Can We Save Enough to Retire? Participant Education in Defined Contribution Plans

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Issue Brief

- The growth in defined contribution plans has focused attention on issues such as whether workers can be educated to make wise decisions regarding their participation in such plans and what constitutes advice as opposed to education by an employer. This *Issue Brief* is the first of three that will explore these issues. It examines the public policy issues involved in participant education, discusses selected educational efforts and provides preliminary findings on their impact, and presents estimates of workers' relative preferences among various plan characteristics.

- Many defined contribution plans require workers to make decisions regarding participation, contribution rates, and asset allocation across available options. In making such decisions, a worker would ideally be influenced by two temporal concepts: determination of appropriate time horizon and periodicity, which involves recognition of the stages of a worker's life and his or her priority of needs at each stage.

- Several characteristics impact the participant's time horizon and periodicity. Work force diversity makes it difficult for a sponsor to satisfy the savings objectives of all participants simultaneously unless they provide asset allocation flexibility. However, some sponsors are concerned about potential liability for investment "losses" incurred by participants even though participants direct the asset allocations of at least some of their balances. Still, many plan sponsors have decided that the advantages of individual choice outweigh potential legal liabilities, and ERISA sec. 404(c) provides sponsors with guidance on plan design provisions that may minimize sponsor exposure.

- Many companies are responding with innovative methods to enhance the strength of their participant education efforts. Three areas considered in participant education communication are the media used to transmit the message, the frequency of the message, and the content of the message.

- In a recent survey by EBRI and Mathew Greenwald and Associates, 73 percent of 401(k) participants reported that their employer provided some type of educational material. Among those using the material, 33 percent reported that it led them to increase the amount of their contributions and 44 percent reported that the materials led them to change the allocation of their money.

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Introduction

The retirement income prospects of the baby boom generation and those who follow it are currently subject to much debate. On the optimistic side it is noted that boomers have higher real incomes and greater wealth accumulations than their parents' generation did at a similar point in their working lives. Therefore, boomers appear on track for a better retirement than their parents, assuming there are no dramatic changes in the economy such as drops in real incomes over time or changes in government tax and benefit policies. Those who are pessimistic about boomers' ability to maintain their standard of living once they move into retirement point to low national saving rates, future tax rates that would be needed to support entitlement programs, federal deficits, and the apparent absence of political will to address these issues. They also point out that boomers should not count on the same increases in the value of housing wealth that their parents experienced, and they question whether workers who are fairly mobile will accrue meaningful pension benefits. Attention is also often focused on ongoing developments within the employment-based retirement plan market, in particular, the continued growth of defined contribution plans, which require workers to make decisions that directly impact the amount of income they will have in retirement. Many worry that workers are not able to make wise savings and investment decisions.

Aside from arguments regarding the boomers' retirement prospects,[1] **these concerns highlight the importance of efforts by plan sponsors and their service providers to educate workers with defined contribution plans. The distinction between employment-based pension plans and individual**

[1] *For a complete discussion of this issue, see Dallas L. Salisbury and Nora Super Jones, eds.,* Retirement in the 21st Century...Ready or Not... *(Washington, DC: Employee Benefit Research Institute, 1994).*

saving (two of the three legs in the traditional stool of retirement income security) has become blurred with the growth of salary reduction plans such as 401(k)s. From 1988 to 1993, the fraction of workers participating in salary reduction plans, such as 401(k) plans,[2] 457 plans,[3] and 403(b) plans,[4] increased from 15.3 percent to 23.8 percent. In terms of the number of participants, this represents an increase of 62 percent over this five-year period (15.6 million workers in 1988 versus 25.2 million workers in 1993). Among all salary reduction plan participants, 49 percent also participate in a defined benefit plan. Over the same period, the fraction of salary reduction plan participants who reported the plan as their primary retirement plan increased from 49 percent to 73 percent (among those particpating in both a defined benefit plan and a salary reduction plan, 60 percent reported the salary reduction plan as primary).[5]

With such plans, a worker must typically first decide whether or not to participate. Participation is not automatic as with a defined benefit plan, although there are some types of defined contribution plans, such as money purchase plans, in which the worker may be automatically enrolled. Once a worker is a plan participant, he or she must decide how much to contribute to the plan and usually how the funds are to be allocated among the investment options offered by the plan. These decisions will have a direct impact on the amount of money the worker accumulates for retirement. Asset allocation decisions focus attention on relevant investment horizons and, more fundamentally, on the question of whether the participant views the investment as saving for retirement, which can be decades away, or as saving for other purposes such as a home purchase in a couple years, a child's college education in the next decade, or a contingency fund in the event of a period of unemployment. Finally, issues of participation, contribution rates, and asset allocation are moot points vis-a-vis retirement income if money placed in salary reduction plans is not preserved for retirement in another qualified plan or rolled over into an individual retirement account (IRA) on job change.

Where defined benefit plans traditionally represented a paternalistic relationship between the employer and employee, defined contribution plans represent a relationship in which the employer and employee are partners in preparing for the worker's retirement. It is generally fair to say that the provision of educational material has to some degree lagged behind the provision of the plans. Now there is increasing focus on the employees' decisions with regard to such plans in terms of their implications for future retirement income. Therefore, there is also increased focus on the material that employees are receiving with regard to their plans. Employers are expending significant resources in attempts to educate their workers and are striving to determine what works best. The basic ques-

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[2] *The Revenue Act of 1978 permitted employers to establish 401(k) arrangements, named after the Internal Revenue Code (IRC) section authorizing them. In 1981, the Internal Revenue Service issued the first set of proposed regulations covering such plans. These proposed regulations provided some interpretive guidelines for sec. 401(k) and specifically sanctioned "salary reduction" plans (Allen et al., 1992). Through 401(k) arrangements, participants may contribute a portion of compensation (otherwise payable in cash) to a tax-qualified employment-based plan. Typically, the contribution is made as a pretax reduction in (or deferral of) salary that is paid into the plan by the employer on behalf of the employee. The Tax Reform Act of 1986 placed a $7,000 limit on pretax employee contributions to private-sector 401(k) plans. This limit was indexed to the consumer price index beginning in 1988. The 1994 limit is $9,240. In many cases, an employer provides a matching contribution that is some portion of the amount contributed by the employee, generally, up to a specified maximum. The employee pays no federal income tax on the contributions or on the investment earnings that accumulate until withdrawal. Some plans also permit employee after-tax contributions; the earnings on these contributions are also not taxed until withdrawal.*

[3] *Public-sector employers can establish salary reduction arrangements similar to 401(k) plans under IRC sec. 457.*

[4] *Charitable organizations qualified under IRC sec. 501(c)(3) (for example, a tax-exempt hospital, church, school, or similar organization or foundation) and public school systems and public colleges and universities can establish tax-deferred annuity plans under sec. 403(b).*

[5] *For a complete discussion of developments in the salary reduction plan marketplace, see Paul Yakoboski and Annmarie Reilly, "Salary Reduction Plans and Individual Saving for Retirement,"* EBRI Issue Brief *no. 155 (Employee Benefit Research Institute, November 1994).*

tion is whether workers are in a position to make "wise" decisions concerning such plans, or more importantly, whether they can be put in such a position. At the same time, employers are also focused on the issue of education versus advice and the fuzzy distinction between the two. They are wary of being seen as crossing the line from education to advice and potentially being held liable for any less than desirable outcomes resulting from participant decisions.

The Employee Benefit Research Institute (EBRI) has undertaken a multi-phase study of educational efforts within defined contribution plans, particularly those offering participants the ability to direct their own investments (participant-directed account plans). This *Issue Brief* represents the first product of this research effort. A second *Issue Brief* will present detailed tabulations, broken out by worker demographics, of participant behavior regarding contribution rates and asset allocations in plans sponsored by a few large employers. The final report will be based on the results of two sets of surveys conducted in the first quarter of 1995. The first set focused on service providers for participant-directed account plans and provides insights into the incidence of providing specific types of educational materials as well as their level of acceptance by plan sponsors. The second set surveyed plan sponsors to gauge the use of specific types of educational materials and empirically evaluate the impact of the various educational programs on participation rates, contribution levels, and asset allocation.

It would be premature to speculate on the impact participant education has on asset allocation, contribution levels, and participation until the survey analysis is complete. Therefore, this *Issue Brief* will examine relevant public policy issues involved, including the government's response in terms of the Employee Retirement Income Security Act of 1974 (ERISA) sec. 404(c) regulations; illustrate selected educational efforts of plan sponsors; provide preliminary information on the impact of these efforts; and present previously unpublished results from a model that estimates workers' relative preferences over various plan characteristics.

