

# Notes

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## A T A G L A N C E

### **Characteristics of the Population With Consumer-Driven and High-Deductible Health Plans, 2005–2012**, *by Paul Fronstin, Ph.D., EBRI*

- Generally, the population of adults within both high-deductible (HDHP) and traditional health plans have been split 50–50 between men and women. In contrast, differences in gender have been found between consumer-driven health plan (CDHP) enrollees and those with traditional coverage.
- In most years, CDHP enrollees were less likely than those with traditional coverage to be between the ages of 21 and 34, and the CDHP population was more likely than traditional-plan enrollees to be in households with \$150,000 or more in income in every year except 2009 and 2010.
- CDHP enrollees were roughly twice as likely as individuals with traditional coverage to have college or post-graduate educations in nearly all years of the survey.
- CDHP enrollees have consistently reported better health status than traditional-plan enrollees, exhibiting better health behavior than traditional-plan enrollees with respect to smoking and (except for 2010 and 2011), exercise, and sometimes obesity rates.

### **Retirement Plan Participation and Asset Allocation, 2010**, *by Craig Copeland, Ph.D., EBRI*

- The likelihood of a working family head participating in a retirement plan increased with the size of his or her employer. In 2010, among family heads working for employers with 10–19 employees, 22.4 percent participated in a plan, compared with 67.2 percent of family heads who worked for employers with 500 or more employees.
- In 2010, 18.9 percent of family heads who participated in an employment-based retirement plan had a defined benefit (DB) plan only, while 65.0 percent had a defined contribution (DC) plan only, and the remaining 16.1 percent had both a DB and a DC plan. This was a significant change from 1992, when 42.3 percent had a DB plan only, and 40.8 percent had a DC plan only.
- Asset allocation within a family head's retirement plan seems to be affected by his or her ownership of other types of retirement plans. Those who own an IRA are more likely to be invested all in stocks if they also own a 401(k)-type of plan. Those who own a DB plan and a 401(k)-type plan are less likely to allocate their DC plan to all interest-earning assets.

# Characteristics of the Population With Consumer-Driven and High-Deductible Health Plans, 2005–2012

By Paul Fronstin, Ph.D., Employee Benefit Research Institute

## Introduction

In 2001, a handful of employers started offering health reimbursement arrangements (HRAs)—a then-new type of health plan. The most prevalent HRA plan design then had a deductible of at least \$1,000 for employee-only coverage and a tax-preferred account that could be tapped by workers and their families to pay out-of-pocket health care expenses. The Medicare Prescription Drug, Improvement, and Modernization Act of 2003 included a provision to allow individuals with certain high-deductible health plans to contribute to a health savings account (HSA).<sup>1</sup> HRAs and HSA-eligible plans are today collectively referred to as consumer-driven health plans (CDHPs).

Initially, projections for growth of CDHPs were strong. In reality, growth has been slow, but steady. By 2012, 36 percent of employers with 500 or more workers offered either an HRA- or HSA-eligible plan, covering 16 percent of that population, up from the 32 percent that offered such a plan and 13 percent enrollment a year earlier.<sup>2</sup> As a result, about 25 million individuals with private insurance, representing about 14.6 percent of the market, were either in a CDHP or an HSA-eligible plan last year (Fronstin 2012).

This article examines the population with a CDHP and how it differs from the population with traditional health coverage. Data from the 2005–2007 EBRI/Commonwealth Fund Consumerism in Health Care Survey and the 2008–2012 EBRI/MGA Consumer Engagement in Health Care Survey are used for the analysis. Differences between the population with traditional coverage and high-deductible health plan (HDHP) enrollees are also examined. Differences discussed in the remainder of this article are statistically significant. (More information about the data can be found in the appendix.)

## Demographic Differences in the CDHP, HDHP, and Traditional-Plan Populations

*Gender*—Generally, the population of adults within both HDHPs and traditional health plans have been split 50–50 between men and women. Throughout 2005–2012, about 50 percent of traditional-plan enrollees were male and 50 percent were female (Figure 1). HDHP enrollees have also been mostly split 50–50 between men and women. When it has not been an even 50–50 split, the differences between HDHP enrollees and the population with traditional coverage have not been statistically significant (such as in 2012, when 48 percent of the HDHP population was male and 52 percent was female).

In contrast, differences in gender have been found between CDHP enrollees and those with traditional coverage. In 2005, 2006, and 2009, there were no statistically significant differences between CDHP enrollees and those with traditional coverage. However, in 2007 and 2008, CDHP enrollees were more likely than those with traditional coverage to be male, and between 2010 and 2012, CDHP enrollees were more likely than those with traditional coverage to be female. Specifically, 44 percent of CDHP enrollees were male and 56 percent were female in 2012, unchanged from 2011.

*Marital Status and Children*—In 2006–2009 and 2011–2012, HDHP enrollees were less likely to be married than those with traditional coverage. Similarly, in 2006–2007 and 2009, CDHP enrollees were less likely to be married than those with traditional coverage. HDHP enrollees were less likely than traditional-plan enrollees to be parents in 2006, 2007, 2009, 2011, and 2012. In contrast, the differences in the likelihood of being parents between CDHP and traditional-plan enrollees prior to 2010 and in 2011 were not statistically significant.

**Figure 1  
Selected Demographics, by Type of Health Plan, 2005–2012**

	2005	2006	2007	2008	2009	2010	2011	2012
<b>Male</b>								
Traditional <sup>a</sup>	49%	49%	50%	48%	50%	50%	50%	50%
HDHP <sup>b</sup>	53	49	51	50	48	46	47	48
CDHP <sup>c</sup>	57	50	57*	54*	52	44	44	44*
<b>Female</b>								
Traditional <sup>a</sup>	51	51	50	52	50	50	50	50
HDHP <sup>b</sup>	47	51	49	50	52	54	53	52
CDHP <sup>c</sup>	43	50	43*	46	48	56*	56*	56*
<b>Married</b>								
Traditional <sup>a</sup>	60	74	78	67	78	76	75	76
HDHP <sup>b</sup>	61	55*	64*	62*	64*	68	67*	70*
CDHP <sup>c</sup>	59	61*	70*	71	70*	67	78	78
<b>Has children</b>								
Traditional <sup>a</sup>	34	42	47	42	44	40	43	43
HDHP <sup>b</sup>	33	35*	37*	37	39*	40	39*	38*
CDHP <sup>c</sup>	40	44	45	46	49	47*	47	51*
<b>Age 21–34</b>								
Traditional <sup>a</sup>	27	33	34	33	28	31	27	24
HDHP <sup>b</sup>	18*	24*	21*	20*	25	21*	18*	17*
CDHP <sup>c</sup>	20*	24*	20*	23*	28	20*	19*	20
<b>Age 35–44</b>								
Traditional <sup>a</sup>	26	23	22	23	23	23	24	24
HDHP <sup>b</sup>	25	25	24	24	24	27*	22	24
CDHP <sup>c</sup>	31	32*	31	30	28	36*	30*	27
<b>Age 45–54</b>								
Traditional <sup>a</sup>	29	26	27	26	28	27	27	29
HDHP <sup>b</sup>	34	29	30	29	27	28	33*	30
CDHP <sup>c</sup>	34	28	30	28	27	27	30	30
<b>Age 55–64</b>								
Traditional <sup>a</sup>	17	18	18	19	21	19	22	24
HDHP <sup>b</sup>	24	22	25*	26*	25	24	27*	30*
CDHP <sup>c</sup>	15	16	19	19	16*	16	22	22
<b>White, non-Hispanic</b>								
Traditional <sup>a</sup>	71	71	71	72	70	70	69	71
HDHP <sup>b</sup>	94*	83*	78*	77	72	72	74*	74
CDHP <sup>c</sup>	93*	81	75	76	72	78	79*	77*
<b>Minority</b>								
Traditional <sup>a</sup>	28	29	29	28	30	30	31	29
HDHP <sup>b</sup>	6*	17*	22*	24	27	28	25*	26
CDHP <sup>c</sup>	7*	19	25	24	28	22	21*	21*

Source: EBRI/Commonwealth Fund Consumerism in Health Care Survey, 2005–2007; EBRI/MGA Consumer Engagement in Health Care Survey, 2008–2012.

