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University-Provided Retirement Planning Support and Retiree Financial Satisfaction During Retirement: Differences by Gender, Job Classification, and Planning Behavior

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Abstract

Sound financial planning and financial advice is necessary to achieve retirement income adequacy. The shift from defined benefit to defined contribution pension plans and the recent bankruptcy of Enron Corporation underscore the importance of managing retirement accumulation and liquidation risks. This study analyzes the effectiveness and adequacy of institutional-provided information and advice on employees' retirement planning decisions and their satisfaction with financial resources during retirement. Results suggest that retirement planning should begin earlier in an employee's career and that employer-provided retirement information and advice is a highly valued service. Gender, planning practices, job classification, and age are all significant predictors of satisfaction with financial resources during retirement. Targeting women and union employees with retirement information and advice that focuses on allocating contributions using a balanced portfolio approach should result in significant increases in satisfaction with financial resources during retirement. Regulatory objectives should focus on reducing retirement accumulation and liquidation risks, improving the delivery of professional financial advice to plan participants, and expanding qualified retirement plan choice for all labor force participants. To encourage employer participation in employee retirement planning, employers acting in "good faith" should be federally protected from liability for providing retirement planning information and advice to employees.

Introduction

The overall purpose of this study is to investigate the use of various sources of retirement information, employee efforts in planning for retirement, impact of planning on financial status during retirement, and retiree satisfaction with their financial resources during retirement for a sample of retired university employees. Furthermore,

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the study explores differences in the above listed behaviors by gender, job classification, and time of retirement. This article contributes to the growing body of knowledge on retirement planning and satisfaction with financial resources by describing actual retirement planning behavior, and by showing relationships between retirement planning behavior and satisfaction during retirement. This study also will add to our current knowledge the differences in these behaviors by gender, employee class, and time of retirement. Because the data for each stratum were organized by employee classes and analyzed in four groups by years since retirement, we are able to determine the effect of retirement decisions over a long period of time and for various classes of employees. To the best of our knowledge, this approach has not previously been used in studies of this type.

From a practical perspective, the results of this study can be used to determine effectiveness and adequacy of institutional-provided education/information to prepare employees to make retirement decisions, and the implications of retirement accumulation and liquidation decisions on an employee's long-term financial stability. While there are limits[1] to the generalizability of our results, base line data provided could be used by other organizations that are trying to answer similar retirement questions. Our findings are particularly relevant for universities that use TIAA-CREF. Plan participant investment choices have been expanded substantially during the decade of the 1990s and in October of 2002 a group of mutual funds were rolled out by TIAA-CREF, which will make retirement planning decision making even more complex. Consequently, university-provided retirement planning support has become even more important. Additionally, insurers, legislators, regulators, and others interested in reducing information asymmetry during the accumulation and liquidation phases of choice-based (defined contribution) retirement planning should be interested in these results.

Economic differences among retired people are extensive. The economic status of elders is partially the result of the environment in which their decisions were made. Thus, the levels of living achieved by the elderly 50 years ago or the elderly of today are the product of many factors, some generational in nature and some individual and personal, reflecting choices about education, savings, health practices, and many other matters. Crystal and Shea (1990) find that resources among the elderly are distributed more unequally than among the rest of the population; aging differently affects the economic status of older Americans; and unmarried women, minorities, and the oldest-old are identified as most vulnerable. They conclude that women, along with minorities, are at risk for poverty in older age—now and for the foreseeable future. Cutler, Gregg, and Lawton (1992) suggest that ensuring that retirees have made wise financial decisions in preparation for retirement is one of the more pressing societal challenges American institutions will face in coming decades.

Sound financial planning and financial advice is necessary to achieve retirement income adequacy. The fact that many baby boomers will live well into their eighties requires a planned investment strategy to provide retirement income for that length of time (Mastin, 1998). Social security alone is inadequate to serve as a lifetime income for retirees, and social security payments represents on average only 22 percent of a couple's income. The

[1] Limitations of the study are discussed in a later section of the article.

pay-as-you-go pension plan and the ability of the economy to support old-age benefits with resources produced by a proportionately smaller number of current workers has been challenged as the rate of retirement increased during the past decades (Frostin, 1999). In 1950, there were 16.7 workers for every social security beneficiary. Today there are roughly four workers per retiree, and the number is expected to decline to roughly 2.5 workers per retiree by the year 2030 (EBRI, 1997). Dumm, Colquitt, and Hoyt (2002) survey financial planners and conclude that financial experts are concerned about the current operation of the social security system. As a result, prospective retirees should recognize that the value of social security payments is uncertain and the benefit should not be counted on when planning for old-age economic security.

The shift from defined benefit to defined contribution pension plans also underscores the importance of managing retirement risks. The defined contribution pension plan approach requires that plan participants receive sound investment counsel to manage their retirement savings better. Most defined contribution plans require that employees take an active role in their retirement planning process by making periodic accumulation and liquidation decisions for the funds they set aside for retirement years. Employees retain their account-specific accumulation and liquidation risks and, as a consequence, are singularly responsible for fund growth and the amount of benefits received at retirement. Studies that investigate the effectiveness and adequacy of institutional-provided retirement planning information are even more relevant since the collapse of the Enron Corporation and the precipitous decline in the value of its employees' 401(k) accounts, because many were disproportionately invested in company stock. Since the Enron debacle, pension oversight has become a top priority of several congressional lawmakers and lobbying organizations. For example, last year the U.S. House of Representatives passed the Retirement Security Advice Act; President Bush currently is floating a pension reform proposal, and more restrictive pension reform is being proposed by Democratic Senators Boxer and Corzine. Unfortunately, sweeping pension legislation, made in a vacuum, may impose too many restrictions on the way defined contribution plans are set up and administered. VanDerhei (2002) suggests that company stock in a 401(k) accumulation account may have beneficial influences. A worst-case scenario would be that regulatory uncertainty and higher plan costs negatively impact defined contribution pension plan growth and participation. Regulatory objectives should focus on reducing retirement accumulation and liquidation risks, improving the delivery of professional financial advice to plan participants, and expanding qualified retirement plan choice for all labor force participants.

PROCEDURES

Data Collection

A list of 1,609 eligible employees who retired in 1975 or later from a major Midwestern University[2] was used as a sampling frame for this study. The sampling frame was sorted

[2] The university studied is a North Central Association of Colleges and Schools accredited land grant institution located in the Midwest. Fall 2001 undergraduate and graduate student enrollment was almost 28,000. The university employs approximately 1,800 faculty and 4,500 permanent staff.

by gender and retirement year, and a sample of 660 individuals was selected by fractional systematic sampling.[3]

Data were collected via telephone using a multi-item survey instrument with items assessing utilization of a number of the study university's sponsored retirement benefit options and educational programs. The survey included measurement of investment strategy, and of satisfaction with various aspects of life, including satisfaction with financial resources, university retirement services, and relationships with others. Demographic information, such as gender, age, employment status when working, and income, was also gathered.

Selected retirees were contacted first by letter, and then interviewed by telephone. The data were collected and tabulated with the Computer Assisted Telephone Interviewing (CATI) system used at the Statistical Laboratory of the university studied in October and November of 1999. Of the 660 retirees selected, 63 were no longer living at the time of the survey, and another 60 could not be located even after extensive searching. Of the 537 eligible and located retirees selected, 478 respondents completed interviews for an adjusted response rate of 89 percent. Out of the nonrespondents, 28 (5.2 percent) refused to be interviewed, 13 (2.4 percent) were too ill to participate, and 18 (3.4 percent) were never reached or were unavailable during the study period. Consequently, the overall response rate was 80.1 percent (i.e., 478/(660–63)). Respondents were separated into four retirement groups: those retired (1) before or during 1984, (2) between 1985 and 1989, (3) between 1990 and 1994, and (4) during or after 1995. Hence, the respondents can be divided into eight strata, based on retirement group and gender.

The data for each stratum were organized by employee classes, i.e., faculty, professional and scientific, and merit (union) staff. Data were analyzed in four groups by years since retirement (i.e., 1 year, 5 years, 10 years, and 15 years). This allowed us to fill a gap in the literature by determining the effect of retirement decisions over a long period of time and for various classes of employees.

Objectives

Specific objectives of this study were to ascertain the:

1. Use of various sources of information consulted by employees to learn about retirement planning.
2. Specific retirement planning actions taken by employees to prepare for their financial security during retirement.
3. Level of satisfaction with various aspects of life during retirement.
4. Difference in use of information, planning behavior and satisfaction by gender, employee class, and time of retirement.

[3] The Statistical Laboratory at the university studied designed the sampling method and assisted in the development and testing of the survey instrument to ensure the robustness of the results. Systematic random sampling controls the distribution of the sample by spreading it throughout the sampling frame or stratum at equal intervals, thus providing implicit stratification. A copy of the survey instrument is available from the authors.

5. Relationship between retirement planning actions and level of satisfaction with the financial situation of the employee in retirement.

Results of this study will make unique contributions to the existing body of literature by identifying resources used by employees to learn how to plan for retirement, by describing actual retirement planning behavior, and by showing the relationship between retirement planning behavior and satisfaction during retirement. This study also will add to our current knowledge the differences in these behaviors by gender, employee class, and time of retirement.

Variables

Variables used in the research process were categorized as either socio-demographic or planning behavior. Socio-demographic characteristics include gender, employee class, marital status (at retirement and at the time of survey), income, sources of income, household size, retirement age, and employment status. Only selected socio-demographic characteristics were used for the topics covered in this article. Planning behavior comprised four different actions: (1) determination of retirement income, (2) time horizon—number of years prior to retirement that the employee began planning, (3) the level of annual contribution to TIAA (fixed income, a stability-oriented option) and the level of annual contributions to CREF (a growth-oriented option), and (4) selection of retirement benefit options.

