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Appendix: Additional Figures for the EBRI/ICI Participant-Directed Retirement Plan Data Collection Project for Year-End 2001

Sarah Holden and Jack VanDerhei¹

OVERVIEW AND SUMMARY

The March 2003 issue of *Perspective* covers the year-end 2001 data gathered by the Employee Benefit Research Institute (EBRI)² and the Investment Company Institute (ICI)³ in their collaborative effort—the EBRI/ICI Participant-Directed Retirement Plan Data Collection Project.⁴ This Appendix provides supplementary tables and charts for the [March 2003 Perspective](#).

THE EBRI/ICI DATABASE

Relationship of Database Plans to the Universe of Plans

The 2001 EBRI/ICI database appears to be a representative sample of the estimated universe of 401(k) plans. Cerulli Associates (2002) estimates that there were 399,944 401(k) plans at year-end 2001 with about 45 million participants. ICI (June 2002) estimates 401(k) plans held \$1,754 billion in assets at year-end 2001.⁵ Relative to these estimates, the 2001 EBRI/ICI database accounts for 12 percent of all 401(k) plans, 33 percent of all 401(k) plan participants, and about 36 percent of 401(k) plan assets. The distribution of assets, participants, and plans in the EBRI/ICI database for 2001 is similar to that reported for the universe of plans estimated by Cerulli Associates (Figure A1).

¹ Sarah Holden, Senior Economist, Research Department at the Investment Company Institute (ICI) and Jack VanDerhei, Temple University, Employee Benefit Research Institute (EBRI) Fellow. Special thanks to Luis Alonso, Research Associate at EBRI, who managed the database. In addition, thanks to Darrin Helsel and Stefan Kimball at ICI who assisted in preparing the graphics.

² The Employee Benefit Research Institute is a nonprofit, nonpartisan, public policy research organization, which does not lobby or take positions on legislative proposals.

³ The Investment Company Institute is the national association of the American investment company industry. Its membership includes 8,935 open-end investment companies (“mutual funds”), 559 closed-end investment companies, and six sponsors of unit investment trusts. Its mutual fund members manage assets of approximately \$6.4 trillion, accounting for approximately 95 percent of total industry assets, and represent more than 90 million individual shareholders.

⁴ In this effort, EBRI and ICI have collected data from some of their members that serve as plan recordkeepers and administrators. The data include demographic information, annual contributions, plan balances, asset allocation, and loan balances.

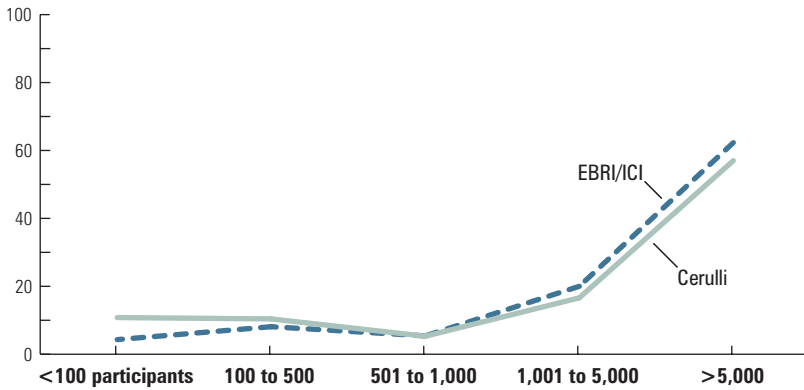
⁵ The latest U.S. Department of Labor (Winter 2001–2002) estimate of the universe of 401(k) type plans is for plan-year 1998. For 1998, it reported 300,593 401(k) type plans covering 37 million active participants with \$1,541 billion in assets.

FIGURE A1

401(k) Plan Characteristics by Number of Participants: EBRI/ICI Database vs. Cerulli Estimates for All 401(k) Plans, 2001

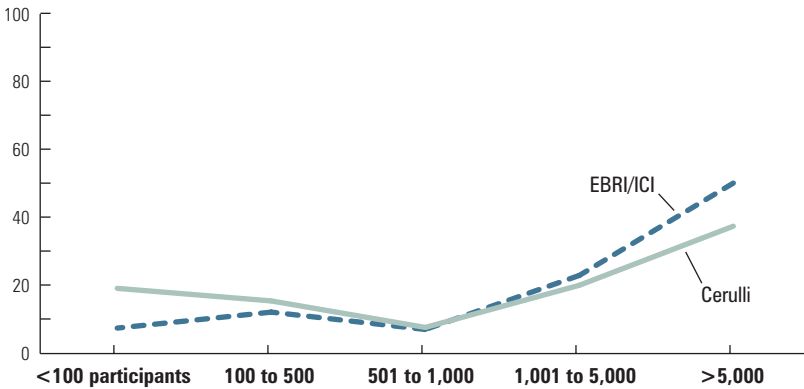
Plan Assets

(percent of plan assets)



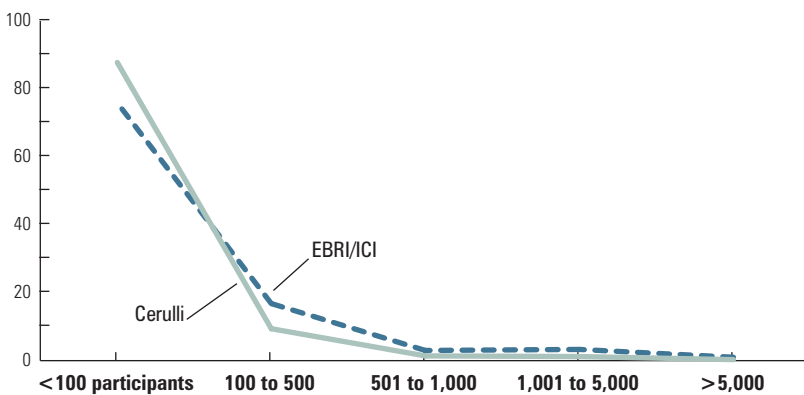
Participants

(percent of participants)



Plans

(percent of plans)



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

Distribution of Plans, Participants, and Assets by Plan Size

The 2001 EBRI/ICI database contains 48,786 401(k) plans with \$632.7 billion of assets and 14,641,179 participants (Figure A2). Because most of the plans have a small number of participants, the asset size for many plans is modest. About 31 percent of the plans have assets of \$250,000 or less, and another 34 percent have plan assets between \$250,001 and \$1,250,000.

The Typical 401(k) Plan Participant

Participants in 401(k) plans cover wide ranges of age and tenure. Sixty percent of participants are in their thirties or forties, while 12 percent of participants are in their twenties and 6 percent are in their sixties (Figure A3). The median age of the participants in the 2001 EBRI/ICI database is 43 years old, one year older than in 2000. Forty percent of the participants have five or fewer years of tenure, while 6 percent have more than 30 years of tenure. The median tenure at the current employer is six years, the same as the median tenure in the 2000 EBRI/ICI database.⁶ Salary information available for a subset of participants indicates that the median annual salary among that group is \$30,130.⁷

⁶The median tenure in the 1999 EBRI/ICI database was seven years (see Holden and VanDerhei (January/February 2001)).

⁷In some analyses, the subset is restricted to participants earning \$20,000 or more. The median salary in that sub-sample is about \$47,500.

