



SOCIETY OF ACTUARIES

Risks of Retirement—Key Findings and Issues

February 2004

Introduction and Background

An understanding of post-retirement risks is particularly important today in light of the aging society, the volatility in the equity markets and the growth of individual responsibility for managing retirement assets. Also important is an understanding of how Americans are choosing to leave the labor force. Most of the emphasis in retirement planning has been on the pre-retirement period. Several years ago, the Society of Actuaries recognized the need to focus on management of post-retirement risks and instituted a Retirement Needs Framework Project.

As part of the Society of Actuaries project, research on public attitudes toward retirement was conducted in 2001 and 2003 by Mathew Greenwald & Associates, Inc., and the Employee Benefit Research Institute (EBRI) on behalf of the Society of Actuaries. The purpose of the 2003 study was to evaluate Americans' awareness of possible risks, how this awareness had changed since 2001 and how it affects the management of their finances with respect to retirement. (A separate report covers an additional area of study, the process of retirement.) The 2001 and 2003 studies were split between current retirees and those not yet retired, referred to as pre-retirees in this report. A separate study, The Retirement Plan Preferences Study, sponsored by the Society of Actuaries and American Academy of Actuaries, focused on the preferences of employees for different plan features and distribution methods. The 2003 Risks and Process of Retirement Survey covered people age 45 to 80, and the Preferences Survey covered all adults who have or retired with benefits from an employer-sponsored retirement program. A description of methodologies and some discussion about the populations studied follows. The studies should be viewed as representative of the populations as a whole and not of the attitudes and understanding of high net worth individuals.

This report provides key results related to risk of these two surveys and relates them to the 2001 SOA Risk Survey and other surveys. The discussion sections in this report includes input from all organizations who supported the studies.

Methodology

| Studies and methodology used | | | |
|---|---|--|---|
| Study | Methodology | Sample | Margin of Error |
| Retirement Plan Preferences Survey (2003) | Two-stage mail panel – The first stage asked members of the Synovate mail panel (a nationally representative panel) about participation in a pension or retirement plan. A stratified random sample was selected from qualified first-stage respondents for the second mailing. | 790 workers who have a retirement plan with a current employer and 600 retirees who retired with retirement benefits | At the 95% confidence level: ± 3 percentage points for questions asked of all workers ± 4 percentage points for questions asked of all retirees |
| 2003 Risks and Process of Retirement Survey | Telephone interviews – Households were selected from a nationwide targeted list sample. | 604 Americans age 45 to 80 (303 retirees and 301 pre-retirees, unweighted) | At the 95% confidence level: ± 6 percentage points for questions asked of all retirees or all pre-retirees |

Additional surveys providing related information

| | | | |
|---|--|--|---|
| Retirement Confidence Survey (2003) | Telephone interviews – random digit dialing Series starting in 1990 | 1000 Americans age 25 and older (782 workers and 218 retirees) | At the 95% confidence level: ± 4 percentage points for questions asked of all workers ± 7 percentage points for questions asked of all retirees |
| Retirement Health Survey (2003) | Telephone interviews – random digit dialing Series starting in 1998 | 1002 Americans age 21 and older | At the 95% confidence level: ± 3 percentage points for questions asked of all respondents |
| Insight into Participant Investment Knowledge and Behavior (2002) | Telephone interviews Eight in a series starting in 1991 | 801 respondents age 25 to 65 Respondents had contributed to 401(k) plan and had a choice of funds to invest | |

Overview of Post-Retirement Risks

Post-retirement risks include the risk of outliving assets, loss of a spouse, declining functional status, large out-of-pocket medical expenses, inflation and other family members needing assistance. Financial products and employee benefit plans can offer protection against some of these risks, but many Americans choose to self-insure these risks by investing their retirement portfolios independently and reducing spending. Examples of products that may be used to partially offset these risks are as follows:

| Risk | Potential Range for Risk | Products for Risk Transfer |
|--------------------------------|---|--|
| Outliving assets | Life spans at age 65 range from 0 years to over 40 years. | Annuities, including joint and survivor annuities |
| Loss of a spouse | Periods of widowhood of 15 years or more are not uncommon. These are often accompanied by a reduction in standard of living. | Joint and survivor annuities; life insurance |
| Decline in functional status | Cost of care on account of frailty can range from \$0 to over \$2,000,000 for a couple over their lifetimes. Today, nursing home care costs may run \$70,000 or more per person per year. Care can be provided at home, in adult day care, assisted living facilities or nursing homes. | Long-term care insurance helps pay for the cost of care for the disabled. Continuing care retirement communities that provide caps on monthly costs for assisted living and skilled nursing care offer some risk protection as well. |
| Out-of-pocket medical expenses | Medical costs not covered by Medicare for retirees over age 65 can range from \$0 to over \$1,000,000 for a couple over their lives. | Medical insurance |
| Inflation | Inflation can range from 0% in any year to 10% or more; inflation has been much higher in other countries. | Products with cost-of-living adjustments |

Key study findings surface and reinforce concerns that the public may not understand the extent and/or nature of a risk or that they may underestimate it. The new Risk and Process of Retirement Study, and the 2001 study which preceded it, provide evidence of how these disconnects affect consumer behavior.

Benefit Trends, Wealth Levels and the Study

A major change has taken place in benefit coverage in the American workplace. The shift away from traditional defined benefit plans and employer-subsidized retiree medical insurance and to defined contribution plans and little or no employer-subsidized retiree medical insurance has been documented in many places. This is important in considering the study results as the need for personal risk management increases substantially with the shift in benefit coverage.

The sample for the Retirement Plan Preferences Survey was drawn from individuals at all ages who had or retired with benefits from an employer-sponsored retirement plan. Workers and retirees in the study have different benefit coverage. Eighty-eight percent of the retirees received benefits from a defined benefit plan compared to 49% of the workers. Only 9% of the retirees say that they received benefits from a defined contribution plan compared to 56% of the workers who are covered by such a plan.

The 2003 Risks and Process of Retirement Survey studies a sample of people age 45 to 80 regardless of whether they have pension coverage. We would expect to find higher defined benefit coverage among retirees than among pre-retirees, but not as much difference as we would find in the Retirement Plan Preferences Study. Defined benefit coverage of workers increases with age, and the pre-retirees in the risk study are older, on average, than the workers in the preferences study.

It should be pointed out that the results of the 2003 Risk and Process of Retirement survey apply to Americans, on average, and do not provide specific insights into behaviors and values of high net worth individuals. In the risk survey, only 2% of the sample report \$1 million or more in savings and investments. Four percent of pre-retirees and 3% of retirees report savings and investments of between \$500,000 and \$1,000,000. Fourteen percent of pre-retirees and 4% of retirees report household incomes of at least \$100,000. The Retirement Plan Preferences Study sample is a little more affluent: 15% of workers and 8% of retirees have annual incomes of at least \$100,000. This is not surprising since that study covered only people covered by employer sponsored retirement programs.

At the low income end of the spectrum, 12% of pre-retirees and 28% of retirees included in the 2003 Risks and Process of Retirement Survey report incomes less than \$25,000. In the Retirement Plan Preferences Survey, 7% of workers and 26% of retirees report incomes less than \$25,000.

