401(k) Plan Asset Allocation, Account Balances, and Loan Activity in 2004

by Sarah Holden and Jack VanDerhei

Defined contribution (DC) plans are one of the primary means by which Americans save for retirement, and 401(k) plans are the most common type of DC plan. In an ongoing collaborative effort, the Employee Benefit Research Institute (EBRI) and the Investment Company Institute (ICI) collect annual data on millions of 401(k) plan participants to present an accurate portrayal of the behavior of 401(k) plan participants.

This issue of Perspective updates ICI and EBRI’s research of 401(k) plan participant activity through year-end 2004, and notes several key findings:

- Consistent participation in 401(k) plans remains essential to successful saving: Consistent participation has had a significant impact on individuals’ ability to accumulate sizeable gains in 401(k) account balances since 1999. By year-end 2004, the average account balance among 401(k) participants who had held accounts since at least 1999 increased by 36 percent, despite experiencing one of the worst bear markets for stocks since the Great Depression; rising 15 percent in 2004 alone. Notably, older and longer-tenured participants have higher-than-average balances, and younger and shorter-tenured participants have smaller-than-average balances.

- Equity investing remains popular in 401(k) plans: The bulk of 401(k) participants’ assets remained in equity securities at year-end 2004. On average, 67 percent of participants’ assets are invested in equity securities through equity funds, the equity portion of balanced funds, and company stock.

- Investment preferences are shifting to simpler options: Lifestyle and lifecycle funds have increased in popularity in recent years among both plan sponsors and plan participants due to increasing concern that many participants require investment guidance and/or simpler investment choices. For example, recently hired 401(k) plan participants in their twenties currently hold a higher percentage of their 401(k) accounts in balanced funds—which include lifestyle and lifecycle funds—than their peers did in 1998.

- Loans are widely available, but rarely taken: Although research indicates that permitting loans increases both participation and contribution rates in 401(k) plans, concern exists that individuals will undo those benefits by taking the money out prior to retirement. However, loan activity among 401(k) plan participants continues to be limited: In 2004, 19 percent of participants in plans that offered loans have loans outstanding. On average, among participants with loans, the loan represents 13 percent of the remaining account balance at year-end 2004.
of participants, as done in this report, provides the most meaningful analysis of 401(k) account balance trends. Nearly 40 percent, or 4.0 million, of the participants with 401(k) plan accounts at the end of 1999 maintained accounts at the end of each year from 1999 through 2004. An examination of this consistent subgroup of participants helps to more reliably portray the growth of 401(k) plan account balances over time by removing from the analysis the effects of participants and plans who entered or left the EBRI/ICI database.

Participation Through Bear and Bull Markets Boosts Account Growth
In any given year, three factors contribute to changes in a participant’s account balance: new contributions by the participant and/or the employer; total investment return on account balances, which depends on market performance and the allocation of assets in the individual’s account; and withdrawals, borrowing, and loan repayments. Among 401(k) plan participants who have had accounts since at least year-end 1999, the average account balance increased 36 percent in the past five years, rising from $67,016 at year-end 1999 to $91,042 at year-end 2004 (Figure 1). In 2004 alone, the average account balance among this consistent group of participants increased 15 percent, due in part to positive equity market returns (Figure 2).

Account balances generally have increased since 1999 because of net contributions each year and stock market appreciation since 2002. For example, contributions made toward the end of the bear market and invested in broad equity market funds have increased more than 40 percent in value, showing the benefit of ongoing participation even though, as of year-end 2004, the broad equity market (as measured by the S&P 500 total return index) had not returned to its mid-2000 peak.
While these averages provide a broad snapshot, they mask the wide range of 401(k) participant account balances. There tends to be a positive correlation between job tenure and account balance in each of the nine years covered by the EBRI/ICI database and among the participants in the consistent group (those with account balances at the end of each year from at least 1999 through 2004). Given that age and tenure are often correlated, there also tends to be a positive correlation between age and account balance.

Moreover, the aggregate averages don’t reveal the wide range in rates of change in participants’ account balances. In the consistent group, participants who were younger (or had fewer years of tenure) experienced the largest increases in average account balances between year-end 1999 and year-end 2004. For example, the average account balance of participants in their twenties rose 206 percent between the end of 1999 and the end of 2004 (Figure 3). This increase reflects the strong impact of contributions on account balances for this age group. Because their account balances tend to be small, contributions produce significant growth in them.

