THE RETIREMENT DISTRIBUTION DECISION TEN YEARS LATER: RESULTS FROM AN EMPIRICAL STUDY

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From 1964 until 2002, the State of Nebraska sponsored a defined contribution plan for its employees. During this period, the plan was unique among state pension plans

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because it was an individual account–type plan that offered participants the choice of a lump-sum or annuity distribution upon retirement. Such a choice presents the opportunity to learn more about how individuals perceive financial risks and weigh various factors when deciding how to access their retirement benefits. This study reports the results of a new survey of Nebraska state workers who retired or terminated employment in 1997. The results offer a perspective on how individuals perceive their decisions ten years later. The findings reveal three general themes. First, retirees tended to underestimate the financial risks associated with uninsured health care expenses. Sixty-five percent of retiree respondents said that they had initially underestimated such risk. Second, federal policies may influence the distribution decision. For example, many respondents cited tax penalties on lump-sum distributions as a major factor in their decision, which is consistent with a high percentage choosing a nontaxable direct rollover distribution. Finally, the results provide a basis for cautious optimism that retirees will be able to successfully manage a present value sum distribution during retirement. Over 90% of retiree respondents reported that they were able to cover their living expenses ten years after their retirement.

I. Introduction

In a defined contribution plan world, individuals bear the primary responsibility for determining their retirement income security.[1] Understanding the factors that influence individualized financial decisions is important for the future development of retirement policy at the local, state, and national levels. Faced with budget shortfalls, many state and local governments are considering as a cost-saving measure changing from a traditional pension plan, with benefits paid as a monthly annuity for life, to an individual account–type plan where retirement benefits are paid as a one-time distribution of the account balance.[2] At the national policy level, the first generation of workers whose retirement benefits are primarily in the form of a large payment from a 401(k) plan will soon begin to enter retirement.[3] These changes looming on the retirement horizon raise a significant public policy issue: how will

1. *See* Colleen E. Medill, *The Individual Responsibility Model of Retirement Plans Today: Conforming ERISA Policy to Reality*, 49 EMORY L.J. 1, 9–13 (2000); Edward A. Zelinsky, *The Defined Contribution Paradigm*, 114 YALE L.J. 451, 455–69 (2004).

2. Chuck Jordan, *Some Lawmakers Looking to Overhaul State Pension Plans*, CONGRESSDAILY, Mar. 5, 2007, at 6. Unlike the private sector, in the government sector, defined benefit plans still dominate. *See* U.S. DEP'T OF LABOR, BUREAU OF LABOR STATISTICS, NATIONAL COMPENSATION SURVEY: EMPLOYEE BENEFITS IN STATE AND LOCAL GOVERNMENTS IN THE UNITED STATES 6 tbl.1 (2007) (83% of state and local government workers had access to a defined benefit plan, whereas only 29% had access to a defined contribution plan).

3. *See generally* ALICIA H. MUNNELL & ANNIKA SUNDÉN, COMING UP SHORT: THE CHALLENGE OF 401(K) PLANS (2004) (discussing the future of 401(k) plans).

individuals fare during retirement when their retirement benefits are paid, not in the form of a monthly annuity for life, but rather as a large cash distribution at the beginning of their retirement years?

Effective legal analysis of this important public policy issue calls for an interdisciplinary approach using empirical tools from other disciplines beyond the rational choice model of law and economics.[4] It is, after all, real people—rather than the hypothetical rational economic actor—who make, and live with, the consequences of their retirement financial decisions. Empirical data concerning how real people make decisions are necessary for local and state government officials, as well as congressional lawmakers, to evaluate the potential effects of the transition to an individual account–based retirement system where the individual assumes responsibility for managing longevity, inflation, investment, and health care–shock financial risks. Rather than relying on anecdotal evidence, policy makers can use empirical research to evaluate more comprehensively whether the current legal

4. For a comparison of the utility of the rational choice model with a social analytic jurisprudence model that draws on empirical methodologies from other social sciences, principally psychology, see Richard L. Wiener, *Law and Everyday Decision Making: Rational, Descriptive, and Normative Models*, *in* SOCIAL CONSCIOUSNESS IN LEGAL DECISION MAKING 3, 6–28 (R. Wiener et al. eds., 2007). Professor Wiener posits that a "social analytic jurisprudence model" of psycholegal analysis that relies on interdisciplinary methodologies provides richer and more complete insights into the effects of law in everyday life than the rational choice model alone can provide. *Id.* at 26–28.

> Law embodies normative theories of behavior . . . . Psychological research can and does study the actual conduct of people to measure the fit between everyday behavior and the law's regulatory scheme . . . . Researchers [using techniques from the science of psychology] study the everyday behavior of people to offer suggestions of how to improve the fit between the normative model and the social milieu.

Id. at 27. The movement to incorporate cognitive tendencies and psychological biases into economic research has spawned the behavioral economics movement. *Id.* at 28. For a description of the contributions of the behavioral economics literature to the current state-of-the-art research concerning retirement financial planning and investment behavior, see Colleen E. Medill, *Transforming the Role of the Social Security Administration*, 92 CORNELL L. REV. 323, 331–41 (2007).

and regulatory scheme, broadly defined,[5] is adequate or whether changes should be considered.[6]

This Article reports one such effort to extend empirical legal scholarship into a new venue—the arena of national retirement policy—by studying the postdistribution experience of former participants in the retirement plan sponsored by the State of Nebraska for state employees. From 1964 until 2002, the State of Nebraska sponsored a defined contribution plan (the State Employees Plan) for employees of state government.[7] During this period, the State Employees Plan offered participants the choice of a present value distribution or an annuity upon the participant's retirement or termination of employment.[8]

Such a choice presents the opportunity to learn more about how individuals perceive various types of financial risks and weigh various motivational factors when deciding whether to receive retirement benefits as a one-time present value distribution or as lifetime monthly annuity payments (the distribution decision). The State Employees Plan also presents a natural experiment in terms of comparing the post–distribution decision experiences of participants who se-

5. Major areas of public policy implicated by this shift toward greater individual responsibility for retirement income security include regulation of the securities, mutual fund, and insurance industries; regulation of retirement plans sponsored by public and private employers; and the Social Security, Medicare, and Medicaid programs.

6. *See* Michael Heise, *The Importance of Being Empirical*, 26 PEPP. L. REV. 807, 808 (1999) ("[A]necdotal evidence supplies a risky foundation upon which to form generalizations applicable to a larger population.").

7. The State Employees Plan covers all permanent employees of the State of Nebraska who have completed twelve consecutive months of service except: (1) state judges; (2) state patrol officers; (3) Nebraska Department of Education employees who participate in the state's School Employees Retirement Plan; (4) employees of the University of Nebraska, state colleges, and community colleges; and (5) other miscellaneous categories of workers. NEB. REV. STAT. § 84-1301(a) (2006). These state employees also are eligible to make additional voluntary contributions on a pretax basis to another defined contribution plan sponsored under Section 457 of the Internal Revenue Code. § 84-1313(3)(b). The State Employees Plan was converted from a defined contribution plan to a cash balance (defined benefit) plan effective January 1, 2003. § 84-1309.02. Participants in the State Employees Plan today continue to have the option of choosing between a present value distribution or an annuity for their retirement benefits. § 84-1319.

8. *See* § 84-1319. As used in this Article, the term "present value distribution" refers collectively to taxable lump-sum distributions and nontaxable direct rollover distributions. When the data are analyzed using these subcategories, the terms "lump sum" and "direct rollover" are used to distinguish between the two subtypes of present value distributions.

lected a present value distribution with the experiences of those who selected an annuity.

II. Social Science Literature on Retirement Financial Planning and the Consumption of Accumulated Retirement Wealth

A substantial body of social science literature addresses how a rational actor would perceive and make optimal decisions concerning longevity, inflation, investment, and health care–shock financial risks in managing retirement wealth. A critical moment is when the individual must decide whether to receive retirement benefits in the form of a present value distribution or an annuity.[9] For individuals who elect to receive a present value distribution, there is an ongoing series of decisions concerning the investment and consumption of retirement assets.[10] Factors suggested by the social science literature as possibly influencing the distribution decision include:

(1) other sources of retirement income (for example, Social Security benefits and personal savings);

(2) competing desires for lifetime consumption of retirement wealth and intergenerational wealth transfer at death;

(3) estimates of future rates of investment return;

(4) estimates of longevity, inflation, stock market volatility, and health care–shock financial risks; and

(5) estimates concerning the value of annuities.[11]

9. LAWRENCE A. FROLIK & RICHARD L. KAPLAN, ELDER LAW IN A NUTSHELL 364–65 (4th ed. 2006).

10. *Id.* at 380–81.

