T-166

Senate Committee on Health, Education, Labor and Pensions

Hearing on:

"The Wobbly Stool: Retirement (In)security in America"

Thursday, Oct. 7, 2010

10:00 a.m.

SD-430 Dirksen Senate Office Building

Testimony by

Jack VanDerhei, Ph.D.

Research Director

Employee Benefit Research Institute (EBRI)

www.ebri.org

Retirement Income Adequacy and the Reliance on Employment-Based Retirement Plans and Social Security

By Jack VanDerhei, Research Director, Employee Benefit Research Institute

SUMMARY

Mr. Chairman and members of the committee, I am Jack VanDerhei, research director of the Employee Benefit Research Institute. EBRI is a nonpartisan institute that has been conducting original research on retirement and health benefits for the past 32 years. EBRI does not take policy positions and does not lobby.

Today's testimony will deal with the following topics:

- Sponsorship and participation in employment-based retirement plans.
- The national and individual retirement adequacy deficits.
- The importance of Social Security.
- Americans' retirement confidence.

2009 Sponsorship and Participation Levels

First, a quick look at the numbers will tell you where the nation is today when it comes to Americans' participation in a retirement plan. Among all of the 154 million Americans who worked in 2009, almost half—just over 49 percent—worked for an employer or union that sponsored a pension or retirement plan, and almost 40 percent participated in a plan. For *full-time, full-year wage and salary workers* ages 21–64—those most likely to be offered retirement benefits— 54 percent of these workers participated in a retirement plan.

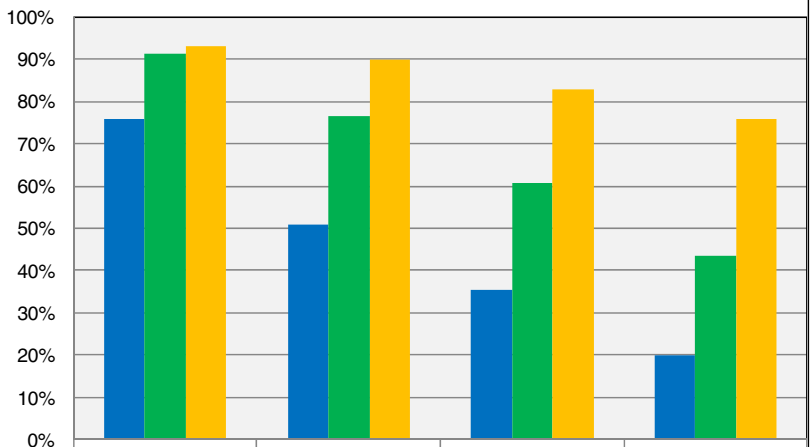
The likelihood of a worker participating in an employment-based retirement plan goes up sharply with employer size. For workers at employers with fewer than 10 employees, less than 14 percent participated in a plan, compared with 53 percent of those working for an employer with 1,000 or more employees.

Now looking at the more than 78 million workers who did NOT work for an employer sponsoring a plan in 2009, about 12 percent were self-employed. Of the remaining 69 million workers who were not offered retirement benefits, almost 10 percent were under the age of 21, and about 5 percent were age 65 or older. Almost half–48 percent—were not full-time, full-year workers, 27 percent had annual earnings of less than $10,000, and more than half—57 percent—worked for employers with less than 100 employees.

What these numbers show is the structural reasons why many Americans do not have employment-based retirement benefits: They don't work full time, they work at small firms, they are very low-income.

Figure 1
EBRI 2010 Retirement Readiness RatingTM (RRR) Baseline (Status Quo for Social Security) vs. Social Security set to 0 vs. DB, DC and IRA set to 0

Percentage of population "at risk" for inadequate retirement income, by pre-retirement income quartile



	Lowest	2	3	Highest
EBRI RRR Baseline 2010	76%	51%	35%	20%
EBRI RRR 2010 with Social Security = 0	91%	77%	61%	44%
EBRI RRR 2010 with DB, DC and IRA = 0	93%	90%	83%	76%

Source: EBRI Retirement Security Projection Model ™ versions 100504e and 100930e

Retirement Adequacy Deficits

Measuring retirement income adequacy is an extremely important and complex topic, and EBRI started to provide this type of measurement in the late 1990s. When we modeled the Baby Boomers and Gen Xers in 2010, between 44–47 percent of the households were projected to be at risk of not having adequate retirement income for BASIC retirement expenses—housing, food, etc.—plus uninsured health care costs. Even though this number is quite large, the good news is that this is 11-12 percentage points LOWER than what we found in 2003.

Who is most at risk? Figure 1 shows that, not surprisingly, lower-income households are MUCH more likely to be at risk for insufficient retirement income: The 2010 baseline at-risk ratings (the left-most column) range from 76 percent for the lowest-income households, compared with only 20 percent of the highest income households.

But even more significant is **when** many workers, especially low-income workers, will run "short" of money: Our research finds that 41 percent of early Baby Boomers in the lowest-income quartile will run short of money within just 10 years of retirement.

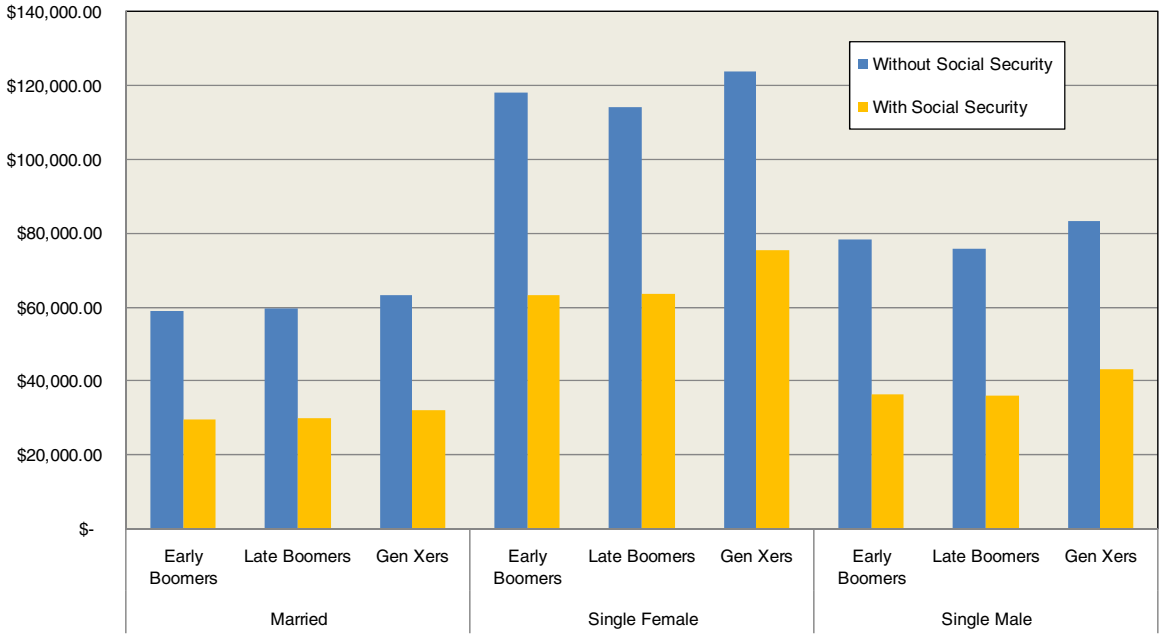
In preparation for this hearing, EBRI has used our modeling capabilities to calculate the accumulated retirement adequacy deficits. Figure 2 shows the average retirement income deficits by age, family status, and gender for Baby Boomers and Gen Xers. These numbers are present values at retirement age

and represent the additional amount each member in that group would need at age 65 to eliminate their expected deficits in retirement (which could be a relatively short period or could last decades).

The aggregate deficit number with the current Social Security retirement benefits is estimated to be $4.6 trillion with an individual average of approximately $48,000. If Social Security benefits were to be eliminated, the aggregate deficit would jump to $8.5 trillion and the average would increase to approximately $89,000.

These numbers show that the national retirement income deficit is quite large—and it would be almost twice as large without current-level Social Security benefits.

Figure 2
Average Individual Retirement Income Deficit, by Gender, Marital Status and Age Cohort (in 2010 $s)



Source: EBRI Retirement Security Projection Model ™ version 100930e

Importance of Social Security

In addition to employment-based retirement plans, Social Security is an extremely important component of retirement income, and hence retirement income adequacy. The importance of Social Security retirement benefits for low-income workers is shown in Figure 1: 91 percent of the lowest-income households would be at risk of inadequate retirement income if they had no Social Security retirement benefits, compared with 76 percent at risk with current Social Security benefits.

The other three higher-income quartiles also benefit from Social Security: Comparing the at-risk percentages with and without Social Security retirement benefits, 24-26 percent of households in the other three higher-income groups are saved from at-risk status by Social Security.

Also, Figure 1, focusing on the third set of columns for each income group, shows just how important the employment-based retirement system is: If you eliminated the expected retirement income generated by

defined benefit pensions, defined contribution plans, and IRAs, the at-risk percentages would be even larger than that without Social Security benefits.[1]

Retirement Confidence

Not surprisingly, these trends have clearly been reflected in the annual EBRI/MGA Retirement Confidence Survey, which has measured Americans' confidence in their ability to retire for 20 years. Sixteen percent of workers in the 2010 RCS say they are *very* confident they will have enough money to live comfortably throughout their retirement years. Forty-six percent are *not too* or *not at all* confident they will have enough money to live comfortably. While these rates have fluctuated, they hit their lowest levels we have ever recorded in 2009.

Again, full details are on our website, but many of the findings are grim: Those who say they are saving has not grown. The percentage of workers who reported they and/or their spouse had saved for retirement increased briefly in 2009 (75 percent), it now stands at 69 percent. While the percentage of workers having saved for retirement increased from 1995–2000, it declined significantly in 2001 and has hovered around 70 percent throughout most of the 2000s.

In addition to the lack of improvement in the percentage saving, the percentage of workers who have virtually no money in savings and investments has increased over the past year. Among RCS workers providing this type of information, 54 percent report that the total value of their household's savings and investments, excluding the value of their primary home and any defined benefit plans, is less than $25,000. Moreover, 27 percent say they have less than $1,000 in savings (up from 20 percent in 2009).[2]

The propensity to guess or do their own calculation may help to explain why the amounts that workers say they need to accumulate for a comfortable retirement appear to be rather low. Twenty-nine percent of workers say they need to save less than $250,000, and another 17 percent mention a goal of $250,000–$499,999. Twenty-four percent think they need to save $500,000–$999,999, while about 1 in 10 each believe they need to save $1 million–$1.49 million (8 percent) or $1.5 million or more (9 percent). However, savings goals tend to increase as household income rises.

Full Testimony Submission to the

Senate Committee on Health, Education, Labor and Pensions

Hearing Oct. 7, 2010:

"The Wobbly Stool: Retirement (In)security in America"

By Jack VanDerhei and Craig Copeland
Employee Benefit Research Institute

Mr. Chairman and members of the committee, thank you for your invitation to testify today on retirement security in America . I am Jack VanDerhei, research director of the Employee Benefit Research Institute. Craig Copeland, a senior research associate at EBRI co-authored the written testimony and is with me today.

EBRI is a nonpartisan research institute that has been focusing on retirement and health benefits for the past 32 years. EBRI does not take policy positions and does not lobby.