Figure 1: 401(k) Account Balances Increase for Second Consecutive Year
Average account balances among 401(k) participants present from year-end 1999 through year-end 2004

Figure 2: Domestic Stock Market Begins to Recover from Bear Market
Domestic stock market indexes, 1 month-end level, 2 December 1996 to December 2004

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1 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 individual retirement accounts (IRAs) are not included. Account balances are net of loan balances.
2 Based on a sample of 4.0 million participants with account balances at the end of each year from 1999 through 2004.
Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project

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1 The S&P 500 Index consists of 500 stocks chosen for market size, liquidity, and industry group representation. 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).
2 All indexes are set to 100 in December 1996.
Sources: Bloomberg, Frank Russell Company, and Standard & Poor’s
In contrast, the average account balance of older participants (particularly those with longer tenures) had not yet recovered from the impact of the bear market. For participants in their sixties, the average account balance is still down nearly 5 percent at year-end 2004 compared with year-end 1999 (Figure 3). This decline in assets reflects the magnitude of the impact of investment returns on these larger account balances, while annual contributions are able to provide only a minor boost to large account balances. In addition, participants in their sixties have a higher propensity to make withdrawals. Nevertheless, even for these older participants, continued contributions through the bear market helped to mitigate the impact of the market decline on their account balances.

**UPDATED TRENDS IN ACCOUNT BALANCES, ASSET ALLOCATION, AND LOAN ACTIVITY**

The year-end 2004 EBRI/ICI database includes information for 16.3 million 401(k) plan participants’ accounts, and allows for an accurate present-day snapshot of 401(k) plan participants. Saving builds account balances

The average 401(k) account balance of all participants at year-end 2004 is $56,878. Half of the participants in the database have account balances less than $19,926 (the median account balance), while half hold more. As noted above, younger participants and those just starting their current jobs tend to have smaller account balances, while older participants and those with longer tenure tend to have higher account balances. These averages blend the experiences of 16.3 million diverse 401(k) plan participants, many of whom are young and/or new to their jobs. Indeed, about 37 percent of participants in the year-end 2004 EBRI/ICI database are in their twenties or thirties, and about a similar percentage have five or fewer years of tenure (Figure 4).
Many observers wonder whether such account balances will be able to provide significant income in retirement. However, this question cannot be answered by looking at these aggregate account balances for two key reasons.

First and most importantly, these aggregate measures are based on accounts held by participants from a wide range of ages and tenures, many of whom are years away from retirement and have only just started saving for retirement. Young workers or those just starting out at their current jobs simply have not had the time to accumulate significant balances. Indeed, the majority of participants with an account balance less than $10,000 only recently started at their current jobs. Fifty-eight percent of participants with account balances less than $10,000 have been at their current employers five years or less (Figure 5).

Second, since 401(k) plans were introduced relatively recently (about 25 years ago), even older and longer-tenured employees could have participated in a 401(k) plan for, at most, about half of a career. Nevertheless, the average account balance among participants in their sixties with more than 30 years of job tenure is $179,189 at year-end 2004 (Figure 6).

**Average Asset Allocation Suggests that Investors Have a Long-Term Investment Horizon**

Consistent with a long-term investment horizon, 401(k) plan participants are heavily invested in equity securities. At year-end 2004, nearly half (46 percent) of 401(k) plan participants’ account balances are invested in equity funds, on average (Figure 7). Altogether, equity securities—equity funds, the equity portion of balanced funds, and company stock—represent about two-thirds of 401(k) plan participants’ assets. On average, asset allocations of 401(k) plan participants are little changed in 2004. Previous research indicates that in any given year, 401(k) plan participants generally do not rebalance or change the asset allocation in their accounts.

**FIGURE 5**

*More than Half of Participants with Small Accounts Are New to Their Jobs*

Percentage of participants1 with a 401(k) account balance less than $10,000 by tenure.2 2004

<table>
<thead>
<tr>
<th>Tenure</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 2 Years</td>
<td>26</td>
</tr>
<tr>
<td>&gt;2 to 5 Years</td>
<td>32</td>
</tr>
<tr>
<td>&gt;5 to 10 Years</td>
<td>23</td>
</tr>
<tr>
<td>&gt;10 to 20 Years</td>
<td>11</td>
</tr>
<tr>
<td>&gt;20 to 30 Years</td>
<td>5</td>
</tr>
<tr>
<td>&gt;30 Years</td>
<td>3</td>
</tr>
</tbody>
</table>

Median = 4 Years

1 At year-end 2004, 5.9 million, or 36 percent of, participants have account balances less than $10,000.

2 Job tenure is generally years working at current employer, and thus may overstate years of participation in the current employer’s 401(k) plan.

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

**FIGURE 6**

*Account Balances Increase with Age and Tenure*

Average 401(k) account balance by age and tenure, 2004

<table>
<thead>
<tr>
<th>Age</th>
<th>Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td>20s</td>
<td>$10,000</td>
</tr>
<tr>
<td>30s</td>
<td>$40,000</td>
</tr>
<tr>
<td>40s</td>
<td>$80,000</td>
</tr>
<tr>
<td>50s</td>
<td>$160,000</td>
</tr>
<tr>
<td>60s</td>
<td>$200,000</td>
</tr>
</tbody>
</table>

Note: The average account balance among all 16.3 million participants is $56,878; the median account balance is $19,926.

Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project
Younger 401(k) Plan Participants Tend to Favor Equities

As observed in prior years, younger 401(k) plan participants still tend to hold a higher portion of their accounts in equity assets than older participants, who tend to invest more in fixed-income assets such as bond funds, guaranteed investment contracts (GICs) and other stable value funds, or money funds. On average, participants in their twenties have 52 percent of their account balances invested in equity funds, compared with about 37 percent of account balances for participants in their sixties (Figure 8). Participants in their twenties hold only about 20 percent of their accounts in fixed-income securities (bond funds, GICs and other stable value funds, and money funds combined), while those in their sixties hold 38 percent of their assets in these investments. Allocations to company stock continue to be very similar across age groups. Participants in their twenties have about 13 percent of their 401(k) plan account balances in company stock as did participants in their sixties, while those in their forties have 15 percent.

Again, these averages hide a wide range of individual activity. About half (or 7.8 million) of the 401(k) participants in the 2004 EBRI/ICI database are in plans that offer company stock as an investment option. Among these participants, 59 percent hold 20 percent or less of their account balances in company stock, including about 37 percent who do not hold company stock at all (Figure 9). In contrast, about 11 percent...
have more than 80 percent of their account balances invested in company stock. Furthermore, analysis of the asset allocation of recently hired participants finds that recently hired participants in 2004 are less likely than their counterparts in 1998 to invest in their employer’s stock.\footnote{22}

Among individual participants, the allocation of account balances to equity funds also varies widely around the average of 46 percent for all participants in the 2004 EBRI/ICI database. Indeed, 21 percent of participants have more than 80 percent of their account balances invested in equity funds, while about 32 percent hold no equity funds at all (Figure 10).\footnote{23} However, in aggregate, about 53 percent of participants with no equity fund balances have exposure to the stock market through company stock and/or balanced funds.

**Lifestyle and Lifecycle Funds Gain Popularity**

In recent years, various reports have indicated that lifestyle and lifecycle funds have become increasingly popular. For example, Profit Sharing/401(k) Council of America (PSCA; 1997–2005) reports that more 401(k) plan sponsors are offering lifestyle and/or lifecycle funds as an investment option (Figure 11).\footnote{24} Lifestyle funds maintain a predetermined risk level and generally use words such as “conservative,” “moderate,” or “aggressive” in their names to indicate the fund’s risk level. Lifecycle funds follow a predetermined reallocation of risk over time to a specified target date, and typically rebalance their portfolios to become more conservative and income-producing by the target date.
In the EBRI/ICI database, lifestyle and lifecycle funds are included in the balanced fund category and among recently hired participants there has been a rising trend in the percentage of account balances invested in balanced funds. For example, at year-end 2004, 16 percent of the account balances of recently hired participants in their twenties is invested in balanced funds, compared with about 7 percent among that age group in 1998 (Figure 12). A similar pattern occurs across all age groups.25

**Plans Offering 401(k) Loans Are Common, But Loans Are Rarely Taken**

Most participants in 401(k) plans are in plans that offer borrowing privileges.26 Indeed, research indicates that offering a loan provision increases participation and contribution rates in 401(k) plans,27 but concerns are also raised that individuals save only to then take those savings out.

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**FIGURE 12**

Participants Now More Likely to Choose Balanced Funds

401(k) plan average asset allocation among participants with two or fewer years of tenure, percent of total,1 2 1998 and 2004

<table>
<thead>
<tr>
<th>AGE GROUP</th>
<th>1998</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>20s</td>
<td>66.9</td>
<td>7.4</td>
</tr>
<tr>
<td>30s</td>
<td>24.2</td>
<td>16.0</td>
</tr>
<tr>
<td>40s</td>
<td>15.4</td>
<td>9.7</td>
</tr>
<tr>
<td>50s</td>
<td>10.5</td>
<td>8.4</td>
</tr>
<tr>
<td>60s</td>
<td>15.8</td>
<td>6.9</td>
</tr>
<tr>
<td>All Ages</td>
<td>38.1</td>
<td>5.7</td>
</tr>
</tbody>
</table>

1 Minor investment options are not shown; therefore, column percentages do not add to 100 percent. 2 Drawn from samples of 1.2 million participants with two or fewer years of tenure in 1998 and 1.8 million participants with two or fewer years of tenure in 2004. 3 Fixed-income investments include bond funds, guaranteed investment contracts (GICs) and other stable value funds, and money funds. For a detailed breakdown see Appendix Figure A28. 4 “Funds” include mutual funds, bank collective trusts, life insurance separate accounts, and any pooled investment product primarily invested in the security indicated.

