

► **Retirement Education**

# *Employer Involvement in Defined Contribution Investment Education*

**by Gary Blau and  
Jack L. VanDerhei**

► In this paper the authors consider the personnel problems that may arise for defined contribution plan sponsors if major market corrections cause older employees to delay retirement beyond previous expectations. *We move from that basic premise to argue that, given the continued evolution from defined benefit (DB) to defined contribution (DC) retirement plans, employers need to be more “proactive” in educating their employees about their retirement planning. A human resources perspective is used to support this argument, apart from and in addition to legal considerations such as ERISA Section 404(c). Specifics of employer involvement and its place as a component of an organization’s culture are discussed. Finally, recommendations are given for employers to consider.* ◀

Imagine the following scenario:  
“You are an engineer who has been with your company for 33 years and are looking forward to retirement in six months. You and your spouse have been making plans about how you will both be spending your free time traveling, doing volunteer work, visiting with family, and on recreational activities. Your company has a qualified DC retirement plan, a 401(k), and your retirement assets are primarily in equity funds. Suddenly, the stock market plummets and reduces the value of your retirement “nest egg” by 30%. Now you calculate that you need to work for an additional three to five years in order to recoup your investment losses and have the standard of living you desire. How could this have happened?”

Now, imagine this scenario for thousands of baby boomer employees over the next ten to 25 years as they prepare to retire. Clearly, many employees will be very upset. What about the employers of these affected employees? Some employers may feel forced to retain unmotivated, highly paid employees, when they need new hires (at a lower cost) with “fresh” ideas. The purpose of this paper is to argue that increased employer efforts to educate employees about retirement planning is in the employee’s and employer’s best interests—especially those employers that are concerned about the human resource effects of maintaining an unexpected number of older workers who would like to retire but need to keep working.

This article examines the human resource rationale for employer involvement in employee DC retirement planning from the perspective of attempting to minimize large losses in employees’ retirement accounts as they approach their expected retirement age while simultaneously attempting to ensure that sufficient investment income is generated to minimize the probability that employees’ retirement accounts are depleted while they are still alive.<sup>1</sup> Another equally valid concern is that some younger employees will invest too conservatively<sup>2</sup> and therefore have insufficient accumulations to retire in a time frame that fits the sponsor’s personnel objectives. This would appear to be of increasing concern in light of the need for some type of Social Security reform<sup>3</sup> as well as studies suggesting continuing

improvements in life expectancy for those nearing retirement age.<sup>4</sup> In a future paper, we plan to derive the cohort-specific rates of return that would be necessary to provide “appropriate” replacement rates for retirees at various ages.

### **A HUMAN RESOURCE PERSPECTIVE FOR EMPLOYER INVOLVEMENT**

*Human resource management* is defined as “activities undertaken to attract, develop, and maintain an effective workforce within an organization” (Daft 2000, p. 394). Employer education on employee retirement planning falls within this definition. Human resource strategy must support a company’s business strategy, so that the organization maintains a competitive advantage.

Two well-known general approaches to business strategy are by Porter (1980) and Miles and Snow (1978). Porter (1980) identified three types of business unit strategies that help a firm to gain a competitive advantage:

- *Overall cost leadership*—emphasizing product/service efficiency and tight cost controls
- *Differentiation*—emphasizing innovation, marketing and research
- *Focus*—combination of cost leadership and differentiation, directed at a particular market segment.

Miles and Snow’s (1978) “defender” strategy shares much in common with the overall cost leadership approach, as does their “prospector” strategy with the differentiation approach.

Human resource functions have been proactive around compensation issues in supporting these business strategies (Milkovich and Newman 1999). For example, task-based job descriptions, greater variable pay and use of gain-sharing plans support a cost leadership (defender) strategy, while more flexible job descriptions, market-based pay and rewards for innovation support a differentiation (prospector) strategy. Even within the benefits area, human resources functions are becoming very proactive to attract, motivate and retain employees. For example, employers are offering such amenities as pet insurance, on-site car

washing and dental services, and dry cleaning delivered to offices (Hein 1999).

However, in general, human resource departments have been less proactive about retirement planning for employees. And yet, employee retirement/pension satisfaction has been identified as a critical benefit of concern to employees (Lust and Danehower 1990). Employers, generally through their human resource departments, need to be more involved in their employees’ retirement planning. Especially so because environmental forces, including government regulations and market response, have affected what retirement plans are offered to employees.

### **ENVIRONMENTAL FORCES AFFECTING RETIREMENT PLANS**

As researchers (Clark and McDermed 1990; Gale, Papke and VanDerhei 1999; Gustman 1992; Ippolito 1995; Papke 1999) have noted, the relative percentage of plans and participants covered by DB plans has decreased over the past 15 years. A more recent article by Wang and VanDerhei (2000) shows that this shift may actually be even greater when contributions are analyzed.

