

An analysis of lump-sum pension distribution recipients

According to data from the Survey of Income and Program Participation (SIPP), most recipients of lump-sum pension distributions “roll over” at least part of their lump sums; those who spend theirs typically do so to pay off debts, purchase other items, and cover everyday expenses

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Employer-sponsored pensions, one-third of the “three-legged stool” consisting of Social Security income, private savings, and pensions, account for almost 20 percent of aggregate income for people 65 years or older.¹ With Social Security’s projected financial shortfall, income from pensions may play an even greater role in providing economic security in the future, especially for those without substantial private savings.

While pensions have traditionally been paid in the form of a monthly annuity, lump-sum options have always been prominent in defined contribution plans (especially 401(k)-type plans); in the past decade, however, availability has also increased in defined benefit plans. Woods estimated that approximately \$65 billion was distributed from both defined contribution and defined benefit plans in 1990², with this amount growing to between \$87 and \$130 billion in 1995.³ With preretirement access becoming more prevalent in the design of pension plans through loans, withdrawals, and *lump-sum distributions*, concerns have been raised in both the public policy and retirement research communities regarding future retirement income adequacy for today’s workers. If individuals spend their retirement nest egg early in their career or even at retirement, they risk spending their golden years in poverty.

In this study, we use both descriptive and regression analysis to examine the characteristics of individuals who save and spend their lump-sum distributions, examining both preretirement distributions and those received at or after retire-

ment. We use data from the 1991, 1992, and 1993 panels of the Survey of Income Program and Participation (SIPP) matched to Summary Earnings Record (SER) data maintained by the Social Security Administration. This study adds to the lump-sum literature in two ways. First, we examine specific uses of the distribution—such as medical expenditures or car purchases—while most other lump-sum studies only aggregate specific lump-sum uses into two categories, ‘saved’ or ‘spent’. Studying specific uses of these distributions can prove to be a valuable key as to what motivates the spending in the first place. For example, using the funds for everyday expenses could signal a need to meet immediate cash constraints, while purchasing a boat or car may suggest myopia or excessive consumption on the part of the recipient.

The second way this study adds to the existing literature on lump-sum distributions is by examining the role that individual earnings may play in lump-sum decisions by using three different measures of earnings constructed from earnings records of the Social Security Administration. Previous research has found financial variables instrumental in explaining who saves their distributions, but most research has used only one-year, self-reported measures of earnings, which may include both permanent and transitory components. We try to assess the effects of these more permanent and transitory components by examining the relationship between earnings and lump-sum decisions using earnings measures for three different periods: annual earnings in the year of the distribution, average earnings for the

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5 years preceding the distribution, and average projected lifetime annual earnings. Each of these three earnings variables reflects a different time frame to which the lump-sum recipient may look when making the decision about what to do with his or her distribution.

The first two sections of the article provide background information on lump-sum distributions, including the various types of pension plans available, a description of what constitutes a lump-sum distribution, and a summary of current trends regarding lump sums in pension plans. The next three sections discuss, respectively, the tax treatment of lump sums, previous research conducted on the incidence and utilization of lump-sum distributions, and the data used and our analysis. The final two sections provide a descriptive analysis of specific lump-sum uses—including multiple uses—and a multivariate probit analysis of who saves and who spends their lump sums.

In our analysis, we first examine the uses for lump sums as they are coded in the SIPP, including patterns of use depending on age at the time of the distribution, amount of the distribution, and earnings. We then aggregate the specific uses into two categories—*saved* and *spent*—to describe more generally who spends and who saves their distributions. Finally, we estimate a multivariate probit model to sort out the specific characteristics that may affect the decision to save a lump sum, paying particular attention to the earnings measure used. We examine lump-sum distributions regardless of whether they were made prior to, at, or during retirement. Due to data limitations, however, we are unable to determine if the recipients actually were retired at the time of the distribution—we know the year in which the distribution was taken, but we do not know the recipient's retirement status at the time of the distribution.

In both our descriptive and regression analyses we examine an earnings measure not found in other lump-sum studies—average earnings for the 5 years preceding the distribution—as well as earnings in the year of the distribution and average projected lifetime annual earnings. Analyzing lump-sum use in relation to these three earnings measures allows us to examine whether it makes a difference in the lump-sum decision if earnings are measured over a short period (1 year), a medium-length period (5 years), or a lifetime period. Researchers often find that earnings data are available for only 1 year, so an important goal of this study is to compare earnings data for various periods to see if it makes a difference in the lump-sum decision.

Pension plans and lump-sum distributions

A pension plan is an employee benefit primarily intended to provide income to employees upon their retirement, typically in the form of a monthly annuity for life. Pension plans fall into

one of two broad categories: *defined benefit plans* and *defined contribution plans*. Depending on the rules of the specific plan, employees may have the option of receiving a single lump-sum distribution in the case of retirement, disability, death, attainment of age 59½, termination of the plan, or separation from service. A lump-sum distribution from a qualified retirement plan is a distribution of the entire balance (or in the case of a defined benefit plan, the discounted present value) of a participant's account during a taxable year and normally is categorized as a distribution at retirement or a preretirement distribution. From 1988 to 1992 alone, an estimated \$59 billion was received in preretirement lump sums, or 14 percent of the \$431 billion in contributions made to defined contribution plans over the same period.⁴

Defined benefit plans. In a defined benefit plan, benefits are specified amounts to be paid monthly to the participant after retirement for the remainder of the participant's life. Each employee's future benefit is determined by a specific formula, usually based on salary and years of service, and the plan provides a guaranteed level of benefits at retirement. Typically, these plans do not require the employee to contribute to the plan, because the future benefits are financed through regular employer contributions. Hence the employer bears the risk associated with providing the guaranteed level of retirement benefits. Further, if the employer is unable to pay the retirement benefits, the Pension Benefit Guaranty Corporation (PBGC) will pay the guaranteed benefit up to a statutory limit.⁵

Traditionally, defined benefit plans have paid benefits at the time of retirement in the form of an annuity; however, lump-sum options both before and at retirement are gaining in popularity. According to data from the Bureau of Labor Statistics (BLS) on medium and large private establishments, 2 percent of defined benefit plans offered lump sums in 1989, while 23 percent of plans offered them in 1997.⁶ Much of this increase in lump-sum options has been fueled by the conversion of many defined benefit plans to *cash balance* plans, a type of defined benefit plan that creates a notional account for each participant while the assets remain in a trust managed by the employer. Upon separation from employment, cash balance account balances are typically distributed in the form of a lump sum.⁷

Defined contribution plans. In a defined contribution plan, employers generally promise to make annual or periodic contributions to accounts that are set up for each employee. While the level of employer contributions to a defined contribution plan is guaranteed, the level of benefits available at retirement is not. The benefits payable under the plan can be a combination of employer contributions, employee contributions, and investment gains or losses. Upon job separation, most defined contribution plans allow for payout to the par-

ticipant in the form of a lump-sum distribution.

Defined contribution plans have grown considerably over the last decade. From 1993 to 1997, for example, the number of new Savings and Thrift plans (a type of defined contribution plan) increased by 75 percent.⁸ Because lump-sum distributions are one of the most common provisions found in these types of plans, their growth has contributed to the growth in the number of workers with lump-sum options.⁹ Savings and Thrift plan participants with lump sum provisions increased from 8.1 million in 1993 to 13.5 million in 1997. Also, by 1997 defined contribution plan participants were nearly 4 times more likely than defined benefit plan participants to participate in a plan that allowed for a lump-sum distribution at job separation.¹⁰

The Employer Retirement Income Security Act of 1974 (ERISA). This legislation provides specific rules governing both defined benefit and defined contribution pension plans and their respective lump-sum distribution provisions. For example, if the present value of the pension plan participant's vested¹¹ accrued benefit is greater than \$5,000, ERISA states that the plan cannot force the plan participant to begin receiving benefits before reaching the age that is generally considered normal retirement age as specified in plan documentation. Vested accrued benefits only refer to employer contributions; employee contributions are always fully vested. However, if the present value of the vested accrued benefit plan is \$5,000 or less, the plan can require the individual to receive benefits when they first become distributable, such as when the employee separates from the employer. Generally, pension plans will provide a lump sum if a plan participant's accrued benefit is \$5,000 or less.¹²

Triggers and uses of lump-sum distributions

Separating from a job can prompt some major and often confusing decisions, one of which is figuring out what to do with the money from a pension plan. An individual may have several options depending on the type and design of the plan. Employees may choose to keep the funds in a former employer's plan, transfer the funds to a new employer's plan, transfer the money directly into a tax-deferred account (also known as *roll over*) such as an Individual Retirement Account (IRA), purchase an annuity, or take the distribution in cash and then decide what to do with it. In this section, we discuss each of these options in turn.

Taking the distribution in cash. For many individuals, taking the distribution has one major advantage—immediate access to cash. Some may use this money for consumption, such as to take a vacation, purchase a new car, or simply to pay for everyday living expenses. Others may take the distribution and place it in a non-tax-deferred saving vehicle, such as stocks or bonds, or use it to help finance a new business. (Hereafter, we

refer to these types of saving vehicles as *other saving*.) Still others may take the money and then decide to put it back into a tax-qualified account, such as an IRA.

Possible disadvantages to taking the distribution out of a retirement saving vehicle include the loss of tax-deferred compounding over time and less wealth for retirement if the money is spent on consumption. Individuals who take a preretirement distribution may also face tax penalties or be subject to additional Federal tax withholding. Furthermore, these individuals run the risk of being taxed at a higher income tax rate than if they had withdrawn the money on or after retirement, given that the income tax base is generally higher before retirement due to higher labor earnings.

Rolling over the distribution. An individual often has the option of leaving his lump sum with the former employer, directly transferring it into a new employer's plan or putting it into an IRA, or purchasing an annuity. For our purposes, these options will be referred to as *direct rollovers*.¹³ Individuals also may take the distribution and re-invest it themselves in one of the instruments just mentioned, and that is called an *indirect rollover*. The tax consequences for indirect rollovers often are different than for direct rollovers, depending on the individual situation. The advantages to rolling over a distribution are obvious: income for retirement, tax-deferred compounding, and numerous other tax advantages. Nonetheless, individuals often cite the decreased liquidity that accompanies tax-deferred accounts as one disadvantage of investing in these types of vehicles.