11. *See, e.g.*, COURTNEY COILE & KEVIN MILLIGAN, HOW HOUSEHOLD PORTFOLIOS EVOLVE AFTER RETIREMENT: THE EFFECT OF AGING AND HEALTH SHOCKS 3 (2006); MUNNELL & SUNDÉN, *supra* note 3, at 143–71; Ivica Dus et al., *Betting on Death and Capital Markets in Retirement: A Shortfall Risk Analysis of Life Annuities Versus Phased Withdrawal Plans*, 14 FIN. SERVICES REV. 169–96 (2005); Wolfram J. Horneff et al., *Following the Rules: Integrating Asset Allocation and Annuitization in Retirement Portfolios*, 42 INST. MATHEMATICS & ECON. 396, 397–98 (2008); Wei-Yin Hu & Jason S. Scott, *Behavioral Obstacles to the Annuity Market* 5–17 (Pension Research Council, Working Paper No. 10, 2007); Susann Rohwedder & Arthur Van Soest, *The Impact of Misperceptions About Social Security on Saving and Well-Being* 2 (Univ. of Mich. Ret. Research Ctr., Working Paper No. 118, 2006); Jason S. Scott et al., *Efficient Annuitization: Optimal Strategies for Hedging Mortality Risk* 33 (Pension Research Council, Working Paper No. 09, 2007); Arthur Van Soest & Arie Kapetyn, *Savings, Portfolio Choice, and Retirement Expectations* 2–3, 15 (Univ. of Mich. Ret. Research Ctr., Working Paper No. 119, 2006).

Using aggregate-level data, researchers have studied the transition from the retirement asset accumulation phase during an individual's working years to the consumption phase, which begins with the retirement years.[12] The results of these studies are mixed. Some retirees appear to maintain their preretirement wealth and consumption levels.[13] Others experience a sharp decline in wealth and consumption levels shortly after retirement begins.[14] Researchers studying this immediate and sharp decline in consumption following retirement—a phenomenon known as the retirement-consumption puzzle—have proposed multiple theories to explain both the puzzle and the divergent outcomes produced by aggregate-level data.[15] Some individuals may be reducing consumption in retirement by reducing food- and work-related expenses or substituting increased leisure time for goods that are complements to leisure.[16] Some individuals may have unknowingly or knowingly undersaved for retirement but did not reduce consumption until forced to do so because of a decline in income upon entering retirement.[17] This theory is consistent with numerous research studies finding that between twenty and fifty percent of the population reaches retirement with insufficient financial resources.[18] Finally, some individuals may experience unexpected health problems that either force an earlier-than-planned retirement or increase health care expenses in retirement.[19]

These theories suggest that a nontrivial percentage of individuals may suffer from suboptimal planning for retirement. The policy concern raised by this research is that the group of suboptimal planners may increase in the future because of the growing number of workers who will enter retirement with a present value distribution as

12. *See* Craig Copeland, *How Are New Retirees Doing Financially in Retirement?*, EMP. BENEFIT RES. INST. ISSUE BRIEF, Feb. 2007, at 1, 3.

13. *See id.* at 6 fig.2.

14. *Id.*; Robert Haveman et al., *Assessing the Maintenance of Savings Sufficiency over the First Decade of Retirement* 3 (CESifo, Working Paper No. 1567, 2005); Michael D. Hurd & Susann Rohwedder, *Some Answers to the Retirement Consumption Puzzle* 3 (Nat. Bureau of Econ. Research, Working Paper No. 12057, 2006).

15. *See* Hurd & Rohwedder, *supra* note 14, at 3–4.

16. *See id.*; Eric Hurst, *The Retirement of a Consumption Puzzle* 16 (Nat'l Bureau of Econ. Research, Working Paper No. 13789, 2008).

17. *See* Hurd & Rohwedder, *supra* note 14, at 3–4.

18. *See* Susann Rohwedder, *Self-Assessed Retirement Outcomes: Determinants and Pathways* 3 (Univ. of Mich. Ret. Research Ctr., Working Paper No. 141, 2006).

19. *See* Hurst, *supra* note 16, at 23–27; Rohwedder, *supra* note 18, at 4.

their primary source of retirement income.[20] Researchers have found that retirees with less annuitized retirement wealth consume more in the early retirement years than retirees with more annuitized retirement wealth.[21] This research suggests that future retirees, whose retirement benefits are increasingly likely to be in the form of a present value distribution, may be at a higher risk of overconsuming and depleting their retirement plan assets before they die.[22]

From a policy perspective, one antidote for suboptimal retirement financial planning is financial literacy.[23]

> Numerous research studies have found that even when controlling for disparities in income levels, there is a strong positive correlation between the level of financial literacy and the amount of personal retirement savings. The causal link between the two centers on the planning process. Researchers hypothesize that greater financial literacy improves retirement savings because it counters psychological biases and improves the cognitive ability of individuals to collect and evaluate information concerning their options. Significantly, researchers have shown that improved financial literacy correlates with higher levels of retirement savings by all workers, not just those with high incomes.[24]

One variable common to both financial literacy and retirement planning is the accuracy with which individuals perceive various

20. *See generally* THE EVOLVING PENSION SYSTEM (William G. Gale et al. eds., 2005) (describing general trends and discussing alternatives for reform). The present value distribution may come directly from the worker's 401(k) or other individual account–type plan, or may be the result of rolling over retirement benefits from a former employer's retirement plan into an IRA. *See* Daniel I. Halperin & Alicia H. Munnell, *Ensuring Retirement Income for All Workers*, *in* THE EVOLVING PENSION SYSTEMS 155, 161–62 (William G. Gale et al. eds., 2005). When changing employers, the worker may elect to receive a taxable distribution of his or her retirement benefits, a choice that will reduce the amount of accumulated wealth available for consumption during the retirement years. *See id.* at 173.

21. Barbara A. Butrica & Gordon B.T. Mermin, *Annuitized Wealth and Consumption at Older Ages* 20 (The Urban Inst., Working Paper No. 26, 2006).

22. *See id.* Although in theory an individual voluntarily could use a present value distribution to purchase an annuity, in fact very few individuals do so. *See* JEFFREY R. BROWN ET AL., THE ROLE OF ANNUITY MARKETS IN FINANCING RETIREMENT 6–7 (2001); Thomas Davidoff et al., *Annuities and Individual Welfare*, 95 AM. ECON. REV. 1573, 1573–90 (2005); Irena Dushi & Anthony Webb, *Annuitization: Keeping Your Options Open* (Univ. of Mich. Ctr. for Ret. Research, Working Paper No. 04, 2004); Hu & Scott, *supra* note 11, at 5–17.

23. *See* Annamaria Lusardi & Olivia S. Mitchell, *Baby Boomer Retirement Security: The Roles of Planning, Financial Literacy, and Housing Wealth*, 54 J. MONETARY ECON. 205 (2007) [hereinafter *Baby Boomer Retirement Security*]; Annamaria Lusardi & Olivia S. Mitchell, *Financial Literacy and Retirement Preparedness: Review of the Evidence and Implications for Financial Education*, BUS. ECON., Jan. 2007, at 351 [hereinafter *Financial Literacy and Retirement Preparedness*].

24. Medill, *supra* note 4, at 337–38 (citations omitted).

types of retirement financial risks.[25] Another key variable in retirement planning is the individual's motivations for saving and planning.[26] These motivations may be complementary to, or compete with, a desire for personal financial security during retirement.[27] For example, a desire to leave a bequest for one's heirs competes with the desire to control for the risk of longevity by using one's accumulated retirement wealth to purchase long-term care insurance or an annuity.[28]

To summarize, a review of the social science literature reveals that researchers have focused primarily on the theoretical insights into retirement financial planning provided by economics and psychology, and have compared these theories with trends identified through the analysis of aggregate-level data. These methodologies have obvious limitations. The methodological approach taken in this research study is different—to attempt to illuminate aggregate numbers and theories by asking individuals about their distribution decisions and their postdecision experiences.

III. Study Methodology[29]

The research study described in this Article was conducted as a mail survey of former participants in the State Employees Plan who either retired or terminated employment in 1997 and who were eligible at that time to receive a distribution of their retirement benefits (collectively, the 1997 Population). The survey collected individual-

25. *See* Elke U. Weber, *Who's Afraid of a Poor Old Age? Risk Perception in Risk Management Decisions*, *in* PENSION DESIGN AND STRUCTURE: NEW LESSONS FROM BEHAVIORAL FINANCE 53, 53–66 (Olivia S. Mitchell & Stephen P. Utkus eds., 2004).

26. Douglas A. Hershey et al., *Psychological Foundations of Financial Planning for Retirement*, 14 J. ADULT DEV. 26, 28 (2007).

