Effective Retirement Savings Programs: Design Features and Financial Education

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Summary and Introduction

This article provides an overview of the literature on best practices for designing retirement savings plans and providing financial education in the workplace. These two elements are critically important considerations for plan providers. Both must be carefully constructed to maximize the effectiveness of an employer-sponsored retirement savings program in helping participants build adequate funds for when their working career ends. Without a successful plan design, financial education will not be effective, and even a well-structured plan can fail to achieve retirement savings goals without financial education. The main components of a retirement savings program include options for enrollment, investment choices, employer matching of contributions, and distributions during the working career and at retirement. In addition, employees must be educated about the plan design and how it affects them. The core aspects of financial education are controlled by employers: the topics covered, the delivery methods used, the frequency with which it is offered, and its general availability. Financial education can be especially helpful to certain subgroups of the population, including minorities, women, and those with low income and education levels. This article is designed for use both by practitioners and academics seeking a broad overview of some of the significant issues that should be considered in designing a retirement savings program that counts the adequacy of long-term savings among participants as a goal.[1]

A large literature now exists on the effects of different plan designs and methods of education. The literature review is supplemented with information from the 2004 Survey of Consumer Finances (SCF) to document the need for well-designed retirement savings programs and financial education. The SCF is a triennial survey on wealth and saving that is undertaken by the Federal Reserve Board in conjunction with the Statistics of Income (SOI) Division of the Internal Revenue Service (Kennickell 2006).[2] The SCF data are intended to represent the financial characteristics of a subset of the household unit called a "primary economic unit." This unit consists of an economically dominant single individual or couple (married or living as partners) in a household and all other individuals in the household who are financially interdependent with that individual or couple. In a primary economic unit with a mixed-sex couple, the male is considered the head of household; for same-sex couples, the older individual is deemed the head of household.[3] Data from the SCF cover a broad variety of demographic and financial

characteristics, including saving behavior, account balances, and sources of investment advice.

In recent years, there has been an increased policy focus on retirement savings programs offered by employers. These savings programs, which include 401(k), 403(b), Simplified Employee Pensions (SEP), and other plans, are referred to as defined contribution (DC) plans because account balances at retirement depend on employee and employer contributions and the performance of the worker's investments.[4] These plans have largely replaced employer-sponsored defined benefit (DB) plans, which pay retirement benefits using formulas based on factors such as years of service and earnings. Indeed, projections from the Social Security Administration's Modeling Income in the Near Term (MINT) model indicate that current retirees will be the last group strongly dependent on DB pensions (Butrica, Iams, and Smith 2003/2004).[5] For middle-income individuals born between 1926 and 1935, DB pensions will account for 20 percent of their income at age 67, compared with only 3 percent of income from retirement savings programs. For those born in the late part of the baby boom (1956–1964), the corresponding figures are 9 percent and 8 percent. The relative importance of retirement savings programs will increase only for post boomer retirees: among all workers today, only 20 percent participate in DB plans, compared with 43 percent in DC plans.[6]

The passage of the Pension Protection Act (PPA) in August 2006 provided key legislation on both DB and DC plans. Among the changes for DC plans, the PPA removes barriers that prevented companies from automatically enrolling their employees in their plans, removes the risk factor for employers providing investment advice, and gives workers greater control over how their accounts are invested. Many of the PPA changes did not go into effect until after December 31, 2006, and some provisions do not become operational until 2008. It is therefore too early to determine the overall effect the PPA will have on DC plans and their participants. In addition, a technical corrections bill was introduced in the Senate on August 2, 2007, to fix some provisions of the PPA (S.1974). Relevant provisions of the PPA are discussed throughout the article in the context of their relationship to plan design and financial education.

Current Statistics on Saving

Data from the 2004 SCF highlight current deficiencies in savings and financial information.[7] According to SCF data, 10 percent of respondents do not save or invest at all, and certain demographic groups are particularly at risk. As Table 1 shows, the less-educated, non-Hispanic blacks, Hispanics/Latinos, and those with low total family income are all more likely to report that they are not saving or investing.[8, 9] The largest discrepancy is between those with no high school diploma (25 percent do not save) and those with a college degree (less than 5 percent do not save).

Table 1.
Percentage of respondents not saving or investing, by demographic group

Characteristic	Not saving or investing	
	Percentage	Standard error
Overall	10.0	0.44
Sex		
Men	8.5	0.41
Women	13.7	1.10
Education level		
No high school diploma	25.1	1.84
High school diploma	10.3	0.75
Some college	9.2	0.98
College degree	4.1	0.43
Age		
Under 30	7.9	1.03
30–39	8.5	0.89
40–49	8.3	0.73
50–59	8.0	0.86
60–69	12.7	1.30
70 or older	15.9	1.45
Race or ethnic group		
White (non-Hispanic)	8.7	0.44
Black (non-Hispanic)	13.8	1.60
Hispanic/Latino	13.5	1.27
Other	8.8	2.72
Total family income		
Under $20,000	21.6	1.51
$20,000–29,999	13.5	1.50
$30,000–39,999	8.3	1.39
$40,000–49,999	9.7	1.31
$50,000–59,999	6.8	1.50
$60,000–69,999	4.3	1.19
$70,000 or above	1.8	0.34

SOURCE: Authors' calculations using the 2004 Survey of Consumer Finances.

NOTE: The standard errors are total standard errors that incorporate estimates of variation due to sampling and imputation. (For details, refer to the "Codebook for 2004 Survey of Consumer Finances" provided by the Division of Research and Statistics, Board of Governors of the Federal Reserve System.)

When asked what their most important reasons for saving are, around 45 percent of respondents to the SCF answer "retirement/old age," and only about 13 percent say that a saving horizon of longer than 10 years is most important to them. Again, these answers vary by demographic characteristics. Table 2 shows that as income rises, so do planning horizons. Only about 19 percent of respondents with total family income below $20,000 are saving for retirement, as opposed to about 71 percent of respondents with total family income above $70,000. In addition to those with low income; the less-educated, those under age 30, and minorities are all less likely to have long-term saving horizons with money earmarked for retirement.

To some extent, inadequate savings can be attributed to a lack of sufficient retirement goals.[10] Without setting goals for retirement savings, many people fail to save enough and lack confidence in their future retirement income. The SCF asks respondents to rate the retirement income they expect to receive from Social Security and private pensions. As Table 3 shows, only about 8 percent of respondents are very satisfied with their expected retirement income, and 34 percent feel their retirement income will be enough to maintain their current standard of living. On the

Table 2.
Percentage of respondents saving for retirement or old age and percentage having a saving horizon longer than 10 years, by demographic group

Characteristic	Saving for retirement or old age		Saving horizon longer than 10 years	
	Percentage	Standard error	Percentage	Standard error
Overall	44.7	0.73	13.3	0.49
Sex				
Men	49.2	0.90	14.7	0.63
Women	33.3	1.27	9.7	0.65
Education level				
No high school diploma	20.2	1.76	4.7	0.60
High school diploma	40.0	1.16	11.2	0.74
Some college	44.3	1.45	12.1	1.16
College degree	58.6	1.26	19.1	0.86
Age				
Under 30	25.2	1.75	12.2	1.22
30–39	38.1	1.48	15.2	0.97
40–49	57.8	1.61	16.4	0.97
50–59	62.2	1.59	15.2	1.15
60–69	49.2	1.70	12.4	1.16
70 or older	26.9	1.69	6.3	0.95
Race or ethnic group				
White (non-Hispanic)	49.8	0.80	15.7	0.57
Black (non-Hispanic)	30.8	1.53	7.1	0.74
Hispanic/Latino	27.3	2.50	7.3	1.06
Other	49.8	3.23	8.1	2.35
Total family income				
Under $20,000	19.4	1.28	5.3	0.55
$20,000–29,999	29.1	1.72	10.0	1.24
$30,000–39,999	40.4	2.13	11.2	1.45
$40,000–49,999	44.6	2.55	14.4	1.76
$50,000–59,999	48.3	3.03	11.1	1.75
$60,000–69,999	56.4	2.41	19.5	1.99
$70,000 or above	70.8	1.22	21.0	1.18

SOURCE: Authors' calculations using the 2004 Survey of Consumer Finances.