To identify the retirement planning time horizon, respondents selected from the following options: "less than 1 year," "1 to 5 years," "6 to 10 years," "11 to 20 years," and "more than 20 years." For chi-square analysis these responses were grouped into three categories: (1) up to 5 years, (2) 6 to 10 years, and (3) more than 10 years. Responses to the question, "How satisfied are you with various aspects of your life in retirement?" were measured on a 5-point Likert-type scale, where "1 = very dissatisfied" and "5 = very satisfied." Various aspects of satisfaction were: growth in retirement funds, health insurance, relationships, ability to move, housing, employer retirement services, and overall financial resources.

Limitations

Caution must be taken while generalizing results from this study to retirees from other universities or nonuniversity retirees. The 403(b) retirement plan requires that participants contribute 5 percent of qualifying income in order to receive the university's 10 percent contribution into their retirement account. If the retirement plans at other universities are designed differently than at the university studied, employees at other universities may not be as satisfied as the respondent group of retirees.[4] Nonuniversity benefits managers must also interpret the results of this study with caution. Similarly, these findings are not generalizable to firms that sponsor a defined benefit pension plan, but should have relevance to organizations that sponsor defined contribution plans or salary deferral plans such as a 401(k) plan. Additionally, the sample for this study lacks

[4] The AAUDE Survey of Benefit Programs 1999–2000 shows that for participating universities, the most frequent employee contribution was 5 percent of salary and institutional contribution was 10 percent.

racial or ethnic diversity and consists of a large majority of white respondents due to the predominance of white population in the Midwest. Thus, one should be careful while generalizing the results to the universities (employers) having considerable ethnic diversity.

LITERATURE REVIEW

Retirement refers to a condition in which an individual is forced or allowed to leave the labor market, or is employed less than full-time, and in which the source of his or her income defines retirement operationally, with no single definition meeting research needs in all disciplines (Atchley, 1982). The decision to retire is complex and entails much more than just a decision to stop working full-time (Reitzes, Mutran, and Fernandez, 1998). Research on retirement over the past decades has found that most retirees look forward to retirement, are happy with this time and suffer no ill-effects as a result of labor force withdrawal (Beck, 1992; Ekerdt, 1987; Ekerdt and Bosse, 1982; Martin Matthews and Brown, 1987; Sacombee and Lee, 1986). Atchley (1982) found that while activity levels were important for men and women retirees, the similarity ended after that. For women, good health and older age were predictive of life satisfaction during retirement, whereas having an adequate income and many goals were important for men. Martin Matthews and Brown (1987) found occupational factors and health to be important for men's morale, while only health had an influence on women. In contrast Sacombee and Lee (1986) found health, marital status, and income to be predictors of satisfaction for both men and women.

Although the majority of the retirees cope well with retirement, poor adjusters consistently have emerged in studies conducted over the past 20 years in a number of developed countries (Braithwaite and Gibson, 1989). Studies done on satisfaction during retirement have found that important predictors of retirement satisfaction are quality of relationships and frequency of aid from confidants and relatives, involvement in organizations, and health and financial status (Dorfman et al., 1985). In particular, retirees with higher incomes or adequate finances reported being more satisfied with life in retirement (Crowley, 1986; Dorfman, 1992; Palmore, Fillenbaum, and George, 1984). The financial satisfaction variable has been extensively used in models predicting life satisfaction and other measures of subjective well-being (Hira and Mugenda, 1998).

Given the problems associated with measuring income objectively and the fact that people's assessment of their financial situation appears to be based on relative deprivation and not income per se (Liang and Fairchild, 1979), subjective assessments of economic circumstances have been found to be most appropriate when focusing on retirees' life satisfaction (Dorfman and Moffett, 1987). Thereafter, financial satisfaction has been used quite widely in models predicting life satisfaction and other measures of subjective well-being (Davis and Helmick, 1985). Floyd et al. (1992) developed an instrument for describing retirement experiences and satisfaction to facilitate increased research addressing causal factors and processes of change and adjustment to this important life transition. Consistent with previous research, Calasanti (1996) found health, satisfaction with finances, and education to be significantly correlated with life satisfaction during retirement. Hira and Mugenda (1998) found financial satisfaction to be significantly correlated with retirees' perceptions of their comparative situation. Interestingly, Hershey et al. (1998) found that while training significantly increased the knowledge of

pre-retirees' domain, the overall quality of their retirement decisions did not significantly improve.

Campbell, Converse, and Rodgers (1976) concluded that satisfaction reflected a perceived gap between aspiration and achievement and that it could range from perception of fulfillment to that of deprivation. Satisfaction as a variable was found to be a better indicator of subjective well-being than happiness because it allowed a more stable and generalized assessment of individuals' reactions to their current financial situation (Sumarwan and Hira, 1993). The concept of financial satisfaction has also been measured using several items as indicators or using just one item as an indicator, such as satisfaction with income, satisfaction with the financial situation in general, or satisfaction with level of living. Financial satisfaction refers to the subjective evaluations of the degree to which one's financial resources are adequate versus inadequate, or satisfactory versus dissatisfactory (Andrew and Withey, 1976). Subjective measures have included variables like perception of past and future financial outcomes, perceptions of income adequacy (Keith, 1985), and satisfaction with overall economic conditions including debt, savings, and income (Hira, Fitzsimmons, and Bauer, 1993). Although retirement in general has received extensive study, the nature and the impact of retirement planning on retiree's overall satisfaction as well as satisfaction with finances is incomplete. A debate in both the economic and sociological literatures continues about whether incomes and wage levels for current workers are determined by characteristics of the individual (education) or structural features of the economic and social system (location in industrial sector). Both personal characteristics and structural features are important in determining the economic status of the elderly in a society. This study contributes to the existing body of literature by identifying resources used to learn about how to plan for retirement, by describing actual retirement planning behavior, and by showing a relationship between retirement planning behavior and satisfaction during retirement. This study also explores differences in these above-described areas by gender, employee class, and time of retirement.

RESULTS

Socio-demographic Profile

This section of the article focuses on the profile of the sample of the retirees with respect to their demographic and institutional characteristics. Table 1 shows a summary of the socio-demographic profile of respondent retirees.

The average retiree in this study was a 70-year-old male, married, retired at age 63, and with an annual income between $60,000 and $70,000. Approximately one-third of the respondents were female, and slightly fewer than 20 percent were in the divorced/separated/widowed category. The percentage of retirees married at the time of this study was 77 percent, down from 82 percent at the time of retirement.

The portion of retirees in the divorced/separated/widowed category increased from 13 percent to 19 percent during this same period. The most frequently reported income (28 percent) was in the more than $80,000 category. Many retirees received income from several sources other than an employer-provided retirement plan. A majority (87 percent) received social security payments and had investment income (66 percent). Two other sources of income identified by a significant number of retirees were spouse's income (44 percent) and IRA income (39 percent). Slightly over one-fourth of the retirees

TABLE 1
Socio-demographic Profile

Characteristic	*N*	Percent	Mean
Gender			
Male	308	64.4	
Female	170	35.6	
Retirement Marital Status			
Married	392	82.0	
Divorced/Separated/Widowed	65	13.5	
Single/Never Married	1	0.2	
Current Marital Status			
Married	368	77.0	
Divorced/Separated/Widowed	90	18.8	
Single/Never Married	1	0.2	
Household Size			1.85
Retirement Age			62.8
Current Age			69.78
Education			
Some College or Below	159	33.3	
BS	64	13.4	
MS	93	19.5	
PhD	162	33.9	
Job Classification			
Merit	134	28.0	
Professional & Scientific	138	28.9	
Faculty	204	42.9	
College/Unit			
Agriculture	71	14.9	
LAS	67	14.0	
Facility/Planning	38	7.9	
Extension	53	11.1	
Ames Lab/Administration	68	14.2	
Other	181	37.9	
Current Employment Status			
Working	137	28.7	
Not Working	341	71.3	
Current Household Income (Median)	$50,000–$60,000		
Source of Income			
Social Security	415	86.8	
IRA Income	187	39.1	
Investment Income	314	65.7	
Spouse Income	209	43.7	
Employment	132	27.6	

Note: Percentages do not sum to 100 percent for the marital status categories because some respondents declined to provide marital information, but otherwise participated in the survey. The inability or unwillingness to respond also causes "*N*" to vary over categories.

(28 percent) were currently employed as they identified employment as a source of income.

An average retiree in this study was more likely to be a faculty member and hold a PhD degree. However, about one-third of the respondents had no college degree. Almost equal proportions of the respondents were in either the merit/union (28 percent) or professional/scientific (29 percent) employment class. Most of the respondents were either from two large colleges—Agriculture (15 percent) and Liberal Arts and Sciences (14 percent)—or from a government lab/administration (14 percent).

About three-quarters of the retirees lived in households with two persons, which is in line with the proportion of retirees that were married at the time of the survey. About 21 percent of the retirees lived alone and only 4 percent of the retirees lived in households with three members. Less than 1 percent of the retirees had four-person households.