<sup>a</sup> Traditional = health plan with no deductible or <\$1,000 (individual), <\$2,000 (family).

<sup>b</sup> HDHP = high-deductible health plan with deductible \$1,000+ (individual), \$2,000+ (family), no account.

<sup>c</sup> CDHP = consumer-driven health plan with deductible \$1,000+ (individual), \$2,000+ (family), with account.

\* Difference between HDHP/CDHP and Traditional is statistically significant at  $p \leq 0.05$  or better.

*Age*—It is often assumed that CDHP enrollees are more likely than those with traditional coverage to be young, because they use less health care, on average. However, that is generally not what has been found in these surveys. In most years, CDHP enrollees were less likely than those with traditional coverage to be between the ages of 21 and 34. In 2006, 2010, and 2011, the CDHP population was more likely than the population with traditional

coverage to be ages 35–44. No statistically significant differences between the two groups were found in the percentage between the ages of 45–54, and only in 2009 was the population with traditional coverage composed of a larger share of 55–64-year-olds than the CDHP population.

Similar results were found in comparing the HDHP population with traditional-coverage enrollees. Other than in 2009, HDHP enrollees were less likely than those with traditional coverage to be ages 21–34. They were more likely than those with traditional coverage to be ages 35–44 only in 2010, and other than in 2011, there were no differences in the percentages between the ages of 45–54. In 2007, 2008, 2011, and 2012 it was found that the HDHP population included a larger share of 55–64-year-olds than the population with traditional coverage.

*Race*—Few differences in plan enrollment type were found by race. Other than in 2005, 2011, and 2012, there were no differences in the distribution of enrollees when comparing the CDHP population with those covered by traditional plans, and that 2005 difference may have been due to a small sample size of minorities, which was addressed in 2006. In 2011 and 2012, it was found that the CDHP population was more likely to be white, non-Hispanic than the population with a traditional health plan.

When comparing HDHP enrollees and traditional-plan enrollees, it was found that in 2005, 2006, 2007, and 2011 a higher percentage of HDHP enrollees were white, non-Hispanic. However, the 2005 finding here may also have been due to a small sample size.

## **Income Differences**

CDHP enrollees have been more likely than traditional-plan enrollees to be in higher-income households in most years of the survey. In fact, the CDHP population was more likely than traditional-plan enrollees to be in households with \$150,000 or more in income in every year except 2009 and 2010 (Figure 2). CDHP enrollees were also more likely than traditional-plan enrollees to be in households with \$100,000–\$149,999 in income since 2007 (2010 is an exception). Since 2007, traditional-plan enrollees have been more likely than CDHP enrollees to be in households with incomes less than \$30,000.

In general, there have been few income differences between HDHP enrollees and traditional-plan enrollees, and in 2012, there were no statistically significant differences.

## **Education Differences**

CDHP enrollees were roughly twice as likely as individuals with traditional coverage to have college or post-graduate educations in nearly all years of the survey (Figure 3). In 2012, 23 percent of CDHP enrollees had graduate degrees, and 46 percent had college degrees, compared with 16 percent and 26 percent, respectively, of traditional enrollees. HDHP enrollees were also more likely than traditional-plan enrollees to have college or graduate degrees.

## **Health Status Differences**

With the exception of 2007, the survey has never found differences in self-reported health status between HDHP enrollees and individuals with traditional coverage. In contrast, in seven out of eight years of the survey (2009 was the exception), it was found that CDHP enrollees were more likely than traditional-plan enrollees to report excellent or very good health (Figure 4). Furthermore, in five of the eight years of the survey (2006, 2007, 2008, 2011, and 2012), CDHP enrollees were less likely to report being in fair or poor health, though the actual differences were small.

CDHP enrollees exhibit more health-conscious behavior than individuals with traditional coverage. In all years of the survey, CDHP enrollees were less likely than those with traditional coverage to report that they smoked. Similarly, during 2005–2009 and 2012 (but not in 2010 and 2011), CDHP enrollees were less likely to report that they did not regularly exercise. In four years of the survey (2005, 2009, 2010, and 2012), CDHP enrollees were less likely to have been obese.

**Figure 2**  
**Household Income, by Type of Health Plan, 2005–2012**

	2005	2006	2007	2008	2009	2010	2011	2012
<b>Less than \$30,000</b>								
Traditional <sup>a</sup>	15%	12%	15%	14%	11%	14%	11%	8%
HDHP <sup>b</sup>	11	17*	12*	9*	10	4*	8*	8
CDHP <sup>c</sup>	11	13	6*	4*	3*	3*	3*	4*
<b>\$30,000–\$49,999</b>								
Traditional <sup>a</sup>	19	20	18	19	17	17	16	13
HDHP <sup>b</sup>	19	30*	18	14*	16	14	16	14
CDHP <sup>c</sup>	22	24	13	10*	10*	11	10*	10
<b>\$50,000–\$99,999</b>								
Traditional <sup>a</sup>	34	38	36	36	38	37	37	36
HDHP <sup>b</sup>	36	35	38	40	43*	47*	37	36
CDHP <sup>c</sup>	33	43	41	40	45*	54*	33	36
<b>\$100,000–\$149,999</b>								
Traditional <sup>a</sup>	14	14	14	14	17	15	17	20
HDHP <sup>b</sup>	11	5*	14	19*	16	19*	17	16
CDHP <sup>c</sup>	13	7*	20*	25*	24*	14	23*	24*
<b>\$150,000 or more</b>								
Traditional <sup>a</sup>	7	7	7	9	10	10	12	16
HDHP <sup>b</sup>	4	3*	9	9*	8	7*	14*	16
CDHP <sup>c</sup>	9*	4*	11*	15*	10	11	24*	20*

Source: EBRI/Commonwealth Fund Consumerism in Health Care Survey, 2005–2007; EBRI/MGA Consumer Engagement in Health Care Survey, 2008–2012.

<sup>a</sup> Traditional = health plan with no deductible or <\$1,000 (individual), <\$2,000 (family).

<sup>b</sup> HDHP = high-deductible health plan with deductible \$1,000+ (individual), \$2,000+ (family), no account.

<sup>c</sup> CDHP = consumer-driven health plan with deductible \$1,000+ (individual), \$2,000+ (family), with account.

\* Difference between HDHP/CDHP and Traditional is statistically significant at  $p \leq 0.05$  or better.

**Figure 3**  
**Education, by Type of Health Plan, 2005–2012**

	2005	2006	2007	2008	2009	2010	2011	2012
<b>High School Graduate or Less</b>								
Traditional <sup>a</sup>	32%	38%	42%	33%	35%	38%	34%	30%
HDHP <sup>b</sup>	14*	17*	14*	13*	14*	10*	12*	11*
CDHP <sup>c</sup>	6*	11*	11*	10*	8*	10*	7*	8*
<b>Some College, Trade or Business School</b>								
Traditional <sup>a</sup>	31	29	29	31	31	28	30	29
HDHP <sup>b</sup>	36	36*	30	28	26	26	29	27
CDHP <sup>c</sup>	28	33*	24	22*	24*	25	21*	22*
<b>College Graduate or Some Graduate Work</b>								
Traditional <sup>a</sup>	24	22	20	24	23	22	24	26
HDHP <sup>b</sup>	34	35*	40*	42*	42*	45*	42*	42*
CDHP <sup>c</sup>	46*	41*	41*	44*	46*	44*	48*	46*
<b>Graduate Degree</b>								
Traditional <sup>a</sup>	13	11	9	12	11	10	12	16
HDHP <sup>b</sup>	16	12	17*	17*	18*	18*	17*	18
CDHP <sup>c</sup>	20*	15	24*	24*	21*	21*	24*	23*

Source: EBRI/Commonwealth Fund Consumerism in Health Care Survey, 2005–2007; EBRI/MGA Consumer Engagement in Health Care Survey, 2008–2012.

