



# Retirement Needs Framework: Overview Chapter

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## Introduction

Actuaries have a unique opportunity to participate in and help shape the emergence of issues that are critical to our society. Many countries have populations that are aging with varying degrees of rapidity. Although there has been much attention given to retirement planning and related issues, most of it has been focused on accumulating assets at retirement age, with little analysis of the period after retirement. The pension practice area of the SOA took up the challenge to respond to these issues with a special research project, which we have named the *Retirement Needs Framework*. The organizing committee was chaired by Marilyn Oliver. Other members of the committee included Joe Applebaum, Doug Borton, Zenaida Samaniego, Pat Scahill, Bill Torrie, Henry Winslow, and Judy Anderson.

The first two phases of the Retirement Needs Framework project included a combination of research papers and a symposium for presentation and discussion of the papers. Future phases will expand on this initial work. This volume includes the papers, a digest of points raised in the discussion, and ideas for future work.

The objective of this research was to gain a much better insight into the period from retirement to the end of life, and to set the stage for better modeling and development of retiree needs. The project participants were multidisciplinary and included actuaries, attorneys, demographers, and economists. The symposium attendees and authors included academics and practitioners; this offered a chance for the two groups to work together and exchange ideas.

This project is extremely important because today there is a focus on change in both government and

corporate retirement programs. Individual responsibility is being stressed. At the same time so much of the research around retirement focuses on the period before retirement rather than on postretirement events and how to manage them. This paper provides a broad overview of the symposium; it brings together ideas presented by different participants and introduces related ideas from other sources.

## Project Goals

The purpose of this research was to gain a much better insight into the period beginning with retirement, and to set the stage for better modeling and development of retiree needs. The research reflects the perspectives of a multidisciplinary group of authors, who worked individually. The symposium served to bring together and integrate their ideas plus those of discussants and seminar participants.

This project is focused on understanding postretirement events, understanding modeling approaches for working with the events, and searching out data. The project organizing committee began with a discussion of these activities and then sought the best way to move ahead to help actuaries deal with them. The postretirement events include inflation, death of a spouse, changes in health, changes in care needs, changes in the availability of family members to provide care, changes in housing needs, and changes in interests and avocations. The committee looked for areas where there are mismatches between retiree needs and the common forms of distribution. A call for papers was issued, and 13 papers were submitted.

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The papers and the discussions of them have served to identify a number of areas where current policy serves as a barrier to effectively meeting the needs of the elderly. Although the project is not directly focused on policy, it is anticipated that this work will be helpful in providing a more complete picture to policymakers and that it will inform policymaking. It should also serve as a resource for those who are building tools for personal retirement planning and those who are assisting plan sponsors in making decisions.

## Challenges to the Profession

The research presented here offers many insights and powerful tools as we go about our work. At the same time, challenges to individuals, employers, governments, and professional organizations remain, creating a need for further research. These challenges, which can be taken up in several different ways, are as follows:

- *Mismatches:* We need a better understanding of mismatches between current methods of payout and needs, and better ways to finance them. Dealing with mismatches requires building new models and some changes in the marketplace. New financial products or options in existing products would be desirable. Related issues are discussed in this chapter under the heading "Marketplace." The chapter concludes with a summary of mismatches.
- *Actuarial role in influencing policy:* A number of institutions influence the retirement security of a population. One of the challenges to the profession (as individuals and collectively) is appropriately influencing such institutions. As part of that, the profession has a stake in being sure that the institutions are aware of the profession and the potential role of actuaries. Individuals need to directly participate in policy discussion and debates. This is discussed further below.
- *Modeling, practical issues, and integration:* Models are the key to application of ideas. Some of the ideas presented in this monograph need further development and consideration of practical issues in application. Areas needing further development include the application of multistate models to analysis of the frail elderly and their care, modeling of alternative investment and payout strategies, analysis of issues involved in annuity versus alternative forms of distributions, and application of these models by various users. Application requires both additional analysis and acquisition of suitable data. This project provides a beginning at integrating the ideas presented.