Individuals who purchase annuities have additional costs and benefits to consider. Those who purchase certain types of annuities have the advantage of being relieved of the responsibility of making further investment decisions, as well as being provided with the security of a set future stream of income payments. Disadvantages to purchasing an annuity include decreased financial flexibility and the possibility of dying before the full value of the contract is realized.

Although benefits paid in the form of an annuity historically have been commonplace in defined benefit plans, defined contribution plan participants rarely exercise this option. For example, using the 1992–96 waves of the Health and Retirement Study,¹⁴ Michael D. Hurd, Lee Lillard and Constantijn Panis find that only 4 percent of defined contribution participants purchased an annuity.¹⁵ One contributing factor may be that most defined contribution plans do not pay the up-front cost to purchase the annuity, commonly known as the “load,” creating a disincentive for participants to voluntarily choose this option.

Tax treatment of lump sum distributions

As the option to take a lump sum has grown over the past two decades, policy makers have adjusted the tax code to encour-

age the roll over of distributions. In the following paragraphs we describe two important pieces of legislation that are aimed at maintaining pension funds within the tax-deferred retirement saving system.

The Tax Reform Act of 1986. This was the first major piece of legislation to address the issue of lump-sum distributions. Beginning in January 1987, a 10-percent tax penalty was imposed on any taxable lump-sum amounts withdrawn from a qualified retirement plan that were not rolled over into a tax-deferred instrument within 60 days of receipt. This penalty is levied on those who do not maintain or re-invest their distribution in a tax-deferred vehicle before age 59½, given the distribution is not the result of death, disability, certain medical expenses, or under early retirement plan provisions (after age 55). Additionally, individuals aged 55 years and older who take a lump sum after job separation also are exempt. To avoid the penalty, the individual must either directly roll over the balance into a new employer's plan or an IRA (including both Individual Retirement Accounts and Individual Retirement Annuities), leave the balance in the previous employer's plan, or redeposit the balance into one of the saving vehicles mentioned earlier within 60 days. Partial lump sums are subject to the same 10-percent penalty on the amount withdrawn.

Has imposition of the penalty increased rollovers? In a 1996 study, Angela E. Chang examines the effects of the penalty using microdata from the 1988 Current Population Survey (CPS).¹⁶ She finds that a 1-percent increase in the tax penalty raises the probability of rollovers among high-income recipients¹⁷ by 1.3 percentage points, but such an increase does not have a statistically significant effect on low-income recipients.¹⁸ Nevertheless, the actual revenue received from the penalty over the period from 1987 to 1989 greatly exceeded expectations, with \$547 million anticipated and \$1.9 billion collected.¹⁹

The Unemployment Compensation Act of 1992. This legislation added a new qualification provision under section 401(a)(31) of the Internal Revenue Code that requires qualified plans to provide employees with a direct rollover option. Employers must allow terminating employees the option of directly rolling their distribution amounts over to an IRA or another employer's plan. If the employee takes the distribution in cash, the employer must withhold 20 percent of the balance for Federal income taxes.²⁰ This withholding applies even if the employee receives a distribution and then rolls it over within the 60-day period. Partial rollovers are subject to the same withholding requirements and 20 percent of the amount not directly rolled over must be withheld.²¹

Thus far, little research has focused on the effectiveness of the 1992 legislation. Paul Fronstin and his co-authors²² provide a descriptive analysis of the use of lump-sum distribu-

tions from the 1993 CPS and compare them with similar tabulations from the 1996 Retirement Confidence Survey (RCS).²³ The number of lump-sum distributions invested in retirement accounts before and after the 1992 legislation is quite similar: 45.5 percent for distributions received from 1987 to 1993 (CPS) and 46 percent for distributions received from 1993 to 1996 (RCS). These figures suggest that the withholding tax has not had much effect, although it would be premature to conclude this without additional supporting evidence.

Other tax consequences for nonrollover. Tax penalties are not the only tax disincentives of early lump-sum withdrawal. Lump sum distributions, like any other pension income receipts, are subject to Federal income tax the year they are received. The earlier the withdrawal in one's work career, the larger the foregone tax savings that deferment brings in income tax. Additionally, since labor income during one's working years usually is higher than income during retirement, the tax rate at which the lump sum is taxed may be higher than if the individual waited until retirement or later to withdraw the money.

An example of the tax consequences for nonrollover. With the new tax laws in effect, taking a lump sum—even if it is placed back into a qualified account within 60 days—can greatly reduce the amount of benefit the employee has built up. In the following example, we consider the reductions taken for a typical 50-year old male worker who changes jobs, withdraws his balance of \$100,000 from his 401(k) account, and purchases a speedboat with the money.

As stipulated in the 1992 Act, the employer must withhold 20 percent of the lump-sum distribution (\$20,000) for Federal income tax as soon as he accepts the check, leaving him \$80,000 to buy his boat. However, because he has not yet reached age 59½ and does not roll over the balance into a qualified account within 60 days, he is also penalized 10 percent of the *total balance*, or \$10,000, which he must account for in his Federal income tax return for that year. Not counting the additional income tax he must normally pay on the 401(k) withdrawal itself and the fact that he may pay a higher overall income tax rate for the year of the distribution than if he had withdrawn the money after retirement, he would ultimately have, at the most, \$70,000 of his balance left.

Previous research

Much research has been conducted on who is eligible for a lump-sum distribution, how the money is spent, and who saves and who spends their lump sum. In this section, we describe the relevant literature pertaining to each of these topics.

Lump-sum eligibility. The percentage of participants eli-

gible for a lump-sum distribution has increased considerably in the last two decades. According to a 1999 study of CPS data by Leonard E. Burman, Norma B. Coe, and William G. Gale, among those covered by defined benefit and defined contribution pensions in the 1988 CPS, 56 percent reported being eligible for a lump sum if they were to separate from their current job; by 1993, this figure had risen to 68 percent.²⁴ In another study examining 1993 SIPP data, Patrick J. Purcell finds that in late 1995 and early 1996 (the retirement module of the 1993 SIPP was fielded in 1995 and 1996), 82 percent of workers covered by a pension plan had a lump sum option.²⁵ Eligibility has most likely increased due to a combination of growth in defined contribution plans and an increase in lump-sum options in defined benefit plans over this period.

Individuals that are eligible for lump sums tend to differ from those who are not eligible in several ways. In the Burnam study mentioned earlier, the authors find that workers in defined contribution plans, those with annual family income of more than \$10,000, and those with at least a high school education are more likely to have lump-sum options.²⁶ In addition, the kind of occupation in which one works also appears to make a difference—a larger proportion of managers, sales and technical workers, and clerical workers are eligible for lump-sum distributions than are service workers and those in more traditional “blue collar” occupations.

Lump-sum use. Several patterns emerge in the literature when examining lump-sum use: the percentage of both rollovers and distributed dollars rolled over has increased over time; most lump sums are not rolled over, although the majority of distributed dollars are; and a significant portion of individuals who do not roll over their balances save the money in another form.

The Burnam study examines the incidence of lump-sum rollovers for both preretirement and retirement distributions as reported in the CPS in 1988 and in 1993.²⁷ In the 1988 survey, only 16 percent of lump-sum recipients rolled over their whole distribution, and 2 percent rolled over a portion of it. In the 1993 survey, a greater percentage of individuals rolled over either all or part of their balance: 33 percent rolled over the whole distribution, and 7 percent rolled over part of the lump sum. Using data from Hewitt Associates, Paul Yakoboski also reports growth in rollovers, but examines only preretirement distributions resulting from job change.²⁸ He finds that 35 percent of job changers who received distributions rolled over their funds in 1993, while 40 percent did so in 1996.

Although historically most distributions have not been rolled over, the majority of the dollar value of all distributions has been rolled over. For example, 73 percent of distributed dollars were rolled over in 1993, and 79 percent were rolled over in 1996.²⁹ Examination of tax data reveals similar rollover rates: John Sabelhaus and David Weiner report that 70 to 77

percent of distributions were rolled over in 1995.³⁰ The fact that a much larger percentage of dollars than distributions is rolled over makes sense, given the large positive relationship between rollovers and the size of the distribution that repeatedly has been found in the lump-sum literature.³¹ Further, the distribution of lump-sum amounts appears to be very skewed: William F. Bassett, Michael J. Fleming, and Anthony P. Rodrigues report that the average distribution between 1988 and 1992 was \$10,367, while the median distribution amount was only \$3,263.³² Likewise, the more recent study of lump sums by Purcell reported that in the end of 1995 and beginning of 1996, the average distribution was \$13,200, and the median distribution was \$5,500.³³

If an individual does not roll over his distribution, what does he do with the money? Taking the lump-sum distribution does not necessarily decrease wealth meant for retirement if this money is re-invested in some other manner. Gary V. Englehardt found that approximately 25 percent of those in the 1992 HRS who took their lump sums (16 percent of all job changers aged 51–61 in 1992 with pensions) invested their distributions in other saving vehicles or paid down debt.³⁴ Describing the uses of nonrollovers from the 1993 CPS, James M. Poterba, Steven F. Venti and David A. Wise find that using the money for everyday expenses is the most common use, with 22 percent of individuals using *any portion* of their distribution in this way (more than one use is identified).³⁵ This is followed in prevalence by paying down loans or debt (19 percent) and putting the money in a saving account or other financial instrument (16 percent). However, when weighted by distribution dollars, 22 percent of non-rollover distributions were put into other savings or investments, 11 percent of funds were used for everyday expenses, and 11 percent of lump sums went towards paying down debt. Again, we see the larger distributions being saved and the smaller ones being consumed.