Summary Comparison of Differences in 2001 and 2003 Results

Despite the fact that the 2001 Retirement Risks Survey was conducted in August of that year – before the major terrorist attack and before substantial declines in investment markets – there are remarkably few differences in responses among retirees in that study and the 2003 Risks and Process of Retirement Study. Some major differences between the studies are found among pre-retirees; however, particularly with respect to concerns about retirement risk.

- **Pre-retirees increasingly concerned about retirement risks:** Pre-retirees are far more likely in 2003 than they were in 2001 to express concern about having enough money to pay for good health care (79% indicated *very* or *somewhat* concerned, up from 58%), savings and investments keeping pace with inflation (78%, up from 63%), and being able to maintain a reasonable standard of living for the rest of their life (71%, up from 54%). In contrast, retirees are equally likely in both years to say they are concerned about retirement risks. The exception is married retirees are slightly less likely than in 2001 to say they are *somewhat* concerned about their spouse being able to maintain the same standard of living after their death (19% in 2003, 27% in 2001).
- **Changing risk management strategies:** There are reported changes in risk management strategies between 2001 and 2003. Retirees are less likely in 2003 than in 2001 to say the strategy of using stock investments in the hope that the increase in their value will contribute to a comfortable lifestyle in the long run describes them *somewhat* well (24%, down from 31%). They are also less likely to say thinking it is a good idea to buy annuities describes them *very* well (13%, down from 20%). On the other hand, pre-retirees are more likely than in the earlier study to say the statement about insurance being a good idea because it protects against things such as needing extended nursing care describes them *very* or *somewhat* well (58%, up from 48%).

Just as retirees are less likely than in 2001 to say they are *somewhat* likely to use stock investments, a smaller percentage of retirees now indicate they have given *a great deal* of consideration to how to allocate their portfolio among different types of investments (36%, down from 47% in 2001).

- **Factors influencing retirement decision changing:** In general, pre-retirees tend to respond similarly in the two studies when asked about the different factors that might influence their decision about when to retire. Nevertheless, three factors are now given more weight in pre-retirees' decision-making process. These are the amount of money they expect to have at the time they retire (68% indicated *very* important in 2003, 59% in 2001), keeping health insurance through their employer (72%, 63%), and eligibility age for Social Security (47%, 38%). There is also a higher likelihood in this year's study for pre-retirees to say they will never retire (8%, 4%) and to report having saved less than \$50,000 (39%, 28%).

Differences in methodology and samples: It should be noted that the 2003 study used a different definition of retirement, focusing on retirement from the individual's primary occupation, and that it excluded people over age 80.

Pre-retirees are more concerned about risk than retirees. In 2003, pre-retirees, but not retirees, are considerably more likely than in 2001 to express concern about risk.

Finding

Pre-retirees are far more likely in 2003 than in 2001 to say they are *very* or *somewhat* concerned about having enough money to pay for good health care, savings and investments keeping pace with inflation, and being able to maintain a reasonable standard of living for the rest of their lives. In contrast, retirees are equally likely in both years to say they are concerned about retirement risks. The exception is that married retirees are slightly less likely than in 2001 to say they are *somewhat* concerned about their spouse being able to maintain the same standard of living after their death (19% in 2003, 27% in 2001).

The increase in concern by pre-retirees between 2001 and 2003 means that pre-retirees now show greater concern for retirement risks on a whole than do retirees. In every category but one (concern as to whether children can provide assistance), the level of concern among pre-retirees is much greater than among retirees.

Pre-retirees are most likely to say they are *most* concerned about being able to pay for good health care (24%). Roughly one in seven are *most* concerned about maintaining a reasonable standard of living (15%), keeping up with inflation (14%), or depleting their savings and being left only with Social Security (12%). In general, retirees are *most* concerned about the same set of risks, but they are most likely to be concerned about inflation risk (17%), followed by being able to pay for good health care (12%), being left only with Social Security (11%), and paying for long-term care (9%).

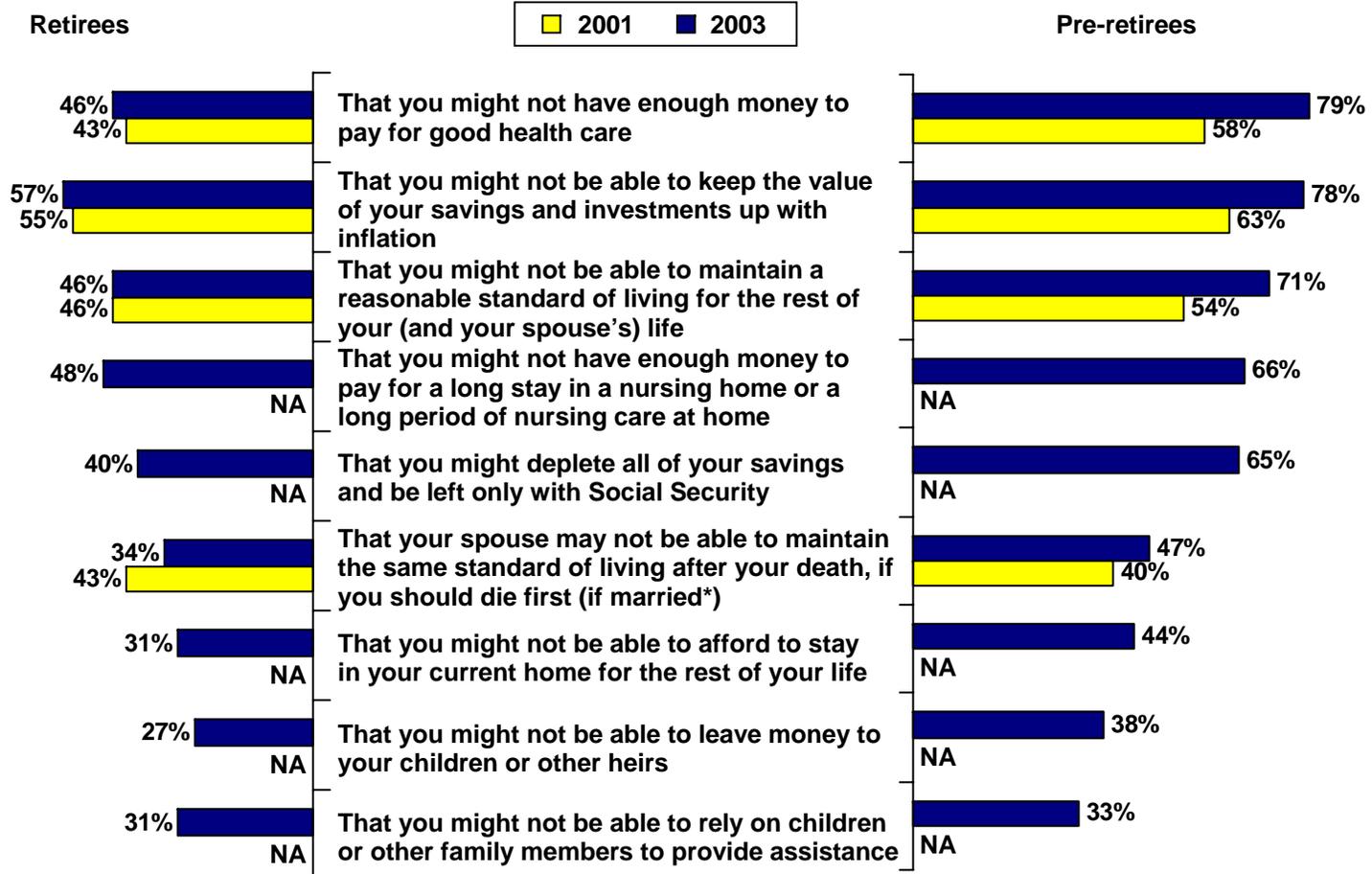
Discussion

It's difficult to say whether risk awareness among pre-retirees is increasing or pre-retirees show greater concern because of the decline of traditional defined benefit and retiree medical programs. Regardless, one result is clear – people are postponing or planning to postpone retirement. Key factors are the recent investment markets and concerns about health care and health insurance. The 2003 Retirement Confidence Survey (RCS) conducted by EBRI, the American Savings Council and Greenwald, as well as the American Association of Retired Persons (AARP) research has documented that people are planning to work longer. The RCS has found that one-quarter of workers age 45 and older have decided to postpone their retirement within the past year, usually for financial reasons.