It is important that they are studied further and at a level that includes analysis on an integrated basis. There are many connected issues affecting planning by individuals through planning at a policy level.

- *Data:* Data are the key to applying models. We need to understand what is available and how to use it and to determine how to fill in the gaps. We also need to develop the means to identify and collect needed data on an ongoing basis. Governments collect much of the data either directly or through research grants. The profession needs to have an appropriate voice in identifying needs for such data and to participate in these efforts.
- *Retirement: when and what we mean:* Over the last 50 years there has been a trend to early retirement that may have started to reverse in the U.S. Although there has been much discussion about phased retirement by academics for many years, formal retirement systems generally do not provide for phased retirement. Individuals often choose multiple jobs or careers that have the effect of phased or multistep retirement. A major challenge to actuaries is to find ways for retirement benefit programs to support phased retirement.
- *Methods of investing and distributing assets:* At the symposium there was a lot of focus on the issue of whether to buy annuities, how to invest and withdraw funds after retirement, and the challenges of the marketplace. These discussions opened up several issues for actuaries including the need for different and better products, the need for better models, and questions about how decisions should be made. One specific need is for better, indexed annuities. These issues are closely tied to some of the mismatches.
- *Issues with regard to the frail elderly:* Challenges with regard to the frail elderly overlap many of the issues discussed here including modeling, data, and products. However, the subject of the frail elderly is often overlooked or put aside. Therefore, it has been listed as a separate item.
- *Issues related to different groups of people:* Actuaries need to help find ways to serve those who are not served well by existing systems. When we look at the population as a whole, we get a different picture. The economic status of the elderly has improved greatly, and within the U.S. poverty levels have been dropping. But when we divide the population into subgroups, we get a very different picture. There are still many people outside the mainstream system who have no access to retirement plans, inadequate skills to access retirement planning tools, or both. When we

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look at issues relating to the economic status of the elderly, we find that big differences exist between families and unrelated persons, with families being much better off, and between men and women, with men being much better off.

- *Basic design of retirement programs:* The issue of defined benefit (DB) plans versus defined contribution (DC) plans is a hot topic in many corporate settings and in debates over social insurance. This research does not deal with that discussion directly, but its results are linked to that debate. We need to have a broad exploration of these issues and expand them to look at financial security products generally. This challenge is not dealt with in this monograph, but it is being addressed by the actuarial profession.

The work done in this project is that of individuals and diverse organizations. The issues discussed are of fundamental importance to people in many countries. Bruce Palmer's paper introduces many of these issues. The role of the profession is to encourage further work, perhaps sponsor some of it, but primarily provide forums for publication, discussion, and exchange of ideas between professionals.

## Geographic Focus

Although most of the discussion relates to the environment in the U.S. and Canada, the issues raised generally have no geography and are universal. The modeling approaches should likewise be applicable in a broad range of situations. However, applicable data will be needed.

In all nations that have formalized old age security systems, there are concerns about outliving assets, use of assets, the impact of widowhood, and dealing with declining health status.

## The Actuarial Role in Influencing Policy

Retirement needs are an issue both for actuarial organizations in many nations and for individuals. The primary responsibility for participation in policy debates rests with the American Academy of Actuaries in the U.S. and the Canadian Institute of Actuaries in Canada. Both are active in issues related to their aging societies.

Individuals also need to participate actively in policy discussion and debates. This is particularly important now when radical changes in social security are being considered. This participation may take the form of explaining,

clarifying assumptions, or taking a position. Although this project is not about U.S. social security reform, the matters discussed are helpful in thinking through the issues. An example will help to illustrate the importance of actuaries participating in discussions. In the debate about privatizing Social Security, advocates often give examples to show that people would be much better off with individual accounts. A single example was provided in a debate at which the author was present. The questions, which remained unanswered after quizzing the advocate for privatization, included the following: How would death and disability benefits be provided? What rate of return was assumed? Was variability in rates of return considered and how? How would we provide for transition arrangements? What would be the effect on benefits paid to widows? What would be the effect on individuals at lower income levels? Would lump sums be permitted? Although none of these questions were answered, the single example was generalized to indicate that "everyone" would benefit. There are complex issues in understanding comparisons of value. Actuaries are needed to ensure that debates about value are based on fair comparisons and that relevant issues are not swept under the carpet.