It is important to note that both the CPS and SIPP do not include pension balances left with the previous employer in the definition of lump-sum distribution, but the HRS does. The proportion of individuals who elect this option is substantial: Michael D. Hurd and his coauthors examine the 1992, 1994 and 1996 HRS and find that 43 percent of defined contribution plan participants with a lump-sum option who separated from a job during that time left the funds with their employer.³⁶ This point must be kept in mind when inferring SIPP results to *all individuals who separated from an employer*. Given this, figures on rollovers in the CPS and SIPP probably greatly underestimate the total number of individuals (and funds) that remain in the tax-deferred retirement system for those who separate from a job.³⁷

Characteristics of lump sums and those who save them Previous work on lump-sum distributions has found several com-

mon characteristics that describe who saves or spends lump sums. Most studies look solely at who *rolls over* their distributions, while only a handful define saving as both rollovers and investment in other saving vehicles. We will discuss the most recent work examining rollovers, as well as one study that looks at both rollovers and other saving, in the following paragraphs.

The amount of the distribution has consistently been found to be one of the strongest predictors of whether a distribution is rolled over. For example, several studies find that the size of the distribution has a large positive effect on rollovers.³⁸ In particular, the study by Poterba and others finds that individuals with distributions of \$10,000 or more are 21 percent more likely to roll over their money than those with distributions of less than \$1,000.³⁹ They find this relationship to be even stronger when including both rollovers and other saving uses in the definition of saving. Individuals with distributions of \$10,000 or more are 34 percent more likely to save their balances than those with distributions of less than \$1,000.

Several other characteristics have been found to affect the incidence of rollovers. Both the Poterba study and the Purcell study find that as age increases, the probability of rollover also increases.⁴⁰ Poterba and his coauthors also find similar results when including other saving in the definition.⁴¹ Further, Purcell finds that race affects lump-sum disposition: Whites are twice as likely as blacks to place their funds in a qualified account, even after controlling for education and income.⁴² Interestingly, Purcell's study is the only one that we know of to use the SIPP, and it is the only one to find evidence that race affects lump-sum disposition.

Income has also been shown to affect rollovers. Two studies analyze 1993 CPS data and find that both household earned income and total family income are positively correlated with rolling over a distribution.⁴³ Purcell tests three different earnings and income measures from the 1993 SIPP and arrives at similar conclusions regarding their impact on the rollover decision: Those whose annual income was more than \$36,000 were significantly more likely to roll over their balances than individuals whose annual income was less than \$18,000 per year (regardless of which income definition is used).⁴⁴ Both the 1998 Poterba study and the one by Purcell divide income into four categories and find that the highest income group is the only group for which income is a statistically significant predictor of rollovers.⁴⁵ Poterba and others find similar results when they expand their saving definition to include other saving vehicles, although the magnitude of the effect is only half as large.⁴⁶

Data and relevant variables in the SIPP

For our analysis, we use a pooled sample from the 1991, 1992, and 1993 panels of the SIPP matched to earnings measures

taken from the Summary Earnings Records.⁴⁷ Each SIPP panel consists of a series of “waves,” or 4-month intervals. Each household is interviewed once at the end of each wave regarding events from the preceding 4 months. Most of our data are from the *Retirement Expectations and Pension Plan Coverage* topical module of the SIPP (hereafter called the *Pension module*) that contains information primarily related to current and past pension coverage.⁴⁸ The panel weight we use in our tabulations is constructed by the Bureau of the Census for this particular combination of panels, and it includes the three panel weights from the public data set in its construction.⁴⁹

We use the Summary Earnings Record (SER) of the Social Security Administration (SSA) for the construction of our three earnings variables. The SER contains earnings covered by Social Security that are derived from payroll tax records for the period from 1951 to 1999 (up to the taxable wage ceiling). One of our earnings variables—*earnings in the year of the distribution*—is taken directly from the annual figures recorded in the SER. We also use the SER to construct earnings in two other periods, *average annual earnings over the 5-year period before the distribution* and *average projected lifetime annual earnings*. The 5-year earnings measure is constructed by taking the average of annual earnings found in the SER for the 5 years preceding (but not including) the year of the distribution. We construct the expected average annual earnings over a lifetime from a projected average indexed *monthly* earnings created for analysis at the Social Security Administration. We convert all of our earnings measures to 2000 dollars, because that is the most recent year for which the Consumer Price Index (CPI) is available for this study.⁵⁰

A total of 6,851 individuals aged 25 years and older—13 percent of the respondents interviewed for the Pension topical module—reported receiving at least one lump-sum distribution from a previous pension plan.⁵¹ The survey does not report whether the lump sum was from a defined benefit or a defined contribution plan. We delete 1,382 individuals from this group to form a sample of 5,469 respondents for our analysis. We drop these individuals either because they were not matched to their respective earnings in the SER,⁵² or they were employed in jobs not covered by Social Security employment during or around the time they received their lump sum, which would give them zero SER earnings for these years.⁵³

Descriptive analysis: lump-sum uses

In this section, we use descriptive analysis to examine the specific uses of lump-sum distributions. Table 1 reports summary statistics for our sample. Nearly two-thirds of the individuals who received a lump-sum distribution were younger than age 40 at the time of the distribution, with the average age being 38. Three-quarters of the recipients were married at

the time of the interview, and 50 percent of the sample is female. The majority of recipients are white and college-educated, at 90 and 65 percent, respectively, and the mean amount of uses for the distributions reported is 1.6. This sample of lump-sum recipients contains a greater percentage of whites and college educated individuals than the entire 1991–1993 SIPP topical module sample, where only 79 percent of the respondents are white, and only 50 percent are college-educated. (This information is not shown in tables.)

Table 1 also shows the mean for each of the three earnings measures. The mean earnings measured in the year of the distribution and the 5-year average earnings are quite similar, at \$28,578 and \$28,191, respectively. The mean value of average projected lifetime annual earnings is somewhat higher, at \$33,134.

Specific lump-sum uses in the SIPP. The SIPP asks each respondent the following question, “Did (the respondent) ever receive a lump-sum payment from any current or former pension or retirement plan provided by (the respondent’s) current or former employer or union?” The individual is then asked to report the amount of the most recent distribution and how it was used. If the individuals responded that the balance was rolled over into an IRA or another employer’s account, no further questions about the use of the funds were asked. However, if the respondent reported that the distribution was not rolled over, he or she is asked specifically what was done with the distribution. The respondent may have put the distribution to one or several uses, which are recorded and coded into 10 different categories.⁵⁴ If the response cannot be classified among these categories, the distribution is coded as *not determinable*. Although multiple uses of the distribution are recorded, the SIPP does not report the proportion of the distribution allocated to each use.

We classify these 10 categories as either *other saving* or *spent*. As mentioned earlier, we consider a distribution to be saved in other saving vehicles if it is used to purchase a home, placed in a savings account, invested in other investment vehicles (such as stocks or bonds), or used to finance a new business. However, if the distribution was used to pay for education, cover unemployment expenses, pay bills (or buy other items), buy a car, boat, or other vehicle, cover medical expenses, or used for everyday expenses, we categorize it as spent. Eighty-two percent (4,610 individuals)⁵⁵ of the sample reported only one use for their distribution. For simplicity and clarity, in the descriptive analysis that follows, we restrict the sample to these individuals.⁵⁶

Table 2 reports lump-sum uses for the individuals who reported only one use. More than half of the sample respondents saved their funds in either a tax-deferred vehicle (35 percent) or another saving vehicle (17 percent). The majority of those who listed “other savings” as their use put the money

Table 1. Demographic characteristics of persons receiving lump-sum pensions

Characteristics	Mean
Age at receipt of distribution (years):	
25–29	25
30–39	38
40–49	21
50–59	11
60 and older	5
Women	50
Marital status:	
Married	75
Divorced	13
Widowed	2
Never married	10
Race:	
White, non-Hispanic	90
Black, non-Hispanic	5
Hispanic	3
Asian/Native American/Other	2
Highest educational level obtained:	
Less than high school (percent)	6
High school graduate	29
At least some college	65
	Mean (standard deviation in parenthesis)
Number of uses of distribution:	1.61 (1.8)
Current age	45 (10.5)
Age received distribution	38 (10.7)
Amount of distribution ¹	\$14,231 (24,618)
Year of distribution receipt	1986 (6.5)
Earnings year of distribution ¹	\$28,578 (18,586)
Average 5-year earnings ¹	\$28,191 (17,300)
Average projected lifetime earnings ¹	\$33,134 (17,702)
Household net wealth ¹	\$123,816 (246,830)
Number of observations ²	5,469

¹ Data are in 2000 dollars.

² Observations are weighted so as to represent the population of the United States as of June 1993, the 1-month the three panels overlap. Panel weights are constructed for the pooled sample using adjustment factors calculated by the Census Bureau specifically for these three panels.

NOTE: Standard deviations are in parenthesis.

SOURCE: Authors’ tabulations from the 1991, 1992, and 1993 Survey of Income and Program Participation panels matched to Summary Earnings Records data.

into a savings account (7 percent of the sample), followed closely by those who purchased a home with their money (6 percent). For those who spent their lump sums, most individuals appear to use their distributions for day-to-day living. The most common use was *paid bills or bought other items* (24 percent),⁵⁷ followed by *everyday expenses* (12 percent). Only 1 percent used the money for either education or to pay medical bills. It does not appear that many individuals use their lump sum for “big-ticket” purchases, such as cars and boats, with only 2 percent of the sample using their distribution for these purposes.

The mean and median lump-sum amounts are also shown in Table 2. The distribution of the lump-sum amounts is skewed—mean lump-sum amounts for all uses are 2 to 3 times

larger than median values. For instance, the mean value of spent distributions is \$7,190, while the median value equals only \$2,777. This distinction is an important one to make when evaluating the extent to which workers are consuming their retirement resources, because the amount of dollars being spent does not appear to be as great when using the median (instead of the mean) amount.

Lump-sum decisions and age. Previous research has shown that age is a factor in the lump-sum decision—younger recipients are more likely to spend their lump sums than are their older counterparts. If younger people are less likely to roll over their distributions, what are they doing with the money?