A plan to postpone retirement will not work for many people, however. The RCS has consistently documented that approximately two in five retirees leave the workforce earlier than planned, usually due to reasons such as poor health or loss of their job.

How concerned are you . . . ?

(2003: Retirees, n=273; Pre-retirees, n=331)



Longevity Risk: There is little understanding of life expectancy at age 65.

Finding

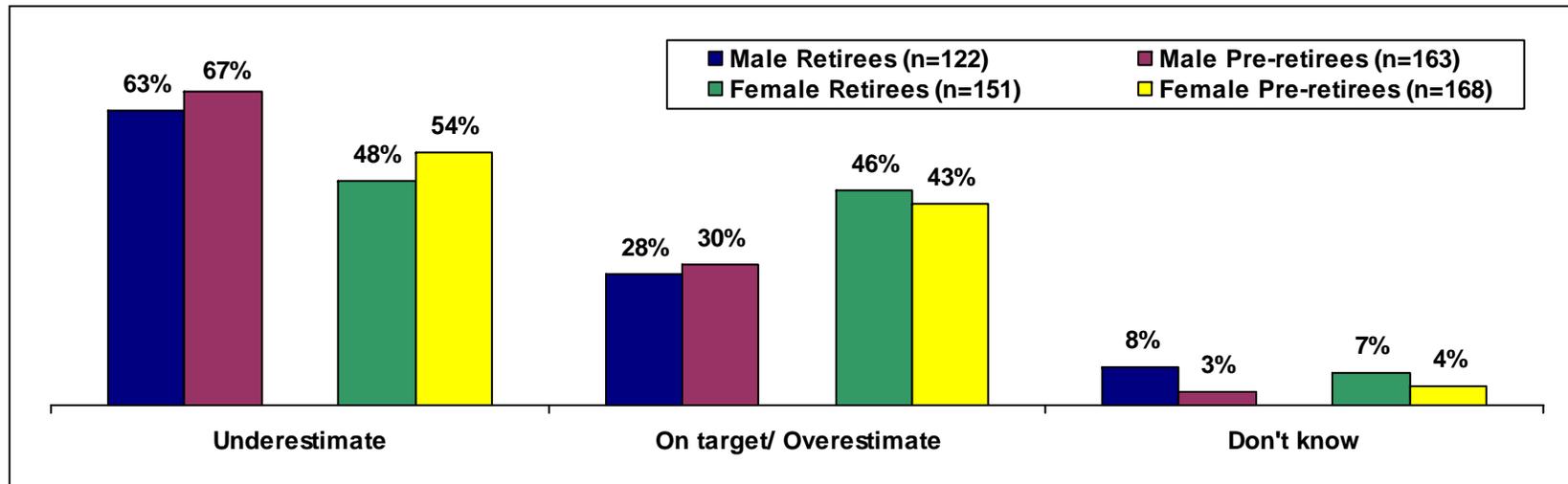
Majorities of men underestimate the life expectancy of the average 65-year-old male, currently 81 to 83 years of age depending on the population projected. Women do only slightly better; roughly half underestimate the average 65-year-old female's life expectancy, which is 85 to 86 years of age.

While half of pre-retirees expect to live at most until age 84, 17% expect to live until age 85, and 26% expect to live until an older age. Similarly, almost half of retirees expect to live to ages younger than 85, 13% expect to live until age 85, and 29% think they will live longer.

Discussion

Longevity risk is one of the most significant risks faced by retirees. Retirees who make decisions to manage a significant portion of their retirement assets must understand the chance of living to very old ages and the potential variability of life spans. However, it appears that there is little understanding of life span. Research presented at the 2003 Pension Research Council annual conference indicated that people prefer to deal with what is coming soon compared to what is far away. The uncertainty of a potential long life span is sufficiently distant event that most people do not want to deal with it.

What age do you think the average 65-year-old male/female can expect to live?



Longevity Risk: Both workers and retirees prefer regular income for their retirement plan payout option.

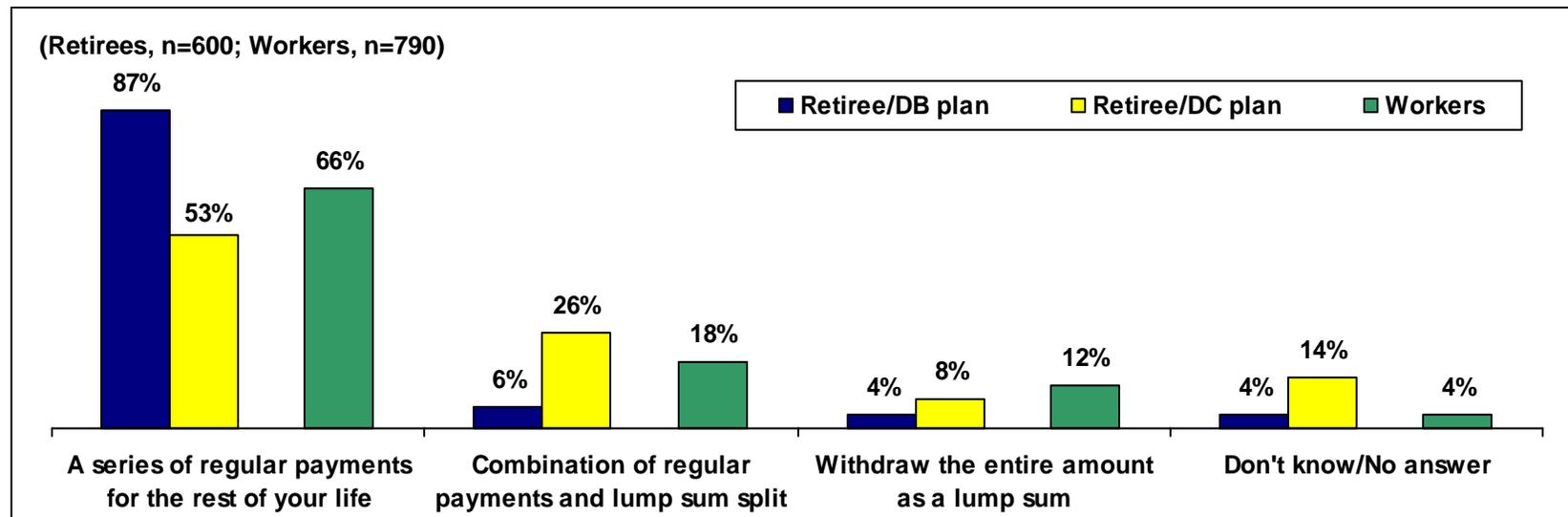
Finding

Almost nine in ten retirees with a defined benefit plan and half of retirees with a defined contribution plan report they are managing the payout from their retirement plan in the form of regular income payments that will last the rest of their life. (This may not actually be through a pension or annuity product.) Two-thirds of workers say they prefer to do the same.