A forthcoming *Issue Brief* will analyze plan-specific information about participant contribution and asset allocation decisions and how they relate to various plan and participant characteristics and plan sponsor educational initiatives.

Why Employee Education?

The Participant Decision

Participant education in defined contribution plans focuses primarily on the participation decision, an understanding of the level of contribution necessary to reach retirement goals, and basic investment concepts regarding appropriate asset allocation.

For retired employees to maintain the standard of living they enjoyed while working, adequate retirement income is generally considered to be roughly 70 percent to 80 percent of their final year's salary. Employees who understand the following basic retirement planning concepts should be able to determine whether participation in a defined contribution plan is necessary for them and what contribution level and asset allocation strategies are appropriate:

- sources of retirement income,
- goal establishment for retirement income,
- effect of inflation on retirement buying power,
- effect of personal life style and assumptions concerning health status and expected life span on retirement income (i.e., how long one expects to live beyond retirement and personal expectations of activities and quality of life during those retired years), and
- survivor income neccessities.

Sources of Retirement Income

Most retired workers in the United States have three major sources of retirement income: Social Security, private pensions, and personal savings. Currently, Social Security is the largest single source of income for retirees. For the average wage earner who works full time and retires at age 65, Social Security replaces approximately 40 percent to 45 percent of average earnings.[6] However, this level of replacement will be lower in the future for many individuals for two reasons.

One reason is that Social Security benefits are weighted in favor of those whose earnings are in the lower wage ranges. Those retired households in 1990 with income at or more than three times the government determined poverty level,[7] or $18,804 for a single person aged 65 or over, received only 25 percent of their total retirement income from Social Security (Congressional Budget Office, 1993). Those whose earnings history is in excess of the higher taxable wage base may realize a Social Security replacement percentage of 20 percent or less.

Additionally, 1983 Social Security Amendments increased the age requirement for unreduced benefits from age 65 for those born before 1938 to age 66 for those born before 1954 and to age 67 for those born in 1960 and later. The amendment requires that these future retirees take a 30 percent reduction of their unreduced Social Security benefit if they wish to retire early at age 62. Current workers must be made aware that Social Security may not remain the largest component of retirement income for them, as it is for present retirees.

Pension income is the second source of retiree income to be considered by potential defined contribution plan participants. Currently, pension income accounts for approximately 20 percent of income of all retired households,[8] ranging from 2.1 percent for those in the lowest income quintile to 25.9 percent for those retirees in the highest income quintile. Among all civilian nonagricultural wage and salary workers, participation and vesting in a retirement plan varies widely with worker demographics and income. When considering a pension as a percentage of retirement income, it is critical for employees to evaluate the type of pensions that are available to them and whether this availability is limited by their own personal priorities or by possible plan characteristics. For example, the parameters of a defined benefit plan may not be compatible with the employment portability required by the employee.

Regardless of the reason for changes in pension plans, employees should be aware that **in 1993, 49.8 percent of pension plan participants reported defined contribution plans as their primary retirement plan type, up from 25.8 percent in 1988. In contrast, 38.2 percent of these workers reported a defined benefit plan as their primary plan type, down from 56.7 percent in 1988.** Given that the trend toward defined contribution plans being regarded as primary plans continues, an employee who chooses not to participate may be making the decision not to have any pension income available at retirement, effectively losing a significant percentage of potential retirement income.

The third primary source of retirement income is personal savings. Total assets, including savings, are the second largest source of income for present retirees, representing approximately 25 percent of total household income, ranging from 4 percent at the lowest income levels to 33 percent of total household income at the top income level.[9] The present rate of savings for retirement aside from Social Security and employer-paid pension plans among workers sampled by EBRI is 61 percent of all workers.[10] It is also necessary for employees to understand that their ability to use invest-

[6] *See Paul Yakoboski and Celia Silverman, "Baby Boomers in Retirement: What Are Their Prospects?,"* EBRI Special Report *SR-23*/Issue Brief *no. 151 (Employee Benefit Research Institute, July 1994).*

[7] *U.S. Congress, House Committee on Ways and Means,* Overview of Retirement Programs: 1992 Green Book *(Washington, DC: U.S. Government Printing Office, 1992). For a single person aged 65 or over, the poverty threshold in 1990 was $6,268.*

[8] *See Yakoboski and Silverman, 1994.*

[9] *See Paul Yakoboski et al., "Employment-Based Retirement Income Benefits: Analysis of the April 1993 Current Population Survey,"* EBRI Special Report *SR-25*/Issue Brief *no. 153 (Employee Benefit Research Institute, September 1994).*

[10] *Employee Benefit Research Institute, "Retirement Confidence in America: Getting Ready for Tomorrow,"* EBRI Special Report *SR-27,* Issue Brief *no. 156 (Employee Benefit Research Institute, December 1994).*

It is also necessary for employees to understand that their ability to use investment income to increase savings toward retirement decreases with age because the amount of time for interest to compound decreases as participants age.

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Successful education of employees on the benefits of participating in a defined contribution plan requires effective communication, which in turn depends on consistent and regular delivery of the message. A recent EBRI study on salary reduction plans[11] shows a trend toward increasing participation in defined contribution plans. The percentage of workers participating in a defined contribution plan among those whose employer sponsors a plan rose from 57.0 percent in 1988 to 64.4 percent in 1993. However, the same study also reveals that 30.2 percent of workers whose employers offer a plan were unaware of whether the employer offered a matching contribution to the plan, indicating that workers were unaware of specific plan information. Furthermore, the study reveals that among this group of workers who were unaware of an employer match, the participation rate was only 37.8 percent, a possible warning sign that the message is not yet being communicated.

Setting a Goal for Retirement Income

Before an employee can decide how much is necessary to save for retirement, it makes sense for that employee to consider two temporal concepts that will affect decisions of participation, contribution level, and asset allocation to a defined contribution retirement plan. The first concept involves his or her particular time horizon, that is, how long the employee expects to leave the defined contribution plan money in place before needing to remove it for any reason. An employee may anticipate a job change or the need to fund college expenses or the purchase of a home. Employees should consider that the time horizon will affect asset allocation selection (see discussion in the next section concerning asset allocation).

Periodicity throughout one's life span is the second factor that an employee should be aware of when making decisions about contributions to a defined contribution retirement plan. Periodicity involves the stages of a worker's life and the employee's priority of needs at each stage. For example, an employee may experience a divorce or the sickness or death of a spouse, which drastically changes his or her original priorities. By definition, periodicity is dynamic, and an employee needs to be aware that although contribution levels may be low at different periods due to other priorities, the advantage of tax-deferred compound interest accumulation will offset this contribution level until such time as the employee is able to increase it.

Once an employee decides to participate in a defined contribution plan, the next step is to decide on a target goal of retirement income. Given the above information, one method for an employee to determine how much income is required to achieve this objective from his or her defined contribution plan is to choose an approximate level of expected income in retirement, determine how much of that income is expected to be replaced by Social Security and other benefits, and calculate the percentage of income replacement (replacement ratio) needed from the defined contribution plan.

When using replacement ratios, it is important to consider several factors in the calculations. To make the calculation as accurate as possible, the following variables should be included: time (age at entry into the plan until retirement); contribution rate; expected rate of return on investment; expected salary growth rate; and expected rate of inflation. These variables will affect the amount of retirement income that will

[11] *See Yakoboski and Reilly, 1994.*

be available from the employee's defined contribution plan.

Table 1 enables a participant to consider these variables as they apply to his or her personal retirement plan. The table gives differing projections of replacement ratios using alternative scenarios of salary growth rate assumptions in relation to inflation, differing retirement ages, the age of entry into the defined contribution saving plan, and varying rates of return from the age of entry into the plan to the payout at retirement. A table such as this allows employees to calculate alternative outcomes for themselves. The plan contribution rate for this table, that is, the percentage of salary that an employee regularly contributes to his or her defined contribution plan, remains constant at 10 percent of salary for all scenarios. Employees may adjust this percentage for differing contribution rates by simply multiplying any of the replacement rate percentages in the table by the ratio of the differing contribution rate to 10 percent; for example, if it is desired to use a 15 percent contribution rate, multiply the ratio in table 1 by 1.5. The actual replacement percentages are based on an actuarial formula developed by the Teachers Insurance and Annuity Association/College Retirement Equities Fund (TIAA/CREF).[12]

However, it is important to note here that the ratios in table 1 apply only to the first year of retirement, as inflation rates will most likely change after retirement from the original projections, whereas in most cases income will remain fairly constant. By using calculations such as those in table 1, employees are potentially able to determine whether to enhance their retirement savings with a defined contribution retirement plan and at what level. The following hypothetical example allows for a better understanding of the value of such a tool in calculating retirement income needs.