FIGURE A2

EBRI/ICI Database: 401(k) Plan Characteristics by Plan Assets, 2001

Total Plan Assets	Total Plans	Total Participants	Total Assets	Average Account Balance
\$0 to \$250,000	15,356	254,580	\$1,734,932,114	\$6,815
>\$250,000 to \$625,000	10,066	324,615	\$4,119,283,909	\$12,690
>\$625,000 to \$1,250,000	6,729	371,884	\$5,961,209,521	\$16,030
>\$1,250,000 to \$2,500,000	5,252	472,003	\$9,326,014,100	\$19,758
>\$2,500,000 to \$6,250,000	5,060	906,161	\$19,963,771,825	\$22,031
>\$6,250,000 to \$12,500,000	2,448	874,076	\$21,396,750,941	\$24,479
>\$12,500,000 to \$25,000,000	1,505	944,452	\$26,419,488,196	\$27,973
>\$25,000,000 to \$62,500,000	1,117	1,454,843	\$44,238,029,579	\$30,407
>\$62,500,000 to \$125,000,000	526	1,312,137	\$46,154,225,482	\$35,175
>\$125,000,000 to \$250,000,000	329	1,364,307	\$56,243,364,467	\$41,225
>\$250,000,000	398	6,362,121	\$397,163,215,142	\$62,426
All	48,786	14,641,179	\$632,720,285,276	\$43,215

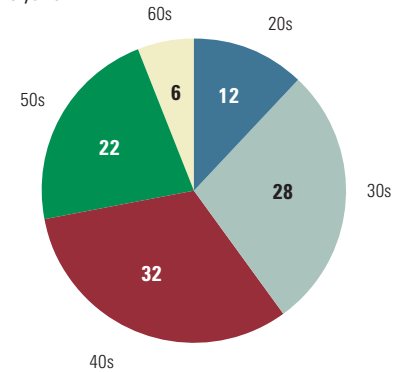
Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project

FIGURE A3

401(k) Participants by Age and Tenure, 2001
(percent of participants)

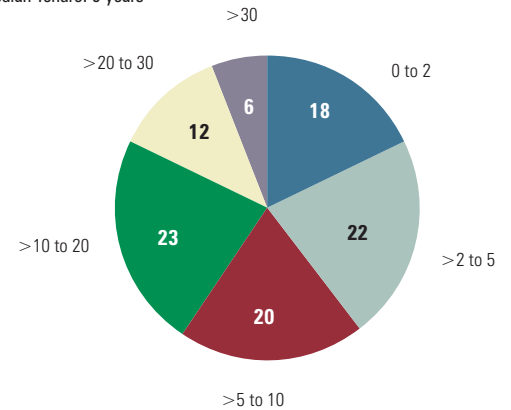
By Age

Median Age: 43 years



By Tenure (years)

Median Tenure: 6 years



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

ASSET ALLOCATION

Asset Allocation and Investment Options

The investment options⁸ that participants are offered by a plan sponsor significantly affect how participants allocate their 401(k) assets.

Figure A4 presents the distribution of plans, participants, and assets by four combinations of investment offerings. The first category is the base group that consists of plans that do not offer company stock, guaranteed investment contracts (GICs), or other stable value funds. Almost 28 percent of participants in the 2001 EBRI/ICI database are in these plans—which generally offer equity funds, bond funds, balanced funds, and money funds as investment options. Another 28 percent of participants are in plans that offer GICs and/or other stable value funds as an investment option, in addition to the “base” options. Alternatively, almost 18 percent of participants are in plans that offer company stock, but no stable value products, while the remaining 27 percent of participants are offered both company stock and stable value products, in addition to the base options.

FIGURE A4

Distribution of 401(k) Plans, Participants, and Assets by Investment Options, 2001

(percent of total)

Investment Options Offered by Plan	Plans	Participants	Assets
Equity, Bond, Money, and/or Balanced Funds	40.8	27.5	19.9
Equity, Bond, Money, and/or Balanced Funds, and GICs ¹ and/or Other Stable Value Funds	56.6	27.8	20.4
Equity, Bond, Money, and/or Balanced Funds, and Company Stock	1.1	17.6	22.3
Equity, Bond, Money, and/or Balanced Funds, and Company Stock, and GICs ¹ and/or Other Stable Value Funds	1.5	27.1	37.4

¹ *Guaranteed investment contracts.*

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

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

Holden and VanDerhei (March 2003) discusses the impact of investment options on participants' asset allocations in aggregate. Figure A5 presents an analysis of asset allocation by investment option and also by age of participant. Salary information is available for a subset of participants in the 2001 EBRI/ICI database.⁹ Because asset allocation is influenced by the investment options available to participants, Figure A6 presents asset allocation by salary range and by investment option.

Participant asset allocation also varies with plan size (Figure A7, top panel), but much of the variation can be explained by differences in the investment options offered by plan sponsors. For example, the percentage of plan assets invested in equity funds tends to fall as plan size increases, while the share in company stock rises with plan size. A portion of this trend occurs because few small plans offer company stock as an investment option. For example, less than 1 percent of participants in small plans are offered company stock as an investment option, while 73 percent of participants in plans with more than 5,000 participants are offered company stock as an investment option. Participants in plans that do not offer company stock tend to invest a larger portion of their assets in equity funds. Thus, to analyze the potential effect of plan size, the remaining panels of Figure A7 group plans by investment option and plan size.

⁸ Investment options are grouped into eight categories. (Account balances are net of loan balances and thus unpaid loan balances are not included in any of the eight asset categories described.) Equity funds consist of pooled investments primarily investing in stocks. These funds include equity mutual funds, bank collective trusts, life insurance separate accounts, and other pooled investments. Similarly, bond funds are any pooled account primarily invested in bonds, and balanced funds are pooled accounts invested in both stocks and bonds. Company stock is equity in the plan's sponsor (the employer). Money funds consist of those funds designed to maintain a stable share price. Stable value products such as guaranteed investment contracts (GICs)—insurance company products that guarantee a specific rate of return on the invested capital over the life of the contract—and other stable value funds—synthetic GICs (a portfolio of fixed-income securities “wrapped” with a guarantee to provide benefit payments according to the plan at book value) or similar instruments—are reported as one category, “GICs and other stable value funds.” The “other” category is the residual for other investments such as real estate funds. The final category, “unknown,” consists of funds that could not be identified. Some administrators supplying data were unable to provide complete asset allocation detail on certain pooled asset classes for one or more of their clients. Only plans in which at least 90 percent of all plan assets could be identified were included in the final EBRI/ICI databases.

⁹ On average, asset allocation of participants missing salary information is similar to the asset allocation for those with such information, in aggregate.

FIGURE A5

Average Asset Allocation of 401(k) Accounts by Participant Age and Investment Options, 2001