Retirement Income Adequacy and the Reliance on Employment Based Retirement Plans and Social Security

The concept of measuring retirement security – or retirement income adequacy – is an extremely important topic. EBRI started a major project to provide this type of measurement in the late 1990s for several states that were concerned whether their residents would have sufficient income when they reached retirement age. After conducting studies for Oregon, Kansas and Massachusetts, we expanded the simulation model to a full-blown national model in 2003 and earlier this year updated it to several significant changes including the impact of defined benefit plan freezes, automatic enrollment provisions for 401(k) plans and the recent crises in the financial and housing markets.[3]

If I could direct your attention to Figure 1, you will see that when we modeled the Baby Boomers and Gen Xers in 2010 that between 44–47 percent of the households were projected to have inadequate retirement income for even BASIC retirement expenses plus uninsured health care costs. Even though this number is quite large, the good news is that this is 11–12 percentage points LOWER than what we found in 2003.

The improvement over the last seven years is largely due to the fact that in 2003 very few 401(k) sponsors used automatic enrollment (AE) provisions and the participation rates among the low income employees (those most likely to be at risk) was quite low. With the adoption of AE in the past few years, these percentages have often increased to the high 80s or low 90s.

Although there do not appear to be any major trends by age, if I could direct your attention to Figure 2 you will see that, as I mentioned previously, the lower-income households are MUCH more likely to be at risk for insufficient retirement income (even though we model our basic retirement expenses as a function of the household's expected retirement income). The 2010 baseline ratings (the left most column) ranges from 76 percent of the lowest-income households at risk to only 20 percent for the highest income household.

While the lack of retirement income adequacy of the lowest income households should be of great concern, even more alarming is the rate at which they will run "short" of money. As documented in VanDerhei and Copeland (July 2010), 41 percent of early boomers in the lowest income quartile will run short of money within 10 years

The importance of Social Security retirement benefits can be seen by comparing the second set of columns for each income quartile in Figure 2 with the baseline at risk percentages just mentioned. Comparing the 91 percent of the lowest income households who would be at risk if they had no Social Security retirement benefits with the 76 percent of those who are at risk with the current benefits means that 15 percent of these households are saved from retirement income inadequacy by Social Security.

The value of Social Security retirement benefits to the low income households will not come as a surprise to anyone who has studied this issue but what may be startling is the extent to which the other three income quartiles also benefit from this program. If one compares the at risk percentages with and without Social Security retirement benefits, the percentage of households that are saved from at risk status is 24-26 percent for the other three groups

The value of employment based accumulations can also be seen in Figure 2 by focusing on the third set of columns for each income group. This shows that if one were to eliminate the expected retirement income generated by defined benefit plans, defined contribution plans and IRAs that the impact on at risk percentages would be even larger than that projected for Social Security.[4]

While knowing the percentage of households that will be at risk for inadequate retirement income is important for public policy analysis, perhaps equally important is knowing just how large the accumulated deficits are likely to be. Figure 3 provides information on the average individual retirement income deficits by age cohort as well as family status and gender for baby boomers and Gen Xers. These numbers are present values at retirement age and represent the additional amount each individual in that group would need at age 65 to eliminate their expected deficits in retirement (which could be a relatively short period or could last decades).

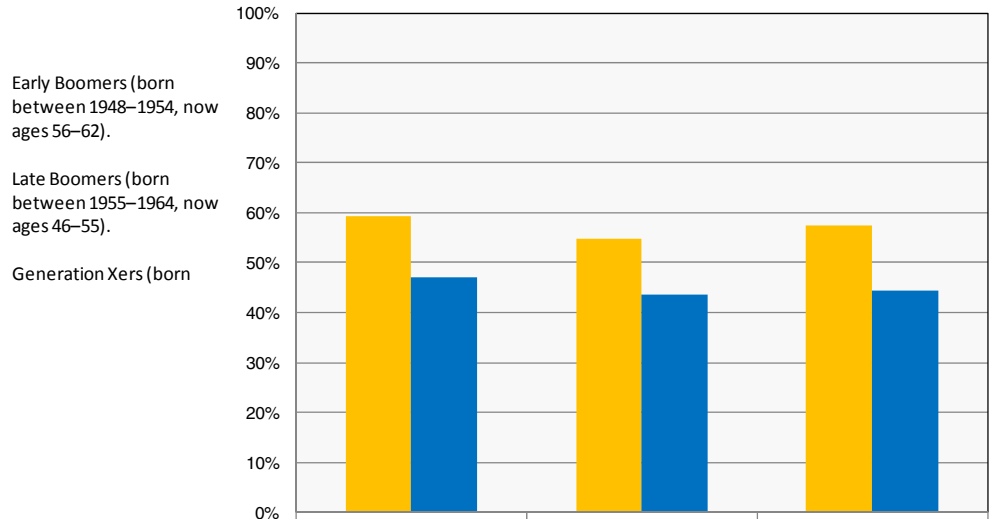
The aggregate deficit number with the current Social Security retirement benefits is estimated to be $4.6 trillion with an individual average of approximately $48,000. If Social Security benefits were to be eliminated, the aggregate deficit would jump to $8.5 trillion and the average would increase to approximately $89,000.

Figure 1

EBRI Retirement Readiness Rating™ (RRR)

2003 and 2010 Baselines (Status Quo for Social Security)

Percentage of population at risk* for inadequate retirement income, by age cohort (baseline assumptions)

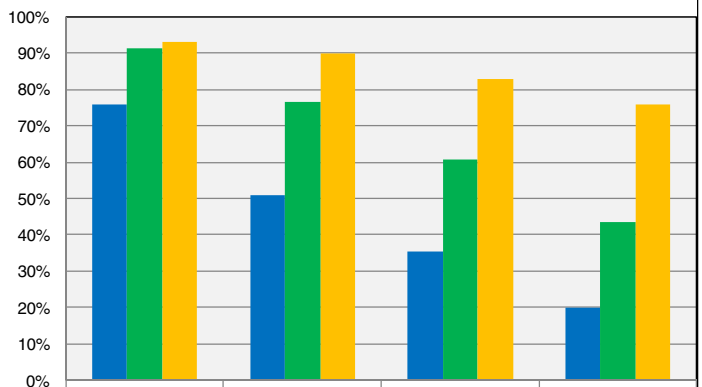


	Early Boomers	Late Boomers	Gen Xers
EBRI RRR Baseline 2003	59%	55%	57%
EBRI RRR Baseline 2010	47%	44%	45%

Sources: EBRI Retirement Security Projection Model™ versions 100504e and 100930e.
* See text for definition of "at risk"

Figure 2
EBRI 2010 Retirement Readiness RatingTM (RRR) Baseline (Status Quo for Social Security) vs. Social Security set to 0 vs. DB, DC and IRA set to 0

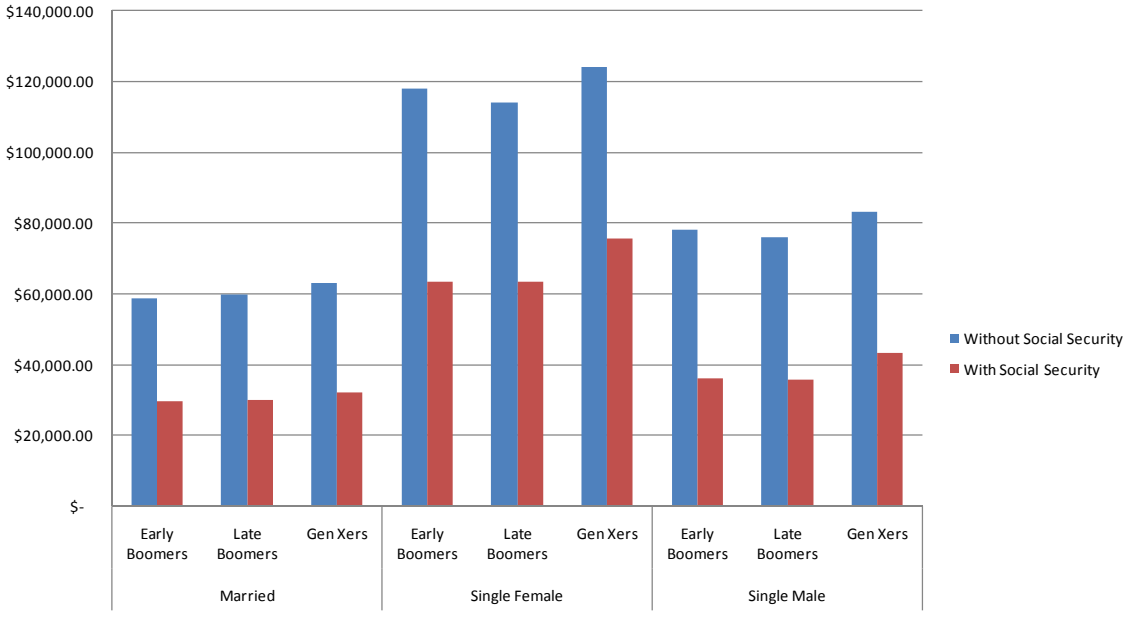
Percentage of population "at risk" for inadequate retirement income, by pre-retirement income quartile



	Lowest	2	3	Highest
EBRI RRR Baseline 2010	76%	51%	35%	20%
EBRI RRR 2010 with Social Security = 0	91%	77%	61%	44%
EBRI RRR 2010 with DB, DC and IRA = 0	93%	90%	83%	76%

Source: EBRI Retirement Security Projection Model ™ versions 100504e and 100930e

Figure 3
Average Individual Retirement Income Deficit by Gender, Marital Status and Age Cohort (in 2010 $)



Source: EBRI Retirement Security Projection Model™ version 100930e

2009 Participation Levels

Among the 154.2 million Americans who worked in 2009, 76.0 million worked for an employer or union that sponsored a pension or retirement plan, and 61.0 million participated in the plan (Figure 4). This translates into a sponsorship rate (the percentage of workers working for an employer or union that sponsored a plan) of 49.3 percent and a participation level (fraction of all participating in a plan regardless of eligibility) of 39.6 percent.

Figure 4
Percentage of Various Work Forces Who Work for an Employer That Sponsored a Retirement Plan, and the Percentage Who Participated in a Plan, 2009

	All Workers	Wage and Salary Workers Ages 21–64	Private-Sector Wage and Salary Workers Ages 21–64	Public-Sector Wage and Salary Workers Ages 21–64	Full-Time, Full-Year Wage and Salary Workers Ages 21–64
			(millions)		
Worker Category Total	154.2	128.8	107.6	21.2	89.0
Works for an employer sponsoring a plan	76.0	70.1	52.9	17.3	55.0
Participating in a plan	61.0	57.7	42.2	15.5	48.4
			(percentage)		
Worker Category Total	100.0%	100.0%	100.0%	100.0%	100.0%
Works for an employer sponsoring a plan	49.3	54.4	49.1	81.3	61.8
Participating in a plan	39.6	44.8	39.2	72.9	54.4

Source: Employee Benefit Research Institute estimates from the 2010 March Current Population Survey.

However, this measure of the work force contains the unincorporated self-employed and those typically with a looser connection to the work force—individuals under age 21 and older than age 64. Therefore, a different measure of the work force is examined: *wage and salary workers* ages 21–64.[5] For this group, the sponsorship rate increases to 54.4 percent and the fraction participating increases to 44.8 percent. When separating these wage and salary workers into the public and private sectors, the percentages participating differ significantly. Almost 73 percent (72.9 percent) of the public-sector workers participated in an employment-based retirement plan, compared with 39.2 percent of the private-sector workers.