## Modeling, Practical Issues, and Integration

Models are the tools that permit application of observed, or hypothetical, relationships. At an early stage of development they offer some insights but may not be very practical. With further development and suitable data, they provide the direct means of practical application. They can also be dangerous if they are accepted as reality without understanding the underlying assumptions, simplifications, and degree of validation.

Some of the ideas and models presented in the Retirement Needs Framework project will need further development and consideration of applications of practical issues, which will require both additional analysis and acquisition of suitable data.

## *Models Identified and Need for More Modeling*

Modeling and analytical approaches applicable to different areas were discussed:

1. Markov chain models to model transitions between different states of health; both Bruce Jones and Eric Stallard produced models for this purpose

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2. Stochastic models of alternative withdrawal and investment strategies to look at differences in the chance of ruin where assets were invested in different ways
  3. Models of the effectiveness of different annuity payout strategies
  4. Models linking expected health care costs to different states of health
  5. Models based on derivatives and investment strategies to analyze different payout strategies.

Some of the areas needing further development include the application of multistate models to analyze the needs of the frail elderly, models of alternative investment and payout strategies, analysis of issues involving annuity versus alternative forms of distribution, and application of these models by various users.

### ***Integration of Different Elements of the Post-retirement Period***

This project provides a start at integrating the ideas presented. The changes and discontinuities after retirement are in some cases mutually independent and in others dependent. However, from the perspective of the individual, a total plan is what is needed. It is important that the events be considered and analyzed on an integrated basis. There are many interconnected issues in both individual planning and setting public policy. They may also be reflected in product development as financial products are designed to deal with multiple needs.

### ***The Significance of Models to Different Stakeholders***

This author's paper "Retirement Needs: The Perspective of the Individual" includes a listing of events and an analysis of their predictability (Table 1). These concepts are closely related to the feasibility of statistical modeling around these events. Modeling requires that there be data and a method that can be used to predict the events being modeled.

Modeling also has a very different significance to different stakeholders. Table 2 of that paper defines the stakeholders. An insurer or plan sponsor will want to do modeling to predict costs for an overall group but is not likely to be as focused on the impact on an individual. An individual is concerned not only about expected results for the group but also about personal results. The individual may want to convert the distribution of possible

results to some sort of average by buying insurance or an annuity. The insurance company will be concerned about whether it can offer or sell such products.

### **Data**

The papers here focus more on modeling and concepts than on data. Data will be critical to applying these concepts in the real world as they are developed.

### ***Asset Modeling***

For modeling assets there are well-established sources of average historical returns on different asset classes. Ibbotson Associates is a frequently used source and is cited by Raymond Murphy in his paper "A Simple Model of Investment Risk for an Individual Investor after Retirement." The Ibbotson data are updated annually. One of the major concerns in reviewing historical returns when modeling investments is the particular time period selected. Simulations of results under different strategies will be very different depending on the period selected and when the decision was made.

As indicated above, it would be far better to be able to model a combination of asset classes including traditional investments, annuities, and insurance products. Data sources on annuities and insurance products will be a challenge. Suzanne Doyle and John Piggott, in their paper "Mandatory Annuity Design: A Preliminary Study," point to the problems of market risk on annuities, and our data will need to reflect that.

### ***Frail Elderly and Long-Term Care***

Both population data and information on long-term-care insurance help us focus on issues related to the frail elderly. Eric Stallard provides insights on the National Long-Term-Care Survey, an extremely valuable data source on frailty within the U.S. population. These data are very helpful in looking at transitions between different health states, or steps in the continuum. This is a periodic study, and the next round is in the planning stage. There are questions about how to integrate the data with insured data and apply it to insurance. Additionally, it would be quite interesting to have comparative data between countries. Another challenge is how to apply the data to different subpopulations. For example, a continuing care retirement community or insurer may wish to look at data that are relevant to the particular participants

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in the group as selected by the entry rules of the program and by the choices of the individuals. Economic status eliminates participation by many.