A DB retirement plan promises to pay benefits based on a predetermined formula that typically considers an employee’s average earnings over his or her last three to five years of work. Disadvantages of DB plans to employers include facing higher and less predictable costs for long-tenure employees, bearing investment risk, paying the Pension Benefit Guaranty Corporation (PBGC) insurance premiums, default risks associated with DB plans

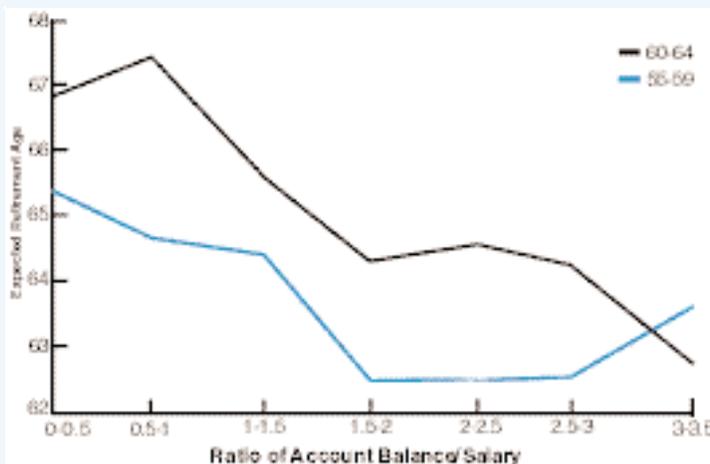
#### **The Authors**

**Gary Blau** is a professor in the Human Resources Administration Department, Fox School of Business and Management at Temple University. He earned his Ph.D. from the University of Cincinnati. His research interests focus on understanding employee attitudes and behaviors.

**Jack L. VanDerhei** is an associate professor in the Department of Risk, Insurance and Healthcare Management, Fox School of Business and Management at Temple University. He earned his Ph.D. from the University of Pennsylvania. His research interests focus on the financial and fiduciary aspects of private defined benefit and defined contribution retirement plans.

FIGURE

**Expected Retirement Age as a Function of Account Balance/Salary by Current Age of Employee**



Source: Authors' tabulations from 1998 Survey of Consumer Finances.

and complying with an array of often complex legal requirements (Fore 2000; Gale et al. 1999; Kleinman, Anandarajan and Lawrence 1999; Mitchell and Schieber 1998; Schieber, Dunn and Wray 1998).

The disadvantages of traditional DB plans to employees, relative to qualified DC plans, include the “back-loading” of benefit formulas, whereby the majority of plan benefits are earned in the few years prior to retirement age. Workers who terminate employment prior to these years generally have fewer retirement benefits to take with them, compared to those who participate in a typical DC plan of equal cost. That is, traditional DB plans are less valuable for those employees who move from job to job than for those who remain with a single employer for the major portion of their career.<sup>5</sup>

Given these disadvantages of qualified DB plans and clear trends toward increased use of DC plans, there is little question that DC plans—such as 401(k)s—are appealing to employers and employees alike. Among other features, it can be argued that the portability of qualified DC plans is an advantage, as is their reduced level of complexity in meeting legal requirements (Kleinman et al. 1999). However,

DC plans present certain disadvantages to employees, relative to traditional DB plans. These disadvantages include the potential inability of lower income employees to participate in salary deferral types of plans due to their lack of discretionary income, the temptation to tap DC funds before retirement (Sablehaus 1999; Yakoboski 1997 and 1999), and—most relevant for this paper—the investment decision-making responsibility imposed on employees (Bernartzi and Thaler 2000; Gale et al. 1999; Kleinman et al. 1999; VanDerhei et al. 2000).

Employer advantages in typical qualified DC plans include more predictable costs, savings on insurance premiums to the PBGC and lower administrative costs. However, one “un-addressed” cost to employers that sponsor DC plans is suggested in the opening scenario—i.e., unexpected delays in employee retirement during prolonged market corrections (Gale et al. 1999). Typical DC plan benefits are less predictable, generally, than traditional DB benefits from a human resources perspective. DC plan benefits depend not only on the employer but on employee contributions and asset allocation decisions and the unpredictable effect of market returns on retirement benefits.<sup>6</sup>

**NEED FOR GREATER EMPLOYER INVOLVEMENT IN EDUCATING EMPLOYEES FOR THEIR RETIREMENT**

*Retirement* has been defined as “the exit from an organizational position or career path of considerable duration, taken by individuals after middle age, and taken with the intention of reduced psychological commitment to work thereafter” (Feldman 1994, p. 287). By using this definition, we are focusing on workers who are at least in their 50s and beyond. With the passage of the Age Discrimination in Employment Act (ADEA) in 1967 and amendment in 1986, mandatory retirement has now been abolished for almost all employees, making retirement a voluntary behavior (Hanisch and Hulin 1991).