(percent of account balances)¹

	Equity Funds	Balanced Funds	Bond Funds	Money Funds	GICs ² and Other Stable Value Funds	Company Stock
ALL AGES COMBINED						
Investment Options						
Equity, Bond, Money, and/or Balanced Funds	64.8	9.5	14.3	9.7		
Equity, Bond, Money, and/or Balanced Funds, and GICs ² and/or Other Stable Value Funds	52.0	12.9	5.1	3.4	25.2	
Equity, Bond, Money, and/or Balanced Funds, and Company Stock	43.1	4.8	10.9	7.4		33.0
Equity, Bond, Money, and/or Balanced Funds, and Company Stock, and GICs ² and/or Other Stable Value Funds	39.0	6.4	3.4	2.5	22.6	25.3
PLANS WITHOUT COMPANY STOCK, GICs,² OR OTHER STABLE VALUE FUNDS						
Age						
20s	73.8	8.1	9.9	7.6		
30s	75.0	8.1	9.6	6.4		
40s	69.4	9.2	12.0	8.1		
50s	61.2	10.0	15.6	11.0		
60s	48.8	11.1	22.9	14.5		
PLANS WITH GICs² AND/OR OTHER STABLE VALUE FUNDS						
20s	61.6	13.6	4.7	3.6	14.6	
30s	62.0	13.2	4.7	2.8	15.5	
40s	56.2	13.3	4.9	3.1	20.6	
50s	49.4	12.7	5.2	3.5	27.3	
60s	37.5	12.0	5.5	4.1	39.8	
PLANS WITH COMPANY STOCK						
20s	48.8	4.8	6.2	7.4		32.2
30s	49.0	4.7	6.2	5.8		33.5
40s	44.8	4.9	8.0	7.0		34.4
50s	41.2	4.9	11.5	8.2		33.5
60s	37.5	4.9	21.0	8.6		27.7
PLANS WITH COMPANY STOCK AND GICs² AND/OR OTHER STABLE VALUE FUNDS						
20s	46.8	7.4	3.2	4.1	8.7	28.5
30s	48.0	6.5	2.9	2.2	10.0	29.2
40s	43.2	6.6	3.2	2.2	16.0	27.8
50s	37.7	6.4	3.7	2.6	23.8	25.0
60s	29.8	5.9	3.3	3.0	37.4	19.8

¹ Minor investment options are not shown; therefore, row percentages will not add to 100 percent.

² Guaranteed investment contracts.

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

FIGURE A6

Average Asset Allocation of 401(k) Accounts by Salary and Investment Options, 2001

(percent of account balances)¹

Salary	Equity Funds	Balanced Funds	Bond Funds	Money Funds	GICs ² and Other Stable Value Funds	Company Stock
PLANS WITHOUT COMPANY STOCK, GICs,² OR OTHER STABLE VALUE FUNDS						
\$20,000 to \$40,000	58.0	11.0	18.6	10.7		
>\$40,000 to \$60,000	64.8	9.1	17.6	7.7		
>\$60,000 to \$80,000	67.6	8.5	16.3	6.6		
>\$80,000 to \$100,000	67.9	8.4	16.0	6.8		
>\$100,000	66.6	8.3	15.3	7.5		
All	64.8	9.5	14.3	9.7		
PLANS WITH GICs² AND/OR OTHER STABLE VALUE FUNDS						
\$20,000 to \$40,000	50.8	11.5	3.3	1.5	31.8	
>\$40,000 to \$60,000	53.2	11.6	3.7	1.8	28.5	
>\$60,000 to \$80,000	56.4	11.3	3.7	2.0	25.6	
>\$80,000 to \$100,000	57.2	11.5	4.0	2.2	24.2	
>\$100,000	58.1	10.7	3.3	1.7	25.3	
All	52.0	12.9	5.1	3.4	25.2	
PLANS WITH COMPANY STOCK						
\$20,000 to \$40,000	35.0	6.4	8.5	9.2		40.8
>\$40,000 to \$60,000	34.7	8.1	7.3	10.2		39.7
>\$60,000 to \$80,000	36.8	10.1	7.3	9.0		36.6
>\$80,000 to \$100,000	38.9	11.2	8.0	8.8		33.1
>\$100,000	43.1	10.7	11.1	8.1		26.9
All	43.1	4.8	10.9	7.4		33.0
PLANS WITH COMPANY STOCK AND GICs² AND/OR OTHER STABLE VALUE FUNDS						
\$20,000 to \$40,000	35.8	7.2	2.9	1.2	22.1	30.2
>\$40,000 to \$60,000	38.5	7.2	2.9	1.7	22.1	27.1
>\$60,000 to \$80,000	42.0	7.3	3.0	2.0	22.4	22.7
>\$80,000 to \$100,000	45.7	6.5	3.2	1.8	22.3	19.6
>\$100,000	45.7	5.0	3.5	1.3	22.1	21.8
All	39.0	6.4	3.4	2.5	22.6	25.3

¹ Minor investment options are not shown; therefore, row percentages will not add to 100 percent.

² Guaranteed investment contracts.

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

FIGURE A7

Average Asset Allocation of 401(k) Accounts by Plan Size and Investment Options, 2001

(percent of account balances)¹

Plan Size by Number of Participants	Equity Funds	Balanced Funds	Bond Funds	Money Funds	GICs ² and Other Stable Value Funds	Company Stock
ALL PLANS						
1 to 100	54.7	16.2	8.8	7.6	11.6	0.1
101 to 500	57.1	12.3	9.4	7.2	11.2	0.7
501 to 1,000	55.7	11.5	10.1	6.4	11.7	2.7
1,001 to 5,000	51.6	9.7	8.3	6.6	13.0	8.9
>5,000	44.0	6.0	6.8	4.3	14.3	23.8
All	47.7	8.0	7.6	5.2	13.6	16.8
PLANS WITHOUT COMPANY STOCK, GICs,² OR OTHER STABLE VALUE FUNDS						
1 to 100	67.1	9.9	11.5	10.6		
101 to 500	65.1	9.9	12.9	9.9		
501 to 1,000	63.8	10.4	15.4	8.3		
1,001 to 5,000	63.5	10.4	13.7	10.6		
>5,000	65.6	7.3	16.9	8.9		
All	64.8	9.5	14.3	9.7		
PLANS WITH GICs² AND/OR OTHER STABLE VALUE FUNDS						
1 to 100	45.5	21.0	6.9	5.3	20.3	
101 to 500	48.6	15.3	5.4	3.9	24.8	
501 to 1,000	49.8	14.0	4.2	3.5	27.3	
1,001 to 5,000	50.5	11.1	4.6	2.7	29.0	
>5,000	57.5	9.7	5.0	2.9	23.1	
All	52.0	12.9	5.1	3.4	25.2	
PLANS WITH COMPANY STOCK						
1 to 100	52.7	6.8	10.4	16.3		12.4
101 to 500	50.9	9.3	11.4	9.7		17.1
501 to 1,000	48.2	5.9	11.0	11.1		22.4
1,001 to 5,000	45.3	7.1	9.5	9.1		27.9
>5,000	42.4	4.3	11.3	7.0		34.5
All	43.1	4.8	10.9	7.4		33.0
PLANS WITH COMPANY STOCK AND GICs² AND/OR OTHER STABLE VALUE FUNDS						
1 to 100	46.3	9.5	5.3	10.3	15.6	9.4
101 to 500	44.7	12.2	5.1	4.1	19.5	10.5
501 to 1,000	38.7	12.3	3.9	3.5	22.6	16.1
1,001 to 5,000	39.7	9.1	3.6	3.3	24.1	17.7
>5,000	38.9	5.9	3.3	2.4	22.4	26.4
All	39.0	6.4	3.4	2.5	22.6	25.3

¹ Minor investment options are not shown; therefore, row percentages will not add to 100 percent.

² Guaranteed investment contracts.