Discussion

It should be noted that only 9% of retirees had defined contribution plans. It is not known how many of the retirees had lump sum options. This result is puzzling as, anecdotally, private pension plan sponsors report a high incidence of lump sum elections. At the same time, people rate annuity products very poorly. One conclusion may be that retirees are managing the money themselves through periodic withdrawals. This strategy can increase exposure to longevity risk as retirees must choose between minimizing withdrawals early in retirement or risk outliving assets.

Which of the following best describes how you would like to receive the money from an employer's retirement plan, given that each choice is of equal value/received the money from this retirement program?



Longevity Risk: Lifetime income is the dominant concern among retirees when choosing a payout option from a retirement plan.

Finding

Almost nine in ten retirees say lifetime income is a *very* important consideration when choosing a payout option from a retirement plan. Almost as important for retirees is not outliving one's money and keeping up with inflation. Workers consider the same set of factors *very* important, but also add control of savings to the list of considerations they are most likely to think *very* important.

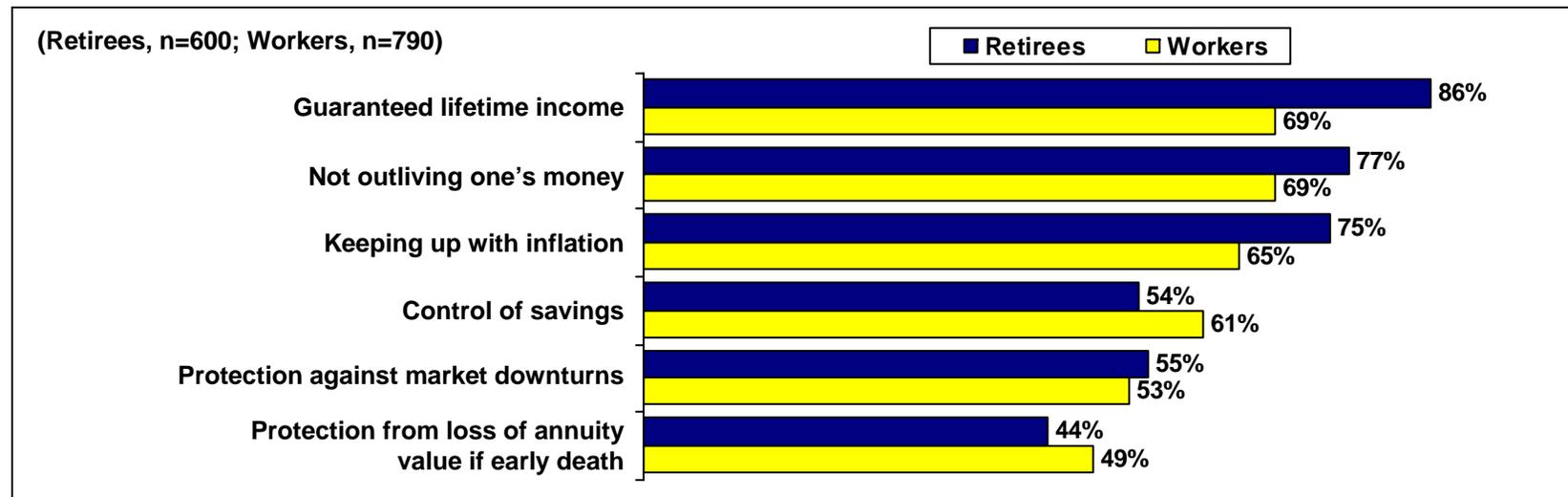
At the same time, both retirees and workers express concern about dying early and losing annuity value.

Discussion

As noted before, these results are somewhat puzzling based on anecdotal evidenced from private pension plan sponsors reporting high rates of lump sum elections. There is a need to understand in more detail what is meant by lifetime income and how decisions about choosing lifetime income, other regular non-guaranteed income, and other methods of asset management are chosen.

Rejection of annuity products may lie partly with concerns of loss of value on early death. These concerns might be partly alleviated by product design, but may also require attention from public policy makers for a complete solution.

**When deciding on what payout option to choose from your retirement plan, how important are each of the following?
(percentage saying *very* important)**



Understanding of Investment Risk and Vehicles

While these two studies do not provide a lot of insight on this topic, another series of studies, The Insight into Participant Investment Knowledge and Behavior Study, provides some insight into knowledge of investments. The participants in this survey all participate in 401(k) or similar plans with investment choice, but many of them show significant gaps in investment knowledge. The 2002 survey is the latest in a series sponsored by John Hancock Life Insurance Company, and it clearly demonstrates confusion about how investment vehicles work, their relative risk and what they include.

In general, survey respondents are unclear about the features and risk profiles of many investment vehicles common to employer-sponsored plans.

- For example, when asked what types of instruments are found in a money market fund, in 2002, 49% said short-term investments, 47% said bonds, and 40% said stocks. Participants were asked to include all that applied so multiple responses are possible. Only 8% knew that money market funds contain only short-term investments. This level of misunderstanding has been consistent since this question was first posed in 1992.
- Similarly, most participants do not understand how bonds function and perform in changing investment markets. Specifically, they do not understand that the market value of a bond moves inversely with changes in interest rates. In the 2002 survey, nearly 80% of respondents did not know that the best time to invest in bonds is prior to a decrease in interest rates. In addition, more respondents believed there is a direct relationship between bond prices and interest rates than believed there is an inverse relationship. These findings have been consistent since first asked in 1992.
- Participants have been and remain confused about the relative risk of company stock. Respondents are asked to rank the risk of various investment options within their employer-sponsored plans. In all eight surveys, respondents have ranked their company's stock as less risky than diversified domestic stock funds and diversified global and international stock funds. And surprisingly, this perception of risk of a single company's stock was not affected by Enron; the risk ranking for employer stock as an investment remained below diversified domestic stock funds and diversified global and international stock funds by margins consistent with previous surveys. Unfortunately, the familiarity of the employer combined with the loyalty of the employee may lull the participant into a false sense of security regarding employer stock as an investment.

The lack of investment knowledge of the average American is probably even worse than that suggested by the results to this series of surveys. All respondents to these surveys were required to participate in their employer-sponsored defined contribution plan, and therefore had some investment experience. Not all Americans do.

Investment Risk: Neither workers nor retirees are very confident about managing their money in retirement, though more say they are somewhat confident.