Pre-retirement planning requires taking a long-term view of one's financial situation. Furthermore, it indicates that the person has made an effort to review the level of resources needed to sustain a desired standard of living after retirement. The process may involve seeking out expert advice on the current level of resources that need to be set aside and invested to grow safely. People who are engaged in such a process can increase the likelihood of having a financially secure retirement. In this study the retirement planning process took into consideration the following areas: retirement income determination, planning horizon, sources of consultation for retirement planning information, level of contributions, and selection of investment accounts for these contributions and selection of benefit options. Differences in these planning behaviors were explored by gender, job classification, and time of retirement.

Planning Horizon

In general, respondents in this study took a relatively short-term approach to retirement planning. The majority of the retirees (66 percent) had a retirement planning horizon of five years or less. About 15 percent indicated that they started planning less than 1 year in advance of retirement and just over half (51 percent) started their planning efforts 1 to 5 years before their retirement. Only 17 percent of all respondents started their planning efforts 11 or more years in advance of their retirement. Not surprisingly, when respondents were asked what advice they may have for current employees, the majority said that everyone should start thinking about retirement planning as early as possible and that young employees should be planning for their retirement right now.

Figure 1 shows that male retirees were more likely to have started planning for retirement earlier than female retirees. About 11 percent of the male compared to only 5 percent of the female retirees began pre-retirement planning more than 20 years before retirement. Another 18 percent of the male retirees began their planning 6 to 10 years before retirement, while 15 percent of the female retirees began theirs in the same period. A larger proportion of females (22 percent) than males (12 percent) began their pre-retirement planning less than 1 year before retirement time.

Information on differences in planning horizon by job class is presented in Figure 2. Faculty retirees were more likely than merit and professional/scientific employees to have began pre-retirement planning long before their retirement date. For example, about 13 percent of the retirees in faculty positions compared to 9 percent of merit and

FIGURE 1
Pre-retirement Planning: Differences by Gender

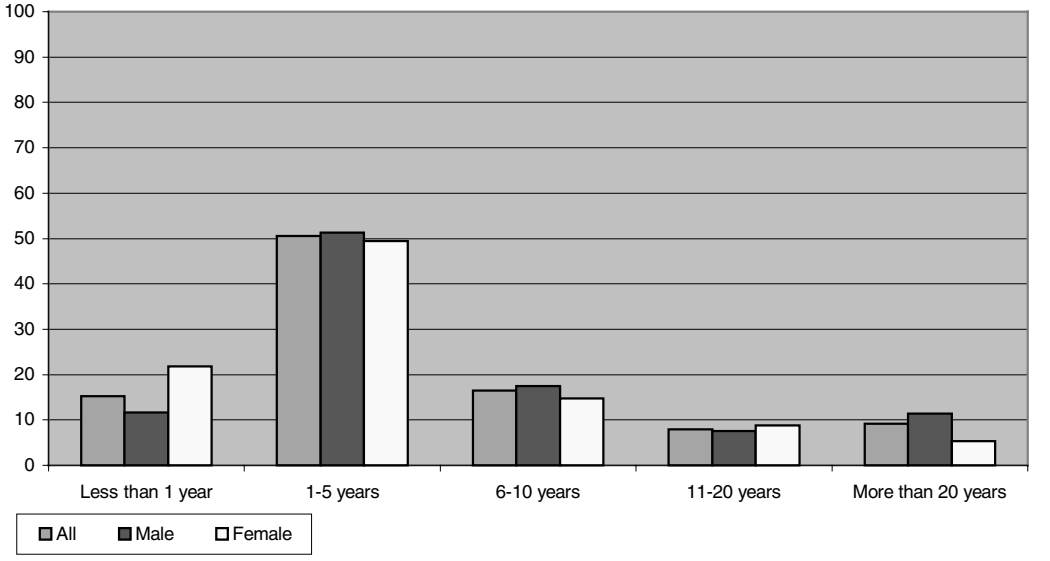
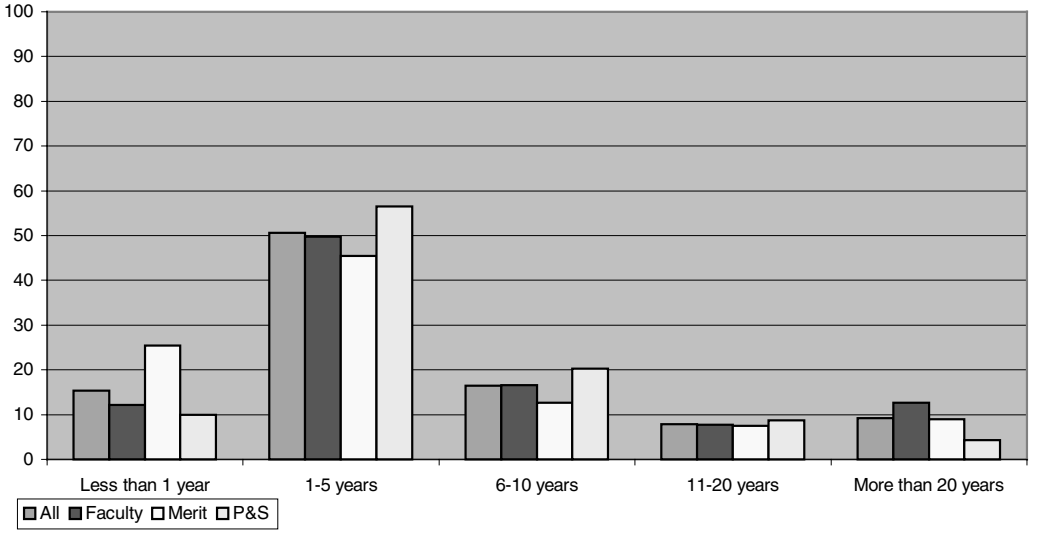


FIGURE 2
Pre-retirement Planning: Differences by Job Classification



4 percent of professional/scientific retirees started planning more than 20 years before retirement. On the other hand, about a quarter of the merit retirees began planning for retirement less than a year before they retired, as compared to 12 percent for the faculty and 10 percent for professional/scientific staff.

FIGURE 3
Pre-retirement Planning: Differences by Time of Retirement

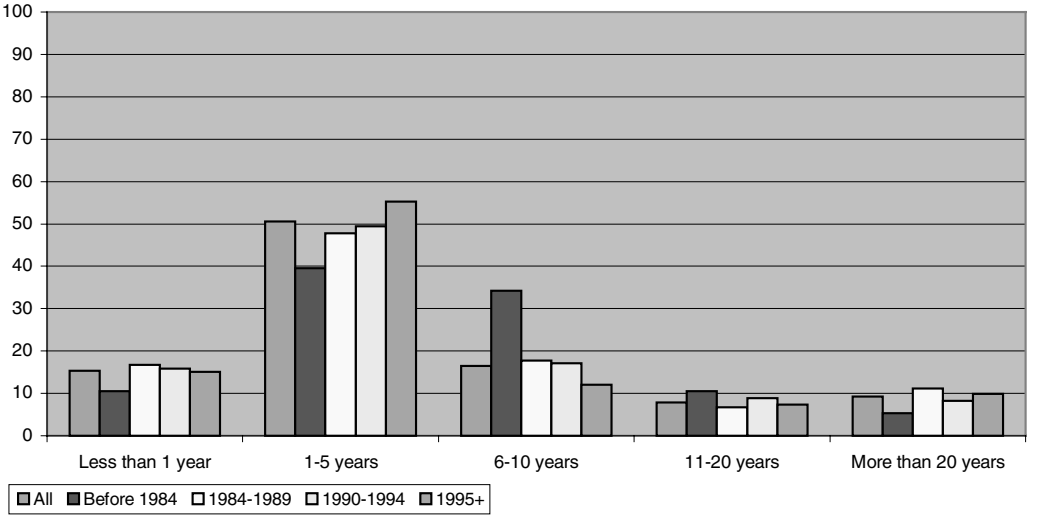


Figure 3 shows that the retirement planning horizon is getting shorter over time. This could be attributed to the return on equity during the 1980s and 1990s and the corresponding run-up in retirement fund accumulations allowing people to retire earlier, without much planning time. The short planning horizon used by respondent retirees is most likely the reason why "paying attention to retirement planning earlier in one's career" is a re-occurring theme in the written comments section of the survey. A shorter planning horizon also requires accurate and timely retirement planning information and advice.

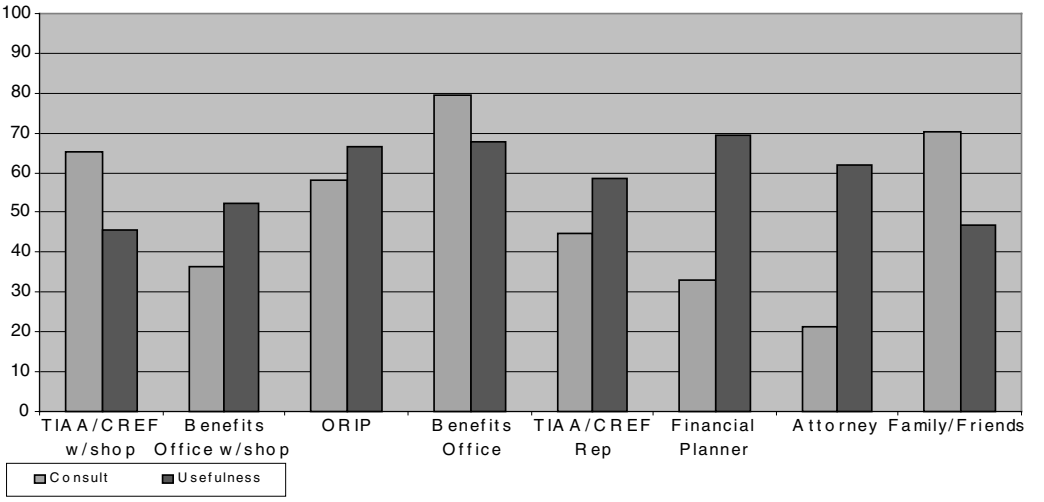
Sources of Information and Their Usefulness for Retirement Planning

In this subsection of the article, we discuss information sources that were used by retirees and how they were assessed for their value-added in retirement planning. Respondents were provided with a list of eight potential sources of retirement planning information. They were asked to identify the retirement planning services they had consulted and rate them according to their usefulness during the planning process. Figures 4–8 summarize the frequency and usefulness of retirement planning information sources available to and used by retirees in this study.