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

Distribution of Equity Fund Allocations and Participant Exposure to Equities

On average, 48 percent of participant account balances are allocated to equity funds in the year-end 2001 EBRI/ICI database (Figure A7, top panel). However, individual asset allocations vary widely across participants. For example, more than one-quarter of participants hold no equity funds, while a similar number of participants hold more than 80 percent of their balances in equity funds (Figure A8). Furthermore,

FIGURE A8

Asset Allocation Distribution of 401(k) Plan Participant Account Balances to Equity Funds by Age, Tenure, and Salary, 2001

(percent of participants)

	Zero	1 to 20%	>20% to 80%	>80%	Total
ALL	27.8	7.5	36.9	27.8	100
AGE COHORT					
20s	29.1	5.4	35.6	29.9	100
30s	23.4	6.3	38.0	32.3	100
40s	25.8	7.8	38.4	28.0	100
50s	30.0	9.0	36.8	24.2	100
60s	40.6	10.1	30.8	18.6	100
TENURE (years)					
0 to 2	26.7	5.3	36.6	31.4	100
>2 to 5	24.1	6.3	38.0	31.5	100
>5 to 10	23.3	8.3	38.3	30.1	100
>10 to 20	26.8	9.0	37.8	26.4	100
>20 to 30	32.7	9.6	36.2	21.5	100
>30	43.7	9.4	30.6	16.3	100
SALARY					
\$20,000 to \$40,000	32.2	8.4	36.1	23.3	100
>\$40,000 to \$60,000	28.1	8.9	38.0	25.1	100
>\$60,000 to \$80,000	19.8	9.1	42.4	28.7	100
>\$80,000 to \$100,000	16.9	8.2	43.2	31.7	100
>\$100,000	16.5	7.3	41.9	34.3	100

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

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

the percentage of participants holding no equity funds tends to increase with age and tenure. In contrast, the percentage of participants holding no equity funds tends to fall as salary increases.

Participants with no equity fund balances may still have exposure to the stock market through company stock or balanced funds. Indeed, 50 percent of participants with no equity funds have investments in either company stock or balanced funds (Figure A9).¹⁰ As a result, many participants with no equity funds have exposure to equity-related investments through company stock and/or balanced funds (Figure A10).

FIGURE A9

Percentage of 401(k) Plan Participants Without Equity Fund Balances Who Have Equity Exposure by Age and Tenure, 2001

	Percentage with Company Stock and/or Balanced Funds
AGE COHORT	
20s	45.4
30s	49.4
40s	51.5
50s	53.0
60s	48.4
All	49.8
TENURE (years)	
0 to 2	45.2
>2 to 5	48.1
>5 to 10	47.7
>10 to 20	51.8
>20 to 30	56.8
>30	58.5
All	49.8

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

¹⁰ Data for year-end 2000 published in Holden and VanDerhei (November 2001) have been revised. At year-end 2000, 54.2 percent of participants with no equity funds had exposure to equities through company stock and/or balanced funds. In addition, 48.5 percent of participants in their twenties with no equity funds had exposure to equities; 54.1 percent of participants in their thirties; 56.3 percent of participants in their forties; 58.3 percent of participants in their fifties; and 52.3 percent of participants in their sixties. Furthermore, 48.6 percent of participants with two or fewer years of tenure with no equity funds had exposure to equities through company stock and/or balanced funds; 51.9 percent of participants with between two and five years of tenure; 53.4 percent of participants with between five and 10 years of tenure; 57.9 percent of participants with between 10 and 20 years of tenure; 60.3 percent of participants with between 20 and 30 years of tenure; and 60.1 percent of participants with more than 30 years of tenure.

FIGURE A10

Average Asset Allocation for 401(k) Plan Participants Without Equity Fund Balances by Age and Tenure, 2001
(percent of account balances)

	Balanced Funds	Bond Funds	Money Funds	GICs ¹ and Other Stable Value Funds	Company Stock	Other	Unknown	Total ²
AGE COHORT								
20s	16.8	10.1	20.6	19.5	31.1	1.1	0.5	100
30s	13.5	9.9	14.0	19.8	40.4	1.6	0.4	100
40s	11.2	10.1	12.4	25.5	38.3	1.7	0.4	100
50s	9.6	11.2	11.7	32.8	32.4	1.6	0.3	100
60s	7.9	14.4	10.5	44.3	21.6	1.1	0.2	100
All	10.0	11.7	11.9	32.9	31.5	1.5	0.3	100
TENURE (years)								
0 to 2	21.1	13.3	24.7	18.9	20.2	1.1	0.5	100
>2 to 5	18.8	12.2	19.6	19.4	27.8	1.4	0.5	100
>5 to 10	14.8	11.5	16.8	22.7	31.3	2.0	0.4	100
>10 to 20	11.1	10.5	13.8	29.3	32.6	2.1	0.3	100
>20 to 30	8.5	9.8	10.7	34.5	34.1	1.9	0.2	100
>30	6.4	11.8	8.0	46.1	26.5	0.9	0.1	100
All	10.0	11.7	11.9	32.9	31.5	1.5	0.3	100

¹ Guaranteed investment contracts.

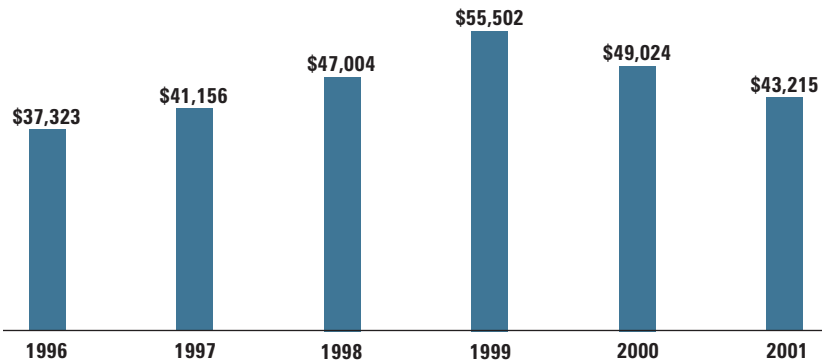
² Row percentages may not add to 100 percent because of rounding.

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

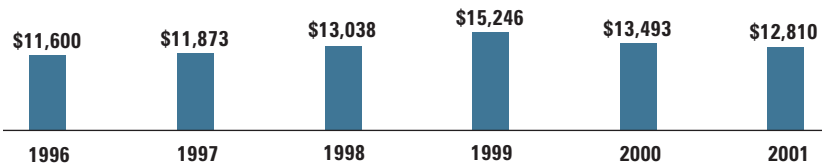
FIGURE A11

401(k) Plan Participant Account Balances,¹ 1996–2001²

Average



Median



¹ Account balances are participant account balances held in the 401(k) plans at the participants' current employers and are net of plan loans. Retirement savings held in plans at previous employers or rolled over into IRAs are not included.

² Sample of participants changes over time.

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

ACCOUNT BALANCES

Average and Median Account Balances

The EBRI/ICI database is constructed from administrative records of 401(k) plans. The database contains only the account balances held in the 401(k) plans at participants' current employers. Retirement savings held in plans at previous employers or rolled over into individual retirement accounts (IRAs) are not included in this analysis. Furthermore, account balances are net of unpaid loan balances. In addition, the EBRI/ICI database for any given year captures a snapshot of the account balances at year-end and thus reflects the entrance of new plans and new participants and the exit of participants who retire or change jobs. At year-end 2001, the average account balance was \$43,215 and the median account balance was \$12,810 (Figure A11). Because of the changing composition of the universe over time, it is not correct to construe the change in average or median account balance for the entire database as the experience of "typical" 401(k) plan participants.¹¹

¹¹ For an analysis of the change in account balances of the group of participants with accounts at year-end 1999, year-end 2000, and year-end 2001, see Holden and VanDerhei (March 2003).

