, Using Various Equity Return Assumptions, and a Non-Equity Return of 6.3 Percent .....	10
Figure 7, Time Needed to Recover From 2008 401(k) Losses, Using Various Equity Return Assumptions and a Non-Equity Return of 3.15 Percent .....	10
Figure 8, 401(k) Recovery Time, by Job Tenure and Salary: Equity Return Options Assuming a Non-equity Return of 6.3 Percent .....	13
Figure 9, 401(k) Recovery Time, by Job Tenure and Salary: Equity Return Options Assuming a Non-equity Return of 3.15 Percent .....	16
Figure 10, Asset Allocation Distribution of 401(k) Participant Account Balances to "Equity," by Age: Year-end 2007 and 2008 .....	19

# The Impact of the Recent Financial Crisis on 401(k) Account Balances

By Jack VanDerhei, EBRI

## Introduction

The retirement income prospects for future generations of retirees have been modeled extensively by EBRI in recent years in an attempt to more accurately predict how various cohorts of Americans will likely fare in retirement. Results have ranged from very bleak for substantial portions of the U.S. population (VanDerhei and Copeland, 2003) to fairly positive for 401(k) participants with continuous coverage throughout their working careers: Results suggest a significant portion of these workers' preretirement income could be replaced by 401(k) accumulations when combined with Social Security (at least, the Social Security benefits projected under current statutory provisions).

Assuming that 401(k) accumulations were used to purchase nominal annuities at age 65, the EBRI/ICI 401(k) Accumulation Projection Model (Holden and VanDerhei, 2002) predicted baseline median replacement rates at retirement ranging from 51–69 percent, based on final five-year average salary ("replacement rate" meaning the percentage of a worker's final salary that is replaced in retirement by a nominal annuity purchased with 401(k) assets). However, these baseline results were predicated on the assumption that any worker currently participating in a 401(k) plan would *continue to be offered* a 401(k) plan at each future job. If it is assumed that the worker would have only an *average* chance of being offered a 401(k) plan at future jobs, the income replacement rates decrease to a range of 21–26 percent. While this latter scenario is certainly far too pessimistic to be correct, the disparity between the two sets of results demonstrates the importance of continued participation in a 401(k) plan throughout an employee's working career.

Moreover, these simulation results were based on the assumption that the range of rates of return historically observed in the United States would be replicated on a stochastic basis for future years. Historically (and in the baseline case of the model), about two-thirds of the time, equity returns in any given year are between –7 percent and 33 percent per year.<sup>1</sup> However, during 2008, major U.S. equity indexes were sharply negative, with the S&P 500 Index losing 37.0 percent for the year. Fixed-income investments fared much better during this period, with the Barclays Capital U.S. Aggregate Bond Index gaining 5.2 percent and three-month T-bills gaining 1.4 percent.

It should be emphasized that while older employees have average equity allocations that are lower than their younger counterparts (and hence are thought by many to be less vulnerable to negative returns in the equity markets), their average account balances are significantly larger and therefore have more to lose in a significant downturn. For example, examination of the age composition of account balances in the 2007 EBRI/ICI database finds that 52 percent of participants with account balances of less than \$10,000 were in their 20s or 30s. Similarly, 53 percent of participants with account balances greater than \$100,000 were in their 50s or 60s.<sup>2</sup>

Research has shown that a worker's age is a major factor in his or her ability to recover from an economic downturn. Holden and VanDerhei (2002) simulated the likely impact of a major bear market—defined as three consecutive years of a –9.3 percent annual return—on the overall (nominal) replacement rates that could be provided by "401(k) accumulations" as a function of when the downturn occurred during the employee's tenure with the retirement plan sponsor.

That analysis found that age and tenure had a big effect on how badly an economic downturn affected a 401(k) participant's assets. Based on a median (or mid-point) income replacement rate of about 51 percent of an individual's final income, the modeled three-year downturn would result in a lower replacement rate for 401(k) participants in the lowest-income quartile of only –3.2 percentage points at the beginning of their career, or –7.5 percentage points for those in mid-career (ages 39–41), or –13.4 percent for those at the end of their career.<sup>3</sup>

However, building and/or modifying a simulation model that is able to quantify the likely impact of a market downturn on eventual retirement income is a lengthy process. Consequently, attention is typically focused on how a decline in the financial markets has affected the *average defined contribution plan balances*. The first section of this *Issue Brief* takes the most recent information in the EBRI/ICI 401(k) database (year-end 2007)<sup>4</sup> and uses employee-specific information as well as financial market indexes<sup>5</sup> to estimate the percentage change in average account balances among 21.8 million 401(k) participants, presented by account balances as well as age and tenure for the periods January 1, 2008, through January 20, 2009.<sup>6</sup>

While this provides detailed information on the likely account activity during the recent financial crisis, it does not provide a long-term view of how 401(k) participants have fared in the system. The EBRI/ICI database previously has shown the results of continuous participation, and the second section of the *Issue Brief* documents the extent to which the 401(k) system has provided a significant positive average growth in account balances over the period from January 1, 2000, through January 20, 2009. A sample of 2.2 million 401(k) participants who have been employed by the same plan sponsor each year from year-end 1999 through year-end 2006 was used in this analysis. This “consistent sample” of 401(k) participants was created several years ago in the annual analysis of EBRI/ICI 401(k) data to provide an estimate of changes in average annual account balances that was not biased downward by job turnover among 401(k) participants.

There has been considerable discussion recently as to what the current market downturn might do to retirement ages. This is a natural question to ask after observing the account balance declines for many of the participants in the study (especially those considered to be on the verge of retirement); however, for many individuals/households, this will depend on far more than just the 401(k) balances with the current employer. Still, the question of how long it will take 401(k) participants to recover their losses in the current market has been the topic of much speculation, and the third section of the *Issue Brief* provides detailed distributional analysis of the “recovery time” for participants under a variety of future return assumptions for both equity and non-equity components of the 401(k) portfolio. Results are displayed both as a function of job tenure alone, and as job tenure and salary together.

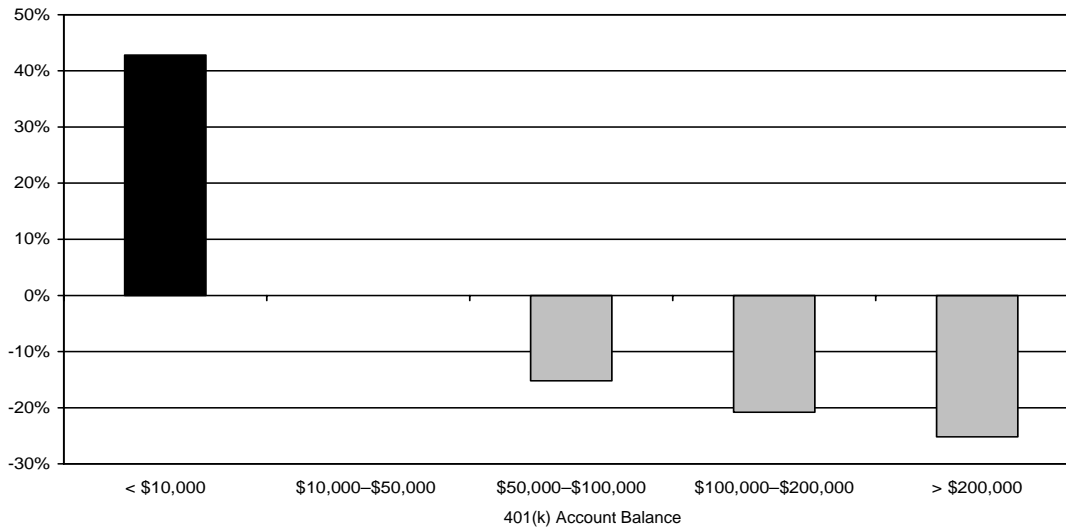
One of the questions that comes up repeatedly is why so many 401(k) participants close to retirement age have done so poorly with respect to changes in account balances in 2008. The conventional wisdom has long held that as 401(k) participants approach retirement age, they should start to gradually reduce their equity allocations, although the appropriate asset allocations for those on the verge of retirement will, in many models, take into consideration the expected longevity of the individual (or joint longevity of the household). There is certainly evidence of this behavior on average.<sup>7</sup> However, the distributional analysis of this equity concentration may be more skewed than typically thought, since many 401(k) participants nearing retirement have high equity concentrations. Accordingly, the last section of this *Issue Brief* presents distributional analysis for all age cohorts but focuses primarily on the significant percentage of those “near-elderly” workers between 56 and 65 who have equity concentrations far beyond what are often thought to be appropriate at that age.

## **Average Account Balances**

According to Fidelity Investments (2009), their average work-place savings account balance declined 27 percent in 2008 (to \$50,200) from \$69,200 in 2007.<sup>8</sup> For reasons explained below, this loss may be slightly larger than a similar number computed for the entire universe of 401(k) participants in 2008.<sup>9</sup>

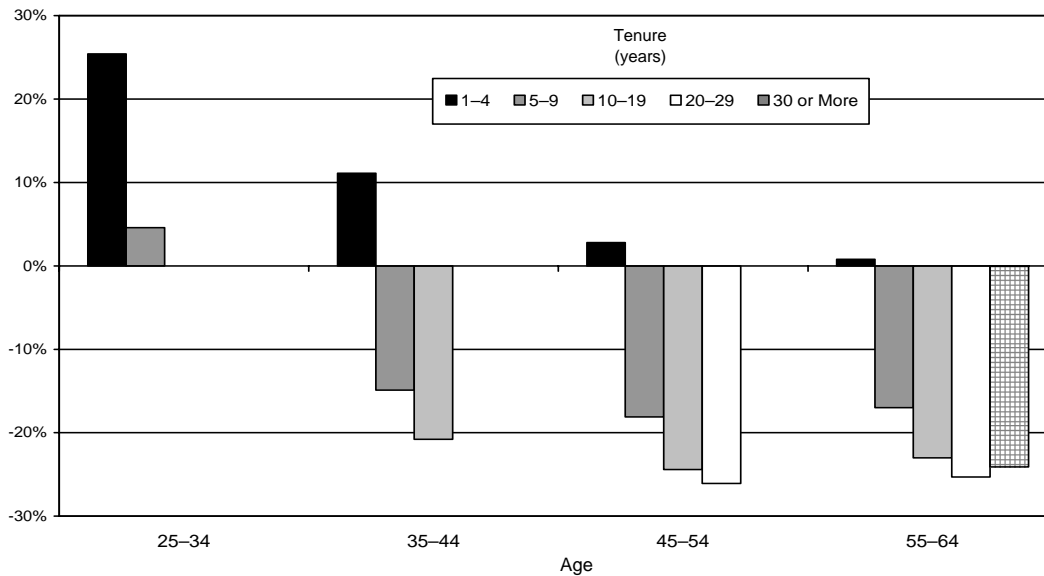
Given that the account balance growth or decline depends to a large extent on the ratio of account balances to annual contributions, the change in average account balances during this period is a function of size of the account balance. Figure 1 shows these changes from January 1, 2008, to January 20, 2009, based on the year-end 2007 EBRI/ICI 401(k) database of more than 21 million participants. Those with low account balances relative to contributions experienced relatively minimal investment losses that were typically more than made up by new contributions. For example, participants with less than \$10,000 in account balances at year-end 2007 had an estimated average growth of more than 40 percent during 2008, while those in the \$10,000–\$50,000 range roughly broke even, on average. However,

**Figure 1**  
**Change in Average Account Balances From**  
**Jan. 1, 2008–Jan. 20, 2009, by Level of Account Balance,**  
**Among 401(k) Participants With Account Balances as of Dec. 31, 2007**



Sources: 2007 Account Balances: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project; 2008 and 2009 account balances: EBRI estimates. The analysis is based on all participants with account balances at the end of 2007 and contribution information for that year.

