HOW WILL THE RISE IN 401(K) PLANS AFFECT BEQUESTS?

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Executive Summary

This *brief* explores how the shift from defined benefit to defined contribution pension plans might affect bequests and thereby consumption and saving. Bequests can occur under two different types of circumstances: (1) individuals plan to leave an inheritance for their heirs (an intended bequest); or (2) individuals have no specific inheritance plans, but die before consuming all of their assets (an unintended bequest). This *brief* concludes that both types of bequests will increase as retirees receive more of their pension benefits as lump-sum amounts rather than as annuity payments, which provide a lifetime stream of income.

A key reason underlying the likely increase in bequests is that many people are reluctant to spend accumulated wealth. This reluctance is evident in four different ways: (1) the small size of the U.S. annuity market; (2) the aversion of older homeowners to reverse mortgages; (3) the holdings of life insurance by retirees; and (4) the limited dissaving in retirement. In the past, any reluctance to turn assets into income streams was mitigated by the fact that most retirement wealth — Social Security and private pensions — came in the form of annuity payments. Today, the story is different because more and more private sector pension plans provide lump-sum benefits.

The effect of pensions on bequests is potentially large and significant. First, in 1998, bequeathable wealth in the hands of decedents was $15 billion (3.2 percent) higher as a

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result of the increase in defined contribution plans as a share of pension wealth between 1992 and 1998. Thus, the shift in pension form has already significantly increased the potential for unintended bequests, and the transition to defined contribution plans was far from complete in 1998. Second, interest in leaving a bequest is greater among individuals who receive a larger proportion of their pension wealth as lump sums rather than annuities. The likely rationale is that individuals find it easier to accumulate wealth for a bequest from a pile of assets rather than from saving out of current income. Thus, it appears that lump-sum payments affect intended as well as unintended bequests. Third, workers react very differently to their defined contribution accumulations than they do to the present value of annuity pensions. They do not reduce their other saving in anticipation of payments from defined contribution plans as they do in response to promised Social Security and defined benefit pension payments. Finally, the most significant increase in lump-sum pension accumulations occurs in the middle and lower portions of the wealth distribution, so that the increase in bequests should help to reduce wealth inequality.

This summary may overstate the story, but our goal is to raise the possibility that a reluctance to spend lump sums may be an issue as serious as the conventional worry that recipients will spend their entire pension accumulation on a trip around the world. If, in fact, people save more in anticipation of leaving their pension accumulations as bequests, they will have lower consumption during their working years. If they do not boost their saving, they will have lower consumption in retirement. In either case, a reluctance to spend accumulated pension wealth will reduce lifetime consumption.

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Introduction

Over the past two decades, the nature of pension coverage in the United States has changed sharply from defined benefit plans to defined contribution plans, which include the increasingly popular 401(k) plans.[1] Defined benefit plans generally provide retired workers with a set amount based on their salary history, while benefits under defined contribution plans depend on the accumulated amount in a worker's account. According to the Survey of Consumer Finances (SCF), the proportion of households with only a defined contribution plan increased during the 1990s from 37 percent to 57 percent of those households with coverage.[2] Over the same period, the proportion with a defined benefit plan dropped from about 40 percent to 20 percent, while the proportion with dual coverage remained unchanged. Because defined contribution plans are becoming the only pension arrangement for more and more households, how beneficiaries receive their pension accumulations at retirement is becoming an increasingly important issue.

At retirement, defined contribution plans typically offer lump-sum payments or installment payments over a certain time period. According to the Employee Benefit Survey for Medium and Large Firms, in 1997 only 27 percent of 401(k) plan participants had an option to choose a life annuity as their method of distribution. In the future, the percent of plans offering only a lump-sum option is likely to increase sharply, because the Internal Revenue Service issued regulations in 2000 permitting sponsors of defined contribution plans to discontinue all options other than lump-sum payments (U.S. Department of the Treasury 2000).

Lump-sum payments are also becoming more frequent options among defined benefit plans in large part due to the conversion of conventional defined benefit plans to so-called "cash balance plans."[3] The most recent official statistics report that 6 percent of full-time employees at medium and large private establishments had this type of plan in 1997. But surveys suggest that significant conversion has occurred since then.[4] The key point is that cash balance plans — like defined contribution plans — provide lump-sum payments at separation. Assuming only modest growth in cash balance plans, the value of lump-sum pension benefits should exceed annuity payments from defined benefit plans for those retiring in 2010 (VanDerhei and Copeland 2001).