Finding

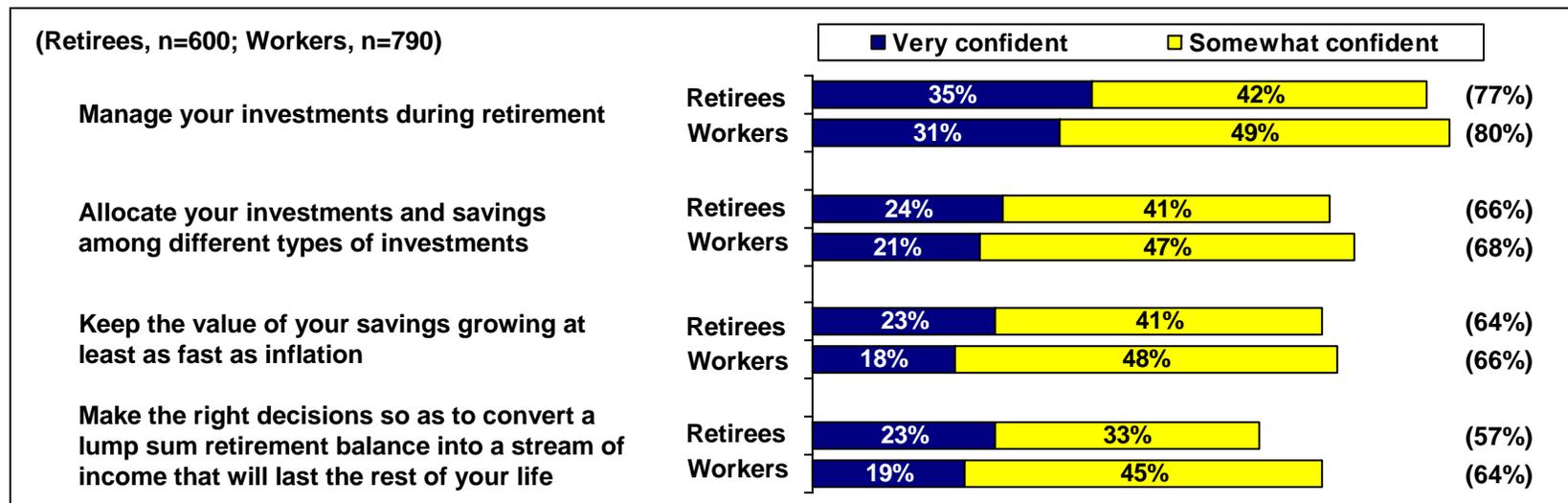
Neither workers nor retirees express a great deal of confidence in managing their money in retirement, and confidence declines as questions become more specific. Only 35% of retirees and 31% of workers are *very* confident in their ability to manage investments during retirement. The percentage who are *very* confident falls to 21% or less of workers and 24% or less of retirees when questions get more specific: allocation of investments, growing savings at least as fast as inflation and converting a lump sum balance into a lifetime income stream.

Discussion

A lack of retiree confidence may not be as surprising as many retirees surveyed participate primarily in defined benefit plans. They may not have many investments to manage nor may never have had the expectation of managing investments in retirement.

However, a majority of workers surveyed participate in defined contribution plans. In theory, they should already be comfortable managing their own funds through the defined contribution process. As noted, workers lack knowledge of investment basics, and this clearly translates into lack of confidence. This lack of knowledge and lack of confidence may increase their financial risk once they retire.

Please indicate how confident you are in your ability to do each of the following during retirement.



Health Care Risk: Pre-retirees are more concerned than retirees about paying for health care in retirement.

Finding

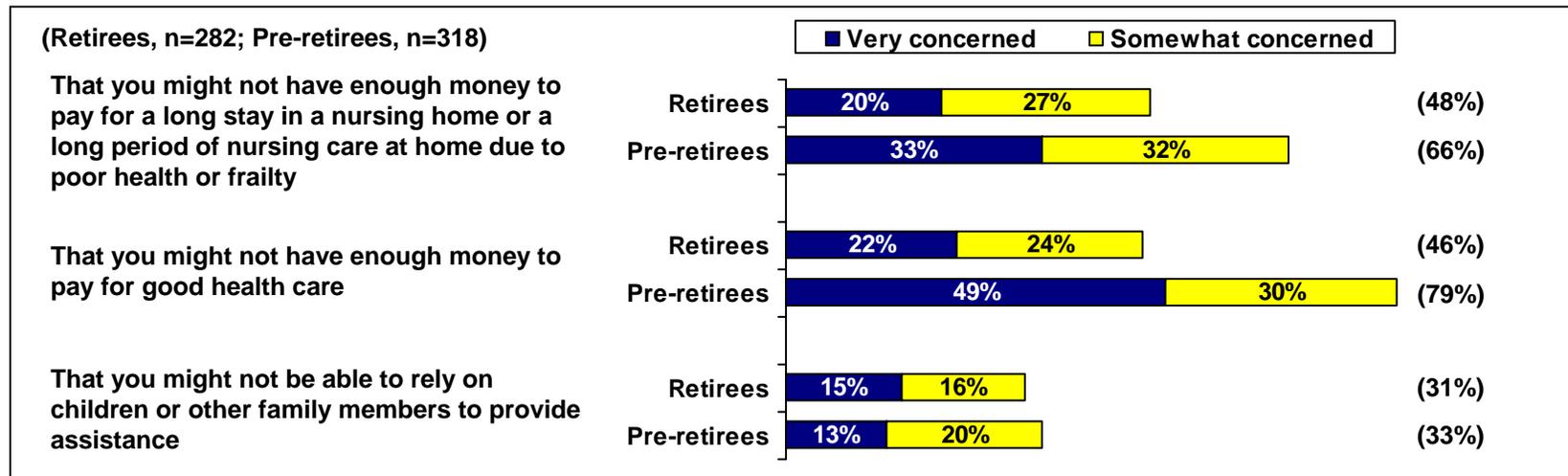
While health care is a significant concern for pre-retirees, retirees express less concern about having enough money to pay for the costs of health care in retirement. Eight in ten pre-retirees are *very* or *somewhat* concerned about having enough money to pay for good health care, and two-thirds are concerned about having enough to pay for long-term care. Half of retirees are concerned about each of these costs.

Both retirees and pre-retirees are much less likely to say they are concerned about not being able to rely on family members for assistance. Only about a third say they are *very* or *somewhat* concerned.

Discussion

The issues of paying for health care in retirement change drastically at Medicare eligibility. The number of employers offering retiree health has dropped drastically. Prior to Medicare eligibility, retirees without employer coverage are faced with very high costs for individual insurance and some in poor health can not get coverage at all. After the 2003 Medicare amendments, Medicare covers most acute hospital care, physician services, and starting in 2006, it will cover a part of prescription drug costs. Lack of coverage is a barrier to retiring early. The decline in employer-sponsored medical coverage may limit the ability of future generations to retire prior to Medicare eligibility.

How concerned are you . . . ?



Inflation Risk: This is the predominant concern among retirees; it is one of several competing concerns among pre-retirees.

Finding

Retirees are more likely to be concerned about inflation risk than about any other risk examined in the 2003 Risks and Process of Retirement Survey (57% are *very* or *somewhat* concerned). Pre-retirees are even more likely to be concerned about inflation (78%), but they are just as likely to be concerned about having enough money to pay for good health care (79%).