**Figure 2**  
**Change in Average Account Balances From Jan. 1, 2008–Jan. 20, 2009, by Age and**  
**Tenure, Among 401(k) Participants With Account Balances as of Dec. 31, 2007**



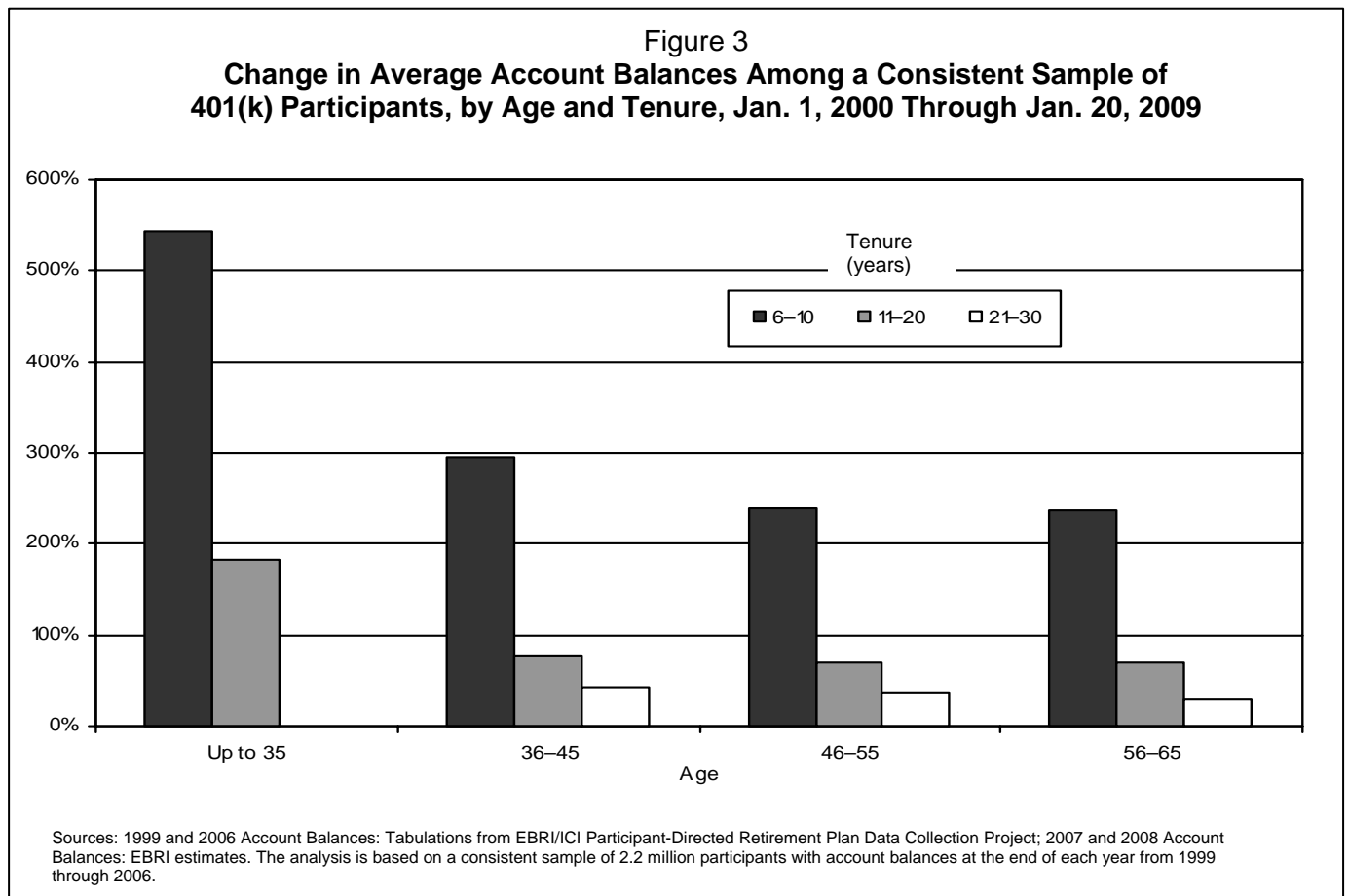
Sources: 2007 Account Balances: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project; 2008 and 2009 account balances: EBRI estimates. The analysis is based on all participants with account balances at the end of 2007 and contribution information for that year.

those in the largest category (year-end 2007 account balances greater than \$200,000) experienced a loss of more than 25 percent.

Although it appears that, on average, most of the account balance decreases were experienced by those with above-average account balances, most of the policy concerns in the last few months have focused on those close to retirement age. Figure 2 shows estimated changes in average 401(k) account balances for the same time period shown in Figure 1, but broken down by age and tenure. Focusing on those on the verge of retirement (ages 56–65) makes it clear that the changes, to a large extent, depend on the participant's tenure with the plan sponsor. Within this group, average account balance changes varied between a positive 1 percent for the short-tenure individuals (less than five years) to more than a 25 percent loss for those with tenure of more than 20 years.<sup>10</sup>

While much of the current attention in the financial press has focused on 2008 401(k) performance, given the sharp decline in equities, it is important to stress that this type of retirement plan is (or at least should be) a long-term investment proposition. Previous analysis with the EBRI/ICI 401(k) database (VanDerhei, Holden, Copeland and Alonzo, 2007) showed that for those consistently in 401(k) plans from 1999 through 2006, inclusive, the average account balance fell 8 percent in the first three years of this decade but in 2003 increased 30 percent.

Figure 3 shows the estimated change in average account balances among a consistent sample of 401(k) participants by age and tenure from January 1, 2000, through January 20, 2009. As a result of the continued participation in the 401(k) plans, the average participant in the lowest-tenure range (six to 10 years as of year-end 2006) more than tripled his or her account balance during this time period, even after factoring in the bear market for equities in the early portion of this decade and the recent financial market crisis. Even the long-tenure individuals (21 to 30 years at work) had an average gain of at least 29 percent during that period.



## Time for Recovery<sup>11</sup>

There has been considerable discussion as to what the current market downturn might do to retirement ages (Noor, 2009). The decision-making process undertaken by individuals or households to determine their retirement age(s) is an extremely complicated process and the actual impact of a sudden drop in equity prices on retirement behavior will take years to analyze. However, as a convenient proxy for participants with a vast majority of their non-Social Security retirement wealth in 401(k) plans, Figures 4 and 5 show how long it might take for various 401(k) participants to recover the losses experienced in 2008, as a function of tenure with the current plan sponsor.<sup>12</sup>

Obviously, recovery times will be a function of what future market returns are assumed. Figures 4 and 5 differ in their assumptions for the non-equity components (bonds, money market, and stable-value investments) of future market returns. Figure 4 assumes a nominal annual rate of return on the non-equity portion of the portfolio of 6.3 percent, while Figure 5 cuts that assumption in half, to a nominal return of 3.15 percent. Five different panels showing a range of returns are presented in both figures, one for each of the following equity return assumptions: -10 percent, -5 percent, 0, +5 percent, and +10 percent.<sup>13</sup> In addition to showing the estimated recovery time for the median individual in each tenure and equity return combination,<sup>14</sup> a distributional analysis is included to show the 10<sup>th</sup>, 20<sup>th</sup>, 30<sup>th</sup>, 40<sup>th</sup>, 60<sup>th</sup>, 70<sup>th</sup>, 80<sup>th</sup>, and 90<sup>th</sup> percentiles as well. For example, the value for the 70<sup>th</sup> percentile represents a time period long enough to include the recovery times of 70 percent of those in the tenure and equity return combination cohort (in other words, at that value only 30 percent of that cohort would have recovery times greater than that amount). This additional detail is important, due to the large degree of diversity within each equity return/job tenure combination.

For example, in panel D of Figure 4 (+5 percent equity return assumption), the *median* time to recovery for an individual in the highest job tenure category is 1.8 years. However, the 10<sup>th</sup> percentile is zero (no recovery time), due to the fact that at least 10 percent of the 401(k) participants in this category were estimated to have no losses in 2008<sup>15</sup> and the 90<sup>th</sup> percentile is estimated to take 4.9 years before their 401(k) balances are expected to be equal to their January 1, 2008, level (in nominal terms).

The choice between the two non-equity return assumptions (namely, Figure 4 or Figure 5) appears to be of relatively minor consequence as long as the equity rate of return assumption is non-negative (i.e., either 0, +5 or +10 percent). However, under a negative equity rate of return assumption, some interesting differences take place in the right hand tail of the recovery time distributions. For example, in Panel A (-10 percent equity rate of return) of Figure 4 (6.3 percent non-equity rate of return), the median participant with 20–29 years of tenure is assumed to need 6.0 years to recover their 2008 losses,<sup>16</sup> whereas the same individual in Figure 5 (3.15 percent rate of return) would need 7.8 years. Moving to the 60<sup>th</sup> percentile in the same panel for the highest-tenure category increases the differential substantially (13.1 years in Figure 4 vs. 20.7 years in Figure 5). Results for the 70<sup>th</sup> percentile in each case show what is likely to result for those with either very large equity allocations at the end of 2007 or those with low contribution-to-account-balance ratios. In both cases, under these assumptions, the recovery times are so large as to effectively eliminate the possibility that the participant will ever recover their 2008 losses.<sup>17</sup> In fact, using the lower rate of return in Figure 5 results in a situation in which, mathematically, the participant would never recover (infinite recovery time).

Figures 6 and 7 summarize the information in Figures 4 and 5 to illustrate how important the equity return assumption is on the recovery time calculation, as well as the diversity in recovery times for each tenure grouping (by showing both the median as well as the 70<sup>th</sup> percentile).<sup>18</sup> In Figure 6 (6.3 percent non-equity return assumption), even those with the highest job tenure categories have median recovery time of less than two years for a +5 and +10 percent equity return, and 2.3 years if the equity return assumption is zero. However, the median recovery times for this group increase to 3.3 years with a -5 percent equity return and 6.0 years for a -10 percent equity return. In each job tenure/equity return combination, the 70<sup>th</sup> percentile is (by definition) larger than the median, but a lower equity return assumption accentuates the difference. With a +10 percent equity return assumption, the largest tenure category's estimated recovery time increases from 1.4 to 2.2 years. With a zero equity return assumption, it increases from 2.3 to 4.3 years, and at a -10 percent equity return assumption, it increases from 6.0 years to a situation where the

Figure 4  
**Time Needed to Recover From 2008 401(k) Losses,<sup>a</sup> Using Various Equity Return Assumptions  
and a 6.3 Percent Non-equity Return Assumption<sup>b</sup>**

<b>Panel A: Equity Rate of Return: <u>-10 percent</u></b>									
Percentile of 401(k) Participants									
Job Tenure	10th	20th	30th	40th	Median	60th	70th	80th	90th
(years)	(years needed to recover)								
1-4	—	—	—	—	—	—	—	0.1	0.9
5-9	—	—	—	0.3	0.8	1.5	2.4	4.1	9.5
10-19	—	—	0.7	1.7	3.0	5.1	9.1	24.4	infinity
20-29	—	0.1	1.2	3.0	6.0	13.1	72.3	infinity	infinity
<b>Panel B: Equity Rate of Return: <u>-5 percent</u></b>									
Percentile of 401(k) Participants									
Job Tenure	10th	20th	30th	40th	Median	60th	70th	80th	90th
(years)	(years needed to recover)								
1-4	—	—	—	—	—	—	—	0.1	0.8
5-9	—	—	—	0.3	0.7	1.1	1.7	2.6	4.5
10-19	—	—	0.6	1.3	2.1	3.0	4.3	6.6	13.5
20-29	—	0.1	1.0	2.1	3.3	5.1	8.0	14.7	63.2
<b>Panel C: Equity Rate of Return: <u>0 percent</u></b>									
Percentile of 401(k) Participants									
Job Tenure	10th	20th	30th	40th	Median	60th	70th	80th	90th
(years)	(years needed to recover)								
1-4	—	—	—	—	—	—	—	0.10	0.64
5-9	—	—	—	0.23	0.56	0.92	1.36	1.92	2.93
10-19	—	—	0.49	1.03	1.57	2.15	2.84	3.80	5.70
20-29	—	0.06	0.82	1.56	2.32	3.18	4.26	5.85	9.01
<b>Panel D: Equity Rate of Return: <u>+5 percent</u></b>									
Percentile of 401(k) Participants									
Job Tenure	10th	20th	30th	40th	Median	60th	70th	80th	90th
(years)	(years needed to recover)								
1-4	—	—	—	—	—	—	—	0.1	0.6
5-9	—	—	—	0.2	0.5	0.8	1.1	1.5	2.2
10-19	—	—	0.4	0.9	1.3	1.7	2.1	2.7	3.6
20-29	—	0.1	0.7	1.3	1.8	2.3	2.9	3.7	4.9
<b>Panel E: Equity Rate of Return: <u>+10 percent</u><sup>c</sup></b>									
Percentile of 401(k) Participants									
Job Tenure	10th	20th	30th	40th	Median	60th	70th	80th	90th
(years)	(years needed to recover)								
1-4	—	—	—	—	—	—	—	0.1	0.5
5-9	—	—	—	0.2	0.4	0.7	0.9	1.3	1.7
10-19	—	—	0.4	0.7	1.1	1.4	1.7	2.1	2.6
20-29	—	0.0	0.6	1.1	1.4	1.8	2.2	2.7	3.3

Source: Employee Benefit Research Institute.