We examine this issue, and the results are summarized in Table 2, which shows the uses of lump sums, stratified by age at the time of the distribution. As would be expected, individuals who were older at the time of the distribution were much more likely to roll over their lump-sum distributions than were their younger counterparts. While only 17 percent of those aged 25 to 29 rolled over their lump sums, 56 percent of those aged 60 years and older kept their distribution in the retirement system. Not surprisingly, a larger percentage of younger individuals used their lump sum to purchase a home, although the difference is not large: 8 percent of those aged 25 to 29 years purchased a home, compared with 4 percent for those aged 60 years and older.

The labor economics literature suggests that younger workers, having not settled into a career job, typically change jobs more often than older workers do. This pattern leads to a greater number of younger workers being unemployed at

any given time. Table 2 shows that younger individuals are more likely than older workers to spend their lump-sum distribution on unemployment expenses, although the total incidence of use for this purpose is small. Spending on everyday expenses also decreases as age increases, suggesting that younger individuals may be covering their basic living expenses with their lump sums. However, because the category *everyday expenses* is somewhat vague and thus could include many different kinds of uses—from going to a movie to buying food—it is not possible to determine what proportion of these uses are in fact for necessities.

Lump-sum use and amount of distribution. Table 3 breaks down the specific uses of the distributions by size. Consistent with previous research, a greater percentage of individuals with larger distributions rolled over their distributions, with 60 percent of those with distributions greater than \$15,000 rolling over their lump sums, and only 16 percent of those with a distribution of \$1,500 or less doing so. Likewise, a greater percentage of individuals with distributions of more than \$15,000 saved their money in other saving vehicles than did those with distributions that were less than or equal to \$1,500 (20 and 13 percent, respectively), although the percentage point difference between the groups is much smaller than when examining rollovers.

When comparing recipients who spent their distribution on educational or unemployment expenses; purchased a car, boat, or other vehicle; or paid medical expenses, there is very little variation in spending pattern by the amount of the distribu-

Table 2. Individuals who specified one use for their lump sum distribution, by amount and age at distribution

Total	Amount of distribution (2000 dollars)		Percent	Age at distribution				
	Mean	Median		25-29	30-39	20-49	50-59	Older than 60
All uses	\$13,999	\$ 4,860	100	100	100	100	100	100
Rolled over ¹	22,839	10,611	35	17	34	44	55	56
Other saving ¹	13,970	6,448	17	20	17	14	16	21
Purchase home	13,590	7,610	6	8	7	5	3	4
Savings account	8,441	3,558	7	9	6	4	6	9
Invested	23,532	14,141	3	2	2	3	6	6
Start a business	21,892	12,359	2	1	2	2	1	2
Spent ¹	7,190	2,777	42	53	43	36	26	17
Education	10,901	6,053	1	<1	<1	1	<1	...
Unemployment expenses	7,780	3,575	2	3	3	3	1	1
Paid bills and/or bought other items	6,850	2,880	24	30	27	21	15	9
Bought car, boat, other vehicle	7,725	4,743	2	3	2	1	1	2
Medical expenses	7,725	2,777	1	<1	<1	<1	1	1
Everyday expenses	5,249	2,090	12	17	11	10	8	4
Not determinable ¹	10,327	3,682	6	10	6	6	3	6

¹ The sum for "Rolled over," "Other saving," "Spent," and "Not determinable" equals to 100 percent.

NOTE: There were 4,610 weighted observations.

SOURCE: Authors' tabulations from the 1991, 1992, and 1993 Survey of Income and Program Participation panels matched to Summary Earnings Records data.

Table 3. Individuals specifying only one use for their lump-sum distribution, by amount of distribution, and average 5-year earnings

[In percent]

Specified Use	Total	Amount of distribution (2000 dollars)				Average 5-year earnings			
		Less than 1,500	\$1,501 to \$5,000	\$5,001 to \$15,000	More than \$15,000	Less than \$15,000	\$15,001 to \$30,000	\$30,001 to \$50,000	More than \$50,000
All users	100	100	100	100	100	100	100	100	100
Rolled over ¹	35	16	26	37	60	19	26	43	66
Other saving ¹	17	13	15	20	20	16	19	19	13
Purchase home	6	3	5	9	7	5	8	7	4
Savings account	6	9	8	6	4	8	8	6	3
Invested	3	1	1	3	6	2	2	3	5
Start a business	2	<1	1	2	3	1	1	3	1
Spent ¹	42	63	51	36	17	56	48	32	18
Education	1	<1	<1	1	<1	<1	1	<1	1
Unemployment expenses	2	3	3	3	1	2	3	3	2
Paid bills/bought other items	24	36	30	22	10	32	28	19	11
Bought car, boat, other vehicle	2	1	3	3	1	2	2	2	<1
Medical expenses	1	1	1	<1	<1	1	<1	<1	<1
Everyday expenses	12	22	14	7	5	19	14	8	4
Not determinable ¹	6	8	8	7	3	9	7	5	3

¹ The sum for "Rolled over," "Other saving," "Spent," and "Not determinable" equals 100 percent.

NOTE: Observations (weighted) equal 4,610.

Source: Authors' tabulations from the 1991, 1992, and 1993 Survey of Income and Program Participation panels matched to Summary Earnings Records data.

tion. In contrast, marked distinctions in the way in which the distribution is spent emerge when comparing the remaining spent categories. For example, those who received a distribution of \$1,500 or less were nearly 4 times more likely to use their distribution to pay bills, buy other items, or pay everyday expenses compared with those whose distributions were greater than \$15,000.

Lump-sum use and earnings. In table 3, we present our results on distribution use stratified by average 5-year earnings. We present only the 5-year earnings measure here, because the results are similar regardless of which measure is used.⁵⁸

The tabulations in Table 3 show that lower earners tend to spend their distributions, while higher earners tend to save them. Among the individuals whose average 5-year annual earnings were less than or equal to \$15,000, 19 percent rolled over their distributions; among those with average 5-year earnings greater than \$50,000, two-thirds rolled over their lump-sum distributions. The majority of individuals with lower average earnings tend to use their money to pay bills, purchase other items, or pay everyday expenses. This makes sense if low earners do not make enough money to meet all of their expenses. However, low earners also tend to receive smaller lump-sum distributions, and they are younger, which also helps explain this pattern. We address this issue further in the section presenting our probit regression results.

Why examine specific lump-sum uses? What do we learn

from examining the uses of lump sums by those who *do not* roll over their distributions? Several points from our descriptive analysis are worth mentioning.

When we look at both lump-sum uses in general and uses stratified by age, amount of distribution, and earnings, we see several patterns. First, most people are not using their distributions for their children's education, paying medical expenses, or purchasing homes. Nor are they using the funds ~~for immediate needs, such as periods of unemployment.~~⁵⁹ Even when stratified by age, distribution amount, and earnings, unemployment and medical expense categories each constitute less than 3 percent of responses. Individuals also do not appear to be using lump-sum distributions to purchase luxury items, with only 2 percent of all workers purchasing a car, boat, or other vehicle with the money.

So what *are* those workers who do not roll over their lump sums spending the money on? In general, most people who take the distribution spend it on things contained in the following two categories: *paid off loans, bills, or spent it on other items* (24 percent) and *used for everyday expenses* (12 percent). When examining uses by age, amount of distribution, and earnings, we see similar results: Younger workers, those with smaller lump sums, and those with lower earnings tend to use their money to pay off bills or for everyday expenses more often than for the "other spending" or "other saving" categories.

The issue here is what exactly is meant by *other items*, as well as what is included in *everyday expenses*. Unfortunately, the

survey combines *other items* with *paid off loans or bills*, because paying off debt can be wealth enhancing (other things being equal), while spending on other items generally is not. Because we have no way of ascertaining from the SIPP who paid bills and who purchased other items, we can only look to other evidence on this topic for some insight. Poterba and others list the uses of lump sums from the 1993 CPS, which contains a separate category for paying down debt, and find this use to be the second most common one after rolling the distribution over.⁶⁰ Hence, it is probable that many of these individuals did in fact use the lump sum to pay down debt, which can increase net worth and resources for retirement.

Examining those who report one or more uses. Thus far in our descriptive analysis, we have examined only lump-sum use for individuals who reported *one* use for their distribution. In this subsection, we include all lump-sum recipients in our analysis, including those with multiple uses, but we aggregate the responses into just two categories—*saved* and *spent*—in order to make a clearer presentation. We use two different definitions of what constitutes *saved*, because other saving (such as stocks and bonds) may add to retirement wealth and could be considered saving for retirement along with rollovers.

The two definitions of saving include a narrow definition that contains only rollovers, and a broader definition that includes both rollovers and other saving. Recall that the survey did not ask additional uses of the lump sum for individuals who reported rolling over their distribution, and as a result they necessarily can have only one recorded use for their distribution. However, the SIPP questionnaire is designed in such a way that those who reported using their distributions for other saving could also have reported either spending the distribution and/or using the distribution for uses coded as *not determinable*. The survey does not report the proportion of the distribution saved for those who save only part of the money—hence, for our purposes, we classify a person as having saved his distribution if he or she reports at least one use as other saving.⁶¹ Henceforth, we group together those who saved their whole distribution and those who saved only a portion of it under the heading “saved.”

Using the more narrow definition of saving, 31 percent of respondents saved their distribution. (See table 4.) This percentage greatly increases under the broader definition, to 58 percent. Burnam and others find similar results when using the narrow definition of saving in their analysis of the 1993 CPS: 33 percent of individuals rolled over their entire distribution, while 7 percent rolled over only a portion of it.⁶²

Table 4 also shows lump-sum use by individual characteristics. Using either definition of saving for lump sums, the proportion of saving increases with the amount of the distribution, level of education, current household net wealth, and age. Divorced respondents have a smaller incidence of lump-

sum saving than do married, widowed, or never married individuals. This difference widens when using the broad definition of saving. We also find that a greater percentage of whites (white, non-Hispanic) and “other” races (including Asians and Native Americans) save their distributions than of blacks (black, non-Hispanic) or Hispanics, with a difference of as much as 19 percentage points using the narrow definition of saving.

