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Office of Disability, Aging and Long-Term Care Policy



SIMULATION MODELING ON LIFE CARE ANNUITY: FINAL REPORT

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INTRODUCTION

State and federal interest in methods of increasing private pre-funding of long-term care expenses continues to grow because of persistent gains in longevity and looming increases in the number of older Americans as the Baby Boom generation enters retirement. Despite recent research indicating declines in old age disability, growth in the number of persons surviving to advanced ages will increase the number needing long-term care. States and federal governments fear that without large expansions in private financing, the Medicaid program will incur much of the associated costs.

The most widely known and established vehicle for private pre-funding is long-term care insurance (LTCI). This type of insurance remains uncommon despite impressive improvements in the quality of LTCI products on the market over the last two decades. About 10% of Americans age 65 or older held LTCI coverage in 2002, and about 7% of persons age 55-64 (Johnson and Wiener 2006; Johnson and Occello 2005).¹ According to a recent report from Milliman, Inc., an independent actuarial and consulting firm, LTCI market developments since 2002 have been discouraging. The number of insurance companies selling stand-alone LTCI products is contracting, due to industry consolidation and "strategic concerns," with the value of new paid LTCI premiums declining for four straight years through 2006.²

With low LTCI market penetration among older persons and high premiums for good quality coverage at older ages, and fixed retirement incomes among the elderly, recent attention has turned to ways that asset accumulations might be used to fund or pre-fund long-term care needs. LTCI is almost exclusively purchased through installment premiums and draws primarily on current income of purchasers. Examples of ways to increase the use of assets to pay for long-term care expenses include facilitating use of reverse mortgages to make it easier for consumers to draw on home equity, and other innovative mechanisms funded by asset accumulations rather than current income. In a 2001 study,³ we examined one such asset-based mechanism--a single-premium annuity funded by retirement savings that provides a stable level of retirement income for life and a higher payout level if disability occurs. Several insurers are reported to be considering similar products and other new combination products that link annuities or life insurance with long-term care protection. Their interest arises in

¹ Johnson, RW, and JM Wiener. 2006. "A Profile of Frail Older Americans and Their Caregivers." Retirement Project Occasional Paper #8. Washington, DC: The Urban Institute (http://www.urban.org/UploadedPDF/311284_older_americans.pdf). Johnson, RW, and CE Uccello. 2005. "Is Long Term Care Insurance the Answer?" Issue in Brief, Center for Retirement Research, Boston College (<http://www.urban.org/UploadedPDF/1000795.pdf>).

² Delane, H, C Friedrich, and B Millsap. 2007. "Long-Term Care Insurance Combination Products: A New Opportunity." Milliman Inc. (<http://www.milliman.com/expertise/life-financial/publications/rr/ltc-combination-products-RR05-01-07.php>).

³ Murtaugh, C, BC Spillman, and M Warshawsky. 2001. "In Sickness and in Health: An Annuity Approach to Financing Long-term Care and Retirement Income." *Journal of Risk and Insurance* 66(2): 225-254 (<http://www.tiaa-crefinstitute.org/research/articles/docs/060101.pdf>).

part because of provisions in the Pension Protection Act of 2006 that extend LTCI tax preferences to long-term care benefits in such combination products.⁴

In this report, we examine the potential for asset-based pre-funding of retirement income and disability insurance through an annuity combining income and long-term care protection, in the context of increased interest in reverse mortgage financing. We first consider potential financial access among the older population. We compare their assets with the price of a combined annuity and their income and assets with published guidelines for “affordability” of LTCI. We also focus on the extent to which persons who otherwise would not be able to purchase pre-funded LTC protection could if they had access to their housing equity. Finally, we consider two other factors that may affect access to private pre-funding: medical underwriting for LTCI and the relaxed underwriting theoretically possible in a combined annuity; and alternate annuity designs that would reduce the annuity cost without reducing long-term care benefits.

⁴ Delane, et al. 2007.

BACKGROUND

In our 2001 paper,⁵ we simulated single lump-sum premiums paid in advance for a combined annuity to finance stable retirement income beginning immediately and an increased benefit level if disability occurs. This type of annuity is a disability-escalating single-premium immediate annuity (SPIA)--as distinct from variable and other types of annuities often marketed aggressively and sometimes inappropriately to retirees as investments.⁶ SPIAs insure a given level of income for the life of the contract. The disability-escalating SPIA we model continues for remaining life.