<sup>a</sup> Losses are defined as the difference between year-end 2007 and 2008 account balances. This is NOT limited to investment loss.

<sup>b</sup> "Non-equity" meaning a bond or other stable-value investment.

<sup>c</sup> The historic equity rate of return on equities is about 10 percent per year.



Figure 5  
**Time Needed to Recover From 2008 401(k) Losses,<sup>a</sup> Using Various Equity Return Assumptions  
and a 3.15 Percent Non-equity Return Assumption<sup>b</sup>**

**Panel A: Equity Rate of Return: -10 percent**

Job Tenure (years)	Percentile of 401(k) Participants								
	10th	20th	30th	40th	Median	60th	70th	80th	90th
	(years needed to recover)								
1-4	—	—	—	—	—	—	—	0.1	1.0
5-9	—	—	—	0.3	0.9	1.6	2.6	4.3	10.9
10-19	—	—	0.8	1.9	3.5	5.9	11.1	38.4	infinity
20-29	—	0.1	1.5	3.7	7.8	20.7	infinity	infinity	infinity

**Panel B: Equity Rate of Return: -5 percent**

Job Tenure (years)	Percentile of 401(k) Participants								
	10th	20th	30th	40th	Median	60th	70th	80th	90th
	(years needed to recover)								
1-4	—	—	—	—	—	—	—	0.1	0.8
5-9	—	—	—	0.3	0.7	1.2	1.8	2.7	4.8
10-19	—	—	0.6	1.4	2.3	3.3	4.7	7.3	15.8
20-29	—	0.1	1.1	2.4	3.9	6.0	9.7	18.7	214.6

**Panel C: Equity Rate of Return: 0 percent**

Job Tenure (years)	Percentile of 401(k) Participants								
	10th	20th	30th	40th	Median	60th	70th	80th	90th
	(years needed to recover)								
1-4	—	—	—	—	—	—	—	0.1	0.7
5-9	—	—	—	0.2	0.6	1.0	1.4	2.0	3.0
10-19	—	—	0.5	1.1	1.7	2.3	3.0	4.0	6.1
20-29	—	0.1	0.9	1.7	2.6	3.5	4.7	6.4	9.9

**Panel D: Equity Rate of Return: +5 percent**

Job Tenure (years)	Percentile of 401(k) Participants								
	10th	20th	30th	40th	Median	60th	70th	80th	90th
	(years needed to recover)								
1-4	—	—	—	—	—	—	—	0.1	0.6
5-9	—	—	—	0.2	0.5	0.8	1.1	1.6	2.2
10-19	—	—	0.5	0.9	1.3	1.8	2.2	2.8	3.7
20-29	—	0.1	0.8	1.4	1.9	2.5	3.1	3.9	5.1

**Panel E: Equity Rate of Return: +10 percent<sup>c</sup>**

Job Tenure (years)	Percentile of 401(k) Participants								
	10th	20th	30th	40th	Median	60th	70th	80th	90th
	(years needed to recover)								
1-4	—	—	—	—	—	—	—	0.1	0.5
5-9	—	—	—	0.2	0.4	0.7	1.0	1.3	1.8
10-19	—	—	0.4	0.8	1.1	1.4	1.7	2.1	2.7
20-29	—	0.1	0.7	1.1	1.5	1.9	2.3	2.8	3.4

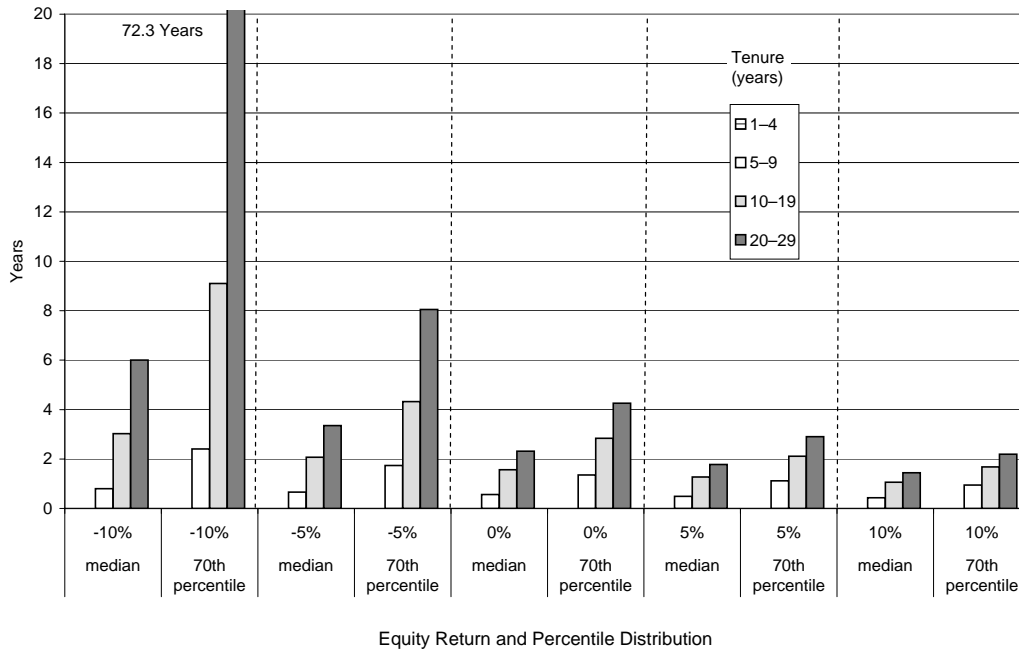
Source: Employee Benefit Research Institute.

<sup>a</sup> Losses are defined as the difference between year-end 2007 and 2008 account balances. This is NOT limited to investment loss.

<sup>b</sup> "Non-equity" meaning a bond or other stable-value investment.

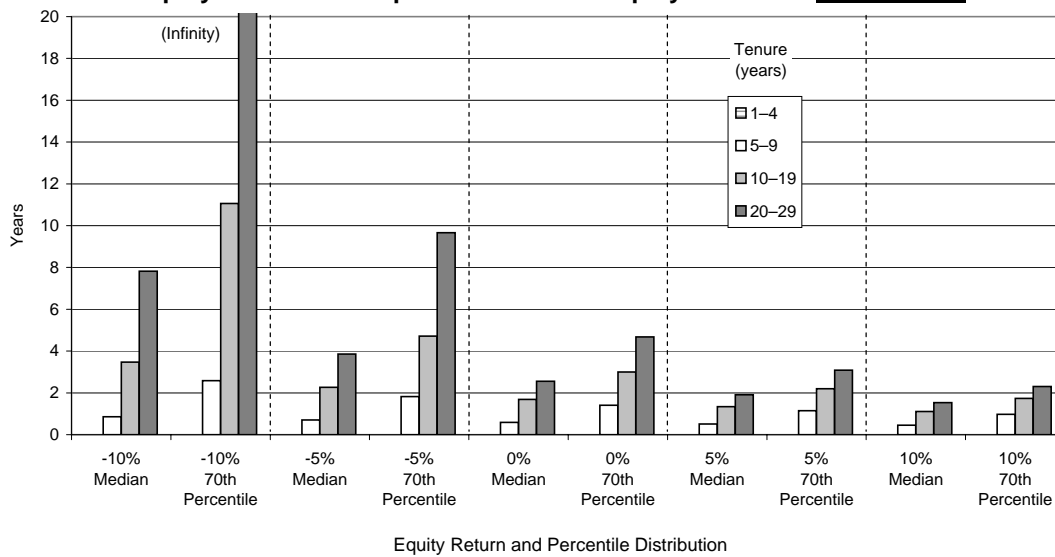
<sup>c</sup> The historic equity rate of return on equities is about 10 percent per year.

**Figure 6**  
**Time Needed to Recover From 2008 401(k) Losses,<sup>a</sup> Using Various Equity Return Assumptions, and a Non-Equity Return of 6.3 Percent**



Source: Author's calculations based on year-end 2007 data from the EBRI/ICI Participant-Directed Retirement Plan Data Collection Project.  
<sup>a</sup> Losses are defined as the difference between year-end 2007 and 2008 account balances. This is NOT limited to investment loss.

**Figure 7**  
**Time Needed to Recover From 2008 401(k) Losses,<sup>a</sup> Using Various Equity Return Assumptions and a Non-Equity<sup>b</sup> Return of 3.15 Percent**



Source: Author's calculations based on year-end 2007 data from the EBRI/ICI Participant-Directed Retirement Plan Data Collection Project.  
<sup>a</sup> Losses are defined as the difference between year-end 2007 and 2008 account balances. This is NOT limited to investment loss.  
<sup>b</sup> "Non-equity" means bonds and other stable-value investments.

participant is estimated to never recover (72.3 years). Similar results for the lower non-equity return assumption are found in Figure 7.

A policy question that has repeatedly surfaced since the financial market crisis is whether the impact will be disproportionately borne by the lower-paid employees. Figures 8 and 9 repeat the analysis in Figures 4 and 5, but present results for each job tenure group for six different salary groupings:<sup>19</sup> \$20,000–\$30,000, \$30,000–\$40,000, \$40,000–\$50,000, \$50,000–\$60,000, \$60,000–\$90,000, and greater than \$90,000.<sup>20</sup>

These findings show that, at least for the median results, lower-paid employees will have shorter recovery times than their higher-paid counterparts, and in many cases there is a *significantly* shorter recovery time for the lowest-paid category of participants than the highest-paid. For example, in Panel D (5 percent equity return assumption) of Figure 8 (6.3 percent non-equity return assumption), the recovery time for the lowest-salary category (\$20,000–\$30,000) with the highest tenure was 1.4 years. This number increases for virtually all categories until it reaches 2.3 years for those in the highest-salary category (greater than \$90,000).<sup>21</sup>

## Equity Concentrations

Another topic that demonstrates the vulnerability of 401(k) participants to volatility in the equity markets deals with extreme equity concentrations, especially for older employees. Figure 10 shows for the year-end 2007 EBRI/ICI 401(k) database universe, the asset allocation distribution of 401(k) participant account balances to “equity” by age, as of year-end 2007 and with an estimate for 2008. Equity in this figure is defined as the percentage of the participant’s 401(k) funds held in equity funds, company stock, and the equity portion of balanced and/or target-date funds.<sup>22</sup> The figure shows that 27 percent of young 401(k) participants (those 35 or younger in 2007) have 90 percent or more of their 401(k) assets in equities (broadly defined). Another 13 percent of this cohort have 80–90 percent of their assets allocated in this fashion, and another 11 percent have 70–80 percent allocated to equities.