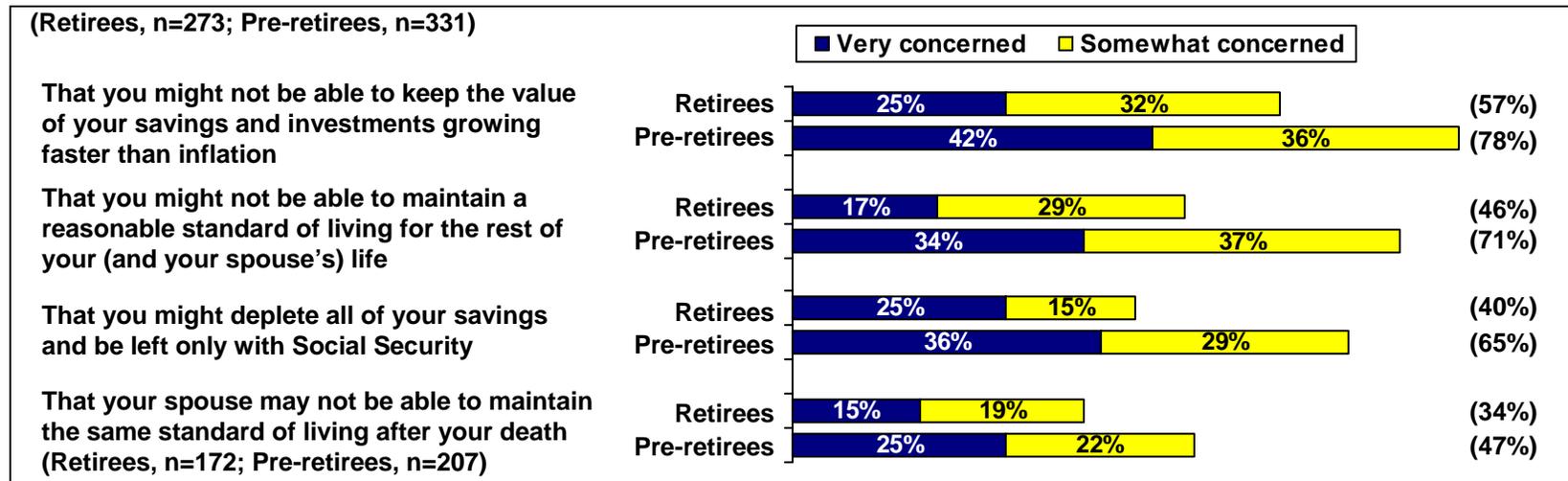
Less than half of retirees and seven in ten pre-retirees are concerned that they might not be able to maintain a reasonable standard of living for the rest of their (and their spouse's) lives. Four in ten retirees and two-thirds of pre-retirees are concerned that they might deplete all of their savings and rely solely on Social Security.

Discussion

The focus on inflation can be linked to the primary strategy for risk management, reducing spending. Although overall inflation in the U.S. has been modest in the last five years, there have been recent periods of significant inflation. Health care cost increases have far outstripped inflation recently, particularly prescription drugs, and premiums for health insurance including Medicare Part B and retiree premiums for employer plans,

Except for Social Security, most retirees do not have regular income that is adjusted for inflationary increases and the increase in Social Security is often less than the corresponding increase in medical costs. Low interest rates compound the problem for those with fixed income investments.

How concerned are you . . . ?



Many are aware of the value of insurance, but few purchase insurance as a way to reduce their risk.

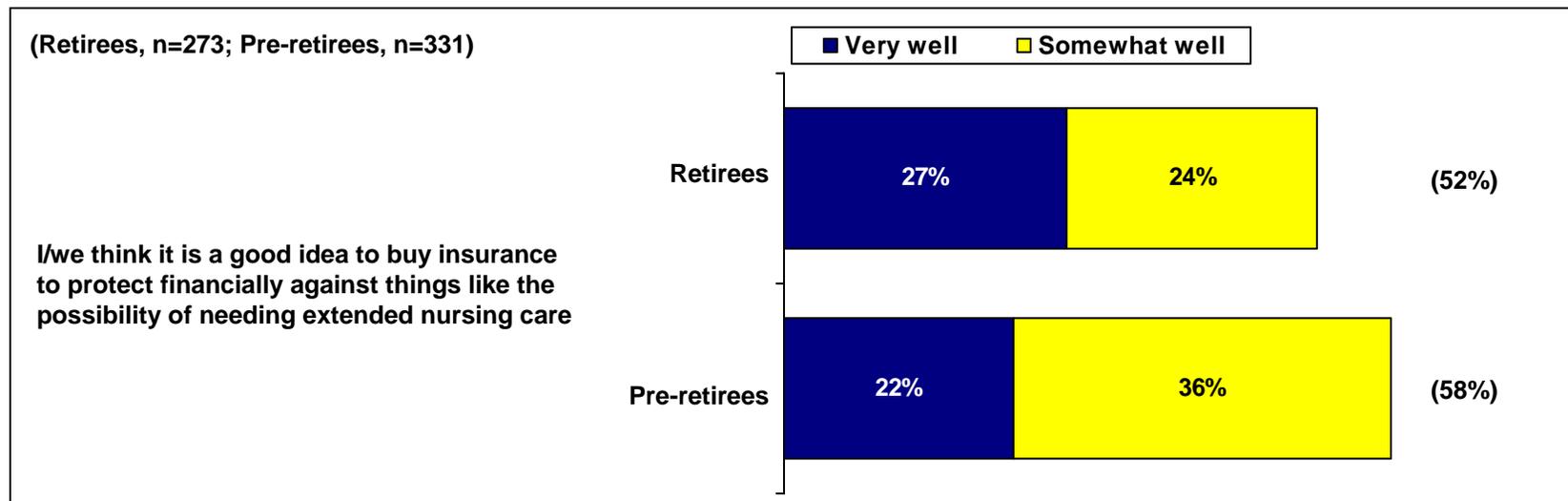
Finding

More than half of retirees and pre-retirees say a statement that buying insurance to protect against things like the possibility of needing extended nursing care is a good idea describes them well. In fact, roughly one-fourth think it describes them *very* well. But only 17% each say they have actually purchased long-term care insurance. Another one in ten report having purchased health insurance, while 9% of retirees and 6% of pre-retirees are saving against the possibility of needing care.

Discussion

No verification was made regarding respondents actually purchase of long term care insurance, and the 17% reporting purchase is higher than would be expected based on the general population. The Federal Government installed a program for its employees a year ago, and the employee response to that program will be a signal to the private sector about whether to greatly expand employer offerings of this coverage. Where employers offer it, employees and retirees are expected to pay for it, and election rates tend to be low.

How well does the statement about saving for retirement describe you (and your spouse)?



Even fewer turn to annuities to protect against risk.

Finding

About four in ten retirees and pre-retirees think the statement “it is a good idea to buy annuities because they protect people by paying a guaranteed income for life, no matter how long you live” describes them well, but only 13% each think it describes them *very* well. Moreover, very few—just 2% of retirees and 3% of pre-retirees—say they have actually purchased an annuity in order to manage risk.