Given this shift in the pension environment, this *brief* focuses on how the rise in lump-sum benefits will affect bequests and the welfare of older people. It explores why people prefer lump sums to flows of income, the extent to which retirees try to hold onto their assets, how much bequests may rise, and whether an increase in bequests will be financed by lower consumption in retirement or by greater saving during the work life.

People Prefer Lump Sums to Flows

Even though some defined contribution plans offer participants distribution in the form of an annuity, retirees frequently do not take advantage of the option.[5] This is not surprising; the real world and the psychological literature are full of examples that people prefer lump sums to flows. Moreover, the new behavioral economics literature suggests that retirees will treat these assets in a very different fashion than they would have treated a stream of payments.

Numerous examples from everyday life suggest that given the choice of either a lump sum or a stream of payments of equal value, people generally prefer the lump sum. Employers often exploit this preference by offering athletes and many professionals immediate signing bonuses, rather than streams of future payments, to induce them to accept positions. The great majority of taxpayers (75 percent) overpay their income taxes to insure themselves a lump-sum refund, when they could

1 For more details on trends in private pensions, see Munnell, Sundén, and Lidstone (2002).

2 The SCF is a triennial survey sponsored by the Federal Reserve Board in cooperation with Statistics of Income of the Department of the Treasury. The SCF collects detailed information on approximately 4,000 households' assets, liabilities, and demographic characteristics as well as on pension coverage, participation, and pension plan characteristics such as contribution levels.

3 Legally, cash balance plans are defined benefit plans where employers prefund contributions, own the assets, select the investments, and bear the risk. To the employee, however, cash balance plans look very much like a defined contribution plan. Contributions made for the employees are recorded in an account. The employees receive regular statements showing the balance in their account and the benefits tend to accrue as a constant percentage of compensation. The accounts are "notional," meaning that they are used for recordkeeping purposes only; the pension funds are not invested through these separate accounts, but are instead pooled and invested centrally by the employer.

4 By 2000, 16 percent of pension plans among the Fortune 100 were cash balance plans, and, more generally, cash balance plans may have increased from 5 percent to 12 percent of all defined benefit plans between 1998 and 2000 (Elliot and Moore 2000).

5 Brown (2000) found that less than half (48 percent) of households expect to annuitize even a portion of their defined contribution accounts.

easily adjust their withholding to avoid making an interest-free loan to the IRS. In addition to anecdotal evidence, several empirical studies confirm that individuals have a marked preference for lump sums (Fetherstonhaugh and Ross 1999 and Thaler 1994).

The strong preference for lump sums may result from a desire for immediate gratification at the expense of long-term well being or from concerns about longevity expectations or the belief that the utility of money will decline over time. An immediate lump sum also allows for big-ticket purchases, such as paying off a mortgage or taking a vacation, which are not possible with small annuity payments.

Not only will people generally take their defined contribution benefit in the form of a lump sum if offered but they will also think differently about it than if they received a stream of payments. Specifically, people are more likely to save a greater portion of a lump sum than a regular stream of income like an annuity. One plausible explanation for this tendency is that households keep a series of mental accounts, partly in an effort to control their own behavior (Thaler 1985, 1990 and Thaler and Shefrin 1981). A lump sum would raise consumption less than an annuity payment because large gains relative to income are thought of as saving, and thus the recipient places the sums in the "assets" mental account. Annuity payments, which are smaller gains relative to income, are coded as current income and available for spending.

In short, the psychological literature suggests that people prefer lump sums and once they receive them are reluctant to spend them. The following section looks at real world opportunities for individuals to turn their lump sums into streams of income for consumption, and speculates about possible reasons for their reluctance to do so.

The Elderly Like To Retain Control Over Their Assets

In theory, the shift in how pension plans provide benefits need not have any implications for bequests. Individuals could always simply spend their assets or turn them into annuities. However, evidence suggests that this is not going to happen. The failure of retirees to take advantage of annuity opportunities, their lack of enthusiasm for reverse mortgages, their reluctance to spend bequeathable wealth, and their holdings of life insurance all suggest that the elderly hold on to their assets. We further contend that one of the important reasons they hold on to assets is to leave bequests.