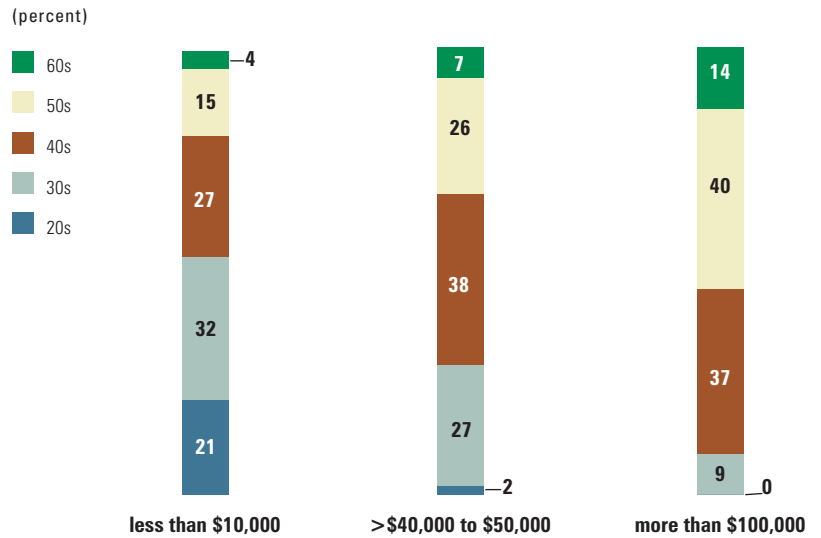
Relationship of Age and Tenure to Account Balances

There is a positive correlation between age and account balance among participants in the 2001 EBRI/ICI database.¹² Examination of the age composition of account balances finds that 53 percent of participants with account balances of less than \$10,000 are in their twenties or thirties (Figure A12). Similarly, of those with account balances greater than \$100,000, more than half are in their fifties or sixties. The positive correlation between age and account balance is expected because younger workers are likely to have lower incomes and to have had less time to accumulate a balance with their current employer. In addition, they are less likely to have rollovers from a previous job's plan in their current plan accounts.

There is a positive correlation between account balance and tenure among participants in the 2001 EBRI/ICI database. The participant's tenure with the employer serves as a proxy for length of participation in the 401(k) plan.¹³ Indeed, 63 percent of those participants with account balances of less than \$10,000 have five or fewer years of tenure, while 88 percent of those participants with account balances greater than \$100,000 have more than 10 years of tenure (Figure A13).¹⁴

FIGURE A12

Age Composition of Selected 401(k) Account Balance Categories, 2001

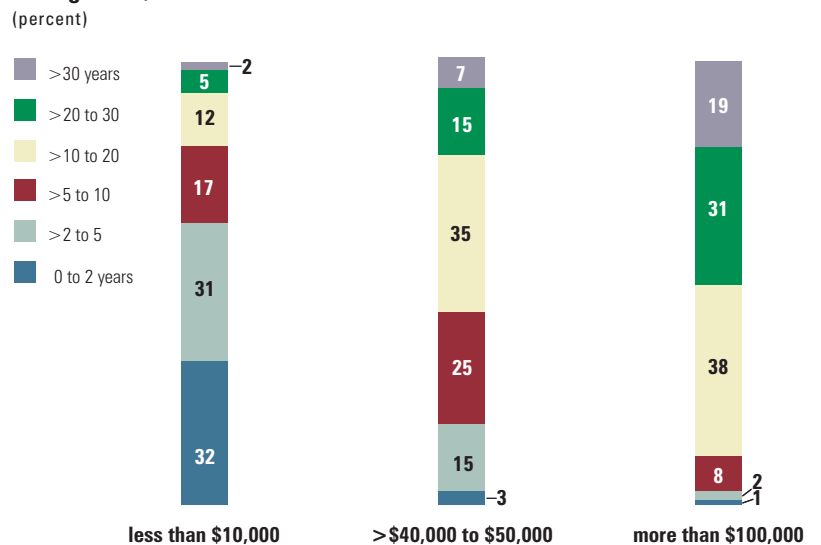


Note: Percentages may not add to 100 percent because of rounding.

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

FIGURE A13

Tenure Composition of Selected 401(k) Account Balance Categories, 2001



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

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

¹² Approximately 1 percent of the participants in the database had a missing birth date; were younger than 20 years old; or were older than 69 years old. They were not included in this analysis.

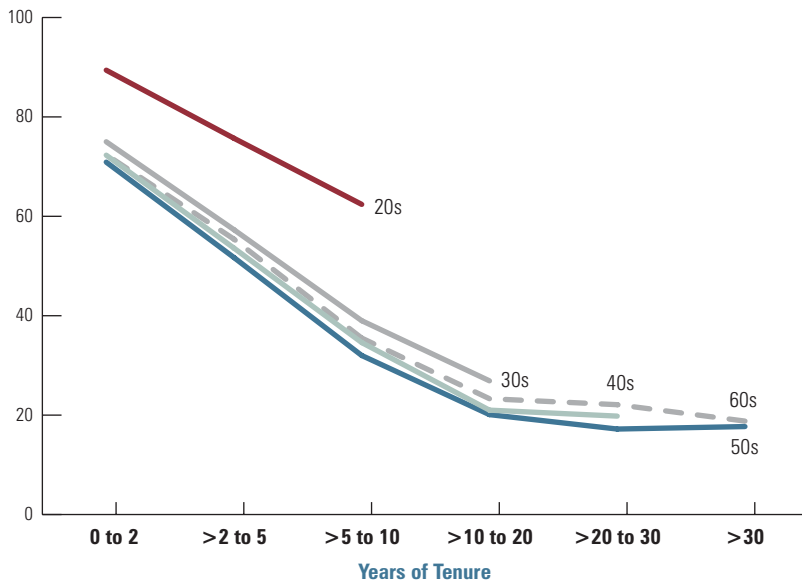
¹³ Approximately 9 percent of the participants in the database had a missing tenure range and were not included in this analysis. In addition, for one data provider, "years of participation" are used for the tenure variable.

¹⁴ The positive correlation between tenure and account balance is expected because long-term employees have had more time to accumulate an account balance. However, a rollover from a previous employer's plan could interfere with this positive correlation because a rollover could give a short-tenure employee a high account balance. There is some discernible evidence of rollover assets among the participants with account balances greater than \$100,000 as 1 percent of them have two or fewer years of tenure and 2 percent of them have between two and five years of tenure.

FIGURE A14

401(k) Account Balances Less Than \$10,000 by Age and Tenure, 2001

(percent of participants with account balances less than \$10,000)

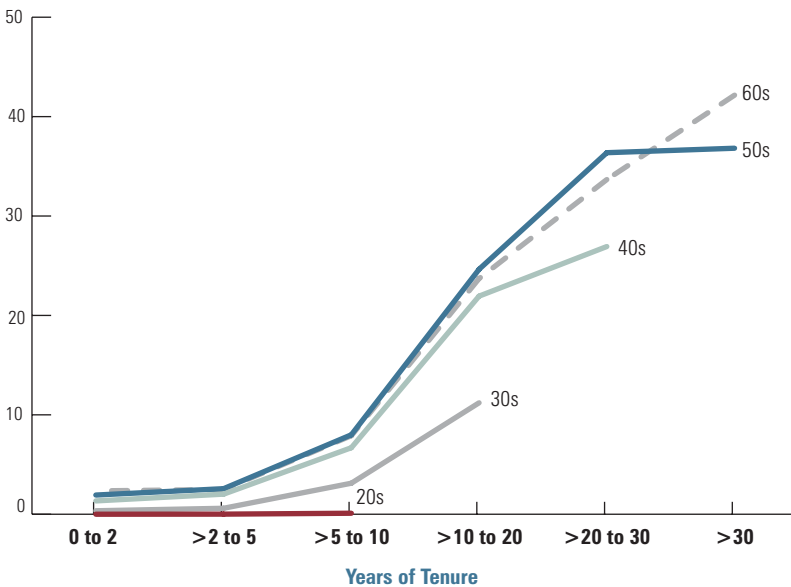


Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project

FIGURE A15

401(k) Account Balances Over \$100,000 by Age and Tenure, 2001

(percent of participants with account balances over \$100,000)