27. *See* John Ameriks et al., *Annuity Valuation, Long-Term Care, and Bequest Motives* 4–6 (Pension Research Council, Working Paper No. 20, 2007); G. Victor Hallman, *Retirement Distributions and the Bequest Motive* 1–4 (Pension Research Council, Working Paper No. 24, 2007); Cassio M. Turran & Olivia S. Mitchell, *The Impact of Health Status and Out-of-Pocket Medical Expenditures on Annuity Valuation* 1–5 (Pension Research Council, Working Paper No. 30, 2007).

28. *See* Ameriks et al., *supra* note 27, at 2–3; Hallman, *supra* note 27, at 2–4; Turran & Mitchell, *supra* note 27, at 1.

29. This section of the Article summarizes the study methodology. The complete methodology report, BUREAU OF SOCIOLOGICAL RESEARCH, UNIV. OF NEB.-LINCOLN, METHODOLOGY REPORT: PARTICIPANT PERCEPTIONS AND DECISION-MAKING CONCERNING RETIREMENT PLAN BENEFITS (2008) [hereinafter METHODOLOGY REPORT], is available from the author and is on file at the offices of the Elder Law Journal at the University of Illinois College of Law.

level data concerning how members of the 1997 Population assessed longevity, inflation, investment, and health care–shock financial risks and the factors that motivated their distribution decisions in 1997. The survey further collected individual-level demographic data, data on financial literacy, and data concerning the benefit and consumption experiences of the members of the 1997 Population for the ten-year period following the distribution decision.

The researcher conducted the study with the technical expertise and assistance of the University of Nebraska-Lincoln Bureau of Sociological Research (BOSR).[30] The BOSR assisted in wording and formatting the questions on the survey instrument, administered and tracked the mailing of the survey packets, and tabulated the survey results using appropriate methodological standards and protocols.[31]

The final survey instrument was a ten-page questionnaire consisting of six main topical sections with thirty-five questions, several with multiple parts, for a total of sixty-five survey items. A copy of the final survey instrument is reproduced in the Appendix. The format of the final survey instrument was designed by the BOSR for use with TeleForm, a scannable software package that reads and tabulates survey answers for each participant. After the TeleForm program initially tabulated the survey responses, the BOSR staff manually verified the data and corrected any errors.[32]

Section One of the survey related to the respondent's perceptions of financial risk and included a question to ascertain the type of retirement benefit distribution the individual elected to receive in 1997. Section Two consisted of questions to assess the factors that motivated the participant's decision regarding the form of distribution of retirement benefits in 1997. Section Three contained questions related to the participant's financial management, health care expenses, and general satisfaction with the distribution decision made in 1997. Section Four, which applied only to those respondents who were "retirees" (that is, individuals who were age sixty-two or older in 1997, and therefore eligible for early retirement under the federal Social Security

30. The Bureau of Sociological Research is affiliated with the Department of Sociology at the University of Nebraska-Lincoln. *See* Bureau of Sociological Research, http://bosr.unl.edu (last visited Oct. 22, 2008). The BOSR provides educational and other nonprofit survey research and related services for researchers and scholars throughout the United States. *See id.*

31. *See* METHODOLOGY REPORT, *supra* note 29, at 4–18.

32. *Id.* at 9.

program), asked questions about the respondent's retirement lifestyle. The questions in Section Five gauged the respondent's financial literacy and efforts at retirement financial planning. Section Six asked the respondent to provide standard demographic information and comments about the survey.

To the extent possible within the legal[33] and budgetary constraints presented by the project, the researcher used the Tailored Design Method of survey methodology, a standard protocol for this type of research.[34] There were a total of 134 valid survey responses. Based on their indicated age in 1997, forty-two respondents (31.34%) were classified as retirees and ninety respondents (67.16%) were classified as workers at the time of the distribution decision in 1997. Two respondents did not indicate their age and therefore could not be classified as either retirees or workers.[35]

A limited set of characteristics about the 1997 Population was made available to the researcher by the Nebraska Public Employees Retirement System (NPERS) at the grant proposal stage of the project

33. Based on its interpretation of Nebraska confidentiality laws, the administrator for the State Employees Plan, the Nebraska Public Employees Retirement System (NPERS), provided the last home address information of record for the 1997 Population directly to the Nebraska State Government Print Shop. The Print Shop then printed and mailed the surveys to the 1997 Population using the 1997 home address information provided by NPERS. Surveys with outdated home addresses were returned by the U.S. Postal Service directly to the BOSR. The BOSR researched current home address information using the outdated address on the returned survey envelope and, when possible, remailed the survey materials to a current home address. The BOSR did not have access to the original mailing list, which constrained the utilization of mail survey design features that may have improved response rates, such as personalized follow-up contacts with nonrespondents. *See* METHODOLOGY REPORT, *supra* note 29, at 3–4, 6–8. Notwithstanding these constraints, the final response rate for the survey was 10.24%. *Id.* at 15. The final response rate represents all surveys that were not returned as ineligible, deceased, or undeliverable and not trackable. *See id.*

34. *See* METHODOLOGY REPORT, *supra* note 29, at 4–5. Using the Tailored Design Method, the survey instrument was developed using the following four steps: (1) a pretest of the draft survey instrument conducted by administering the draft survey orally to subjects from the 1997 Population; (2) revision of the draft survey instrument based on feedback from the oral interviews in step 1; (3) a second pretest of the revised survey instrument conducted by having subjects from the 1997 Population complete the written survey and then provide feedback through a postsurvey oral interview; and (4) revision and preparation of the final survey instrument based on feedback from the oral interviews in step 3. DON A. DILLMAN, MAIL AND INTERNET SURVEYS: THE TAILORED DESIGN METHOD (2d ed. 2007).

35. *See* METHODOLOGY REPORT, *supra* note 29, at 10–11, 16 tbl.4. In tabulating the data, survey respondents were coded as either "workers" (age sixty-one or younger) or "retirees" (age sixty-two or older) at the time of the distribution decision in 1997. *See* METHODOLOGY REPORT, *supra* note 29, at 10–11.

(the 1997 Population data).[36] To assess possible response bias, the survey respondents are compared with the 1997 Population data by retirement status and form of distribution in table 1.[37]

Table 1

Comparison of the 1997 Population with the Survey Respondents by Retirement Status and Distribution Type

	NPERS Population (1997)	Survey Responses (2007)
Total	**1,607**	**134**
Retirees	320 (19.91%)	42 (31.34%)
Workers	1,287 (86.31%)	90 (67.16%)
System Missing*	—	2
Form of Distribution		
Annuity	63 (3.92%)	14 (10.45%)
Other Form**	1,544 (96.08%)	117 (87.31%)
System Missing*	—	3

Notes to table 1: "System Missing*" reflects that a response was not provided by the respondent on the question or characteristic being analyzed. The "Other Form**" option for the Form of Distribution was further subcoded into Present Value or No Distribution. *See* discussion *infra* main text.

Table 1 shows that the study represents an oversample of the retiree group, which is the principal group sought in the study. The worker group provides a necessary comparison population. Similarly, the study represents an oversample of individuals in the 1997 Population who chose an annuity. This oversample is consistent with one of the study's principal objectives, namely to compare the post–

36. Within table 1, data on the known characteristics of the 1997 Population were provided by the NPERS at the initial grant proposal stage of the project. The final mailing list that the NPERS provided to the Nebraska Government Print Shop contained address information for only 1568 individuals. *See* METHODOLOGY REPORT, *supra* note 29, at 16.

37. In any survey, the data collected may be biased by self-selection among the survey respondents. Given the ten-year-old mailing list used for this survey, the data collected are more likely to reflect the experiences of members of the 1997 Population who are more stable (that is, those that have stayed at the same home address for the past ten years), who are more educated with higher cognitive abilities, and who are more interested in retirement financial planning issues. *See generally* Bärbell Knäuper et al., *Question Difficulty and Respondents' Cognitive Ability: The Effect on Data Quality*, 13 J. OFFICIAL STAT. 181, 197 (1997) (concluding that survey results were biased because respondents with lower cognitive ability were under-represented for more complex topics).

distribution decision experiences of former participants who selected an annuity with those who selected a present value distribution. Based on the 1997 Population data furnished by the NPERS, less than 4% of the 1997 Population selected an annuity; therefore, an oversample of the annuity group was desirable to provide a valid comparison.[38]

IV. Study Results

A. Characteristics of the Survey Respondents

Table 2 presents descriptive statistics for the survey respondents.