The Annuity Story

Annuities are contracts between insurance companies and individuals that protect individuals against the risk of outliving their savings. They provide a stream of monthly or annual payments in exchange for a one-time premium.[6] Economic theory would suggest that a lot of annuitization should occur, rather than a little. Consumers concerned about maintaining their standard of living and uncertain about how long they will live, with no bequest motives and with access to an actuarially-fair annuity market, should always choose to annuitize 100 percent of their wealth (Yaari 1965).

Researchers have calculated that access to an actuarially fair annuity market is equal to roughly a 50-percent increase in unannuitized financial wealth for a 65-year-old male (Brown 2000 and Brown, Mitchell, and Poterba 2000). Despite the enormous potential gains from annuitization, the market for annuities in the United States is miniscule. In 2001, sales of so-called "single premium immediate annuities" amounted to only $10.3 billion (LIMRA 2002). The question is why. Researchers have focused on four potential reasons to explain the small U.S. annuity market:

- *Adverse selection and administrative costs.* If an insurance company imposes high enough charges on annuities, these factors can offset the benefits of annuitization. The charges, known as load factors, come from two sources: (1) the company's need to cover administrative costs and desire to earn a profit; and (2) the fact that those with longer life expectancies are more likely to buy the product.
- *Ability of families to pool risk.* If individuals can share financial resources within their families, they will be less likely to buy an annuity (Brown and Poterba 2000 and Kotlikoff and Spivak 1981). In the case of marriage, husband and wife generally agree to pool their resources while both are alive and to name each other as the major beneficiary in the case of death. Simulations suggest that, for a 55-year-old individual, marriage provides 46 percent of the protection offered by a fair annuities market (Kotlikoff and Spivak 1981).
- *Precautionary saving.* Individuals will be reluctant to annuitize if they want to keep a pile of financial wealth to cover uncertain future expenses. Full annuitization limits the amount that people can spend to their monthly benefits, and leaves them without a buffer to cover large unexpected expenditures. Thus, retirees may want to retain at

6 The following discussion focuses on the single premium immediate annuity, since it is designed specifically to insure against longevity risk.

least some wealth to cover large bills, such as outlays for uninsured medical costs.

- *Bequest motive.* A bequest motive is the most obvious reason that people might be reluctant to annuitize their wealth. Without a bequest motive, individuals get no benefit from any wealth that they hold at death, so it would be irrational for them not to select the higher return on annuities that arises from the "mortality premium," the effective subsidy that insurers pay to those who live for a long time out of the initial premiums received from those who die early. But with a bequest motive, individuals do value the wealth left to their heirs, and therefore will not want to annuitize all their assets (Yaari 1964).

The Reverse Mortgage Story

Housing equity is the most important asset for the vast majority of Americans; 14.5 million households age 62 and over own their home free and clear (SCF 1998). In principle, this asset might be used to support consumption in retirement. Under a reverse mortgage, a homeowner borrows against the equity in her house and receives money from a lender. Reverse mortgages were envisioned as a mechanism that would allow older people to consume their housing equity without selling their homes. Yet this market is extremely small — less than one percent of qualified homeowners have a reverse mortgage.

A bequest motive could help explain why people tend to retain ownership of their homes. Other potential reasons for the small size of the reverse mortgage market include high up-front administrative and closing costs, a desire to retain assets to cover future medical expenses, fear of taking on debt, and the relatively small number of companies that offer reverse mortgages.[7]

The Savings Story

Economists generally agree that individuals accumulate resources during their working years that they will draw upon to support themselves in retirement. The accumulated resources consist of credits under Social Security, accrued benefits under employer-sponsored defined benefit plans, accumulations in defined contribution plans, housing wealth, and financial assets. Wealth in the form of Social Security and defined benefit plan accruals are automatically drawn down in retirement since they are paid out in the form of monthly benefits and generally consumed. Since, for most of the population, pension promises constitute the bulk of total wealth at retirement, this drawing down of pension wealth means that savings behavior of most of the elderly more or less conforms to the theory that individuals smooth their consumption over their lifetime.