NOTE: The standard errors are total standard errors that incorporate estimates of variation due to sampling and imputation. (For details, refer to the "Codebook for 2004 Survey of Consumer Finances" provided by the Division of Research and Statistics, Board of Governors of the Federal Reserve System.)

other hand, about 27 percent think that their retirement income will be totally inadequate. Sex, education, age, and race do not seem to affect the percentage of respondents who are totally satisfied with their retirement income, although there are modest demographic differences in the percentage of respondents who consider their retirement assets to be totally inadequate, and no group seems to feel exceedingly confident in their retirement savings. Perhaps the most striking finding in this analysis concerns individuals between the ages of 50 and 59, who are quickly approaching their retirement years. Of this group, roughly 25 percent believe that their retirement income will be totally inadequate. Having a quarter of the group so close to retirement feeling unprepared is a substantial problem.

As the above SCF data show, a majority of people are not saving for retirement, exhibit short-sightedness in savings planning, and do not feel satisfied with their expected retirement income. These issues could be partially remedied by a retirement program designed to encourage employee participation and contributions while offering effective financial information to partic-

Table 3.
Percentage of respondents rating their expected Social Security and pension income, by demographic group

Characteristic	Totally inadequate		Somewhat inadequate		Enough to maintain living standards		Somewhat satisfactory		Very satisfactory	
	Percentage	Standard error	Percentage	Standard error	Percentage	Standard error	Percentage	Standard error	Percentage	Standard error
Overall	27.3	0.68	19.3	0.59	34.0	0.64	11.2	0.52	8.2	0.40
Sex										
Men	25.5	0.79	18.9	0.62	34.8	0.79	12.4	0.62	8.4	0.44
Women	32.0	1.35	20.5	1.25	31.8	1.21	8.2	0.84	7.5	0.71
Education level										
No high school diploma	31.6	2.02	20.4	1.43	35.1	1.79	6.1	0.99	6.7	1.00
High school diploma	29.5	1.26	18.4	0.97	35.0	1.48	9.4	0.88	7.7	0.62
Some college	31.3	1.54	20.1	1.28	32.0	1.63	9.6	0.88	7.0	0.82
College degree	21.7	1.07	19.3	0.89	33.6	1.14	15.6	0.86	9.7	0.69
Age										
Under 30	35.3	1.58	16.5	1.32	29.5	1.73	9.6	0.96	9.1	1.11
30–39	32.5	1.56	21.6	1.57	28.6	1.36	10.0	1.01	7.3	0.83
40–49	29.5	1.13	21.2	1.18	33.6	1.26	10.6	0.91	5.2	0.61
50–59	25.1	1.30	18.9	1.20	37.6	1.31	12.3	1.01	6.0	0.75
60–69	21.5	1.36	19.2	1.68	35.4	1.82	13.3	1.46	10.6	1.00
70 or older	18.5	1.83	17.2	1.21	39.1	1.98	12.0	1.45	13.3	1.36
Race or ethnic group										
White (non-Hispanic)	25.3	0.73	20.6	0.65	33.8	0.71	12.2	0.64	8.2	0.48
Black (non-Hispanic)	32.1	1.47	17.1	1.99	33.7	1.95	10.3	1.19	7.0	0.81
Hispanic/Latino	34.1	1.77	14.9	1.29	35.5	1.95	5.5	0.92	9.9	0.94
Other	29.0	3.54	17.4	2.86	34.6	3.25	12.5	3.38	6.5	1.84
Total family income										
Under $20,000	38.3	1.53	20.3	1.34	30.2	1.26	5.9	0.76	5.3	0.70
$20,000–29,999	33.3	1.95	18.6	1.35	30.7	1.65	8.8	1.36	8.7	1.20
$30,000–39,999	24.2	2.25	18.2	1.80	43.3	2.73	7.3	1.18	6.9	1.03
$40,000–49,999	28.6	2.18	20.8	1.41	34.8	1.90	10.3	1.34	5.6	1.18
$50,000–59,999	19.1	2.30	22.8	2.42	34.7	2.80	13.4	2.09	10.0	1.82
$60,000–69,999	21.1	2.30	17.9	2.44	30.3	2.45	18.8	2.37	12.0	1.49
$70,000 or above	20.1	1.13	18.3	0.81	35.2	1.11	16.2	1.08	10.2	0.77

SOURCE: Authors' calculations using the 2004 Survey of Consumer Finances.

NOTES: Respondents were asked to rate their expected retirement income on a scale from 1 to 5, with 1 being totally inadequate, 3 being enough to maintain living standards, and 5 being very satisfactory. The terms "somewhat inadequate" and "somewhat satisfactory" are the authors' choosing for those respondents who chose 2 and 4 on the scale, respectively.

The standard errors are total standard errors that incorporate estimates of variation due to sampling and imputation. (For details, refer to the "Codebook for 2004 Survey of Consumer Finances" provided by the Division of Research and Statistics, Board of Governors of the Federal Reserve System.)

ipants. Both of these methods are critical elements to consider in designing an employer-sponsored savings program that aims to help participants save adequately for retirement.

Plan Design

Retirement savings plans can be constructed and administered in a variety of ways. These design choices merit close consideration because research has shown that different enrollment, investment, matching, and distribution options can considerably influence participation and savings rates.

Enrollment

The most basic feature of a retirement savings program, and one that plays a significant role in determining participation rates, is the enrollment approach used in the plan. Retirement savings programs are generally designed using either an opt-in or automatic enrollment strategy. In an **opt-in plan**, the default is nonparticipation because employees are required to indicate their desire to be involved in the program, most often by submitting an enrollment form. Under **automatic enrollment**, employees are, by default, account holders in the retirement plan. They can opt-out of the plan but usually must fill out paperwork to do so.

Madrian and Shea (2000) find in their study of a large U.S. company that switching from an opt-in to an automatic enrollment plan increases participation substantially and lowers discrepancies in 401(k) participation among different demographic groups. Similar results are demonstrated in a report by Holden and VanDerhei (2005), which finds, for all eligible employees in the study, that automatic enrollment increased 401(k) participation by 26 percentage points. Automatic enrollment allows employees to avoid deciding whether to participate in the plan by making participation the default. This factor is particularly important because inertia and the desire to avoid making a complicated decision can have a significant impact on participation.[11]

Policymakers have begun to appreciate the impact of automatic enrollment plans on participation and have developed initiatives to help make these types of retirement savings programs more common. The most significant indicator of the growing faith in the efficacy of automatic enrollment is the passage of the PPA. The PPA amends the Employee Retirement Income Security Act (ERISA) expressly to preempt state laws that prohibit the withholding of any portion of an employee's pay without an affirmative election by the employee, that is, automatic enrollment (Purcell 2006). To obtain the preemption, employers must satisfy several requirements: deferrals and employer contributions must be placed in qualifying default investment alternatives (QDIAs) for participants who do not direct their account investments; notice must be given to participants explaining their right to opt-out or change the deferral percentage; participants must be informed that their accounts will be invested in QDIAs if they do not give investment directions; and participants must have a reasonable time to opt-out or to elect a different amount of deferral after notice is given.[12]

The PPA also amends the Internal Revenue Code to add a design-based safe harbor for plans that use automatic enrollment. The safe harbor is optional and allows plans to be exempt from nondiscrimination testing if the requirements are met.[13] To be eligible for the safe harbor, the default contribution rate for a retirement savings plan with automatic enrollment must be no less than 3 percent in the first year, increasing to minimums of 4 percent in the second year, 5 percent in the third year, and 6 percent in all following years. Contribution rates can be set higher than these thresholds, with 10 percent serving as the maximum (Purcell 2006).[14] The potential availability of safe harbor from nondiscrimination testing is designed to make automatic enrollment a more attractive option for plan providers, thereby increasing its use and, by extension, participation in retirement savings plans. Matching provisions are also part of the PPA rules governing safe harbor, and a discussion of these rules is included later in this article.