Although many asset allocation models and/or financial advisors may suggest that extreme concentrations in equities for the young cohorts would be acceptable, few would recommend it for those approaching retirement. Nevertheless, the 2007 asset allocation information in Figure 10 shows that almost a quarter (22 percent) of the oldest 401(k) participants (ages 56–65 in 2007) had 90 percent or more of their 401(k) assets in equities. Another 10 percent had 80–90 percent in equities, and 11 percent had 70–80 percent in equities.

Target-date funds with automatic rebalancing and a “glide path” ensuring “age-appropriate” asset allocation are likely to become much more common after full implementation of the Pension Protection Act of 2006 (PPA), with an expected increase in automatic enrollment for 401(k) plans and the attendant interest in qualified default investment alternatives (QDIAs).<sup>23</sup> Based on unpublished EBRI research,<sup>24</sup> the average equity allocation for target-date funds designed for individuals in the 56–65 age range was 51.2 percent at year-end 2007. That would imply that approximately 43 percent of the consistent sample participants in the age 56–65 age category would have had at least a 20 percent reduction in equities at year-end 2007 *if they were allocated 100 percent to target-date funds*.<sup>25</sup> It would appear that this situation changed markedly by year-end 2008; however, it is likely that most of the change is due to market fluctuations, as opposed to participant transfer activity. The 2008 asset allocation estimates in Figure 10 suggest that only 15 percent of the oldest 401(k) participants (ages 56–65 in 2007) had 90 percent or more of their 401(k) assets in equities. Another 5 percent had 80–90 percent in equities, and 9 percent had 70–80 percent in equities. Aggregating these three categories together, the percentage of 401(k) participants ages 56–65 in 2007 with more than 70 percent of their 401(k) portfolio in equities had decreased from 43 percent at year-end 2007 to 29 percent at year-end 2008.

## Conclusion

401(k) plans have come under increasing scrutiny during the recent financial crisis (Puzzanghera, 2008). Although this is largely due to the financial market impact on existing account balances, there have been several reports of employers cutting back on matching contributions during 2008 (Laise, January 8, 2009). Moreover, there have been reports that many workers have been taking out 401(k) loans or hardship withdrawals in recent months because they can no longer

tap the equity in their homes to pay down credit card debt (Trejos and Malone, 2008). Recent evidence reported by Fidelity (2009) suggests that these trends may not be outside of historical norms.<sup>26</sup>

While the current period of financial uncertainty for 401(k) participants has resulted in reform proposals ranging from modest modifications to outright elimination of the current system, it is possible that some of the perceived limitations of the current system may soon be at least partially corrected as a result of recent legislative and regulatory activity. As a result of PPA and the subsequent regulations for QDIAs, the number of 401(k) sponsors adopting automatic enrollment plans appears to be increasing significantly.<sup>27</sup> In addition to increasing the percentage of eligible workers participating in the 401(k) plans, previous research has shown a strong propensity for employees defaulted into the system to remain with the default investments chosen by the plan sponsor (Choi, Laibson, Madrian, and Metrick, 2001 and 2004; and Nessmith, Utkus, Young, 2007). Although balanced funds and managed accounts are also feasible choices for satisfying the QDIA regulations, it appears that the majority of plan sponsors adopting automatic enrollment will opt for the lifecycle/target-date approach.<sup>28</sup>

Although it will likely take several years before the automatic enrollment/QDIA phenomena result in a situation where a majority of the 401(k) assets are automatically rebalanced into "age appropriate" asset allocations (especially for older participants), it would appear that in time this will certainly decrease the percentage of participants on the verge of retirement with extreme equity concentrations similar to what was observed in Figure 10. However, this should not necessarily be seen as a complete remedy for investment risk for workers, as the average target-date fund across all age cohorts was reported to have dropped 32 percent in 2008. Even more problematic for those on the verge of retirement is that 2010 target-date funds were reported to have decreased 25 percent (Laise, January 31, 2009).

Moreover, target-date funds are likely to be viewed by some 401(k) participants as a homogenous product—but, in fact, they are not. Among 2010 funds at least a year old, the most conservative target-date fund had 26 percent of assets in stocks as of the third quarter of 2008, according to Ibbotson Associates, but the most aggressive had two-thirds of its assets in stocks (Laise, November 13, 2008).

EBRI is currently conducting an analysis of target-date funds for defined contribution plans. This project will incorporate three distinct, but interrelated, phases. The first phase will provide an empirical analysis of the use of target-date funds in 401(k) plans. The second phase will focus on a conceptual analysis of the desirable construction of target-date accumulation principles for defined contribution plan participants, including the extension of these principles into the decumulation phase, by taking into account plan demographics. The third phase will include an empirical analysis of the choice of target-date funds by plan sponsors and correlates with employee demographics and plan design variables. The additional insights generated by this research should assist in providing a more informed asset allocation for those nearing retirement age.

**Figure 8**  
**401(k) Recovery Time, by Job Tenure and Salary: Equity Return Options**  
**Assuming a Non-Equity Return of 6.3 Percent**

**Time Needed to Recover From 2008 401(k) Losses,\* Assuming Equity Return of -10 Percent**

Job Tenure (years)	Salary	Percentile of 401(k) Participants								
		10th	20th	30th	40th	Median	60th	70th	80th	90th
(years needed to recover)										
1-4	\$20,000-\$30,000	—	—	—	—	—	—	—	—	0.2
1-4	\$30,000-\$40,000	—	—	—	—	—	—	—	—	0.4
1-4	\$40,000-\$50,000	—	—	—	—	—	—	—	—	0.6
1-4	\$50,000-\$60,000	—	—	—	—	—	—	—	0.2	0.8
1-4	\$60,000-\$90,000	—	—	—	—	—	—	—	0.3	1.2
1-4	>\$90,000	—	—	—	—	—	—	0.3	0.8	2.2
5-9	\$20,000-\$30,000	—	—	—	—	0.2	0.6	1.2	2.3	5.3
5-9	\$30,000-\$40,000	—	—	—	0.0	0.4	0.9	1.6	2.7	6.0
5-9	\$40,000-\$50,000	—	—	—	0.2	0.6	1.2	2.0	3.3	6.4
5-9	\$50,000-\$60,000	—	—	—	0.4	0.8	1.4	2.2	3.6	7.3
5-9	\$60,000-\$90,000	—	—	0.2	0.7	1.1	1.8	2.7	4.1	8.7
5-9	>\$90,000	—	0.1	0.6	1.1	1.8	2.7	4.0	6.7	66.9
10-19	\$20,000-\$30,000	—	0.0	0.1	0.8	1.8	3.1	5.5	12.6	infinity
10-19	\$30,000-\$40,000	—	0.0	0.3	1.2	2.2	3.7	6.5	14.5	infinity
10-19	\$40,000-\$50,000	—	0.0	0.6	1.6	2.9	4.9	8.8	23.2	infinity
10-19	\$50,000-\$60,000	—	0.0	0.8	1.6	2.9	4.7	8.2	19.3	infinity
10-19	\$60,000-\$90,000	—	0.3	1.2	2.2	3.6	5.8	10.2	26.1	infinity
10-19	>\$90,000	—	0.8	1.8	3.2	5.2	8.4	16.6	156.7	infinity
20 or More	\$20,000-\$30,000	—	—	0.5	1.7	3.9	7.8	26.6	infinity	infinity
20 or More	\$30,000-\$40,000	—	—	0.8	2.1	4.4	9.2	31.8	infinity	infinity
20 or More	\$40,000-\$50,000	—	0.2	1.5	3.4	6.7	15.3	222.7	infinity	infinity
20 or More	\$50,000-\$60,000	—	0.2	1.3	3.1	6.1	13.4	62.9	infinity	infinity
20 or More	\$60,000-\$90,000	—	0.4	1.7	3.7	7.0	15.7	109.7	infinity	infinity
20 or More	>\$90,000	—	1.1	3.0	6.2	13.2	58.4	infinity	infinity	infinity

**Time Needed to Recover From 2008 401(k) Losses,\* Assuming an Equity Return of -5 Percent**

Job Tenure (years)	Salary	Percentile of 401(k) Participants								
		10th	20th	30th	40th	Median	60th	70th	80th	90th
(years needed to recover)										
1-4	\$20,000-\$30,000	—	—	—	—	—	—	—	—	0.2
1-4	\$30,000-\$40,000	—	—	—	—	—	—	—	—	0.3
1-4	\$40,000-\$50,000	—	—	—	—	—	—	—	—	0.5
1-4	\$50,000-\$60,000	—	—	—	—	—	—	—	0.1	0.6
1-4	\$60,000-\$90,000	—	—	—	—	—	—	—	0.3	0.9
1-4	>\$90,000	—	—	—	—	—	—	0.2	0.6	1.6
5-9	\$20,000-\$30,000	—	—	—	—	0.1	0.5	0.9	1.7	3.2
5-9	\$30,000-\$40,000	—	—	—	—	0.3	0.7	1.2	1.9	3.4
5-9	\$40,000-\$50,000	—	—	—	0.2	0.5	0.9	1.5	2.2	3.6
5-9	\$50,000-\$60,000	—	—	—	0.3	0.6	1.1	1.6	2.4	3.9
5-9	\$60,000-\$90,000	—	—	0.2	0.5	0.9	1.3	1.9	2.6	4.3
5-9	>\$90,000	—	0.1	0.5	0.9	1.4	1.9	2.6	3.7	8.1
10-19	\$20,000-\$30,000	—	—	0.1	0.7	1.4	2.1	3.2	5.1	9.7
10-19	\$30,000-\$40,000	—	—	0.3	0.9	1.6	2.4	3.6	5.4	10.5
10-19	\$40,000-\$50,000	—	—	0.5	1.2	2.0	3.0	4.3	6.5	12.7
10-19	\$50,000-\$60,000	—	—	0.6	1.3	2.0	2.9	4.1	6.1	11.6
10-19	\$60,000-\$90,000	—	0.3	0.9	1.6	2.4	3.3	4.6	6.7	12.9
10-19	>\$90,000	—	0.6	1.4	2.2	3.1	4.1	5.7	8.8	21.9
20 or More	\$20,000-\$30,000	—	—	0.4	1.3	2.5	3.9	6.6	12.3	57.6
20 or More	\$30,000-\$40,000	—	—	0.7	1.6	2.8	4.3	7.0	12.5	41.5
20 or More	\$40,000-\$50,000	—	0.2	1.1	2.2	3.6	5.5	8.9	15.9	63.3
20 or More	\$50,000-\$60,000	—	0.1	1.0	2.1	3.4	5.1	7.9	14.4	43.1
20 or More	\$60,000-\$90,000	—	0.3	1.3	2.4	3.7	5.5	8.4	14.6	47.5
20 or More	>\$90,000	—	0.9	2.0	3.4	5.1	7.8	12.9	30.3	infinity

*(Figure 8 cont'd. next page)*

(Figure 8 cont'd. from previous page)