A more restrictive definition of the work force, which more closely resembles the types of workers who generally must be covered in accordance with the Employee Retirement Income Security Act (ERISA) for a retirement plan offered by a private-sector employer or union, is the work force of *full-time, full-year wage and salary workers* ages 21–64.[6] Approximately 54 percent of these workers participated in a retirement plan.

Worker Characteristics and Participation

The percentage of wage and salary workers ages 21–64 participating in a retirement plan in 2009 increased with age. For those ages 21–24, 18.0 percent participated in a plan, compared with 53.4 percent of those ages 55–64. Male workers were slightly more likely to participate in a plan than females. However, female workers were more likely to have participated in a plan than males among full-time, full-year workers.

Being white or having attained a higher educational level was also associated with a higher probability of participating in a retirement plan. Among white workers, 49.4 percent participated in a plan, compared with 26.7 percent of Hispanic workers. Seventeen percent of workers without a high school diploma participated in

a plan, with the percentage participating increasing with educational attainment to 66.6 percent of those holding a graduate or professional degree.

Workers who were married were more likely to participate in a plan, while never-married workers had the lowest probability. The higher an individual's earnings were, the more likely he or she participated in a plan. Nearly one-quarter of those who had annual earnings of $15,000–$19,999 participated in a plan. This number increased to 68.5 percent of those earning $50,000 or more. Furthermore, full-time, full-year workers were by far the most likely type to participate in a retirement plan. Those individuals working in professional and related occupations had the highest probability of participating in a retirement plan, at 60.4 percent. In comparison, those workers in farming, fishing, and forestry occupations had the lowest likelihood of participating in a plan, at 13.7 percent.

Employer Characteristics and Participation

The probability of a worker participating in an employment-based retirement plan increased significantly with the size of his or her employer (Figure 5). For workers at employers with fewer than 10 employees, 13.6 percent participated in a plan, compared with 53.1 percent of those working for an employer with 1,000 or more employees. The sector and industry of the employer also had an impact on the likelihood of participating in a plan. Public-sector workers were significantly more likely to participate than private-sector workers. Workers in the manufacturing industry and the transportation, utilities, information, and financial industry had the highest probability of participating, while those in the other services industry had the lowest probability.

Number Without a Plan

An important policy topic resulting from an analysis of employment-based retirement plan participation is the number of workers who are *not* participants, as well as the number for those who work for an employer/union that does *not* sponsor a plan.[7] This section investigates these numbers to show where potential legislation may exclude workers, or the number of workers who are already being reached, by certain demographic and employer characteristics, annual earnings, employer size, and work status (full-time/part-time).

In 2009, 78.2 million workers worked for an employer/union that did *not* sponsor a retirement plan and 93.2 million workers did *not* participate in a plan (Figure 6).[8] Focusing in on employees who did not work for an employer that sponsored a plan, 9.2 million were self-employed—meaning the worker could have started a plan for himself/herself without the need for action from his/her employer. Therefore, the number of workers who worked for someone else that did not sponsor a plan totaled 69.0 million in 2009.

Of those 69.0 million, 6.7 million were under the age of 21, and 3.6 million were age 65 or older. Approximately 33 million were not full-time, full-year workers, and 18.5 million had annual earnings of less than $10,000. Furthermore, many of these workers (39.4 million) worked for employers with fewer than 100 employees, including 10.2 million working for employers with 25–99 employees, 10.4 million for those with 10–24 employees, and 18.8 million for those with fewer than 10 employees.

However, many of these workers would fall into many of these categories simultaneously, such as being under age 21, having less than $10,000 in annual earnings, and not being a full-time, full-year worker. Therefore, the bottom of the Figure 6 shows the number of workers who would remain in a targeted population, if exclusions are made for age, annual earnings, work status, and/or employer size. For example, if the population of interest is wage and salary workers ages 21–64 who work full time, make $5,000 or more in annual earnings, and work for an employer with 10 or more employees, 31.5 million worked for an employer that did not sponsor a retirement plan in 2008 (meaning that 46 percent of the total nonself-employed working

Figure 5

Percentage of Various Work Forces Who Worked for an Employer That Sponsored a Retirement Plan and the Percentage Who Participated in a Plan, by Various Characteristics, 2009

	All Workers			Workers Ages 21–64			Private-Sector Workers Ages 21-64			Public-Sector Workers Ages 21-64			Full-Time, Full-Year Workers Ages 21-64		
	Number of workers	Sponsorship rate	Percentage participating	Number of workers	Sponsorship rate	Percentage participating	Number of workers	Sponsorship rate	Percentage participating	Number of workers	Sponsorship rate	Percentage participating	Number of workers	Sponsorship rate	Percentage participating
	(000s)	(%)	(%)	(000s)	(%)	(%)	(000s)	(%)	(%)	(000s)	(%)	(%)	(000s)	(%)	(%)
Age															
20 or younger	8,963	23.0%	4.1%												
21–24	12,061	35.0	17.7	11,816	35.6%	18.0%	10,582	32.5%	15.9%	1,235	62.0%	35.7%	4,944	44.7%	30.6%
25–34	33,177	47.8	36.5	31,792	49.6	37.9	27,394	45.1	33.2	4,397	77.4	67.2	21,258	57.1	47.1
35–44	32,926	53.4	45.2	30,854	56.5	47.9	25,961	51.4	42.7	4,893	83.5	75.7	22,764	62.8	55.7
45–54	35,666	55.6	49.1	32,895	59.5	52.5	26,901	54.0	46.7	5,993	83.7	78.7	24,810	65.4	60.0
55–64	23,754	56.6	49.2	21,485	61.3	53.4	16,756	54.7	46.5	4,729	84.5	77.8	15,262	66.6	61.2
65 or older	7,652	39.2	29.9												
Gender															
Male	81,218	48.3	39.4	67,070	53.7	45.0	58,085	49.3	40.4	8,985	82.3	74.1	49,253	60.1	53.2
Female	72,981	50.3	39.7	61,771	55.2	44.6	49,509	48.9	37.8	12,262	80.6	72.1	39,785	63.9	55.8
Race/Ethnicity															
White	106,261	52.9	43.1	87,429	59.0	49.4	72,550	54.0	44.0	14,879	83.8	75.5	60,979	66.2	59.1
Black	16,205	49.0	37.9	14,202	52.5	41.6	11,311	46.9	35.2	2,891	74.6	66.7	9,835	60.5	51.6
Hispanic	21,760	32.6	23.9	18,610	35.4	26.7	16,417	30.2	21.4	2,193	74.7	66.6	12,149	42.8	34.9
Other	9,973	47.8	38.3	8,600	51.9	42.4	7,316	47.1	38.0	1,284	78.7	67.7	6,076	58.2	50.6
Education															
No high school diploma	16,163	22.3	12.7	10,818	25.4	17.0	10,275	23.5	15.2	543	62.2	51.0	6,210	31.7	23.3
High school diploma	44,259	43.8	33.6	36,930	48.3	37.8	32,627	44.5	33.8	4,303	77.2	68.5	24,863	55.4	46.4
Some college	44,998	49.8	38.4	37,791	54.8	43.6	32,041	50.4	38.9	5,750	79.0	69.4	25,069	63.2	54.9
Bachelor's degree	32,000	59.7	51.4	28,844	63.3	54.8	22,968	58.2	49.8	5,875	83.2	74.5	21,550	68.4	62.4
Graduate/proven. degree	16,780	68.3	61.6	14,459	73.3	66.6	9,684	66.2	59.1	4,775	87.7	81.7	11,347	76.7	72.4
Marital Status															
Married	85,564	54.4	46.9	74,636	58.9	51.0	61,234	53.3	45.2	13,402	84.1	77.7	54,553	64.7	58.7
Widowed	3,182	47.4	36.7	1,959	56.8	45.5	1,586	50.5	39.2	373	83.7	72.3	1,299	64.8	56.6
Divorced	16,367	50.6	40.3	14,080	55.0	44.2	11,676	49.7	37.9	2,404	80.9	75.0	10,054	61.6	52.4
Separated	3,778	42.5	32.9	3,382	45.5	35.5	2,905	40.6	30.5	477	75.5	66.2	2,143	53.5	45.0
Never married	45,308	39.9	26.1	34,784	45.5	32.4	30,192	41.2	28.4	4,592	73.8	58.6	20,989	55.0	44.8
Work Status															
Full-time, full-year	98,539	58.3	51.1	89,038	61.8	54.4	73,113	56.6	48.5	15,926	85.6	81.6	89,038	61.8	54.4
Full-time, part-year	22,046	39.9	27.3	18,611	42.9	29.8	16,099	37.8	25.0	2,512	75.8	60.5			
Part-time, full-year	17,440	32.1	17.9	11,888	37.4	22.2	10,608	33.8	19.9	1,280	66.6	41.7			
Part-time, part-year	16,174	25.4	9.0	9,305	28.8	11.5	7,775	23.0	8.1	1,530	58.2	29.0			

(cont'd.)

(cont'd.)