Participant A decides to enter the defined contribution plan at age 30, with a 10 percent of salary contribution rate every year. Participant A anticipates an average 6 percent rate of return based on the chosen asset allocation, expects her or his salary to increase over the years at about the same rate as the investment rate of return during the accumation period, and hopes to retire at age 65. Using table 1, this participant can expect about 29.9 percent of her or his final salary to be replaced by the defined contribution savings if it is left untouched until retirement and if the parameters are left unchanged. Participant B decides to make some different assumptions. This participant also enters the plan at age 30, invests 10 percent per year, plans to retire at 65, and expects the salary growth rate to remain similar to the rate of return. However, this participant invests in more risky investments with a higher expected rate of return over the long run of 10 percent, given her or his intention to leave the investment in similar areas of asset allocation. Table 1 reveals that participant B can expect a retirement income replacement ratio of 41.4 percent. Thus, this participant can expect a larger replacement rate from the defined contribution plan at retirement than participant A with the same percentage of income invested and the only difference between them being the expected rate of return on the investment.

Contribution Levels, Asset Allocation, and Rollovers

In addition to the participation decision, employees must also decide how much to contribute to the plan and usually how their funds are to be allocated among the plan's investment options. **The critical question consequently arises as to whether participants are educated enough on these issues to make these decisions. When considering the need for effective participant education, examination of the present status of participant behavior should be considered.**

[12] *See TIAA/CREF, "Replacement Ratio Projections in Defined Contribution Retirement Plans: Time, Salary Growth, Investment Return, and Real Income,"* Research Dialogues *(September, 1994): 1–6.*

Table 1
Estimated Retirement Income Replacement Percentages
Yearly Annuity Benefit as a Percentage of Final Year's Salary
Contribution Rate: 10 Percent of Salary; Retirement Ages 65 and 70

(Retirement Benefit Based on a One-Life Annuity with Ten-Year Guarantee)

Retirement Age and Entry Age	Annuity Payment or Investment Rate of Return	Benefit replacement percentage at retirement according to expected difference between salary growth rate and credited interest or investment rate of return during accumulation period: Interest rate exceeds salary growth rate by 2%	Interest rate and salary growth rate the same	Salary growth rate exceeds interest rate by 2%
Age 65 Retirement, Entry Age 30	4%	34.9%	24.6%	18.1%
	6	42.1	29.9	22.1
	8	49.7	35.5	26.4
	10	57.5	41.4	31.0
Age 65 Retirement, Entry Age 35	4	28.3	21.1	16.2
	6	34.2	25.6	19.8
	8	40.4	30.4	23.6
	10	46.9	35.5	27.7
Age 70 Retirement, Entry Age 30	4	47.0	31.4	22.2
	6	55.4	37.3	26.5
	8	64.2	43.5	31.1
	10	73.2	50.0	36.0
Age 70 Retirement, Entry Age 35	4	39.0	27.5	20.3
	6	46.0	32.7	24.2
	8	53.3	38.1	28.4
	10	60.8	43.8	32.8

Source: TIAA/CREF, Replacement Ratio Projections in Defined Contribution Retirement Plans: Time, Salary Growth, Investment Return, and Real Income," *Research Dialogues* (September 1994): 1–6.

Participation—Among workers with an employer offering a salary reduction plan in 1993, about two-thirds (65 percent) actually participated. This was up from 57 percent in 1988. A majority of participants viewed their salary reduction plan as their primary employment-based retirement plan (73 percent in 1993, up from 49 percent in 1988.) Even among salary reduction participants who reported also participating in a defined benefit plan, 60 percent reported the salary reduction plan as being their primary plan.

***Contribution Levels*—The average contribution among salary reduction participants was 7.1 percent of salary in 1993, up from 6.6 percent in 1988.** Twenty percent of participants contributed less than 5 percent of salary to their plan, 13 percent contributed 5 percent, 19 percent contributed 6 percent to 9 percent, 11 percent contributed 10 percent, 10 percent contributed 10 percent, and 28 percent did not know how much they contributed. These figures did not vary greatly among those who viewed their plan as primary and those who viewed their plan as supplemental.

Asset Allocation—A recent survey by Hewitt Associates gives some indication of how 401(k) funds are invested (Hewitt Associates, 1993).[13] Looking at only those plans where guaranteed investment contracts (GICs) are available, GICs accounted for 47 percent of the balance of employee contributions and 30 percent of the balance of employer contributions. Where available, employer stock accounted for 33 percent of employee contribution balances and 67 percent of employer contribution balances. Where available, equity investment options accounted for 21 percent of employee balances and 20 percent of employer balances. Where available, balanced funds accounted for 13 percent of employee balances and 33 percent of employer balances. Where available, diversified fixed income vehicles accounted for 31 percent of employee contributions and 39 percent of

[13] *In March and April 1993, Hewitt Associates conducted a survey of employers with 401(k) plans. A total of 487 companies provided information on the 401(k) plans. The data in the survey reflect each company's plan covering the largest number of salaried employees. The survey group was comprised mainly of larger employers. The average size of responding companies was 11,198 employees. Only 7 percent had fewer than 1,000 employees. Forty-nine percent had 1,000–4,999 employees, 18 percent had 5,000–9,999 employees, and 26 percent had 10,000 or more employees.*

employer contributions.

Data provided by Fidelity Investments paints a different picture in terms of asset allocation. In the Fidelity database,[14] the assets of plans with a company stock option were allocated as follows: 45.5 percent in equity (other than company stock), 16 percent in company stock, 28.7 percent in GICs, 6.8 percent in money markets, and 3 percent in fixed income vehicles. In plans without a company stock option, the assets are allocated as follows: 52.4 percent in equity, 34.2 percent in GICs, 8.1 percent in money markets, and 3 percent in fixed income vehicles.

If participants are overly conservative with their plan money, e.g., they prefer low-risk, low-return investments and shy away from equities, they may increase the risk of having an inadequate retirement income. Participants should be aware of the desirability of earning a rate of return in excess of the rate of inflation. When investing long term for retirement, having inflation eat away the value of what is set aside should be a concern as well as potential nominal losses from equity investments. Early evidence indicates that as plans offer more and better investment alternatives and participants become better informed about them, participants are more likely to diversify across asset classes.

Lump-Sum Distributions—Workers also face the decision of what to do with lump-sum distributions received from their plans. On job change, workers have access to lump-sum distributions of their vested account balances. They may roll this money over into an IRA or possibly their new employer's plan or they may be able to leave it in the old plan and thus preserve it for retirement. However, workers may elect not to preserve the money on a tax-deferred basis for retirement and incur federal income and penalty taxes in the process.[15] Available evidence indicates that many workers do not roll over and preserve such distributions.[16]

In 1993, 12.4 million people reported that they had ever received a lump-sum distribution from a retirement plan. The mean amount of the most recent distribution was $10,800, and the median amount was $3,500. Forty-two percent of all recipients reported using any portion of their most recent distribution for tax-qualified saving, and 19 percent reported using the entire distribution for tax-qualified saving. The likelihood of such benefit preservation increased with the size of the distribution and also was more likely the more recent the distribution. To the extent that workers do not or cannot think long term with their lump-sum distributions they are sacrificing funds that would otherwise be available to fund consumption in retirement and thus may be jeopardizing to some degree their retirement income security.

Sec. 404(c) Regulations

The previous section documented the wide variation in employee choices with respect to investment of their defined contribution assets. It should be noted that providing participants with the flexibility to choose their own asset allocation from the alternative funds provided under the plan is not a necessary consequence of sponsoring a defined contribution plan. However, many sponsors

[14] Over 1,500 plans and 2 million participants as of June 30, 1994.

[15] The Unemployment Compensation Amendments Act of 1992 imposed a mandatory 20 percent income tax withholding on eligible rollover distributions that are not directly transferred as rollovers. Mandatory withholding occurs even if the distribution is rolled over within the permitted 60-day period. The 20 percent withheld is applied toward any income tax, including the 10 percent penalty tax on distributions before age 59 1/2, owed on distribution amounts not rolled over into a tax-qualified vehicle. The act requires plans to provide workers with the option of a direct transfer of their account balance to an eligible retirement plan (defined to include individual retirement accounts and defined contribution plans.)