A greater percentage of individuals with higher earnings also save their distributions, compared with those with lower earnings, regardless of what earnings measure or definition of saving is used. Table 4 shows that the proportion of respondents who save their lump-sum distributions increases substantially as earnings increase, although the increase is not quite as large for the projected lifetime earnings measure as it is for the 1-year or 5-year earnings measures. Under the broader definition of saving, for example, we see an increase from 47 to 80 percent for low to high earners when using annual earnings, and an increase from 46 to 82 percent when using average 5-year earnings. However, when using projected annual earnings, the increase is from 47 to 73 percent.

Of course these tabulations only tell part of the story, given that many of these variables may be correlated with one another. We are particularly interested in the earnings variables and whether the time period of earnings makes a difference in the decision to save or spend a lump-sum distribution. In the past few years, much attention has been paid to research findings suggesting that low income individuals tend to spend their lump sums, while higher earners tend to roll theirs over. In the next section, we use a probit model to assess whether the effects of earnings on lump-sum use remains strong when using the different earnings measures.

Probit model of lump-sum use

We now examine the characteristics of those who save lump sums by estimating a multivariate probit model. We estimate our model separately using both the narrow and broader definitions of saving used in table 4, with the dependent variable taking on the value of 1 if the distribution was saved, and 0 otherwise. Omitting individual subscripts, we model the decision to save or spend a distribution as

$$Y_j^* = \beta_0 + \beta_j X + \varepsilon_j; \quad (1a)$$

where Y_j^* is the difference in utility for the worker depending on whether or not he saves his distribution, β_0 is a constant, and ε_j is an error term. X is a vector of demographic and financial variables thought to affect lump-sum use and includes age at time of the distribution, marital status, race, gender, highest educational level obtained, amount of distribution, and total household net wealth.^{63,64} The model is estimated separately depending on whether we use average 5-year earn-

Table 4. Characteristics of persons distributing lump-sum benefits using narrow and broad definitions of savings

[In percent]

Characteristics	Narrow definition		Broad definition	
	Saved ¹	Spent	Saved ²	Spent
All workers	31	69	58	39
Gender:				
Female	28	72	52	48
Male	34	66	63	37
Race :				
White	32	68	59	41
Black	13	87	43	57
Hispanic	20	80	45	55
Asian/Native American/Other	32	68	57	43
Age at time of distribution :				
25-29	16	84	45	55
30-39	30	70	56	44
40-49	38	62	62	38
50-59	48	52	73	27
60 and older	44	56	79	21
Marital status:				
Married (including separated)	32	68	60	40
Divorced	24	76	42	58
Widowed	31	69	62	38
Never married	31	69	58	42
Highest educational level obtained:				
Less than high school degree	21	79	42	58
High school degree	25	75	53	47
College degree/Some college	35	65	61	39
Amount of distribution:				
Less than or equal to \$1,500	15	85	37	63
\$1,501-\$5,000	24	76	48	52
\$5,001-\$15,000	33	67	64	36
More than \$15,000	50	50	80	20
Annual earnings year of distribution:				
Less than or equal to \$15,000	20	80	47	49
\$30,001-\$50,000	36	64	64	36
More than \$50,000	56	44	80	20
Five-year average earnings:				
Less than or equal to \$15,000	17	83	46	54
\$15,001-\$30,000	23	77	50	50
\$30,001-\$50,000	38	62	65	35
More than \$50,000	60	40	82	18
Average projected lifetime earnings:				
Less than or equal to \$15,000	19	81	47	53
\$15,001-\$30,000	22	78	48	52
\$30,001-\$50,000	36	64	63	37
More than \$50,000	49	51	73	27
Total household net wealth:				
Less than or equal to \$15,000	13	87	34	66
\$15,001-\$65,000	24	76	50	50
\$65,001-\$170,000	35	65	64	36
More than \$170,000	48	52	78	22

¹ Under the narrow definition, a distribution is considered "saved" if the whole distribution was rolled over.

² Under the broad definition, a distribution is considered "saved" if at least part of the distribution was rolled over or put into other saving.

NOTE: Observations (weighted) equal 5,168. "Amount of distribution," "Current household net wealth," and all earnings variables are in 2000 dollars.

rent household net wealth," and all earnings variables are in 2000 dollars.

SOURCE: Authors' tabulations from the 1991, 1992, and 1993 Survey of Income and Program Participation panels matched to Summary Earnings Records data.

ings, average projected lifetime annual earnings, or earnings for the year of the distribution. The chosen measure of earnings for each specification is also included in X.

If $Y^* > 0$, the individual saves the lump sum; hence $Y=1$ for those observed to save the lump sum, 0 otherwise. The sub-

script j equals 1 or 2, depending on the use of the narrow or broad definition of saving. Thus, the probability that a person saves a lump sum can be written as

$$P(Y_j=1|X) = \Phi(\beta_{0j} + \beta_j X); \quad (1b)$$

where $\Phi(\cdot)$ denotes the cumulative normal distribution. We estimate equation (1b) for both definitions of saving.

Table 5 reports the estimates of equation (1b) for three separate specifications, each using a different earnings measure, and both definitions of saving. The results using the earnings for the year of the distribution are shown in columns (1) and (3), those using the 5-year earnings measure are shown in columns (2) and (5), and those using average projected lifetime annual earnings are shown in columns (3) and (6). Because macroeconomic conditions and tax laws have varied over the years, we also include dummy variables for the year of the distribution (not shown in the tables).⁶⁵ An *F* test for the joint significance of the year dummies reveals they are highly statistically significant, with a *p*-value of less than 0.01.⁶⁶ Because most of these estimates are similar in magnitude and statistical significance among the different earnings specifications, for simplicity, we discuss only the estimates from the first column of each table in detail.⁶⁷ Further, we estimate the specifications both with and without weights and find that the difference in the estimates does not affect our conclusions; thus, for computational ease, we present unweighted results.⁶⁸

Table 5 shows that, regardless of the definition of saving used, those with larger distribution amounts are more likely to save their distributions, and this effect is large and highly statistically significant in all specifications, using either definition of saving. College graduates are also more likely to save their lump sums than are high school graduates or those who have not attained at least a high school diploma, with a 9 percent greater probability using the narrow definition of saving and an 18 percent greater probability when using the broader one.

We also find that current household net wealth is an important predictor of lump-sum use, with the largest difference in the likelihood of saving (34 percent using either definition of saving) between those with the lowest and highest levels of wealth. All wealth effects are estimated with a *p*-value of less than 0.01. Given that this is a measure of wealth at the time of the interview (versus wealth at the time of the distribution), it is probable that this variable may be serving as a proxy for some sort of taste for saving in this model.

Table 5 also shows that marital status, gender, and age at time of the distribution are also statistically significant, although the results vary depending on what definition of saving is used. Never-married individuals have a 6 percent greater likelihood than married individuals of saving their distributions, regardless of the definition of saving used, while divorced respondents are 8 percent less likely to save their lump sums, but only when defining saving broadly. In addition, women are 5 percent *more* likely to save their distributions than men when using the narrow definition of saving. This result is surprising, considering other studies of lump-sum

use have either found no “gender effect,” or they have found that women have a *lower* probability of saving their lump-sum distributions.⁶⁹

As age at the time of the distribution increases, the likelihood of saving the distribution increases (up to age 60), but this effect is statistically significant for all age dummy variables only when using the narrow definition of saving. The fact that we see significant effects for age *only* when looking at rollovers makes sense, given that tax-deferred vehicles may not be as attractive to younger individuals because of the decreased liquidity during the early stage of the life cycle.⁷⁰

The differences in lump-sum saving we saw in the earlier descriptive analysis with regard to race also remain when examining the probit estimates. The degree to which blacks and Hispanics (relative to whites) are less likely to save their lump sums differs depending on the definition of saving used. Using the narrow definition, blacks have a 14 percent lower probability of rolling over their distribution than do whites, with Hispanics being 10 percent less likely than whites to roll over their lump sum. This difference decreases for blacks and increases for Hispanics when using the broad definition of saving, with blacks being 8 percent and Hispanics 14 percent less likely than whites to save their distribution. Interestingly, only Purcell—the only other lump-sum study we know of that also uses the SIPP—also found that whites were more likely than blacks to save their distributions.⁷¹

The results in table 5 suggest that regardless of which earnings measure is used, the likelihood of saving a distribution increases as earnings increase. There is one exception to this, however, when looking at the lower earners. For the specification using average 5-year earnings (and the broad definition of saving) and the specifications using projected lifetime earnings (both definitions of saving), there is no significant difference in the likelihood of saving a lump sum between individuals who earned between \$15,000 and \$30,000 annually and those who earned less than \$15,000 (the group omitted here).

Why might these lower average lifetime earners *not* follow the same pattern as their higher earning counterparts? One possibility lies in the mechanics of actually creating the average projected lifetime annual earnings variable used in this analysis. Higher earners generally have more education and labor force stability than lower earners, which makes their lifetime earnings path easier to project and thus probably more accurate than the projections for lower earners. Measurement error typically biases an estimate towards zero and thus leads to estimates that are not statistically significant.