	All Workers		Workers Ages 21–64			Private-Sector Workers Ages 21-64			Public-Sector Workers Ages 21-64			Full-Time, Full-Year Workers Ages 21-64		
	Number of workers (000s)	Sponsorship rate (%)	Percentage participating (%)	Number of workers (000s)	Sponsorship rate (%)	Percentage participating (%)	Number of workers (000s)	Sponsorship rate (%)	Percentage participating (%)	Number of workers (000s)	Sponsorship rate (%)	Percentage participating (%)	Number of workers (000s)	Sponsorship rate (%)	Percentage participating (%)
Annual Earnings															
Less than $5,000	15,666	21.3	5.8	7,970	24.3	7.4	6,997	21.0	6.3	972	48.5	15.2	353	32.2	20.6
$5,000–$9,999	12,103	24.6	8.7	8,370	26.7	9.9	7,421	22.6	7.9	949	58.5	25.8	941	21.5	11.4
$10,000–$14,999	12,590	28.7	14.8	9,785	30.6	16.2	8,656	25.7	12.6	1,129	68.1	44.4	3,111	29.2	18.3
$15,000–$19,999	11,642	34.6	21.9	9,895	36.9	23.7	8,862	32.8	20.1	1,033	72.4	54.7	5,642	35.7	24.1
$20,000–$29,999	23,961	45.5	34.0	21,184	48.6	36.6	18,423	44.4	31.8	2,761	77.1	68.5	15,465	49.6	38.2
$30,000–$39,999	20,466	56.0	47.5	18,567	59.0	50.1	15,334	53.9	44.2	3,233	83.4	78.1	15,553	60.4	51.7
$40,000–$49,999	15,429	65.0	58.6	14,302	67.7	61.0	11,085	62.2	54.4	3,217	86.7	83.8	12,578	68.1	61.9
$50,000 or more	42,342	70.0	65.4	38,769	73.2	68.5	30,815	69.0	63.7	7,954	89.5	87.0	35,396	73.9	69.5
Occupation															
Management, business, and financial	22,111	57.5	51.3	18,732	64.0	57.4	16,325	60.8	53.9	2,406	85.6	81.1	15,818	66.8	61.4
Professional and related	32,925	65.6	56.2	29,053	69.7	60.4	19,780	63.1	53.5	9,273	83.8	75.1	21,047	74.9	68.3
Service	28,025	32.5	21.7	21,469	37.4	26.5	17,262	28.1	17.0	4,207	75.4	65.6	12,161	47.5	38.4
Sales and related	17,445	39.3	27.4	13,332	44.8	33.3	13,141	44.3	32.9	191	74.2	61.1	8,748	51.7	43.5
Office and admin. support	19,865	57.1	44.6	17,575	59.8	47.8	14,471	55.3	42.5	3,103	80.8	72.6	12,409	66.9	57.8
Farming, fishing, and forestry	1,335	15.9	11.6	987	17.7	13.7	942	15.3	11.3	45	68.4	64.9	501	25.6	21.2
Construction and extraction	9,045	32.0	26.6	7,274	37.8	31.8	6,752	34.1	28.2	522	85.3	78.1	4,016	44.8	39.8
Installation, maintenance, repair	5,372	51.4	43.5	4,681	55.7	47.6	4,269	52.6	44.4	411	87.8	81.0	3,715	61.5	54.4
Production	8,737	50.7	40.7	7,963	53.1	43.1	7,647	52.1	42.0	316	77.7	70.5	5,584	57.1	49.1
Transportation/material moving	9,338	43.6	31.9	7,778	47.0	35.8	7,004	44.4	33.2	774	70.6	59.4	5,039	53.6	44.3
Employer Size															
Fewer than 10 employees	32,073	13.7	11.0	19,404	17.0	13.6	19,404	17.0	13.6				11,226	21.4	18.3
10–24 employees	14,690	28.0	21.6	12,698	29.7	23.6	12,698	29.7	23.6				8,067	35.4	30.4
25–99 employees	17,645	41.6	31.8	15,605	43.7	34.2	15,605	43.7	34.2				10,832	49.7	41.5
100–499 employees	16,413	53.4	41.6	14,955	55.2	43.8	14,955	55.2	43.8				10,537	61.3	51.8
500–999 employees	6,492	62.8	50.4	5,936	64.6	53.1	5,936	64.6	53.1				4,325	71.2	61.9
1,000 or more employees	43,644	66.1	51.3	38,997	68.9	55.2	38,997	68.9	55.2				28,125	75.4	65.1
Public sector	23,243	79.2	69.7	21,248	81.3	72.9				21,248	81.3	72.9	15,926	85.6	81.6
Sector/Industry															
Private sector	130,956	44.0	34.2	107,594	49.1	39.2	107,594	49.1	39.2				73,113	56.6	48.5
agriculture, mining, and construction	14,127	27.9	23.1	10,566	34.2	28.6	10,566	34.2	28.6				6,173	39.9	34.9
manufacturing	15,123	61.8	53.1	14,025	64.1	55.3	14,025	64.1	55.3				10,816	68.0	60.7
wholesale and retail trade	22,042	45.1	30.3	17,913	49.0	35.0	17,913	49.0	35.0				11,875	55.8	44.9
transportation, utilities, information, and financial	19,411	54.2	45.8	16,919	59.0	50.4	16,919	59.0	50.4				13,090	64.3	57.4
professional services	38,996	47.9	38.0	32,773	52.7	42.3	32,773	52.7	42.3				22,561	60.1	51.2
other services	21,258	24.2	14.7	15,397	27.4	18.0	15,397	27.4	18.0				8,598	34.5	26.8
Public sector	23,243	79.2	69.7	21,248	81.3	72.9				21,248	81.3	72.9	15,926	85.6	81.6

Source: Employee Benefit Research Institute estimates from the 2010 March Current Population Survey.

Figure 6

Number of Workers Working for an Employer Who Does NOT Sponsor an An Employment-Based Retirement Plan, by Various Demographic and Employer Characteristics, 2009

Characteristic(s)	Working for an Employer NOT Sponsoring a Plan	NOT Participating In a Plan
	(millions)	
Total	78.2	93.2
Self-Employed (Not Wage and Salary)	9.2	9.4
Net Wage and Salary	69.0	83.8
Under 21 Years Old	6.7	8.4
65 Year Old or Older	3.6	4.3
Not Full-Time, Full-Year	32.7	40.5
Full-time, part-year	12.1	14.8
Part-time, full-year	10.1	12.5
Part-time, part-year	10.6	13.2
Less than $5,000 in annual earnings	10.4	12.8
Less than $10,000 in annual earnings	18.6	22.9
Less than 100 employees	39.4	42.9
Fewer than 10 employees	18.8	19.6
10–24 employees	10.4	11.4
25–99 employees	10.2	11.9
Wage and Salary, Full-Year, Ages 21-64, $5,000 or more in annual earnings, 10 or more employees	29.5	37.3
Wage and Salary, Full-Year, Ages 21-64, $5,000 or more in annual earnings, 25 or more employees	23.3	30.6
Wage and Salary, Full-Time, Ages 21-64, $5,000 or more in annual earnings, 10 or more employees	31.5	39.6
Wage and Salary, Full-Time, Ages 21-64, $5,000 or more in annual earnings, 25 or more employees	24.9	32.5
Wage and Salary, Full-Year, Ages 21-64, $10,000 or more in annual earnings, 10 or more employees	27.8	35.0
Wage and Salary, Full-Year, Ages 21-64, $10,000 or more in annual earnings, 25 or more employees	21.9	28.7
Wage and Salary, Full-Time, Ages 21-64, $10,000 or more in annual earnings, 10 or more employees	29.6	37.2
Wage and Salary, Full-Time, Ages 21-64, $10,000 or more in annual earnings, 25 or more employees	23.4	30.5
Wage and Salary, Full-Time, Full-Year, Ages 21-64, $5,000 or more in annual earnings, 10 or more employees	13.3	17.6
Wage and Salary, Full-Time, Full-Year, Ages 21-64, $5,000 or more in annual earnings, 25 or more employees	10.4	14.4
Wage and Salary, Full-Time, Full-Year, Ages 21-64, $5,000 or more in annual earnings, 100 or more employees	7.8	11.3
Wage and Salary, Full-Time, Full-Year, Ages 21-64, $10,000 or more in annual earnings, 10 or more employees	9.5	12.5
Wage and Salary, Full-Time, Full-Year, Ages 21-64, $10,000 or more in annual earnings, 25 or more employees	7.4	10.2
Wage and Salary, Full-Time, Full-Year, Ages 21-64, $10,000 or more in annual earnings, 100 or more employees	5.5	8.0

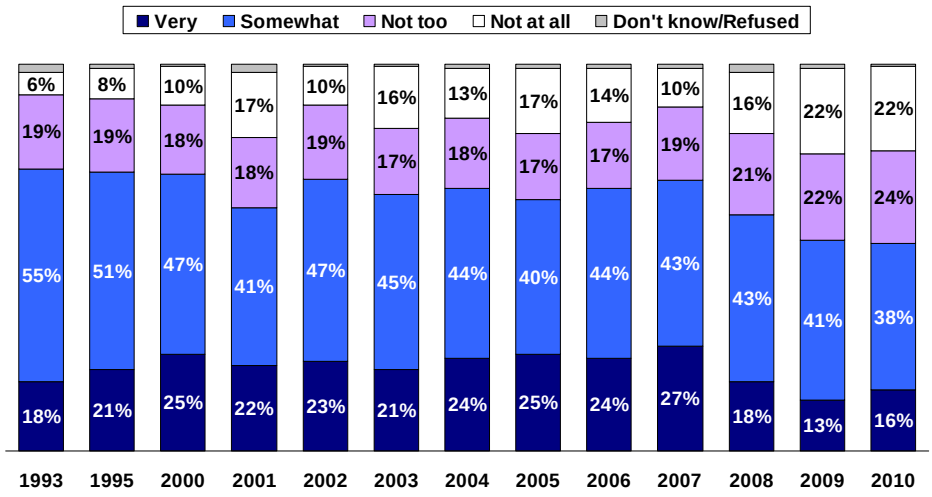
Source: Employee Benefit Research Institute estimates from the 2010 March Current Population Survey.

for an employer that did not sponsor a plan fell into this group). Yet, if a more restrictive definition is placed on the targeted population, so that only workers who work full-time, full-year, make $10,000 or more in annual earnings, and work for an employer with 100 or more employees, only 5.5 million workers (or 11 percent) would be included among those working for an employer that did not sponsor a plan. Of course, another way to look at this last number is that 89 percent of these workers with those characteristics worked for an employer that did sponsor a retirement plan in 2009.

Retirement Confidence

A downward trend found in the 2008 and 2009 Retirement Confidence Surveys (RCS) in Americans' confidence in their ability to retire comfortably appears to be stabilizing in 2010. Sixteen percent of workers in the 2010 RCS say they are *very* confident they will have enough money to live comfortably throughout their retirement years (statistically equivalent to the low of 13 percent measured in 2009). Forty-six percent are *not too* or *not at all* confident they will have enough money to live comfortably (statistically equivalent to the 44 percent observed in 2009). Overall retirement confidence has fluctuated over the 20 years of the RCS, reaching its highest levels among workers in 2007 (27 percent very confident), 2005 (25 percent) and 2000 (25 percent) and its lowest level in 2009 (Figure 7).

Figure 7
Worker Confidence in Having Enough Money to Live Comfortably Throughout Their Retirement Years



Source: Employee Benefit Research Institute and Mathew Greenwald & Associates, Inc., 1993–2010 Retirement Confidence Surveys.

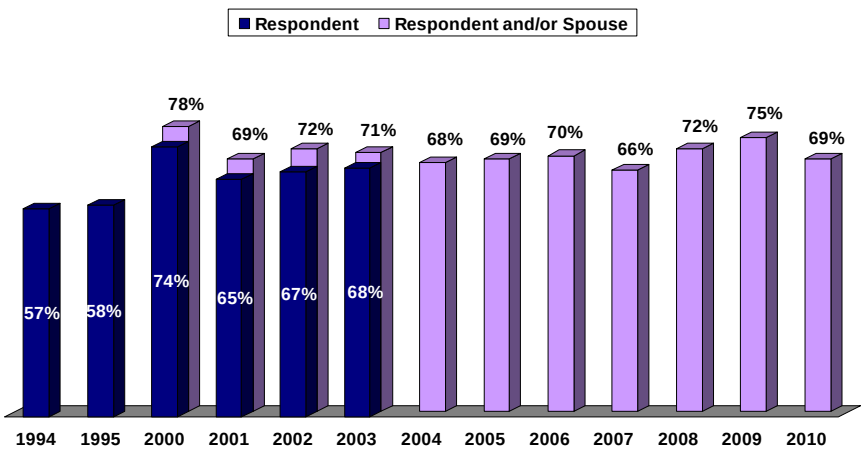
As would be expected, worker confidence in having enough money for a comfortable retirement increases with household income. Worker confidence also increases with savings and investments, education, and improved health status. Those who have experienced increases in income (compared with those whose income in 2009 was the same or lower than in 2008) or financial assets (compared with those whose assets in January 2010 were the same or lower than in January 2008) are more likely to express confidence in having enough money for a comfortable retirement. Others more often confident are men (compared with women), married workers

(compared with those not married), those who participate in a defined contribution retirement plan (compared with those who do not), those who report they or their spouse currently have benefits from a defined benefit plan (compared with those who do not), and those who expect to have access to employer-provided health insurance (compared with those who do not).

Saving for Retirement

While retirement confidence was stabilizing, it did not appear that Americans were saving more to improve their retirement financial prospects. Although the percentage of workers who reported they and/or their spouse had saved for retirement increased briefly in 2009 (75 percent), it now stands at 69 percent. While the percentage of workers having saved for retirement increased from 1995–2000, it declined significantly in 2001 and has hovered around 70 percent throughout most of the 2000s (Figure 8).