Table 2
Descriptive Statistics for Survey Respondents

Distribution Type		Total	Present Value	Annuity
Annuity		10.70%		
Present Value		83.20%		
No Distribution		6.10%		
Retirement Status				
Retiree		33.10%	29.00%	64.30%
Worker		66.90%	71.00%	35.70%
	Valid	118 (100%)	107 (100%)	14 (100%)
Gender				
Female		60.30%	57.90%	78.60%
Male		39.70%	42.10%	21.40%
	Valid	121 (100%)	107 (100%)	14 (100%)
Education Level				
High school or less		19.20%	20.80%	7.10%
Some college		37.50%	35.80%	50.00%
Bachelor's degree or higher		43.30%	43.40%	42.90%
	Valid	120 (100%)	106 (100%)	14 (100%)

(*Continued on next page*)

1 38. METHODOLOGY REPORT, *supra* note 29, at 17.

Table 2—*Continued*

Distribution Type	Total	Present Value	Annuity
Marital Status (1997)			
Married	76.30%	76.00%	78.60%
Not married	23.70%	24.00%	21.40%
Valid	118 (100%)	104 (100%)	14 (100%)
Age (1997)	**Mean**		
	53.51	52.70	59.71
(Std. Deviation)	(SD 10.92)	(SD 10.9)	(SD 9.19)

Notes to table 2: Missing values (N < 134) are the result of item nonresponse on individual items (that is, gender, education, marital status) from individual questions in the survey and variables calculated from responses to one or more survey questions (that is, retirement status, age).

Distribution decisions for the survey respondents were coded as an annuity, a present value distribution (further subcoded where appropriate as either a taxable "lump sum" or a nontaxable "direct rollover"), or as "no distribution" for individuals who elected to keep their account balance invested with the State Employees Plan and did not take a distribution in 1997. Survey respondents could also indicate "other" for their form of distribution and give an open-ended explanation. All of the "other" responses were successfully recoded into one of the above categories based on the open-ended explanation.[39]

A large majority (83.20%) of survey respondents selected the present value distribution. Respondents who chose a present value distribution were further asked whether they received a taxable lump sum or elected a nontaxable direct rollover. Thirty-two respondents chose a taxable lump sum and eighty-two chose a nontaxable direct rollover.[40] Of this group, five respondents indicated that they chose to receive their present value distribution as both a (partial) lump sum and as a (partial) direct rollover.[41]

Table 2 also provides a snapshot of the demographic characteristics of the survey respondents. One-third of the survey respondents were retirees (age sixty-two or older in 1997) and two-thirds were workers (age sixty-one or younger in 1997). Among respondents who selected a present value distribution, more than 70% were workers.

39. *See id.* at 11–13.
40. *See id.* at 12–13, tbls.1–2.
41. *See id.*

Among respondents who selected an annuity, 64% were retirees at the time of the distribution decision in 1997. The majority of survey respondents (60%) were women. The average age was fifty-three. A large majority (76%) were married at the time of the distribution decision in 1997.

Perhaps the most striking demographic characteristic is the relatively high educational level of the survey respondents. Approximately 80% of the survey respondents had at least some college education, and more than 40% had a college bachelor's degree or higher. This point is further illuminated by examining the overall financial literacy of the survey respondents, which was assessed as part of Section Five of the survey.

B. Financial Literacy of the Survey Respondents

Because financial literacy plays such a crucial role in retirement financial planning, the survey assessed the respondents' financial literacy by using questions similar to those that were used as part of the national 2004 Health and Retirement Study.[42] The 2004 Health and Retirement Study was conducted as a random national telephone survey of persons age fifty and older.[43] This national survey asked individuals three questions designed to test the individual's understanding of the financial concepts of compound interest, inflation, and stock market risk.[44] For the 2004 Health and Retirement Study national survey, only 67.1%, 75.2%, and 52.3% of respondents correctly answered the questions on compound interest, inflation, and stock market risk.[45]

42. *Financial Literacy and Retirement Preparedness*, *supra* note 23, at 35–45 (describing the financial literacy questions and results of the national 2004 Health and Retirement Study).

43. *See* The Health and Retirement Study, A Longitudinal Study of Health, Retirement, and Aging, http://hrsonline.isr.umich.edu/index.html (last visited Oct. 22, 2008).

44. Annamaria Lusardi & Olivia S. Mitchell, *How Much Do People Know About Economics and Finance*, UNIV. OF MICH. RET. RES. CENTER POLICY BRIEF, Mar. 2008, at 1.

45. ANNAMARIA LUSARDI & OLIVIA S. MITCHELL, FINANCIAL LITERACY AND PLANNING: IMPLICATIONS FOR RETIREMENT WELLBEING 23 tbl.1 (2005). To test the concept of compound interest, survey respondents were asked this question:

> Suppose you had $100 in a savings account and the interest rate was 2% per year. After five years, how much do you think you would have if you left the money to grow: more than $102, exactly, or less than $102?
>
> More than $102
> Exactly $102

Only 34.3% of national respondents correctly answered all three financial literacy questions.[46]

Table 3.1 shows how the survey respondents answered the three financial literacy questions used as part of the 2004 Health and Retirement Study. Table 3.2 shows the joint probability of correctly answering all three of these questions.

Table 3.1
Distribution of Survey Responses to Financial Literacy Questions

	Correct	Incorrect	No Response /Refused
Compound Interest	83.60%	9.70%	6.70%
Inflation	86.60%	6.00%	7.50%
Stock Risk	78.40%	14.20%	7.50%

Notes to table 3: The researcher's survey did not include predefined categories to capture and distinguish between "Don't Know" or "Refuse" responses as did the 2004 Health and Retirement Study national survey questionnaire. Instead, the researcher's survey allowed for nonresponse (both "Don't Know" and "Refuse") by way of a blank response. These blank responses were recorded as missing values and tabulated as a single variable "No Response/Refused" in table 3 to emulate the response options presented in the 2004 Health and Retirement Study. For table 3.1, N = 134.

Less than $102

Infra App., Section Five, Question 17. The correct answer is "more than $102." To test the concept of inflation, survey respondents were asked this question:

> Imagine that the interest rate on your savings account was 1% per year and that the rate of inflation was 2% per year. After one year, would you be able to buy more than, exactly the same as, or less than today with the money in this account?
>
> More than
> Exactly the same
> Less than

Infra App., Section Five, Question 18. The correct answer is "less than." To test the concept of stock market risk, survey respondents were asked this question:

> Do you think that the following statement is true or false? "*Buying a single company stock usually provides a safer return than a mutual fund that invests in the stock of multiple companies.*"
>
> True
> False
> Not sure or don't know

Infra App., Section Five, Question 19. The correct answer is "false."

46. *See* LUSARDI & MITCHELL, *supra* note 45, at 23 tbl.1.

Table 3.2
Joint Probabilities of Survey Respondents Correctly Answering Financial Literacy Questions

	All 3 responses correct	Only 2 responses correct	Only 1 response correct	No responses correct
Proportion (N = 121)	72.7%	22.3%	4.1%	0.8%

Table 3.1 shows that the survey respondents had a much higher level of financial literacy than did the national group of respondents to the 2004 Health and Retirement Study. Table 3.2 shows that almost three-fourths of the 1997 Population survey respondents correctly answered all three of the financial literacy questions, as compared with only slightly more than one-third of the national group of survey respondents to the 2004 Health and Retirement Study.

The comparison of financial literacy between the 2004 Health and Retirement Study national respondents and the survey respondents is relevant because of the implications of financial illiteracy for retirement income security. This point, which is emphasized in the social science literature, calls attention to several significant public policy questions. First, should employers who sponsor 401(k) plans be required to provide retirement financial education or investment advice to their employees?[47] Second, should the federal government take on a greater role in improving financial literacy through public education programs and initiatives?[48] The public policy debate ultimately reduces to a cost-benefit analysis: "how can policy makers know that an investment [whether public or through a mandate on private employers] in . . . retirement financial education today will lead to a more secure retirement for workers in the future?"[49]

To begin to resolve this debate, policy makers need more data. The data collected in this study represent a "best case" scenario. As compared with the general public, the survey respondents have a much higher level of financial literacy. Their recollection of how they

47. Under current law, employers who sponsor participant-directed 401(k) plans for their workers are not required to provide investment education or make investment advice available to their workers. *See* 29 C.F.R. § 2550.404c-1 (2007) (federal regulations governing participant-directed individual account plans).
48. *See* Medill, *supra* note 4, at 337–48.
49. *Id.* at 359.

made an important distribution decision and their reflections on the experience ten years afterwards can provide policy makers and employers with two important insights. First, what information *should* participants be given to help them in making a distribution decision? Second, how might a general public that *is* financially knowledgeable fare in a future retirement system where a present value distribution of retirement benefits, rather than a lifetime monthly annuity, is the norm?