As can be seen from Figure 4, the most frequently used information source was the plan sponsor's benefit office. It appears that not only a majority of the retirees (79 percent) consulted with that office but also found that the information provided by the benefits office was very helpful (68 percent). A majority (65 percent) of the retirees also indicated that they attended TIAA/CREF workshops. However, only 46 percent found these to be useful.

A much smaller proportion of retirees (45 percent) met directly with a TIAA/CREF representative, but slightly over half of the retirees (58 percent) who received one-on-one advice found it to be useful. Similarly, a little over half of the retirees (58 percent)

FIGURE 4
Sources and Usefulness of Consultation for Retirement Planning



consulted with the Office of Retirement and Information Planning (ORIP) and a majority (67 percent) of those who used the services found them useful. A much smaller proportion of the retirees consulted with financial planners (33 percent) or attorneys (22 percent). However, a majority of the retirees rated services of these two professionals to be highly valuable. A large majority (70 percent) also consulted with friends and family, however, a much smaller proportion of these retirees were satisfied with their advice (45 percent).

Information presented in Figure 5 shows that the use of various sources of information differed by retirees' gender. It appears a larger proportion of male than female retirees made use of various sources of information that were available to them when employed. A large majority (79 percent) of both males and females used services of the benefits office. However, a larger proportion of male than female retirees (72 percent, 67 percent, respectively) consulted with family and friends for retirement planning advice. Male and female retirees were equally likely to utilize services of their employer's benefits office. Benefit office workshops were attended by slightly over one-third of the retirees (37 percent of the males and 34 percent of the females). Similarly, about 35 percent of the female and 32 percent of the male retirees opted for professional planners/advisors.

As shown on Figure 6, male and female retirees also differed in their opinions about the usefulness of various sources of retirement advice and information. A much larger proportion of male than female retirees seemed to have found the following sources to be useful: TIAA/CREF workshops, benefit office workshops, consultation with TIAA/CREF representatives, and attorneys. About 67 percent of the males found attorney consultation useful compared with 50 percent of the female retirees, and half of the male retirees found TIAA/CREF workshops useful compared to only 40 percent of the female retirees. Interestingly, despite the fact that a larger proportion of females than males participated in the workshops offered by TIAA/CREF and ORIP, males were more likely than females to find these beneficial.

FIGURE 5
Sources of Consultation for Retirement Planning: Differences by Gender

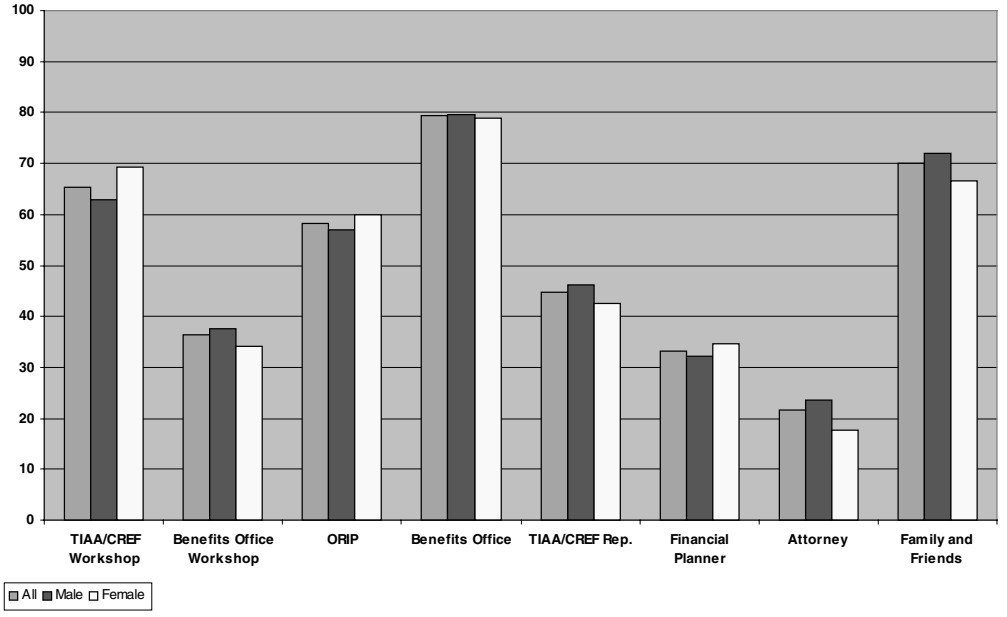


FIGURE 6
Usefulness of Consultation for Retirement Planning: Differences by Gender

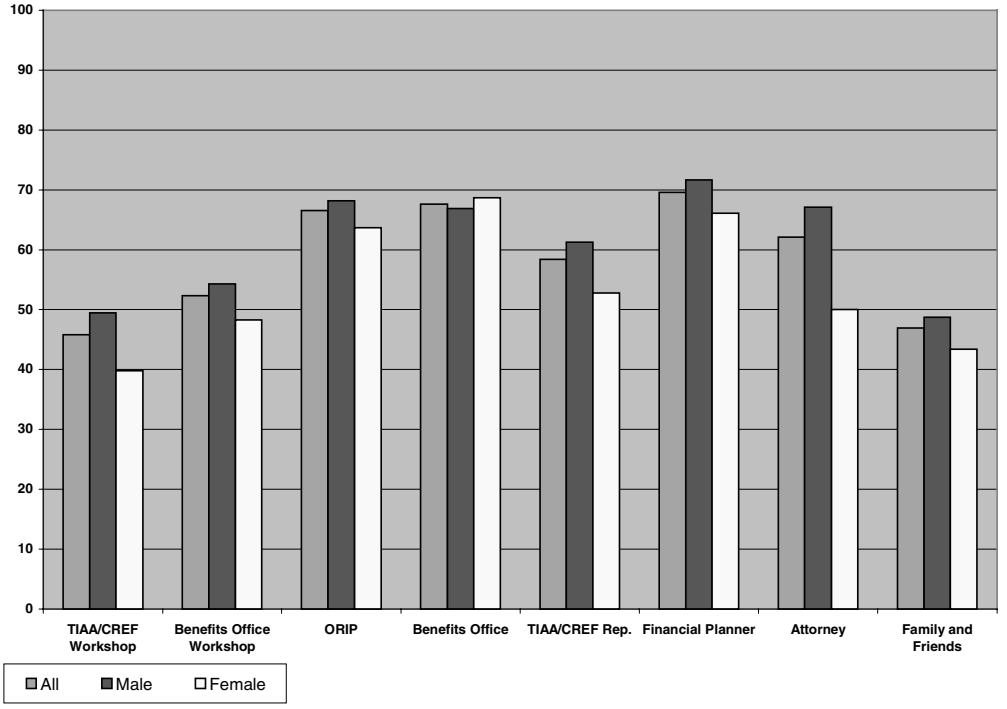


FIGURE 7
Sources of Consultation for Retirement Planning: Differences by Job Classification