Figure 8
Workers Having Saved Money for Retirement



Source: Employee Benefit Research Institute and Mathew Greenwald & Associates, Inc., 1994–2010 Retirement Confidence Surveys.

Three in 10 Americans age 25 and over report they have not saved any money for retirement (29 percent of workers and retirees). Of these, 79 percent of workers say this is because they cannot or could not afford to save. Nevertheless, 31 percent of workers who have not saved are *very* or *somewhat* confident that they will have enough money for a comfortable retirement. However, this percentage has steadily declined from 47 percent in 2004, suggesting that workers are increasingly recognizing the need to save at least some money themselves if they would like to achieve a financially secure retirement.

Retirement Savings

In addition to the lack of improvement in the percentage saving, the percentage of workers who have virtually no money in savings and investments has increased over the past year. Among RCS workers providing this type of information, 54 percent report that the total value of their household's savings and investments, excluding the value of their primary home and any defined benefit plans, is less than $25,000. Moreover, 27 percent say they have less than $1,000 in savings (up from 20 percent in 2009). Approximately 1 in 10 each

report totals of $25,000–$49,999 (12 percent), $50,000–$99,999 (11 percent), $100,000–$249,999 (11 percent), and $250,000 or more (11 percent) (Figure 9).

Figure 9
Total Savings and Investments Reported by Workers, Among Those Providing a Response
(not including value of primary residence or defined benefit plans)

	2002	2005	2006	2007	2008	2009	2010
Less than $1,000	50%	52%	39%	35%	36%	20%	27%
$1,000–$9,999						19	16
$10,000–$24,999			14	13	13	13	11
$25,000–$49,999	13	13	12	10	12	11	12
$50,000–$99,999	15	11	12	13	12	12	11
$100,000–$249,999	15	12	11	15	15	12	11
$250,000 or more	7	11	12	14	12	12	11

Source: Employee Benefit Research Institute and Mathew Greenwald & Associates, Inc., 2002–2010 Retirement Confidence Surveys.

These findings are similar to some other estimates of American household assets. Quantifiable data from the 2007 Survey of Consumer Finances (conducted by the U.S. Federal Reserve Board) found that the median (midpoint) level of household assets of all Americans who have an asset is $221,500.[9] This includes the value of the primary home, which had a median value of $200,000 for those who owned a home. Since then, home values have declined nationwide.

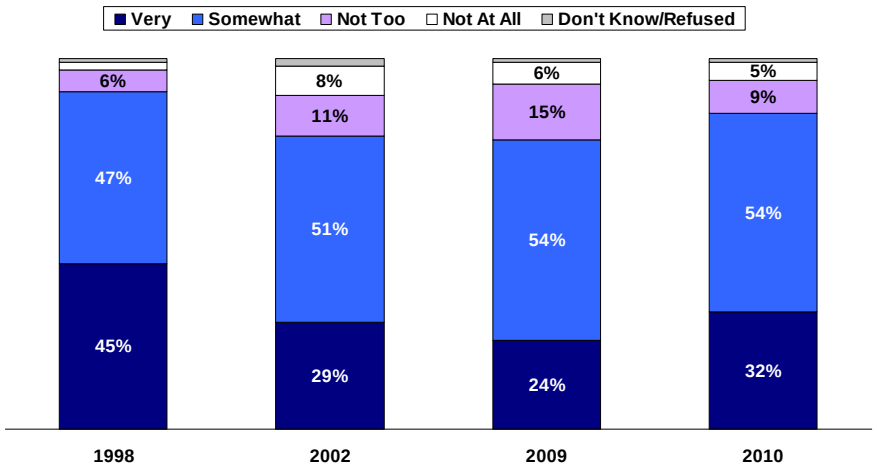
Older workers tend to report higher amounts of assets. Seventy-one percent of workers age 25–34 have total savings and investments of less than $25,000, compared with 42 percent of workers age 45 and older. At the same time, 18 percent of workers age 45 and older cite assets of $250,000 or more (versus 4 percent of workers age 25–34). As one might suspect, total savings and investments increase sharply with household income, education, and health status. Workers who have done a retirement savings needs calculation (compared with those who have not) tend to have higher levels of savings. In addition, those who have saved for retirement are more likely than those who have not saved to have substantial levels of savings. In fact, 69 percent of those who have not saved for retirement say their assets total less than $1,000.

One-third of workers who have saved for retirement (32 percent) say they are *very* confident that they are investing their retirement savings wisely (up from 24 percent in 2009, but down from the high of 45 percent measured in 1998). Another 54 percent are *somewhat* confident that their savings are wisely invested (Figure 10).

Retirement Savings Needs

Along with relatively low savings, many workers continue to be unaware of how much they need to save for retirement, which may be leading to them to not accurately determine that retirement prospects. Less than half of workers (46 percent) report they and/or their spouse have tried to calculate how much money they will need to have saved by the time they retire so that they can live comfortably in retirement. This is comparable to the percentages measured from 2003–2009, but is lower than the high of 53 percent recorded in 2000 (Figure 11).

Figure 10
Worker Confidence That Retirement Savings Are Invested Wisely, Among Those Having Saved for Retirement



Source: Employee Benefit Research Institute and Mathew Greenwald & Associates, Inc., 1998–2010 Retirement Confidence Surveys.

The likelihood of doing a retirement savings needs calculation increases with household income, education, and financial assets. In addition, married workers (compared with unmarried workers), those age 35 and older (compared with those age 25–34), retirement savers (compared with nonsavers), and participants in a defined contribution plan (compared with nonparticipants) more often report trying to do a calculation.

The propensity to guess or do their own calculation may help to explain why the amounts that workers say they need to accumulate for a comfortable retirement appear to be rather low. Twenty-nine percent of workers say they need to save less than $250,000, and another 17 percent mention a goal of $250,000–$499,999. Twenty-four percent think they need to save $500,000–$999,999, while about 1 in 10 each believe they need to save $1 million–$1.49 million (8 percent) or $1.5 million or more (9 percent). However, savings goals tend to increase as household income rises (Figure 12).

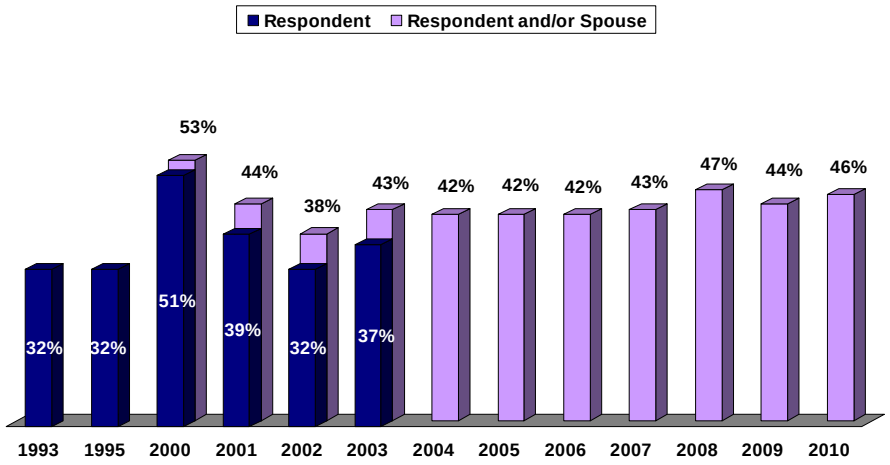
Workers who have done a retirement savings needs calculation also tend to have higher savings goals than do workers who have not done the calculation. Twenty-eight percent of workers who have done a calculation, compared with just 8 percent of those who have not, estimate they need to accumulate at least $1 million for

retirement. At the other extreme, 19 percent of those who have done a calculation, compared with 39 percent who have not, think they need to save less than $250,000 for retirement.

The savings goals cited by workers who have done a retirement needs calculation have increased over time. In the 2000 RCS, 31 percent said they needed to accumulate at least $500,000 for retirement. This percentage increased to 43 percent in 2005 and again to 54 percent in 2010 (Figure 13).

Figure 11

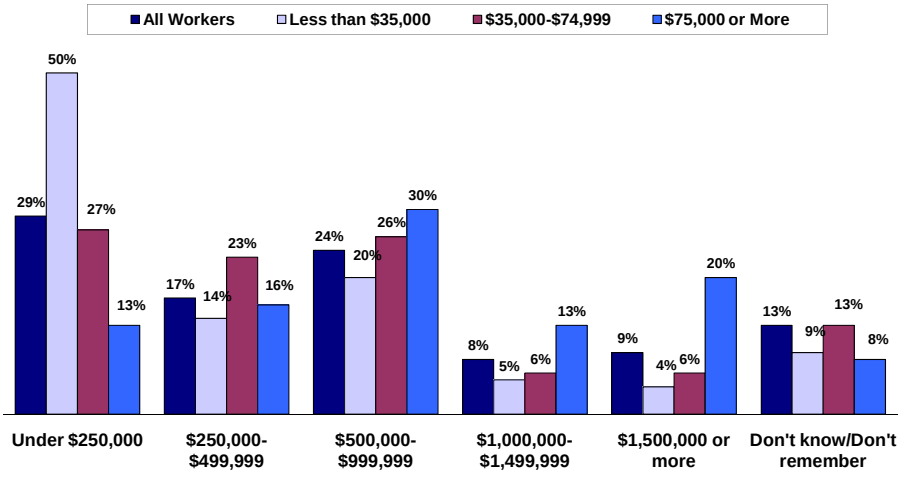
Workers Having Tried to Calculate How Much Money They Need to Save for a Comfortable Retirement



Source: Employee Benefit Research Institute and Mathew Greenwald & Associates, Inc., 1993–2010 Retirement Confidence Surveys.

Figure 12

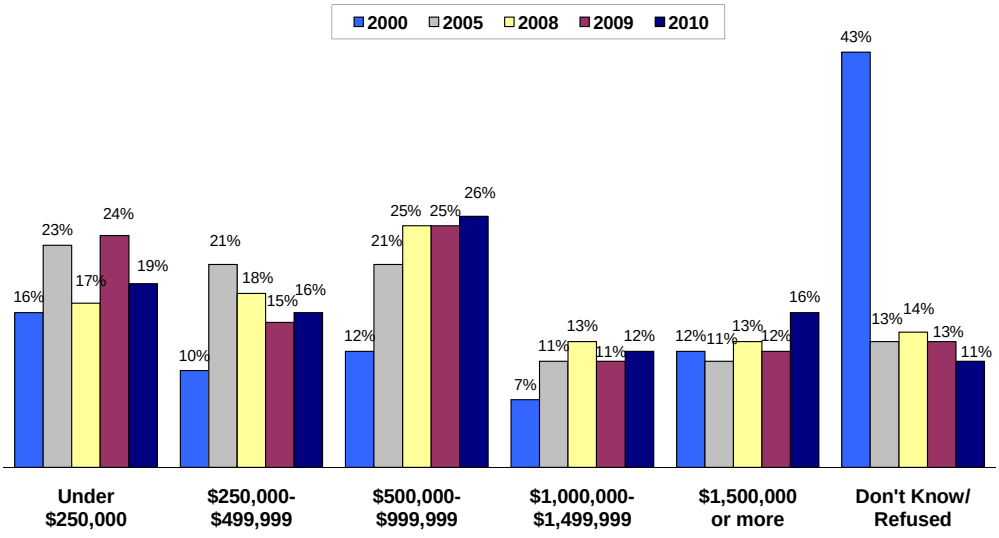
Amount of Savings Workers Think They Need for Retirement, by Household Income



Source: Employee Benefit Research Institute and Mathew Greenwald & Associates, Inc., 2010 Retirement Confidence Survey.