C. Perceptions of Financial Risk and Motivational Factors in the Distribution Decision

Section One of the survey asked a series of questions that required survey respondents to recall their perceptions of longevity, inflation, investment, and health care–shock (further subcoded as medical care expenses and long-term care expenses) financial risks in making the distribution decision in 1997.[50] Table 4.1 shows the responses based on the form of distribution (annuity or present value distribution) selected in 1997.[51] Section One further asked respondents to self-evaluate the accuracy of their risk perceptions ten years after making the distribution decision.[52] Table 4.2 shows the responses to these self-evaluation questions based on the form of distribution selected.

Table 4.1
Risk Perceptions and Distribution Decisions (1997) by Distribution Type

		PRESENT VALUE	ANNUITY
Longevity Risk			
High		54.30%	66.70%
Medium		21.00%	8.30%
Low		24.80%	25.00%
	Valid N	105 (100%)	12 (100%)

(*Continued on next page*)

50. *See infra* App., Section One, Question 3.
51. Due to budgetary constraints, the researcher did not attempt to control for the potential problem of recall bias in Section One of the survey.
52. *See infra* App., Section One, Question 4.

Table 4.1—*Continued*

		PRESENT VALUE	ANNUITY
Inflation Risk			
High		59.30%	50.00%
Medium		27.80%	33.30%
Low		13.00%	16.70%
	Valid N	108 (100%)	12 (100%)
Investment Risk			
High		23.40%	7.70%
Medium		47.70%	61.50%
Low		29.00%	30.80%
	Valid N	107 (100%)	13 (100%)
Medical Expense Risk			
High		51.90%	76.90%
Medium		20.40%	15.40%
Low		27.80%	7.70%
	Valid N	108 (100%)	13 (100%)
Long-Term Care Expense Risk			
High		27.10%	50.00%
Medium		21.50%	8.30%
Low		51.40%	41.70%
	Valid N	107 (100%)	12 (100%)

Notes to table 4.1: Missing values (N < 134) are the result of item nonresponse. The valid N for each group (that is, present value, annuity) by item is listed above.

Table 4.2

Self-Evaluation of Risk Perceptions (2007) by Distribution Type

	PRESENT VALUE	ANNUITY
Longevity Risk		
Too High	4.70%	0.00%
About Right	55.70%	25.00%
Too Low	26.40%	16.70%
Does Not Apply	13.20%	58.30%
Valid N	106	12

(*Continued on next page*)

Table 4.2—*Continued*

	PRESENT VALUE	ANNUITY
Inflation Risk		
Too High	5.70%	8.30%
About Right	44.80%	58.30%
Too Low	38.10%	33.30%
Does Not Apply	11.40%	0.00%
Valid N	105	12
Investment Risk		
Too High	15.50%	15.40%
About Right	39.80%	53.80%
Too Low	34.00%	23.10%
Does Not Apply	10.70%	7.70%
Valid N	103	13
Medical Expense Risk		
Too High	11.30%	7.10%
About Right	30.20%	21.40%
Too Low	42.50%	71.40%
Does Not Apply	16.00%	0.00%
Valid N	106	14
Long-Term Care Expense Risk		
Too High	3.70%	7.70%
About Right	15.90%	15.40%
Too Low	26.20%	30.80%
Does Not Apply	54.20%	46.20%
Valid N	107	13

Notes to table 4.2: Missing values (N < 134) are the result of item nonresponse. The valid N for each group (that is, present value, annuity) by item is listed above.

Table 4.1 shows that more than two-thirds of those survey respondents who selected an annuity recalled perceiving the risk of longevity as high at the time of the distribution decision in 1997, a result consistent with the selection of the annuity distribution option. Among those survey respondents who selected a present value distribution, more than half perceived the risk of longevity as high, one-fifth perceived longevity risk as medium, and one-fourth perceived longevity risk as low. A majority of all survey respondents recalled

perceiving the risk of inflation as high. Less than one-fourth of those survey respondents who selected a present value distribution in 1997 recalled perceiving investment risk as high, with most perceiving investment risk as medium (47.7%) or low (29%).

For medical expense risk, more than half of those survey respondents who selected a present value distribution and more than three-fourths of those survey respondents who selected an annuity recalled perceiving this risk as high at the time of the distribution decision in 1997. In contrast, more than 50% of those survey respondents who selected a present value distribution and more than 40% of those survey respondents who selected an annuity recalled perceiving the risk of long-term care expense as low at the time of the distribution decision.

Table 4.2 shows how survey respondents in 2007 self-evaluated their perceptions of financial risk ten years after the distribution decision. Among those survey respondents who selected a present value distribution in 1997, a majority believed that their perception of longevity risk was about right, but one-fourth believed that their perception of longevity risk was too low. More than one-third of the present value distribution respondents believed that their perceptions of inflation and investment risk at the time of the distribution decision were too low. Perhaps the most striking result was that more than 40% of present value respondents believed that their perception of medical expense risk was too low, despite the fact that over half of these respondents recalled perceiving medical expense risk as high at the time of the distribution decision in 1997.

For long-term care expense risk, more than half of the present value distribution respondents indicated that this risk did not apply to them. Among those respondents who did provide a self-evaluation, the majority (over 25% of all present value distribution respondents) believed that their perception of long-term care expense at the time of the distribution decision was too low.

Among those survey respondents who selected an annuity in 1997, no respondents believed that their perception of longevity risk was too high at the time of the distribution decision. One-fourth of annuity respondents believed that their perception of longevity risk at the time of the distribution decision was about right. The majority of annuity respondents believed that their perceptions of investment and inflation risk at the time of the distribution decision were about right.

In contrast, more than 70% of survey respondents who selected an annuity evaluated their perception of medical expense risk at the time of the distribution decision as too low. Again, this result is striking in light of the fact that over three-fourths of annuity respondents recalled perceiving medical expense risk as high at the time of the distribution decision in 1997.

For long-term care expense risk, almost half of the annuity respondents indicated that this risk did not apply to them. Among those respondents who did provide a self-evaluation, the majority (30% of all annuity respondents) believed that their perception of long-term care expense at the time of the distribution decision in 1997 was too low.

Section Two of the survey asked respondents to recall their motivations for the distribution decision in 1997 and identify the motivating factors that played a "major" role in the decision.[53] Table 5.1 shows the responses according to the form of distribution (annuity or present value distribution) selected in 1997. Table 5.2 shows the responses according to the respondent's status (retiree or worker) in 1997.

Table 5.1 shows a significant difference between survey respondents who selected a present value distribution and survey respondents who selected an annuity for two motivational factors. More than half of the present value distribution respondents indicated as a major factor in their distribution decision that a "[t]ax penalty would apply if [the distribution was] taken as a lump sum and not deposited/rolled over to an IRA."[54] This result is consistent with the fact that of those respondents who selected the present value distribution, a large majority selected a nontaxable direct rollover instead of a taxable lump-sum distribution.[55]

The most striking significant difference, however, between the present value distribution respondents and the annuity respondents was the desire "to decide and control how [their] NPERS benefits were invested and spent."[56] Fifty-seven percent of present value distribution respondents indicated that controlling their retirement assets was a major factor in their distribution decision. In sharp contrast,

53. *See infra* App., Section Two, Question 5.
54. *See infra* App., Section Two, Question 6.
55. *See* METHODOLOGY REPORT, *supra* note 29, at 12.
56. *See infra* App., Section Two, Question 6.

none of the annuity respondents identified this as a major motivational factor in their distribution decision.

Table 5.1
Major Factors Motivating Distribution Decision (1997) by Distribution Type

	PRESENT VALUE	ANNUITY	*Significance*
Tax Penalty*	51.50%	21.40%	*0.046*
Social Security Annuity	29.50%	46.20%	*na*
Personal Savings and Investments	23.40%	15.40%	*na*
Spousal Annuity	22.90%	35.70%	*na*
Immediate Purchase	10.40%	0.00%	*na*
Inheritance	21.70%	30.80%	*na*
Debt Reduction	14.20%	7.10%	*na*
Control Assets*	57.10%	0.00%	*0.000*
Passivity	8.70%	21.40%	*na*
Personal Income Security	17.00%	76.90%	*na*
Spousal Income Security	16.30%	46.20%	*na*

Notes to table 5.1: Significance using Fisher's Exact Test on two-sided matrix; "na" denotes cell sizes too small to run a significance test. Significant factor at 0.05 or less is denoted by "*".

Table 5.2 presents major motivational factors by retirement status. There are two significant differences between retirees and workers. More than half of retirees indicated as a major motivational factor in their distribution decision that their "Social Security benefits would be paid each month for the rest of [their lives]."[57] Although overall only a small number of survey respondents indicated that they "wanted to use [their] NPERS benefits to pay off bills or other debts,"[58] 17% of workers indicated that this was a major motivational factor as compared with only 2% of retirees.