Another possibility is that lower wage workers simply are not as cognizant of their expected lifetime earnings and therefore do not look to them in making their lump-sum decisions. Instead, they may pay more attention to their financial situation at the time of the distribution, as everyday consumption needs tend to be more pressing for individuals in this lower

Table 5. Probit estimates of the probability of saving a lump-sum distribution, by individual characteristics and earnings variable

Characteristic	Narrow definition of saving ¹			Broad definition of saving ²		
	Earnings in year of distribution ³ (1)	Average earnings 5-years before distribution ³ (2)	Average projected lifetime earnings ³ (3)	Earnings in year of distribution ³ (4)	Average earnings 5-years before distribution ³ (5)	Average projected lifetime earnings ³ (6)
Age received distribution (base under 30):						
30-40 .....	.04 (.02)+	.02 (.02)	.06 (.02)	-.01 (.02)	-.02 (.02)	.005 (.02)
40-50 .....	.06 (.02)**	.05 (.02)*	-.007 (.02)	-.007 (.02)	-.01 (.02)	.03 (.02)
50-60 .....	.09 (.03)**	.06 (.03)*	.07 (.03)*	.07 (.03)*	.05 (.03)***	.10 (.03)**
Older than 60	-.008 (.04)	-.05 (.03)	.07 (.05)	.07 (.05)	.03 (.05)	.09 (.04)***
Female .....	.05 (.02)**	.04 (.02)**	-.01 (.02)	-.01 (.02)	-.03 (.02)***	-.003 (.02)
Marital status (base married, including separated):						
Divorced	-.008 (.02)	-.006 (.02)	-.08 (.02)**	-.08 (.02)**	-.06 (.02)**	-.08 (.02)**
Widowed .....	.02 (.05)	.03 (.05)	.03 (.05)	.03 (.05)	.02 (.04)	.04 (.05)
Never married .....	.06 (.03)**	.07 (.03)**	.06 (.03)*	.06 (.03)*	.07 (.02)**	.05 (.03)*
Race (base white, non-Hispanic):						
Black, non-Hispanic	-.14 (.03)**	-.14 (.03)**	-.08 (.04)*	-.08 (.04)*	-.08 (.04)*	-.08 (.04)*
Hispanic	-.10 (.03)**	-.10 (.03)**	-.14 (.05)**	-.14 (.05)**	-.14 (.05)**	-.13 (.05)**
Asian/Native American/Other	-.05 (.04)	-.06 (.04)	-.06 (.06)	-.06 (.06)	-.06 (.06)	-.05 (.06)
Highest educational level (base: no degree):						
High school degree .....	.03 (.03)	.03 (.03)	.13 (.03)**	.13 (.03)**	.14 (.03)**	.14 (.03)**
College degree/some college .....	.09 (.03)**	.10 (.03)**	.18 (.03)**	.18 (.03)**	.19 (.03)**	.18 (.03)**
Amount of distribution ¹ (base less than \$1,000):						
\$1,000-\$5,000 .....	.13 (.02)**	.12 (.02)**	.09 (.02)**	.09 (.02)**	.09 (.02)**	.09 (.02)**
\$5,000-\$15,000 .....	.20 (.02)**	.20 (.02)**	.22 (.02)**	.22 (.02)**	.22 (.02)**	.22 (.02)**
More than \$15,000 .....	.31 (.03)**	.30 (.03)**	.33 (.02)**	.33 (.02)**	.33 (.02)**	.33 (.02)**
Earnings (base: less than \$15,000):						
\$15,000-\$30,000 .....	.06 (.02)**	.04 (.02)*	.06 (.02)**	.06 (.02)**	.02 (.02)	.008 (.02)
\$30,000-\$50,000 .....	.15 (.02)**	.12 (.02)**	.11 (.02)**	.11 (.02)**	.06 (.02)**	.09 (.02)**
More than \$50,000 .....	.20 (.03)**	.16 (.03)**	.14 (.02)**	.14 (.02)**	.09 (.03)**	.15 (.03)**
Total household net wealth ¹ (base less than \$15,000):						
\$15,000-\$65,000 .....	.13 (.02)**	.13 (.02)**	.12 (.02)**	.12 (.02)**	.12 (.02)**	.12 (.02)**
\$65,000-\$170,000 .....	.23 (.02)**	.24 (.02)**	.22 (.02)**	.22 (.02)**	.23 (.02)**	.22 (.02)**
More than \$170,000 .....	.34 (.02)**	.34 (.02)**	.34 (.02)**	.34 (.02)**	.34 (.02)**	.33 (.02)**
Pseudo R ² .....	.19	.19	.18	.18	.17	.18
Log likelihood	-2569	-2584	-2861	-2861	-2874	-2858

¹ Estimates (unweighted) = 5,114.

² Estimates (unweighted) = 5,140.

³ F tests for joint statistical significance of earnings variables:

column 1: 72.7, p-value=0.0;

column 2: 42.7, p-value=0.0;

column 3: 104.2, p-value=0.0;

column 4: 36.8, p-value=0.0;

column 5: 11.0, p-value=0.1;

column 6: 44.0, p-value=0.0.

All specifications include year dummy variables for the year the distribution was received.

NOTE: Robust standard errors are in parenthesis.

** significant at the 1-percent level

* significant at the 5-percent level

*** significant at the 10-percent level

"Amount of distribution"; "earnings in year of distribution"; "average 5-year earnings"; "projected lifetime earnings"; and "household net wealth" are in 2000 dollars.

Estimates (unweighted) = 5,114.

earnings category than for higher earners. Lower earners also are more likely to be "liquidity constrained" (unable to borrow money), which may make a lump-sum distribution appear that much more appealing as a way to meet current expenses.

To investigate this possibility further, we modify equation (1b) to include all three of the earnings measures in X. This modification is necessary to control for the fact that an individual may be classified into different earnings categories,

depending on which earnings measure is used.⁷²

Table 6 reports the results for both definitions of saving. We estimated the two regressions using all three earnings variables and found that none of the average 5-year earnings variables were statistically significant, so we eliminated that measure from the final specification presented in Table 6. Column (1) reports the results using the narrow definition of saving, and column (2) presents the results using the broader measure.

The results are similar to those in table 5 with regard to lower earners. Individuals who earned \$15,000 to \$30,000 in the year of the distribution—regardless of average projected lifetime annual earnings—are 4 to 5 percent more likely (depending on the definition of saving) to save their distribution than those who earned less than \$15,000, with p -values of less than 0.05.

These results suggest that lower earners are looking more at their earnings at the time of the distribution than at either past earnings or expected lifetime annual earnings in making lump-sum decisions. This conclusion seems plausible given that these individuals are more likely than higher earners to have immediate consumption needs. It is also possible, however, that lower earners put the same weight as higher earners on their earnings at the time of the distribution, but the lower

earners have greater year-to-year earnings deviations from the lifetime path of earnings than do middle and upper earners. Lower earners may thus appear to put a greater emphasis on earnings at the time of the distribution, although, in reality, their lifetime earning paths are just noisier.

THE FOCUS OF OUR PAPER IS TWOFOLD: to identify what spenders of lump sums are doing with their distributions, and determine what characteristics affect the saving/spending decision, focusing on three different measures of earnings. In our descriptive analysis, we find that most individuals save some portion of their distribution in either a tax-deferred or other saving vehicle, and those that do spend the distribution typically have much smaller distribution

Table 6. Probit estimates of the probability of saving a lump-sum distribution including both earnings the year of the distribution and average projected lifetime earnings, by individual characteristic

Characteristic	Narrow definition of saving (1)	Broad definition of saving (2)
Age received distribution (base under 30):		
30–40	.05 (.02)**	-.0008 (.02)
50–60	.14 (.03)**	.09 (.03)**
Older than 60	.03 (.04)	.09 (.04)*
Female	.08 (.02)**	.003 (.02)
Marital status (base married, including separated):		
Divorced	-.009 (.02)	-.08 (.02)*
Widowed	.03 (.05)	.03 (.05)
Never married	.06 (.03)*	.06 (.03)*
Race (base White, non-Hispanic):		
Black, non-Hispanic	-.14 (.03)**	-.08 (.04)*
Hispanic	-.10 (.03)*	-.13 (.05)**
Asian/Native American/Other	-.05 (.04)	-.05 (.09)
Highest educational level (base no degree):		
High school degree	.03 (.03)	.13 (.03)**
College degree/Some college	.08 (.03)**	.18 (.03)**
Amount of distribution (base less than \$1,000)		
\$1,000–\$5,000	.12 (.02)**	.09 (.02)**
\$5,000–\$15,000	.19 (.02)**	.22 (.02)**
More than \$15,000	.29 (.03)**	.33 (.02)**
Earnings, year of distribution (base less than \$15,000):		
\$15,000–\$30,000	.04 (.02)*	.05 (.02)**
\$30,000–\$50,000	.11 (.02)**	.08 (.02)**
More than \$50,000	.10 (.03)**	.10 (.03)**
Earnings, average projected lifetime (base less than \$15,000):		
\$15,000–\$30,000	.01 (.02)	-.01 (.02)
\$30,000–\$50,000	.11 (.03)**	.06 (.03)*
More than \$50,000	.18 (.04)**	.10 (.03)**
Total household net wealth (base less than \$15,000)		
\$15,000–\$65,000	.12 (.02)**	.11 (.02)**
\$65,000–170,000	.22 (.02)**	.22 (.02)**
More than \$170,000	.33 (.02)**	.33 (.02)**
Pseudo R ²	.20	.18
Log likelihood	-2548	-2852
Observations	5,114	5,140

NOTE: Estimates are unweighted. Specifications include year dummy variables for the year the distribution was received. Robust standard errors in parenthesis:

** significant at the 1-percent level
* significant at the 5-percent level

amounts. Additionally, spenders do not purchase “big-ticket” items such as cars or boats with their lump sums, nor are they using the money for medical, unemployment or educational expenses. Most spenders are using the money to pay down debt, purchase other items, and cover everyday expenses. These patterns persist even after stratifying uses by age, amount of the distribution, and average earnings.

In the latter portion of the article, we use a probit model to examine characteristics associated with lump-sum disposition and the role that earnings has in predicting lump-sum distribution use. Estimates—using either definition of saving—show a strong positive correlation between the amount of the distribution and saving the distribution, as well as an increase in the likelihood of saving the money as the level of education increases. Blacks and Hispanics are less likely than whites to save their distributions, regardless of the definition of saving used. We also find that women are more likely than men to roll over their lump sums, but only for the more narrow definition of saving.

For individuals who earn more than \$30,000 annually, our earnings estimates follow a similar pattern to other lump-sum studies—higher earners are more likely to save their distributions, regardless of the definition of saving used. However, when examining estimates for individuals who make less than \$30,000 annually, only earnings *in the year of the distribution* are positively correlated with lump-sum use. Lifetime earnings have no role in explaining lump-sum use for lower earners. As we explained earlier, these insignificant estimates could be the result of downward bias of the lifetime earnings estimate due to measurement error in projecting lifetime earnings.