The controversy about dissaving in retirement centers on the elderly's handling of their non-annuitized or bequeathable wealth. The evidence suggests that retirees are reluctant to draw down these financial assets. A series of studies looking at panel data for the 1960s, 1970s, and early 1980s found that the elderly draw down their non-annuitized financial assets at a relatively slow rate of between 1 and 5 percent per year.[8] The results for the late 1980s and 1990s differ from the earlier studies in that they show either no change or increases in the assets of the elderly (Hurst, Louh, and Stafford 1998 and Haider et al. 2000). While rising stock prices may have dominated the most recent studies, the evidence taken as a whole clearly indicates that retirees are reluctant to draw down their accumulated saving. Another indication is that once people get wealth they are reluctant to part with it.

The Life Insurance Story

Life insurance holdings by retirees shed some light on the strength of the bequest motive, although the phenomenon is slightly different. We are interested in whether people hold on to their assets once they have them, while the life insurance debate focuses on whether people attempt to turn annuitized income streams back into wealth by buying insurance. Purchasing life insurance is equivalent to selling off one's annuities (Yaari 1965).

Life insurance is a useful instrument to protect working-age individuals against the loss of earned income, but does not seem appropriate for retirees who are living off accumulated wealth. They have no earned income to protect and should, if anything, be purchasing annuities in order to ensure that they do not exhaust their resources before they die. If people are interested in leaving bequests, they could simply not annuitize a portion of their wealth and invest it in stocks and bonds. Nevertheless, the majority of married couples in retirement own life insurance.

Researchers have suggested various explanations for this behavior. Some (for example, Bernheim 1991) contend that these elderly households hold life insurance to offset excessive annuitization through Social Security, so that they will have assets to bequeath to their children or other beneficiaries. Others suggest several alternative hypotheses for the large fraction of elderly households that own life insurance (Brown 1999). These include simple inertia in that many of the policies have been held for decades, an effort to

7 For further details on reverse mortgages, see Eschtruth and Tran (2001).

8 Mirer (1980), Diamond and Hausman (1984), and Hurd (1987, 1991).

pre-pay death expenses, a source of liquidity to pay estate taxes, or a way to ensure an adequate stream of consumption for spouses.

While much of Brown's critique has merit, the insurance holdings of older people are simply too large to dismiss. Table 1 shows the holdings by age of both term and whole life insurance as reported in the 1998 SCF. Although the mean value of term life insurance held by those 65 and older is much smaller than that held by younger age groups, it still averages $32,766. Moreover, it is unclear whether whole life holdings should be totally excluded from consideration, since whole life policies contain both an insurance and a tax-favored saving component. Since people have other tax-favored ways to save, such as variable annuities and IRAs, selecting whole life suggests that the insurance aspect has some value.

How the Shift to Lump-Sum Payments Could Affect Bequests

Although researchers have offered a host of reasons for the reluctance of the elderly to part with their assets, the desire to leave a bequest is a common theme. Actually, people leave bequests for two reasons: they deliberately plan to do so or they die before consuming all of their assets.[9] The shift to defined contribution plans could affect actual bequests through either mechanism. It is important to recognize that these two mechanisms may not be wholly independent of one another. For example, an individual's first priority may be to cover her own needs in retirement, but she may also hope to have some unused resources available to leave as a bequest. In this circumstance, the two motives are blurred — whether or not a bequest occurs may be largely unplanned, but it would be a desirable outcome from the standpoint of the decedent. For the purposes of this *brief*, however, we will treat these two motives as if they were independent.

With uncertain lifetimes and no access to life annuities, elderly individuals would conserve wealth to self-insure against the risk of outliving their resources or having to severely curtail consumption. Although a well-developed market for annuities exists in the United States, as discussed earlier most people do not buy them. Shunning annuities in a world of uncertain lifetimes creates precautionary saving, which produces significant unintended bequests. Simulation exercises suggest that the purchase of annuities could increase the consumption of the elderly by one third.[10] In the context of this study, these results suggest that the movement away from annuitization in the private pension system could have a significant negative effect on consumption and a resulting positive impact on bequests.

A shift to defined contribution plans could also have an impact on intended bequests, because more defined contribution plans mean more lump-sum distributions. People may have an unsatisfied demand for leaving a bequest but find it too difficult to accumulate assets for that purpose. Given assets, however, their tendency is to preserve them and to increase the amount they intend to leave their children or other beneficiaries. One question is how prevalent is the desire to leave a bequest.