Such a disability-escalating annuity, in theory, could reduce adverse selection that increases the cost of income annuities and expand the proportion of elders medically eligible for long-term care protection. We demonstrated that there is a tradeoff between mortality and disability risks that would allow substantially relaxed medical underwriting and make it possible to offer long-term care coverage to a larger population than under current LTCL underwriting practices. A small pricing advantage also was demonstrated. The price of a combined income and disability annuity for the expanded risk pool was estimated to be about 5% lower than the price of the same products purchased separately under conventional LTCL underwriting.

In contrast to the annuity we examined, most of the few annuity-based products now on the market appear either to be limited to annuities with favorable withdrawal conditions if annuity payments are used for long-term care expenses, or to annuities that offer long-term care benefits as a rider purchased with additional periodic premiums, similar to those for conventional LTCL. At least one company in the United States offers a disability-escalating *deferred* annuity--with payments beginning a predetermined number of years in the future--based on research conducted by Christopherson.⁷

Other potential advantages in a combined annuity like the one we examine may attract a more diverse risk pool than LTCL. By explicitly integrating long-term care protection with more general retirement security planning, a combination annuity may address often-cited consumer aversion to focusing on the risk of future frailty. The continuing decline in prevalence of conventional pension annuities through employment and rising prevalence of wealth accumulations in defined contribution plans, such as 401(k) accounts, also could increase demand for annuitization *per se* as a way to insure stable income throughout retirement. Policymakers also may have an interest in

⁵ Murtaugh, et al. 2001.

⁶ Freiman, MP. 2007. "A Look at Hybrid Insurance Products with Long-Term Care Insurance." American Association of Retired Persons (AARP) Public Policy Institute Report #2007-11 (http://assets.aarp.org/rgcenter/il/2007_11_hybrid.pdf).

⁷ Christopherson, DL. 1992. "New IDEAs for Insuring Long-Term Care." *Journal of the American Society of CLU and ChFC* 46(2): 42-53.

encouraging increased private annuitization in light of pressures on Social Security that may force limits on future growth in benefits.

The cash long-term care benefit in a combined annuity has the potential to simplify choices and reduce uncertainty about future benefits, two frequently cited reasons for the low market penetration of conventional LTCI. Most LTCI plans now on the market reimburse for allowed services used up to a periodic (e.g., daily, weekly, monthly) maximum benefit, often with limits on the types of providers that may be used and lower maximum benefit levels for services received at home. Much of long-term care, however, involves less skilled care that can be provided by family members, friends, and other unlicensed providers and needs such as home modifications or assistive devices. Cash benefits reduce the level of consumer vigilance required to assure that the LTCI policy selected will be flexible enough to cover needs that actually arise and to accommodate future changes in the formal long-term care delivery system. Recently, policy and advocacy interest has turned to the advantages of cash benefits, fostered in part by the success of the Cash and Counseling Demonstration, in which greater levels of service and consumer satisfaction were achieved--even at low benefit levels--when beneficiaries were able to manage a cash allowance in lieu of traditional agency-provided services.⁸

In our initial analysis of a combined annuity, we focused on the impact of relaxed underwriting and did not address how the distribution of income and assets among the older population would affect the potential reach of private financing through either a combined annuity or conventional LTCI. In this study we use more recent data and simulation methods to examine the potential role of financial resources in access to pre-funded long-term care protection. We focus particularly on housing wealth, in light of heightened interest in home equity as a source of long-term care financing.