Figure 13

Amount of Savings Workers Think They Need for Retirement, Among Those Doing a Retirement Savings Needs Calculation



Source: Employee Benefit Research Institute and Mathew Greenwald & Associates, Inc., 2000–2010 Retirement Confidence Surveys.

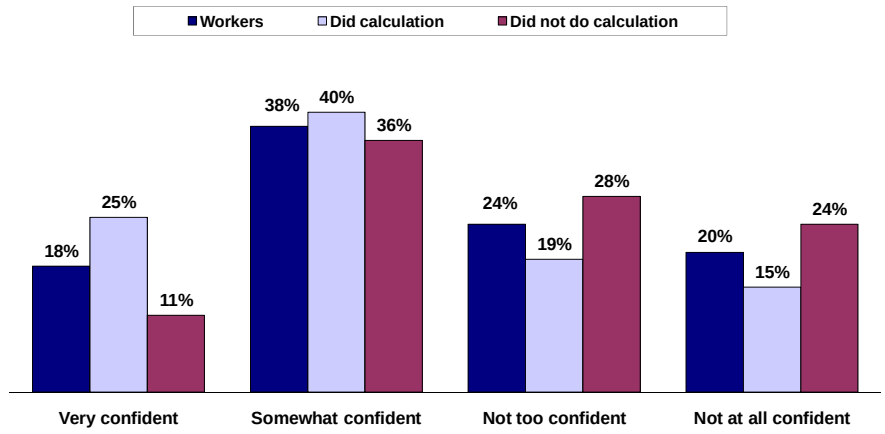
Despite this, workers who have done a retirement needs calculation are more likely than those who have not to feel confident that they will be able to accumulate the amount they need for retirement. Twenty-five percent of those who have done a calculation report they are *very* confident that they will be able to accumulate the amount they need, compared with just 11 percent of those who have not done a calculation. At the other extreme, only 15 percent of those who have done a calculation are *not at all* confident they will reach their goal, compared with 24 percent of those who have not done a calculation. Overall, 18 percent of workers are *very* confident, 38 percent are *somewhat* confident, and 44 percent are *not too* or *not at all* confident that they will be able to accumulate the amount they need by the time they retire (Figure 14).

The RCS provides little support for speculation that workers who do a retirement savings calculation are discouraged by the results. Those who have done a retirement needs calculation continue to be more likely than those who have not to say they are *very* confident about having enough money for a comfortable retirement (22 percent vs. 10 percent). Moreover, those who think they need to accumulate at least $1 million in retirement savings are six times as likely as those who think they need less than $250,000 to be *very* confident (36 percent vs. 6 percent).

Finally, the retirement savings calculation appears to be a particularly effective tool for changing retirement planning behavior. Forty-four percent of workers who calculated a goal amount in the 2008 RCS report having made changes to their retirement planning as a result. Most often, these workers say they started saving or investing more (59 percent). Other actions reported include:

- Changing their investment mix (20 percent).
- Reducing debt or spending (7 percent).
- Enrolling in a retirement savings plan at work (5 percent).
- Deciding to work longer (3 percent).
- Researching other ways to save for retirement (3 percent).

Figure 14
Worker Confidence in Ability to Accumulate Needed Retirement Savings, by Doing a Retirement Needs Calculation



Source: Employee Benefit Research Institute and Mathew Greenwald & Associates, Inc., 2010 Retirement Confidence Survey.

Financial Advice

Most workers believe they are getting all the information they need to make sound financial decisions for their retirement. Twenty-nine percent of workers say this describes them *very* well. Another 44 percent of workers feel it describes them *somewhat* well. Only 27 percent of workers say it does not describe them. Among workers, those who participate in an employer-sponsored retirement savings plan are particularly likely to say it describes them *very* or *somewhat* well. The likelihood of indicating they receive all the information they need also increases with age, education, and household income.

One-third of workers (33 percent) report they have sought investment advice from a professional financial advisor over the past year. Those with higher levels of financial assets are more likely than those with lower levels of assets to seek this advice, but whether this is because higher-asset individuals feel a greater need of investment advice or because professional advice increases the likelihood of building asset levels is unclear.

Overconfidence?

Although many workers may have re-evaluated their confidence in having a comfortable retirement in the wake of the recession and the accompanying economic turmoil, many workers still provide conflicting responses with respect to confidence and retirement preparation. This suggests that at least some workers may be overconfident about their likely financial security in retirement. A general public opinion survey such as the RCS cannot provide a definitive answer to whether workers are preparing adequately for retirement, but the RCS does provide some strong indications.

First, workers who are *very* confident that they will have enough money to live comfortably throughout their retirement years appear to be better prepared, on average, than those who are *somewhat* confident. In turn, those who are *somewhat* confident appear to be better prepared overall than those who are not confident. For example, confidence increases as the reported total of savings and investments increases. Further, the

likelihood of having done a retirement savings needs calculation increases with confidence, and retirement savings goals tend to rise with confidence.

At the same time, workers who are most confident about their financial security in retirement also tend to expect to get the most out of retirement, so that their accumulated savings will need to stretch further. Workers who are *very* confident are more likely than those who are less confident to expect to retire before age 60 and they are less likely to expect that they will work for pay after they retire. They are also more likely to think their spending in retirement will be about the same as before they retire.

Finally, there is considerable room for improvement in preparing for retirement among at least some of those who say they are *very* confident. Twenty-three percent of *very* confident workers are not currently saving for retirement, 44 percent have less than $50,000 in savings, and 33 percent have not done a retirement needs calculation. In addition, 13 percent of *very* confident workers who are offered a retirement savings plan by their current employer are not contributing to the plan. Workers may be thinking about these failures in preparation when they consider the possibility of becoming financially dependent on others in their old age: 25 percent of workers who are *very* confident about having enough money for retirement and 34 percent of workers who are *somewhat* confident admit they worry about being financially dependent on others during their retirement.

Changing Expectations About Retirement Ages

Many workers are adjusting some of their expectations about retirement, perhaps in response to their reduced level of confidence about their retirement finances. Twenty-eight percent of workers in the 2010 RCS say the age at which they expect to retire has changed in the past year. Of those, the vast majority (87 percent) report that their expected retirement age has increased. This means that 24 percent of all workers planned to postpone their retirement in 2010. While similar to the level reported in 2009, this represents a substantial increase over previous years, when less than 20 percent said they had postponed their anticipated retirement age (Figure 15).

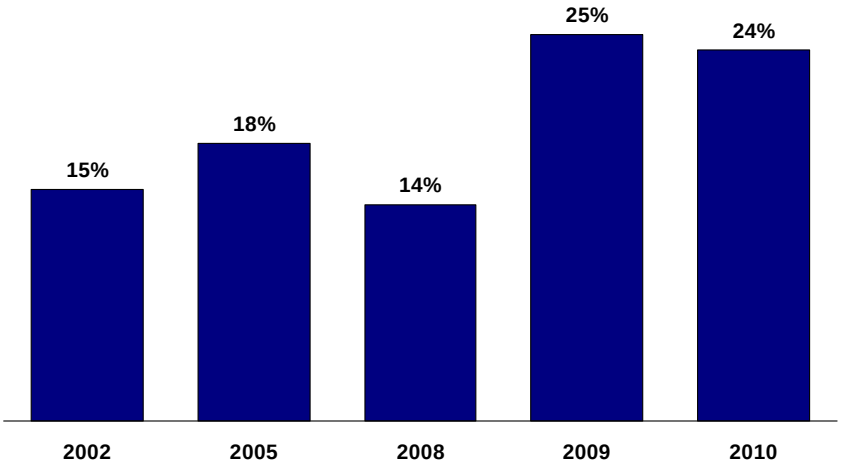
Among the reasons given for the change by workers postponing retirement in the 2010 RCS are:

- The poor economy (29 percent).
- A change in employment situation (22 percent).
- Inadequate finances or can't afford to retire (16 percent).
- The need to make up for losses in the stock market (12 percent).
- Lack of faith in Social Security or government (7 percent).
- The cost of living in retirement will be higher than expected (7 percent).
- Needing to pay current expenses first (6 percent).
- Wanting to make sure they have enough money to retire comfortably (6 percent).

At the same time, 8 percent of workers changing their retirement age in the past year (2 percent of all workers) report they will retire sooner than they had planned, primarily due to poor health or disability.

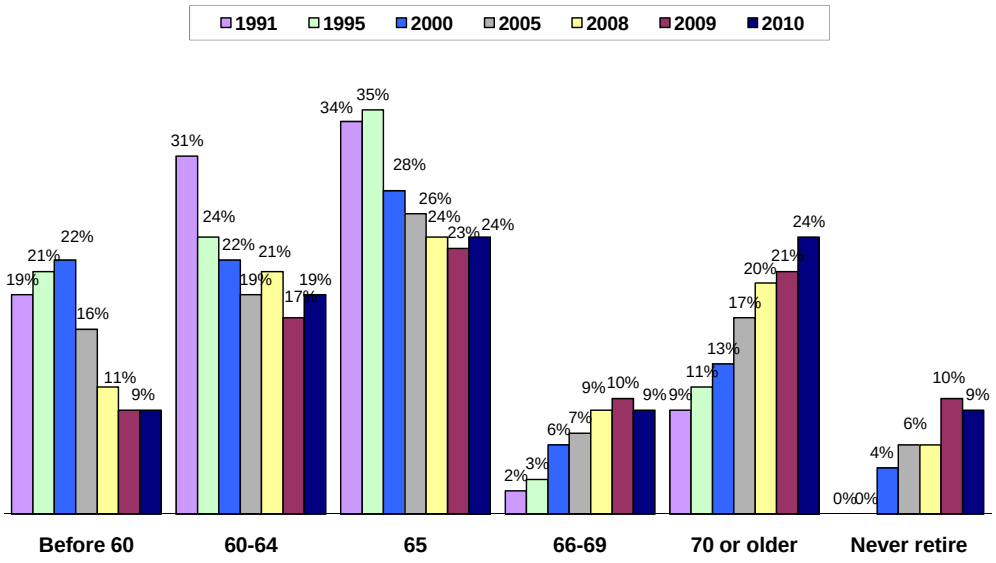
While worker responses to a question asking the age at which they expect to retire has shown little change between 2009 and 2010, the age at which workers say they plan to retire has crept upward incrementally over time. In particular, the percentage of workers who expect to retire after age 65 has increased over time, from 11 percent in 1991 to 14 percent in 1995, 19 percent in 2000, 24 percent in 2005, and 33 percent in the 2010 RCS (Figure 16). Nevertheless, the median (midpoint) age at which workers expect to retire has remained stable at 65 since 1995.

Figure 15
Workers Reporting They Postponed Their Expected Retirement Age in Past 12 Months



Source: Employee Benefit Research Institute and Mathew Greenwald & Associates, Inc., 2002–2010 Retirement Confidence Surveys.

Figure 16
Trend in Workers' Expected Retirement Age



Source: Employee Benefit Research Institute and Mathew Greenwald & Associates, Inc., 1991–2010 Retirement Confidence Surveys.

Appendix A: Brief Description of RSPM[10]

One of the basic objectives of RSPM is to simulate the percentage of the population that will be "at risk" of having retirement income that is inadequate to cover basic expenses and pay for uninsured health care costs for the remainder of their lives once they retire.[11] However, the EBRI Retirement Readiness Rating™ also provides information on the distribution of the likely number of years before those at risk "run short of money," as well as the percentage of compensation they would need in terms of additional savings to have a 50, 70, or 90 percent probability of retirement income adequacy.