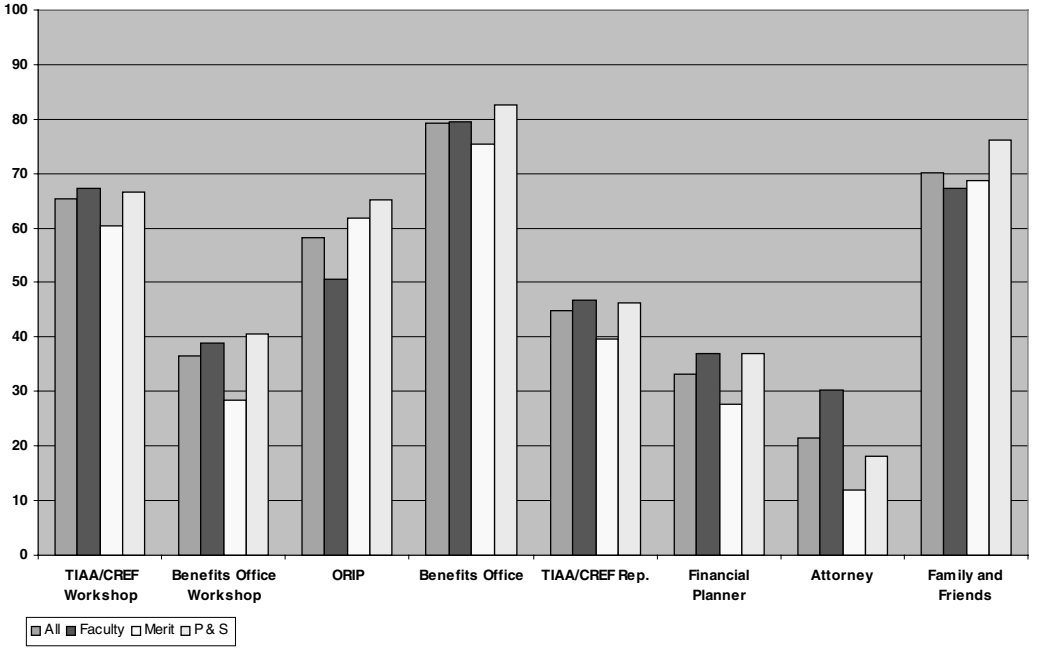
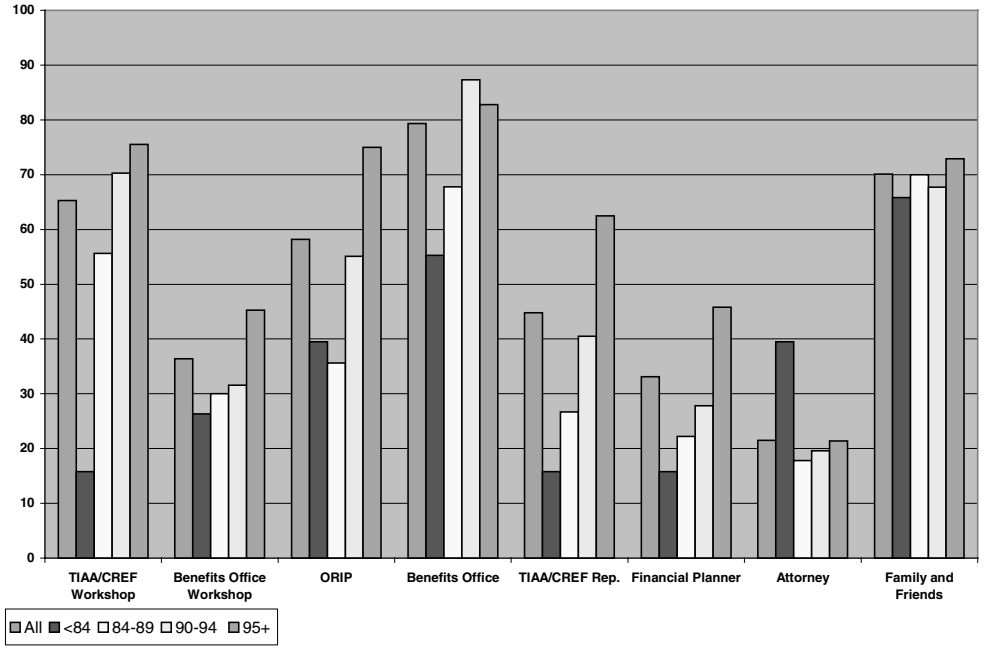


Figure 7 shows that faculty and professional/scientific staffs were similar in their use of various sources of information for retirement planning. However, retirees in merit (union) positions were different from retirees in the other two job classes in their use of information sources. The level of participation among merit staff was lower as compared to that of the other two groups in almost every type of information service; the only exception was ORIP and consultation with family and friends. Merit staff had above-average participation in ORIP services, at 63 percent compared with that of 58 percent for the whole group. A considerably larger proportion of faculty (30 percent) retirees as compared to the other two groups (18 percent professional/scientific and 12 percent of merit) sought advice from attorneys. About 66 percent of the retirees in faculty positions and slightly over half of retirees in professional/scientific and merit positions that sought advice from attorneys reported that they found attorneys to be a useful source of retirement planning information.

Professional/scientific staff had the highest participation in consultation with family/friends and the benefits office. About 76 percent of them sought advice from family and friends compared with 67 percent of the faculty and 69 percent of merit staff. A majority of retirees among all three classes of jobs—professional/scientific (83 percent), faculty (79 percent), and merit (75 percent)—obtained advice from their employer's benefits office. Respondent assessment of the usefulness of sources of retirement planning advice and information was comparable among all employment classifications. Even though a relatively small proportion of retirees sought services of professional planners and advisors, a majority of the ones who used these services found them to be valuable. A

FIGURE 8
Sources of Consultation for Retirement Planning: Differences by Time of Retirement



relatively larger proportion of faculty retirees as compared to merit and professional/scientific retirees found consultation with attorneys, family members, and friends to be useful.

A review of Figure 8 shows that over time respondent retirees became increasingly involved with the various sources of retirement planning advice and information that were available. Generally, employees who retired after 1994 were more likely than those who retired before 1994 to consult the available sources of retirement planning services. Those who retired before 1984 generally were the least likely to have used the available information and advice. Attorneys were the only source of advice and information consulted by a relatively larger proportion of earlier retirees. About 40 percent of those retiring before 1984 compared to about 20 percent of those retiring after 1984 used attorneys for retirement planning advice.

On the other hand, a larger proportion of those who retired after 1989 utilized TIAA/CREF workshops (70 percent) and the benefits office (80 percent). A much smaller proportion of those retiring before 1984 had used these two sources of information, TIAA/CREF (16 percent) and the plan sponsor's benefit office (55 percent). While this study did not control for information intensity over time, it is quite possible that both TIAA/CREF and the respondents' institution increased the amount of planning information and assistance available to employees, making the use of attorneys for retirement advice less necessary. Interestingly, survey results show that recent retirees were more likely to seek retirement planning advice and information than other retirees, but they did not find the advice and information as useful as the other respondent cohorts.

The Internet is increasingly becoming an important source of all kinds of information. More and more vendors and plan sponsors are posting valuable retirement planning and benefits information on their sites for convenience and accessibility purposes. In this survey, respondents were asked if they obtained retirement information over the Internet from their employer, from TIAA/CREF, or from any other sources. First, it is important to note that only 12 percent of all retirees in this survey indicated that they were using the Internet as a source of information and/or tool for retirement planning. Of the retirees that had used the Internet as a retirement planning tool, more of them had obtained information from the TIAA/CREF Web site (52 percent) than from the university studied Web site (34 percent). A much smaller proportion of retirees (14 percent) indicated that they had obtained retirement planning information from other Web sites.

It appears that a much larger proportion of male (13 percent) than female retirees (9 percent) had accessed the Internet for retirement information. Professional/scientific retirees were more likely to obtain information from the plan sponsor's Web site, while the largest proportion of retirees to obtain information from the TIAA/CREF Web site were merit employees (59 percent), followed by faculty retirees (52 percent), and finally professional/scientific (36 percent). Not surprisingly, it is clear that a large majority of those retirees (88 percent) who were using the Internet as an information source retired in 1995 or after. None of those who retired before 1984 used the Internet, and only one person among those who were using the Internet had retired between 1984 and 1989. Although the Internet is not widely used by respondent retirees at this time, its popularity with more recent retirees suggests that plan sponsors and vendors should increasingly take advantage of this information tool to communicate retirement planning information.

Retirement Contributions and Benefit Options

The quality of a retiree's retirement is positively related to the standard of living (other factors, such as health, are also very important) that the person is currently experiencing. Standard of living is a function of the sources of retirement income that the person has, and for many retirees, benefits from qualified plans make up a significant portion of their income. In defined contribution plans (403(b), 401(k)) retirement accumulations grow over time and are a function of the level of contributions made and the investment return earned on the accumulations. However, determination of income needed during retirement and the level of contributions made to retirement funds to achieve that income would have great influence on the standard of living a retiree would in reality experience. This subsection of the article discusses the level of contributions, the allocation of contributions, and the retirement benefit choices made by survey respondents.

Retirement Income Determination. Deciding when to retire involves multi-attribute decision making. One important attribute is the estimated retirement income and how it compares to the standard-of-living objective of the prospective retiree. Table 2 shows that in general, most respondent retirees (84 percent) calculated their anticipated retirement income and compared it to their expected financial needs.

Male retirees were more likely than female retirees to have analyzed their retirement needs. Eighty-six percent of the male retirees as compared to 80 percent of female retirees had carried out the analysis to determine how much income would be needed during retirement to maintain their current lifestyle. Furthermore, retirees in faculty and

Table 2
Calculate Retirement Income

	All	Gender		Job Classification			Age			Retirement Year		
	$N = 478$	Male $N = 308$	Female $N = 170$	F $N = 205$	M $N = 134$	P&S $N = 138$	55–59 $N = 99$	60–64 $N = 215$	65+ $N = 164$	<84 $N = 38$	84–89 $N = 90$	90–94 $N = 158$
No	15.9[a]	13.6	20.0	12.2	26.1	11.6	15.2	14.9	17.7	18.4	20.0	19.1
Yes	83.9	86.0	80.0	87.8	73.9	87.7	84.8	85.1	81.7	78.9	80.0	81.1
DK[b]	0.2	0.3	0.0	0.0	0.0	0.7	0.0	0.0	0.6	2.6	0.0	0.0
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[a]Reported as a percentage.
[b]DK in all tables and figures is defined as the response "didn't know."

professional/scientific positions (88 percent each) were more likely than those in merit (union) positions (74 percent) to have undertaken such analysis. When compared by age of the retiree, it can be seen that retirees under age 65 and those retiring after 1990 were more likely to do a comparative analysis for their income needs during retirement than older or earlier retirees, although the differences are not large.

Contribution Levels. Plan participants are required to contribute 5 percent of qualifying income to receive the Study University's two for one match (10 percent contribution) to the 403(b) plan that is administered by TIAA/CREF. Plan participants may also contribute, within internal revenue code (IRC) limits, to a supplemental retirement account (SRA). Contributions to the SRA are voluntary and not matched, but are made with pretax income and interest income is tax deferred. Contributions to the 403(b) and the SRA are allocated as directed by the plan participant to fixed (TIAA) and/or variable (CREF) investment options during the accumulation (working) period. At retirement, the plan participant may select among many liquidation options, including, but not limited to, life income options and cash settlement options.