Reverse Mortgages and Home Equity Financing

Recent studies have highlighted the use of reverse mortgages to help older persons use their home equity for long-term care needs. Reverse mortgages allow homeowners to borrow against their home equity while remaining at home, and repayment of the loan is deferred until they leave the home. Home Equity Conversion Mortgages (HECM) through the Department of Housing and Urban Development are by far the most common type of reverse mortgage sold to date. Proceeds may be received as a lump-sum, as a line of credit that earns interest on any unused amounts, or as guaranteed periodic payments over remaining life, depending on the type of reverse

⁸ Carlson, BL, L Foster, SB Dale, and RS Brown. 2007. "Effects of Cash and Counseling on Personal Care and Well-Being." *Health Services Research* 42(1) Part II: 467-487. American Association of Homes and Services for the Aging. 2006. "AAHSA's Framework for Financing Long Term Care." (http://www.aahsa.org/advocacy/nursing_homes/payment_financing/documents/fc_short_version.pdf). Community Living Assistance Services and Supports Act of 2007, (<http://www.pascenter.org/documents/CLASSACT2007.pdf>). Introduced July 10, 2007, as Senate Bill 1758, sponsored by Senators Kennedy and Harkin, and as House Resolution 2001, sponsored by Representatives Pallone and Dingell. Official text not yet available.

mortgage. An online calculator provided by the AARP indicates that consumers may be able to access roughly half their equity after deductions for expenses and loan interest as either a lump-sum or as a line of credit through a HECM loan.⁹

Estimates of reverse mortgage potential vary considerably, however. Stucki¹⁰ estimates that older homeowners have over \$2 trillion in home equity and that a total of \$953 billion--on the order of half their total equity--might be made available through reverse mortgages. Merlis¹¹ estimates much smaller potential. He finds that a little over 40% of the 24 million households headed by an adult age 62 or older would not qualify for a HECM because they lack home equity, do not meet age requirements, or because the maximum loan is insufficient to cover closing costs. After excluding 1.6 million potential borrowers with very low incomes and few financial resources other than their homes, and 3.8 million households in the top quartile by financial assets, he identifies about 8.8 million households as the target population for reverse mortgage financing. Assuming these 8.8 million households qualified for and obtained a median loan of roughly \$47,000 in 2000, the implied total would be approximately \$413 billion, less than half the total estimated by Stucki.

Other research casts doubt on the reach of reverse mortgage financing, at least in the short run. A recent Harris survey of homeowners aged 50 to 65 found that only 6% of respondents planned to use their home equity for ordinary living expenses in retirement, with little variation by age.¹² Data from several sources indicate that few people had taken out reverse mortgages as of the first part of this decade, perhaps less than 1% of older homeowners.¹³ The National Council on Aging (NCOA) website indicates substantial growth, however, with the number of people taking out reverse mortgages growing from fewer than 6,000 in 2000 to more than 48,000 in 2005.¹⁴ The NCOA website also notes, however, that while reverse mortgage proceeds have been used to pay for home repairs, and health and long-term care needs, "... funds have been used to buy everything from a second car, an airplane or recreational vehicle, or taking a dream vacation."

⁹ Available at <http://www.aarp.org/money/revmort/>.

¹⁰ Stucki, BR. 2005. "Use Your Home to Stay at Home. Expanding the Use of Reverse Mortgages for Long-Term Care: A Blueprint for Action." Washington, DC: NCOA (<http://www.ncoa.org/Downloads/ReverseMortgageReportPublications.pdf>).

¹¹ Merlis, M. 2005. "Home Equity Conversion Mortgages and Long-Term Care." Washington, DC: Georgetown University Long-term Care Financing Project (<http://lrc.georgetown.edu/pdfs/hecmfullreport.pdf>).

¹² Munnell, AH, M Soto, and J-P Aubry. 2007. "Do People Plan to Tap Their Home Equity in Retirement?" Center for Retirement Research at Boston College Publication Number 7-7 (http://crr.bc.edu/images/stories/Briefs/ib_7-7.pdf).

¹³ Stucki. 2005. Fisher, JD, DS Johnson, JT Marchand, TM Smeeding, and BB Torrey. 2007. "No Place Like Home: Older Adults and Their Housing." *Journal of Gerontology: Social Sciences* 63B(2): S120-S128. Munnell, et al. 2007.

¹⁴ NCOA, "Trends in Reverse Mortgages--A New Option For Senior Homeowners." (<https://www.ncoa.org/content.cfm?sectionID=11&detail=1659>).

High loan costs for reverse mortgages and limits on the amount of equity that can be taken out may partly explain their lack of appeal. The amount that may be obtained through a HECM loan is capped at the median home value in the county where the applicant lives and varies inversely with life expectancy. The general life tables used to determine reverse mortgage loan amounts, in addition, may reduce amounts available to borrowers with current long-term care needs because they overstate life expectancy for persons already experiencing disability.