Appendix C describes how households (whose heads are currently ages 36–62) are tracked through retirement age, and how their retirement income/wealth is simulated for the following components:

- Social Security.
- Defined contribution balances.
- IRA balances.
- Defined benefit annuities and/or lump-sum distributions.
- Net housing equity.[12]

A household is considered to run short of money in this model if aggregate resources in retirement are not sufficient to meet aggregate minimum retirement expenditures, which are defined as a combination of deterministic expenses from the Consumer Expenditure Survey (as a function of income), and some health insurance and out-of-pocket health-related expenses, plus stochastic expenses from nursing home and home health care expenses (at least until the point they are picked up by Medicaid). This version of the model is constructed to simulate "basic" retirement income adequacy; however, alternative versions of the model allow similar analysis for replacement rates, standard-of-living calculations, and other ad hoc thresholds.

The version of the model used for the analysis in this testimony assumes all workers retire at age 65 and immediately begin to withdraw money from their individual accounts (defined contribution and cash balance plans, as well as IRAs) whenever the sum of their basic expenses and uninsured medical expenses exceed the after-tax[13] annual income from Social Security and defined benefit plans (if any). If there is sufficient money to pay expenses without tapping into the tax-qualified individual accounts,[14] the excess is assumed to be invested in a non-tax-advantaged account where the investment income is taxed as ordinary income.[15] The individual accounts are tracked until the point at which they are depleted; if the Social Security and defined benefit payments are not sufficient to pay basic expenses, the entity is designated as having "run short of money" at that time.

Appendix B: Brief Chronology of RSPM[16]

The original version of Retirement Security Projection Model® (RSPM) was used to analyze the future economic well-being of the retired population at the state level. The Employee Benefit Research Institute and the Milbank Memorial Fund, working with the governor of Oregon, set out to see if this situation could be addressed for Oregon. The analysis[17] focused primarily on simulated retirement wealth with a comparison to ad hoc thresholds for retirement expenditures, but the results made it clear that major decisions lie ahead if the state's population is to have adequate resources in retirement.

Subsequent to the release of the Oregon study, it was decided that the approach could be carried to other states as well. Kansas and Massachusetts were chosen as the next states for analysis. Results of the Kansas study were presented to the state's Long-Term Care Services Task Force on July 11, 2002,[18] and the results of the Massachusetts study were presented on Dec. 1, 2002.[19] With the assistance of the Kansas Insurance Department, EBRI was able to create Retirement Readiness Ratings based on a full stochastic decumulation model that took into account the household's longevity risk, post-retirement investment risk, and exposure to potentially catastrophic nursing home and home health care risks. This was followed by the expansion of RSPM, as well as the Retirement Readiness Ratings produced by it, to a national model and the presentation of the first micro-simulation retirement income adequacy model built in part from administrative 401(k) data at the EBRI December 2003 policy forum.[20] The basic model was then modified for Senate Aging testimony in 2004 to quantify the beneficial impact of a mandatory contribution of 5 percent of compensation.[21]

The first major modification of the model occurred for the EBRI May 2004 policy forum. In an analysis to determine the impact of annuitizing defined contribution and IRA balances at retirement age, VanDerhei and Copeland (2004) were able to demonstrate that for a household seeking a 75 percent probability of retirement income adequacy, the additional savings that would otherwise need to be set aside each year until retirement to achieve this objective would decrease by a median amount of 30 percent. Additional refinements were introduced in 2005 to evaluate the impact of purchasing long-term care insurance on retirement income adequacy.[22]

The model was next used in March of 2006 to evaluate the impact of defined benefit freezes on participants by simulating the minimum employer contribution rate that would be needed to financially indemnify the employees for the reduction in their expected retirement income under various rate-of-return assumptions.[23] Later that year, an updated version of the model was developed to enhance the EBRI interactive Ballpark E$timate® worksheet by providing Monte Carlo simulations of the necessary replacement rates needed for specific probabilities of retirement income adequacy under alternative risk management treatments.[24]

RSPM was significantly enhanced for the May 2008 EBRI policy forum by allowing automatic enrollment of 401(k) participants with the potential for automatic escalation of contributions to be included.[25] Additional modifications were added in 2009 for a Pension Research Council presentation that involved a winners/losers analysis of defined benefit freezes and the enhanced defined contribution employer contributions provided as a quid pro quo.[26]

A new subroutine was added to the model to allow simulations of various styles of target-date funds for a comparison with participant-directed investments in 2009.[27] Most recently, the model was completely reparameterized with 401(k) plan design parameters for sponsors that have adopted automatic enrollment provisions.[28]

Appendix C: Assumptions Used in RSPM[29]

Retirement Income and Wealth Assumptions

RSPM is based in part on a 13-year time series of administrative data from several million 401(k) participants and tens of thousands of 401(k) plans,[30] as well as a time series of several hundred plan descriptions used to provide a sample of the various defined benefit and defined contribution plan provisions applicable to plan participants. In addition, several public surveys based on participants' self-reported answers (the Survey of Consumer Finances [SCF], the Current Population Survey [CPS], and the Survey of Income and Program Participation [SIPP]) were used to model participation, wages, and initial account balance information.

This information is combined to model participation and initial account balance information for all defined contribution participants, as well as contribution behavior for non-401(k) defined contribution plans. Asset allocation information is based on previously published results of the EBRI/ICI Participant-Directed Retirement Plan Data Collection Project, and employee contribution behavior to 401(k) plans is provided by an expansion of a method developed in VanDerhei and Copeland (2008) and further refined in VanDerhei (2010).

A combination of Form 5500 data and self-reported results was also used to estimate defined benefit participation models; however, it appears information in the latter is rather unreliable with respect to estimating current and/or future accrued benefits. Therefore, a database of defined benefit plan provisions for salary-related plans was constructed to estimate benefit accruals.

Combinations of self-reported results were used to initialize IRA accounts. Future IRA contributions were modeled from SIPP data, while future rollover activity was assumed to flow from future separation from employment in those cases in which the employee was participating in a defined contribution plan sponsored by the previous employer. Industry data are used to estimate the relative likelihood that the balances are rolled over to an IRA, left with the previous employer, transferred to a new employer, or used for other purposes.

Defined Benefit Plans

A stochastic job duration algorithm was estimated and applied to each individual in RSPM to predict the number of jobs held and age at each job change. Each time the individual starts a new job, RSPM simulates whether or not it will result in coverage in a defined benefit plan, a defined contribution plan, both, or neither. If coverage in a defined benefit plan is predicted, time series information from the Bureau of Labor Statistics (BLS) is used to predict what type of plan it will be.[31]

While the BLS information provides significant detail on the generosity parameters for defined benefit plans, preliminary analysis indicated that several of these provisions were likely to be highly correlated (especially for integrated plans). Therefore, a time series of several hundred defined benefit plans per year was coded to allow for assignment to the individuals in RSPM.[32]

Although the Tax Reform Act of 1986 at least partially modified the constraints on integrated pension plans by adding Sec. 401(l) to the Internal Revenue Code, it would appear that a significant percentage of defined benefit sponsors have retained Primary Insurance Amount (PIA)-offset plans. In order to estimate the offset provided under the plan formulas, RSPM computes the employee's Average Indexed Monthly Earnings, Primary Insurance Amount, and covered compensation values for the birth cohort.

Defined Contribution Plans

Previous studies on the EBRI/ICI Participant-Directed Retirement Plan Data Collection Project have analyzed the average account balances for 401(k) participants by age and tenure. Recently published results (VanDerhei, Holden and Alonso, 2009) show that the year-end 2008 average balance ranged from $3,237 for

participants in their 20s with less than three years of tenure with their current employer to $172,555 for participants in their 60s who have been with the current employer for at least 30 years (thereby effectively eliminating any capability for IRA rollovers).

Unfortunately, the EBRI/ICI database does not currently provide detailed information on other types of defined contribution plans nor does it allow analysis of defined contribution balances that may have been left with previous employers. RSPM uses self-reported responses for whether an individual has a defined contribution balance to estimate a participation model and the reported value is modeled as a function of age and tenure.

The procedure for modeling participation and contribution behavior and asset allocation for defined contribution plans that have not adopted automatic enrollment is described in VanDerhei and Copeland (2008). The procedure for modeling contribution behavior (with and without automatic escalation of contributions) for 401(k) plans is described in VanDerhei (2010). Asset allocation for automatic enrollment plans is assumed to follow average age-appropriate target-date funds as described in VanDerhei (2009). Investment returns are based on those used in Park (2009).

Social Security Benefits

Social Security's current-law benefits are assumed to be paid and received by those qualifying for the benefits under the baseline scenario. This funding could either be from an increase in the payroll tax or from a general revenue transfer. The benefits are projected for each cohort assuming the intermediate assumptions within the 2009 OASDI Trustee's Report. A second alternative is used where all recipients' benefits are cut 24 percent on the date that the OASDI Trust Fund is depleted (2037).

Expenditure Assumptions

The expenditures used in the model for the elderly consist of two components—deterministic and stochastic expenses. The deterministic expenses include those expenses that the elderly incur in their basic daily life, while the stochastic expenses in this model are exclusively health-event related—such as an admission to a nursing home or the commencement of an episode of home health care—that occur only for a portion, if ever, during retirement, not on an annual or certain basis.

Deterministic Expenses

The deterministic expenses are broken down into seven categories—food, apparel and services (dry cleaning, haircuts), transportation, entertainment, reading and education, housing, and basic health expenditures. Each of these expenses is estimated for the elderly (65 or older) by family size (single or couple) and family income (less than $20,000, $20,000–$39,999, and $40,000 or more in 2008 dollars) of the family/individual.

The estimates are derived from the 2008 Consumer Expenditure Survey (CES) conducted by the Bureau of Labor Statistics of the U.S. Department of Labor. The survey targets the total noninstitutionalized population (urban and rural) of the United States and is the basic source of data for revising the items and weights in the market basket of consumer purchases to be priced for the Consumer Price Index. Therefore, an expense value is calculated using actual experience of the elderly for each family size and income level by averaging the observed expenses for the elderly within each category meeting the above criteria. The basic health expenditure category has additional data needs besides just the CES.

Health

The basic health expenditures are estimated using a somewhat different technique and are comprised of two parts. The first part uses the CES as above to estimate the elderly's annual health expenditures that are paid out-of-pocket or are not fully reimbursed (or not covered) by Medicare and/or private Medigap health insurance.

The second part contains insurance premium estimates, including Medicare Part B and Part D premiums. All of the elderly are assumed to participate in Part B and Part D, and the premium is determined annually by the Medicare program and is the same nationally with an increasing contribution from the individual/family on the basis of their income. For the Medigap insurance premium, it is assumed all of the elderly purchase a Medigap policy. A national estimate is derived from a 2005 survey done by Thestreet.com that received average quotes for Plan F in 47 states and the District. The estimates are calculated based on a 65-year-old female. The 2005 premium level is the average of the 47 state average quotes. The 2010 premium level was estimated by applying the annual growth rates in the Part B premiums from 2006 through 2010 to the average 2005 premium.

This approach is taken for two reasons. First, sufficient quality data do not exist for the matching of retiree medical care (as well as the generosity of and cost of the coverage) and Medigap policy use to various characteristics of the elderly. Second, the health status of the elderly at the age of 65 is not known, let alone over the entire course of their remaining life. Thus, by assuming everyone one has a standard level of coverage eliminates trying to differentiate among all possible coverage types as well as determining whether the sick or healthy have the coverage. Therefore, averaging of the expenses over the entire population should have offsetting effects in the aggregate.