Evidence already indicates that the automatic enrollment elements of the PPA have worked as intended. According to a 2006 survey of chief financial officers completed by Financial Executives International and Baruch College, almost 28 percent of companies are either planning to modify or have already modified their 401(k) plans based on the PPA. Roughly 38 percent of the firms making such changes have set the introduction of automatic enrollment as a goal (Financial Executives International 2006).

However, despite the growing acceptance of automatic enrollment, the effects of this strategy are not all positive. There is evidence that automatic enrollment produces lower contribution rates than would occur under an opt-in program. Madrian and Shea (2000) note that in their study of automatic enrollment, 12.2 percent more employees remain at the default contribution rate than what would be predicted under a scenario where all new participants under automatic

enrollment contribute at the default rate. This finding indicates that automatic enrollment leads many individuals to choose the default contribution rate, even some who would have participated in the plan under an opt-in arrangement anyway and adopted a different contribution rate. One particular problem with participants remaining at the default rate is that this rate is nearly always well below the DC plan contribution rates that are generally required to achieve an adequate postretirement income, according to projections by Vanguard (2004).

A possible solution to low default savings rates is outlined by Thaler and Benartzi (2004). The authors develop what they term the SMarT program, which features an automatic escalating contribution rate that takes effect with the first paycheck following a raise, up to a certain predetermined maximum. The plan ensures that an employee's take-home pay is never reduced and helps overcome obstacles to saving, such as bounded rationality (people do not know how much they should save); lack of self-control (people lack the willpower to increase savings); procrastination (people often postpone tasks they find unpleasant); status quo bias (people are often controlled by inertia); and loss aversion (people weigh losses they experience more heavily than they do gains). In their study of the SMarT program at a midsized manufacturing firm, Thaler and Benartzi (2004) find that 80 percent of participating employees remain in the SMarT program through four pay raises, with contribution rates rising from 3.5 percent to 13.6 percent over a period of slightly more than 3 years.

Despite their benefits, retirement savings programs with automatic enrollment are sometimes criticized because of the paternalism such plans entail. If this issue is a concern, another alternative is to design a retirement program that uses active-decision making —an option discussed by Carroll and others (2005) in *Optimal Defaults and Active Decisions*. Under an active-decision plan, prospective participants are given a form, either when they come on duty or at a later date when they become eligible, that requires them to decide whether to participate in the retirement plan being offered. The authors find in their analysis of a large Fortune 500 company that changing to an active-decision plan increased enrollment by 28 percent over the standard, opt-in program during 3 months and that attrition rates showed no discernable change. Active-decision plans also resulted in participants choosing an average savings rate that would take 3 years to achieve using opt-in enrollment. However, active-decision plans also have definite costs. They require every potential participant to enter into an often time-consuming decision process that they may be ill qualified to make. In addition, these plans require the creation of an effective method for compelling completion of the form, lest the program become for all intents and purposes an opt-in plan (Carroll and others 2005). Active-decision plans avoid the paternalism present in automatic enrollment programs but place a greater burden on participants and may ultimately be less effective at increasing participation rates.[15]

Enrollment options can substantially influence participation rates, contributions, and consequently, the ability to sustain an adequate postretirement income. Changing from an opt-in to an automatic enrollment program has a positive impact on enrollment but can also decrease contribution rates as people fail to increase their savings rate from the default. Maintaining the low default rate, in turn, results in fewer participants having enough savings to maintain an adequate replacement rate when they are no longer working. Retirement savings programs, such as the SMarT plan, deal with these complicated issues and include enrollment features that achieve a balance among the distinct goals that savings plans must meet. If automatic enrollment is objected to on grounds of paternalism, active-decision making can be used instead—an approach that also avoids automatic enrollment's negative affect on contribution rates. No matter which path is chosen, however, the literature overwhelmingly encourages implementing a plan with enrollment features that increase participation beyond the levels attained through opt-in design.

Investment

After choosing to participate in a savings program, participants must determine how to best invest their money. The options offered by a retirement savings program are important factors in helping participants meet their own savings goals.

One issue of particular concern is a lack of diversification. Agnew, Balduzzi, and Sunden (2003) find a bimodal distribution of investment holdings with 47.61 percent of individuals in their study holding no equities and 21.73 percent holding only equities. Further, a 2007 Fidelity Investments report finds that 19 percent of DC plan participants hold only a single, non-diversified investment asset in their 401(k) plan (Fidelity Investments 2007). By concentrating investments in a limited number of assets, employees are not diversifying their accounts—which can be an impor-

tant protection from dramatic fluctuations in account value.

The most basic aspect of designing investment options for retirement plans is determining the range of opportunities that will be available for participants. In the 2004 SCF, nearly 53 percent of retirement plan participants reported having at least a limited choice in how the assets in their employer-run retirement plans are invested. The way in which these choices are constructed can have a sizable effect on savings behavior. Iyengar, Jiang, and Huberman (2003) find in their study of Vanguard Group clients that for every 10 funds that are added, 401(k) participation rates decrease between 1.5 percent and 2 percent. When people are faced with too many options, many choose to do nothing, overwhelmed by the complex decision-making required. This problem is particularly acute in investing, a topic in which few people feel well qualified (Iyengar, Jiang, and Huberman 2003).

Agnew and Szykman (2004) discover in their survey of individuals that reducing the number of investment options decreases the feeling of overload among those with substantial financial knowledge. However, although those with low financial knowledge still feel overwhelmed and would likely benefit from improved financial education. This finding highlights the importance of plan design in conjunction with financial education to prevent the abundance of poorly understood choices that produce uncertainty in, and avoidance of, investment.[16] The recommendation offered by Iyengar, Jiang, and Huberman (2003) to deal with the abundance of choice is to tier funds, setting up groups of funds in different sections according to investment goals. This approach allows participants to experience the positive effects of greater choice, such as a sense of personal control, without making them feel overwhelmed by the number of options available.

Beyond the problems associated with the inaction that often accompanies the feeling of being overwhelmed is the fact that when investors do make an investment choice, they generally make one ill suited to achieving their own savings goals. Benartzi and Thaler (2001) find investors often use what is termed the 1/n heuristic, where contributions are divided evenly among the options provided. Using this type of decisionmaking, participants may choose portfolios that are not along, or are at the wrong point of, the efficient frontier, which represents the optimal portfolio allocation that is consistent with an individual's desired balance of risk and return. Benartzi and Thaler's work demonstrates that many people are simply unable to effectively make complicated investing decisions in the manner most beneficial to them. However, these issues do not mean that investors are inherently unable to make effective investment decisions. Comprehensive financial education programs and a well-designed retirement savings plan can help alleviate the problems associated with excessive choice.

Regardless of the investment options offered, constructing the default fund requires great care. The propensity of many participants to maintain investments in the default option requires that the automatically adopted portfolio is well designed to achieve optimal investment decisions and high returns. Choi and Laibson (2001) describe how default savings rates are often low and placed in conservative investment options such as money markets, which can result in participants not having adequate funds throughout their retirement. This cautionary approach for defaults is logical given that employers are unlikely to automatically place employees in a position where their funds are dependent on volatile returns.