Table 1: Life Insurance Policies by Age Groups, SCF 1998

	Term		Whole Life		
Age Group	Percentage With	Mean Value	Percentage With	Mean Cash Value	Mean Face Value
65 and Older	41.2%	$32,766	36.0%	$22,435	$45,721
55-64	57.4	120,251	36.0	22,338	124,773
45-54	55.6	203,435	32.9	33,743	173,689
35-44	58.5	194,238	29.0	38,093	148,112
Younger than 35	50.4	167,475	18.1	25,015	122,670

Source: Authors' calculations using the SCF 1998.
Note: Mean values are for households holding insurance.

9 Finkelstein (Munnell and Sundén 2003 forthcoming) points out that the type of bequest has significance for an individual's welfare. Intended bequests suggest either a neutral or positive effect on an individual's well-being. An unintended bequest implies a negative effect as the decedent could have enjoyed a higher standard of living in retirement.

10 Kotlikoff and Spivak (1981), Davies (1981), and Abel (1985).

Two types of evidence shed some light on the importance of a bequest motive. Both the Health and Retirement Study (HRS)[11] and the SCF ask respondents virtually the same questions: "Do you (and your spouse) think it is important to leave an inheritance to surviving heirs?" and "Do you (and your spouse) expect to leave a sizable inheritance to your heirs?" The responses show 67-78 percent of families think leaving an inheritance is very important, important, or somewhat important and 42-50 percent responded either yes, probably, or possibly to expectations about leaving a sizable inheritance.[12] Not surprisingly, interest in bequests is greater among those with greater wealth.

The second method for determining the strength of a bequest motive is through empirical tests. John Laitner and F. Thomas Juster (1996) found significant interest in leaving estates among a sample of 1988 TIAA-CREF annuitants. The households in this sample generally fall within the top 10-20 percent of the income distribution but exclude the super-rich. The authors restrict their sample to male respondents and end up with 425 cases, whose average age is 70. About half of these individuals are interested in leaving an estate, and their net worth is several hundred thousand dollars higher than those with no interest in bequests.

Many researchers have argued that a strong bequest motive helps explain why the rate of dissaving among the elderly is so low. The main critic of this position is Michael Hurd who has examined dissaving among the elderly using a vast array of data sets (Hurd 1991). Like other researchers, he finds a very small amount of dissaving among the elderly and sometimes even a growth in wealth. In each study, Hurd tests whether this pattern can be attributed to a bequest motive by comparing the savings patterns of households with children to those without children. He finds no significant difference in the savings patterns between the two types of households and concludes that no evidence for a bequest motive exists.

The difficulty with these studies is that they implicitly assume that childless couples never leave intentional bequests. This assumption is not consistent with most survey data. Data on TIAA-CREF annuitants show a significant fraction of households without children believe leaving a bequest is either very or quite important (Laitner and Juster 1996). Table 2 presents information from the HRS on attitudes about leaving inheritances for households with and without children. The differences between the two groups are very small.

Table 2: Percent of Households Aged 51-61 Interested in Leaving an Inheritance, With and Without Children, HRS 1992

Panel A: Do you think it is important to leave an inheritance to surviving heirs?

	With Children	Without Children
Very Important or Important	23	20
Somewhat Important	48	36
Not Important	28	40

Panel B: Do you expect to leave a sizable inheritance to your heirs?

	With Children	Without Children
Yes or Probably	28	25
Possibly	15	11
Probably Not or No	55	59

Source: Authors' calculations using the HRS 1992.
Note: Totals may not equal 100 because a small number of respondents answered "don't know" or "not applicable" to these survey questions.

All the evidence taken together suggests that the desire to leave a bequest is widespread. This implies that a major increase in lump-sum payments from private pension plans could have an important impact on the total volume of bequests. The following three sections explore the implications of the growth in defined contribution plans on various aspects of bequests. The analyses are based on data from the SCF and the HRS.

11 The HRS is a nationally representative sample of 7,607 families who had at least one member born between 1931 and 1941. Respondents were interviewed initially in 1992 when they were 51-61 and have been interviewed every two years since; at this writing, five waves of the HRS are available.

12 We have interpreted positive responses to these questions as an indication of a bequest motive. This seems reasonable because 80 percent of those who "expect" to leave a bequest view leaving a bequest as "important." Critics, nevertheless, suggest that positive responses to the questions simply reflect the recognition that any household with non-annuitized wealth will end up leaving a bequest unless its members live for an exceedingly long time or have large non-reimbursed medical expenses. More generally, Mitchell (Munnell and Sundén 2003 forthcoming) points out that an intention to leave a bequest may not reflect actual behavior. For example, respondents may have answered based on what they would like to do rather than what they expect to do.