Data are also being collected on long-term-care insurance. The data are very immature and cover only a small part of the population. One of the key challenges is using the data together with the population-wide data referenced above.

The SOA's Long-Term-Care Task Force is working with the data on the frail elderly. Further data will be needed for applications in other models. Development of regular data resources is important if the models are to be updated regularly. The project group for this project is further exploring the issue of data that can be published on a regular basis, by the SOA, for pension and health actuaries.

### **Other Data**

The October 1998 issue of the *North American Actuarial Journal* provides a study of mortality patterns in NAFTA countries and illustrates that there are very different issues among them. The U.S. and Canada have similar issues, as do many European countries. Mexico is very different, and there may be other countries with similar issues. Although Mexico is much younger, it will undergo much faster and more dramatic population aging.

The Health and Retirement Survey is a major U.S. longitudinal study of retirement in the population. It looks at a group of people nearing retirement age and then re-interviews them every two years. Four waves of this study have already been completed. Papers available through the Pension Research Council provide substantial insights into the findings from the data. This is a major resource for further research on the period before and after retirement. One of the key issues at the time of retirement is decision making by the individual. This database provides information on how recent retirees have been making these decisions. The database also includes personal information about assets, health, and data on pension plans and social security.

## **Retirement: When and What We Mean**

The research focuses both on definitions of retirement and how patterns of retirement are changing. The classical definition of retirement relates to an event: An

individual who was working leaves a job and collects a retirement benefit. Most of the discussion is focused on a retirement event. Sometimes the discussion focuses on leaving the labor force, but more often it focuses on leaving a job. An alternative to thinking of retirement as an event is to consider two asset accumulation periods: a period when assets are being accumulated to use later, and a period when assets accumulated earlier are being used to replace or supplement current income in order to provide living expenses. Retirement under such a framework is the second period, the time when assets are being used.

Under our traditional definition we think about early retirement or normal retirement (that is, retirement before the age defined as the normal retirement age or at that age). For many years we have had a trend to early retirement, at least from the perspective of the single employer paying a benefit. The paper by Robert Brown leads us in a different direction. In Brown's paper retirement is defined as a gradual process extending over several years rather than a one-time event. A person may leave a long-term job (career job) and take one or more other jobs (bridge jobs) prior to leaving the labor force. Bridge jobs are discussed and data presented on retirement patterns in the U.S. and Canada, with some comparative data from other nations. In Brown's paper it is shown that substantial numbers of people, in both the U.S. and Canada, take bridge jobs. Brown states that the trend to early retirement has reversed and cites research by Joseph Quinn to demonstrate that. He discusses the strong influence of early retirement incentives and windows, and the tendency to go back to work after retiring under one of these programs. Linda Brothers presents different theories of what drives decisions to retire and raises questions for further research. Competing theories are based on economics versus doing what is expected of one within the normal social system.

Retirement age will be a policy issue in the U.S. as Social Security and Medicare changes are debated. It is a policy issue in other countries as well. Repeatedly actuaries and other experts point to the increase in life expectancy since various retirement systems were implemented and the overall desirability of an increase in retirement ages. Attempts to increase retirement ages in social programs are highly controversial. The October 1998 issue of the *North American Actuarial Journal* is devoted to a discussion of research on mortality improvement. Mortality, particularly at the older ages, has improved markedly and is expected to continue improving. The expert opinion is that there will be no slowdown in mortality improvement.

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The discussion by Carol Bogosian points out that retirement values and attitudes vary by generation and over time. The parents of the Baby Boomers had one set of expectations, the Baby Boomers a different one, and Generation X will have yet different values. A counter-view is that retirement decision making is largely driven by economics and that social values do not really determine behavior. Affordability of retirement is always a key factor. The discussion of values links to the two retirement decision models mentioned above (economics versus social norm).