Nearly 100 percent of the respondents either met the required match or contributed more than required to their retirement plan. Over one-half of respondents indicated that they contributed to an SRA and took advantage of the additional tax deferral that is available through the supplemental plan. Contribution levels seem to vary based on gender (Figure 9). Males were more likely than females to make larger contributions to the retirement fund (more than minimum and closer to maximum) while females were more likely to be making contributions at the minimum level. Faculty retirees and retirees retiring in 1995 and after were more likely to have made contributions in excess of the minimum required.

Level of Contributions to TIAA and CREF. Figures 10 and 11 summarize information about the percentage of retirement contributions made by respondent retirees into TIAA (fixed)

FIGURE 9
Retirement Contribution Level: Differences by Gender

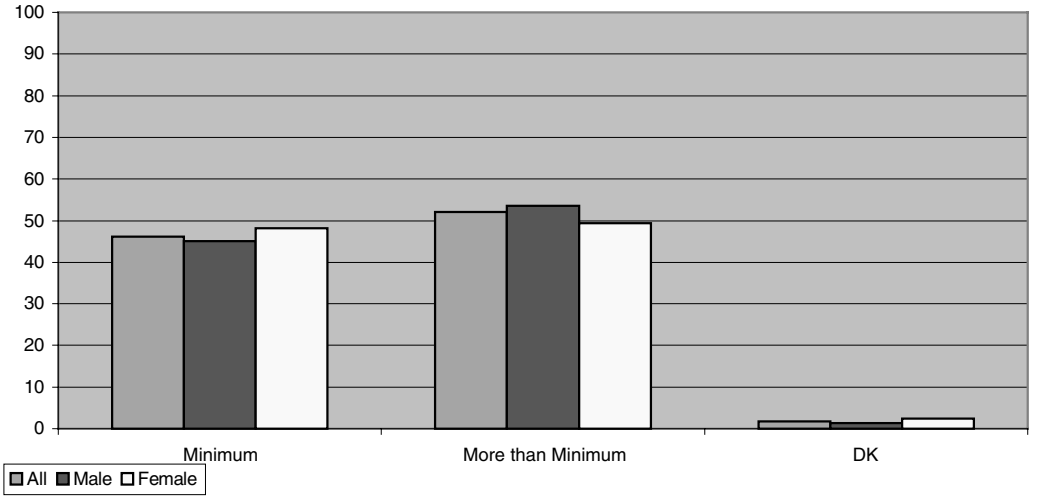
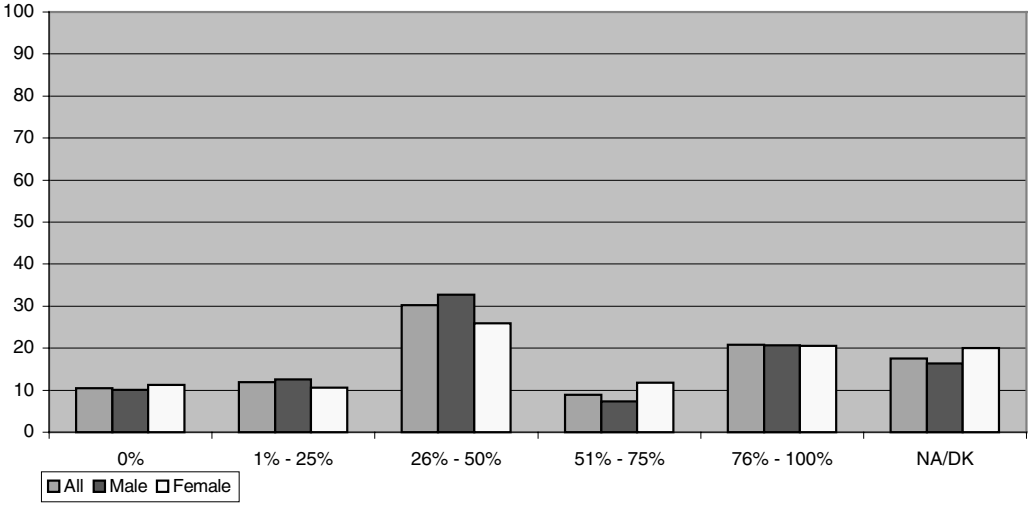
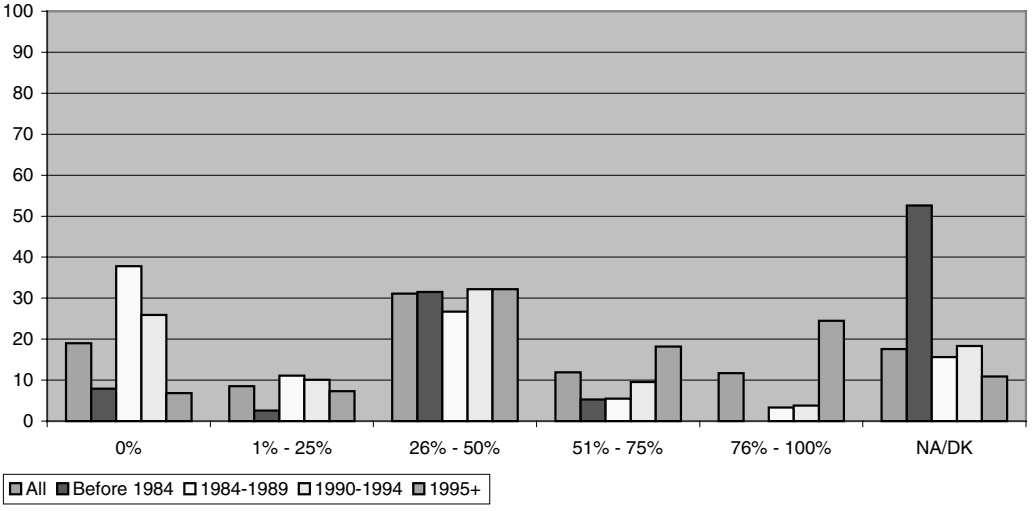


FIGURE 10
Percentage Contribution to TIAA: Differences by Gender



Note: NA/DK is used when the respondent would not or could not provide an answer to the telephone survey question.

FIGURE 11
Percentage Contribution to CREF: Differences by Time of Retirement



and CREF (equity) accounts. A balanced portfolio approach between TIAA/CREF was used by about 30 percent of surveyed retirees. This is the academically appropriate and practical way to manage investment risk, while maximizing accumulations over time. These retirees contributed somewhere between 26–50 percent of their retirement

contributions between the two accounts. It is also a signal that many employees were receiving appropriate retirement planning advice and information.

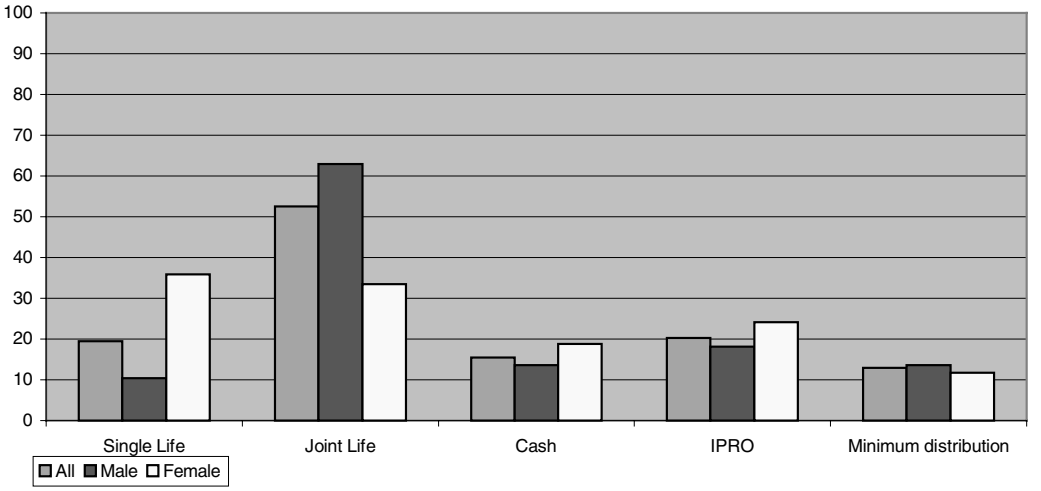
Differences in the level of contributions between male and female retirees were not that pronounced. Figure 10 shows that almost a similar proportion of males and females were found in two categories of contribution to TIAA, the smallest (0 percent), and the largest (76–100 percent). A slightly larger proportion of males (13 percent) than females (11 percent) were in the 1–25 percent category. On the other hand, a larger proportion of females (12 percent) than males (7 percent) were found in the second highest contribution category (51–75 percent). Additionally, a larger proportion of female than male retirees indicated they did not know the level of their contributions to TIAA. A much larger proportion of retirees in the professional/scientific job class (37 percent) than those in the faculty (29 percent) and merit (25 percent) job classes were making contributions to TIAA somewhere between 26–50 percent. Among those who contributed between 51–75 percent to TIAA, professional/scientific employees were in larger proportion than the other two employee groups. However, the largest proportion of merit (25 percent) as compared to faculty (20 percent) and professional/scientific (17 percent) retirees made TIAA contributions at the highest levels (76–100 percent).