Increased transaction costs when reverse mortgage financing is used to pay for LTCI also reduces the amount of equity actually available to pay for care. Merlis¹⁵ estimates that only 36 cents for every dollar of equity would be available for actual long-term care benefits because of the dual transaction costs of using a HECM loan to pay for LTCI. He estimates that medical underwriting would further limit this use of reverse mortgage funds, with only 6.4 million of the 8.8 million households in his target market likely to pass underwriting.

Primary Aims of this Report

Our aim in this analysis is to revisit the potential for a combined income and disability annuity in light of the financial resources of the older population. We compare the proportion of the population potentially able to purchase a combined annuity or LTCI, and examine the importance of home equity in estimates of the proportion who could pre-fund long-term care needs through a combined annuity.

The primary research questions explored empirically in this project for simulated cohorts of retirees at age 65 and age 75 are the following:

- What proportion of persons has the financial resources to purchase a combined annuity or to meet published guidelines for conventional LTCI “affordability,” and how is their wealth distributed between housing and nonhousing assets?
- What proportion of persons estimated to be able to purchase annuity coverage can do so only because of their housing wealth?
- What proportion of persons who do not meet “affordability” guidelines for LTCI purchase has substantial housing wealth but insufficient assets to purchase the combined annuity?
- How does medical underwriting affect conclusions about potential access to pre-funded LTC protection?
- How do characteristics and lifetime disability experience differ across groups defined by “affordability” guidelines?

¹⁵ Merlis. 2005.

- To what extent might different product designs that reduce the cost of a combined annuity without reducing disability benefits affect access?

Three aspects of our analysis are important to emphasize. First, we focus on ages at or after retirement, although many argue that expanding long-term care pre-funding depends on pushing the decision earlier during working years. Second, our primary analysis is limited to comprehensive cash benefits in the combined annuity and to LTCI policies with similarly comprehensive benefits. We do not address empirically the more general question of how many retirees could afford *any* LTCI policy, including policies with less comprehensive coverage, lower benefit levels, or shorter benefit periods, although we will discuss issues surrounding lower levels of protection that could reduce LTCI costs and increase access to LTCI in the conclusion. Finally, the analysis considers financial situation at the assumed age at which purchase is considered. Thus, it examines the potential capacity to privately pre-fund future long-term needs, not financial situation at the time when care is needed or among all persons age 65 or older.

DATA AND METHODS

The data for our analysis are primarily from the 1993 National Mortality Followback Survey (NMFS), a nationally representative sample of persons age 15 or older dying in that year. The survey is the most recent in a series of surveys conducted by the National Center for Health Statistics to study causes of death and disease, demographic trends in mortality, and other health and health care issues. The next of kin or another knowledgeable respondent was asked to provide information about the decedent's health history, limitations in physical and mental functioning, lifestyle (e.g., history of smoking, diet) and socioeconomic characteristics. These data, which include the timing of onset of conditions and functional limitations, provide the foundation for the projections of longevity and disability qualifying for benefits as well as our simulation of medical underwriting. Their strength is providing actual experience over the lifetime.

We analyze samples of 6,709 persons dying at age 65 or older and 4,728 persons dying at age 75 or older. We use weights that adjust the longevity distribution within the samples to represent persons turning ages 65 and 75 in 2000, with further adjustment for differential longevity by education to take into account higher educational attainment in more recent cohorts relative to the samples of decedents. This methodology allows us to use the life health and disability experience of recent decedents to simulate the experience of these two recent age cohorts over their remaining lifetimes.

Financial Data

Because the individual level income and asset data on the NMFS are for the last year of life, they are not suitable for estimating resources available at our selected purchase ages. We therefore use data from the 2000 Health and Retirement Survey (HRS) to simulate the characteristics of persons by financial situation at purchase age.

Detailed information about income and assets is a focus of the HRS/Asset and Health Dynamics Among the Oldest Old, making it a rich source of information about the financial status of the older population. Financial data are collected at the household level, defined as the respondent and the respondent's spouse, if married. The wealth measures we use are net wealth, including the value net of debt of the primary residence, other real estate, vehicles, businesses, retirement accounts, financial assets, and other assets; net household wealth excluding the primary residence; and the net value of the primary residence. We do not include the present value of Social Security benefits, pensions, or private annuities. Thus, income derived from such assets is included in the income measure, but wealth measures include only assets that have not already been annuitized.