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

The distribution of account balances underscores the effects of age and tenure on account balances. In a given age group, fewer years of tenure means a higher percentage of participants with account balances of less than \$10,000. For example, 89 percent of participants in their twenties with two or fewer years of tenure have account balances of less than \$10,000, compared with 62 percent of participants in their twenties with five to 10 years of tenure (Figure A14). Older workers display a similar pattern. For example, 72 percent of all participants in their sixties with two or fewer years of tenure have account balances of less than \$10,000. In contrast, only about 20 percent of those in their sixties with more than 20 years of tenure have account balances of less than \$10,000.¹⁵

In a given age group, longer tenure means a higher percentage of people with account balances greater than \$100,000. For example, about 5 percent of participants in their sixties with 10 or fewer years of tenure have account balances in excess of \$100,000 (Figure A15). However, about 34 percent of participants in their sixties with 21 to 30 years of tenure with their current employer have account balances greater than \$100,000. The percentage increases to 42 percent for participants in their sixties with more than 30 years of tenure.

¹⁵ Two possible explanations for the low account balances among this group are: (1) that their employer's 401(k) plan has only recently been established (indeed, 49 percent of all 401(k) type plans in existence in 1995 were established after 1989 (U.S. Department of Labor (Spring 1999), table B.10)), or (2) that the employee only recently joined the plan. In either event, job tenure would not accurately reflect actual 401(k) plan participation.

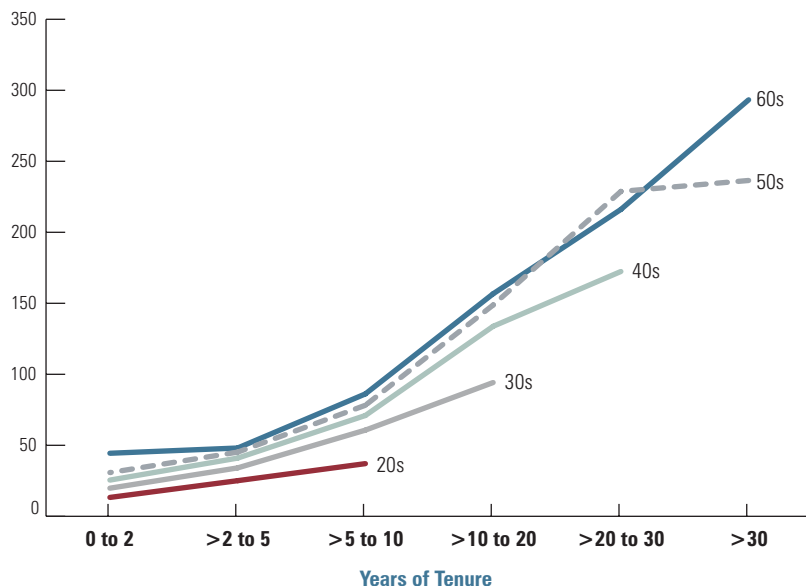
Relationship Between Account Balances and Salary

This section examines how the ratio of 2001 account balances to 2001 salary varies with age, tenure, and salary.¹⁶ The ratio of participant account balances to salary is positively correlated with age and tenure. Participants in their sixties, having had more time to accumulate assets, tend to have higher ratios, while those in their twenties have the lowest ratios (Figure A16).

In addition, for any given age and tenure combination, the ratio of account balance to salary varies somewhat with salary. For example, among participants in their twenties, the ratio tends to increase slightly with salary for low-to-moderate salary groups (Figure A17). However, at high salary levels the ratio tends to decline somewhat. A similar pattern occurs among participants in their sixties (Figure A18).¹⁷

FIGURE A16

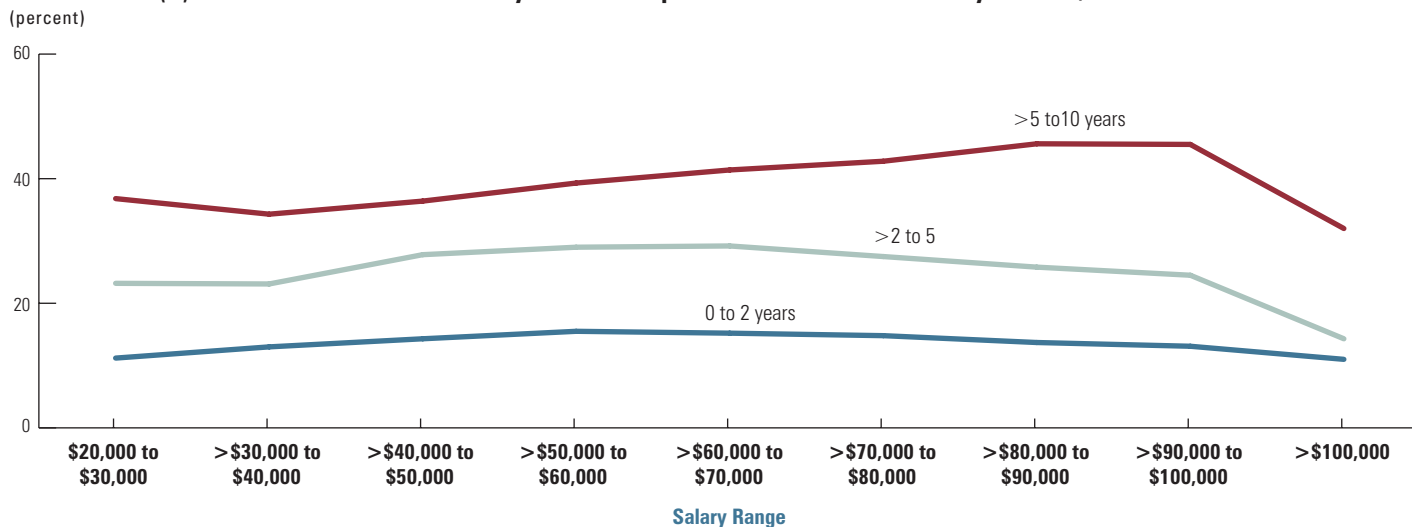
Ratio of 401(k) Account Balance to Salary by Age and Tenure, 2001 (percent)



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

FIGURE A17

Ratio of 401(k) Account Balance to Salary for Participants in Their Twenties by Tenure, 2001 (percent)



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

¹⁶ The ratio of 401(k) account balance (at the current employer) to salary alone is not an indicator of preparedness for retirement. A complete analysis of preparedness for retirement would require estimating projected balances at retirement by also considering retirement income from Social Security, defined benefit plans, IRAs, and other defined contribution plans, possibly from previous employment. For references to such research, see Holden and VanDerhei (January/February 2001). In addition, Holden and VanDerhei (November 2002) develops a model that projects the proportion of an individual's pre-retirement income that *might* be replaced by 401(k) plan accumulations at retirement, under several different projected scenarios.

¹⁷ The tendency of the ratio of account balances to salary to peak at higher salary levels and then fall off likely reflects the influence of two competing forces. First, empirical research (see Holden and VanDerhei (October 2001) for a complete discussion of EBRI/ICI findings and others' research on the relationship between contribution rates and salary) suggests that higher earners tend to contribute higher percentages of salary; therefore, one would expect the ratio of account balance to salary to rise with salary. However, tax code contribution limits and nondiscrimination rules constrain these high-income individuals' ability to save. The contribution limits (elective deferral limits in Internal Revenue Code (IRC) Section 402(g); total contribution limits in IRC Section 415(c) and nondiscrimination rules (Actual Deferral Percentage and Actual Contribution Percentage (ADP/ACP) nondiscrimination rules in IRC Sections 401(k) and 401(m)) aim to assure that employees of all income ranges attain the benefits of the 401(k) plan.