Figure 11 indicates that employees who retired between 1984 and 1989 were less likely to be well diversified or knowledgeable about how they allocated their contributions to TIAA/CREF. On the other hand, about 40 percent of those retiring after 1994 were making contributions to CREF at the highest two levels—between 51 percent and 100 percent. These findings may well be a result of the fact that during the 1970s and early 1980s interest rates were at high levels relative to the under-performing stock market and optimizing plan participants were more likely to contribute to TIAA. For those retiring after 1994, the run up in the equity market during the 1980s and 1990s most likely influenced their decision to invest heavily in CREF. In addition, Americans in general have become more accustomed to mutual fund–like investments. As a consequence, the level of contributions to CREF has increased over time.

Benefit Options. At the time of retirement, the retiree has many options that can be used to liquidate their retirement accumulations in an orderly manner. The options range from a guaranteed income for the life of the retiree (single life annuity) to a minimum distribution as required by the IRC at age $70\frac{1}{2}$ years. This subsection of the article discusses the retirement income selections that were made by respondent retirees. About 20 percent of the retirees selected the single life income option. This option guarantees income for the life of the annuitant and results in the largest payout, but the annuity income ceases upon the death of the annuitant. The TIAA interest payment retirement option (IPRO) was chosen by 20 percent of surveyed retirees. This option allows the retiree to preserve accumulations while drawing on the interest earned. This option is sometimes used as a transition or temporary benefit until a more permanent retirement income option is elected. Another option available to retirees is to take the IRC required minimum distribution at age $70\frac{1}{2}$ years. Thirteen percent of retiree respondents selected this option, most of whom had retired after age 65.

As shown in Figure 12, a much larger proportion of females (36 percent) than males (10 percent) were more likely to select the single life option. These findings are consistent with the selection bias that is common with this annuity option. For this cohort of the

FIGURE 12
Retirement Income Selection: Differences by Gender



sample, the fact that females on average outlive men, are more likely to be single, and to be a lower-paid merit (union) employee lead to the more frequent use of the single life annuity. On the other hand, a much larger proportion of males (63 percent) than females (34 percent) selected the joint annuity option. Male retirees were also more likely to select the minimum distribution option. A slightly higher proportion of females than males selected cash and IPRO options. The joint life annuity is the most popular liquidation option for all groups combined at retirement.

From a job classification perspective, merit (27 percent) retirees were more likely than faculty (17 percent) or professional/scientific (16 percent) retirees to select the single life option. Similarly, a much larger proportion of merit retirees than those in the other two job classifications selected cash, IPRO, and minimum distribution options. These findings raise several questions that cannot be answered from our survey. One, did the options fit their personal and family needs in the best way? Two, did they fully understand the consequences of their choice? Three, were they more likely to be influenced by others who wanted them to take cash and invest with them?

The cash option, at the university studied, had been restricted first to 10 percent of the retirement transition benefit and later to approximately one-third of CREF accumulations. Beginning in 1998, the CREF portion of accumulations could be cashed out in its entirety. Relaxing this constraint has resulted in the more frequent use (31 percent) of this option by post-1995 retired persons when compared to those that retired before 1995 (less than 7 percent). This may be a temporary bubble due to the transition options for cash that affected retirees in 1998 and early 1999.

Gender does not overly influence respondent retirees' selection of cash options. Approximately 20 percent of both male and female retirees that used the cash option selected the retirement transition benefit and 30 percent used the IRA rollover. Interestingly, women (19 percent) were more likely than males (14 percent) to select the cash option. This could

be a result of dual-income estate planning options that are available to longer-lived females as a group.

Satisfaction During Retirement

Participating retirees were asked how satisfied they were with seven different aspects related to retirement: overall financial resources, employer-provided retirement services, retirement fund growth, health insurance, housing, ability to move around, and relationships. Responses were measured on a 5-point scale where 1 = very dissatisfied and 5 = very satisfied.

A large majority of respondent retirees were satisfied or very satisfied with all aspects of their retired life. Retirees who responded to this survey were in good physical health, with over 80 percent indicating they were very satisfied with their ability to move around. Similarly, over 70 percent were very satisfied with their housing and personal relationships with friends and family. A somewhat smaller percentage, but still a majority (60 percent), of the retirees was also very satisfied with retirement fund growth. Three areas where a relatively smaller proportion of retirees indicated a high level of satisfaction were overall financial resources (44 percent), health insurance (43 percent), and employer-provided retirement services (44 percent).

Significant gender differences in satisfaction can be seen in two specific aspects of retirement (Figure 13)—retirement fund growth and overall financial resources. It appears that male retirees were more likely than female retirees to be satisfied with the level of overall financial resources and growth in their retirement funds. Of course these two items are interrelated; the level of fund growth affects the level of overall resources.

FIGURE 13
Satisfaction With Various Aspects of Retirement: Differences by Gender

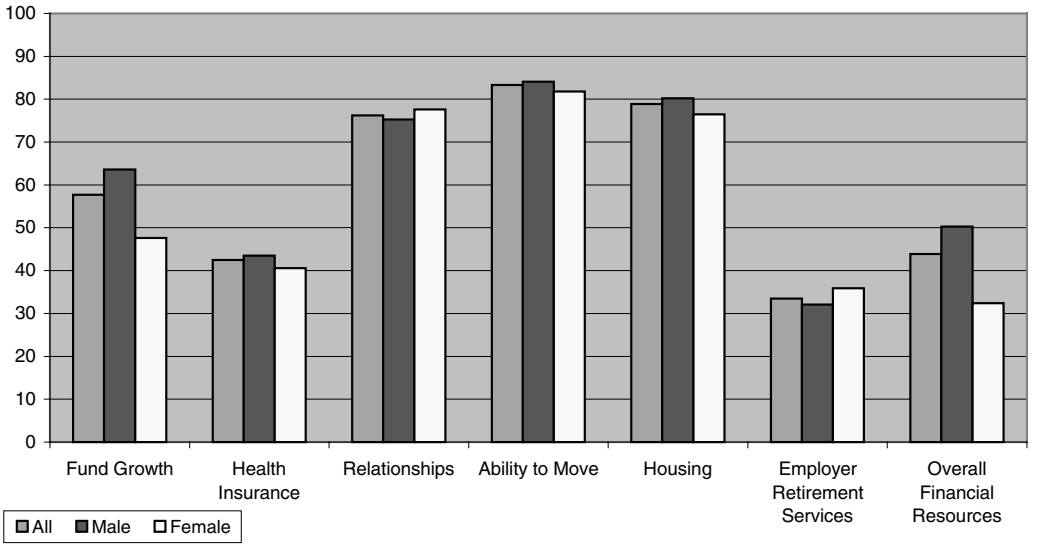
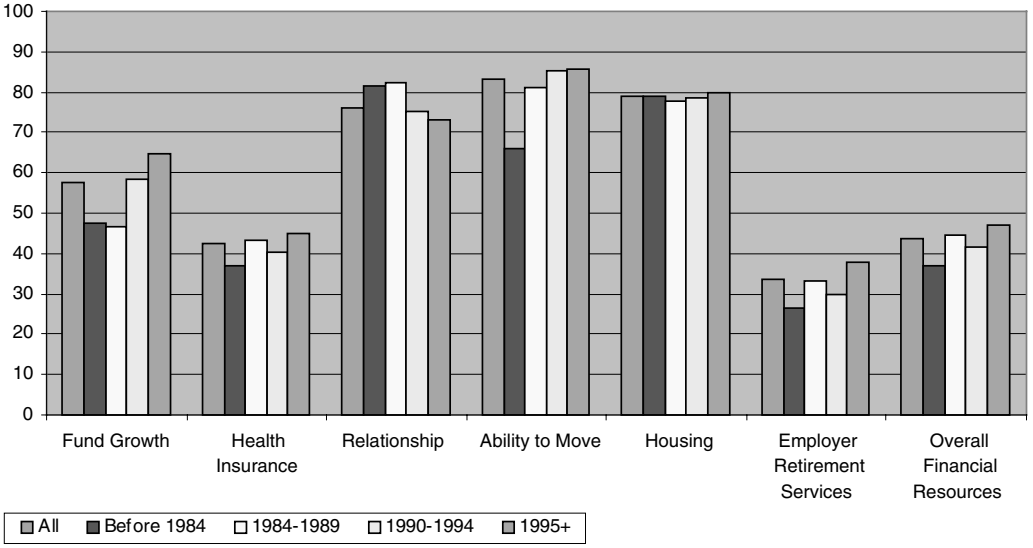


FIGURE 14
Satisfaction With Various Aspects of Retirement: Differences by Time of Retirement



Although the differences were not significant, more females than male retirees were satisfied with employer-provided retirement services and relationships with friends and family. On the other hand, males were more likely than females to be satisfied with their ability to move around, housing, and health insurance.

Figure 14 provides information about differences in satisfaction with various aspects of retirement by time of retirement. A much larger proportion of most recent retirees (retiring after 1994) were very satisfied with the following aspects of retirement: retirement fund growth, health insurance, ability to move, employer-provided retirement services, and overall financial resources. The only area where a larger proportion of earlier retirees (retiring before 1989) were very satisfied is "relationships with family and friends." The proportion of the retirees (almost 80 percent) who were very satisfied with their housing was fairly similar regardless of the time of retirement.

These findings show that levels of satisfaction are time dependent and have improved for the surveyed retiree group. The findings may be the result of several factors including stock market performance, age of the retirees, and better and improved retirement planning services provided by the employee benefit office of the university studied. More detailed analysis of predictors of retiree satisfaction can now be reported.