57. *See infra* App., Section 2, Question 6.
58. *See infra* App., Section 2, Question 6.

Table 5.2
Major Factors Motivating Distribution Decision (1997) by Retirement Status

	RETIREES	WORKERS	*Significance*
Tax Penalty	51.30%	47.60%	*0.846*
Social Security Annuity*	51.20%	20.00%	*0.001*
Personal Savings and Investments	31.00%	16.30%	*0.067*
Spousal Annuity	24.40%	22.10%	*0.823*
Immediate Purchase	4.80%	10.50%	*na*
Inheritance	31.00%	17.60%	*0.112*
Debt Reduction*	2.40%	17.40%	*0.020*
Control Assets	56.10%	45.30%	*0.343*
Passivity	14.60%	10.60%	*na*
Personal Income Security	24.40%	20.90%	*0.654*
Spousal Income Security	17.50%	18.80%	*1.000*

Notes to table 5.2: Significance using Fisher's Exact Test on two-sided matrix; "na" denotes cell sizes too small to run a significance test. Significant factor at 0.05 or less is denoted by "*".

D. Use of Retirement Benefits for Medical and Long-Term Care Expenses

The costs associated with medical care and nursing home (long-term) care can be significant. Even with Medicare coverage, the average couple retiring in 2006 will need about $200,000 to cover their health care expenses.[59] Such expenses include the premium cost for Medicare Part B (medical care) and Part D (prescription drugs), out-of-pocket expenditures for prescription drugs, prescription drug insurance, supplemental medical insurance, copayments and deductibles, preventative care, dental care, and vision and hearing care.[60] Significantly, this estimate does not include the cost of long-term care that may be needed.[61] Researchers estimate that one in five persons

59. COLLEEN E. MEDILL, INTRODUCTION TO EMPLOYEE BENEFITS LAW: POLICY AND PRACTICE 387 (2d ed. 2007).
60. *Id.*
61. *Id.*

over the age of sixty-five will spend at least a year in a nursing home.[62] In 2006, the average cost of a private room in a nursing home was estimated to be $194.28 per day, or almost $71,000 on an annual basis.[63]

Given these statistics, Section Three of the survey asked respondents whether their retirement benefits had been used to pay medical care or long-term care expenses during the ten-year period following the distribution decision (1997–2007) for themselves, a spouse, dependent children, or an elderly parent.[64] Expenditures were defined to include the payment of premiums for medical or long-term care insurance.[65] Responses are shown in table 6 by retirement status.

Table 6

Benefit Consumption for Medical and Long-Term Care Expenses (1997–2007) by Retirement Status

	RETIREES		WORKERS	
	Medical	Long-Term Care	Medical	Long-Term Care
Did not spend benefits	63.41%	82.50%	78.82%	95.18%
Did spend benefits	36.59%	17.50%	21.18%	4.82%
Valid N	*41*	*40*	*85*	*83*

Notes to table 6: Missing values (N < 134) are the result of item nonresponse. The valid N for each cross-tabulated set of items is listed above.

Table 6 shows that among retirees, more than one-third had used their retirement benefits to pay for medical care expenses or related insurance premiums, and almost one-fifth had used their retirement benefits to pay for long-term care expenses or related insurance premiums. Among workers, more than one-fifth had used their retirement benefits to pay for medical care expenses or related insurance premiums. A small number of workers (4.8%) had used their retire-

62. Purvi Sevak & Lina Walker, *The Responsiveness of Private Savings to Long Term Care Policies* 1 (Univ. of Mich. Ret. Research Ctr., Working Paper No. 150, 2007).

63. Richard L. Kaplan, *Retirement Planning's Greatest Gap: Funding Long-Term Care*, 11 LEWIS & CLARK L. REV. 407, 415 (2007).

64. *See infra* App., Section Three, Subsection B, Questions 10–11.

65. *See infra* App., Section Three, Subsection B, Questions 10–11.

ment benefits to pay for long-term care expenses or related insurance premiums.

E. Overall Level of Satisfaction with the Distribution Decision

Section Three of the survey asked respondents to identify their level of satisfaction with the distribution decision they made in 1997.[66] Responses are shown in table 7.1 by retirement status and in table 7.2 by type of distribution.

Table 7.1
Satisfaction with Distribution Decision by Retirement Status

	RETIREES	WORKERS
Satisfied / Very Satisfied	85.40%	76.50%
Neutral / No Opinion	9.80%	10.60%
Dissatisfied / Very Dissatisfied	4.90%	12.90%
Valid N	41 (100%)	85 (100%)

Notes to table 7.1: Missing values (N < 134) are the result of item nonresponse. The valid N for each cross-tabulated set of items is listed above.

Table 7.2
Satisfaction with Distribution Decision by Distribution Type

	Respondents	
	PRESENT VALUE	ANNUITY
Satisfied / Very Satisfied	78.30%	78.60%
Neutral / No Opinion	9.40%	21.40%
Dissatisfied / Very Dissatisfied	12.30%	0.00%
Valid N	106 (100%)	14 (100%)

Notes to table 7.2: Missing values (N < 134) are the result of item nonresponse. The valid N for each cross-tabulated set of items is listed above.

Tables 7.1 and 7.2 show that a large majority of the survey respondents were satisfied or very satisfied with their distribution decision made in 1997. As a group, 85% of retirees and more than 75% of workers were satisfied or very satisfied with their distribution deci-

66. *See infra* App., Section Three, Subsection C, Question 12.

sion. Seventy-eight percent of both respondents who selected the annuity and respondents who selected the present value distribution were satisfied or very satisfied with their distribution decision. None of the respondents who selected an annuity indicated that they were dissatisfied or very dissatisfied with their distribution decision.

F. Retiree Lifestyle and the Adequacy of Retirement Income

Section Four of the survey was limited to respondents who were classified as retirees (age sixty-two or older at the time of the distribution decision in 1997). Section Four asked retirees a series of questions concerning the adequacy of retirement household income and current and anticipated future expenditures for daily living expenses, medical care, long-term care, and prescription drugs. Almost 95% of retirees strongly or somewhat agreed that their household income during the past twelve months had been enough to pay for their "[d]aily living expenses including premiums for medical care, long-term (nursing home) care and prescription drug insurance."[67] Eighty-six percent of retirees strongly or somewhat agreed that their household income during the past twelve months had been enough to pay for "[m]edical care expenses not covered by insurance."[68] Eighty-four percent of retirees strongly or somewhat agreed that their household income during the past twelve months was enough to pay for "[p]rescription drug expenses not covered by insurance,"[69] and more than 80% strongly or somewhat agreed that they had enough income left over to "pay for the things and activities [they] enjoy beyond [their] basic needs."[70] In contrast, 55% of retirees strongly or somewhat disagreed that "during the past twelve months [their] household income was enough to pay for nursing home or other long-term care expenses not covered by insurance."[71]

Looking ahead to the future, a large majority were optimistic that their retirement income would be adequate to maintain their life-

67. *See infra* App., Section Four, Question 14a; METHODOLOGY REPORT, *supra* note 29, at 47.
68. *See infra* App., Section Four, Question 14b; METHODOLOGY REPORT, *supra* note 29, at 47.
69. *See infra* App., Section Four, Question 14d; METHODOLOGY REPORT, *supra* note 29, at 48.
70. *See infra* App., Section Four, Question 15; METHODOLOGY REPORT, *supra* note 29, at 48.
71. *See infra* App., Section Four, Question 14c; METHODOLOGY REPORT, *supra* note 29, at 48.

style, with the notable exception of long-term care expenses. More than three-fourths of retirees strongly or somewhat agreed that their household income in the future will be enough to pay for daily living expenses.[72] More than 70% of retirees strongly or somewhat agreed that in the future their household income will be enough to pay for medical expenses not covered by insurance (72%)[73] and prescription drug expenses not covered by insurance (73%).[74] Notably, more than 60% of retirees strongly or somewhat disagreed that in the future their household income will be enough to pay for nursing home or other long-term care expenses not covered by insurance.[75]

V. Discussion and Analysis of the Study Results

In reviewing the data results, it is important to bear in mind that the survey respondents evidenced a relatively high level of financial literacy as compared with the general public. With this point in mind, three general themes emerge from the study results.

First, plan participants may need more and better information to assess the financial risks presented by uninsured medical care expenses in retirement. Although a majority of all survey respondents recalled perceiving medical care expense risk as high at the time of the distribution decision, subsequent self-evaluation indicated that a majority of respondents believed that they had underestimated the financial risk associated with uninsured medical care expenses. In fact, more than one-third of retirees and more than one-fifth of workers reported spending a portion of their retirement benefits on medical care expenses not covered by insurance.