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However, as has been the case for the nine years that the EBRI/ICI databases have tracked 401(k) plan participants’ loan activity, relatively few participants make use of this borrowing privilege. At year-end 2004, only 19 percent of those eligible for loans have loans outstanding (Figure 13). As in previous years, loan activity varies with age, tenure, salary, account balance, and plan size.28

Among participants with outstanding loans at the end of 2004, the average unpaid balance is $6,946.29 Participants’ loan activity in 2004 matches previous years: loan balances as a percentage of account balances (net of the unpaid loan balance) for participants with loans continue to hover around 13 percent.30 In addition, consistent with previous years, there is variation around this average: Older participants, longer-tenured participants, and participants with higher account balances tend to have lower loan ratios.

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**FIGURE 13**

Few Participants Take Loans from Their 401(k) Plans

Percentage of eligible 401(k) participants with loans by participant age, 2004

<table>
<thead>
<tr>
<th>AGE GROUP</th>
<th>20s</th>
<th>30s</th>
<th>40s</th>
<th>50s</th>
<th>60s</th>
<th>All Ages</th>
</tr>
</thead>
<tbody>
<tr>
<td>20s</td>
<td>12</td>
<td>21</td>
<td>22</td>
<td>19</td>
<td>10</td>
<td>19</td>
</tr>
</tbody>
</table>

Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project
The average account balance ($91,042) among the 4.0 million consistent participants is higher than the average account balance ($56,878) among all 16.3 million 401(k) plan participants in the year-end 2004 database because the consistent participants have longer tenure, on average, compared to the entire database (and account balances tend to rise with tenure). Indeed, the minimum tenure in the consistent group at year-end 2004 is five years.

The S&P 500 total return index increased 42.7 percent between December 2002 and December 2004. The Russell 2000 total return index, which represents the smaller of the large corporations, increased 74.2 percent over the same period and had surpassed its peak of early 2000 (Figure 2).

For statistics indicating the higher propensity of withdrawals among participants in their sixties, see Holden and VanDerhei (November 2002—Appendix).

The EBRI/ICI data are based on administrative records from a variety of recordkeepers that cover a wide range of plan sizes. For a more detailed description of the database, see the Appendix.

When analyzing the change in account balances over time it is important to have a consistent sample. Comparing average account balances across different year-end snapshots can lead to false conclusions. For example, the addition of a large number of new plans (arguably a good event) to the database would tend to pull down the average account balance, which could then be mistakenly described as hurting current participants, but actually 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 older participants happened to retire and roll over their account balances. In addition, changes in the sample of recordkeepers and/or changes in the set of plans that they recordkeep can also influence the change in aggregate average account balance. Thus, to ascertain what is happening to 401(k) participants’ account balances, a consistent set of participants must be analyzed.
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 EBR/ICI 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 (see Holden and VanDerhei (May 2001)). In addition, the preliminary analysis found that 401(k) participants are not naïve—that is, when given “n” options they do not divide their assets among all “n.” Indeed, less than 1 percent of participants followed a “1/n” asset allocation strategy.

16 At year-end 2004, 65 percent of balanced mutual fund assets were invested in equities (see Investment Company Institute, Quarterly Supplemental Data).

17 Unless otherwise indicated, all asset allocation averages are expressed as a dollar-weighted average.

18 For example, Hewitt Associates (2005b) reports that 11.4 percent of participants in their system made both a transfer and an investment change in 2004; Fidelity Investments (2004) finds 13 percent of DC plan participants in their system made exchanges in 2003; and The Vanguard Center for Retirement Research (September 2004) saw 14 percent of their DC plan participants trade in 2003. Holden and VanDerhei (September 2003) analyzes changes in year-end asset allocations among 5.3 million EBR/ICI database 401(k) plan participants with accounts at the end of each year from 1999 through 2002. Choi, Laibson, Madrian, and Metrick (July 2004) find that 401(k) plan participants rarely make changes after the initial point of enrollment. Investment Company Institute (March 2001) finds that 89 percent of equity mutual fund shareholders in DC plans made no redemptions or redemption exchanges in 1998. In addition, Investment Company Institute (Spring 2000) finds that 81 percent of the 401(k) plan households surveyed made no allocation changes in the 12 months preceding the survey (August 1997 through September 1998).

19 Participants in their twenties hold approximately 2 percent of the total assets in the 2004 EBR/ICI database; participants in their thirties hold 13 percent; participants in their forties hold 34 percent; participants in their fifties hold 38 percent; and participants in their sixties hold the remaining 14 percent of the total assets.

20 The tendency of younger participants to favor equity funds and older participants to favor fixed-income securities holds up even when accounting for investment options offered by the 401(k) plan sponsor (see Appendix Figure A20). The mix of investment options, particularly the inclusion of company stock and/or GICs and other stable value funds, offered by a plan sponsor significantly affects the asset allocation of the participants in a plan.
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