On the other hand, these estimates could suggest that lower earners are making lump-sum decisions based more on their short-term financial situation than on taking a more long-term view. If this is indeed the case, then lower earners either have a true financial need at the time of the distribution and find it in their best interest to consume the distribution, or they may be

taking a myopic view of the future and retirement planning. We see in the tabulations that distributions are not being spent on everyday needs related to unemployment expenses or medical bills, but beyond that, it is difficult to discern what classification most spenders fall into. What exactly makes up the two most common consumption uses coded in the SIPP—*paying off debt or buying other things* and *using for everyday expenses*—is not very clear. Whether financial necessity is in fact a predominant issue in lump-sum consumption would depend on whether the majority of people in the first response category were actually paying off debt, or if they were just purchasing non-necessities. It also depends on what one considers to be an everyday expense; using the money to pay rent certainly describes a different degree of necessity than using it to purchase a stereo system.

What implications do our findings have for the issue of the availability and use of lump sums? First, data that more clearly define the categories of lump-sum spending are needed if we are to gain a better understanding of what motivates people to spend their distributions. Detailed questions that directly ask why a distribution was spent also would be helpful. The upcoming 1996 SIPP panel, which provides for more detailed responses to the question on lump-sum use, should provide more clarity with regard to exact lump-sum uses.

Informing individuals of the importance of planning for retirement may also influence lump-sum use. If it is true that many lump-sum spenders simply are not thinking ahead far enough to plan for retirement, educating them on the importance of retirement saving and on such financial topics as the benefits of compound interest may affect their behavior. Leslie A. Muller found that younger individuals were more likely to save lump sums if they took a retirement class,⁷³ and Douglas B. Bernheim and Daniel M. Garrett found a positive correlation between employer-sponsored retirement education and overall saving rates.⁷⁴ As new studies on the effects of retirement education are published, we will be better able to determine the degree to which educating individuals affects their lump-sum behavior. □

Notes

¹ *Income of the Population 55 or Older* (Social Security Administration, Office of Research and Statistics, 1996).

² John R. Woods, “Pension Benefits Among the Aged: Conflicting Measures and Unequal Distributions,” *Social Security Bulletin*, Fall 1996, pp. 3–30.

³ John Sabelhaus and David Weiner, “Disposition of Lump-Sum Pension Distributions: Evidence from Tax Returns,” *National Tax Journal*, September, 1999, pp. 593–613.

⁴ William F. Bassett, Michael J. Fleming, and Anthony P. Rodrigues, “How Workers Use 401(k) Plans: The Participation, Contribution, and Withdrawal Decisions,” *National Tax Journal*, June 1998.

⁵ “The Pension Benefit Guaranty Corporation (PBGC) is a Federal corporation created by the Employee Retirement Income Security Act

of 1974 (ERISA) to encourage the continuation and maintenance of defined benefit pension plans, provide timely and uninterrupted payment of pension benefits to participants and beneficiaries in plans covered by PBGC, and keep pension insurance premiums at the lowest level necessary to carry out objectives”; from the PBGC website, on the Internet at <http://www.pbgc.gov>.

⁶ *Employee Benefits in Medium and Large Firms, 1989*, Bulletin 2336 (Bureau of Labor Statistics, 1990); *Employee Benefits in Medium and Large Private Establishments, 1997*, Bulletin 2517, (Bureau of Labor Statistics, September 1999).

⁷ For a more complete description of cash balance plans, see Kenneth R. Elliott and James H. Moore, Jr., “Cash Balance Pension Plans: The New Wave,” *Compensation and Working Conditions*, Summer, 2000, pp. 3–12.

⁸ *Employee Benefits in Medium and Large Private Establishments, 1993*, Bulletin 2456, (Bureau of Labor Statistics, 1995); *Employee Benefits in Medium and Large Private Establishments, 1997*, Bulletin 2517, (Bureau of Labor Statistics, September 1999).

⁹ For more on the growth of defined contribution plans, see Richard P. Hinz and John A. Turner, "Pension Coverage Initiatives: Why Don't Workers Participate?" in Olivia S. Mitchell and Sylvester Schieber, eds., *Living with Defined Contribution Pensions: Remaking Responsibility for Retirement* (Philadelphia, PA, University of Pennsylvania Press, 1998); Gary Klunman, Asokan Anadarajan, and Kenneth Lawrence, "An Analysis of the Move Toward Defined Contribution Plans: Are the Rewards Commensurate with the Risks?" *Journal of Pension Planning and Compliance*, Fall, 1999, pp. 61–89; Olivia S. Mitchell, "Developments in Pensions," *NBER Reporter* (National Bureau of Economic Research, 1998); Leslie E. Papke, "Are 401(k) Plans Replacing Other Employer-Provided Pensions? Evidence from Panel Data," *Journal of Human Resources*, Spring 1999, pp. 346–68; Leslie E. Papke, Mitchell Peterson, and James M. Poterba, "Do 401(k) Plans Replace Other Employer-Provided Pensions?" *Advances in the Economics of Aging* (Chicago and London, National Bureau of Economic Research Project Report Series, 1996), pp. 219–36.

¹⁰ *Employee Benefits in Medium and Large Private Establishments, 1993*, Bulletin 2456, (Bureau of Labor Statistics, 1995); *Employee Benefits in Medium and Large Private Establishments, 1997*, Bulletin 2517, (Bureau of Labor Statistics, September 1999).

¹¹ Vesting refers to the amount of time an individual must work before earning a nonforfeitable right to their accrued benefit. When an individual is fully vested, the accrued benefit is the amount they are eligible to receive when they separate from the employer. Employers may provide different vesting schedules as long as it meets the minimum requirements set by ERISA for counting vesting service.

¹² Employers may want to cash out relatively small balances for two reasons: the relatively high administrative cost of maintaining records on former employees with small balances, and the requirement that employers pay premiums to the Pension Benefit Guaranty Corporation (PBGC) for these accounts. PBGC premiums are paid per employee, which makes holding a small balance that much more costly to the employer. See Patrick J. Purcell, "Lump-Sum Distributions and Retirement Income Security," *Journal of Pension Planning and Compliance*, Fall, 2000, pp. 27–60; "Cashing Out Terminated Participants' Vested Benefits Simplifies Plan Administration, Reduces PBGC Premiums," *Spencer's Research Reports* (Chicago, IL, Charles D. Spencer and Associates, October 3, 1997); and the website of Charles D. Spencer and Associates, on the Internet at www.spencernet.com.

¹³ Technically, leaving the money in the former employer's plan is not "rolling over" or "transferring" any funds. We classify this use as a rollover in keeping with the general definition of maintaining the funds in a tax-deferred plan.

¹⁴ The Health and Retirement Study (HRS)—sponsored by the National Institute on Aging (part of the National Institutes of Health) and conducted by the University of Michigan's Institute for Social Research—is designed "to provide data for researchers, policy analysts, and program planners who are making major policy decisions that affect retirement, health insurance, saving and economic well-being" (from the HRS website, on the Internet at www.umich.edu/~hrswww/index.html).

¹⁵ Michael D. Hurd, Lee Lillard, and Constantijn Panis, "An Analysis of the Choice to Cash-Out, Maintain, or Annuitize Pension Rights at Job Change or Retirement," *RAND Working Paper* DRU-1979-DOL, October 1998.

¹⁶ Angela E. Chang, "Tax Policy, Lump-Sum Pension Distributions, and Household Saving," *National Tax Journal*, June 1996, pp. 235–52.

¹⁷ High-income workers are those with annual incomes exceeding \$39,999 (in 1987 dollars).

¹⁸ Chang, "Tax Policy, Lump-Sum Pension Distributions, and House-

hold Saving." Chang uses two models to estimate the penalty's effect; this result is using a difference-in-difference approach. She also presents a standard probit, which estimates that a 1-percent increase in the tax rate increases the rollover probability by 0.4 percentage point for high-income individuals and 0.2 percentage points for low-income individuals.

¹⁹ *Ibid.*

²⁰ Internal Revenue Code (IRC) §3405 9 (c) (1).

²¹ Whether the individual gets back the 20-percent withheld ultimately depends on whether he has overpaid in total income taxes for that year. This is the case regardless of whether he re-invests the money in a tax-deferred instrument within 60 days.

²² Paul Fronstin and others, "Lump-Sum Distributions and Rollovers," in Deborah Holmes, ed., *EBRI Databook on Employee Benefits* (Washington, DC, Employee Benefit Research Institute, 1997), pp. 135–40.

²³ The Retirement Confidence Survey (RCS) is conducted by the Employee Benefits Research Institute (EBRI): "Since 1991, the RCS has tracked Americans' financial preparations for retirement and their attitudes regarding retirement. The RCS is a random, nationally representative survey of 1,000 Americans over age 25. Both current workers and current retirees are surveyed; this allows comparisons across generations in terms of attitudes and financial preparations. The survey contains a core set of questions that is asked annually and is used to track key attitudes and behavior patterns over time. The survey also strives to be timely by covering issues that are of current interest to policymakers and retirement benefits specialists; examples include participant education in 401(k) plans, public attitudes regarding Social Security reform, and individual's attitudes regarding investing for retirement"; from the RCS page of the EBRI website, on the Internet at <http://www.ebri.org/>.

²⁴ Leonard E. Burman, Norma B. Coe, and William G. Gale, "Lump-Sum Distributions from Pension Plans: Recent Evidence and Issues for Policy and Research," *National Tax Journal*, September 1999, pp. 553–62.

²⁵ Patrick J. Purcell, "Lump-Sum Distributions and Retirement Income Security."

²⁶ Leonard E. Burman and others, "Lump-Sum Distributions from Pension Plans."

²⁷ *Ibid.*

²⁸ Paul Yakoboski, "Large Plan Lump-Sums: Rollovers and Cashouts," *EBRI Issue Brief*, No. 188 (Washington, DC, Employee Benefit Research Institute, August 1997).