<sup>a</sup> Traditional = health plan with no deductible or <\$1,000 (individual), <\$2,000 (family).

<sup>b</sup> HDHP = high-deductible health plan with deductible \$1,000+ (individual), \$2,000+ (family), no account.

<sup>c</sup> CDHP = consumer-driven health plan with deductible \$1,000+ (individual), \$2,000+ (family), with account.

\* Difference between HDHP/CDHP and Traditional is statistically significant at  $p \leq 0.05$  or better.

**Figure 4  
Selected Health Status Indicators, by Type of Health Plan, 2005–2012**

	2005	2006	2007	2008	2009	2010	2011	2012
<b>Self-Rated Health Status</b>								
<b>Excellent/very good</b>								
Traditional <sup>a</sup>	42%	54%	49%	56%	59%	59%	58%	60
HDHP <sup>b</sup>	50	53	54*	54	59	58	56	56
CDHP <sup>c</sup>	58*	60*	65*	66*	64	67*	66*	69*
<b>Good</b>								
Traditional <sup>a</sup>	45	35	38	34	32	34	34	32
HDHP <sup>b</sup>	36	34	35	34	30	32	34	34
CDHP <sup>c</sup>	34	33	29*	30	27	28*	28*	25*
<b>Fair/poor</b>								
Traditional <sup>a</sup>	13	12	13	10	9	7	9	9
HDHP <sup>b</sup>	13	13	10	12	11	10	10	9
CDHP <sup>c</sup>	9	7*	6*	5*	8	5	6*	6*
<b>At least one chronic health condition**</b>								
Traditional <sup>a</sup>	54	49	49	52	52	50	52	n/a
HDHP <sup>b</sup>	56	50	53*	56	54	52	55	n/a
CDHP <sup>c</sup>	48	43*	45	45*	46*	45	48	n/a
<b>Health problem***</b>								
Traditional <sup>a</sup>	57	51	53	54	54	51	53	n/a
HDHP <sup>b</sup>	57	53	55	57	57	54	57	n/a
CDHP <sup>c</sup>	49	44*	46*	45*	49*	46	50	n/a
<b>Obese</b>								
Traditional <sup>a</sup>	36	30	27	26	31	29	29	28
HDHP <sup>b</sup>	33	28	30	29	28	27	28	27
CDHP <sup>c</sup>	26*	30	25	23	23*	22*	25	22*
<b>Smokes cigarettes</b>								
Traditional <sup>a</sup>	23	24	24	20	18	15	15	14
HDHP <sup>b</sup>	14*	18*	14*	15*	13*	12	11*	11*
CDHP <sup>c</sup>	14*	14*	15*	13*	13*	9*	9*	11*
<b>No regular exercise</b>								
Traditional <sup>a</sup>	24	25	25	25	21	23	24	20
HDHP <sup>b</sup>	15*	25	20*	21	19	19	21	18
CDHP <sup>c</sup>	16*	19*	17*	17*	13*	20	20	15*

Source: EBRI/Commonwealth Fund Consumerism in Health Care Survey, 2005-2007; EBRI/MGA Consumer Engagement in Health Care Survey, 2008-2011.

<sup>a</sup> Traditional = health plan with no deductible or <\$1,000 (individual), <\$2,000 (family).

<sup>b</sup> HDHP = high-deductible health plan with deductible \$1,000+ (individual), \$2,000+ (family), no account.

<sup>c</sup> CDHP = consumer-driven health plan with deductible \$1,000+ (individual), \$2,000+ (family), with account.

\* Difference between HDHP/CDHP and Traditional is statistically significant at  $p \leq 0.05$  or better.

\*\* Arthritis; asthma, emphysema or lung disease; cancer; depression; diabetes; heart attack or other heart disease; high cholesterol; or hypertension, high blood pressure, or stroke.

\*\*\* Health problem defined as fair or poor health or one of eight chronic health conditions.

With respect to HDHP and traditional-plan enrollees, there were no statistically significant differences in the obese percentage in any years of the survey and no recent differences in exercise. However, in all years of the survey except 2010, HDHP enrollees were less likely than traditional-plan enrollees to report that they smoked.

## Employer Size Differences

In the earlier years of the survey (2005–2009), the CDHP population was more likely than the population with traditional coverage to have that coverage through small employers (between two and 49 employees) (Figure 5).

More recently (2010–2012), there were no statistically significant differences by employer size between the CDHP population and that of the population with traditional coverage.

When comparing HDHP enrollees with traditional-plan enrollees it was found that, in all years of the survey except 2007, HDHP enrollees were less likely than traditional-plan enrollees to be with large employers (500 or more employees). They were more likely to be from small employers in all years of the survey except for 2010.

**Figure 5**  
**Firm Size, by Type of Health Plan, 2005–2012**

	2005	2006	2007	2008	2009	2010	2011	2012
<b>Self-employed With No Employees</b>								
Traditional <sup>a</sup>	2%	4%	3%	2%	3%	3%	3%	3%
HDHP <sup>b</sup>	9*	9*	9*	7*	7*	5*	9*	9*
CDHP <sup>c</sup>	8*	5	6*	7*	5	5	3	5
<b>2–49 Employees</b>								
Traditional <sup>a</sup>	15	19	19	16	15	16	16	17
HDHP <sup>b</sup>	31*	32*	27*	26*	25*	26	27*	23*
CDHP <sup>c</sup>	39*	32*	28*	25*	21*	23	20	17
<b>50–199</b>								
Traditional <sup>a</sup>	8	10	11	12	11	8	13	8
HDHP <sup>b</sup>	9	14	14	13	15*	13*	13	14*
CDHP <sup>c</sup>	8	12	11	13	12	12	12	11
<b>200–499</b>								
Traditional <sup>a</sup>	9	8	9	8	10	8	9	9
HDHP <sup>b</sup>	6	8	7	7	7*	8	8	10
CDHP <sup>c</sup>	5*	10	8	7	7*	7	9	10
<b>500 or more</b>								
Traditional <sup>a</sup>	54	45	43	50	48	52	49	54
HDHP <sup>b</sup>	33*	29*	36	38*	37*	41*	37*	40*
CDHP <sup>c</sup>	36*	31*	40	42	48	49	49	53

Source: EBRI/Commonwealth Fund Consumerism in Health Care Survey, 2005–2007; EBRI/MGA Consumer Engagement in Health Care Survey, 2008–2012.

<sup>a</sup> Traditional = health plan with no deductible or <\$1,000 (individual), <\$2,000 (family).  
<sup>b</sup> HDHP = high-deductible health plan with deductible \$1,000+ (individual), \$2,000+ (family), no account.  
<sup>c</sup> CDHP = consumer-driven health plan with deductible \$1,000+ (individual), \$2,000+ (family), with account.  
\* Difference between HDHP/CDHP and Traditional is statistically significant at  $p \leq 0.05$  or better.

## Conclusion

It is very difficult to generalize the differences in characteristics among CDHP enrollees, HDHP enrollees, and individuals with traditional coverage, but a few differences stand out.

In most years of the survey, both the CDHP and HDHP populations were less likely to be young (ages 21–34) than the population with traditional coverage. There were no statistically significant differences in the portion ages 45–54 and no recent statistically significant differences in the portion ages 55–64. In 2006, 2010, and 2011, the CDHP population was more likely than the population with traditional coverage to be ages 35–44. CDHP enrollees had higher income than traditional-plan enrollees in most years of the survey, and CDHP and HDHP enrollees have consistently reported higher education levels than traditional-plan enrollees.

CDHP enrollees have consistently reported better health status than traditional-plan enrollees, exhibiting better health behavior than traditional-plan enrollees with respect to smoking and (except for 2010 and 2011), exercise, and sometimes obesity rates. HDHP enrollees have also been consistently less likely than those with traditional coverage

to report that they smoke, but no recent differences were found in exercise rates, and differences have never been found in rates of obesity. However, it cannot be determined from the survey whether plan design had an impact on health status, smoking, exercise, or obesity rates.