**Time Needed to Recover From 2008 401(k) Losses,\* Assuming Equity Return of 0 Percent**

Job Tenure (years)	Salary	Percentile of 401(k) Participants								
		10th	20th	30th	40th	Median	60th	70th	80th	90th
(years needed to recover)										
1-4	\$20,000-\$30,000	—	—	—	—	—	—	—	—	—
1-4	\$30,000-\$40,000	—	—	—	—	—	—	—	—	0.3
1-4	\$40,000-\$50,000	—	—	—	—	—	—	—	—	0.4
1-4	\$50,000-\$60,000	—	—	—	—	—	—	—	0.1	0.5
1-4	\$60,000-\$90,000	—	—	—	—	—	—	—	0.3	0.8
1-4	>\$90,000	—	—	—	—	—	—	0.2	0.5	1.3
5-9	\$20,000-\$30,000	—	—	—	—	0.1	0.4	0.8	1.3	2.2
5-9	\$30,000-\$40,000	—	—	—	—	0.3	0.6	1.0	1.5	2.4
5-9	\$40,000-\$50,000	—	—	—	0.2	0.5	0.8	1.2	1.7	2.5
5-9	\$50,000-\$60,000	—	—	—	0.3	0.6	0.9	1.3	1.8	2.7
5-9	\$60,000-\$90,000	—	—	0.2	0.5	0.8	1.1	1.5	1.9	2.8
5-9	>\$90,000	—	0.1	0.4	0.8	1.1	1.5	1.9	2.5	4.3
10-19	\$20,000-\$30,000	—	—	0.1	0.6	1.1	1.6	2.2	3.2	4.8
10-19	\$30,000-\$40,000	—	—	0.3	0.8	1.3	1.8	2.5	3.3	5.0
10-19	\$40,000-\$50,000	—	—	0.5	1.0	1.5	2.1	2.8	3.8	5.6
10-19	\$50,000-\$60,000	—	—	0.5	1.0	1.5	2.1	2.7	3.6	5.3
10-19	\$60,000-\$90,000	—	0.2	0.8	1.3	1.8	2.3	3.0	3.9	5.6
10-19	>\$90,000	—	0.5	1.1	1.6	2.2	2.7	3.5	4.5	6.9
20 or more	\$20,000-\$30,000	—	—	0.4	1.0	1.8	2.6	3.8	5.4	8.8
20 or more	\$30,000-\$40,000	—	—	0.6	1.2	2.0	2.8	3.9	5.4	8.3
20 or more	\$40,000-\$50,000	—	0.2	0.9	1.7	2.5	3.3	4.5	6.1	9.1
20 or more	\$50,000-\$60,000	—	0.1	0.9	1.6	2.3	3.2	4.2	5.8	8.4
20 or more	\$60,000-\$90,000	—	0.3	1.0	1.8	2.5	3.3	4.4	5.9	8.6
20 or more	>\$90,000	—	0.8	1.5	2.3	3.2	4.2	5.5	7.6	13.4

**Time Needed to Recover From 2008 401(k) Losses,\* Assuming Equity Return of +5 Percent**

Job Tenure (years)	Salary	Percentile of 401(k) Participants								
		10th	20th	30th	40th	Median	60th	70th	80th	90th
(years needed to recover)										
1-4	\$20,000-\$30,000	—	—	—	—	—	—	—	—	0.1
1-4	\$30,000-\$40,000	—	—	—	—	—	—	—	—	0.3
1-4	\$40,000-\$50,000	—	—	—	—	—	—	—	—	0.4
1-4	\$50,000-\$60,000	—	—	—	—	—	—	—	0.1	0.5
1-4	\$60,000-\$90,000	—	—	—	—	—	—	—	0.2	0.7
1-4	>\$90,000	—	—	—	—	—	—	0.2	0.5	1.1
5-9	\$20,000-\$30,000	—	—	—	—	0.1	0.4	0.7	1.1	1.7
5-9	\$30,000-\$40,000	—	—	—	—	0.3	0.5	0.8	1.2	1.8
5-9	\$40,000-\$50,000	—	—	—	0.2	0.4	0.7	1.0	1.4	1.9
5-9	\$50,000-\$60,000	—	—	—	0.2	0.5	0.7	1.0	1.4	2.0
5-9	\$60,000-\$90,000	—	—	0.2	0.4	0.7	0.9	1.2	1.5	2.1
5-9	>\$90,000	—	0.1	0.4	0.6	0.9	1.2	1.5	1.9	3.0
10-19	\$20,000-\$30,000	—	—	0.1	0.5	0.9	1.3	1.7	2.3	3.2
10-19	\$30,000-\$40,000	—	—	0.2	0.7	1.0	1.4	1.9	2.4	3.3
10-19	\$40,000-\$50,000	—	—	0.4	0.8	1.2	1.6	2.1	2.7	3.5
10-19	\$50,000-\$60,000	—	—	0.5	0.9	1.2	1.6	2.0	2.5	3.4
10-19	\$60,000-\$90,000	—	0.2	0.7	1.0	1.4	1.8	2.2	2.7	3.6
10-19	>\$90,000	—	0.5	0.9	1.3	1.7	2.1	2.5	3.1	4.1
20 or more	\$20,000-\$30,000	—	—	0.3	0.9	1.4	1.9	2.6	3.4	4.7
20 or more	\$30,000-\$40,000	—	—	0.5	1.0	1.6	2.1	2.7	3.5	4.6
20 or more	\$40,000-\$50,000	—	0.2	0.8	1.3	1.9	2.4	3.0	3.8	4.9
20 or more	\$50,000-\$60,000	—	0.1	0.7	1.3	1.8	2.3	2.9	3.6	4.7
20 or more	\$60,000-\$90,000	—	0.3	0.9	1.4	1.9	2.4	3.0	3.7	4.7
20 or more	>\$90,000	—	0.7	1.2	1.8	2.3	2.8	3.5	4.4	6.0

(Figure 8 cont'd. next page)

(Figure 8 cont'd. from previous page)

**Time Needed to Recover From 2008 401(k) Losses,\* Assuming Equity Return of +10 percent**

Job Tenure (years)	Salary	Percentile of 401(k) Participants								
		10th	20th	30th	40th	Median	60th	70th	80th	90th
(years needed to recover)										
1-4	\$20,000-\$30,000	—	—	—	—	—	—	—	—	0.1
1-4	\$30,000-\$40,000	—	—	—	—	—	—	—	—	0.2
1-4	\$40,000-\$50,000	—	—	—	—	—	—	—	—	0.3
1-4	\$50,000-\$60,000	—	—	—	—	—	—	—	0.1	0.4
1-4	\$60,000-\$90,000	—	—	—	—	—	—	—	0.2	0.6
1-4	>\$90,000	—	—	—	—	—	—	0.2	0.4	0.9
5-9	\$20,000-\$30,000	—	—	—	—	0.1	0.3	0.6	0.9	1.4
5-9	\$30,000-\$40,000	—	—	—	—	0.2	0.5	0.7	1.0	1.5
5-9	\$40,000-\$50,000	—	—	—	0.1	0.4	0.6	0.8	1.1	1.5
5-9	\$50,000-\$60,000	—	—	—	0.2	0.4	0.6	0.9	1.2	1.6
5-9	\$60,000-\$90,000	—	—	0.2	0.4	0.6	0.8	1.0	1.3	1.7
5-9	>\$90,000	—	0.1	0.3	0.6	0.8	1.0	1.2	1.6	2.2
10-19	\$20,000-\$30,000	—	—	—	0.5	0.8	1.1	1.4	1.8	2.4
10-19	\$30,000-\$40,000	—	—	0.2	0.6	0.9	1.2	1.5	1.9	2.5
10-19	\$40,000-\$50,000	—	—	0.4	0.7	1.0	1.4	1.7	2.1	2.6
10-19	\$50,000-\$60,000	—	—	0.4	0.7	1.0	1.3	1.6	2.0	2.5
10-19	\$60,000-\$90,000	—	0.2	0.6	0.9	1.2	1.4	1.7	2.1	2.6
10-19	>\$90,000	—	0.4	0.8	1.1	1.4	1.6	1.9	2.3	2.9
20 or more	\$20,000-\$30,000	—	—	0.3	0.7	1.2	1.6	2.0	2.5	3.3
20 or more	\$30,000-\$40,000	—	—	0.4	0.9	1.3	1.7	2.1	2.5	3.2
20 or more	\$40,000-\$50,000	—	0.1	0.7	1.1	1.5	1.9	2.3	2.7	3.4
20 or more	\$50,000-\$60,000	—	0.1	0.6	1.1	1.4	1.8	2.2	2.6	3.2
20 or more	\$60,000-\$90,000	—	0.2	0.7	1.2	1.5	1.9	2.2	2.7	3.3
20 or more	>\$90,000	—	0.6	1.0	1.4	1.8	2.2	2.6	3.1	3.9

Source: Employee Benefit Research Institute.

\* Losses are defined as the difference between year-end 2007 and 2008 account balances. This is NOT limited to investment loss.

**Figure 9**  
**401(k) Recovery Time, by Job Tenure and Salary: Equity Return Options**  
**Assuming a Non-equity Return of 3.15 Percent**

**Time Needed to Recover From 2008 401(k) Losses,\* Assuming Equity Return of -10 Percent**

Job Tenure (years)	Salary	Percentile of 401(k) Participants								
		10th	20th	30th	40th	Median	60th	70th	80th	90th
(years needed to recover)										
1-4	\$20,000-\$30,000	—	—	—	—	—	—	—	—	0.2
1-4	\$30,000-\$40,000	—	—	—	—	—	—	—	—	0.4
1-4	\$40,000-\$50,000	—	—	—	—	—	—	—	0.1	0.6
1-4	\$50,000-\$60,000	—	—	—	—	—	—	—	0.2	0.8
1-4	\$60,000-\$90,000	—	—	—	—	—	—	—	0.4	1.2
1-4	>\$90,000	—	—	—	—	—	—	0.3	0.8	2.4
5-9	\$20,000-\$30,000	—	—	—	—	0.2	0.6	1.3	2.5	5.8
5-9	\$30,000-\$40,000	—	—	—	0.0	0.4	0.9	1.7	2.9	6.5
5-9	\$40,000-\$50,000	—	—	—	0.2	0.7	1.3	2.1	3.5	6.9
5-9	\$50,000-\$60,000	—	—	—	0.4	0.8	1.5	2.3	3.8	8.1
5-9	\$60,000-\$90,000	—	—	0.3	0.7	1.2	1.9	2.8	4.4	9.6
5-9	>\$90,000	—	0.1	0.6	1.2	2.0	2.9	4.3	7.5	infinity
10-19	\$20,000-\$30,000	—	—	0.1	1.0	2.1	3.6	6.6	16.7	infinity
10-19	\$30,000-\$40,000	—	—	0.4	1.3	2.4	4.3	7.8	19.7	infinity
10-19	\$40,000-\$50,000	—	—	0.7	1.7	3.2	5.6	10.2	32.5	infinity
10-19	\$50,000-\$60,000	—	0.0	0.9	1.8	3.2	5.5	9.8	27.6	infinity
10-19	\$60,000-\$90,000	—	0.3	1.3	2.5	4.1	6.7	12.5	40.0	infinity
10-19	>\$90,000	—	0.9	2.1	3.8	6.0	10.3	23.2	infinity	infinity
20 or More	\$20,000-\$30,000	—	—	0.6	2.1	4.7	11.1	88.2	infinity	infinity
20 or More	\$30,000-\$40,000	—	—	0.9	2.6	5.8	13.4	143.3	infinity	infinity
20 or More	\$40,000-\$50,000	—	0.2	1.8	4.2	8.7	24.7	infinity	infinity	infinity
20 or More	\$50,000-\$60,000	—	0.2	1.6	3.8	8.0	21.4	infinity	infinity	infinity
20 or More	\$60,000-\$90,000	—	0.5	2.1	4.5	9.3	26.5	infinity	infinity	infinity
20 or More	>\$90,000	—	1.4	3.8	8.5	22.7	infinity	infinity	infinity	infinity