With employees living longer (Otterbourg 2000), DC retirement plans place even more burden on the investment decision making of employee participants, since participants have to plan over a longer retirement horizon. Specifics about employee decision making will

be further discussed below. The recognized and increasing burden placed on employees in DC plans has led to a general “call” for increased investor education (Anonymous 1999; Fanto 1998). For example, Fanto (1998) has called for greater investor education about savings, investing and financial fraud to be made by families, schools, the market and government sources. While these sources can certainly be helpful, no source is in a better position to provide useful information than the employees’ employer (Burzawa 1999; Bayer, Bernheim and Scholz 1996; Bernheim and Garrett 1996).

Employers, specifically human resources personnel, need to be more proactive in educating employees about their DC plan investment decision making in order to help ensure their company’s labor pool remains a source of competitive advantage. While “promote from within” is generally a positive company philosophy, hiring new employees with fresh, innovative ideas may be a necessity to keep a competitive advantage (Gomez-Mejia, Balkin and Cardy 1998).

It is important to distinguish functional from dysfunctional voluntary employee turnover. *Dysfunctional* employee turnover is losing valued, high-performing employees, while *functional* turnover involves less valued employees (e.g., marginal performers) leaving (Campion 1991). When long-term employees are ready to retire and can be replaced by highly motivated new employees with needed fresh ideas, this can be viewed as functional turnover for an organization (provided these new hires are retained for a sufficient time period).

Another way to argue the need for greater human resource department involvement in providing retirement education for employees is to consider that any employee’s performance is a function of three factors: his or her motivation, ability and opportunity (Blumberg and Pringle 1982). From a motivational standpoint, the opening stylized scenario acknowledges that many employees are “ready and eager” for retirement because they have made plans about how they will be spending their free time (Hanisch 1994; Kelves 1999). When such a ready-to-retire employee suddenly cannot retire due to lost retirement assets, that employee

will probably have a motivational problem for some period of time. While such a problem can be overcome, the employee’s performance will undoubtedly be negatively affected.

From an ability standpoint, research does not show a consistent relationship between age and performance (Warr 1994). However, where important employee cognitive or physical abilities decline and are overwhelmed by one’s job demands—such that one’s years of experience and other coping efforts are insufficient to compensate—job performance will suffer (Warr 1994). Research (e.g., Kubeck, Delp, Haslett and McDaniel 1996) also has shown that older persons often generally take longer to learn new skills, make more errors in the process and show less mastery on completion of training.

*Obsolescence* has been defined as “the degree to which organizational professionals lack the up-to-date knowledge or skills to maintain effective performance in either their current or future work roles” (Kaufman 1974, p. 223). The half-life of technological obsolescence is clearly a factor in the flattened compensation maturity curves for professionals such as engineers and scientists (Milkovich and Newman 1999). Obsolescence is typically more of a threat to older, later-career employees (Fossum, Arvey, Paradise and Robbins 1986) than to younger, earlier-career employees.

From an “opportunity” standpoint, older employees unfortunately are often unfairly stereotyped as being less productive and capable of change (Rosen and Jerdee 1985). Despite the inaccuracy of such stereotypes (McEvoy and Cascio 1989), such biases can result in an organization’s being less likely to help or “invest” in older employees (Rosen and Jerdee 1985).

Such management decisions can produce a self-fulfilling prophecy, in which older workers, deprived of developmental experiences, never have an opportunity to disconfirm this initial stereotype (Greenhaus and Callanan 1994). Clearly, providing job-related developmental experiences to older employees to allow them to update their skills (Noe, Wilk, Mullen and Wanek 1997) can help deal with these ability and opportunity issues. Also, not mixing older and newer employees together in training classes may allow for a more sensi-

*“The need for some type of investment education, for at least a portion of the participant population, seems undeniable.”*

tive consideration of older employees’ training needs.

### **EMPIRICAL EVIDENCE**

Before describing the specifics of employer involvement in the next section, we provide some empirical support for our opening scenario that a decrease in DC account balances may indeed result in a deferred retirement age for employees. To investigate whether there is a correlation between expected retirement ages for those nearing retirement and the percentage of preretirement income that is likely to be replaced at retirement, we analyzed families in the 1998 Survey of Consumer Finances<sup>7</sup> where the head of household was between 55 and 64, participating in a DC plan but did not have any expected benefits from a DB plan. The account balances in all individual account retirement plans (DC plans with current and former employers, IRAs and/or Keoghs) were summed and divided by the family head’s current income.

The results of this analysis are shown in the figure for two age cohorts: those ages 55-59 and those ages 60-64. In both cases the expected retirement age reported by the family head is virtually monotonically decreasing: the larger the retirement account balances as a percentage of current salary, the earlier the worker expects to retire. This database does not allow one to determine whether the employee’s reaction to rapid, unexpected decreases in account bal-

ances would be the same as those resulting from relatively stable, predictable results (for example, due to relatively low employee and employer contributions accompanied by an extremely risk-averse asset allocation strategy); however, future analysis of longitudinal databases now under construction<sup>8</sup> should provide further evidence.