## Appendix

This study is based on data from the 2005–2007 EBRI/Commonwealth Fund Consumerism in Health Care Survey and the 2008–2012 EBRI/MGA Consumer Engagement in Health Care Survey. They are online surveys of privately insured adults ages 21–64, fielded in August of each year. The surveys were conducted to provide nationally representative data regarding the growth of CDHPs and HDHPs and the impact of these plans, and consumer engagement more generally, on the behavior and attitudes of adults with private health insurance coverage. High deductibles were defined as individual deductibles of at least \$1,000 and family deductibles of at least \$2,000. Those with high deductibles and either an HRA or an HSA constituted the CDHP sample, and those with deductibles that were generally high enough to meet the qualifying threshold to make tax-preferred contributions to an HSA but without an account constituted the HDHP sample. More information about the 2012 EBRI/MGA Consumer Engagement in Health Care Survey can be found in Fronstin (2012).

## References

Fronstin, Paul. "Findings from the 2012 EBRI/MGA Consumer Engagement in Health Care Survey." *EBRI Issue Brief*, no. 379 (Employee Benefit Research Institute, December 2012).

## Endnotes

<sup>1</sup> See Fronstin (2012) for more information about HRAs and HSAs.

<sup>2</sup> See [www.mercer.com/pressrelease/details.htm?idContent=1491670](http://www.mercer.com/pressrelease/details.htm?idContent=1491670)

# Retirement Plan Participation and Asset Allocation, 2010

By Craig Copeland, Ph.D., Employee Benefit Research Institute

## Introduction

Various data sources are available for measuring the percentage of workers with retirement plans through or outside of employment. This information allows for the development of models that can simulate retirees' potential incomes from these plans as well as other sources of retirement assets that can be used for income in retirement.

The Employee Benefit Research Institute (EBRI) developed the EBRI-Retirement Security Projection Model (RSPM),<sup>®</sup> which allows for the estimation of the *additional savings* that current workers would need—beyond savings that would be generated assuming existing saving behavior within tax-qualified plans—in order to maintain their same standard of living throughout retirement.<sup>1</sup> Furthermore, this model was updated to simulate “at-risk” ratings for those likely to run short of income in retirement.<sup>2</sup>

One RSPM finding showed that the number of future years that workers are eligible to participate in a defined contribution (DC) plan has a tremendous impact on the “at-risk” ratings of various cohorts. Specifically, Gen Xers with no future years of DC-plan eligibility were simulated to run short of money in retirement 60.7 percent of the time, whereas fewer than 1 in 5 (18.2 percent) of those with 20 or more years of future eligibility were simulated to run short of money in retirement. Clearly, access to these retirement programs can have a profound positive impact on financial security in retirement.

To establish current savings behavior, one necessary measurement of retirement preparation is identifying the percentage of workers with employment-based retirement plans, as well as understanding the characteristics of workers with and without access to such programs. The findings from this study show that there has been a significant increase in the percentage of family heads with a DC plan (typically a 401(k)-type plan) over time. Consequently, how participants allocate their DC balances among different asset categories could have a considerable impact on the funds available for these participants in retirement.

The March Current Population Survey (CPS), conducted by the U.S. Census Bureau, has the most up-to-date information on the percentage of workers with a retirement plan.<sup>3</sup> However, the CPS does not provide a breakdown of the retirement plan types—defined benefit (DB) pension or DC, 401(k)-type plans—for workers covered by those plans. Previous EBRI research established the plan-type breakdown for families, using the Survey of Consumer Finances (SCF),<sup>4</sup> a triennial, interview survey of U.S. families that measures their financial characteristics and status and is sponsored by the Board of Governors of the Federal Reserve System in cooperation with the U.S. Department of the Treasury.<sup>5</sup> While the SCF does not provide the level of detail on asset allocation within 401(k) plans found in the EBRI/ICI Participant-Directed Retirement Plan Data Collection Project,<sup>6</sup> it does allow for the comparison of asset allocations within 401(k)-type plans when controlling for the existence of other tax-qualified retirement plans (such as DB pensions and individual retirement accounts (IRAs)).<sup>7</sup>

This article builds upon that research to examine the plan-type breakdown by the characteristics of the participating family heads' employers and discusses the types of results that are incorporated in RSPM related to participation in employment-based retirement plans and the asset allocations in DC plans and IRAs. In addition, the article updates previous EBRI research on these topics with results from the 2010 SCF.<sup>8</sup>

## Retirement Plan Participation

In 2010, according to the SCF, 58.0 percent of working family heads worked for employers that sponsored an employment-based retirement plan, and 44.6 percent of working family heads participated in one (Figure 1).<sup>9</sup> This

was a decrease from 2007, when 46.9 percent of working family heads participated in a plan.<sup>10</sup> From 1992–2007, the percentage of workers participating remained in a very small range, from just below 46 percent to just over 48 percent. The sponsorship rate (the percentage of those working for employers that sponsored a plan) remained at or just over 61 percent from 1992–2007.<sup>11</sup>

**Figure 1**  
**Percentage of Working Family Heads Whose Employers Sponsor a Retirement Plan and the Head's Participation by Employer Size and Industry, 1992, 1995, 2004, 2007, and 2010**

	1992		1995		2004		2007		2010	
	Employer Sponsors	Head Participates								
<b>All</b>	61.3%	48.3%	60.7%	47.9%	61.0%	46.1%	60.5%	46.9%	58.0%	44.6%
(percentage)										
<b>Employer Size</b>										
Fewer than 10 employees	11.9	9.0	10.7	7.9	13.7	11.0	11.2	8.4	9.0	7.7
10–19	42.2	29.9	28.0	22.3	36.3	25.4	32.0	18.1	30.9	22.4
20–99	51.2	37.6	54.7	41.0	57.5	40.9	57.3	41.5	52.8	38.3
100–499	73.3	54.6	75.3	57.2	77.4	56.4	74.4	57.5	73.4	52.0
500 or more	88.8	73.2	87.3	70.6	86.7	67.3	86.0	68.8	84.6	67.2
<b>Industry</b>										
Agriculture, forestry, and fisheries	12.5	11.2	12.8	8.1	9.7	9.4	19.4	11.0	13.1	7.7
Mining and construction	40.7	36.7	37.6	30.2	34.2	25.1	35.7	24.0	35.3	28.4
Manufacturing	72.5	58.0	75.7	63.0	75.4	56.7	69.9	58.4	69.8	57.5
Wholesale and retail trade	48.7	33.0	52.4	33.4	52.8	34.8	56.6	36.5	50.2	30.0
Finance, insurance, real estate, and business and repair services	48.1	37.5	48.9	39.6	54.9	39.9	57.3	40.8	54.3	37.5
Transportation, communications, public utilities, and personal and professional Services	67.7	53.2	65.1	51.2	66.9	51.4	65.6	51.5	61.9	47.9
Public Administration	88.9	75.2	85.0	74.0	92.3	80.7	91.4	89.0	89.1	82.2

Source: Employee Benefit Research Institute estimates of the 1992, 1995, 2004, 2007, and 2010 Survey of Consumer Finances.

Note: Employer Sponsors is defined as the percentage of workers employed by an employer that offers a retirement plan to any of its employees, but not necessarily the working head being studied.

*Employer Size*—The likelihood of a working family head participating in a retirement plan increased with the size of his or her employer. In 2010, among family heads working for employers with 10–19 employees, 22.4 percent participated in a plan, compared with 67.2 percent of family heads who worked for employers with 500 or more employees. From 1992–2007, the likelihood of retirement plan participation fell for family heads who worked for the smallest employers (fewer than 10 employees and 10–19 employees), as it did for those working for the largest employers (500 or more employees). However, it increased for those working for mid-size employers (20–499 employees). Similarly, in 2010, the likelihood of plan participation increased for workers at employers with 10–19 employees but decreased for workers at all other employer sizes.