The second general theme emerging from the data is the important role that federal tax and social welfare policies play in an individual's distribution decision. Survey respondents indicated that federal tax policy penalizing lump-sum distributions and the lifetime annuity form of payment provided by Social Security were significant as major factors considered by respondents in making the distribution

72. *See infra* App., Section Four, Question 16a; METHODOLOGY REPORT, *supra* note 29, at 49.

73. *See infra* App., Section Four, Question 16b; METHODOLOGY REPORT, *supra* note 29, at 49.

74. *See infra* App., Section Four, Question 16d; METHODOLOGY REPORT, *supra* note 29, at 50.

75. *See infra* App., Section Four, Question 16c; METHODOLOGY REPORT, *supra* note 29, at 49.

decision. Further individual-level research on the distribution decision-making process could prove valuable to policy makers in assessing the potential impact of proposals to amend federal tax and social welfare policies on distributions from employer-sponsored retirement plans.

The third general theme emerging from the data is cautious optimism that, in the future, financially literate individuals will be able to manage present value distributions from their retirement plans successfully. A large majority (83%) of survey respondents selected a present value distribution in 1997. Ten years after the distribution decision, 78% of these present value respondents indicated that they were satisfied with their distribution decision.

VI. Conclusion

Perhaps the most important conclusion to be drawn from the survey is that, although there are methodological challenges to be overcome, it is possible to collect individual-level data on the perceptions and decision-making processes used by retirement plan participants in making distribution decisions. Such individual-level data is a potentially valuable resource for state and local government officials as they evaluate public pension systems in light of future fiscal challenges. Individual-level data is also likely to provide valuable insights to federal policy makers as they evaluate proposals to change federal tax policy and the Social Security program. Finally, individual-level data can be used to improve the content of both public financial literacy programs and private efforts by employers to provide workers with retirement financial education so that individuals can accurately estimate and plan for the financial risks associated with retirement.

Appendix: Survey Questionnaire

GENERAL INSTRUCTIONS FOR COMPLETING THIS SURVEY

You have the right to refuse to answer any question you wish. Any question left blank, unless otherwise instructed, will be considered as a refusal to answer that particular question. Please return your survey even if you elect to complete only a few of the survey questions. Your responses are valuable, and we appreciate however many questions you are able to or choose to answer.

The survey includes 6 sections with a total of 35 questions, some of which have sub-parts or additional instructions that require you to skip questions or whole sections that do not apply to you based on your previous answers or situation. Please watch for these instructions as you progess through the questionnaire.

SURVEY-MARKING INSTRUCTIONS:

- → Please use a blue or black pen.
- → Mark ☒ your response in each box or write clearly in the space provided.

SECTION ONE: PERCEPTIONS OF FINANCIAL RISK

The following questions are about your decision in 1997 concerning your NPERS benefits and your perceptions of financial risk in making that decision. Please indicate below the decision you made in 1997 concerning how and when you would receive your NPERS benefits.

1. **In 1997**, I was eligible to receive a benefit from... ***Mark (X) all that apply.***

   ☐ The State Retirement Plan (account with your mandatory contribution & your employer's matching contribution)
   ☐ The Deferred Compensation Plan (account with additional, voluntary tax-deferred contributions made by you)

For all proceeding questions, keep in mind that the term "NPERS benefits" refers to your total retirement benefits including any benefits you may have received from the Deferred Compensation Plan.

2. **In 1997**, I chose to receive my NPERS benefits in the form of... ***Mark (X) all that apply.***

   ☐ A lump sum amount paid directly to me *(go to question 2a)*
   ☐ A direct rollover made to my IRA *(go to question 3)*
   ☐ A monthly guaranteed annuity payment for my life or the lives of myself and my spouse *(go to question 3)*
   ☐ Another form - Please specify in the box below. *(go to question 3)*

2a. **IF YOU RECEIVED A LUMP SUM PAYMENT** - Did you deposit all or part of the payment amount in an IRA within 60 days of receiving the payment?

   ☐ Yes
   ☐ No

3. The table below asks how you perceive various financial risks. To the best of your ability, please recall your frame of mind in 1997 when you had to make a decision about the form of payment for your NPERS benefits. For each statement, please mark (X) how true the statement was for you in 1997.

	Very True	Somewhat True	Not At All True	Don't Know	Not Applicable
(3a.) In 1997, I thought my NPERS benefits, if taken as a lump sum amount or as a rollover to my IRA, would last the rest of my life.	☐	☐	☐	☐	☐
(3b.) In 1997, I thought my basic living expenses would not increase more in the future than they had in the past.	☐	☐	☐	☐	☐
(3c.) In 1997, I thought the rate of return on my investments would be similar to what it had been in the past.	☐	☐	☐	☐	☐
(3d.) In 1997, I thought I would have to pay for any of the following medical expenses for myself or someone else: medical insurance premiums; prescription drug insurance premiums; or out-of-pocket medical expenses (not covered by insurance).	☐	☐	☐	☐	☐
(3e.) In 1997, I thought I would have to pay for long-term (nursing home) care for myself or someone else or pay premiums for long-term (nursing home) care insurance.	☐	☐	☐	☐	☐

4. Knowing what you know now in 2007, please mark (X) whether your estimates in 1997 of the following factors were too low (underestimated), about right, or too high (overestimated).

	Too Low	About Right	Too High	Doesn't Apply
(4a.) How long the funds from my NPERS benefits (paid as a lump sum or a rollover to an IRA) would last.	☐	☐	☐	☐
(4b.) How fast the cost of my basic living expenses would increase.	☐	☐	☐	☐
(4c.) How much my investments would earn.	☐	☐	☐	☐
(4d.) How much I would pay for medical expenses (e.g. the cost of premiums for primary or supplemental health care or prescription drug insurance).	☐	☐	☐	☐
(4e.) How much I would pay for long-term (nursing home) care expenses including the cost of premiums for long-term (nursing home) care insurance.	☐	☐	☐	☐

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SECTION TWO: FACTORS MOTIVATING DECISIONS

5. The table below asks about the reasons for your decision about the form of payment for your NPERS benefits. To the best of your ability, please recall your frame of mind in 1997 when you had to make a decision about your NPERS benefits. For each statement, please mark (X) whether each factor was a major reason, minor reason, or not a reason in deciding the form of payment for your NPERS benefits.

	Major Reason	Minor Reason	Not a Reason
(5a.) In 1997, I thought a tax penalty would apply if I took my NPERS benefits as a lump sum payment and did not deposit or rollover that payment to an IRA.	☐	☐	☐
(5b.) In 1997, I thought my Social Security benefits would be paid each month for the rest of my life.	☐	☐	☐
(5c.) In 1997, I thought I had or would have enough personal savings to pay for unexpected expenses in retirement.	☐	☐	☐
(5d.) In 1997, I thought I would have enough income from my investments and other personal savings to live on during retirement.	☐	☐	☐
(5e.) In 1997, I thought my spouse had or would have a monthly annuity income from an employer retirement plan.	☐	☐	☐
(5f.) In 1997, I thought I wanted to use my NPERS benefits to make a major purchase in the near future.	☐	☐	☐
(5g.) In 1997, I thought if I died prematurely I wanted to leave part or all of my NPERS benefits to my children or grandchildren.	☐	☐	☐
(5h.) In 1997, I thought I did not want to make investment and spending decisions concerning my NPERS benefits.	☐	☐	☐
(5i.) In 1997, I thought I wanted to use my NPERS benefits to pay off bills or other debts.	☐	☐	☐
(5j.) In 1997, I thought I wanted to decide and control how my NPERS benefits were invested and spent.	☐	☐	☐
(5k.) In 1997, I thought I wanted the security of knowing that I would receive a monthly guaranteed annuity payment for life.	☐	☐	☐
(5l.) In 1997, I thought I wanted the security of knowing that after I died my surviving spouse would continue to receive a monthly guaranteed annuity payment for life.	☐	☐	☐

6. **In 1997**, which **ONE** of the following reasons did you consider the **MOST IMPORTANT** reason influencing your decision about your NPERS benefits? ***Mark (X) only ONE response.***

- ☐ Tax penalty would apply if taken as a lump sum and not deposited/rolled over to an IRA
- ☐ My Social Security benefits would be paid each month for the rest of my life
- ☐ I had/would have enough personal savings to pay for unexpected expenses in retirement
- ☐ I would have enough income from investments/other personal savings to live on during retirement
- ☐ My spouse had/would have a monthly annuity income from an employer retirement plan
- ☐ I wanted to use my NPERS benefits to make a major purchase in the near future
- ☐ If I died prematurely I wanted to leave part/all of my NPERS benefits to my children/grandchildren
- ☐ I did not want to make investment/spending decisions concerning my NPERS benefits
- ☐ I wanted to use my NPERS benefits to pay off bills or other debts
- ☐ I wanted to decide and control how my NPERS benefits were invested and spent.
- ☐ I wanted the security of knowing that I would receive a monthly guaranteed annuity payment for life
- ☐ I wanted security of knowing my spouse would receive guaranteed monthly annuity payment for life

SECTION THREE: FINANCIAL MANAGEMENT, HEALTH CARE EXPENSES & BENEFITS DECISION

Subsection A: Financial Management
These questions ask how your NPERS benefits relate to your current financial situation.