[16] See Paul Yakoboski, et al., 1994; and Paul Yakoboski, "Retirement Program Lump-Sum Distributions: Hundreds of Billions in Hidden Pension Income," EBRI Issue Brief *no. 146 (Employee Benefit Research Institute, February 1994).*

Employers often shy away from providing anything that could be viewed as investment advice because they could be perceived as acting as fiduciaries and potentially incur additional liability.

realize that one of the primary benefits of offering investment choices is that employees can customize an investment program unique to their specific objectives and risk tolerance. In contrast, a single commingled fund with a particular asset mix could never be the appropriate retirement planning vehicle for each and every participant. In fact, the sponsor would probably settle for some middle-of-the-road asset allocation that would in all likelihood be too conservative for an employee seeking maximum return (with a long time horizon) and too aggressive for someone seeking a stable value (with a short time horizon).

Issues in Offering Choice

Participants often struggle with the obvious advantages of obtaining a higher rate of return on investments demonstrated in table 1 while weighing the potential limitations of large short-term losses that may result from the investments most likely to produce these higher long-term rates of return. It is not uncommon for participants to look to their employers for guidance on which investment options would be the "best." However, employers often shy away from providing anything that could be viewed as investment advice because they could be perceived as acting as fiduciaries[17] and potentially incur additional liability.

A downside of offering investment choices for participants is that, in their capacity as fiduciaries, sponsors could be considered liable for investment "losses" suffered by the participants, even though such losses are a direct result of the participants' own investment choices. However, sec. 404(c) of ERISA may allow the sponsor to shift the liability for investment decisions from plan fiduciaries to plan participants.

However, there are many fiduciary exposures that sec. 404(c) does not cover. For example, sponsors continue to be responsible for the prudence and diversification of the investment vehicles offered under their plan. They also retain exposure for the selection and monitoring of investment managers where such selection is not under the participants' control.

The remainder of this section describes the kinds of plans that are ERISA sec. 404(c) plans, the circumstances in which a participant or beneficiary is considered to have exercised independent control over the assets in his or her account as contemplated by sec. 404(c), and the consequences of a participant's or beneficiary's exercise of control. The discussion reflects the final regulations for sec. 404(c) issued by the U.S. Department of Labor in October 1992. The effective date of the regulations for calendar year plans was January 1, 1994.

Cost/Benefit Analysis of Compliance

It is important to understand that compliance with sec. 404(c) is not mandatory. Thus each sponsor must review the relevant costs and benefits of compliance in order to determine the feasibility of attempting to limit legal liability exposure.

Sec. 404(c) does not provide a so-called safe harbor approach to dealing with the legal exposure. In other words, even an employer that decides to comply with 404(c) will not be able to obtain complete assurance from the regulators that its plan complies in both design and operation. An employer's compliance may ultimately be judged by the courts on a case-by-case transaction basis.

However, **a plan's compliance with 404(c)**

[17] A person (or corporation) will be considered a fiduciary under the Employee Retirement Income Security Act of 1974 if that person exercises any discretionary authority or control over the management of the plan, exercises any authority or control over assets held under the plan or the disposition of plan assets, renders investment advice for direct or indirect compensation (or has any authority or responsibility to do so), or has any discretionary authority or responsibility in the administration of the plan. Clearly, the trustee of a plan is a fiduciary. So also are officers and directors of a corporation who have responsibility for certain fiduciary functions, e.g., the appointment and retention of trustees or investment managers.

should provide a defense against allegations that a participant's exercise of control results in a fiduciary breach. For example, if a participant in a 404(c) plan invests his or her entire account in an aggressive equity fund and incurs a substantial loss, the participant would lose the argument that the plan fiduciaries should have overridden the investment choice and diversified the account to avoid the loss. In a plan that chooses not to comply with 404(c), such an allegation might be successful on the grounds that not diversifying the participant's account violates ERISA's prudence and diversification requirement.

The cost of compliance is another factor to be considered. It appears that many plans currently meet several of the 404(c) requirements discussed in the following section. However, at a minimum, many plans will need to develop information packets describing their plan and distribute them to plan participants. While there is expense associated with this, modifying plans and systems to accommodate additional investment options and more frequent fund activity is probably more expensive.

Compliance Requirements

Compliance with sec. 404(c) requires that the participants be offered a broad range of investments and that they be allowed to exercise control over the assets in their accounts.

Investment Alternatives—A critical issue is to offer enough choice among investments to allow diversification without offering so many options that the participant becomes confused.

A plan offers a broad range of investment alternatives only if the available investment alternatives are sufficient to provide each participant or beneficiary with a reasonable opportunity to materially affect the potential return on the amounts under the individual's control and the degree of risk to which such amounts are subject. In other words, offering a series of funds that are essentially all low-risk, low-yielding investment vehicles (e.g., money market funds) or offering all high-risk, high-yielding investments (e.g., aggressive growth funds) would probably not be sufficient to meet this requirement.

Moreover, the participant must be able to choose from at least three investment alternatives (the so-called core investments), each of which is diversified and has materially different risk and return characteristics. When considered in the aggregate, these core funds must allow the participant or beneficiary, by choosing among them, to achieve a portfolio with aggregate risk[18] and return characteristics at any point within the range normally appropriate for the participant or beneficiary.[19] This concept is illustrated in table 2, which compares the risk and return characteristics for the three major asset classes tracked over the last 30 years by Ibbotson Associates. Although equity returns, as measured by the S&P stock index, have demonstrated significantly higher rates of return during this period than either bonds or T-bill rates, the potential for significant negative returns in a single year is demonstrated by the loss of more than 26 percent in 1974. This volatility may discourage participants whose investment horizon is sufficiently short from investing a significant percentage of their portfolio in this asset class.

Participants may construct a wide variety of portfolios offering various risk and return combinations

[18] *Although many types of risk, such as inflation risk and credit risk, have been identified in investment literature, most defined contribution participants appear to focus on the concept of absolute volatility risk. Volatility risk, simply stated, involves the change in the market value of the asset. Absolute risk can be measured in one of two ways. The most common is to compute the standard deviation of the periodic returns. Another method is to rank in order the returns over a particular period and to divide the distribution into percentiles. The range from the 25th to the 75th percentile, referred to as the semi-interquartile range in several measurement systems, is then used as a measure of the portfolio's absolute risk. See Allen, et al., for additional detail.*

[19] *An additional requirement for the core funds is that each of them, when combined with investments in the other alternatives, tends to minimize through diversification the overall risk of a participant's or beneficiary's portfolio. A detailed description of portfolio risk is beyond the scope of this* Issue Brief*; however, this topic is explained in any basic text on investments.*

simply by combining stocks, bonds, and cash (such as T-bills).

Table 2
Risk and Return for Various Asset Classes in the Last 30 Years

Asset Class	Average Return[1]	Highest Annual Return	Lowest Annual Return
S&P 500 Stock Index	10.5%	37.2% (1975)	–26.5% (1974)
Bonds	7.4	40.4 (1982)	–9.2 (1967)
T-Bills	6.7	14.7 (1981)	2.9 (1993)

Source: Ibbotson Associates, as cited in Dennis T. Blair and Andrea T. Sellers, *Retirement Planning: More Than Investment Education*, The Alexander Consulting Group, Inc., 1994.

[1]The rate of inflation, as measured by the Consumer Price Index averaged 5.3 percent during this period.

Assuming the information provided in table 2 is considered an adequate representation of expectations for future results, a portfolio consisting of 100 percent cash would be expected to provide the smallest degree of volatility risk (given the lack of negative returns over the last 30 years); however, this safety comes with the price of the lowest expected return. The largest expected return would be obtained by investing 100 percent of the portfolio in stocks. The downside of this approach is that, historically, it increases the likelihood of a large negative loss in any given year. Intermediate positions consisting of less risk and lower returns than an all-stock portfolio and more risk and larger returns than all-cash portfolios can be obtained by mixing the percentages of the various asset classes (e.g., 50 percent cash and 50 percent stock).

The final requirement is that the participant be given a reasonable opportunity to diversify the investment so as to minimize the risk of large losses. In determining whether a plan provides the participant or beneficiary with a reasonable opportunity to diversify his or her investments, the nature of the investment alternatives offered by the plan and the size of the portion of the individual's account over which he or she is permitted to exercise control must be considered. Where the account of any participant is so limited in size that investment in look-through investment vehicles[20] is the only prudent means to assure an opportunity to achieve appropriate diversification, a plan may satisfy the requirements of this paragraph only by offering look-through investment vehicles.