## Methods of Investing and Distributing Retirement Assets

There was quite a great deal of focus around the issue of annuitization versus selecting a lump sum and investing the money privately. Two papers provided models to show the implications of different combinations of withdrawal patterns and asset mixes. In Raymond Murphy's paper his analysis shows that the probability of ruin is no greater with more aggressive investments but the upside potential is much greater. Suzanne Doyle and John Piggott from the University of New South Wales presented a fascinating discussion of the risks involved in retirement plans. They also compared annuities and self-investment from different perspectives:

- Replacement rate risk—the risk of inadequate retirement income to maintain a reasonable standard of living
- Investment risk—risks involved in investing assets; the annuity rate risk cited below is an example of a type of investment risk related to the position of assets at a given point in time
- Inflation risk—risks related to erosion of purchasing power
- Annuity rate risk—if an annuity is purchased, risk related to the fluctuations in annuity rates over time; the same risk is present in reverse in defined benefit plans that permit lump-sum cash-outs in that the cash-out rates vary with markets over time
- Anti-selection risk—this is a big risk from the perspective of the insurer or the plan sponsor offering an annuity versus a lump-sum option
- Longevity risk (risk of outliving assets)—this risk relates to all family members dependent on the retirement income; it is a particularly important issue for widows
- Contingent outlay and medical cost risk—risk arising from significant additional needs, particularly later in

life; such needs may arise from unexpected medical costs and/or the need for additional care due to frailty, or if there are other family members needing help

- Default risk—the risk that the promisor of an annuity will default on payments.

There was significant discussion about the cost of purchasing an annuity where such costs include the risk charges, the cost of anti-selection, and expense charges. It was estimated that such costs are 15–20% in Australia, but that they are lower, 5–15%, in the U.S. Individual annuities have higher expense charges than annuities provided on a group basis.

There was also discussion of whether and under what circumstances annuitization should be mandatory. Different countries have very different policies with regard to whether retirement funds must be paid out as an annuity, in what form, and whether annuities are encouraged. In the U.S. DC plans usually pay benefits as lump sums, whereas DB plans more often pay annuities but may offer a lump-sum option. The new hybrid plans in the U.S. often offer a lump sum. Social security benefits are paid out only as an annuity, but a part of the debate around private accounts is whether lump sums should be offered. In the U.K. qualified plan benefits in excess of a specified, small, tax-free lump sum must be paid out as an annuity. Publicly provided benefits, and their alternatives, must be paid as annuities.

In the U.S. benefit payments from tax-qualified retirement plans must be paid beginning in the year after one reaches age 70 and a half. There are different options for distribution including installment payouts calculated according to a formula in the law. It was clearly demonstrated that the installment payouts are poorly matched to retirement needs and leave retirees very vulnerable to outliving assets. Public policy in this area is a barrier to meeting retiree needs. Beverly Orth in her paper summarizes several areas in which U.S. pension law should be changed in order to make it easier to meet the needs of an elderly population.

In the U.S. purchase of annuities is not popular. Many people feel that they can do better with their investments, particularly after considering the expense charges. They also want to have the principal available for their heirs should they die soon. There is not much focus on outliving assets. Further work is needed around this issue because data on the economic status of the elderly clearly show that the economic status declines at older ages.

Discussants called for new models depicting a portfolio including traditional investments, annuity income, and insurance coverages. Outliving assets is a serious issue, and it is clearly a problem for many elderly.

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Traditional models for looking at portfolio returns and payout strategies incorporate only traditional classes of invested assets and not annuities and insurance. This is a major area for further research.

## Issues with Regard to the Frail Elderly

Care for the frail elderly is a major problem for which there is no solution in place for many families. Elderly women living alone are most likely to need such care on a paid basis. Eric Stallard presents key summary U.S. data on expected costs of care over a lifetime. He estimates that the discounted present value of future health care costs at retirement is \$150,000–182,000, with Medicare paying about 50–55% under current law. Health care costs are much less of a concern to the individual in Canada because of much more extensive public benefits, and much lower residual needs over the public benefits. Health care is a long-term public policy issue in many countries including the U.S. and Canada.