7. Did you or do you currently invest your NPERS benefits?

- ☐ Yes *(go to question 8)*
- ☐ No *(go to question 9a and 9b, as applicable)*

ANSWER QUESTION 8 ONLY IF YOU RESPONDED "YES" TO QUESTION 7.

8. In which ways have you invested your NPERS benefits between 1997 and 2007. ***Mark (X) all that apply.***

- ☐ I did not invest my NPERS benefits.
- ☐ Stock of an individual company or companies
- ☐ Bonds
- ☐ Mutual funds
- ☐ Real estate
- ☐ Other – Please specify in the box below.

IF YOU RECEIVED YOUR NPERS BENEFITS AS A LUMP SUM PAYMENT, ANSWER QUESTION 9a.

9a. Compared to the original amount of your NPERS **lump sum payment** in 1997, do you have more, the same amount, less, or nothing left today?

- ☐ More *(go to question 10)*
- ☐ Same amount *(go to question 10)*
- ☐ Less *(go to question 10)*
- ☐ Nothing left *(go to question 10)*

IF YOU RECEIVED YOUR NPERS BENEFITS AS A DIRECT ROLLOVER, ANSWER QUESTION 9b.

9b. Compared to the original amount of your NPERS **direct rollover payment** in 1997, do you have more, the same amount, less, or nothing left today?

- ☐ More
- ☐ Same amount
- ☐ Less
- ☐ Nothing left

Subsection B: Health Care Expenses
These questions ask about your NPERS benefits may have been used to pay for health care expenses for yourself or someone you are responsible for.

10. **Since 1997**, did you have to use any of your NPERS benefits to pay for medical expenses or medical insurance premiums (not including long-term (nursing home) care) for... ***Mark (X) all that apply.***

- ☐ I didn't need to use my NPERS benefits to pay for medical expenses/medical insurance premiums.
- ☐ Yourself
- ☐ Spouse
- ☐ Dependent child(ren)
- ☐ Elderly parent
- ☐ Other – Please specify in the box below.

11. **Since 1997**, was there ever a time when you had to use any of your NPERS benefits to pay for long-term (nursing home) care expenses or for long-term (nursing home) care insurance premiums for... ***Mark (X) all that apply.***

- ☐ I didn't need to use my NPERS benefits to pay for long-term care expenses/insurance premiums.
- ☐ Yourself
- ☐ Spouse
- ☐ Dependent child(ren)
- ☐ Elderly parent
- ☐ Other – Please specify in the box below.

Subsection C: Satisfaction with Benefits Decision

12. Overall, how satisfied are you with your decision in 1997 regarding your NPERS benefits?

- ☐ Very Satisfied
- ☐ Satisfied
- ☐ Neutral / No Opinion
- ☐ Dissatisfied
- ☐ Very Dissatisfied

13. What information did you **NOT** receive from your employer that would have helped you to make a better decision in 1997 about the form of payment for your NPERS benefits?

SECTION FOUR: RETIREMENT LIFESTYLE
The questions in this section ask about the adequacy of your NPERS retirement benefits. Only answer these questions if you were born in or before 1935.

IF YOU WERE BORN AFTER 1935, GO TO QUESTION 17 NOW. DO NOT ANSWER SECTION FOUR.

14. **During the past 12 months**, my household income was enough to pay for...

	Strongly Agree	Somewhat Agree	Somewhat Disagree	Strongly Disagree	Not Applicable
(14a.) Daily living expenses including premiums for medical care, long-term (nursing home) care and prescription drug insurance.	☐	☐	☐	☐	☐
(14b.) Medical care expenses not covered by insurance.	☐	☐	☐	☐	☐
(14c.) Nursing home or other long-term care expenses not covered by insurance.	☐	☐	☐	☐	☐
(14d.) Prescription drug expenses not covered by insurance.	☐	☐	☐	☐	☐

15. **During the past 12 months**, I had enough income left over to pay for the things and activities I enjoy beyond my basic needs.

☐ Strongly Agree
☐ Somewhat Agree
☐ Somewhat Disagree
☐ Strongly Disagree

16. **Looking ahead to the future**, I believe my household income will be enough to pay for...

	Strongly Agree	Somewhat Agree	Somewhat Disagree	Strongly Disagree	Not Applicable
(16a.) Daily living expenses including premiums for medical care, long-term (nursing home) care and prescription drug insurance.	☐	☐	☐	☐	☐
(16b.) Medical care expenses not covered by insurance.	☐	☐	☐	☐	☐
(16c.) Nursing home or other long-term care expenses not covered by insurance.	☐	☐	☐	☐	☐
(16d.) Prescription drug expenses not covered by insurance.	☐	☐	☐	☐	☐

SECTION FIVE: EFFORTS AT RETIREMENT PLANNING
The questions in this section ask about your financial knowledge, efforts at retirement planning, and your use of various retirement planning tools.

17. Suppose you had $100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have if you left the money to grow: more than $102, exactly $102, or less than $102?

- ☐ More than $102
- ☐ Exactly $102
- ☐ Less than $102

18. Imagine that the interest rate on your savings account was 1% per year and that the rate of inflation was 2% per year. After 1 year, would you be able to buy more than, exactly the same as, or less than today with the money in this account?

- ☐ More than
- ☐ Exactly the same
- ☐ Less than

19. Do you think that the following statement is true or false? *"Buying a single company stock usually provides a safer return than a mutual fund that invests in the stock of multiple companies."*

- ☐ True
- ☐ False
- ☐ Not sure or don't know

20. Did you or have you ever tried to figure out how much your household would need to save for retirement?

- ☐ Yes
- ☐ No

21. Did you or have you developed a plan for retirement saving?

- ☐ Yes
- ☐ No

22. How often are you able to stick to a plan for retirement saving?

- ☐ Always
- ☐ Mostly
- ☐ Rarely
- ☐ Never

23. When trying to figure out how much your household would need to save for retirement...

	Yes	No
(23a.) Did you talk to family and relatives?	☐	☐
(23b.) Did you talk to co-workers or friends?	☐	☐
(23c.) Did you use calculators or worksheets that are computer or Internet-based?	☐	☐
(23d.) Did you consult a financial planner, advisor or an accountant?	☐	☐

24. Do you keep track of your actual spending?
- ☐ Always
- ☐ Mostly
- ☐ Rarely
- ☐ Never

25. Do you set budget targets for your spending?
- ☐ Always
- ☐ Mostly
- ☐ Rarely
- ☐ Never

SECTION SIX: DEMOGRAPHICS & ADDITIONAL COMMENTS

26. In what year were you born?

☐☐☐☐

27. What is your gender?
- ☐ Female
- ☐ Male

28. Are you currently...
- ☐ Married
- ☐ Never Married
- ☐ Divorced
- ☐ Widowed
- ☐ Separated
- ☐ Married, Living Apart

29. **In 1997**, were you married?
- ☐ Yes
- ☐ No

30. **In 1997**, did you have children (include dependent children living at home and adult children)?
- ☐ Yes
- ☐ No

31. What race or races do you consider yourself to be? ***Mark (X) all that apply.***
- ☐ White (Caucasian)
- ☐ Black or African American
- ☐ Asian
- ☐ American Indian or Alaska Native
- ☐ Native Hawaiian or Other Pacific Islander
- ☐ Some other national origin
- ☐ Don't know

32. Do you consider yourself to be Hispanic or Latino/a?
- ☐ Yes
- ☐ No
- ☐ Don't know

33. What is the highest degree you have attained?
- ☐ No diploma
- ☐ High School diploma or GED
- ☐ Some college, but no degree
- ☐ Technical/Associate/Junior College (2 year/LPN)
- ☐ Bachelor's Degree (4 year, BA, BS, RN)
- ☐ Graduate Degree (Masters, JD/Law, Doctorate, PhD)

34. What is your current 5-digit zip code?

35. Please use the space below to write any additional comments you have about the survey or any other information you would like to provide to the researchers.