### **SPECIFICS OF EMPLOYER INVOLVEMENT**

We will not focus on the legal aspects of 401(k) plans, such as ERISA and discriminatory testing (for additional information see VanDerhei and Olsen, forthcoming). Instead, we wish to explore ideas for greater human resources involvement in providing employees access to sufficient information about each investment option in their DC plan so that they can make informed investment decisions. Kimpel (2000) notes that there are two alternatives available to the employer. The first is for the employer to provide robust investment education that will not cross the line into investment advice. The second alternative is for the employer to go beyond IB 96-1<sup>9</sup> and to engage an outside party to provide investment advice.

The need for some type of investment education, for at least a portion of the participant population, seems undeniable. In a poll of 1,000 Americans by Towers Perrin, almost 40% of 401(k) participants did not know how their savings were allocated among asset classes. Of those who did know, one-third had no money in stocks. And many thought guaranteed investment contracts would perform as well as or better than stocks over 20 years (Bryant and Sullivan 1996).

An employer that sponsors a participant-directed 401(k) plan is not required to provide educational materials on retirement savings and investing to the plan participants. Nevertheless, many employers choose to provide educational materials to their employees. Previous research (Milne, VanDerhei and Yakoboski 1996) surveyed plan sponsors with respect to investment education topics and found that among 401(k) plans, the most frequently offered topics were:<sup>10</sup>

- Attributes of plan investment options, 84%

- Understanding of risk and risk tolerance, 74%
- Basic investment terminology, 74%
- Asset allocation, 68%
- Effect of inflation, 60%
- Estimating the income needed for retirement, 60%
- Benefits of dollar cost averaging, 51%
- Impact of preretirement withdrawals on retirement income, 41%.

The same research also examined the various methods of communicating investment education information and found significant variation by plan size as well as when the information was provided<sup>11</sup> and the frequency of communication.

Generally, employees rely on employer-provided information as one of the primary sources of investment information. Importantly, those who rely more heavily on employer-provided investment information tend to be the same types of participants who face the highest risk of accumulating insufficient retirement assets. These participants include those who have less money in their plan accounts, have lower incomes, are younger, have less education and contribute a small percentage of their income to the plan. Numerous surveys have found that, of those employees who received and read the investment allocation education materials, 40-50% changed their plan investment allocation mix as a result (Yakoboski 1995).

Medill (2000) argues that the mere fact that employees may change their investment allocations in response to education does not necessarily indicate they make the types of changes that are more likely to result in the accumulation of sufficient plan assets for retirement. She points to the results of the Yakoboski and VanDerhei (1996) study of participant investment allocation decision making from three large 401(k) plans. All of the participants in this study had the benefit of a well-developed participant education program. Nevertheless, a significant percentage of plan participants made “unconventional investment allocation decisions.” Part of the explanation for why these 401(k) plan participants may have made poorer investment allocation decisions may be due to the employees’ risk taking propensity.

*“Numerous surveys have found that, of those employees who received and read the investment allocation education materials, 40-50% changed their plan investment allocation mix as a result.”*

From a psychological standpoint, employee investment behavior is a function of the employee—i.e., his or her risk taking propensity, life stage (including dependents) and environment—which includes different investment options, such as stocks, bonds and fixed interest accounts. Research (e.g., Bajtelsmit and VanDerhei 1997; VanDerhei, Holden and Quick 2000) suggests that female employees in general are more risk-averse than males and a large percentage of young employees may be making suboptimal investment choices by being too conservative. Other biasing factors may be present, such as the “moral-hazard problem,” in which investors assume that if they make poor choices, they will be “bailed out” because society won’t let them starve (Kleinman et al. 1999). Number of dependents may also be a factor in risk taking behavior, as is the employee’s life stage.

The general recommendation (Kahn 1996) of encouraging greater risk taking investments (such as capital appreciation products like stocks) among younger employees to build capital by and encouraging lower risk taking investments (such as bonds and fixed interest accounts) among older employees to preserve capital will need to be discussed in greater detail on a case-by-case basis.<sup>12</sup> For example, when and how an employee should consider switching over his or her investments. Inclusion of an employee’s significant other (e.g.,

*“Beyond having the financials in place, encouraging employees to think about their psychological/emotional transition to retirement is important.”*

spouse) in any employer-sponsored education may be worth considering. In a survey of retirement planning programs offered by service-related firms, Siegel (1989) found that 81% of these firms extended invitations to spouses to attend these programs. When and where to offer such education, so as to make it as convenient as possible for the employee (and spouse) to attend, also deserves attention. Having currently retired persons come to such retirement programs to discuss their retirement transitions can provide useful information (Siegel 1981). Employers that are able to follow up on these ideas may consider having well-trained “retirement counselor(s)” within the employee relations area of the human resources department.