Opportunity to Exercise Control—**This requirement will be satisfied only if participants are allowed to transfer money among the diversified investment options with a frequency based on investment volatility (but at least once every three months) and they are given sufficient information to make informed investment decisions.**

In order to meet the information requirements under sec. 404(c), the following information must be provided to participants and beneficiaries:

- an explanation that the plan is intended to constitute a plan described in ERISA sec. 404(c) and that the fiduciaries of the plan may be relieved of liability for any losses that are the direct and necessary result of investment instructions given by such participant or beneficiary;
- a description of the investment alternatives available under the plan and a general description of the investment objectives and risk and return characteristics of each such alternative, including information relating to the type and diversification of assets comprising the portfolio of the designated investment alternative;
- identification of any designated investment managers;
- an explanation of the circumstances under which participants and beneficiaries may give investment instructions and an explanation of any specified limitations on such instructions under the terms of the plan; and
- a description of any transaction fees and expenses which affect the participant's or beneficiary's account balance in connection with purchases or sales of interests in investment alternatives (e.g., commissions, sales loads, deferred sales charges, redemption or exchange fees).

In addition, participants or beneficiaries may request the following information:

- a description of the annual operating expenses of each

[20] *A look-through investment vehicle is defined as:*
(i) An investment company described in sec. 3(a) of the Investment Company Act of 1940, or a series investment company described in sec. 18(f) or any of the segregated portfolios of such company;
(ii) A common or collective trust fund or a pooled investment fund maintained by a bank or similar institution, a deposit in a bank or similar institution, or a fixed rate investment contract of a bank or similar institution;
(iii) A pooled separate account or a fixed rate investment contract of an insurance company qualified to do business in a state; or
(iv) Any entity whose assets include plan assets by reason of a plan's investment in the entity.

designated investment alternative (e.g., investment management fees, administrative fees, transaction costs) that reduce the rate of return to participants and beneficiaries and the aggregate amount of such expenses expressed as a percentage of average net assets of the designated investment alternative;

- copies of any prospectuses, financial statements, and reports and of any other materials relating to the investment alternatives available under the plan, to the extent such information is provided to the plan;
- a list of the assets comprising the portfolio of each designated investment alternative that constitutes the plan's assets, the value of each such asset (or the proportion of the investment alternative which it comprises), and, with respect to each such asset that is a fixed-rate investment contract issued by a bank, savings and loan association, or insurance company, the name of the issuer of the contract, the terms of the contract, and the rate of return on the contract;
- information concerning the value of shares or units in designated investment alternatives that are available to participants and beneficiaries under the plan, as well as the past and current investment performance of such alternatives, determined, net of expenses, on a reasonable and consistent basis; and
- information concerning the value of shares or units in designated investment alternatives held in the participant's or beneficiary's account.

Plan Sponsor Responses

The following section deals with the response by participant-directed defined contribution plan sponsors and plan service providers to the need for education of plan participants. Many participants don't understand the implications of the decisions that they are required to make in regard to their defined contribution plans. The increasing availability of such plans to all workers increases the risk that such decisions will be made based on incomplete information at best, thus potentially increasing the probability that there will be inadequate retirement income for a greater proportion of retired workers. This is compounded by the fact that the next wave of retirees is the largest in retirement history, and members of this group without personal retirement savings will be supported by the smallest group of workers, demographically measured, for several years.

Communication

For education to occur, it must be effectively communicated to employees that they need the information and that it will affect their retirement incomes. Moreover, the content of the educational material must be communicated in a way that is relevant to participant decisions and understandable at the level that it may be used. Thus effective communication becomes the key without which educational efforts become pointless.

Three areas of concern should be considered in participant education communication: the media used to transmit the message, the frequency of the message, and the content of the message. In assessing the media of communication to be used, plan sponsors need to consider at what level their particular participants are able to understand the message that they wish to deliver and the media used to deliver the message. In other words, plan sponsors need to use the method with which their particular employees are most likely to be comfortable. In addition, successful delivery of the message requires that it be repeated consistently and at regular intervals. This is particularly important because of the complexity and the importance of the information being communicated. Finally, the content of the message must be targeted to the level of understanding of the largest group of participants in the plan. This further entails making the message relevant to their retirement situation.

As defined contribution plans have grown in number, many companies have become aware of all these facets of effective communication and have responded with innovative methods to enhance the strength of their participant education efforts. These responses include target marketing of the educational efforts to demographic and economic groups, consideration of differing participant time horizons, enhanced access to help for questions that arise, and focus groups to assess a program's effectiveness.

Content of the Message

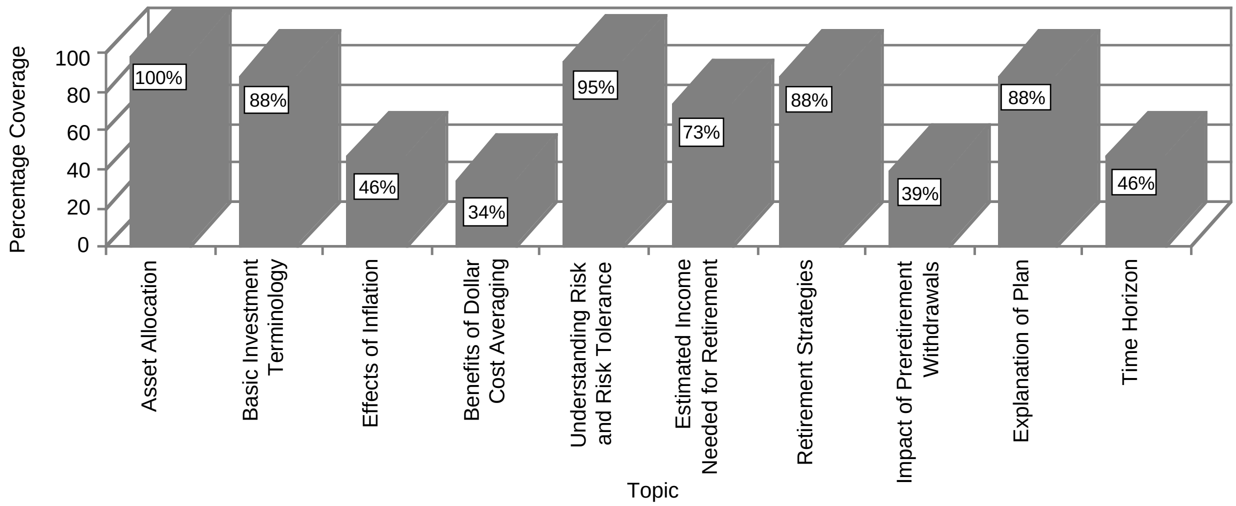
As stated previously, at a minimum, **the content of the message to employees in a participant education campaign should include the necessity to participate, contribution level, asset allocation, and individual time horizon.** Other relevant topics include basic investment terminology, a general explanation of the company's overall pension plan, the effect of inflation on retirement savings, understanding of risk and risk tolerance, the impact of preretirement withdrawals on retirement income, and the benefits of dollar cost averaging.

When the educational message is intended to encourage initial plan participation and a correct initial contribution level, many plan sponsor educational materials attempt to target the information to a specific audience, emphasizing strong company identification. For example, Norm Thompson Corporation, a company specializing in outdoor recreational equipment and supplies, bases its entire campaign for initial participation on the outdoor theme. Beginning at the "base of the mountain," it takes the employee "up the mountain" in the educational process. Caterpillar Company also uses strong company identification in its initial participation campaign, playing on the theme that the initial investment of the defined contribution plan is the "bedrock" for retirement income, to be built upon. The "Road to Retirement" campaign used by J. B. Hunt Transport, Inc. was begun in 1994 (see further description in next section), with virtually all of its educational materials identifying with the plan sponsor, using company colors of black and yellow throughout and a road map theme. The campaign improved the plan's participation rate from 53 percent January 1994 to 67 percent in January 1995.

Moving beyond the initial message of the need to participate are the messages related to investing. To determine investment-specific topics that plan sponsors and service providers feature in participant education campaigns, EBRI examined written materials packages submitted by 40 plan sponsors to the 1995 *Pensions & Investments News* Defined Contribution Education Award contest. Of the 40 plans, all discussed the issue of proper asset allocation, 39 discussed risk and risk tolerance, 36 gave general explanations of their company pension plan and definition of investment-specific terms, 30 discussed how to determine income needed for retirement, 19 talked about the effects of inflation on retirement savings and the need to be aware of individual retirement savings time horizons, 16 discussed the implications of withdrawals before retirement, and 14 explained the concept of dollar cost averaging. Chart 1 shows the percentage of companies in the aggregate that covered each of the above topics in their participant education packets.