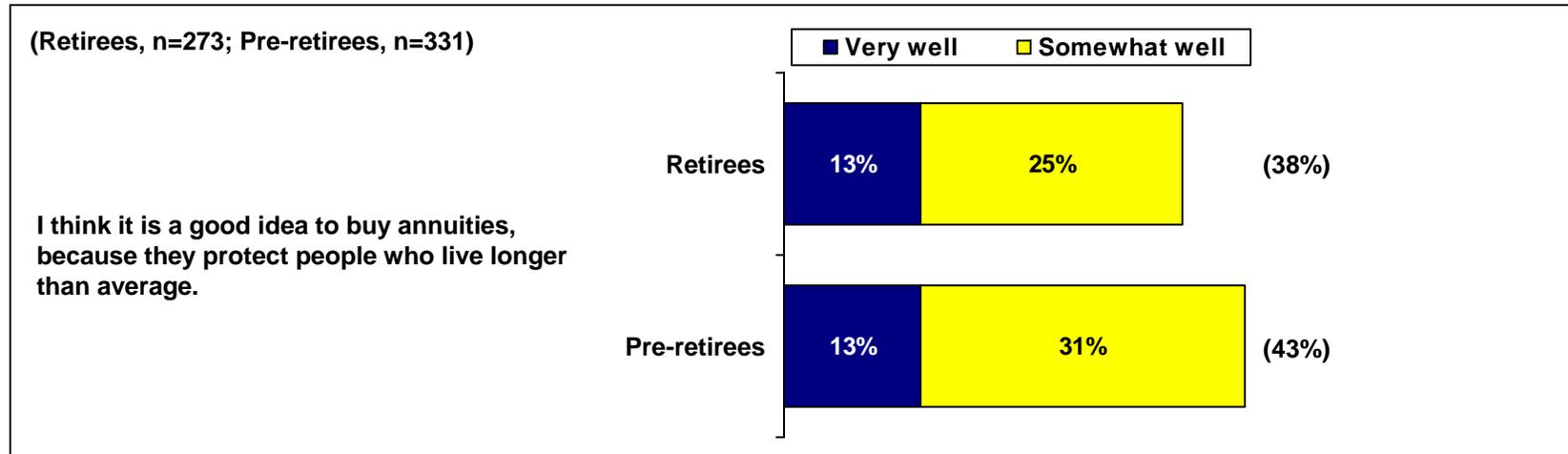
Many retirees have regular income, but for most it comes from Social Security (54%) or from an employer’s defined benefit pension plan (41%). A small minority obtain this regular income from other sources which must be often be managed by the retiree.

Discussion

Retirees and pre-retirees clearly understand the benefits of annuity purchase against longevity risk. But, as noted before, the concerns of early death and loss of value are also very high (44% of retirees and 49% of workers rank that concern as *very* important when deciding payout options). Also noted earlier was underestimation by retirees and pre-retirees of the probability of a longer than-expected life.

The responses here to annuities are similar to the responses for long-term care insurance; namely, retirees understand it’s a good idea, but don’t do it themselves. The reasons for this dichotomy are still unknown.

How well does the statement about saving for retirement describe you (and your spouse)?



Reducing unnecessary spending, increasing savings, and increasing income are the most accepted ways of achieving financial security in retirement.

Finding

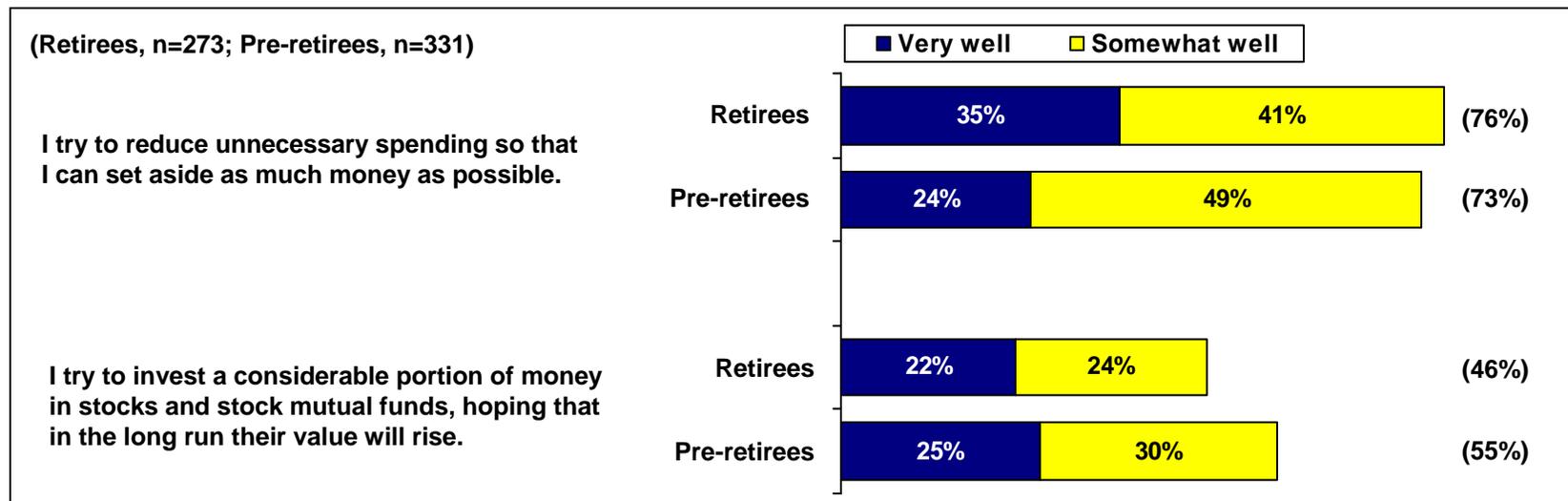
Both retirees and pre-retirees most often attempt to manage risk by trying to reduce personal expenses in order to boost personal savings (76% of retirees, 73% of pre-retirees). Smaller proportions adopt a strategy of stock investments (46% of retirees, 55% of pre-retirees).

When asked in an open-ended format how they protect themselves against the possibility of needing to cut back on their lifestyle, both retirees and pre-retirees most often cite strategies involving reducing spending, increasing savings or increasing income.

Discussion

Retirees adjust their spending as a way to manage. This still leaves them vulnerable to major risks, and economic status declines during retirement for many. It also declines at the time of widowhood.

How well does the statement about saving for retirement describe you (and your spouse)?



Many do not keep regular records of their financial assets and expected retirement income.