Factors Related to Satisfaction With Financial Resources During Retirement. This section focuses on identifying the factors that are significant in predicting retiree satisfaction with financial resources during retirement. These factors include socio-demographic characteristics and planning practices. Correlation analysis was applied to determine the relationship between demographic characteristics, planning practices, and satisfaction. Demographic characteristics selected to be used in correlation analysis were gender, job

TABLE 3
Correlations Among Variables

Variables	1	2	3	4	5	6
1. Financial Satisfaction	–	−0.18**	0.22**	0.27**	0.14*	−0.06
2. Gender		–	−0.04	−0.39**	−0.37**	−0.20**
3. Planning Years			–	0.20**	0.10*	−0.02
4. Employment Type				–	0.07	0.30**
5. Marital Status					–	−0.04
6. Current Age						–

Note: Financial satisfaction was measured on a 5-point scale where very dissatisfied was given a value equal to 1 and very satisfied was equal to 5. Gender was coded as male equal to one and female equal to two. The variable planning year was measured on a 3-point scale where planning for 11 years or more was given a value equal to 3, planning between 6 and 10 years a value equal to 2 and planning for up to 5 years was given a value equal to 1. Employment type was defined as merit, professional and scientific, and faculty. The categories were assigned a value in ascending order with merit staff equal to 1 and faculty equal to 3. The variable marital status was assigned three categories where married when retired was given a value equal to 3, single a value equal to 2, and divorced or widowed a value equal to 1. $N = 418$, $^{*}p < 0.05$, $^{**}p < 0.001$.

classification, marital status at retirement, and current age of the retiree. To determine the association between different planning practices and satisfaction with the financial situation during retirement, chi-square analysis was applied. Different planning practices (these were combined to create an overall planning variable for the correlation analysis) included years of planning, level of contribution to TIAA, and level of contribution to CREF. Use of chi-square analysis is considered appropriate for this purpose because the "goodness" of particular levels of the investment strategy variable is not necessarily defined linearly, and because of the uneven divisions of response options.

Correlation results, presented in Table 3, show the relationship between various sociodemographic characteristics, planning behavior, and satisfaction with financial resources. A review of these results shows that male retirees, retired faculty, and retirees who were married at the time of retirement were more likely than female retirees, retirees in merit or P&S jobs, and those who were single (never married, divorced, widowed) to be satisfied with the level of financial resources during retirement. In addition, the "planning" variable was significantly related to financial satisfaction. These results indicate that retirees who took the time and made an effort to plan for retirement were more likely to be satisfied than those who did not. The relationship between planning and satisfaction is further explored through chi-square analysis presented in Table 4.

Three different chi-square analyses were conducted to test the relationship between financial satisfaction and three measures of retirement planning: the number of years before retirement when planning began, the percentage of retirement contributions

TABLE 4
Summary of Chi-Square Analyses of Investment Strategy and Financial Satisfaction

Planning Investment Behavior	Years Planning	Financial Satisfaction*			χ^2	p	N
		Nonsatisfied	Satisfied	Very Satisfied			
Years Planning for Retirement	0–5	3.5	35.6	28.1	10.087	0.039	424
	6–10	0.9	7.5	6.8	df = 4		
	>11	0.7	5.9	10.8			
	Percent Contribution						
Contribution to TIAA	0–25	1.5	10.7	14.8	21.580	0.001	392
	26–50	0.5	17.6	18.9	df = 6		
	51–75	0.0	5.9	5.1			
	76–100	2.8	13.5	8.7			
Contribution to CREF	0–25	3.1	18.1	12.5	16.320	0.02	393
	26–50	0.5	17.6	19.8	df = 6		
	51–75	0.5	6.9	7.1			
	76–100	1	5.1	7.9			

*Measured as a percentage.

invested in TIAA funds, and the percentage of retirement contributions invested in CREF funds. Financial satisfaction was found not to be independent of the planning variables (for details see Table 4).

As can be seen from Table 4, the number of years spent planning for retirement was not independent of financial satisfaction ($\chi^2 = 10.087$, $p < 0.05$). This suggests that retirees who started planning more than 10 years prior to retirement, were more likely to be among those expressing "very satisfied." These results suggest that planning is an important factor in obtaining a high degree of financial satisfaction.

Participants indicated the percentage of available funds from 0 to 100 percent that they chose to invest in TIAA funds. The level of contribution to TIAA was not independent of financial satisfaction ($\chi^2 = 21.580$, $p < 0.05$). At this high level of contribution to a conservative investment fund, nonsatisfied participants exceeded those expected and vice versa for the "very satisfied" category. In general, then, high contributions to TIAA corresponded with lower financial satisfaction.

Respondent retirees had the opportunity to decide what proportion (varying from 0 to 100 percent in 25 percent increments) of their annual retirement savings could be contributed to a CREF account. The percentage of contribution to CREF funds was found not to be independent of financial satisfaction ($\chi^2 = 16.320$, $p < 0.05$). Table 4 shows that respondent retirees who contributed up to 25 percent to CREF funds tended to be less satisfied than those who contributed to CREF at a higher percentage rate (26 to 50 percent were most satisfied).

The chi-square analysis shows that those retirees who allocated a larger proportion of their annual retirement contributions to CREF than TIAA were more likely to be more satisfied. Similarly, those who started planning earlier in their work life were more likely to be satisfied with their financial resources during retirement.

CONCLUSIONS

This article contributes to the growing body of knowledge about satisfaction with financial resources during retirement by analyzing the effectiveness and adequacy of institutional-provided information and advice on employees' retirement planning decisions. In general this study shows that respondent retirees planned for their retirement and had adequate sources of high quality information available for decision-making purposes. Most felt that they were adequately prepared for retirement. That does not mean that the university studied should not be more proactive in providing retirement education for employees at earlier stages in their careers. However, it must be recognized that even if more educational opportunities were available, not all employees would take advantage of them and that mandatory attendance at retirement planning sessions, as suggested by some respondents, would not be feasible.

A reoccurring comment made by respondent retirees was that all persons should start thinking about retirement planning earlier and that young persons should be currently planning for their retirement. The majority of all survey respondents (66 percent) had a retirement planning horizon of 5 years or less. Employers in general should develop a plan to inform employees about retirement planning at earlier stages in their careers. Employer involvement is important, as the findings of this study indicate that employees depend on employer-provided retirement services and information and highly value the services received.

Other sources of advice and information, such as vendor workshops, were much less valued and less frequently used by respondent retirees. Many of the respondents received retirement planning advice from family and friends, but less than one-half of the retirees found it useful. Only one-third of all respondents used a professional planner and only 22 percent consulted with an attorney, but those using professionals found the advice to be very useful in most instances. Potentially, employers could improve pre-retirement planning by encouraging the use of professional planners and by having vendors provide workshops that are more relevant to the needs of the employee population. Employers should also continue to improve in-house information sources through human resources because of the value placed on this advice by employees and their dependence on employer-provided retirement services.

The Internet is a potentially valuable communication tool for retirement planning and choice. Although this communication tool was not widely used by respondent retirees, the popularity of the Internet with more recent retirees and the almost universal employee access to the Internet suggests that employers should increasingly take advantage of this medium to communicate retirement planning information and advice.

A balanced portfolio approach between fixed income (TIAA) and equity (CREF) was used by over 30 percent of respondent retirees. However, not all respondents were satisfied with the choices made during the accumulation period. Empirical analysis shows that retirees who deposited a larger proportion of their annual retirement contributions to the equity (CREF) rather than the fixed (TIAA) investment option were likely to be more

satisfied with their financial resources during retirement. Respondent comments indicate that more advice and information on the advantages and disadvantages of the fixed and variable accumulation options would be valuable. This would be especially important in the early years of an employee's career when the greatest compounding advantage exists.

Employers that allow retirement accumulation to be invested in company stock or that make matching contributions in company stock should be especially sensitive to the investment information needs of their employees. Investment information and advice should be provided through a third-party benefits specialist or through human resources. To encourage employer participation in employee retirement planning, employers acting in "good faith" should be federally protected from liability for providing retirement planning information and advice to employees.

Retirees would also like to have information earlier and more frequently on retirement income options that are available. The prospective retiree is faced with myriad retirement income choices and more information earlier would be helpful.

The results of this study also show that gender, planning practices, job classification, and age are significant predictors of satisfaction with financial resources during retirement. These findings suggest that younger male retirees that were faculty members and those who started planning for retirement early are most likely to be presently satisfied with their financial resources. Consequently, targeting women and merit (union) employees might result in significant increases in their satisfaction with financial resources. Information and advice for these two target groups should focus on the allocation of retirement contributions using a balanced portfolio approach, because these groups are less likely to use equity as an accumulation vehicle. As a result, retirement income options are limited due to relatively lower accumulation levels.

In summary, this study makes unique contributions to the existing literature by identifying pre-retirement planning behavior that is significantly associated with financial satisfaction during retirement. This study also identifies resources used to learn about retirement planning, by describing actual retirement planning behavior, and by showing relationships between retirement planning behavior and satisfaction during retirement. Furthermore, we identify differences in pre-retirement planning behavior by gender, employee class, and time of retirement. Our results suggest that employer-provided retirement information and advice is highly valued by employees and it should begin earlier in employees' careers. The results of this study are particularly relevant for universities that use TIAA/CREF. Plan participant investment choices have been expanded substantially during the decade of the 1990s, and in October of 2002 a group of mutual funds were rolled out by TIAA/CREF, which will make retirement planning even more complex. Additionally, insurers, legislators, regulators, and others interested in reducing information asymmetry during the accumulation and liquidation phases of choice-based (defined contribution) retirement planning should be interested in the results of this study.

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