#### **EMPLOYER INVOLVEMENT AS A COMPONENT OF ORGANIZATIONAL CULTURE**

We view such employer involvement in employee retirement planning as a component of the organizational culture where the employee works. *Organizational culture* is defined as “the set of key values, beliefs, understandings and norms that members of an organization share” (Daft 2000, p.86). Organizational culture is being increasingly recognized as a powerful factor in employee retention (Bliss 1999; Cabrera and Bonache 1999), and the values of an orga-

nization start with the leaders of that organization (Schein 1997). Many different quantitative measures of organizational culture exist (e.g., Cooke and Rousseau 1988; Glaser, Zamanou and Hacker 1987; O’Reilly, Chatman and Caldwell 1991), and a number of common dimensions generally emerge from these measures, e.g., rewards, outcome orientation and team orientation (Xenikou and Furnham 1996). The general organizational culture dimension best represented by increased employer education efforts for employee retirement planning is “supportiveness,” or concern for employees.

In their article on the role of organizational culture in the retirement process, Lindbo and Schultz (1998) discuss the role of different organizational programs—such as mentoring and preretirement planning—in helping employees through their retirement decision making and postretirement adjustment. Their article focuses attention on the psychological/emotional side of retirement planning. As an example, Lindbo and Schultz (1998) cite Honeywell’s Retiree Volunteer Program, in which Honeywell maintains data on its approximately 7,000 retirees who have stayed in the Minneapolis-St. Paul area. Of this group, some 1,000 have been placed by Honeywell’s program in volunteer positions within nonprofit organizations that benefit from these retirees’ skills and experiences.

Beyond having the financials in place, encouraging employees to think about their psychological/emotional transition to retirement is important (Kelves 1999). Employers can provide education subsidies or sabbaticals (Greenhaus and Callanan 1994), as well as reduced hours or bridge employment (Weckerle and Schultz 1999) to older employees to encourage them to preplan how they can productively spend their time once they retire from their current employer.

#### **RECOMMENDATIONS**

We are recommending increased employer involvement in educating employees about their prospective retirement. Retirement planning has two dimensions—financial and psychological/emotional. As discussed above, there is a clear need for educating employees about financing their retirement, which will be

increasingly based on DC retirement plans. Also as noted above (Hanisch 1994; Lindbo and Schultz 1998), the psychological/emotional side of retirement should also be included in the employer's efforts.

A review of the benefit satisfaction literature indicates that, despite the importance of retirement satisfaction to employees (Lust and Danehower 1990); current benefit satisfaction measures (e.g., Harris 1993; Heneman and Schwab 1985; Lust and Danehower 1992; Spector 1985) do *not* incorporate any items for measuring "retirement financial planning satisfaction" or "retirement psychological/emotional planning satisfaction." Such issues need to be measured by benefit satisfaction measures. As organizations struggle to maintain their competitive advantage by being "an employer of choice" (Herman 1999), these retirement planning issues will become increasingly important.

## **CONCLUSION**

To better manage their human resources, employers need to take a more active role in educating their employees about how to retire when they want to. Returning to the opening scenario, this engineer might have moved a significant percentage of her retirement assets from stocks to bonds and fixed interest accounts well before the market correction occurred, thanks to employer-offered retirement planning seminars she could have attended. The market correction would have had less impact on her retirement "nest egg," and she would have retired at the planned time. Not forgetting her organization's "supportiveness," the new retiree would have been an ambassador of "good will" about her former employer to family, friends and the community. The employer could have replaced this recent retiree with a needed new employee, whom the employer might have heard about through the engineer herself. ◀

## **Endnotes**

1. Pomeroy (2000) suggests that in this case employers could face litigation centered on "you did not teach me how to make these investment decisions."
2. VanDerhei, Holden and Quick (2000) report that 26.8% of 401(k) participants in their 20s have no portion of

their 401(k) accounts invested in diversified equities. However, 57.4% of the balances for this group is invested in either balanced funds and/or employer securities.

3. Without new sources of revenue or cuts in benefits, it is projected that the Social Security system will only be able to pay approximately 70% of the promised benefits after the year 2037. See Copeland, VanDerhei and Salisbury (1999) for more detail.

4. See Stipp (1999) for a review of the various estimates.

5. This phenomenon has been at least partially alleviated recently by the transition to cash balance plans for some employers (VanDerhei 1999).

6. While unanticipated market downturns can be problematic for employers and are the focus of this article, it should be noted that others (Gale et al. 1999) have correctly pointed out that employers may face increased early employee retirements during strong bull markets, especially with increased employers' retirement planning education efforts. For some employers, such early retirements may be problematic.

7. The Federal Reserve Board's triennial Survey of Consumer Finances provides the most comprehensive data available on the wealth of American households. The latest survey data, for the year 1998, were released in January 2000. The Federal Reserve Board interviewed a nationally representative sample of more than 2,000 households, along with a supplemental sample of wealthy households because they control the most assets. The survey is designed to provide detailed information on U.S. families' balance sheets and their use of financial services, as well as on their pensions, labor force participation and demographic characteristics as of the time of the interview.