PLAN LOANS

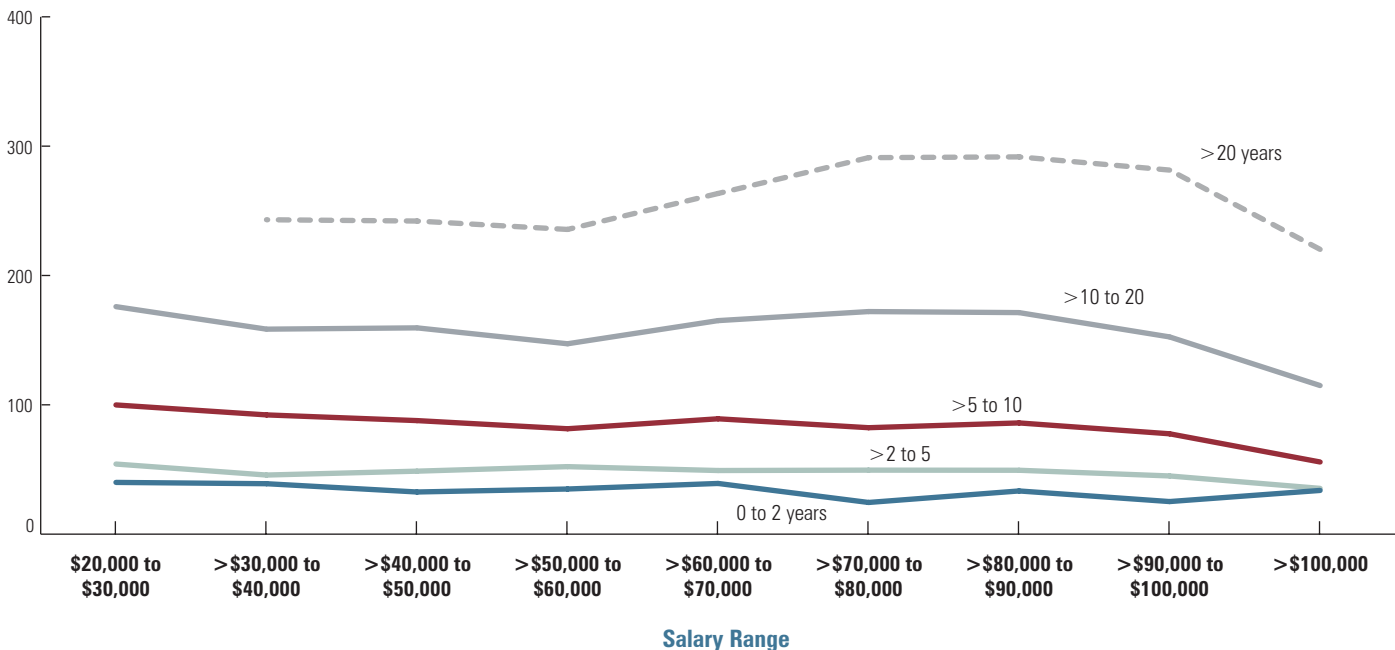
Availability and Use of Plan Loans by Plan Size

Fifty-two percent of the plans for which loan data are available in the 2001 EBRI/ICI database offer a plan loan provision to participants (Figure A19).¹⁸ The loan feature is more commonly associated with large plans (measured by the number of participants in the plan). Eighty-seven percent of plans with more than 10,000 participants include a loan provision, compared with 38 percent of plans with 10 or fewer participants. Furthermore, participants in smaller plans that offer loans tend to be less likely to have taken out a loan than participants in larger plans (Figure A20). Loan ratios vary only slightly when participants are grouped based on the size of their 401(k) plans (measured by the number of plan participants; Figure A21).

FIGURE A18

Ratio of 401(k) Account Balance to Salary for Participants in Their Sixties by Tenure, 2001

(percent)



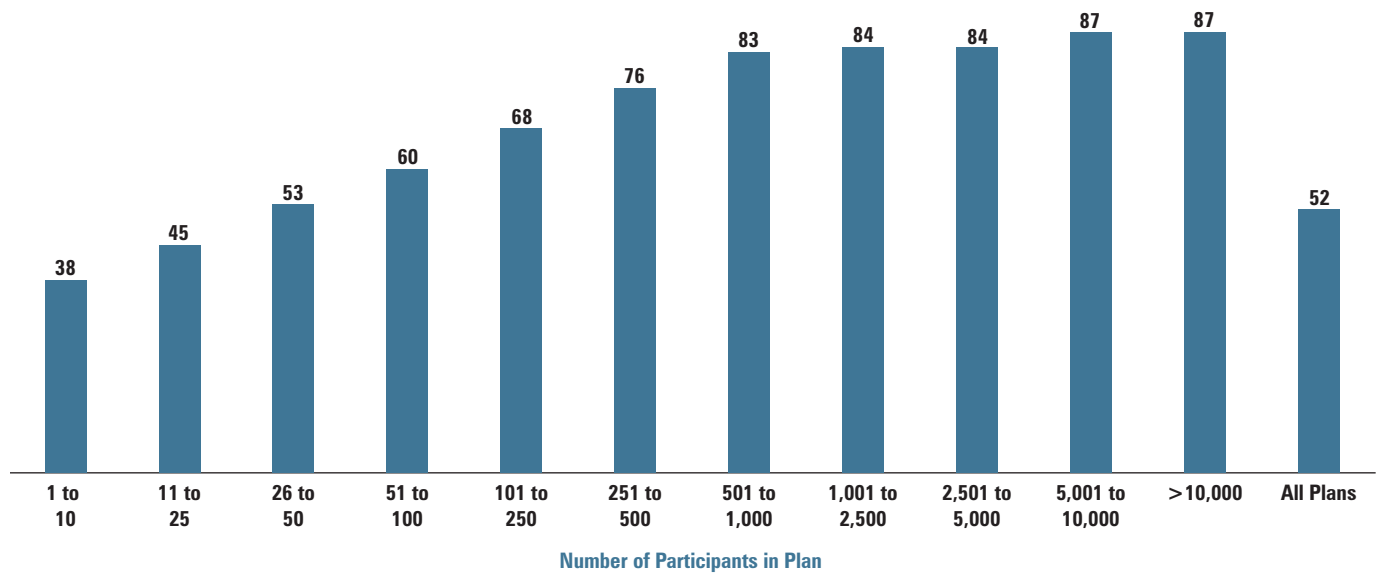
Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project

¹⁸ Plan-specific information on loan provisions is available for the majority of the plans in the sample (including virtually all of the small plans). Some plans without this information are classified as having a loan provision if any participant in the plan has an outstanding loan balance. This may understate the number of plans offering loans (or participants eligible for loans) because some plans may have offered, but had no participant take out, a plan loan. It is likely that this omission is small as the U.S. General Accounting Office (October 1997) finds that more than 95 percent of 401(k) plans that offer loans had at least one plan participant with an outstanding loan.