The specific topics in the participant education packages were further compared with the self-reported participation rates of the companies that entered the contest to facilitate analysis of possible effects of the inclusion of these topics in participant education materials. Chart 2 gives the aggregated participation rates of all the companies, which range from 55 percent to 76 percent. Coverage or noncoverage of each topic in the written information packets is then related to the participation rates. Asset allocation is not included in this analysis as it was covered in all the packets. In general, inclusion of a topic correlates positively with higher employee participation rates in the plan. Two exceptions are the topics of "estimated income needed for retirement" and "retirement strategies," which included

Chart 1
Percentage of Firms That Covered Each Topic



Source: Employee Benefit Research Institute.

using the technique of overall personal assessment of areas such as risk tolerance and time horizon to determine how one should invest.

Media Used to Communicate the Message

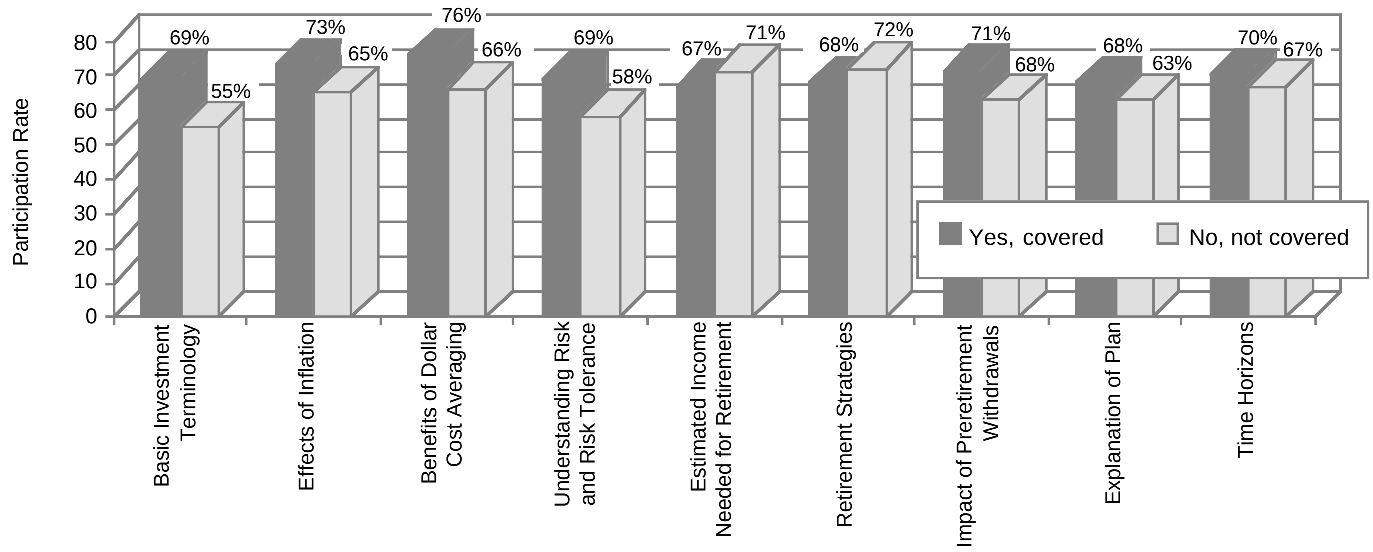
The content of a defined contribution plan participant education program is irrelevant if it is not communicated to the participants. **The demographic diversity of industries offering such programs to employees is such that it has become necessary to consider alternative media to communicate to employees. Plan sponsors must consider the average educational level of the employees they are attempting to target for participation as well as average age and the work environment within which the message is being communicated.** The majority of plan service providers offer packages to plan sponsors that contain multi-media educational methodology including audiovisual material, written brochures, interactive computer software, seminars, and personal financial planners and workbooks for individuals.

The following are a few examples of companies using various media for communicating their educational packages to plan participants in an attempt to target the package to their employees' specific needs. Interactive computer software is one of the newest media used to communicate participant education information to employees. Instant gratification is the key advantage of interactive software. An employee is able to create infinite alternative combinations of asset allocation, contribution level, and inflation rates, with immediate feedback of results. However, there are two major drawbacks to this method of employee education. First, the employee must have access to a computer and be comfortable in using it. Second, the employee must be familiar enough with the nuances of the educational concepts used to make the exercise relevant.

In one case example, approximately two years ago, Continental Bank added interactive computer software developed by Price Waterhouse to the retirement planning program it already had in place.[21] Given the nature of the banking industry, most employees have access to computers and use them regularly in their day-to-day work. Initially, employees were asked to fill out a questionnaire to report financial information. This information was then compared with the individuals' financial goals, resulting in an estimated retirement income level, a process termed by Price Waterhouse a retirement planning analysis (RPA). After the RPA was done, employees were able to compare their estimated retirement income with alternative retirement income levels assuming differing contribution levels and alternative asset allocation scenarios. The program helped employees to develop individual plans that resulted in retirement incomes closer to their desired goals. Although Continental Bank is unable to report actual behavioral changes for plan participants at this time, they polled participants who used the new software on their opinions of the program's success. The results are as follows:

[21] *Dennis J. Nirtaut, "Retirement Planning and the Use of Interactive Software: A Case Study,"* Compensation and Benefits Management *(Autumn 1994): 52–57.*

Chart 2
Participation Rates Based on Each Topic and Whether or Not Topic was Covered in Brochures



Source: Employee Benefit Research Institute.

- 93 percent of participants said they were motivated to take specific financial planning steps,
- 65 percent planned to change their investment asset allocation,
- 41 percent planned to modify their retirement goals,
- 24 percent planned to meet with an investment advisor,
- 94 percent would recommend RPA to a coworker, and
- 71 percent completed the survey in less than three hours.

Another method of communicating defined contribution plan participant education information is by audio cassette. This method is used by J. B. Hunt Trucking Company to augment other communication media for all employee benefit information. The cassette is part of the "Road to Retirement" campaign developed by Prudential Defined Contribution Services in conjunction with the personnel department of J. B. Hunt. This particular plan sponsor is unusual in that 85 percent of its 12,000 employees are truck drivers,[22] and they are rarely available during normal business hours. The advantage of this particular form of communication in this case is that it allows the majority of J. B. Hunt employees to educate themselves while working. The tape, titled "Super Driver," includes a mix of country western music, equipment updates, and health tips along with educational information on "The New, Improved 401(k)!" These Super Driver tapes are distributed on a regular basis and provide an effective communication link between employees who are infrequently located in one place at the same time. Included in the cassette package is a simple card asking employees their opinion of the tape.

Another type of communication vehicle is video tapes. Frequently video tapes are used during employee education seminars to augment or initiate the information presented. This type of communication works well where employees can convene in one place as a group. A unique method used by BellCore, provided through the Vanguard Group, was the use of two videos for a seminar. The first was screened outside of the seminar room before the session began. Its purpose was to grab employee attention by using the familiar Beatle's song, "When I'm Sixty Four," coupled with a black screen that displayed entertaining quotes related to retirement income. The second video was viewed during the seminar and contained basic employee educational material.

In another setting, Rite Aid Corporation, in conjunction with Prudential Defined Contribution Services, developed a video targeted to the demographic majority of their employee base: female clerks under age 40. Company colors of red and blue are used throughout, and the presenters represent the typical Rite Aid employee. When this type of targeted campaign was begun in 1991, 54 percent of the employees allocated their assets to the conservative fixed-income fund. As of June 30, 1994, this asset allocation had dropped to 48 percent and subsequently it dropped to 37 percent.

[22] *Christine Philip, "P&I Names DC Education Award Winners,"* Pensions & Investments, *6 February 1995, p. 49.*

Ongoing education that delivers a regular and consistent message is the final step in the successful communication of a participant education campaign.

Frequency of the Message

Ongoing education that delivers a regular and consistent message is the final step in the successful communication of a participant education campaign. An interesting example of this is the ongoing campaign used by TWA Pilots DAP/401(k), in St. Louis, which used not only an employee-targeted approach but also a strong consistent message. The media used is a simple quarterly newsletter that includes an (800) number for pilots to telephone after they absorb the information provided. The unique feature of this program is that although the newsletter was initially drafted for TWA Pilots by the Frank Russell Trust Company, the contents and second draft were tailored by the defined contribution plan fund's executive director and chairman, also a TWA pilot. In the first quarter that the newsletter was published, it became apparent that the information was reaching the target audience. The TWA pilots completely exhausted the projected budget for the (800) telephone number for the entire year with inquiries based on the first quarter newsletter.