²⁹ *Ibid.*

³⁰ Sabelhaus and Weiner, "Disposition of Lump-Sum Pension Distributions."

³¹ See, for example, William F. Bassett and others, "How Workers Use 401(k) Plans"; James M. Poterba, Steven F. Venti, and David A. Wise, "Lump-Sum Distributions from Retirement Savings Plans: Receipt and Utilization," in David A. Wise, ed., *Inquiries in the Economics of Aging* (Chicago, University of Chicago Press, 1998) pp. 85–108; and Leonard E. Burman and others, "Lump-Sum Distributions from Pension Plans."

³² William F. Bassett and others, "How Workers Use 401(k) Plans."

³³ Patrick J. Purcell, "Lump-Sum Distributions and Retirement Income Security."

³⁴ Gary V. Englehardt, "Pre-Retirement Lump-Sum Pension Distributions and Retirement Income Security: Evidence from the Health and Retirement Study," *Aging Studies Program Paper* No. 23 (Syracuse University, Maxwell School of Citizenship and Public Affairs, Center for Policy Research, June 2001).

³⁵ James M. Poterba and others, “Lump-Sum Distributions from Retirement Savings Plans.”

³⁶ Michael D. Hurd, Lee Lillard, and Constantijn Panis, “An Analysis of the Choice to Cash-Out, Maintain, or Annuitize Pension Rights at Job Change or Retirement.,” *RAND Working Paper* DRU-1979-DOL, October 1998.

³⁷ It also should be noted that the only older individuals (aged 51–61 in 1992) are in the HRS sample, which makes the statistics on the number of rollovers and amount of rollovers naturally higher (than the CPS or SIPP), because the likelihood of rollovers and size of the distribution have been shown to increase with age.

³⁸ See Michael D. Hurd and others, “An Analysis of the Choice to Cash-Out”; William F. Bassett and others, “How Workers Use 401(k) Plans”; James M. Poterba and others, “Lump-Sum Distributions from Retirement Saving Plans”; and Patrick J. Purcell, “Lump-Sum Distributions and Retirement Income Security.”

³⁹ Poterba and others, “Lump-Sum Distributions From Retirement Saving Plans.”

⁴⁰ *Ibid.*; Purcell, “Lump-Sum Distributions and Retirement Income Security.”

⁴¹ Poterba and others, “Lump-Sum Distributions From Retirement Saving Plans.”

⁴² Purcell, “Lump-Sum Distributions and Retirement Income Security.”

⁴³ Poterba and others, “Lump-Sum Distributions From Retirement Saving Plans”; William F. Bassett and others, “How Workers Use 401(k) Plans.”

⁴⁴ Purcell, “Lump-Sum Distributions and Retirement Income Security.”

⁴⁵ Poterba and others, “Lump-Sum Distributions From Retirement Saving Plans”; Purcell, “Lump-Sum Distributions and Retirement Income Security.”

⁴⁶ Poterba and others, “Lump-Sum Distributions From Retirement Saving Plans.”

⁴⁷ The 1993 panel is the most recent SIPP pension data available at this time.

⁴⁸ We also construct some of our variables from the core files and the Work History topical module.

⁴⁹ The pooled weight we use was constructed to reflect the U.S. population for the one month in which all three panels overlap, which is June 1993. The Pension topical module itself, which is fielded in wave 7 in 1991, wave 4 in 1992, and wave 9 in 1993, does not overlap in any one month. For more information on the construction of the weights, contact the authors.

⁵⁰ “The Consumer Price Index (CPI) measures the average change in the prices paid by urban consumers for a fixed market basket of goods and services. The Bureau of Labor Statistics (BLS) calculates the CPI monthly and publishes it about 2 weeks after the end of the month to which it refers.” The CPI often is used as a “deflator” to convert current dollars to constant dollars. For more information on the CPI, see “The Consumer Price Index,” in *BLS Handbook of Methods*, Bulletin 2490 (Bureau of Labor Statistics, April 1997), ch. 17, pp. 167–230; quote, p. 167.

⁵¹ There were 54,581 individuals in the 1991–93 panels interviewed for the Pension topical module, of which 6,851 said they had received at least one lump-sum distribution from a previous plan. Of these 6,851 respondents, 29 percent (1,958 individuals) were drawn from the 1991 panel, 37 percent (2,568 individuals) were drawn from the 1992 panel, and 34 percent (2,325 individuals) were drawn from the 1993 panel.

⁵² The most common reason why an SER record is not matched is because the respondent did not give the Bureau of the Census permis-

sion to use his Social Security number to link his SIPP record to his earnings in the SER.

⁵³ Individuals employed in jobs not covered by Social Security have zeros in the SER data for that year, because these earnings do not have to be reported to the Social Security Administration. We drop these individuals with no earnings in the year of the distribution because zero may not accurately reflect their earnings for that year. The SIPP does not report earnings other than those at the time of the interview.

⁵⁴ The categories as they are coded in the SIPP are as follows: rolled over the funds into an IRA or put them into another (or same) pension or retirement plan; purchased a home or paid off a mortgage; put it in a savings account; invested it in some other instrument (e.g., stocks, money market accounts); used it to start or purchase a business; used it for children’s education; used it for a period of unemployment; paid off loans, bills, or spent it on other items; bought a car, boat, or other vehicle; paid medical or dental expenses; used it for general everyday expenses.

⁵⁵ There actually were 4,617 individuals who gave one use for their distribution, but 7 of these individuals did not report either the year of the distribution or the amount of the distribution. Because two of the characteristics we focus on in the descriptive analysis are *age at the time of the distribution* and *amount of the distribution*, we drop these 7 individuals because we lack sufficient information on these characteristics for them.

⁵⁶ Interested readers may obtain tables describing lump-sum uses for individuals having one or multiple uses for their distributions in appendix A, which is not printed here, but is available directly from the authors. We chose to include data on multiple responses in an appendix and focus on limiting the sample to one use for two reasons. First, we are able to express the percentages using individuals (rather than *responses*), which enables the reader to more readily compare our results with those of other research. We also noticed that workers who used the distribution in multiple ways tended to use part of the distribution in many of the same ways—namely, in the category of *paid bills/other expenses* and *everyday expenses*. Because we don’t know the percentage put to these uses, it is difficult to compare the uses with one another in a meaningful way.

⁵⁷ We classify *paid bills/bought other items* as consumption because we cannot distinguish between those who used the distribution to pay off loans (saving) or who spent it on other items (consumption).

⁵⁸ Lump-sum uses categorized by earnings for the year of the distribution and for average projected lifetime annual earnings can be found in Appendix B, which is not published here, but is available from the authors upon request.

⁵⁹ Chang found similar results using the 1988 CPS, with 7 percent of the sample using their lump sums to fund unemployment. Angela E. Chang, “Tax Policy, Lump-Sum Pension Distributions, and Household Saving.”

⁶⁰ Poterba and others, “Lump-Sum Distributions From Retirement Saving Plans.”

⁶¹ For example, suppose an individual reported three uses for his lump sum: purchased stocks, purchased a car, and gave an answer coded as “undeterminable.” This individual would not be classified as having saved his distribution using the more narrow definition of saving, but under the broader definition, he *would be* considered to have saved the distribution.

⁶² Leonard E. Burman and others, “Lump-Sum Distributions from Pension Plans.”

⁶³ Both marital status and total household net wealth are for the period at the time of the interview.

⁶⁴ In previous lump-sum studies, race and marital status have not been shown to be correlated with lump-sum disposition. However, since these demographic measures are often found to affect savings behavior,

we include them in our model.

⁶⁵ We also include a dummy variable to flag the respondents who had zero earnings in the year of the distribution that were age 62 or older at the time of the distribution. We assume that retirement triggered the lump sum—hence, the zero earnings in that year.

⁶⁶ This *F* statistic is for the 5-year average specification using the broad definition of saving.

⁶⁷ One exception is the age variables. The magnitude of the estimates for age in the projected lifetime earnings specifications (the third column in table 5) is much higher than the magnitude of the age estimates in the other two earnings specifications. It is possible that this observed larger effect of age in column (3) is influenced by the construction of the lifetime earnings measure itself. Because the lifetime earnings measure is an average *over a lifetime*, its value does not depend on age. However, according to the lifecycle model of saving, age would affect earnings at the time of the distribution, as well as 5 years before the distribution. Hence, much of the explanatory power that the age variable brings to the model may be picked up in the earnings variables themselves in the year of the distribution and average 5-year specifications, resulting in a smaller observed effect of age on lump-sum choice when using earnings for the year of the distribution or 5-year average earnings.

⁶⁸ Appendix C, available from the authors, includes a table of *weighted* estimates. We include weighted results only to show that weighting the observations does not change our basic conclusions. Hence, we only present the results of one specification—using the

broad definition of saving and the 5-year average earnings measure. It should be noted that the decision to use this definition of saving and this earnings measure was made somewhat arbitrarily; any of the other specifications also could have been used for this table.

⁶⁹ We find that when we take the earnings variable out of the model (regardless of which earnings measure is used) the estimate on the female dummy becomes small, negative, and statistically significant at the 5-percent level.

⁷⁰ IRAs and other tax-deferred vehicles impose a penalty for withdrawal before the recipient reaches age 59½.

⁷¹ Purcell, “Lump-Sum Distributions and Retirement Income Security.”

⁷² For example, an individual may have had an unusually low earnings year (say, \$25,000) at the time of the distribution, placing him or her in the \$15–30,000 earnings category for that earnings measure. However, average projected lifetime annual earnings are higher, at \$50,000, placing him in the greater-than-\$50,000 category for that earnings measure.

⁷³ Leslie A. Muller, “Retirement Education and Pension Preservation: Does Retirement Education Teach Individuals to Save Pension Distributions?” *Social Security Bulletin* (forthcoming).

⁷⁴ Douglas B. Bernheim and Daniel M. Garrett, “The Determinants and Consequences of Financial Education in the Workplace: Evidence from a Survey of Households,” NBER Working Paper 5667 (National Bureau of Economic Research, Cambridge, MA, July 1996).