The same individuals are likely to need both long-term care and acute care. Variability in costs for the individual is very large. Although public programs in many nations finance acute medical care, this is much less true for long-term care. Provision of and financing of long-term care is a challenge in many countries.

Stallard's paper discusses issues involved with population and cost projections to focus on the health status of elderly Americans and the costs associated with such projections.

The participants discussed the data in the National Long-Term-Care Survey. Only 7% of long-term care is paid for by private insurance. Individuals and Medicaid are the largest payers.

The data provide a great deal of information on the continuum with regard to individual health status and the status of the population, and divide the frail population into those who could qualify for benefits under a long-term care policy qualified under HIPAA (the Health Insurance Portability and Accountability Act of 1996) and those who could not. Only about half of the disabled could so qualify. The SOA's Long-Term-Care Committee will be offering a disk with much of these data. It will be available from the SOA Publication Orders Department (847-706-3526).

In the U.S. long-term care insurance has been sold for a number of years, but it covers only a small percentage of the population and a small percentage of total care. Insured claims data are not mature. Also, benefits are provided only for the most severely disabled individuals.

The National Long-Term-Care Survey, on the other hand, is representative of the total population. Several waves of the study have been completed. One of the challenges for actuaries is resolving how to use the national and insured data together.

Different options for integrating care with housing are emerging. Table 3 in this author's paper "Retirement Needs" outlines several such options. Assisted living is growing in importance and offers an alternative to nursing home care for many individuals. Its specific definition varies by state. The individual or the family most often pays for assisted living. The assisted living environment is much more homelike than the very institutional setting in nursing homes. Questions were raised about whether the typical long-term-care insurance policy would cover a stay in assisted living, but there were not definitive answers to this question.

## Issues Relating to Different Groups of People

Not everyone is in the mainstream system, and of those who are, not all do as well as others. In looking at our population, several sets of issues come to mind: people not part of the mainstream system and differences between families and unmarried individuals and between men and women.

### *People Not Part of the Regular Retirement System*

Most of the papers focused on people covered by regular retirement systems and who have the resources to apply reasonable planning tools. A substantial portion of the elderly population (40% according to Robert Friedland) is only marginally functional. A system requiring application of sophisticated planning and management tools would clearly be beyond their reach. We must recognize the reality of this portion of the population and consider how to provide for them as part of a total system.

### *Differences between Families and Unmarried Individuals, and between Men and Women*

Issues were raised about the role of different members of families. The paper by Nancy Dailey and Kelly

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O'Brien points out that overall men and women still play very different roles in families, and that retirement security is influenced by various combinations of caregiving and labor force participation. Women are much more likely to be the caregivers. At the same time women live longer and are much more likely to be alone and poor or near poor. An analysis of Baby Boom women indicated that relatively few of them would have sufficient assets for a secure retirement. This is a surprise to some observers who believe that as more women entered the workforce they would no longer have concerns about retirement security. Karen Holden's paper focuses on widows and what happens to women at time of widowhood. Overall there is a significant decline in economic status. A single person is assumed to need about 75% as much income as a married couple. There are situations where this percentage might be much larger. When moderate levels of assistance are needed, a couple can help each other out, but a single person is likely to need paid help.

Outliving assets is an important issue, and it is a particularly serious one for women living alone. The data on widowhood show a decline in economic status at time of widowhood. Assets are often depleted if one partner in a couple is too ill to be cared for by the spouse, and this depletion of assets prior to death can be particularly serious if provision was not made for the survivor. The situation of divorced women is also difficult, and the percentage of divorced elderly women in poverty is very high.

Jonathan Forman's paper focuses on spousal rights in a pension plan and provides for several different options with regard to treatment of such rights. He provides us with provocative thinking about different models. These models are important in focusing on rights at divorce, on widows' benefits, and on the ongoing family structure. Any discussion of the rights of spouses can be troublesome, and there are no perfect solutions. There is a great diversity among the relationships of spouses at any time, and over time within the same family. In some families one spouse cares for the household and the other works outside. In many others both work outside, but the duties are split unequally. In some couples, while legal marriage continues, the family is split up. Most structures will have different effects on different family economic situations. This is also an area for further work.