**Time Needed to Recover From 2008 401(k) Losses,\* Assuming an Equity Return of -5 Percent**

Job Tenure (years)	Salary	Percentile of 401(k) Participants								
		10th	20th	30th	40th	Median	60th	70th	80th	90th
(years needed to recover)										
1-4	\$20,000-\$30,000	—	—	—	—	—	—	—	—	0.2
1-4	\$30,000-\$40,000	—	—	—	—	—	—	—	—	0.4
1-4	\$40,000-\$50,000	—	—	—	—	—	—	—	0.0	0.5
1-4	\$50,000-\$60,000	—	—	—	—	—	—	—	0.1	0.6
1-4	\$60,000-\$90,000	—	—	—	—	—	—	—	0.3	0.9
1-4	>\$90,000	—	—	—	—	—	—	0.2	0.6	1.7
5-9	\$20,000-\$30,000	—	—	—	—	0.2	0.5	1.0	1.8	3.3
5-9	\$30,000-\$40,000	—	—	—	0.0	0.3	0.7	1.3	2.0	3.6
5-9	\$40,000-\$50,000	—	—	—	0.2	0.6	1.0	1.6	2.3	3.7
5-9	\$50,000-\$60,000	—	—	—	0.3	0.7	1.1	1.7	2.5	4.1
5-9	\$60,000-\$90,000	—	—	0.2	0.6	1.0	1.4	2.0	2.7	4.5
5-9	>\$90,000	—	0.1	0.5	1.0	1.4	2.0	2.7	3.9	9.5
10-19	\$20,000-\$30,000	—	—	0.1	0.8	1.5	2.3	3.5	5.6	11.4
10-19	\$30,000-\$40,000	—	—	0.3	1.0	1.7	2.7	3.9	6.0	12.0
10-19	\$40,000-\$50,000	—	—	0.6	1.3	2.2	3.2	4.6	7.1	14.6
10-19	\$50,000-\$60,000	—	0.0	0.7	1.4	2.2	3.2	4.4	6.6	13.1
10-19	\$60,000-\$90,000	—	0.3	1.0	1.8	2.6	3.6	5.0	7.3	14.6
10-19	>\$90,000	—	0.7	1.5	2.4	3.3	4.6	6.4	10.0	30.3
20 or More	\$20,000-\$30,000	—	—	0.5	1.5	2.8	4.6	8.1	17.1	248.7
20 or More	\$30,000-\$40,000	—	—	0.8	1.8	3.2	5.0	8.3	16.7	98.1
20 or More	\$40,000-\$50,000	—	0.2	1.3	2.6	4.1	6.4	10.7	20.9	194.7
20 or More	\$50,000-\$60,000	—	0.2	1.2	2.4	3.9	6.1	9.6	18.0	97.7
20 or More	\$60,000-\$90,000	—	0.4	1.5	2.7	4.2	6.5	10.2	18.5	96.9
20 or More	>\$90,000	—	1.1	2.4	4.0	6.1	9.5	16.9	48.9	infinity

*(Figure 9 cont'd. next page)*



(Figure 9 cont'd. from previous page)

**Time Needed to Recover From 2008 401(k) Losses,\* Assuming Equity Return of 0 Percent**

Job Tenure (years)	Salary	Percentile of 401(k) Participants								
		10th	20th	30th	40th	Median	60th	70th	80th	90th
(years needed to recover)										
1-4	\$20,000-\$30,000	—	—	—	—	—	—	—	—	0.1
1-4	\$30,000-\$40,000	—	—	—	—	—	—	—	—	0.3
1-4	\$40,000-\$50,000	—	—	—	—	—	—	—	0.0	0.5
1-4	\$50,000-\$60,000	—	—	—	—	—	—	—	0.1	0.5
1-4	\$60,000-\$90,000	—	—	—	—	—	—	—	0.3	0.8
1-4	>\$90,000	—	—	—	—	—	—	0.2	0.6	1.3
5-9	\$20,000-\$30,000	—	—	—	—	0.1	0.4	0.8	1.4	2.3
5-9	\$30,000-\$40,000	—	—	—	0.0	0.3	0.6	1.0	1.5	2.5
5-9	\$40,000-\$50,000	—	—	—	0.2	0.5	0.8	1.2	1.7	2.6
5-9	\$50,000-\$60,000	—	—	—	0.3	0.6	0.9	1.3	1.8	2.7
5-9	\$60,000-\$90,000	—	—	0.2	0.5	0.8	1.1	1.5	2.0	2.9
5-9	>\$90,000	—	0.1	0.4	0.8	1.1	1.5	2.0	2.6	4.7
10-19	\$20,000-\$30,000	—	0.0	0.1	0.6	1.2	1.7	2.4	3.4	5.2
10-19	\$30,000-\$40,000	—	0.0	0.3	0.8	1.3	1.9	2.6	3.5	5.3
10-19	\$40,000-\$50,000	—	0.0	0.5	1.0	1.6	2.2	2.9	4.0	5.8
10-19	\$50,000-\$60,000	—	0.0	0.6	1.1	1.6	2.2	2.9	3.8	5.6
10-19	\$60,000-\$90,000	—	0.3	0.8	1.4	1.9	2.4	3.1	4.0	5.9
10-19	>\$90,000	—	0.6	1.2	1.8	2.3	2.9	3.7	4.8	7.6
20 or more	\$20,000-\$30,000	—	—	0.4	1.2	2.0	2.9	4.2	6.1	9.9
20 or more	\$30,000-\$40,000	—	—	0.6	1.4	2.2	3.1	4.3	6.0	9.3
20 or more	\$40,000-\$50,000	—	0.2	1.0	1.9	2.7	3.7	4.9	6.6	9.9
20 or more	\$50,000-\$60,000	—	0.2	1.0	1.7	2.6	3.5	4.6	6.3	9.3
20 or more	\$60,000-\$90,000	—	0.3	1.2	2.0	2.7	3.7	4.8	6.4	9.3
20 or more	>\$90,000	—	0.9	1.7	2.6	3.5	4.6	6.1	8.4	15.6

**Time Needed to Recover From 2008 401(k) Losses,\* Assuming Equity Return of +5 Percent**

Job Tenure (years)	Salary	Percentile of 401(k) Participants								
		10th	20th	30th	40th	Median	60th	70th	80th	90th
(years needed to recover)										
1-4	\$20,000-\$30,000	—	—	—	—	—	—	—	—	0.1
1-4	\$30,000-\$40,000	—	—	—	—	—	—	—	—	0.3
1-4	\$40,000-\$50,000	—	—	—	—	—	—	—	0.0	0.4
1-4	\$50,000-\$60,000	—	—	—	—	—	—	—	0.1	0.5
1-4	\$60,000-\$90,000	—	—	—	—	—	—	—	0.2	0.7
1-4	>\$90,000	—	—	—	—	—	—	0.2	0.5	1.1
5-9	\$20,000-\$30,000	—	—	—	—	0.1	0.4	0.7	1.1	1.8
5-9	\$30,000-\$40,000	—	—	—	0.0	0.3	0.5	0.9	1.2	1.9
5-9	\$40,000-\$50,000	—	—	—	0.2	0.4	0.7	1.0	1.4	1.9
5-9	\$50,000-\$60,000	—	—	—	0.2	0.5	0.8	1.1	1.5	2.0
5-9	\$60,000-\$90,000	—	—	0.2	0.4	0.7	0.9	1.2	1.6	2.2
5-9	>\$90,000	—	0.1	0.4	0.7	1.0	1.2	1.5	2.0	3.1
10-19	\$20,000-\$30,000	—	—	0.1	0.6	1.0	1.4	1.8	2.4	3.3
10-19	\$30,000-\$40,000	—	—	0.2	0.7	1.1	1.5	2.0	2.5	3.4
10-19	\$40,000-\$50,000	—	—	0.4	0.9	1.3	1.7	2.2	2.8	3.7
10-19	\$50,000-\$60,000	—	0.0	0.5	0.9	1.3	1.7	2.1	2.7	3.5
10-19	\$60,000-\$90,000	—	0.2	0.7	1.1	1.5	1.9	2.3	2.8	3.7
10-19	>\$90,000	—	0.5	1.0	1.4	1.8	2.1	2.6	3.2	4.3
20 or more	\$20,000-\$30,000	—	—	0.4	1.0	1.6	2.1	2.8	3.7	5.1
20 or more	\$30,000-\$40,000	—	—	0.5	1.1	1.7	2.2	2.9	3.7	4.9
20 or more	\$40,000-\$50,000	—	0.2	0.9	1.5	2.0	2.6	3.2	4.0	5.1
20 or more	\$50,000-\$60,000	—	0.1	0.8	1.4	1.9	2.5	3.1	3.8	4.9
20 or more	\$60,000-\$90,000	—	0.3	1.0	1.5	2.0	2.6	3.2	3.9	4.9
20 or more	>\$90,000	—	0.7	1.4	2.0	2.5	3.1	3.7	4.6	6.4

(Figure 9 cont'd. next page)

(Figure 9 cont'd. from previous page)

**Time Needed to Recover From 2008 401(k) Losses,\* Assuming Equity Return of +10 percent**

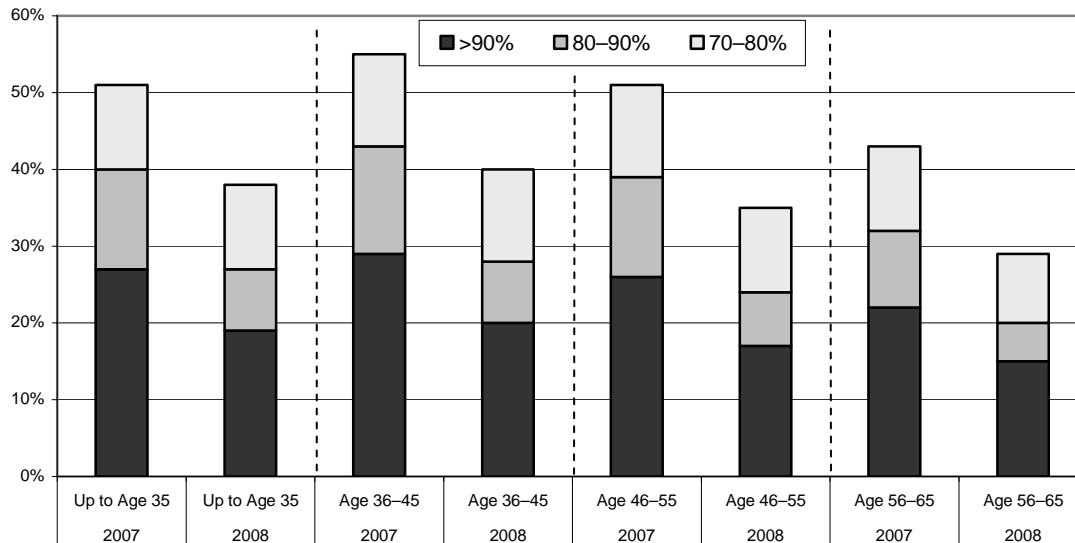
Job Tenure (years)	Salary	Percentile of 401(k) Participants								
		10th	20th	30th	40th	Median	60th	70th	80th	90th
		(years needed to recover)								
1-4	\$20,000-\$30,000	—	—	—	—	—	—	—	—	0.1
1-4	\$30,000-\$40,000	—	—	—	—	—	—	—	—	0.2
1-4	\$40,000-\$50,000	—	—	—	—	—	—	—	0.0	0.4
1-4	\$50,000-\$60,000	—	—	—	—	—	—	—	0.1	0.4
1-4	\$60,000-\$90,000	—	—	—	—	—	—	—	0.2	0.6
1-4	>\$90,000	—	—	—	—	—	—	0.2	0.4	0.9
5-9	\$20,000-\$30,000	—	—	—	—	0.1	0.3	0.6	0.9	1.5
5-9	\$30,000-\$40,000	—	—	—	0.0	0.2	0.5	0.7	1.0	1.5
5-9	\$40,000-\$50,000	—	—	—	0.1	0.4	0.6	0.9	1.2	1.6
5-9	\$50,000-\$60,000	—	—	—	0.2	0.4	0.7	0.9	1.2	1.6
5-9	\$60,000-\$90,000	—	—	0.2	0.4	0.6	0.8	1.0	1.3	1.7
5-9	>\$90,000	—	0.1	0.3	0.6	0.8	1.0	1.3	1.6	2.3
10-19	\$20,000-\$30,000	—	—	0.1	0.5	0.8	1.1	1.5	1.9	2.5
10-19	\$30,000-\$40,000	—	—	0.2	0.6	0.9	1.2	1.6	1.9	2.5
10-19	\$40,000-\$50,000	—	—	0.4	0.7	1.1	1.4	1.7	2.1	2.7
10-19	\$50,000-\$60,000	—	0.0	0.4	0.8	1.1	1.4	1.7	2.0	2.6
10-19	\$60,000-\$90,000	—	0.2	0.6	0.9	1.2	1.5	1.8	2.1	2.7
10-19	>\$90,000	—	0.4	0.8	1.2	1.4	1.7	2.0	2.4	3.0
20 or more	\$20,000-\$30,000	—	—	0.3	0.8	1.3	1.7	2.1	2.7	3.4
20 or more	\$30,000-\$40,000	—	—	0.5	0.9	1.4	1.8	2.2	2.7	3.3
20 or more	\$40,000-\$50,000	—	0.2	0.8	1.2	1.6	2.0	2.4	2.8	3.4
20 or more	\$50,000-\$60,000	—	0.1	0.7	1.1	1.5	1.9	2.3	2.7	3.3
20 or more	\$60,000-\$90,000	—	0.3	0.8	1.2	1.6	2.0	2.3	2.8	3.3
20 or more	>\$90,000	—	0.6	1.1	1.6	1.9	2.3	2.7	3.2	4.0

Source: Employee Benefit Research Institute.