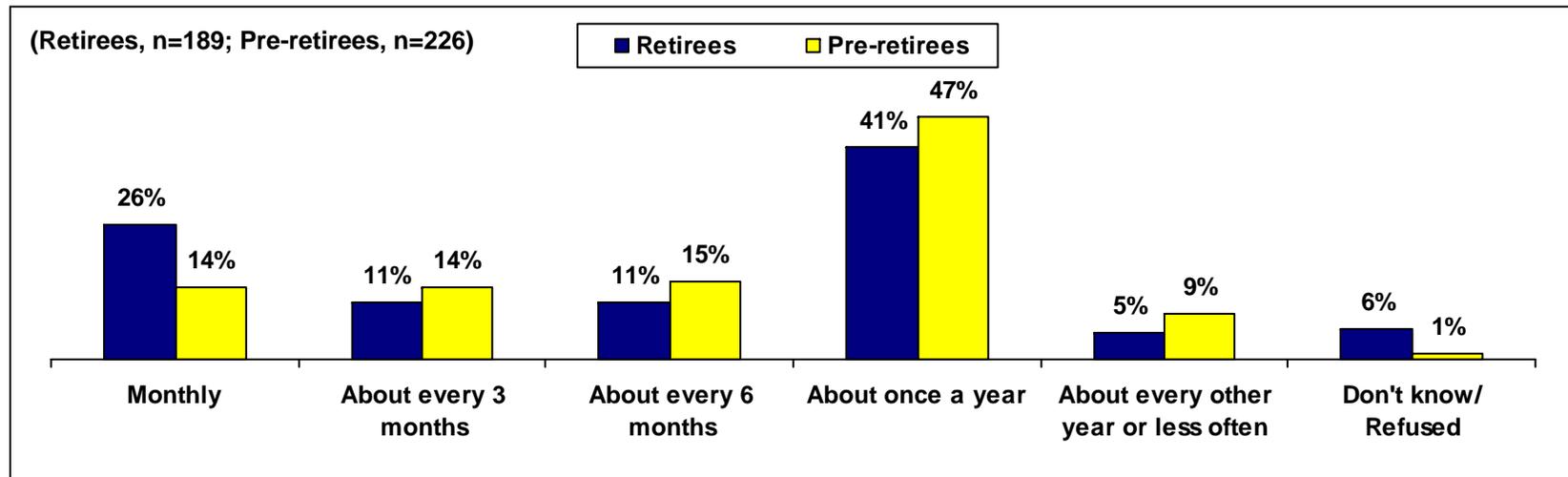
Finding

Three in ten retirees and pre-retirees do not keep regular records of their financial assets and expected retirement income (30% each). Among those who do, some update these records at infrequent intervals. Five percent of retirees and one in ten workers admit to updating them every other year or less often. Four in ten retirees and half of pre-retirees say they update them once a year.

Discussion

Recordkeeping is fundamental to risk management, and becomes more critical in an era of individual responsibility. This should be an area for employer and public education focus.

About how often do you (and your spouse) update these [retirement] records?



Differences by Economic Status

The sample of the 2003 Risks and Process of Retirement Study includes people with very different economic statuses. Almost three in ten retirees have relatively low household income (28% have less than \$25,000) or relatively little financial assets (28% have less than \$25,000). Pre-retirees are less likely to be low income (12%), but are just as likely to have low financial assets (28%). For many of these people, financial management is very focused on day-to-day and month-to-month matters, so that long-term risk management is unlikely. This group does not have resources to buy financial products and Social Security is critical to their income. The sample includes few high net worth respondents, but many people in the middle. For this group, risk management is key, and adopting risk management strategies is a viable option.

Major differences in the study results by economic status reveal few surprises. Among both retirees and pre-retirees, respondents with lower household incomes are more likely than those with higher income to be concerned about retirement risks. Retirees with higher income are also more likely to give thought to how to allocate their savings among different types of investments. Nevertheless, retirees of all income levels appear equally likely to be concerned about inflation risk.

Not surprisingly, the adoption of stock investments as a retirement money management strategy increases with household income and household wealth among both retirees and pre-retirees. The likelihood of considering an annuity as a risk management strategy rises with household wealth among retirees and with household income among pre-retirees. Retirees with household incomes of at least \$25,000 or with at least \$25,000 of household wealth are more likely than their counterparts to indicate the statement “I try to reduce unnecessary spending so I can set aside as much money as possible” describes them well.

As might be expected, the likelihood of reporting that retirees have not saved enough money for retirement is strongly related to household income and household wealth, and increases sharply as either of these factors decreases. Among pre-retirees, those with income of at least \$75,000 are far more likely to say they have accumulated at least \$100,000 for retirement. Moreover, retirees and pre-retirees with higher household income or wealth are more likely to keep financial records.

Perceptions about the length of retirement varies by economic status. As household income decreases, uncertainty about the length of retirement increases among retirees. Pre-retirees with lower household income are more likely than those with higher income to estimate that their retirement will last less than 20 years.

Differences by Health Status

Health status is a key factor in well being in retirement. People with poorer health status often retire earlier and have lower retirement assets because of the impact of health on their work history. For people in poor health, the potential for problems in retirement is compounded because it is unlikely that they can work in retirement to any significant degree.

Differences in responses by health status are closely related to differences by income status, perhaps because those in poorer health often have lower income and vice versa. Among both retirees and pre-retirees, concern about each retirement risk (except inflation risk among retirees) tends to decrease as health status improves.

The likelihood of reporting that retirees have not saved enough money for retirement is strongly related to health, rising as health status declines. In addition, the retirees in better health are more likely to have a pension as a *major* source of income than those in poorer health. Asked which types of expenses they would find it acceptable to cut back on in retirement, pre-retirees who describe their health as *good*, *fair* or *poor* are more likely than healthier pre-retirees to believe it would be *very* acceptable to go to the doctor less often.

As with economic status, responses about the length of retirement varies by health status. Uncertainty about the length of retirement increases among retirees as health status declines. Pre-retirees who say their health is *fair* or *poor* are more likely than those in better health to estimate that their retirement will last less than 20 years.

Differences by Sex

There are major differences in the expected length of retirement for men and women. Women live longer. Among married couples, it is more likely that the wife will outlive the husband. The employment and wage histories of men and women in America are quite different, so that women are likely to have significantly lower pension and Social Security benefits than men, but they are more likely to have meaningful survivor benefits. Women are also more likely to need long-term care outside of the home. In spite of these significant differences in expected life experience between men and women, there are relatively few differences in their responses.

Among both retirees and pre-retirees, women are more likely than men to express concern about having being able to leave money to their heirs. Female retirees (but not pre-retirees) are more likely than males to be concerned about having enough money to pay for good health care, while male pre-retirees (but not male retirees) are more likely than females to say they are concerned about their spouse being able to maintain a reasonable standard of living after their death.

Women are slightly more likely than men to correctly estimate the average life expectancy of the average 65-year-old, yet male retirees (but not male pre-retirees) are more likely than females to expect their own personal life expectancy to be longer than average.

It should be noted that subgroup differences are extremely sensitive to sample size. It is possible that a study with a larger sample size may have uncovered additional differences.

Conclusions

Retirees are faced with several risks during the post-retirement period. Some of the benefits provided to retirees, like Social Security, Medicare, and traditional defined benefit plans, are paid as regular monthly income and have built-in protection against specific risks. Defined contribution plans and personal savings offer no such protection, and retirees are then responsible for managing a great deal of post-retirement risk on their own.

These studies and the 2001 study provide insights about what retirees and those nearing retirement age (those age 45 to 80) say about management of post-retirement risk and the use of various strategies for managing that risk. It shows that there are many gaps in understanding of these risks and in the techniques for dealing with them. The main problem is that most retirees and pre-retirees are not sufficiently aware of some of the financial risks inherent in retirement and of the techniques for managing their impact. Or, if they are aware of the risk, it does not seem to translate into changed behavior. This survey indicates specific areas where education about retirement risks would be especially helpful: long-term care, the uncertain timing of death and inflation. Gaps in knowledge of financial techniques for dealing with risks in retirement will go up with likely increases in life expectancy as a consequence of gaps in knowledge, and these issues have become more pressing in light of the recent market declines and the growth of defined contribution plans. Moreover, shrinking family sizes and changing views of the role of the family may require the next generation of retirees to purchase what the current generation receives at no financial cost.

Various elements of society can help the public to deal with these issues. Public education can be provided through programs made available by employers, other private groups, government and by financial services providers. Financial solutions can be provided through individual action, employer action, financial security products and public programs.

Note: The 2003 Risks and Process of Retirement Survey and 2003 Preferences Survey reports can be obtained from the Society of Actuaries (www.soa.org).