One effective default, and an increasingly popular option for managing investments, is a life-cycle fund. According to Vanguard (2006), more than 40 percent of new participants in DC plans used life-cycle funds for their investments. This type of diversified, evolving portfolio is discussed in *Funds for Retirement: The 'Life-Cycle' Approach* (Vanguard 2005a). In that report, Vanguard highlights two types of life-cycle funds: targeted-maturity funds and static-allocation funds. **Targeted-maturity funds** automatically alter risk as an investor ages; **static allocation funds** have to be actively managed by participants who can choose a portfolio ranging from extremely conservative to very aggressive (Vanguard 2005a). Both types of plans have distinct costs and advantages. Targeted-maturity funds do not allow participants to address issues such as spending needs or risk tolerance, but they also require little work on the part of investors. Static-allocation funds have a more significant time commitment but allow participants to more effectively meet their individual needs. Vanguard (2005a) recommends that only one of these types of life-cycle funds be offered in a retirement plan and, when choosing which of these life-cycle plans is most appropriate, that characteristics such as age, education level, the savings rate of the average participant, and the cost of funds need to be considered.

If not used as intended, the life-cycle fund's effectiveness is limited. The diversification within life-cycle funds is designed to allow participants to use this

investment option as "one-stop shopping." However, only 31 percent of participants in life-cycle funds use them in this way (Vanguard 2006). Like any facet of a retirement investment program, employers should advise participants about the purpose of life-cycle funds and how to use them effectively.

Another critical investment decision in the construction of a retirement savings program is the role of company stock. Utkus and Waggoner (2003) find in their survey of plan sponsors and participants that many employees underestimate their own holdings in company stock, and around two-thirds erroneously believe that their employer's stock is at least as safe as a diversified portfolio of stocks.

Agnew (2002) explains that over investment in company stock is a common mistake in retirement plan portfolios. In DB plans, employer stock cannot, by law, compose more than 10 percent of a portfolio. In DC plans, no such limit exists, and Agnew finds in her study of one large 401(k) plan that the mean allocation of company stock held by plan participants is 49 percent.

Although the allocation in company stock for this particular type of plan was unusually high, the implications of Agnew's (2002) findings are supported by the work of Mitchell and Utkus (2002). By analyzing figures from Holden and VanDerhei's study of data from the Employee Benefit Research Institute (EBRI) and the Investment Company Institute, Mitchell and Utkus find that nearly one-quarter of participants in 401(k) plans that allow investment in company stock have this option accounting for more than 60 percent of their holdings. Company stock can represent a risky investment, particularly when a portfolio is not adequately diversified. Although employers may find the option of providing heavy concentrations of their own stock attractive, employer stock has several deficiencies, making it a poor choice for the core component of a retirement fund, including transaction restrictions and greater volatility than other investment options (Utkus and Waggoner 2003).

The PPA includes diversification rules that went into effect on January 1, 2007, for new securities and will become effective within 3 years for previously held securities. These rules require DC plans to allow participants to diversify their holdings out of company stock into at least three other investment options (Purcell 2006). For all plan participants, regardless of tenure, this rule applies to company stock purchased using voluntary salary deferrals or after-tax contributions. Among employees with at least 3 years of service before 2007, the diversification rules also apply to employer contributions to the plan. However, under certain circumstances, these regulations do not apply to employee stock ownership plans (Purcell 2006).

Determining effective investment options is a difficult task in planning a successful savings plan. Poorly designed investment options, particularly as the default, can significantly decrease the likelihood that participants will be able to sufficiently provide for themselves after their working career ends. Offering tiered options, life-cycle funds, or both, and decreasing reliance on company stock all help ensure that participants in the retirement program invest effectively and according to their own desired risk.

Matching

Another important component of many retirement savings programs is an employer match, in which employers make a contribution to a participant's account based on the money already invested, up to a predetermined point. The match is used as a tool to increase participation and savings levels, as well as contribution rates. The two components of an employer match are the rate at which matching occurs and the threshold at which matching stops.

Engelhardt and Kumar (2006) analyze the complexities of measuring the affect of employer matching. They cite studies that demonstrate seemingly contradictory results. For instance, some studies find that increasing the employer match rate increases savings; others show that the existence of a matching program matters but the actual rate does not; and yet others report that increases in the match rate can lower contributions. On the basis of their own study, Engelhardt and Kumar conclude that individuals do not react strongly to employer matching in terms of either participation or contributions. However, the authors offer the caveat that their study focuses on older workers and younger workers may have a different response to employer matching. Other research, such as that reviewed by Munnell and Sunden (2003) more strongly suggests that the existence of an employer match increases the likelihood that employees will enroll in a retirement savings plan, while also increasing contribution levels.

Beyond the rate at which matching occurs, plan designers must consider the optimal match threshold, or the percentage at which employers' contributions to the plan cease. Choi and others (2001) discuss how the match threshold serves as a guide to employees, who often tailor their saving rate to this limit. The

authors note that the match threshold can help raise the contributions of households with low savings rates and provide an anchoring effect for investors who use the percentage as a starting point. However, the match threshold can also depress contributions if it is set too low, because participants are far less likely to contribute beyond this amount, particularly in plans that use automatic enrollment. According to the authors' analysis of three companies, 63 percent to 79 percent of participants in an opt-in plan contribute at or above the match rate, compared with only 26 percent to 49 percent of participants in an automatic enrollment plan.

One method that can be used to increase contribution rates without costing the employer more money is to match a smaller percentage of pay up to a greater threshold. For example, matching 50 cents on the dollar up to 6 percent, as opposed to 100 percent of each dollar up to 3 percent, may boost employees' contribution rates, even though the employers' cost stays the same (Sleyster 2006).

The PPA includes new rules governing the use of matching funds for safe harbor from nondiscrimination testing for plans using automatic enrollment. In addition to the qualifications that have already been discussed, safe-harbor eligibility also requires employers to match contributions for all non-highly compensated employees using the following guidelines: 100 percent of elective deferrals up to the first 1 percent of compensation, 50 percent of elective deferrals for the next 5 percent of compensation, and a non-elective 3 percent of compensation. Employer contributions must then be 100 percent vested after 2 years (Purcell 2006).

Employer matching can be an important factor in achieving the goals of a retirement plan. Although research on the effectiveness of employer matching is mixed, there is some evidence that matching can increase participation and contributions. Perhaps most importantly, the match rate and threshold seem to help increase contributions among households with low savings, a group particularly at risk for not having sufficient funds to maintain a comfortable standard of living in retirement. The design of an appropriate employer matching program is a worthwhile consideration for plan designers. Ultimately though, the controlling factor in deciding on a match rate and threshold may be the financial ability of the employer to provide funds.

Distributions

Another important aspect of retirement savings programs is the method through which funds are paid out of the account. The rules governing the distribution of funds, both before and after retirement, can have a dramatic impact on plan participation, contribution rates, and the maintenance of an adequate postretirement replacement rate.

One issue that plan designers must consider is whether they will permit money to be distributed before retirement through loans. In the 2004 SCF, almost 13 percent of respondents participating in plans that allow borrowing report having outstanding loans from their retirement plan, for a median amount of $4,500. Like private loans, plan loans are also generally paid back on a fixed time schedule. For example, in the federal government's Thrift Savings Plan (TSP), a general-purpose loan must be repaid in a period of 1 to 5 years, and a residential home loan can be paid off in 1 to 15 years. In addition to interest payments, which are credited back into the account, fees may be associated with the loans to pay for the administrative costs of processing these transactions.

Permitting distribution through loans is a popular feature among 401(k) plans and can have a noticeable impact on participation rates and contributions. According to a study by the Government Accountability Office, participation rates are 6 percentage points higher in plans that allow loans (GAO 1997). Studies indicate that the availability of loans also increases contribution rates. Munnell, Sunden, and Taylor (2001/2002), using the 1998 SCF, find that the possibility of borrowing funds increases contributions by 2.6 percentage points. Both factors are critical in the success of a retirement savings program and help ensure that as many employees as possible have an adequate income in retirement. Loans can also be problematic, however, because loans cause plan balances to grow more slowly since the money that has been removed is not available for investment.

Decisions must also be made regarding how to deal with the accounts held by employees when they leave their position, either at or before retirement. There are numerous options for distribution, and the method selected can affect the adequacy of retirement savings. This choice is ultimately up to the participant, but plan providers can promote the methods of distribution that are most effective in helping achieve retirement savings goals.