Losses are defined as the difference between year-end 2007 and 2008 account balances. This is NOT limited to investment loss.

Figure 10  
**Asset Allocation Distribution of 401(k) Participant Account Balances to “Equity,” by Age: Year-end 2007 and 2008**

(“Equity” is defined as equity funds + company stock + the relevant portion of balanced and target date funds)



Sources:

2007: Tabulations from year-end 2007 data from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project. The analysis is based on active participants with account balances at the end of 2007.

2008: Author's projections based on year-end 2007 data from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project.

## References

- Choi, James J., David Laibson, Brigitte C. Madrian, and Andrew Metrick. "For Better or For Worse: Default Effects and 401(k) Savings Behavior." *Pension Research Council Working Paper*. PRC WP 2002-2. Philadelphia, PA: Pension Research Council, The Wharton School, University of Pennsylvania, November 9, 2001.
- \_\_\_\_\_. "Saving For Retirement on the Path of Least Resistance." Originally prepared for *Tax Policy and the Economy 2001*, updated draft: July 19, 2004.
- Fidelity Investments. *Impact of Market Volatility on Participant Exchange Behavior, Building Futures: Impact of Market Volatility*, December 2008.  
[http://img.en25.com/Web/FidelityRetirementServices/MV%20part%20behavior%20Final%2012-11-08\\_6.pdf](http://img.en25.com/Web/FidelityRetirementServices/MV%20part%20behavior%20Final%2012-11-08_6.pdf)
- \_\_\_\_\_. *Fidelity Reports on 2008 Trends In 401(K) Plans*. January 28, 2009.  
[http://personal.fidelity.com/myfidelity/InsideFidelity/index\\_NewsCenter.shtml?refhp=cp](http://personal.fidelity.com/myfidelity/InsideFidelity/index_NewsCenter.shtml?refhp=cp)
- Holden, Sarah, and Jack VanDerhei. "Can 401(k) Accumulations Generate Significant Income for Future Retirees?" *EBRI Issue Brief*, no. 251; and *ICI Perspective*, Vol. 8, no. 3 (Employee Benefit Research Institute and Investment Company Institute, November 2002).
- Ibbotson Associates. *SBBi (Stocks, Bonds, Bills, and Inflation) 2002 Yearbook: Market Results for 1926-2001*. Chicago: Ibbotson Associates, 2002.
- \_\_\_\_\_. *Ibbotson Target Maturity Report* (Fourth Quarter 2008).  
<http://corporate.morningstar.com/us/documents/q4ibbotsontargetreport/maturityreportq42008.pdf>
- Investment Company Institute. "The Impact of The Financial Crisis on Workers' Retirement Security." Hearing before the Education and Labor Committee, U.S. House of Representatives, October 21, 2008.  
[www.ici.org/home/08\\_house\\_ret\\_security\\_stmt.html](http://www.ici.org/home/08_house_ret_security_stmt.html)
- Laise, Eleanor. "Investing in Funds: A Monthly Analysis—Financial Crisis Highlights Shortcomings of 401(k) Plans." *Wall Street Journal* (11/3/08).
- \_\_\_\_\_. "Big Slide in 401(k)s Spurs Calls for Change." *Wall Street Journal* (1/8/09).

- \_\_\_\_\_. "Five Ways to Fix Up Your 401(k) Plans." *Wall Street Journal* (1/31/09).
- Nessmith, William E., Stephen P. Utkus, Jean A. Young. *Measuring the Effectiveness of Automatic Enrollment*. Vol. 1. Vanguard Center for Retirement Research. Valley Forge, PA: The Vanguard Group, 2007.
- Noor, Moina. "Losing the Glint of the Golden Years." *New York Times* (2/8/09).
- Puzzanghera, Jim. "Calls Grow to Overhaul 401(k) Retirement Plans." *Los Angeles Times* (11/16/08).
- Trejos, Nancy. "Retirement Wreck: Are 401(k)s Still Viable for Saving?" *Washington Post* (10/12/08).
- Trejos, Nancy, and Brenna Maloney. "401(k)s, Retirement Savings and the Financial Crisis." *Washington Post* (December 6, 2008).
- VanDerhei, Jack. "The Impact of the Financial Crisis on Workers' Retirement Security." Testimony. U.S. Congress. House Education and Labor Committee. October 7, 2008.
- VanDerhei, Jack, and Craig Copeland. "Can America Afford Tomorrow's Retirees: Results From the EBRI-ERF Retirement Security Projection Model." *EBRI Issue Brief*, no. 263 (Employee Benefit Research Institute, November 2003).
- VanDerhei, Jack, Sarah Holden, Craig Copeland, and Luis Alonso. "401(k) Plan Asset Allocation, Account Balances, and Loan Activity in 2006." *EBRI Issue Brief*, no. 308; and *ICI Perspective*, Vol. 12, no. 1 (Employee Benefit Research Institute and Investment Company Institute, August 2007).
- \_\_\_\_\_. "401(k) Plan Asset Allocation, Account Balances, and Loan Activity in 2007." *EBRI Issue Brief*, no. 324; and *ICI Perspective*, Vol. 14, no. 3 (Employee Benefit Research Institute and Investment Company Institute, December 2008).
- Vanguard. "Participants calmer than you'd think amid market turmoil" (12/02/2008).  
<https://institutional.vanguard.com/VGApp/iip/site/institutional/researchcommentary/article?File=NewsPartCalm>

## Endnotes

- <sup>1</sup> Ibbotson (2002) data were used to construct the model.
- <sup>2</sup> VanDerhei, Holden, Copeland, and Alonso (2008).
- <sup>3</sup> For 401(k) participants in the highest-income quartile, the median replacement rate decreased by 3.7 percentage points if the market downturn occurred at the beginning of the career. The decrease was estimated to be 10.4 percentage points if it took place at the middle of the career. If the market downturn took place at the end of the career, the estimated decrease was 17.7 percent. These percentage point decreases for this group were based on a median replacement rate of 67.2 percent of final income, assuming a regular stochastic simulation of equity returns.
- <sup>4</sup> 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, 2007, the EBRI/ICI database includes statistical information about 21.8 million 401(k) plan participants, in 56,232 employer-sponsored 401(k) plans, holding \$1.425 trillion in assets. The 2007 EBRI/ICI database covers 45 percent of the universe of 401(k) plan participants, 12 percent of plans, and 47 percent of 401(k) plan assets. The EBRI/ICI project is unique because of its inclusion of data provided by a wide variety of plan recordkeepers 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.
- <sup>5</sup> For purposes of this analysis, investment returns were proxied by one of the following three index returns: S&P 500 Index, Lehman Aggregate Index (and later Barclays Capital U.S. Aggregate Bond Index), or three-month T-bills. These asset classes were assumed to have fees of 75, 45, and 45 basis points, respectively.
- <sup>6</sup> Periodic updates of these numbers are available at: <http://ebri.org/index.cfm?fa=401kbalances>
- <sup>7</sup> For example, among year-end 2007 EBRI/ICI database participants in their 20s, the average allocation to equity funds was 48 percent of assets, compared with nearly 39 percent of assets among participants in their 60s. Younger participants also had higher allocations to balanced funds, particularly to lifecycle funds. Among participants in their 20s, 14 percent of their 401(k) assets were invested in lifecycle funds, while among participants in their 60s, almost 7 percent were invested in lifecycle funds.
- <sup>8</sup> This is based on analysis of Fidelity's 17,095 corporate 401(k) plans, representing more than 11 million participants.
- <sup>9</sup> The Fidelity average account balance for year-end 2007 is slightly larger than a similar average computed for all 22 million participants in the EBRI/ICI 401(k) database (\$65,454).
- <sup>10</sup> It is important to note that the analysis in this *Issue Brief* is confined to the participants' 401(k) plan with their current employer and does not include information on either 401(k) plans with former employers or (most importantly) 401(k) balances that have been rolled over to IRAs. EBRI is currently in the process of enhancing its research capabilities to allow this kind of data to be captured. This will allow linking of accounts across data providers within the database's universe of individual account plans, resulting in a more complete and accurate retirement picture—such as measuring the effect of rollovers, multiple accounts, job turnover, and account leakage.

---

<sup>11</sup> Additional analysis was performed for this topic in which the total contribution levels for the participant were held constant. This will be available in a forthcoming working paper and will be linked to the following page: <http://ebri.org/index.cfm?fa=401kbalances>

<sup>12</sup> These losses are defined as the difference between actual year-end 2007 and estimated 2008 account balances. It should be noted that this includes estimated contribution activity (as well as other cash flows) for 2008 and is not limited to investment losses.

<sup>13</sup> Some may question why any 401(k) participant would choose to continue to invest in equities if the assumed rate of return were negative. While this would certainly seem unlikely if the long-term assumptions were negative, this analysis is attempting to conduct sensitivity analysis on the possible short-term consequences of various equity return assumptions.

<sup>14</sup> A similar type of analysis was conducted by EBRI and reported in Trejos and Maloney (2008); however, the only two scenarios modeled at that time were ones where (1) equity returns immediately returned to historical norms and (2) all 401(k) participants immediately reduced their future 401(k) equity allocations to zero.

<sup>15</sup> This may be due to a number of factors, but in most cases it was either a function of a large contribution-to-account-balance ratios or a very conservative asset allocation.

<sup>16</sup> Even though they are assumed to be suffering relatively heavy losses on their equity investments, their non-equity investments are assumed to be earning 6.3 percent per year. This, coupled with estimated contribution activity of the employee and the employer, are sufficient to recoup the decrease in the estimated 2008 account balance by the end of the estimated recovery period.

<sup>17</sup> It should be noted that the participant and/or the employer may increase contributions to a higher percentage of compensation in the future. This contingency is not included in this analysis.

<sup>18</sup> It should be noted that the missing values for one to four years of tenure reflect the fact that they had positive gains for 2008 (even at the 70<sup>th</sup> percentiles).

<sup>19</sup> Only a portion of the 401(k) participants in the EBRI/ICI database contain salary information. Therefore, the average recovery times for these figures may be slightly different from those provided in Figures 4 and 5.

<sup>20</sup> Participants with salaries less than \$20,000 were excluded in an attempt to deal with part-time employees.

<sup>21</sup> There are several potential explanations for this result, but the most likely is that higher-paid individuals have a higher ratio of account balances to annual contributions than do their lower-paid counterparts. This may be the result of constraints imposed by IRC Sec. 402(g), plan-sponsor reactions to potential ADP/ACP nondiscrimination testing, or plan constraints for highly compensated employees.