*Industry*—Family heads who worked for employers in public administration or manufacturing had the highest probability of participating in a retirement plan, while those working in agriculture, forestry, and fisheries had the lowest likelihood of participation in 2010. Among workers in public administration, 82.2 percent participated in a plan, compared with 7.7 percent of workers in agriculture, forestry, and fisheries.

From 1992–2007, workers in public administration had the largest increase in their likelihood of participating in a plan (from 75.2 percent to 89.0 percent), while those working in the mining and construction industry had the largest decrease in the likelihood of participating (from 36.7 percent to 24.0 percent). Family heads working in the remaining industries experienced either no changes or very small increases or declines in their levels of participation. In 2010, mining- and construction-industry workers ended a decline in their likelihood of participating in a retirement plan, with the participation increasing from 24.0 percent in 2007 to 28.4 percent in 2010. Workers in all of the other industries experienced declines in 2010.

## Retirement Plan Participation, by Plan Type

In 2010, 18.9 percent of family heads who participated in an employment-based retirement plan had a DB plan only, while 65.0 percent had a DC plan only, and the remaining 16.1 percent had both a DB and a DC plan (Figure 2). This was a significant change from 1992, when 42.3 percent had a DB plan only, and 40.8 percent had a DC plan only. Virtually all of the change occurred prior to 1998, except for a significant decline in DB-only coverage that occurred from 2004–2007.<sup>12</sup>

*Employer Size*—In 2010, family heads who worked for the largest employers were more likely to have a DB plan (either alone or with a DC plan) than those who worked for smaller employers. For example, 40.5 percent of participants who worked for employers with 500 or more employees had a DB plan, compared with 22.3 percent of participants working for employers with 10–19 employees. Workers who worked for smaller employers and who participated in a plan had a higher likelihood of having only a DC plan than those who worked for larger employers.

*Industry*—Family heads who worked in public administration and participated in a retirement plan had the highest percentage with a DB plan only, at 40.9 percent in 2010, and also had the highest percentage with both a DB and a DC plan. The next-highest level of participation in a DB plan only (22.6 percent) was among those working in transportation, communications, public utilities, and personal and professional services. Workers in the wholesale and retail trade industry had the highest percentage with a DC plan only, at 84.7 percent.

The percentage of retirement plan participants across all industries who had a DB plan only declined significantly from 1992–2007, but in 2010, this trend moved upward for some industries. One industry where workers' participation in DB plans only continued the downward trend was the finance, insurance, real estate, and business- and repair-services industry: More than 97 percent of these workers had a DC plan, while just 2.8 percent had only a DB plan.

## Asset Allocation in IRAs and 401(k)-Type Plans

As noted above, the manner in which participants allocate their DC balances among asset categories could have a considerable impact on the funds ultimately available for these participants in retirement. This section examines asset allocation in 401(k) plans and IRAs, with particular attention to the allocation within these plans for those owning both a 401(k) and IRA.

In classifying where IRA and 401(k)-type plan<sup>13</sup> owners invest their assets, the SCF asks if the assets in these plans were invested: 1) all in stocks, 2) all in interest-earning assets, or 3) split. If the respondent answered "split," the percentage in stocks was then asked.<sup>14</sup> The results of the asset allocation of family heads within IRAs and 401(k)-type plans are compared across demographic categories and types of plans owned by percentage of assets invested in stocks, with a particular focus on the investing patterns of those with both IRAs and 401(k)-type plans.<sup>15,16</sup>

*Demographic Characteristics*—According to the SCF, among IRA owners, 23.5 percent had their assets invested all in stocks and 20.8 percent were invested in all interest-earning assets in 2010.<sup>17</sup> Among 401(k)-type-plan participants, 21.4 percent were invested all in stocks, but only 13.2 percent were invested all in interest-earning assets (Figure 3). Furthermore, the percentage of 401(k)-type-plan participants with each level of stock allocation was generally higher than that of IRA owners.

**Figure 2**  
**Retirement Plan Type of Family Head Participants by Employer Size and Industry, 1992, 1995, 2004, 2007, and 2010**

Employer Size	1992			1995			2004			2007			2010								
	DB <sup>a</sup>	DC <sup>b</sup>	Both																		
	Only	Only	DB <sup>a</sup> DC <sup>b</sup>	Only	Only	DB <sup>a</sup> DC <sup>b</sup>	Only	Only	DB <sup>a</sup> DC <sup>b</sup>	Only	Only	DB <sup>a</sup> DC <sup>b</sup>	Only	Only	DB <sup>a</sup> DC <sup>b</sup>						
All	42.3%	40.8%	17.0%	57.8%	27.2%	56.2%	16.1%	72.3%	25.8%	56.3%	18.0%	74.2%	18.1%	63.5%	18.5%	82.0%	18.9%	65.0%	16.1%	81.1%	
Fewer than 10 employees	34.2	56.4	9.4	65.8	45.7	49.6	4.7	54.3	30.1	63.8	6.2	70.0	10.0	86.1	3.8	90.0	15.3	77.1	7.5	84.7	
10 to 19	63.0	30.1	7.0	37.1	31.2	64.7	4.1	68.8	18.2	73.5	8.3	81.8	6.9	91.8	1.4	93.1	13.3	77.7	9.0	86.7	
20 to 99	38.0	54.6	7.4	62.0	26.8	64.3	8.8	73.1	20.1	69.9	10.0	79.9	15.3	73.7	11.0	84.7	14.2	78.2	7.6	85.8	
100 to 499	44.4	44.0	11.6	55.6	23.2	63.6	13.2	76.8	30.2	54.9	15.0	69.8	20.6	66.3	13.2	79.4	17.4	70.3	12.3	82.6	
500 or more	41.6	36.8	21.6	58.4	28.1	52.2	19.7	71.9	25.9	51.6	22.6	74.1	18.8	58.0	23.2	81.2	20.8	59.5	19.7	79.2	
Industry																					
Agriculture, Forestry, and Fisheries	29.8	70.2	0.0	70.2	43.8	56.2	0.0	56.2	25.8	60.4	13.8	74.2	17.3	82.7	0.0	82.7	12.3	65.6	22.1	87.7	
Mining and Construction	42.6	43.9	13.5	57.4	31.5	60.6	7.9	68.5	28.3	57.6	14.1	71.7	24.2	61.8	14.0	75.8	15.9	67.0	17.1	84.1	
Manufacturing	34.5	43.5	22.0	65.5	22.3	60.9	16.8	77.7	19.6	64.8	15.7	80.5	6.2	78.2	15.6	93.8	8.8	76.9	14.4	91.2	
Wholesale and Retail Trade	26.5	61.2	12.3	73.5	18.7	69.8	11.5	81.3	9.7	75.5	14.8	90.3	10.6	81.3	8.1	89.4	6.4	84.7	8.9	93.6	
Finance, Insurance, Real Estate, and Business and Repair Services	28.0	48.5	23.5	72.0	18.1	58.0	23.9	81.9	17.0	67.4	15.6	83.0	8.3	71.8	19.9	91.7	2.8	80.3	16.9	97.2	
Transportation, communications, public utilities, and personal and Professional Services	50.3	35.6	14.1	49.7	30.1	55.4	14.5	69.9	29.0	54.6	16.4	71.0	20.4	61.4	18.3	79.6	22.6	62.5	14.9	77.4	
Public Administration	60.2	23.4	16.4	39.8	48.9	29.4	21.7	51.1	46.8	18.3	35.0	53.2	37.7	28.5	33.8	62.3	40.9	32.9	26.2	59.1	

Source: Employee Benefit Research Institute estimates of the 1992, 1995, 2004, 2007, and 2010 Survey of Consumer Finances.  
<sup>a</sup> Defined benefit.  
<sup>b</sup> Defined contribution.  
Note: The 2004 SCF revised the retirement plan identification variables, so the time series should be used with caution.

The percentage of participants with assets invested all in interest-earning assets decreased as family income increased above \$25,000 for participants in both types of plans. For 401(k)-type plan participants in 2010, this percentage decreased from 20.2 percent among family heads with family incomes of \$10,000 up to \$25,000 to 12.3 percent for those with family income of \$100,000 or more. The percentage with all their investments in stocks were relatively similar for 401(k)-type participants with incomes of \$10,000 or more but increased along with family income for IRA owners.