Survey Evidence

While survey evidence on the provision of educational material in plans with participant-directed accounts and the impact of the provided material on participant decisions is relatively scarce, this section highlights some of the available findings.

Provision of Material—**The provision of educational material is more common today than it was for previous generations of workers with a 401(k) plan. In a recent survey by EBRI and Mathew Greenwald and Associates (1994), 73 percent of respondents participating in a 401(k) plan reported that their employer provided some type of educational material (including seminars) regarding the plan. By comparison, among current retirees who had a 401(k) plan while working, only 45 percent reported that their employer provided educational material.**

A survey of 401(k) plan sponsors (Hewitt, 1993) found that only 19 percent of the survey respondents did not provide educational materials that explained basic investment concepts. Twenty-five percent reported providing educational materials quarterly, 11 percent provided it annually, and 20 percent provided such materials only on participant enrollment. Among those providing educational materials to participants, 31 percent reported providing a regular investment publication.

In the same survey, the vast majority of plan sponsors felt that the most important information needs among employees were asset allocation/diversification and risk tolerance (87 percent and 83 percent, respectively). Over 40 percent of the respondents also mentioned basic investment terminology (58 percent), the effect of compounding (58 percent), and the effect of inflation (44 percent).

In another survey, plan sponsors were asked what financial education programs they provided to employees. Ninety-four percent provided enrollment information, 84 percent provided investment education, 64 percent provided retirement planning programs, and 54 percent provided financial planning programs. While enrollment information and investment education programs are almost always provided to all employees, retirement planning programs are offered only to older employees in more than 40 percent of the plans, and financial planning was offered only to executives in just under one-half. Over one-half of the investment education programs have been established since 1992, as have 20 percent of enrollment programs, 24 percent of retirement planning programs, and 40 percent of financial planning programs (William M. Mercer, 1995).

The same survey noted that while the topics covered under each program were the ones typically found, the setting of goals—whether investment, retire-

A survey of the largest defined contribution plans in the country found that in the area of financial planning, 39 percent of large plan sponsors currently offer financial planning seminars and 18 percent plan to offer such seminars.

ment, or financial—was included in 40 percent or fewer of the plans.

Finally, in a 1994 survey of 401(k) plan sponsors, the 82 percent reporting that they try to educate participants about investment and saving principles were asked what prompted them to do so (Buck Consultants, 1994). Fifty-eight percent reported that their employees asked for more information, 50 percent cited the release of final sec. 404(c) regulations, 45 percent said that employees' investment strategies appeared too conservative, 29 percent reported that it was provided free of charge by their plan service provider(s), and 19 percent said they had expanded an existing preretirement/financial planning program.

The summary plan description was the most commonly used means for education (68 percent). Fifty-three percent used an employee newsletter, 53 percent used pamphlets, 47 percent conducted seminars, 42 percent provided handbooks, 41 percent provided a newsletter/magazine devoted to 401(k) plan investment and saving, 32 percent conducted individual meetings, and 28 percent conducted financial planning/ preretirement planning seminars. Other methods cited were videotapes, slideshows, computer programs and projections, and investment seminars.

Financial Planning Information—A survey of the largest defined contribution plans in the country (Phoenix-Hecht, 1994a) found that in the area of financial planning, 39 percent of large plan sponsors currently offer financial planning seminars and 18 percent plan to offer such seminars. Twenty-three percent of large sponsors offer financial planning software (22 percent plan to offer it), and 18 percent offer one-on-one financial planning services (5 percent plan to offer them).

In a study of participants and sponsors of 401(k) plans at small to midsize companies, 28 percent of plan sponsors reported they provided individual counseling with an investment advisor (Frank Russell Company, 1992). The smaller the company, the more likely it was to provide individual counseling. Fourteen percent of companies with over 1,200 employees provided such counseling, as did 30 percent of companies with 501–1,200 employees, 33 percent of companies with 251–500 employees, and 32 percent of companies with 250 or fewer employees. In addition, almost all sponsors reported providing plan-specific information, and 63 percent supplied participants with general information about the fundamentals of investing. Finally, only 26 percent of participants reported believing they were well qualified to make their own investment decisions, and 8 percent of sponsors believed participants were well qualified.

Another study of individuals in participant-directed defined contribution plans found that 37 percent reported that their employers offered them the services of a financial planner to counsel them personally about the investments in the plan (Phoenix-Hecht, 1994b). Thirty-nine percent of those with such services available reported using them within the past six months. The study hypothesized that much of this counseling, at least in smaller entities, was actually informal in nature and arose because smaller companies tend to offer less formal communication material.

The same study also found that 33 percent of participants want someone else to manage their retirement savings for them. These individuals tended to think their own saving was invested too conservatively and more should be invested in stocks. They are also likely to feel that they lack the knowledge to know where to invest. While they are satisfied with their plans and the information provided, they are still likely to wish that their employer would give them advice on which investment options would best meet their needs.

Use and Impact of Material—**In the EBRI/Greenwald survey, 92 percent of those receiving educational material reported reading it. Those with no college**

education were much less likely (77 percent) than those with some college (97 percent) or college graduates (96 percent) to read the material. Also, the likelihood of using such material increased with household income, rising from 81 percent for those with incomes below $25,000 to 96 percent for those earning over $50,000.

Among those reading the material (or attending the seminars), 96 percent reported that the topics covered included a description of the investment options available, and 92 percent reported that the advantages of saving through tax-deferred plans were covered. By comparison, only 73 percent reported that the principles of asset allocation and diversification were among the topics covered.

Among those reading the material (or attending the seminars), 33 percent reported that the materials led them to increase the amount of their contributions to the plan. This effect was slightly more likely among older workers (29 percent among those aged 26–34 versus 37 percent for those aged 55–64). The effect was less likely among college graduates, compared with those with no college (30 percent versus 41 percent). This effect was also less likely as household income rose (47 percent for those with incomes below $25,000, compared with 35 percent for those with incomes above $50,000).

Among those reading the material (or attending the seminars), 44 percent reported that the materials led them to change the allocation of their money among the options available. This effect did not vary markedly with worker age (44 percent among those aged 26–34 versus 47 percent for those aged 55–64). The effect was reported by 42 percent of college graduates, 51 percent of those with some college, and 41 percent of those with no college. This effect fell slightly as household income rose (47 percent for those with incomes below $25,000, compared with 44 percent for those with incomes above $50,000).

In the Foster Higgins study, 69 percent of sponsors reported making changes to their communication strategies (A. Foster Higgins & Co., Inc., 1992). The most frequent changes reported were holding additional employee meetings (39 percent), producing or revising a video or slide show (35 percent), and introducing or changing personalized communication (34 percent). Sixty-nine percent of those who had made changes within the previous two years reported an increase in plan participation as a result. Seventeen percent reported a significant increase, and 51 percent reported a slight increase.

In an update of this survey two years later, 23 percent of plan sponsors reported increasing their employee communication in the intervening two years, and participation rose in 64 percent of these plans (A. Foster Higgins & Co., Inc., 1994). Twenty-six percent reported a significant increase, and 43 percent reported some increase. One of the new trends noted in the survey was the use of interactive voice response technology. The survey noted that 35 percent of plans now use this technology (up from 27 percent in the previous year), and an additional 19 percent plan to implement it in the near future. Of those with the interactive voice response technology, almost all use it to answer general plan inquiries, 78 percent use it for transactions like investment transfers and contribution rate changes, and 43 percent use it to model asset growth projections.

A survey of the largest defined contribution plan sponsors in the country (Phoenix-Hecht, 1994a) uncovered widespread displeasure with current education and communication materials. When asked whether there was a need to improve their own plans' education and communication materials, 90 percent reported such a need.

The same survey also found that sponsors of large plans thought it important to target certain employee groups with education and communication materials. Eighty-nine percent thought it important to target new employees, 86 percent to target preretirement employees (those over age 55), 85 percent to target lower compensated employees, 80 percent to target young employees (those under age 30), and 79 percent to target nonparticipants. Those responding that a particular group was important to target were then asked if they currently do target that group. New employees and preretirement employees were the only groups targeted by more than one-half of the employers reporting that they should be targeted (65 percent and 52 percent, respectively). Nonparticipants were targeted by 39 percent, lower compensated employees by 30 percent, and young employees by 29 percent.