The fundamental question facing plan participants who leave their employer before retirement is whether to accept receipt of the funds in their retirement savings account immediately, to defer compensation until a later date by leaving the account with their employer,

or to roll the account over into an investment portfolio at their new job or into an IRA. According to Hewitt Associates (2005b), 45 percent of all employees elect to take a lump-sum payment when leaving their job. The rates are highest for younger workers, aged 20 to 29, 66 percent of whom accept a cash distribution. However, even among older workers, aged 40 to 49, over 42 percent elect a lump-sum payment upon ending their employment (Hewitt Associates 2005b). A significant factor in determining whether the 401(k) balance is taken as a lump sum or rolled over (meaning transferred into another tax-deferred savings vehicle) is the amount of money in the account. Of participants with less than $10,000 in their 401(k), 72.5 percent cash out their balance, compared with 31 percent for those with balances between $10,000 and $20,000 (Hewitt Associates 2005b). The payment of a lump sum can negatively affect savings because many participants are unlikely to reinvest these funds (Poterba, Venti, and Wise 1995). Beyond the fact that lump-sum payments are rarely reinvested, cashing out a 401(k) also lowers savings by decreasing the value of the account through tax penalties. If a participant accepts a lump-sum payment and is younger than 59½ years old, outside certain exceptions, the sum is generally subject to income tax as well as an extra 10 percent penalty for early withdrawal. The option of cashing out 401(k)s in a lump sum, although attractive for many participants, can largely defeat the purpose of a retirement plan.

The law previously allowed employers to provide a departing employee with a lump-sum cash distribution if the balance in the retirement account was under $5,000, regardless of the employee's consent. However, the Economic Growth and Tax Relief Reconciliation Act of 2001 lowered this threshold to $1,000. Instead of a cash distribution, employers must rollover the retirement account into an IRA for the employee if the employee does not make another election (Purcell 2003).

Turning to retirement distribution, if having adequate long-term retirement savings is a goal, annuities should be encouraged. As longevity increases, the possibility that individuals will outlive their retirement resources is a growing concern. Research from EBRI indicates that workers have a poor understanding of the variability of life expectancy, meaning that many fail to plan for the possibility of living longer than their own self-projected death age (Helman, Copeland, and VanDerhei 2006). As the National Academy of Social Insurance panel report argues, "economic analyses indicate that a life annuity would be a rational choice for a person who wanted to ensure income for life" (Reno and others 2005, 51).

Decisions about methods of distribution are a critical factor in determining the effectiveness of a retirement savings plan. Distribution rules can increase savings and are important in providing plan participants with an adequate postretirement replacement rate. Even a plan that has successfully helped participants accrue sizable funds for retirement can be rendered ineffective by design decisions that foster counterproductive distribution strategies. As such, it is important that plan designers do not overlook this final component of constructing a successful retirement savings plan.

Financial Education

Constructing a well-designed plan is only one aspect of developing a successful program with high levels of participation, significant contribution rates, and an adequate postretirement replacement rate. Financial education is another essential element of an effective retirement savings program. It can help employees set realistic goals for retirement savings and can increase employees' understanding of the choices available to them, thereby increasing their savings and net worth (Maki 2004). The need for financial education is made apparent when one considers that roughly 30 percent of households in the Health and Retirement Study whose head is nearing the end of his or her working career have engaged in little or no planning for retirement (Lusardi 2003).

Financial education has become a more important topic in the past few decades, largely as a result of the increase in DC plans in the workplace.[17] To successfully operate one of these plans, employers should provide information to employees that explains the details of the plan, encourages them to participate, ensures they make sound investments, and makes certain they are contributing enough during their working years to maintain a desired standard of living in retirement. According to *The Effects of Financial Education in the Workplace: Evidence from a Survey of Employers* by Bayer, Bernheim, and Scholz (1996), both participation in and contributions to DC plans are significantly higher when employers offer educational programs.

In a workplace, financial education is most often provided by employers to employees—both to those who are already enrolled in a savings plan and to those who do not participate. According to a 2005 Hewitt Associates study, 91 percent of employers offer investment education to employees (2005a). Forty-two

percent of employers stated that the most important goal of education they provide is to increase plan participation (Hewitt Associates 2003). With the passage of the PPA, which allows for automatic enrollment (as explained previously), employers may set new goals in offering education to their employees. Other reasons employers might offer financial education to employees could include improving employees' motivation, loyalty, and morale by demonstrating concern for their welfare; communicating the substantial value of pension benefits; or responding to employees' request for assistance with financial planning (Bernheim and Garrett 2003).

Although many employers offer financial education to their employees, several studies indicate that retirement savings plans are not achieving the primary goals for which they are designed. According to Hewitt Associates (2006a), about 33 percent of employees with 401(k)s do not participate in the plan offered by their employer. Of those who do participate, 22 percent do not contribute enough to max out their employer matching contribution, and only 35 percent of employees were definitely aware that their employer even offered matching contributions (Hewitt Associates 2003). Further, only 2 percent of workers, according to data from EBRI, say they are very knowledgeable about investing (Gross 2005). A survey by investment education provider ICC Plan Solutions finds that roughly 74 percent of retirement plan sponsors state that their participants need help with basic investment knowledge (Arnone 2005).

This lack of basic investment knowledge may lead employees to make poor investment decisions, leaving them ill prepared for retirement. Using Survey of Income and Program Participation (SIPP) data, a study by Copeland (2005) found that only 5.6 percent of workers are making the maximum contribution allowed to their 401(k)-type plan and that the average total account balance is only $33,647. In addition, the median account balance for workers closest to retirement (aged 55 to 64) is only $25,000.[18] Under IRS laws for 2008, employees can contribute up to $15,500 per year to their retirement savings accounts, and this amount can increase annually by cost-of-living adjustments.[19] With average account balances so low, many individuals will not be able to achieve the recommended 70 percent to 80 percent income replacement rate in retirement (Milne, VanDerhei, and Yahoboski 1995).

The PPA made it easier for employers to provide financial education at work without worrying about the risk involved. Previously, employers were hesitant to provide advice because they did not want to be held legally liable if their employees' investments did poorly. The PPA eliminated that risk by permitting a fiduciary that is a registered investment company, bank, insurance company, or registered broker/dealer to provide investment advice to participants in an "eligible investment advice arrangement" as long as they charge a flat fee that does not vary depending on the basis of any investment option selected or their recommendations are based on a computer model that has been certified by an independent third-party (Purcell 2006 and Doyle 2007).[20] An audit of the investment advice will be required annually (Purcell 2006). The provisions on investment advice could be further refined in the technical corrections of the PPA, since this was one of the most heavily debated provisions in the original legislation (Shidler 2006).

Financial education provided by employers (or plan sponsors) is often the only exposure many employees have to this type of information. With the passage of the PPA, employers now have more legal protections in providing investment advice to their employees and may be more inclined to offer or expand education within their retirement savings programs. Financial education can cover a wide range of topics, including basic investment terminology, principles of asset allocation, concepts of risk tolerance, and retirement goal setting. In addition, employers can determine how often and in what form they offer education to their employees. They can also tailor the type of financial education provided according to the demographics of their workforce, which can further increase the effectiveness of financial education in achieving the goals of a successful retirement savings program (that is, high contribution and participation rates, optimal investment decisions, and an adequate replacement rate).

Topics Covered

Financial education offered by employers can cover a wide range of topics and can be tailored according to the make-up of their workforce. For example, if employees are at the beginning of their career, financial education could focus on encouraging enrollment in the plan, slowly increasing contribution rates with career steps, and investment allocations that may yield more money over a long time horizon. As employees near retirement, financial education could shift to cover how the money should be distributed when leaving employment, what types of annuities to purchase,

or altering investment allocations to avoid sudden dips in the stock market close to retirement.