As family-head IRA owners' ages increased, the likelihood that they were invested all in stocks decreased. For example, among those under age 35, 29.5 percent were invested all in stocks, compared with 13.6 percent of those ages 75 or older. A similar pattern emerged with regard to the age of 401(k)-type participants who were invested all in stocks, but it leveled off after age 64, according to the SCF.<sup>18</sup>

As the educational attainment of family heads increased, the likelihood that IRA participants were invested all in interest-earning assets decreased. Specifically, 42.8 percent of family-head IRA participants without high school diplomas were invested all in interest-earning assets, compared with 17.0 percent among those with college degrees. This pattern also emerged for 401(k)-type-plan participants.

Among IRA owners, the race of the family head had no significant effect on the probability of being invested all in interest-earning assets, but white, non-Hispanic family heads had a lower likelihood of being invested all in stocks. In contrast, white, non-Hispanic, family-head, 401(k)-type-plan participants had similar likelihoods of being all invested in either of the assets compared with those without a white family head. The net-worth percentile of IRA owners and 401(k)-type participants had no clear impact on being completely invested in either stocks or interest-earning assets.

*Asset Allocation Comparison among Plan Types*—As shown previously, the probabilities of being invested all in stocks were similar for IRA owners and 401(k)-type-plan participants, but there was a much lower probability of being invested all in interest-earning assets among 401(k)-type participants. Furthermore, among IRA owners, there seemed to be a significant difference in the likelihood of being invested either all in stocks or all in interest-earning assets that was related to whether they also owned a 401(k)-type plan (Figure 4). For example, almost 23 percent of those who did *not* own a 401(k)-type plan were invested all in interest-earning assets, compared with just over 15 percent of those who *did* own one. Additionally, among IRA owners who had rollover assets, there were lower likelihoods of being invested all in interest-earning assets and all in stocks, relative to those IRA participants without rollover assets.

Among 401(k)-type participants, those with or without an IRA had very similar likelihoods of being invested either in all interest-earning assets or in all equities (Figure 4). However, there was a clear difference in the equity selections for those with and without an IRA. Those 401(k) participants with an IRA were more likely to have 51 percent to 99 percent in equities in their account than those without an IRA. Correspondingly, those 401(k) participants without an IRA were more likely to have 1 percent to 50 percent in equities in their account than those with an IRA.

*Asset Allocation between Plan Types*—One question that arises when studying the asset allocation in one specific plan such as an IRA or a 401(k)-type plan is whether the owner may be investing in a completely different, and potentially inconsistent, manner in another plan or in his/her other asset holdings. Figure 5 presents the joint distribution of family heads' investments in IRAs and 401(k)-type plans for those owning both types of plans. Note that 13.2 percent of these individuals owning both plans allocate all their assets in each plan to stocks, while 5.8 percent allocate all their assets in both plans to interest-earning assets.

The bottom portion of Figure 5 looks at the conditional probability of the investment allocation in the IRA, given a certain amount of stock investment in the 401(k)-type plan. Of those investing more than 75 percent of their assets in stocks in their 401(k)-type plan, 49.1 percent invested all of their assets in stocks in their IRA, and 65.3 percent had

**Figure 3**  
**Percentage of Individual Retirement Accounts (IRAs) and 401(k)-Type Plan<sup>a</sup> Family Head Participants in Percentage Groupings of Equity Allocation, by Family Head Characteristics, 2010**

Category	IRAs						401(k)-Type Plans <sup>a</sup>					
	All Earning	Stock Allocation					All Earning	Stock Allocation				
		1%-25%	26%-50%	51%-75%	76%-99%	100%		1%-25%	26%-50%	51%-75%	76%-99%	100%
Total	20.8%	15.9%	20.3%	12.6%	6.9%	23.5%	13.2%	20.3%	22.5%	14.8%	7.7%	21.4%
<b>Family Income</b>												
<10,000	22.8	17.0	28.0	12.2	4.8	15.4	15.8	24.6	12.1	0.2	6.2	41.2
\$10,000 up to \$25,000	36.4	21.2	18.1	2.5	4.5	17.3	20.2	23.9	14.7	14.9	2.4	23.9
\$25,000 up to \$50,000	24.1	20.0	18.2	11.3	4.4	22.1	14.4	24.8	19.8	10.8	5.8	24.5
\$50,000 up to \$100,000	21.6	15.7	21.8	9.9	6.6	24.2	12.8	22.5	23.5	15.1	6.4	19.9
\$100,000 or more	14.5	12.5	20.3	17.9	9.2	25.6	12.3	15.0	24.2	17.4	10.7	20.4
<b>Age of Head</b>												
<35	18.6	17.4	22.6	4.9	7.1	29.5	14.7	21.7	19.6	8.4	7.4	28.1
35-44	13.1	15.2	21.6	11.1	9.8	29.2	12.6	18.5	24.6	12.8	9.8	21.6
45-54	15.3	13.8	18.9	18.8	6.0	27.3	10.4	21.3	23.1	19.1	6.7	19.3
55-64	18.0	15.2	23.0	14.5	6.3	22.9	16.2	20.5	22.5	17.7	6.8	16.3
65-74	26.2	16.7	19.3	11.9	7.4	18.5	13.9	14.6	21.0	24.8	8.9	16.8
75+	39.9	20.2	14.7	6.2	5.4	13.6	b	b	b	b	b	b
<b>Education of Head</b>												
No High School Diploma	42.8	15.8	10.7	6.4	0.0	24.3	24.5	25.1	18.1	9.8	1.8	20.6
High School Diploma	29.6	21.8	17.5	8.1	4.7	18.3	15.8	23.0	22.8	11.7	3.4	23.3
Some College	22.0	16.8	23.0	11.0	5.7	21.6	14.1	23.2	23.1	15.3	7.2	17.1
College Degree	17.0	14.0	20.9	14.6	8.1	25.5	11.0	17.7	22.4	16.5	10.3	22.0
<b>Race</b>												
White Non Hispanic	21.1	15.8	20.7	13.3	7.0	22.1	12.7	18.3	22.9	15.6	8.6	21.8
Nonwhite	19.1	16.8	18.0	8.2	5.9	32.0	14.5	25.4	21.5	12.7	5.4	20.4
<b>Net Worth Percentile</b>												
Bottom 25%	24.0	11.9	21.4	7.8	6.9	28.0	17.8	25.7	19.5	9.1	6.7	21.3
25%-49.9%	18.6	19.2	17.9	9.4	3.7	31.2	13.1	24.6	21.5	10.4	5.6	24.8
50%-74.9%	25.6	18.4	18.7	8.1	6.7	22.5	12.0	21.4	24.2	16.4	6.6	19.5
75%-89.9%	22.0	16.0	21.5	12.5	7.0	21.0	11.1	14.7	23.8	18.2	12.3	19.9
Top 10%	15.7	13.0	21.3	18.8	8.2	23.0	15.1	12.8	21.9	20.4	9.0	20.9

Source: Employee Benefit Research Institute estimates from the 2010 Survey of Consumer Finances.  
<sup>a</sup> Sec. 401(k) plans care combined with Sec. 403(b) plans, Thrift Savings Plan, and Supplemental Retirement Annuities.  
<sup>b</sup> Fewer than 10 observations.