8. See VanDerhei, Holden and Quick (2000) for an example.

9. Interpretive Bulletin 96-1 Relating to Participant Investment Education (IB 96-1) sets forth the Department of Labor's (DOL) interpretation of ERISA's "investment advice" fiduciary definition under 29 CFR 2510.3-21(c), as it applies to the provision of investment-related educational information to participants and beneficiaries in participant-directed individual account plans. In general, IB 96-1 identifies four categories of information and materials (safe harbors) regarding participant-directed plans that will not constitute "investment advice" under ERISA's fiduciary definition.

10. The likelihood that a plan sponsor would offer a particular investment topic varied by size of the plan. See page 13 of Milne, VanDerhei and Yakoboski (1996) for more detail.

11. For example: at plan enrollment, postenrollment ongoing education, at retirement/employment termination, and/or on request.

12. Sussman (1996) discusses implementation including the use of lifestyle funds. McCarthy and Turner (2000) find that written financial information provided by employers increases the self-assessed financial knowledge of employees, and individuals who have a higher self-assessment of their financial knowledge are more likely to contribute to their defined contribution plan and more likely to invest in risky assets.

## **References**

- Anonymous. 1999. "Communication, Education, Keys to Retirement Planning." *Employee Benefit Plan Review* 54: 30-32.
- Arnone, William J. 1999. "A New Fiduciary Challenge to 401(k) Plan Sponsors." *Benefits Quarterly* 15 (2): 49-53.