In a survey of individuals *eligible* for a 401(k) type plan (New York Life, 1992), 60 percent of those surveyed said they were very well informed or informed of the plan offered. Those so informed tended to be older, more educated, male and to have higher household incomes and net worth. Those informed were asked where they acquired their information. Eighty-five percent cited reading company-provided material, 60 percent cited company meetings, and 56 percent cited talking with a company employee benefits manager.

Another recent survey asked defined contribution plan participants about their awareness and knowledge of their retirement saving plan (John Hancock, n.d.). Sixty percent reported that they were more knowledgeable investors than they were a year or two ago, but only 14 percent attributed this to additional information received from their employer. Forty-two percent credited reading about finances and investments (but some of this material may have come from employers). Those crediting information from their employer were more likely to be female, have less money in their accounts, have lower incomes, and have less formal education.

When questioned specifically about employer education efforts, 44 percent of participants reported that their employer had increased the quantity of material provided in the last year, and 49 percent reported that the quality of the material had improved. The survey results also showed that participants relied on employer material as one of the most important sources of investment information.

Participants who relied more heavily on information provided by employers, as opposed to the advice of family and friends, reading newspapers and magazines, or consulting with a financial planner, were more likely to have less money in their accounts, have lower incomes, be younger participants, have less education, and contribute a smaller percentage of pay.

Finally, 38 percent reported that in the past year they had read or heard information that made them think that they should invest more heavily in equities. Those reporting this were more likely to be female, older, and more educated. Forty-five percent of these individuals reported that they had altered their investments accordingly. Those changing their investment patterns were more likely to be male, have less money in their accounts, and have higher incomes.

Worker Preferences

An understanding of relative worker preferences for various plan characteristics is likely to be useful in understanding the choices made by workers with regards to participant-directed account plans. It would also prove useful in trying to predict how participants would react to various changes made in their plans. Plan characteristics here refer to both plan features, such as the provision of educational material, and investment options.

J.P. Morgan developed the Participant Preference Model to provide such information. Specifically, the model answers the questions:

- Which plan features are most valued by employees and therefore have the greatest impact on satisfaction and participation?, and
- How will changes in funds or the addition of new funds affect participant asset allocation?

The Participant Preference Model makes predictions based on interviews with a national sample of 401(k) plan participants and a group of employees from four large employers. The interview process used conjoint analysis that asks individuals to make decisions among plan feature tradeoffs. Specifically, individuals rank plan features according to their personal preferences and are then asked to choose among alternative plans built from features with high rankings. The result is a model of the decisionmaking process that can be used to predict future behavior.[23]

J.P. Morgan has provided EBRI with output from the Participant Preference Model, specifically with a preference rating for a prototype plan over all workers, female versus male workers, workers near retirement (over age 50) versus those under age 50, and low earners (less than $40,000) versus high earners (more than $40,000). The marginal utility of various plan characteristics is determined by adding or subtracting a characteristic from the prototype plan and letting the model calculate the change in the preference index. This exercise is performed for both plan features and plan investment options. For example, it can be determined by how much the preference rating increases, if at all, when a balanced fund is added to the investment option menu of the prototype plan or how much the rating decreases when no educational material is provided by the plan. These changes can then be compared across the demographic groups mentioned above. Morgan has provided EBRI with such calculations of marginal preferences.

Model Results

The funds offered by the prototype plan are a GIC/income fund, a S&P stock fund, and company stock. The plan features of the prototype plan are the free provision of financial education brochures, investment information through statements, account information through statements, a fixed match rate, a loan option, and a quarterly valuation of account balances. The preference index among all workers for this prototype plan was 57 (table 3). The index was 57 for both men and women. The preference index for the prototype was 55 for those nearing retirement age and 58 for those under age 50. Among low earners the preference index was 56, compared with 59 among high earners (table 3). This index serves as the benchmark against which new index scores are compared when changes are made to plan characteristics. Attention here is focused on the provision of educational material and changes in the investment options offered.

When examining the importance of educational material, the model showed that if the provision of educational material is dropped from the plan, the preference rating among everyone drops by over 20 percent to 45 (table 3). The drop in the preference index is identical among men and women (from 57 to 45). The drop is similar among younger and older workers: from 58 to 46 among those under age 50 and from 55 to 43 among those over age 50. Similar results held when preference changes were calculated among high versus low earners: it fell from 56 to 44 among those earning less than $40,000 and from 59 to 45 among those earning more than $40,000 (table 3). The calculations make apparent that workers highly value the provision of financial education material.

Potential changes to the investment options available in the prototype plan that can be evaluated by the model are dropping the GIC/income fund, the S&P stock fund, or the company stock or adding a balanced fund, a money market fund, or a bond fund. Clearly the investment options most highly valued by individuals are the ones in the prototype plan. Dropping any one of these options would lower the preference index by a range of 18 percent to 21 percent. It can be hypothesized that individuals' strong preferences for these options are not solely a function of their returns but rather also of their familiarity with options that have been available for extended periods of time. By comparison, adding any

[23] *For a complete description of the model, with examples, see Robert Birnbaum, "Understanding Participant Behavior: A Research-Based Approach," in Dallas L. Salisbury and Nora Super Jones, eds.,* Retirement in the 21st Century...Ready or Not... *(Washington, DC: Employee Benefit Research Institute, 1994).*

Table 3
Workers' Preference for Plan Characteristics

Plan Characteristics	All	Males	Females	Age: Under 50	Age: Over 50	Annual Income: <$40,000	Annual Income: >$40,000
Prototype Plan[a] Preference Index	57	57	57	58	55	56	59
Index with Change in Plan Characteristics							
Drop financial education	45	45	45	46	43	44	45
Drop company stock	45	45	44	45	43	43	47
Drop S&P stock fund	45	45	46	46	43	45	43
Drop GIC/income fund	47	47	47	47	45	46	49
Add balanced fund	58	59	57	58	55	56	55
Add money market fund	57	57	57	58	59	55	59
Add bond fund	56	57	56	57	53	55	58
Percentage Change in Index							
Drop financial education	–21%	–21%	–21%	–21%	–22%	–21%	–24%
Drop company stock	–21	–21	–23	–22	–22	–23	–20
Drop S&P stock fund	–21	–21	–19	–21	–22	–20	–27
Drop GIC/income fund	–18	–18	–18	–19	–18	–18	–17
Add balanced fund	+2	+4	0	0	0	0	–7
Add money market fund	0	0	0	0	+7	–2	0
Add bond fund	–2	0	–2	–1	–4	–2	–2

Source: J.P. Morgan Plan Preferences Model.
[a]The funds offered by the prototype fund are a GIC/income fund, a S&P stock fund, and company stock. The plan features of the prototype plan are the free provision financial education brochures, investment information through statements, account information through statements, a fixed match rate, a loan option, and a quarterly valuation of account balances.

of the other three options considered to the existing options would have essentially no impact on the preference index (table 3). While these results may be somewhat sensitive to the initial designation of funds in the prototype plan, they appear to be congruous with other survey results of participant investment behavior.

The basic findings as regards changes to the investment options available did not vary notably between males and females. Workers nearer retirement appeared to have a stronger preference for a money market fund than those under age 50. The older workers' preference index rose by 7 percent with the addition of a money market fund, while the addition did not affect the younger individuals' preference score. The notable difference among those with incomes above $40,000 and those with incomes below $40,000 is the strength of the preference for the stock fund. Dropping the stock fund lowers the preference index by 20 percent for those with lower incomes, while it the lowers the index by 27 percent for those with higher incomes (table 3).

Conclusion

This *Issue Brief* has provided a universal perspective on participant education issues in the defined contribution realm. It has discussed areas of relevant public policy issues, including government response, plan sponsor and service provider response, the preliminary impact of educational efforts on participant behavior, and survey results showing participant preferences.

A necessity still remains for analysis at the participant-specific level to achieve a better perspective of the impact of educational programs on participant plan decisions within plans in the areas of participation decision, contribution levels, and asset allocations. This will be explored in the next *Issue Brief* in this series, which will analyze data on specific plans, including participant demographic data, asset allocation, contribution rate, participation rate, and other investment-specific data. This "micro" analysis will allow a realistic perspective on the effects of participant education efforts within these plans.

The final study in this series will relate plan characteristics in participant education to participant investment behavior from a "macro" viewpoint. This study will be accomplished by analyzing the data received from the EBRI surveys conducted earlier this year, which include the same types of data as discussed above from multiple diverse plans. This series of *EBRI Issue Briefs* should provide a unique and comprehensive perspective on participant education in defined contribution pension plans.

This *Issue Brief* was written by Deborah Milne, Jack VanDerhei, and Paul Yakoboski of EBRI, with assistance from the Institute's research and education staffs.

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