The total deterministic expenses for the elderly individual or family are then the sum of the values in all the expense categories for family size and family income level of the individual or family. These expenses make up the basic annual (recurring) expenses for the individual or family. However, if the individual or family meet the income and asset tests for Medicaid, Medicaid is assumed to cover the basic health care expenses (both parts), not the individual or family. Furthermore, Part D and Part B premium relief for the low-income elderly (not qualifying for Medicaid) is also incorporated.

Stochastic Expenses

The second component of health expenditures is the result of simulated health events that would require long-term care in a nursing home or home-based setting for the elderly. Neither of these simulated types of care would be reimbursed by Medicare because they would be for custodial (not rehabilitative) care. The incidence of the nursing home and home health care and the resulting expenditures on the care are estimated from the 1999 and 2004 National Nursing Home Survey (NNHS) and the 2000 and 2007 National Home and Hospice Care Survey (NHHCS). NNHS is a nationwide sample survey of nursing homes, their current residents and discharges that was conducted by the National Center for Health Statistics from July through December 1999 and 2004. The NHHCS is a nationwide sample survey of home health and hospice care agencies, their current and discharge patients that was conducted by the National Center for Health Statistics from August 2000 through December 2000 and from August 2007 through February 2008.

For determining whether an individual has these expenses, the following process is undertaken. An individual reaching the Social Security normal retirement age has a probability of being in one of four possible assumed "health" statuses:

- Not receiving either home health or nursing home care,
- Home health care patient,
- Nursing home care patient,
- Death,

based upon the estimates of the use of each type of care from the surveys above and mortality. The individual is randomly assigned to each of these four categories with the likelihood of falling into one of the four categories based upon the estimated probabilities of each event. If the individual does not need long-term care, no stochastic expenses are incurred. Each year, the individual will again face these probabilities (the probabilities of being in the different statuses will change as the individual becomes older after reaching age 75 then again at age 85) of being in each of the four statuses. This continues until death or the need for long-term care.

For those who have a resulting status of home health care or nursing home care, their duration of care is simulated based upon the distribution of the durations of care found in the NNHS and NHHCS. After the duration of care for a nursing home stay or episode of home health care, the individual will have a probability of being discharged to one of the other three statuses based upon the discharge estimates from NNHS and NHHCS, respectively. The stochastic expenses incurred are then determined by the length of the stay/number of days of care times the per diem charge estimated for the nursing home care and home health care, respectively.

For any person without the need for long-term care, this process repeats annually. The process repeats for individuals receiving home health care or nursing home care at the end of their duration of stay/care and subsequently if not receiving the specialized care again at their next birthday. Those who are simulated to die, of course, are not further simulated.

As with the basic health care expenses, the qualification of Medicaid by income and asset levels is considered to see how much of the stochastic expenses must be covered by the individual to determine the individual's final expenditures for the care. Only those expenditures attributable to the individual—not the Medicaid program—are considered as expenses to the individual and as a result in any of the "deficit" calculations.

Total Expenditures

The elderly individuals' or families' expenses are then the sum of their assumed deterministic expenses based upon their retirement income plus any simulated stochastic expenses that they may have incurred. In each subsequent year of life, the total expenditures are again calculated in this manner. The base year's expenditure value estimates excluding the health care expenses are adjusting annually using the assumed general inflation rate of 2.8 percent from the 2009 OASDI Trustees Report, while the health care expenses are adjusted annually using the 4.0 percent medical consumer price index that corresponds to the average annual level from 2004–2009.[33]

References

Copeland, Craig, and Jack VanDerhei. "Restructuring Retirement Risk Management in a Defined Contribution World," In *The Declining Role of Private Defined Benefit Pension Plans: Who Is Affected, and How.* Oxford University Press, 2010.

Holden, Sarah, and Jack VanDerhei. "The Influence of Automatic Enrollment, Catch-Up, and IRA Contributions on 401(k) Accumulations at Retirement." *EBRI Issue Brief,* no. 283 (Employee Benefits Research Institute, July 2005).

VanDerhei, Jack. Testimony for the U.S. Senate Special Committee on Aging Hearing on Retirement Planning: "Do We Have a Crisis in America? Results From the EBRI-ERF Retirement Security Projection Model," Jan. 27, 2004 (T-141).

_____. "Measuring Retirement Income Adequacy, Part One: Traditional Replacement Ratios and Results for Workers at Large Companies." *EBRI Notes*, no. 9 (Employee Benefit Research Institute, September 2004): 2–12.

_____. Projections of Future Retirement Income Security: Impact of Long- Term Care Insurance, American Society on Aging/National Council on Aging joint conference, March 2005.

_____. "Defined Benefit Plan Freezes: Who's Affected, How Much, and Replacing Lost Accruals." *EBRI Issue Brief,* no. 291 (Employee Benefit Research Institute, March 2006).

_____. "Measuring Retirement Income Adequacy: Calculating Realistic Income Replacement Rates." *EBRI Issue Brief,* no. 297 (Employee Benefit Research Institute, September 2006).

_____. "Retirement Income Adequacy After PPA and FAS 158: Part One—Plan Sponsors' Reactions." *EBRI Issue Brief,* no. 307 (Employee Benefit Research Institute, July 2007).

_____. "The Expected Impact of Automatic Escalation of 401(k) Contributions on Retirement Income." *EBRI Notes,* no. 9 (Employee Benefit Research Institute, September 2007): 1–8.

_____. How Would Target-Date Funds Likely Impact Future 401(k) Contributions. Testimony before the joint DOL/SEC Hearing, Target Date Fund Public Hearing, June 2009.

_____. "The Impact of Automatic Enrollment in 401(k) Plans on Future Retirement Accumulations: A Simulation Study Based on Plan Design Modifications of Large Plan Sponsors." *EBRI Issue Brief,* no. 341 (Employee Benefit Research Institute, April 2010).

VanDerhei, Jack, and Craig Copeland. Oregon Future Retirement Income Assessment Project. A project of the EBRI Education and Research Fund and the Milbank Memorial Fund, 2001.

_____. Kansas Future Retirement Income Assessment Project. A project of the EBRI Education and Research Fund and the Milbank Memorial Fund, July 16, 2002.

_____. Massachusetts Future Retirement Income Assessment Project. A project of the EBRI Education and Research Fund and the Milbank Memorial Fund, December 1, 2002.

_____. "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).

_____. "ERISA At 30: The Decline of Private-Sector Defined Benefit Promises and Annuity Payments: What Will It Mean?" *EBRI Issue Brief,* no. 269 (Employee Benefit Research Institute, May 2004).

_____. "The Impact of PPA on Retirement Income for 401(k) Participants." *EBRI Issue Brief,* no. 318 (Employee Benefit Research Institute, June 2008).

_____. " The EBRI Retirement Readiness Rating:™ Retirement Income Preparation and Future Prospects." *EBRI Issue Brief,* no. 344 (Employee Benefit Research Institute, July 2010).

VanDerhei, Jack, Sarah Holden, and Louis Alonso. "401(k) Plan Asset Allocation, Account Balances, and Loan Activity in 2008." *EBRI Issue Brief,* no. 335, and *ICI Perspective,* Vol. 15, no. 2 (Employee Benefit Research Institute and Investment Company Institute, October 2009).

Endnotes

[1] Although one needs to be extremely careful in comparing at risk ratings between a program that is in essence a 100 percent annuity program with one that is increasingly providing lump-sum distributions.

[2] Approximately 1 in 10 each report totals of $25,000–$49,999 (12 percent), $50,000–$99,999 (11 percent), $100,000–$249,999 (11 percent), and $250,000 or more (11 percent)

[3] A brief description of the EBRI Retirement Security Projection Model® (RSPM) is provided in Appendix A followed by chronology of its development and utilization in Appendix B. More technical details regarding the assumptions used in the model are provided in Appendix C.

[4] Although one needs to be extremely careful in comparing at risk ratings between a program that is in essence a 100 percent annuity program with one that is becoming increasingly providing lump sum distributions.

[5] Wage and salary workers include all workers who work for someone else as well as those who are self-employed and are incorporated. Thus, the unincorporated self-employed are not included.

[6] A worker, who is at least 21 years of age, has one year of tenure, and works more than 2,000 hours in a year, in general, must be covered by an employer who offers a private-sector retirement plan to its workers (IRC Sec. 401(a) 26). Typically, public-sector employers follow similar rules, despite not being governed by all of the same statutes as those for private-sector employers.

[7] An employment-based retirement plan can be sponsored by an employer or by a union. "Employer sponsored" is used in this study for brevity, but it should be understood that it also means union.

[8] This includes the 78.2 million who worked for employer/union that did not sponsor a plan plus 15.0 million who worked for an employer that sponsored a plan but did not participate in the plan for whatever reason.

[9] Brian K. Bucks, Arthur B. Kennickell, Traci L. March, and Kevin B. Moore, "Changes in U.S. Family Finances from 2004 to 2007: Evidence from the Survey of Consumer Finances," Federal Reserve Bulletin, Vol. 95 (February 2009): A1-A55.

[10] This material first appeared in VanDerhei and Copeland (July 2010).

[11] The nominal cost of these expenditures increases with component-specific inflation assumptions. See the appendix for more details.

[12] Net housing equity is introduced into the model in three different mechanisms (explained below).

[13] IRS tax tables from 2009 are used to compute the tax owed on the amounts received from defined benefit plans and Social Security (with the percentage of Social Security benefits subject to Federal Income Tax proxied as a function of the various retirement income components) as well as the individual account withdrawals.

[14] Roth IRA and 401(k) accounts are not used in this version of the model but will be incorporated into a forthcoming EBRI publication.

[15] Capital gains treatment is not used in this version of the model.

[16] This material first appeared in VanDerhei and Copeland (July 2010).

[17] VanDerhei and Copeland (2001).

[18] VanDerhei and Copeland (July 2002).

[19] VanDerhei and Copeland (December 2002).

[20] VanDerhei and Copeland (2003)

[21] VanDerhei (January 2004).

[22] VanDerhei (2005).

[23] VanDerhei (March 2006).

[24] VanDerhei (September 2006)

[25] VanDerhei and Copeland (2008).

[26] Copeland and VanDerhei (forthcoming).

[27] VanDerhei (2009).

[28] VanDerhei (2010).

[29] This material first appeared in VanDerhei and Copeland (July 2010).

[30] The EBRI/ICI Participant-Directed Retirement Plan Data Collection Project is the largest, most representative repository of information about individual 401(k) plan participant accounts. As of December 31, 2008, the database included statistical information about:

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

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

[31] The model is currently programmed to allow the employee to participate in a nonintegrated career average plan; an integrated career average plan; a five-year final average plan without integration; a three-year final average plan without integration; a five-year final average plan with covered compensation as the integration level; a three-year final average plan with covered compensation as the integration level; a five-year final average plan with a PIA offset; a three-year final average plan with a PIA offset; a cash balance plan, or a flat benefit plan.

[32] BLS information was utilized to code the distribution of generosity parameters for flat benefit plans.

[33] While the medical consumer price index only accounts for the increases in prices of the health care services, it does not account for the changes in the number and/or intensity of services obtained. Thus, with increased longevity, the rate of health care expenditure growth will be significantly higher than the 4.0 percent medical inflation rate, as has been the case in recent years.