<sup>22</sup> It should be noted that the results in this figure are not directly comparable with Figure 4 in VanDerhei (2008). In the earlier publication, equity concentrations were measured for the consistent sample of participants defined earlier. By definition, participants would need to be in the plan at least seven years to be in the consistent sample. This will provide significant bias in the equity concentrations for the youngest cohorts.

<sup>23</sup> The Department of Labor issued final regulations for qualified default investment alternatives (QDIAs) on October 24, 2007, to provide, inter alia, employers who adopt automatic enrollment plans a safe harbor from fiduciary risk when selecting an investment for participants who fail to elect their own investment. Sec. 404(c)(5)(A) of ERISA provides that, for purposes of Sec. 404(c)(1) of ERISA, a participant in an individual account plan shall be treated as exercising control over the assets in the account with respect to the amount of contributions and earnings which, in the absence of an investment election by the participant, are invested by the plan in accordance with regulations prescribed by the secretary of labor. The three types of funds specifically enumerated for safe harbor treatment in the regulations are: lifecycle (target-date) funds, balanced funds, and managed accounts.

<sup>24</sup> This is explained in more detail in Craig Copeland, "Use of Target Date Funds in 401(k) Plans, 2007," forthcoming.

<sup>25</sup> It is possible that some of these participants were invested in company stock via employer matching contributions that were not able to be diversified.

<sup>26</sup> For example, hardship withdrawals at Fidelity increased slightly in the last year from 1.6 to 1.8 percent; however, loans initiated during this time actually decreased from 9.7 to 9.0 percent. Moreover, the portion of plan sponsors in their database that temporarily suspended or reduced the company 401(k) match was less than 1 percent of the sponsors that had matched in 2007.

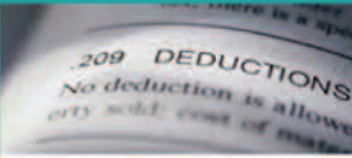
<sup>27</sup> For example, Fidelity (2009) reports that auto-enrollment increased to 16 percent from 11 percent among their plan sponsors in the last year.

<sup>28</sup> Fidelity (2009) reported that lifecycle funds were used as the default in 60 percent of their plans in 2008, up from 38 percent in 2007.

What's New at EBRI  
401(k) Valuations  
Choose a Year

- Publications
- By Topic
- Data Book
- Facts from EBRI
- Fast Facts
- Fundamentals
- Issue Briefs
- Notes
- Policy Books
- President's Reports
- Press Releases
- Special Reports
- Testimony
- Resources
- Benefit Bibliography
- Benefit FAQs
- Links to Other Internet Resources
- Reference Shelf
- Special Issues of Periodicals
- What's New in Employee Benefits

**EBRI Issue Brief – January 2009**



**Capping the Tax Exclusion for Employment-Based Health Coverage: Implications for Employers and Workers**  
This new study by EBRI examines implications for employers and workers involved in capping the tax exclusion for employment-based health coverage, an issue that could come up during this year's expected debate over overhauling the nation's health care system. Press release

**EBRI Notes – January 2009**



**Lump-Sum Distributions at Job Change**  
An increasing percentage of retirement plan participants are preserving their retirement assets in tax-qualified accounts, but a significant number are using at least some these assets to pay off debts, start a business, or buy a home, according to a study released today by the EBRI. Press release


- Most Viewed last 30 days**
- Employee Benefit Research Institute
  - EBRI Databook on Employee Benefits
  - 2009 Fast Facts
  - 401(k) Valuations
  - Facts From EBRI

**2009 Policy Resources  
Facts on Benefit Issues**

**401(k) Valuations**  
Published:  
January 20, 2009  
401(k) Balances and Changes Due to Market Volatility

**Data Book**  
Last Updated:  
December 2008  
A comprehensive collection of the most up-to-date benefit information available

**EBRI Issue Brief – December 2008**



**401(k) Plan Asset Allocation, Account Balances, and Loan Activity in 2007**  
More than 7 percent of 401(k) assets at year-end 2007 were invested in lifecycle funds and one-quarter of 401(k) participants held lifecycle funds, according to analysis by the nonpartisan Employee Benefit Research Institute (EBRI) and the Investment Company Institute (ICI). The findings are part of the annual update of the EBRI/ICI 401(k) database, the largest of its kind, and represent the two groups' first application of the database to examine investors' use of lifecycle funds. Press release

**New Edition Available:  
'Fundamentals of Employee Benefit Programs'**  
The all-new Sixth Edition of EBRI's essential reference book, *Fundamentals of Employee Benefit Programs*, is now available for purchase. For more information, click here  
To order individual copies of the book, click here. EBRI Member organizations wishing to order the book should e-mail publications@ebri.org

**Fast Facts**  
Published  
January 27, 2009  
"Where—and How Much—Do Employers Spend on Compensation?"

**Retirement Survey**  
Published:  
July 2008  
Our most widely read survey on key retirement indicators

## CHECK OUT EBRI'S WEB SITE!

***EBRI's Web site is easy to use and packed with useful information!  
Look for these special features:***

- EBRI's entire library of research publications starts at the main Web page. Click on *EBRI Issue Briefs* and *EBRI Notes* for our in-depth and nonpartisan periodicals.
- To get answers to many frequently asked questions about employee benefits, click on Benefit FAQs.
- EBRI's reliable health and retirement surveys are just a click away through the topic boxes at the top of the page.
- Instantly get e-mail notifications of the latest EBRI data, surveys, publications, and meetings and seminars by clicking on the Sign Up for Updates box at the top of our home page.

***There's lots more!  
Visit EBRI on-line today: www.ebri.org***

**Where the world turns for the facts on U.S. employee benefits.**

Retirement and health benefits are at the heart of workers', employers', and our nation's economic security. Founded in 1978, EBRI is the most authoritative and objective source of information on these critical, complex issues.

**EBRI focuses solely on employee benefits research — no lobbying or advocacy**

EBRI stands alone in employee benefits research as an independent, nonprofit, and nonpartisan organization. It analyzes and reports research data without spin or underlying agenda. All findings, whether on financial data, options, or trends, are revealing and reliable — the reason EBRI information is the gold standard for private analysts and decision makers, government policymakers, the media, and the public.

**EBRI explores the breadth of employee benefits and related issues**

EBRI studies the world of health and retirement benefits — issues such as 401(k)s, IRAs, retirement income adequacy, consumer-driven benefits, Social Security, tax treatment of both retirement and health benefits, cost management, worker and employer attitudes, policy reform proposals, and pension assets and funding. There is widespread recognition that if employee benefits data exist, EBRI knows it.

**EBRI delivers a steady stream of invaluable research and analysis**

- EBRI publications include in-depth coverage of key issues and trends; summaries of research findings and policy developments; timely factsheets on hot topics; regular updates on legislative and regulatory developments; comprehensive reference resources on benefit programs and workforce issues; and major surveys of public attitudes.
- EBRI meetings present and explore issues with thought leaders from all sectors.
- EBRI regularly provides congressional testimony, and briefs policymakers, member organizations, and the media on employer benefits.
- EBRI issues press releases on newsworthy developments, and is among the most widely quoted sources on employee benefits by all media.
- EBRI directs members and other constituencies to the information they need, and undertakes new research on an ongoing basis.
- EBRI maintains and analyzes the most comprehensive database of 401(k)-type programs in the world. Its computer simulation analyses on Social Security reform and retirement income adequacy are unique.

**EBRI makes information freely available to all**

EBRI assumes a public service responsibility to make its findings completely accessible at [www.ebri.org](http://www.ebri.org) — so that all decisions that relate to employee benefits, whether made in Congress or board rooms or families' homes, are based on the highest quality, most dependable information. EBRI's Web site posts all research findings, publications, and news alerts. EBRI also extends its education and public service role to improving Americans' financial knowledge through its award-winning public service campaign *ChoosetoSave*® and the companion site [www.choosetosave.org](http://www.choosetosave.org)

**EBRI is supported by organizations from all industries and sectors that appreciate the value of unbiased, reliable information on employee benefits.** Visit [www.ebri.org/about/join/](http://www.ebri.org/about/join/) for more.

---

*EBRI Employee Benefit Research Institute Issue Brief* (ISSN 0887-137X) is published monthly by the Employee Benefit Research Institute, 1100 13th St. NW, Suite 878, Washington, DC, 20005-4051, at \$300 per year or is included as part of a membership subscription. Periodicals postage rate paid in Washington, DC, and additional mailing offices. POSTMASTER: Send address changes to: *EBRI Issue Brief*, 1100 13th St. NW, Suite 878, Washington, DC, 20005-4051. Copyright 2009 by Employee Benefit Research Institute. All rights reserved. No. 326.

---

## Who we are

---

The Employee Benefit Research Institute (EBRI) was founded in 1978. Its mission is to contribute to, to encourage, and to enhance the development of sound employee benefit programs and sound public policy through objective research and education. EBRI is the only private, nonprofit, nonpartisan, Washington, DC-based organization committed exclusively to public policy research and education on economic security and employee benefit issues. EBRI's membership includes a cross-section of pension funds; businesses; trade associations; labor unions; health care providers and insurers; government organizations; and service firms.

## What we do

---

EBRI's work advances knowledge and understanding of employee benefits and their importance to the nation's economy among policymakers, the news media, and the public. It does this by conducting and publishing policy research, analysis, and special reports on employee benefits issues; holding educational briefings for EBRI members, congressional and federal agency staff, and the news media; and sponsoring public opinion surveys on employee benefit issues. **EBRI's Education and Research Fund** (EBRI-ERF) performs the charitable, educational, and scientific functions of the Institute. EBRI-ERF is a tax-exempt organization supported by contributions and grants.

## Our publications

---

*EBRI Issue Briefs* are periodicals providing expert evaluations of employee benefit issues and trends, as well as critical analyses of employee benefit policies and proposals. *EBRI Notes* is a monthly periodical providing current information on a variety of employee benefit topics. EBRI's *Pension Investment Report* provides detailed financial information on the universe of defined benefit, defined contribution, and 401(k) plans. EBRI *Fundamentals of Employee Benefit Programs* offers a straightforward, basic explanation of employee benefit programs in the private and public sectors. The *EBRI Databook on Employee Benefits* is a statistical reference work on employee benefit programs and work force-related issues. [www.ebri.org](http://www.ebri.org)

## Orders/ Subscriptions

---

Contact EBRI Publications, (202) 659-0670; fax publication orders to (202) 775-6312. Subscriptions to *EBRI Issue Briefs* are included as part of EBRI membership, or as part of a \$199 annual subscription to *EBRI Notes* and *EBRI Issue Briefs*. Individual copies are available with prepayment for \$25 each (for printed copies). **Change of Address:** EBRI, 1100 13th St. NW, Suite 878, Washington, DC, 20005-4051, (202) 659-0670; fax number, (202) 775-6312; e-mail: [subscriptions@ebri.org](mailto:subscriptions@ebri.org) **Membership Information:** Inquiries regarding EBRI membership and/or contributions to EBRI-ERF should be directed to EBRI President/ASEC Chairman Dallas Salisbury at the above address, (202) 659-0670; e-mail: [salisbury@ebri.org](mailto:salisbury@ebri.org)

**Editorial Board:** Dallas L. Salisbury, publisher; Stephen Blakely, editor. Any views expressed in this publication and those of the authors should not be ascribed to the officers, trustees, members, or other sponsors of the Employee Benefit Research Institute, the EBRI Education and Research Fund, or their staffs. Nothing herein is to be construed as an attempt to aid or hinder the adoption of any pending legislation, regulation, or interpretative rule, or as legal, accounting, actuarial, or other such professional advice.

*EBRI Issue Brief* is registered in the U.S. Patent and Trademark Office. ISSN: 0887-137X/90 0887-137X/90 \$.50+.50