The Potential Impact of the Shift to Defined Contribution Plans on Unintended Bequests

The potential impact on unintended bequests due to the growth of defined contribution plans is significant. The 1998 SCF shows the annual flow of bequests to be $236 billion.[13] To examine how the shift to defined contribution plans affects annual bequests, we re-estimate bequests in 1998 replacing the 1998 ratio of defined contribution to total pension wealth with the 1992 ratio. This exercise shows that the shift from defined benefit to defined contribution plans that occurred between 1992 and 1998 increased the wealth held by decedents in 1998 by $15 billion. Of course, the shift to defined contribution plans had not run its course in 1998, at which point defined contribution assets accounted for only 53 percent of total pension wealth (compared to 36 percent in 1992). Assuming that defined contribution assets increase by another 17 percentage points to 70 percent of total pension wealth between 1998 and 2004, wealth held by decedents will be $13 billion higher each year. In other words, by 2004, decedents will hold $28 billion ($15 + $13) more each year than they would have in the absence of the 1992-2004 shift from defined benefit to defined contribution plans.

This exercise also makes it possible to explore how the increase in bequests might affect the distribution of wealth. Table 3 shows the distribution across wealth quintiles of the $15 billion increase in the wealth in the hands of decedents due to the growth of defined contribution plans between 1992 and 1998. It also shows this increase as a percent of total net worth in the hands of decedents in 1998 assuming that defined contribution plans had not grown. The percentages reveal that the increase in bequeathable wealth between 1992 and 1998 was far more important for the lower quintiles than for the upper quintiles. This means that the shift from defined benefit to defined contribution plans should help to reduce wealth inequality.

The Impact of the Shift to Defined Contribution Plans on Intended Bequests

The previous exercise demonstrates how unintended bequests could potentially increase as individuals receive more of their pension benefits as bequeathable wealth. We also hypothesize that intended bequests will rise, because people's interest in bequests changes when they gain access to a pile of assets. Accumulating wealth out of current income to leave a bequest is too difficult, but if people receive a pile of wealth leaving a bequest becomes a plausible option.

Table 3: Increase in Wealth in the Hands of Decedents Due to Growth of Defined Contribution Plans Between 1992 and 1998, by Net Worth Quintiles, SCF 1998

Quintiles of Non-Pension Net Worth	1998 Increase of Wealth in the Hands of Decedents (Billions)	1998 Wealth in the Hands of Decedents with 1992 Pension Ratios (Billions)	Increase as a Percent of 1998 Wealth in the Hands of Decedents with 1992 Pension Ratios
Top	$11.1	$393.9	2.8%
2nd	2.0	60.9	3.3
3rd	1.2	18.5	6.6
4th	0.4	3.4	10.9
Bottom	0.2	0.2	118.3
Total	$14.9	$476.8	3.2%

Source: Authors' calculations using the SCF 1998.
Note: Households are allocated among quintiles based on non-pension net worth with 1992 ratios.

13 For details on the methodology of all calculations and quantitative analysis discussed in this section, see Munnell et al. (Munnell and Sundén 2003 forthcoming).

It is possible to test this hypothesis using data from both the SCF and HRS, since both surveys collect information on households' expectations of leaving bequests. The SCF asks if the household expects to "leave a sizeable estate to others." In addition to this simple yes/no question, the HRS asks households about their expectation of leaving a bequest of $10,000 or more. Households that anticipate leaving a bequest of $10,000 or more are then asked about their expectation of leaving a bequest of $100,000 or more.

We analyzed these data to determine if an increase in the share of pension wealth provided in the form of bequeathable assets (defined contribution assets and IRAs) will increase the probability of leaving a bequest. Our findings supported this premise; if the defined contribution/IRA share of pension wealth increases by 10 percentage points, the respondent's expectation of leaving a bequest increases by 2.1 percentage points in the HRS and by 1.8 percentage points in the SCF. In general, the results are consistent between the two surveys and with earlier studies.[14]

For the more specific questions in the HRS, our results indicate that the share of pension wealth that is in bequeathable form is also a very important determinant of the probability of leaving a bequest of $10,000 or more and $100,000 or more. For bequests of $10,000 or more, a 10-percentage-point increase in the share of bequeathable wealth raises the probability by 3.4 percentage points; for $100,000 or more, a 10-percentage-point increase in the share raises the probability by 2.8 percentage points. The higher impact for smaller bequests is consistent with the fact that pensions are a more important component of wealth for lower wealth households. The conclusion from this exercise is that the form in which respondents receive their pension wealth affects their expectation of leaving bequests. The greater the share of pension benefits received as a lump sum, the greater the likelihood of a planned bequest.