FIGURE A19

Availability of 401(k) Plan Loans by Plan Size, 2001

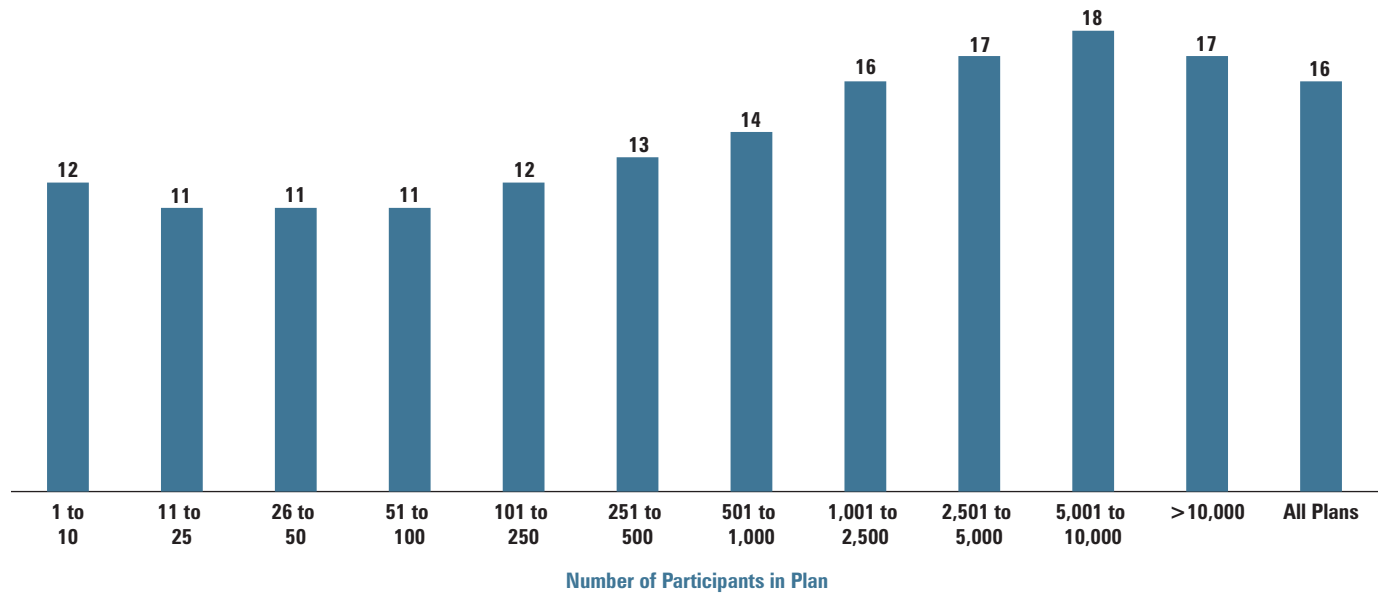
(percent of plans offering loans)



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

FIGURE A20

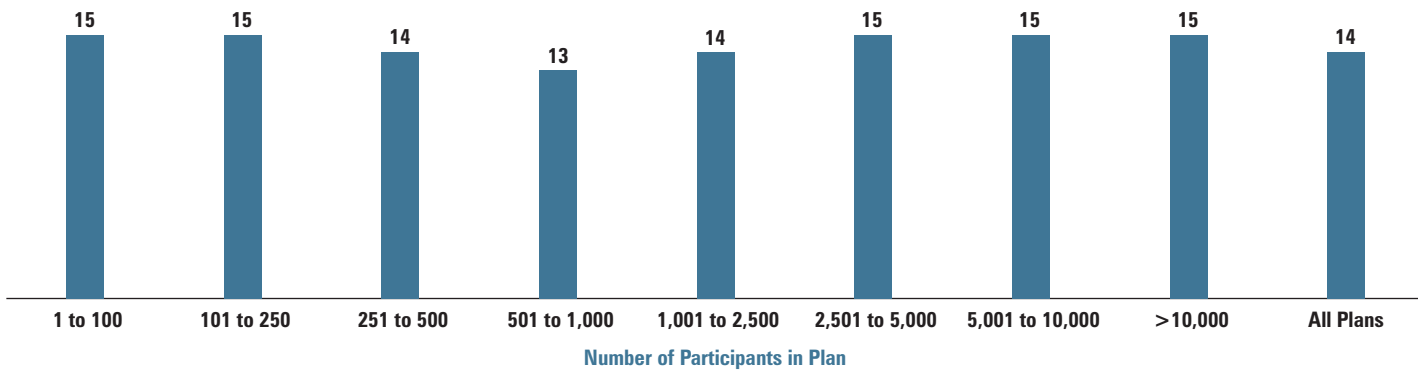
Percentage of Eligible 401(k) Plan Participants with Loans by Plan Size, 2001



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

FIGURE A21

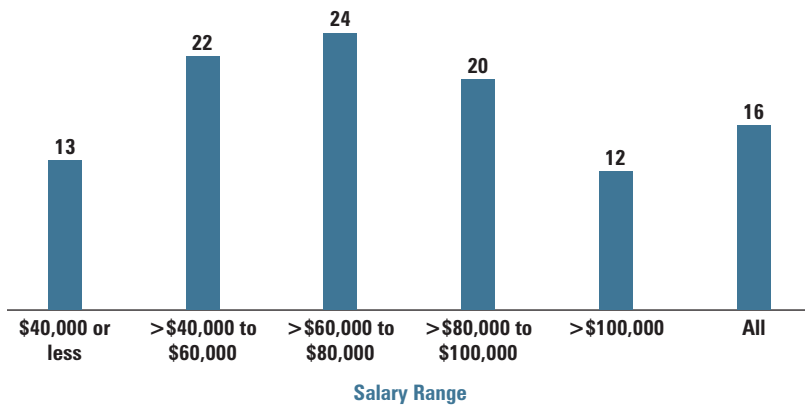
Loan Balances as a Percentage of 401(k) Account Balances for Participants with Loans by Plan Size, 2001



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

FIGURE A22

Percentage of Eligible 401(k) Plan Participants with Loans by Salary, 2001



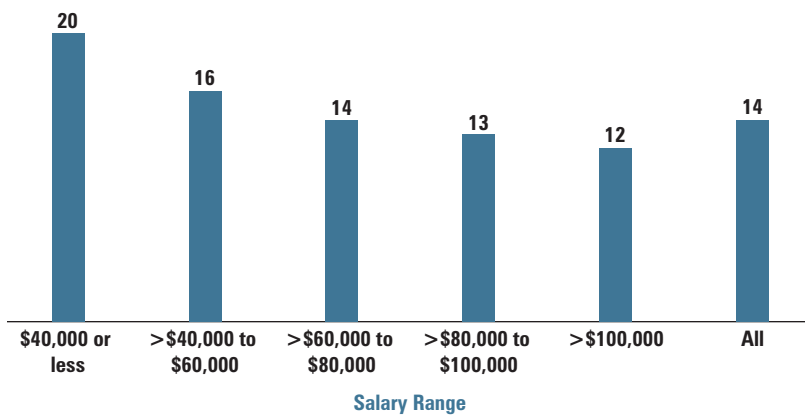
Source: Tabulations from EBRI/ICI Participant-Directed Retirement Plan Data Collection Project

Loan Activity by Salary

Loan activity varies with salary. Participants earning between \$40,001 and \$100,000 are more likely to have a loan outstanding than those earning more or less (Figure A22). Among participants with a loan outstanding, loan ratios tend to decrease as salary increases, falling from 20 percent for participants earning \$40,000 or less to 12 percent for participants earning in excess of \$100,000 (Figure A23).

FIGURE A23

Loan Balances as a Percentage of 401(k) Account Balances for Participants with Loans by Salary, 2001



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

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¹⁹ For a complete bibliography, see Holden and VanDerhei (March 2003).