**Figure 4**  
**Percentage of Individual Retirement Accounts (IRAs) and 401(k)-Type Plan<sup>a</sup> Family Head Participants in Various Asset Allocation Categories by Plan Types, 2010**

Retirement Plan Type and Other Factor	All	Stock Allocation				
	Interest Earning	1%-25%	26%-50%	51%-75%	76%-99%	100%
(percentage)						
IRAs	20.8%	15.9%	20.3%	12.6%	6.9%	23.5%
With 401(k)-Type Plan <sup>a</sup>	15.1	12.6	18.4	15.6	8.9	29.5
Without a 401(k)-Type Plan <sup>a</sup>	22.8	17.1	21.0	11.5	6.2	21.5
With Rollover	18.5	15.7	21.6	14.7	8.5	21.0
Without Rollover	21.9	16.1	19.7	11.6	6.1	24.7
401(k)-Type Plan <sup>a</sup>	13.2	20.3	22.5	14.8	7.7	21.4
With IRA	14.2	14.7	19.6	18.9	11.1	21.5
Without IRA	12.9	22.5	23.7	13.2	6.4	21.4

Source: Employee Benefit Research Institute estimates from the 2010 Survey of Consumer Finances.  
<sup>a</sup> Sec. 401(k) plans care combined with Sec. 403(b) plans, Thrift Savings Plan, and Supplemental Retirement Annuities.

**Figure 5**  
**Joint and Conditional Distributions of Individual Retirement Accounts' Stock Allocations of Family Head IRA Owners That Are Also 401(k)-Type Plan<sup>a</sup> Participants, by 401(k)-Type Plan<sup>a</sup> Stock Allocation and Rollover Status of the IRA, 2010**

401(k)-Type Plan <sup>a</sup> Stock Allocation	All	IRA -Stock Allocation				
	Interest Earning	1%- 25%	26%- 50%	51%- 75%	76%- 99%	100%
<b>Joint Distribution<sup>b</sup></b> (Percentage)						
All Interest Earning	5.8%	1.9%	2.4%	1.2%	0.4%	2.4%
1%-25%	1.8	4.1	2.5	1.8	0.9	3.7
26%-50%	3.0	2.4	6.3	2.8	0.5	4.5
51%-75%	1.3	2.3	3.3	7.5	1.8	2.9
76%-99%	1.0	0.6	1.2	1.0	4.5	2.8
100%	2.2	1.4	2.7	1.3	0.8	13.2
<b>Conditional Distribution,<sup>c</sup> by 401(k)-Type Plan Stock Allocation and Rollover Status of the IRA</b>						
Greater than 75%	9.8	6.2	11.7	7.1	16.2	49.1
Rollover	7.0	3.3	13.3	5.3	15.4	55.7
No Rollover	11.3	7.7	10.8	8.1	16.7	45.5
25% or Less	26.5	20.5	17.2	10.6	4.4	20.9
Rollover	10.1	21.2	20.0	15.3	3.8	29.6
No Rollover	32.6	20.3	16.1	8.8	4.6	17.6

Source: Employee Benefit Research Institute estimates from the 2010 Survey of Consumer Finances.  
<sup>a</sup> Sec. 401(k) plans care combined with Sec. 403(b) plans, Thrift Savings Plan, and Supplemental Retirement Annuities.  
<sup>b</sup> The joint distribution is the probability that individuals owning both plan types have the various combinations of allocations across the two plans. Consequently, the sum of each of the elements in the joint distribution should be 100 percent.  
<sup>c</sup> The conditional distribution is the probability an individual with a specific 401(k)-type plan allocation (i.e., 75 percent or greater) will have each possible IRA allocation. The row should equal 100 percent.

**Figure 6**  
**Percentage of Family Head 401(k)-Type Plan<sup>a</sup> Participants in Various Asset Allocation Categories by Defined Benefit Plan Status and Account Balance, 2010**

Category	All	Stock Allocation				
	Interest Earning	1%- 25%	26%- 50%	51%- 75%	76%- 99%	100%
(percentage)						
Family Head	13.2%	20.3%	22.5%	14.8%	7.7%	21.4%
With Defined Benefit Plan	9.2	15.2	25.0	17.0	10.8	22.8
Without Defined Benefit Plan	13.9	21.1	22.1	14.5	7.3	21.2
<b>Head/Perceived Value of Defined Benefit Plan</b>						
Less than \$15,000 annually	2.4	22.9	31.1	26.1	6.0	11.5
\$15,000 up to \$40,000 annually	8.7	22.8	21.2	16.1	7.7	23.5
\$40,000 or more annually	14.4	8.9	27.0	12.3	11.8	25.6
<b>Head/Account Balance</b>						
Less than \$5,000	15.6	25.9	17.8	14.0	4.7	22.1
\$5,000 up to \$20,000	13.6	24.9	23.8	10.5	5.9	21.3
\$20,000 up to \$50,000	10.4	19.1	25.9	14.4	6.9	23.3
\$50,000 up to \$100,000	12.9	16.7	21.7	16.1	9.0	23.7
\$100,000 or more	13.7	14.8	22.5	19.3	11.7	17.9

Source: Employee Benefit Research Institute estimates from the 2010 Survey of Consumer Finances.  
<sup>a</sup> Sec. 401(k) plans care combined with Sec. 403(b) plans, Thrift Savings Plan, and Supplemental Retirement Annuities.

more than 75 percent in stocks in their IRA. Of those who had 25 percent or less invested in stocks in their 401(k)-type plan, 26.5 percent had all their IRA assets invested in interest-earning assets, and 47.0 percent had 25 percent or less of their IRA assets in stocks.

If the family head had more than 75 percent of the assets in his or her 401(k)-type plan and the IRA assets included rollover assets, the investment in the IRA was more likely to have a higher stock allocation (76.4 percent of those with a rollover had more than 50 percent in stocks, compared with 70.2 percent of those with no rollover).<sup>19</sup> For family heads with a relatively low investment in stocks (25 percent or less) in their 401(k)-type plan, the presence of a rollover also led to a higher likelihood of their IRA being invested more in stocks than was the case for those without a rollover (48.7 percent, compared with 31.0 percent having more than 50 percent in stocks in their IRA).

*Asset Allocation by DB Status and Account Balance*—Family heads who participate in both a 401(k)-type plan and a DB plan were more likely to have more than half of their assets in the 401(k)-type plan invested in stocks than 401(k)-type participants who were *not* also in a DB plan. In fact, slightly more than half (50.7 percent) of those *with* a DB plan had more than half invested in stocks, compared with 42.9 percent of those *without* a DB plan (Figure 6). Furthermore, 401(k)-type participants without a DB plan were more likely to be invested all in interest-earning assets than those with a DB plan.

*Perceived Value of DB Plan*—For family-head 401(k) participants with a DB plan, the percentage having more than half of their 401(k) assets in stocks increased with the perceived value of the defined benefit (Figure 6). Of those with perceived-defined-benefit values of less than \$15,000 annually, 43.5 percent had more than 50 percent of their assets in stocks, compared with 49.7 percent of those with perceived values of \$40,000 or more annually. However, participants with perceived-DB values of less than \$15,000 annually were the least likely to be invested in all interest-earning assets (2.4 percent, compared with 8.7 percent and 14.4 percent).

*Account Balance of 401(k)-Type Plan*—The equity distribution within the accounts of family-head, 401(k)-type participants was similar across each account-balance grouping, with some notable exceptions (Figure 6). Among 401(k)-type participants with account balances of \$5,000 up to \$20,000, 37.7 percent had more than half of their account balance invested in stocks, compared with at least 40.7 percent of those with all other balances.<sup>20</sup> Furthermore, 17.9 percent of those with account balances of \$100,000 or more had all their assets in stocks, compared with at least 21.3 percent of those with all other balance amounts.

## Conclusion

The percentage of family heads who participated in an employment-based pension or retirement plan remained basically unchanged from 1992–2001 (around 48 percent) before declining, reaching 44.6 percent in 2010. However, over that period, a dramatic shift occurred in the types of plans in which these family heads participated, as those with a DB pension fell sharply, while those with a DC 401(k)-type plan grew by more than 20 percentage points.

Due to the increased participation in DC plans, the manner in which participants allocate assets within these plans could have a significant effect upon the financial resources they ultimately will have available in retirement. The distribution of participants invested in each proportion of stocks was found not to vary significantly with age between ages 35–64, although higher educational attainment, income, and net worth were correlated with more investment in stocks. Taken together, this suggests that, even with increased experience, availability, and use of these types of plans, there remains a need for more financial education of participants.