According to a study by Milne, VanDerhei, and Yahoboski (1995), the basic principles that employees should understand are the sources of retirement income, the establishment of goals for retirement income, the effect of inflation on buying power in retirement, the impact of personal lifestyle and assumptions concerning health status and expected life span on retirement income, and the income needs of survivors. Employees need to understand what their retirement income will consist of (Social Security, pensions, individual savings, and so on) and set goals for how much they need to put in their DC plan to ensure that all retirement income combined will result in a replacement rate of 70 percent to 80 percent of preretirement earnings. In addition to these basic principles, the authors argue that basic financial education should at a minimum include the importance of plan participation, contribution levels, asset allocation and diversification, and the individual's savings horizon. Other relevant topics can include basic investment terminology, a general explanation of the company's specific pension plans, understanding of risk and risk tolerance (which can change on the basis of the career stage the employee is in), and the impact of preretirement withdrawals on retirement income (see the previous section on distributions).

Milne, VanDerhei, and Yahoboski (1995) also discuss a 1993 Hewitt Associates study, which found that 87 percent of plan sponsors feel that asset allocation is the most important information need among employees, followed by risk tolerance (83 percent). Bernheim and Garrett (2003) find that financial education programs tend to be remedial and are offered more frequently in situations where employees are predisposed against saving. As the above SCF data show, respondents who are predisposed against saving for a number of reasons are unprepared for retirement. One explanation may be that financial education is not available to or is underused by the majority of those individuals, even though it may be tailored specifically for them. Bernheim and Garrett also state that employers are more likely to offer education in the context of plans, such as 401(k)s or the TSP, where employees make their own decisions about whether or not to enroll, how much they wish to contribute, and how their assets should be allocated.

Delivery Method

Financial education can be offered using a wide range of media, such as print materials or seminars, and the method through which it is provided will depend on the employer's resources and who will be using the information. The delivery method can be customized according to demographic factors such as the age of the employees or the language they speak. Types of program deliverables can include generic print publications (newsletters, guides, workbooks); personalized print items (individual benefit statements, retirement projections); group learning settings (live workshops or seminars, online sessions); individual learning (CDs, videotapes, audiotapes, Web-based self-study modules); telephone services (1-800 numbers); individual counseling with financial planners; and Web-based tools (Arnone 2005). The use of these types of materials can vary from company to company and even from office to office. For example, an educational CD might be very useful for employees who travel frequently, such as truck drivers, or individual counseling can be provided at smaller firms with fewer employees, where it would be less costly (Milne, VanDerhei, and Yakoboski 1995).

According to the 2002 Retirement Confidence Survey conducted by EBRI, the American Savings Education Council, and Matthew Greenwald & Associates, 82 percent of workers receive benefit statements, 82 percent receive brochures, and 68 percent receive either newsletters or magazines. The same study finds that 61 percent of employees have access to a financial planner and 66 percent are eligible to attend seminars. Online materials are available to 47 percent of employees at firms with educational offerings, 14 percent have access to computer software, and 14 percent have access to informational videos (Employee Benefit Research Institute 2002). The most recent Retirement Confidence Survey found that 61 percent of workers have referenced plan benefit statements, 52 percent have used information found over the internet, 28 percent have used computer software, and 21 percent have used information obtained from seminars when making retirement savings and investment decisions (Helman, Copeland, and VanDerhei 2007).

Maki's 2004 study cites a survey using Watson Wyatt Worldwide data, which finds that both generic newsletters and material specific to the employer's retirement savings plan can raise participation rates. If used together, they can increase participation rates 36 percentage points. In addition, the survey finds that

generic newsletters have no effect on contribution rates and that financial information specifically tailored to the employer's plan raises contribution rates approximately 2 percentage points. Though only around half of employees are eligible to attend seminars, Maki notes that retirement seminars are the most effective means of communication, raising participation rates by 8 percentage points and contribution rates by 0.66 percentage points, according to a KPMG Peat Marwick Retirement Benefit Survey. In addition, a 1994 EBRI study on the educational efforts within DC plans found that 92 percent of employees receiving educational materials report reading them. Among those who read the materials (or attended seminars), 33 percent report that the materials led them to increase their plan contributions and 44 percent said it led them to change their asset allocation.

Under the PPA, participants in DC plans who have the right to direct investments must receive a benefit statement once per quarter effective December 31, 2006. The statement must provide information on any restrictions on the right to direct investments, explain the importance of diversification, and include a statement on the risk of holding more than 20 percent of a portfolio in the security of any single entity, such as employer securities. Benefit statements may be provided electronically to the extent that they are reasonably accessible to participants (Hewitt Associates 2006b).

Frequency

In addition to the message and type of financial education provided to employees, the frequency with which it is offered can also affect whether employees are using their retirement savings plan in the most beneficial way. In their study, Bayer, Bernheim, and Scholz (1996) note that frequent seminars have a consistent and positive effect on participation in self-directed plans. They find that among lower-paid workers, frequent seminars are associated with participation rates that are 11.5 percentage points higher than the rates for plans with no seminars. For higher-paid workers, frequent seminars are associated with participation rates that are 6.4 percentage points higher than the rates for plans with no seminars.

According to the study by Milne, VanDerhei, and Yakoboski (1995), successful education requires efficient communication that depends on the consistent and regular delivery of messages. An example would be to provide quarterly benefit statements with a 1-800 number that employees can call to ask further questions about their statements or retirement savings program. If educational materials are not working to improve retirement savings, then a change such as placing posters around the office or sending out e-mails may encourage employees to take action. The authors discuss a Foster Higgins study that found that 69 percent of plan sponsors who made changes to their communication strategies within the previous 2 years reported an increase in plan participation.

These studies indicate that it is not fully sufficient for financial information to be provided only once, but that it must be appropriate and provided to employees regularly to reinforce the goals of the retirement savings plan.

Availability and Use

Regardless of the type, medium, or frequency of financial education offered, availability and use are the most important factors. Bernheim and Garrett (1996) find that educational offerings are strongly correlated with 401(k) participation. When education is available, 84 percent of respondents participate in the plan compared with only 70 percent when education is not offered. When available educational offerings are used by employees (for example, reading a financial education pamphlet offered by an employer), 88 percent participate in their 401(k) plans compared with only a 64 percent participation rate when the educational offerings provided are not used.

With the introduction of the PPA, financial education in the future will be less important for encouraging plan participation and more important for managing account balances and increasing contributions. Bernheim and Garrett (1996) find that when education is offered, median account balances are $8,250 compared with only $5,000 when education is not provided. They also find when employees use the education provided, median plan balances are $10,000 compared with only $4,000 when available educational offerings are not used. These findings demonstrate how important the availability of financial education can be as a tool in helping achieve the goals central to all retirement savings plans.

Effectiveness of Financial Education on Population Subgroups

The SCF data in this article have demonstrated that certain segments of the population are most in need of financial information to make sound investment and saving decisions. According to a Federal Deposit Insurance Corporation study by Burhouse, Grambrell,

and Harris (2004), individuals with less financial knowledge tend to be minority, single, younger or older than average, low earners, and less educated. The authors also find that individuals who need comprehensive financial education covering *all* basic topics (that is, cash flow, savings, and investments) were more likely to be single females, black or Hispanic, live in larger households, have less formal education, and have lower household income.

The sources from which these subgroups receive their financial information play an important role in their overall financial well-being. Among those in the 2004 SCF who save, respondents use a variety of sources to obtain advice and information about their savings and investments. The responses offered in the SCF can be split into three primary categories: formal advisors, informal advisors, and public sources. The **formal advisor** category includes information received from lawyers, accountants, bankers, brokers, financial planners, and insurance agents and materials from work/business contacts, investment clubs, or investment seminars. The **informal advisor** category includes advice from a friend/relative, oneself, partner, spouse, or telemarketer. The **public sources** category includes financial information obtained through calling around, magazines/newspapers, material in the mail, television/radio, online service/Internet, advertisements, other personal research, shopping around, or a store/dealer. Respondents to the SCF survey could provide several different answers as to how they make savings and investment decisions.