- Bajtelsmit, Vickie L. and Jack L. VanDerhei. 1997. "Risk Aversion and Pension Investment Choices," in *Positioning Pensions for the Year 2000*, Michael S. Gordon, Olivia S. Mitchell, and Marc M. Twinney, eds. Philadelphia: University of Pennsylvania Press, 45-66.
- Bayer, Bernheim, Scholz. 1996. "The Effects of Financial Education in the Workplace: Evidence From a Survey of Employers." NBER.
- Benartzi, S., and R. H. Thaler. 2000. "Naive Diversification Strategies in Retirement Saving Plans." *American Economic Review*, forthcoming.
- Bernheim and Garrett. 1996. "The Determination and Consequences of Financial Education in the Workplace: Evidence for Survey of Households." NBER WP 5667, July.
- Bliss, William. 1999. "Why Is Corporate Culture Important?" *Workforce*, February, 8-9.
- Blumberg, Melvin and Charles Pringle. 1982. "The Missing Opportunity in Organizational Research: Some Implications for a Theory of Work Performance." *Academy of Management Review* 4: 560-569.
- Bryant, Douglas, and James Sullivan. 1996. "The 401(k) Plan and the Retirement Planning Revolution." *Compensation and Benefits Review*, January/February, 58.
- Burzawa, Susan. 1999. "Put Investing in Perspective: It's Just One Piece of a Complete Retirement Financial Plan." *Employee Benefit Plan Review* 54: 36-38.
- Cabrera, Elizabeth, and Jaime Bonache. 1999. "An Expert HR System for Aligning Organizational Culture and Strategy." *Human Resource Planning* 22: 51-60.
- Campion, Michael. 1991. "Meaning and Measurement of Turnover: Comparison of Alternative Measures and Recommendations for Research." *Journal of Applied Psychology* 76: 199-212.
- Clark, Robert, and Ann McDermed. 1990. *The Choice of Pension Plans in a Changing Regulatory Environment*. Washington, D.C.: American Enterprise Institute.
- Cooke, Robert, and Denise Rousseau. 1988. "Behavioral Norms and Expectations: A Quantitative Approach to the Assessment of Organizational Culture." *Group and Organizational Studies* 13: 245-273.
- Copeland, Craig, Jack VanDerhei and Dallas L. Salisbury. 1999. "Social Security Reform: Evaluating Current Proposals: Latest Results of the EBRI-SSASIM2 Policy Simulation Model." *EBRI Issue Brief*, June.
- Daft, Richard. 2000. *Management*, 5th ed. Fort Worth, TX: Dryden Press.
- Fanto, James. 1998. "We're All Capitalists Now: The Importance, Nature, Provision and Regulation of Investor Education." *Case Western Reserve Law Review* 49 (1) (Fall): 105-180.
- Feldman, Daniel. 1994. "The Decision to Retire Early: A Review and Conceptualization." *Academy of Management Review* 19: 285-311.
- Fore, Douglas. 2000. "A New Way of Looking at the Risk in Defined Benefit Pension Plans." *Benefits Quarterly* 16 (4).
- Fossum, John, Richard Arvey, Charles Paradise and Nancy Robbins. 1986. "Modeling the Skills Obsolescence Process: A Psychological/Economic Integration." *Academy of Management Review* 11: 362-374.
- Gale, William, Leslie Papke and Jack VanDerhei. 1999. "Understanding the Shift From Defined Benefit to Defined Contribution Plans." Paper presented at a conference entitled "ERISA After 25 Years: A Framework for Evaluating Pension Reform." September 17.
- Glaser, Stephen, Samuel Zamanou and Karen Hacker. 1987. "Measuring and Interpreting Organizational Culture." *Management Communication Quarterly* 1: 173-198.
- Gomez-Mejia, Luis, David Balkin and Robert Cardy. 1998. *Managing Human Resources*, 2nd ed. Upper Saddle River, NJ: Prentice Hall.
- Greenhaus, Jeffrey, and Gerard Callanan. 1994. *Career Management*, 2nd ed. Fort Worth, TX: Dryden Press.
- Gustman, Alan. 1992. "The Stampede Toward Defined Contribution Pension Plans: Fact or Fiction." *Industrial Relations* 31: 361-369.
- Hanisch, Kathy. 1994. "Reasons People Retire and Their Relations to Attitudinal and Behavioral Correlates in Retirement." *Journal of Vocational Behavior* 45: 1-16.
- Hanisch, Kathy, and Charles Hulin. 1991. "General Attitudes and Organizational Withdrawal: An Evaluation of a Causal Model." *Journal of Vocational Behavior* 39: 110-128.
- Harris, Michael. 1993. "Reactions to Employee Benefits: Development and Refinement of a Measure." Paper presented at the 1993 Industrial Relations Research Association. January, Anaheim, CA.
- Hein, Kenneth. 1999. "Have Perks Gone Too Far?" *Incentive* 173: 24-27.
- Heneman, Herbert, and Donald Schwab. 1985. "Pay Satisfaction: Its Multidimensional Nature and Measurement." *International Journal of Psychology* 20: 129-141.
- Herman, Roger. 1999. *Keeping Good People*. Winchester, VA: Oakhill Press.
- Ippolito, Richard. 1995. "Toward Explaining the Growth of Defined Contribution Plans." *Industrial Relations* 34: 1-20.
- Kahn, Virginia. 1996. "All Your Eggs: If Baby Boomers Have All Their 401(k) Money in Stocks, What Happens When They Retire?" *Financial World*, January 2, 56-59.
- Kaufman, Harold. 1974. *Obsolescence and Professional Career Development*. New York: AMACOM.
- Kelves, Barbara. 1999. "Coping With Retirement." *Journal of Accountancy* 188: 67-77.
- Kimpel, John M. 2000. "Education and Advice Under ERISA for Employee-Directed 401(k) Plans." *Benefits Quarterly* 16 (4).
- Kleinman, Gary, Asokan Anandarajan and Kenneth Lawrence. 1999. "An Analysis of the Move Toward Defined Contribution Pension Plans: Are the Rewards Commensurate With the Risks?" *Journal of Pension Planning and Compliance* 25: 61-89.
- Kubeck, John, Norman Delp, Terry Haslett and Mary McDaniel. 1996. "Does Job-Related Training Performance Decline With Age?" *Psychology and Aging* 11: 92-107.
- Lindbo, Tracy, and Kenneth Schultz. 1998. "The Role of Organizational Culture and Mentoring in Mature Worker Socialization Toward Retirement." *Public Productivity and Management Review* 22: 49-59.
- Lust, John, and Carol Danehower. 1990. "Models of Satisfaction With Benefits: Research Implications Based on the Nature of the Construct." *Journal of Business and Psychology* 5: 213-221.
- \_\_\_\_\_. 1992. "The Dimensionality of Employee Benefit Satisfaction." Symposium conducted at the Annual Meeting of the Academy of Management. August, Las Vegas, NV.
- McCarthy, David D., and John A. Turner. 2000. "Pension Education: Does It Work? Does It Matter?" *Benefits Quarterly* 16 (1).
- McEvoy, Glenn, and Wayne Cascio. 1989. "Cumulative Evidence of the Relationship Between Employee Age and Job Performance." *Journal of Applied Psychology* 74: 11-17.
- Medill, Colleen E. 2000. "The Individual Responsibility Model of Retirement Plans Today: Conforming ERISA Policy to Reality." *Emory Law Journal*, Winter.
- Miles, Robert, and Charles Snow. 1978. *Organizational Strategy, Structure, and Process*. New York: McGraw Hill.