The Impact of the Shift to Defined Contribution Plans on Saving and Wealth

If the elderly are not going to spend their lump-sum payments from defined contribution plans, the question arises as to whether they will reduce consumption in retirement or save more during their working years. One way to answer this question is to explore whether people's saving and consumption decisions are influenced by the type of pension coverage that they have.

Our analysis of this issue supports the notion that households view these two forms of pensions very differently in making their saving decisions. We found that defined contribution pensions are associated with higher saving compared to defined benefit pensions. This relationship also holds when looking at the effects of the two types of pensions on net worth rather than savings.

These results must be taken with a grain of salt, however. Since defined contribution plans are voluntary and allow workers to decide how much to contribute, individuals with a strong inclination to save may be more likely to participate and contribute higher amounts to their defined contribution plans. Similarly, individuals with a taste for saving may be more likely to accumulate greater non-pension assets. One method of controlling for the preference for saving is to consider whether people with IRAs (which suggest an inclination to save) behave differently in their defined contribution plans than those without IRAs (Gale 1998). Using this method, our results continue to show a positive relation between saving and defined contribution wealth, while the presence of an IRA is insignificant. The results support the earlier findings that defined benefit wealth has a negative effect on savings while accumulations in defined contribution plans do not reduce savings.

Both the wealth and saving analyses support the contention that households react differently to the promise of lump sums as opposed to annuities in their saving and wealth accumulation decisions. Households appear to increase their saving and wealth when they anticipate a lump-sum payment, while they reduce their other saving in anticipation of an annuity. As mentioned previously, these results must be taken with a grain of salt.

Conclusion

This *brief* has argued that once people obtain assets, they are reluctant to give them up. This is evident in the reluctance to buy annuities, to take advantage of reverse mortgages, and to draw down financial assets in retirement. Life insurance holdings among the elderly may also reflect the desire to have bequeathable assets. The *brief* also argues that the desire to leave a bequest is an important motivation for acquiring and retaining financial resources and housing. Given these two factors, the shift from defined benefit to defined contribution plans should raise bequests to a significant degree. The estimates suggest that the increase in lump-sum payments over the period 1992-2004 will increase wealth in the hands of decedents by $28 billion *each year*.

14 For example, see Smith (1999).

In addition to the potential increase in unintended bequests, the growth in lump-sum payments also appears to raise the interest of households in leaving an intended bequest. Such a potentially large increase in bequests has important implications for the welfare of future retirees. The question is whether they reduce consumption during the working years or lower consumption in retirement. The results reported above suggest that households react very differently to their defined contribution accumulations than they do to the present value of annuity pensions. They do not reduce their other saving in anticipation of payments from defined contribution plans as they do in response to promised Social Security and defined benefit pension payments. Clearly, more work is needed to sort out these issues. Nevertheless, the evidence suggests that a reluctance to spend lump sums may be as likely — if not more likely — as a tendency to squander accumulated pension resources.

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The Center for Retirement Research at Boston College, part of a consortium that includes a parallel center at the University of Michigan, was established in 1998 through a 5-year grant from the Social Security Administration. The goals of the Center are to promote research on retirement issues, to transmit new findings to the policy community and the public, to help train new scholars, and to broaden access to valuable data sources. Through these initiatives, the Center hopes to forge a strong link between the academic and policy communities around an issue of critical importance to the nation's future.

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This paper examines how workers use 401(k) plans by examining their participation, contribution, and withdrawal decisions. Sixty-five percent of eligible workers participate in 401(k) plans. Employee participation rises with income, age, job tenure, and education. While participation also rises if the employer matches contributions, 401(k) participation does not grow with the rate of matching. When pension plan assets are withdrawn in lump-sum distributions before retirement, just 28 percent of distribution recipients (representing 56 percent of distribution assets) roll over the withdrawn fun