In addition to demographic factors related to family heads, asset allocation within a family head's retirement plan seems to be affected by his or her ownership of other types of retirement plans. Those who own an IRA are more likely to be invested all in stocks if they also own a 401(k)-type of plan. Those who own a DB plan and a 401(k)-type plan are also less likely to allocate their DC plan to all interest-earning assets. Furthermore, those family heads who

are invested more heavily in stocks in their 401(k)-type plan and also own an IRA have a high probability of also being heavily invested in stocks in their IRA. Consequently, participants in these plans generally invest them in similar manners, despite some participants having significantly different allocations across the two plan types.

While these results provide important information on behavior within retirement savings plans, they do not include the type of detail on asset allocation within 401(k) plans that is provided by the EBRI/ICI Participant-Directed Retirement Plan Data Collection Project or on IRAs that is provided by the EBRI IRA Database. However, these results do provide some evidence of how participants who own both types of retirement plans allocate their assets among both types of plans, and this can be evaluated with future results from the combined IRA and 401(k) database that EBRI is currently completing.

## Endnotes

<sup>1</sup> See Jack VanDerhei 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).

<sup>2</sup> See Jack VanDerhei, "Retirement Income Adequacy for Boomers and Gen Xers: Evidence from the 2012 EBRI Retirement Security Projection Model," *EBRI Notes*, no. 5 (Employee Benefit Research Institute, May 2012): 2–14.

<sup>3</sup> See Craig Copeland, "Employment-Based Retirement and Pension Plan Participation: Geographic Differences and Trends, 2011," *EBRI Issue Brief*, no. 378 (Employee Benefit Research Institute, November 2012).

<sup>4</sup> See Craig Copeland, "Individual Account Retirement Plans: An Analysis of the 2010 Survey of Consumer Finances," *EBRI Issue Brief*, no. 375 (Employee Benefit Research Institute, September 2012).

<sup>5</sup> See Jesse Bricker, Arthur B. Kennickell, Kevin B. Moore, and John Sabelhaus. "Changes in U.S. Family Finances from 2007 to 2010: Evidence from the Survey of Consumer Finances." *Federal Reserve Bulletin*. vol. 98, no. 2 (June 2012): 1–80  
[www.federalreserve.gov/pubs/bulletin/2012/pdf/scf12.pdf](http://www.federalreserve.gov/pubs/bulletin/2012/pdf/scf12.pdf) for more information on the Survey of Consumer Finances.

<sup>6</sup> See Jack VanDerhei, Sarah Holden, Luis Alonso, and Steven Bass, "401(k) Plan Asset Allocation, Account Balances, and Loan Activity in 2011," *EBRI Issue Brief*, no. 380 (Employee Benefit Research Institute, December 2012) for the latest results from this project.

<sup>7</sup> EBRI is developing a database of individuals who have 401(k) plans and IRAs to see their investment and spend down behavior in these plans. This database will include actual records from record keepers of these types of plans that would provide an extremely rich source of data to analyze.

<sup>8</sup> See Craig Copeland, "Retirement Plan Participation and Asset Allocation, 2007," *EBRI Notes*, no. 11 (Employee Benefit Research Institute, November 2009): 13–23.

<sup>9</sup> From Current Population Survey (CPS) data, the percentage of all workers participating in an employment-based retirement plan was 41.9 percent in 2004 before declining to 39.7 percent in 2006, rising to 41.5 percent in 2007, and declining to 39.7 percent by 2011. These CPS levels are expected to be lower than the results for just family heads in this study, as the CPS results include younger workers and spouses with a lower likelihood of a strong attachment to the work force. See Copeland (November 2012), *op. cit.*, for further results from CPS.

<sup>10</sup> A decline was found in the results from CPS for 2007 to 2010 (Copeland, November 2012), *op. cit.* Furthermore, a decrease in participation among private-sector workers was found from the National Compensation Survey conducted by the Bureau of Labor Statistics during this time. See [www.bls.gov/nsc/ncspubs.htm](http://www.bls.gov/nsc/ncspubs.htm) for results of the various years of the National Compensation Survey.

<sup>11</sup> These sponsorship rates and levels of participation cannot be used to calculate "participation rates" (percentage of retirement-plan-eligible workers who participate in the plan), as the sponsorship rate in this study includes any worker who works for an employer that sponsors a plan regardless of his or her eligibility status. For participation-rate trends from the SCF, see Copeland, (September 2012), *op. cit.*

<sup>12</sup> The 2004 Survey of Consumer Finances questions on employment-based retirement plans were significantly revised from prior years' surveys and retained in 2007 and 2010. One of the goals of these revisions was to better identify the type of plan in which the workers were participating. This included differentiating between defined benefit and defined contribution, but also within the plan types. Therefore, a cash balance answer was added, and as well as a 401(k) plan, thrift savings plan, and 403(b) plan designation, among others, instead of just a 401(k)-type-plan grouping as before. However, by including these revisions in the survey, the trends across plan types could not be directly assessed. The revised questions appeared to be better able to identify defined benefit plans, particularly hybrid plans such as cash balance plans. Therefore, the increased percentage of workers with a defined benefit plan found in 2004 was more likely due to better identification of plan type than to an actual change to defined benefit plans.

<sup>13</sup> The term 401(k)-type plan is used in this study, because the SCF combined Sec. 401(k) plans with Sec. 403(b) plans and supplemental retirement annuities into one category in surveys prior to 2004. For consistency purposes, the plans are grouped in this publication to allow for a comparison with prior years. Thus, these are not pure 401(k) plan results.

<sup>14</sup> The type of interest-earning asset or stock is not differentiated from these questions.

<sup>15</sup> This article does not examine the percentage of families or family heads who own IRAs or 401(k)-type plans. It only examines the asset allocation of those who do own such accounts. Copeland (September 2012), *op. cit.*, found from the 2010 SCF that 28.0 percent of families owned an IRA/Keogh, and 31.1 percent of all families had a member participating in a 401(k)-type plan. Furthermore, 36.3 percent of those families that owned an IRA had a rollover IRA, but 44.5 percent of the IRA assets were attributable to rollover IRAs.

<sup>16</sup> Prior to the 2004 survey, very broad general-asset categories were used: 1) mostly or all in stocks, 2) mostly or all in interest-earning assets, 3) split between stock and interest-earning assets, and 4) other, although there were small differences in the classifications between the two types of accounts. However, in the 2004 survey, more specific allocation was asked for those split between stocks and interest-earning assets. Therefore, the results prior to 2004 are not directly comparable with the results from this study, but because the results in this study for 2010 have the percentage of assets invested in stocks reported by quartiles, a general comparison can be made against the more general categories. See Craig Copeland, "Retirement Plan Participation and Asset Allocation," *EBRI Notes*, no. 1 (Employee Benefit Research Institute, January 2004): 1–11, for results from the 1992–2001 Surveys of Consumer Finances on asset allocation from 401(k)-type plans and IRAs.

<sup>17</sup> Results from the EBRI IRA Database for 2010 showed that 13.1 percent of IRA owners had more than 90 percent allocated to bonds and money (combined) and 37.4 percent to stocks. The EBRI IRA Database has individual level data from IRA recordkeepers on over 10 million accounts. See Craig Copeland, "IRA Asset Allocation, 2010," *EBRI Notes*, no. 10 (Employee Benefit Research Institute, October 2012): 8–20 for more information about the EBRI IRA Database and results from it.

<sup>18</sup> VanDerhei, Holden, Alonso, and Bass (2012), *op. cit.*, found that the percentage of 401(k) participants invested in equities decreased as they became older through their 50s when the percentage began to decrease these oldest participants.

<sup>19</sup> These numbers are determined by adding up the percentages in each category (51%–75%, 76%–99%, and 100%) with a more than 50 percent allocation to stocks in the IRA. For example, for those with a rollover, 5.3 percent (51%–75%) plus 15.4 percent (76%–99%) plus 55.7 percent (100%) equals 76.4 percent.

<sup>20</sup> These numbers are determined by adding up the percentages in each category (51%–75%, 76%–99%, and 100%) with a more than 50 percent allocation to stocks in the 401(k)-type plan.


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