As Table 4 shows, the sources of investment advice used vary based on demographic characteristics. Men, better-educated individuals, older people, non-Hispanic whites, and those making $70,000 or more annually are significantly more likely to use formal advisors. For some groups the limited use of formal advisors is most likely the result of their prohibitive costs. Those with total family income under $20,000 are the most likely to rely on an informal advisor for their financial advice. The Hispanic/Latino group is least likely to use a formal advisor when making savings and investment decisions, but they may be restricted by language barriers. Only about 40 percent of Hispanic/Latinos interviewed used formal advisors. The presence of possible language barriers is an important example of the need for retirement plan providers to tailor financial education materials to the specific audience, such as providing plan information in Spanish if a significant number of potential participants are not proficient in English.

The lack of access to formal investment advice and general financial education may partly explain the current state of these groups' retirement savings plans. A study of university employees and their retirement savings by Clark and others (2003), finds that low earnings for women lead to smaller account balances in basic pension plans compared with men ($191,461 for women versus $514,801 for men). The authors also discover that women set lower retirement goals than men. For example, women have expected retirement ages of 63 years compared with 64 for men and retirement income replacement rates of 79 percent (81 percent for men). Women with fewer years of education are significantly more likely to report a lower desired retirement age. In Copeland's 2005 study using SIPP data, he finds that 22 percent of blacks and 14 percent of Hispanics are participating in a 401(k)-type plan compared with 31 percent of whites. In addition, he finds that only 0.4 percent of blacks and 1.4 percent of Hispanics make maximum contributions to their plans compared with 6.4 percent of whites. These studies raise concerns about whether certain subgroups of the population will have adequate income in retirement. Improved and more extensive financial education may address some of these concerns.

To reach the groups that need financial education, employers should use the most effective medium and cover the most relevant topics. Burhouse, Gambrell, and Harris (2004) find that personal finance management, budgeting, and recordkeeping are significant concerns for low-income audiences. They also discover that among the general population the Internet is the most popular source of financial information. That finding is supported by a Hewitt Associates study (2003) that finds that about 78 percent of plans used the Internet or intranet for employee investment education in 2001. However, according to the SCF data, these at-risk groups may not be comfortable with computer technology; reasons include that they may not be able to afford the technology, may be at jobs that do not offer it, or may experience language or literacy barriers. Of respondents in the 2004 SCF, only around 7 percent of individuals with income under $20,000 use computer software to manage their money compared with 34.5 percent of respondents with income over $70,000. In addition, just over 3 percent of respondents without a high school diploma use computer software to manage their money compared with roughly 31 percent of those with college degrees.

Burhouse, Gambrell, and Harris (2004) find that women, minorities, older individuals, and less-edu-

Table 4.
Percentage of savers reporting use of formal, informal, or public sources for savings and investment advice, by demographic group

Characteristic	Formal advisor		Informal advisor		Public sources	
	Percentage	Standard error	Percentage	Standard error	Percentage	Standard error
Overall	56.7	0.50	48.0	0.85	50.5	0.77
Sex						
Men	57.6	0.62	47.0	0.98	52.6	0.85
Women	54.1	0.94	50.8	1.43	44.7	1.47
Education level						
No high school diploma	44.1	1.24	48.9	1.95	40.1	2.06
High school diploma	53.5	1.21	49.8	1.75	44.1	1.56
Some college	56.9	1.24	49.1	1.59	54.2	1.56
College degree	62.8	0.87	45.9	1.26	57.0	1.28
Age						
Under 30	46.0	1.67	59.4	2.22	56.4	1.87
30–39	52.9	1.26	51.6	1.56	56.6	1.61
40–49	54.1	1.05	52.4	1.32	53.6	1.54
50–59	63.8	1.03	42.3	1.60	51.1	1.82
60–69	61.1	1.47	40.0	1.92	47.1	2.35
70 or older	62.5	1.39	40.1	2.06	34.5	1.95
Race or ethnic group						
White (non-Hispanic)	61.2	0.69	47.2	1.00	49.1	0.91
Black (non-Hispanic)	46.7	1.53	51.5	1.91	54.2	2.34
Hispanic/Latino	39.6	1.47	47.3	2.16	56.1	2.29
Other	50.6	2.63	54.8	3.79	48.2	4.65
Total family income						
Under $20,000	43.7	1.54	54.1	1.73	45.9	1.87
$20,000–29,999	50.5	1.75	52.6	2.45	46.8	2.54
$30,000–39,999	59.2	1.69	46.0	2.40	47.1	1.80
$40,000–49,999	52.6	2.42	49.9	2.86	51.3	2.68
$50,000–59,999	60.2	2.13	48.6	3.03	53.2	2.73
$60,000–69,999	66.4	2.27	44.7	2.88	55.0	3.31
$70,000 or above	64.7	1.00	42.9	1.27	54.3	1.21

SOURCE: Authors' calculations using the 2004 Survey of Consumer Finances.

NOTE: The standard errors are total standard errors that incorporate estimates of variation due to sampling and imputation. (For details, refer to the "Codebook for 2004 Survey of Consumer Finances" provided by the Division of Research and Statistics, Board of Governors of the Federal Reserve System.)

cated individuals prefer to learn in a communal environment, such as a formal course or informal seminar. According to the 1996 study by Bayer, Bernheim, and Scholz, seminars are the most effective type of financial education and are associated with an increase of 12 percentage points in the participation rate of lower-paid workers. The same study also finds that company-sponsored retirement seminars produce an increase of 1 percentage point in the contribution rate of lower-paid employees. This increase is sizable, since the authors note that the average contribution rate for these lower-paid employees is only 3 percent. In addition to seminars, printed educational materials can also be very helpful and less costly for these groups. According to Milne, VanDerhei, and Yakoboski (1995), 77 percent of employees without a college education and 81 percent with income below $25,000 read company-provided educational materials. Among those who read the materials, 33 percent reported increasing their contributions to the plan, and 44 percent reported changing asset allocations. This type of focused education initiative is already occurring in some cases, according to Bernheim and Garrett (2003). Employers are likely to offer financial education in their workplace to encourage participation among lower-paid

employees, with the goal of addressing nondiscrimination requirements that create binding constraints on pension participation among higher-paid employees. In addition, the passage of the PPA has eliminated barriers for employers to offer investment advice, which could help them to further serve these specific groups.

Examining data from the SCF along with studies on retirement savings by other authors, it becomes apparent that certain segments of the population are more in need of financial education than others. These individuals may not have reliable sources outside of work from which to draw this information, making it essential that employers offer some type of financial education to these groups. If resources allow, a seminar or course would be the most beneficial means to relay financial education; however, printed materials that discuss the company's specific pension plan, basic investment terminology, or other information can be very useful.

Conclusion

Employer-sponsored retirement savings programs are now common in the United States, with more than 4 in 10 workers in private industry participating in such programs (Beckmann 2006). These programs and their effects have been documented extensively in recent academic and industry studies. This article provides a comprehensive overview of literature relating to the best practices for designing retirement savings plans and providing financial education. The manner in which these two elements are structured can be critical in helping to ensure that participants in employer-sponsored retirement programs accumulate adequate savings for retirement. Throughout this article, original research from the 2004 SCF has been provided in an effort to further illuminate the extent of the problem facing retirement savings and some specific issues that plan providers should consider in developing their savings programs and attendant educational materials.