- Milkovich, George, and Jerry Newman. 1999. *Compensation*, 6th ed. New York: Irwin McGraw Hill.
- Milne, Deborah A., Jack L. VanDerhei and Paul J. Yakoboski. 1996. "Participant Education: Actions and Outcomes." *EBRI Issue Brief* no. 169, January.
- Mitchell, Olivia, and Sylvester Schieber. 1998. "Defined Contribution Pension: New Opportunities, New Risks." In Olivia Mitchell (ed.), *Living With Defined Contribution Pensions*, 1-14.
- Noe, Raymond, Steffanie Wilk, Ellen Mullen and James Wanek. 1997. "Employee Development Issues in Construct Definition and Investigation of Antecedents." In J. Kevin Ford (ed.), *Improving Training Effectiveness in Work Organizations*. Mahwah, NJ: Lawrence Erlbaum Associates.
- O'Reilly, Charles, Jennifer Chatman and David Caldwell. 1991. "People and Organizational Culture: A Profile Comparison Approach to Assessing Person-Organization Fit." *Academy of Management Journal* 34: 487-516.
- Otterbourg, Robert. 2000. "Time to Retread." *Kiplinger's Personal Finance Magazine* 54: 102-104.
- Papke, Leslie. 1999. "Are 401(k) Plans Replacing Other Employer-Provided Pensions: Evidence From Panel Data." *Journal of Human Resources* 34: 346-368.
- Pomeroy, William R. 2000. "Education: Clients Teaching Employees." *Advisor Today*, January.
- Porter, Michael. 1980. *Competitive Strategy*. New York: Free Press.
- Rosen, Bernard, and Thomas Jerdee. 1985. *Older Employees: New Roles for Valued Resources*. Homewood, IL: Dow Jones-Irwin.
- Sabelhaus, John. 1999. "Disposition of Lump-Sum Pension Distributions: Evidence From Tax Returns." *National Tax Journal* 52 (3) (September): 593.
- Salisbury, Dallas L., Ruth Helman, Pamela Ostuw and Paul Yakoboski. 2000 "Retirement Confidence Survey 2000 Including Results from the RCS Minority Survey and the Small Employer Retirement Survey." *EBRI Issue Brief* no. 222 (June).
- Schieber, Sylvester, Richard Dunn and David Wray. 1998. "The Future of the Defined Contribution Revolution." In Olivia Mitchell (ed.), *Living With Defined Contribution Pensions*, 273-284.
- Schein, Edwin. 1997. *Organizational Culture and Leadership*, 2nd ed. San Francisco: Jossey-Bass.
- Siegel, Stephen. 1981. "Preparation for Retirement in Commercial Banking Firms." *The Banker's Magazine* 164 (5): 89-93.
- Siegel, Stephen. 1989. "Preretirement Programs in Service Firms." *Compensation and Benefits Review*, March-April, 47-58.
- Spector, Paul. 1985. "Measurement of Human Service Staff Satisfaction: Development of the Job Satisfaction Survey." *Journal of Community Psychology* 13: 693-713.
- Stipp, David. 1999. "Hell No, We Won't Go!" *Fortune* 140 (2) (July 19): 102-108.
- Sussman, Alexander. 1996. "The Investment Horizon: How Can Employers Assure Adequate Retiree Benefits in the Coming Years?" *Compensation and Benefits Review*, January/February, 73.
- VanDerhei, Jack L. 1999. "The Controversy of Traditional vs. Cash Balance Plans." *ACA Journal* 8 (4): 7-16.
- VanDerhei, Jack L., Russell Galer, Carol Quick and John Rea. 1999. "401(k) Plan Asset Allocation, Account Balances, and Loan Activity." *EBRI Issue Brief* no. 205 (January).
- VanDerhei, Jack L., and Kelly Olsen. Forthcoming. "Section 401(k) Plans (Cash or Deferred Arrangements) and Thrift Plans." In Jerry S. Rosenbloom (ed.), *Handbook of Employee Benefits*, 5th ed. Homewood, Illinois: Dow Jones-Irwin.
- Wang, Jennifer, and Jack L. VanDerhei. 2000. "The Impact of Primary Pension Trends on Retirement Income: A Reexamination of Defined Benefit/Defined Contribution Trends." *Benefits Quarterly* 16 (1): 73-82.
- Wang, Penelope. 2000. "The Biggest Retirement Decision You'll Make." *Money* 29 (3): 98-104.
- Warr, Peter. 1994. "Age and Employment." In Harry Triandis, Marvin Dunnette and Leanna Hough (eds.), *Handbook of Industrial and Organizational Psychology*, 2nd ed., vol. 4, 485-550. Palo Alto, CA: Consulting Psychologists Press.
- Weckerle, Joelle, and Kenneth Schultz. 1999. "Influences on the Bridge Employment Decisions Among Older USA Workers." *Journal of Occupational and Organizational Psychology* 72: 317-329.
- Yakoboski, Paul. 1999. "Lump-Sum Distributions Total \$87.2 Billion in 1995." *EBRI Notes*. No. 10, October, 4-7.
- \_\_\_\_\_. 1997. "Large Plan Lump-Sums: Rollovers and Cashouts." *EBRI Issue Brief*. no. 188, August.
- \_\_\_\_\_. 1995. "Participant-Directed Retirement Plans Today and Critical Issues for Tomorrow." In *When Workers Call the Shots*. Washington, D.C.: Employee Benefit Research Institute, 9-26.
- Yakoboski, Paul, and Jack L. VanDerhei. 1996. "Worker Investment Decisions: An Analysis of Large 401(k) Plan Data." *EBRI Issue Brief* no. 176, August.
- Xenikou, Athena, and Adrian Furnham. 1996. "A Correlational and Factor Analytic Study of Four Questionnaire Measures of Organizational Culture." *Human Relations* 49: 349-371.