## Marketplace Issues

Some of the challenges facing retirees are driven by the state of the marketplace. The products and services

offered today are not ideal for meeting the needs of retirees. In some cases this is the result of barriers in the form of policy. In others the matter may simply be a function of the decisions of sellers or the lack of an adequate market for a product. In some cases there might be a good market if there was a suitable distribution mechanism.

For the period after retirement the marketplace needs better, indexed annuities and better options to care for the frail elderly. In addition, individuals need a better way to focus across the range of product options.

## Mismatches

As the themes presented in this research are reviewed together, we find several areas of mismatches between the needs of retirees and the benefits that are available. These issues are particularly important in this era of increasing individual responsibility. Mismatches can be defined in terms of policy barriers, individual choices, employer policies, and marketplace issues.

The mismatches include the following:

- Where joint and survivor benefits are utilized, the benefit to the survivor is often less than needed to maintain a couple's standard of living. It is estimated that an individual needs about 75% of the amount needed by a couple. Where joint and survivor benefits are not utilized there may be inadequate recognition of the needs of the survivor.
- Payout forms generally do not recognize increasing needs over time, including those tied to inflation, frailty, and increasing medical costs. The annuity market has very limited options for protecting against inflation, but there is also limited interest in purchasing such annuities because of the big decrease in original benefits.
- Lump sums are increasingly popular, and this can be a problem for some people. There are challenges in investing these assets as well as the issue of outliving them.
- Payout forms do not often focus on risk of outliving assets. This leads to some people overspending and creating severe problems, and some people underspending and not using their assets well.
- Health care financing is very important for the elderly. Although Medicare currently covers most acute care, lack of coverage for prescription drugs is a major issue for many. For those without additional employer coverage, this is a big problem.
- Financing vehicles for coverage of frailty are inadequate. Long-term-care insurance provides a means of financing only part of such care.



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- Mortality and demographic trends point to the need for increasing retirement ages. So far this has not really happened.

## Policy Implications and Stakeholders

The issues discussed in the symposium are extremely important to the society in many countries, in which the population structure is changing. There will be dramatic increases in the percentage of elderly as the Baby Boom ages in the U.S. Along with population aging goes reform and trimming of social security systems, and a move to defined contribution approaches for employer-sponsored retirement plans. Responsibility and risk are being shifted to individuals.

Some of the broad policy questions that arise include the following:

- How much freedom should individuals and families have in planning for old age? To what extent should they be restricted in the options open to them in order to protect individuals in old age?
- What are pensions about, and how should equity and adequacy flow together?
- What is the public interest in spousal rights and survivor income needs? (This is related to the question of individual freedom.)
- What are the appropriate trade-offs for granting of tax preferences?
- To the extent that decisions leave people very poor in old age, to what extent should public assistance raise people's living standard?

Social security reform is being debated in the U.S. Under the current program there is a balance between equity and adequacy with substantial redistribution. Single-earner families, particularly those with lower incomes, are winners. Dual-earner families are losers, and the wives in these families are often big losers as widows. The reform proposals on the table look at the potential for moving to individual accounts or for making other adjustments to the system. Lump sums might be a possible outcome if benefits are provided through individual accounts. Availability of investment choices is also an issue with private accounts, and there are concerns about poor choices.

Issues raised affect all practice areas within the SOA. Although the project is sponsored by the retirement systems practice area, a secure retirement for elderly persons comes from pensions, health benefits, life insurance, and making good investment choices for money saved. The goals of the project were to help identify events, modeling approaches, and data so actuaries would have better tools for designing financial security systems and for helping individuals.

Policy areas for further study include

- Mismatches between distribution requirements and need
- Issues related to mandatory annuitization and the extent of it
- Potential for more flexible and inflation-indexed annuities
- Potential for medical IRAs and other financing for medical care
- Definitions of claim eligibility in HIPAA, which cover only about half of the frail elderly.