Plan Design

With regard to optimal plan design, strong evidence suggests that inertia lowers participation rates substantially in simple, opt-in savings programs. Some plans remedy this by establishing participation as the default (with the ability to opt-out), but research shows that many of these plans have default funds and contribution rates that are problematic for retirement savings. Some research suggests moving away from the opt-in and opt-out framework altogether and focusing on an active-decision model. The idea is to develop mechanisms that require a worker to make a formal decision about the savings program by a certain date. In addition, plan design often seeks to reduce the complexity associated with saving for retirement by simplifying investment choices. Offering too many investment options depresses participation in the plan and can lead to the use of potentially inappropriate strategies (for example, a worker simply putting an equal amount in each fund). One trend in plan design is to offer life-cycle funds, which in many cases are specifically designed to provide "one-stop" shopping to workers. Finally, the distribution of funds is a critical element of plan design that can ultimately affect the long-term adequacy of the payments provided by an employer-sponsored retirement savings program. Lump-sum distributions are an attractive option to many plan participants, but because these funds are often quickly spent rather than reinvested this approach can severely diminish retirement resources when compared with other strategies such as annuitization.

Financial Education

Even under optimal plan design, financial education is necessary for employees to understand how retirement savings programs work and how they can use them to achieve adequate retirement savings. For example, workers do not correctly "use" life-cycle funds; rather than being the only fund held in a portfolio, they are often combined with separate stock and bond index funds. This reflects a lack of financial education even where effective plan design exists. In addition, even if a program's design does not produce high participation or contribution rates, research indicates that education provided to employees can help increase those rates. The literature suggests that frequent educational events, particularly seminars, with consistent messages produce the largest effects on retirement savings. Some groups indicate a lower level of financial knowledge, and efforts to focus financial education on those groups may be an efficient use of company or plan resources. Finally, financial education can provide beneficial effects even after an employee separates from a firm. In particular, discussions of adequate retirement income are important in preventing individuals from consuming their retirement savings (that is, spending lump-sum distributions) before they reach retirement age.

As the provisions of the PPA become effective, further research will be needed to determine their outcomes. With substantial changes to DC plan design and investment advice, the PPA should have a notice-

able effect on participation in and contributions to DC plans. The passage of the PPA highlights the increased recognition of the importance of plan design and investment advice in helping people achieve economic security after their working career ends. The well-being of future cohorts of retirees will undoubtedly depend heavily on the quality of the structure of retirement savings programs and the financial education that accompanies these plans.

Notes

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[1] Although employers can provide savings programs as an employee benefit designed to make the organization a more attractive destination or to remain competitive with other employers, this article assumes that once such plans are established, a legitimate interest in helping participants achieve their retirement savings goals exists.

[2] The SCF uses a dual-frame sample design, with 3,007 cases drawn from a "multi-stage area-probability design" sample and the remaining data pulled from a list sample taken from SOI (Kennickell 2006). This latter sample was constructed to over sample affluent households. Weights must be used for descriptive analysis of the data set (see Kennickell, McManus, and Woodburn (1996) and Kennickell and Woodburn (1997) for a comprehensive discussion of weight design).

[3] Although sex is used as an independent variable in the included tables, it is not emphasized in the text as an indicator of sex-based discrepancies in financial well-being because of the assignment of sex in the SCF on a household level. Differences in financial well-being between the sexes found in other studies are discussed as part of the literature review.

[4] This study will primarily focus on the design of effective 401(k) plans, since slightly over 51 percent of respondents in the 2004 SCF with pension programs reported that a 401(k) was the "most important" of their plans.

[5] The Modeling Income in the Near Term (MINT) micro simulation model was developed by the Social Security Administration's Office of Policy along with the Urban Institute, the Brookings Institution, and the RAND Corporation. Data in the MINT model are largely based on the Survey of Income Program Participation for 1990–1993 and 1996. For more information see Butrica and Iams (2005).

[6] Based on tabulations from the 2006 Employee Benefits Survey (EBS) available at http://data.bls.gov/PDQ/outside-jsp?survey=eb.

[7] Where appropriate, respondents who do not save or are not employed at the time of the survey are excluded.

[8] Total family income includes income from *all sources* before taxes and deductions are made, including wages, salaries, self-employment, nontaxable investments, interest, dividends, unemployment, worker's compensation, child support, alimony, welfare assistance, and the sale of stocks, bonds, or real estate, among others. For a complete list of all income sources, see variables X5702 through X5725 in the 2004 SCF Codebook at http://www.federalreserve.gov/pubs/oss/oss2/2004/codebk2004.txt.

[9] It is sometimes argued that homeownership, which is more evenly distributed across the income distribution, can be used as a source of retirement wealth among low-earners. However, as Apgar and Di (2005) note in *Housing Wealth and Retirement Savings: Enhancing Financial Security for Older Americans*, research has shown that older household do not frequently use the equity found in their homes for other consumption needs (see Venti and Wise 2000). In addition, the burden of mortgage debt, even in old age, can be substantial. This is particularly true among lower income individuals (Apgar and Di 2005).

[10] Our discussion of goal-setting and financial education is not meant to deny the importance of other factors, such as insufficient earnings, that serve as significant explanatory factors in low saving rates. A broader discussion of the myriad factors that depress savings would be outside the scope of this article. As such, only elements that are particularly relevant to the structure of employer-provided retirement savings programs and educational materials are included in the text.

[11] Despite its role in raising participation, automatic enrollment has not yet become standard practice. In 2003, according to *Automatic Enrollment in Section 401(k) Plans* by Patrick Purcell (2004), only an estimated 8 percent of 401(k) plans used automatic enrollment.

[12] The Department of Labor has issued proposed regulations on the QDIAs. Under the PPA, the default investments must include a mix of asset classes consistent with capital preservation or long-term capital appreciation, or a blend of both. For more details on this subject, see the Employee Benefits Security Administration (EBSA) Website at http://www.dol.gov/ebsa/.

[13] In this instance, nondiscrimination refers to regulations governing participation and contribution among highly compensated employees and those who are not highly compensated.

[14] Although portions of the PPA are most relevant to elements of plan design outside of enrollment, they are presented here in order to provide a holistic, more easily understood summary of the legislation.

[15] As Choi, Laibson, and Madrian (2004) note in *Plan Design and 401(k) Savings Outcome*, while discussing the same organization examined in their 2005 publication, "[w]hile we do not know how automatic enrollment would have affected participation rates in this particular company, our guess is that automatic enrollment will generally lead to higher participation rates than active-decision." Thus, although the 28 percent figure is higher than the 26 percent increase in participation experienced under automatic enrollment in the 2005 Holden and VanDerhei piece, the authors expect that had the same company used automatic enrollment, the resulting increase in participation would have probably been even larger. The reasoning behind this assertion is that procrastination would lead those participants automatically enrolled in a 401(k) who do not wish to participate to delay their removal from the program.

[16] The role of financial education is discussed at length later in this article.

[17] Investment education reached mainstream status in 1992 through guidelines issued under the Employee Retirement Income Security Act (ERISA), which outlined information that must be provided to plan participants and beneficiaries (Arnone 2005). For further information on ERISA's financial information requirements, see http://www.dol.gov/dol/allcfr/Title_29/Part_2550/29CFR2550.404c-1.htm. The investment advice provision from the PPA requires that the fiduciary of the plan continue to adhere to ERISA's fiduciary and prudence requirements (Hewitt Associates 2006), but it also makes clear that plan sponsors and other persons who are fiduciaries do not have a duty under ERISA to monitor the specific investment advice that a fiduciary advisor provides (Doyle 2007).

[18] Because 401(k) and other defined contribution plans are relatively new, low balances for workers aged 55 to 64 may be due in part to the fact that they have not been able to contribute to these plans throughout their entire working career. These workers may have been relying more on traditional defined benefit pensions instead. However, the 2004 SCF data show that this age group was not exceedingly confident in their expected Social Security and pension income.

[19] See http://www.irs.gov/retirement/article/0,,id=96461,00.html for yearly cost-of-living increases for dollar limitations on benefits and contributions for pension plans.

[20] A fiduciary is a person or entity named in the plan as having control over the plan's operation. For some plans, it may be an administrative company or a company's board of directors. See http://www.dol.gov/ebsa/publications/fiduciaryresponsibility.html for more information on fiduciary responsibility.

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