To link these data with the characteristics and experience of NMFS decedents, we compute the proportions of HRS respondents in cells defined by education, gender, and marital status at purchase age who would meet various "affordability" assumptions and

merge these proportions onto the corresponding cells on the NMFS. We then estimate the characteristics and experience of, for example, persons with sufficient assets to purchase a combined annuity as a weighted average, where the weights are the proportion of persons in each cell who meet each affordability assumption. An important point to which we will return in the conclusion is that the NMFS data represent individuals, whereas the financial data represent the resources of the respondent and spouse. Thus, for married couples our estimates assess “affordability” of coverage for one spouse based the couple’s joint resources.

In order to have large enough cell sizes, we use samples of 5,651 persons age 65-74, and 3,735 persons age 75-84 in 2000 to compute proportions by cell. We would therefore expect that our estimates are slightly conservative because some persons who would have met a given financial criterion at age 65, for example, may not at age 74.

Underwriting and Benefit Criteria

We simulate conventional LTCI underwriting using methods developed in earlier work modified and updated to use the more recent 1993 NMFS data.¹⁶ Based on review of a variety of sources of information on industry underwriting practices, we identified seven conditions that are associated with greater likelihood of being rejected for LTCI. We then identified as failing conventional underwriting each person in our NMFS sample with any of the seven conditions at the prospective purchase ages. The conditions are: (1) activity of daily living (ADL) limitation; (2) cognitive impairment; (3) major illness (e.g., chronic obstructive pulmonary disease); (4) stroke; (5) recent heart attack or any heart attack complicated by other factors; (6) heavy alcohol consumption; and (7) obesity as an adult. The final condition (i.e., obesity as an adult) is not typically an explicit criterion used to screen out LTCI applicants, but is associated with conditions and health use often leading to rejection.

We estimated eligibility for LTCI benefits and disability benefits under the combined annuity for each individual as the age of onset of disability in any two of five ADLs, or cognitive impairment. This standard is similar to that used in the Health Insurance Portability and Accountability Act of 1996 to define benefit eligibility for LTCI policies qualifying for tax deductions. The five ADLs are bathing, dressing, using the toilet, getting in and out of bed or chairs, and eating.

We model relaxed, or “minimal,” underwriting for the combined annuity as excluding only those already eligible for disability benefits at the time of purchase. Although our earlier results showed that risk pooling would remove the need for any underwriting in a situation of mandatory purchase, we assume that no insurer in a

¹⁶ Murtaugh, CM, P Kemper, and BC Spillman. 1995. "Risky Business: Long Term Care Insurance Underwriting." *Inquiry* 32: 271-284.

voluntary market would be willing to sell an annuity with disability-contingent benefits to persons already eligible for disability benefits.

Premium Estimates

Table 1 provides our estimated premiums for the combined annuity as well as for LTCI coverage comparable to the disability benefits included in the combined annuity. We also provide sample market premiums for comparison with our estimates. The LTCI benefits we model are cash disability payments and have an unlimited, or lifetime, benefit period to make them comparable to the disability benefits in the combined annuity. Clearly, premiums for the comprehensive LTCI benefits we model are higher than premiums for policies with more limited benefits and/or a shorter maximum benefit period. Thus, our LTCI estimates are of the proportion who could purchase a comprehensive long-term care benefit, not the proportion who could afford more modest benefit packages.

Combined Annuity Premiums

The base annuity design we model is a single-premium income annuity that begins at purchase, coupled with a disability benefit that increases income if disability criteria are met. Lump-sum premiums for the combined annuity are computed as the present discounted value of benefits paid over remaining life, assuming a nominal interest rate of 6%, for persons passing minimal underwriting. The benefits are a \$1,000 per month immediate income annuity continuing for life, with a \$2,000 increase in the monthly payment if the annuitant becomes chronically disabled in at least two ADLs or cognitive impairment, and an additional \$1,000 monthly at the four-ADL level. Thus, the disability benefits are similar to LTCI with a lifetime or unlimited benefit period. The maximum initial benefit level of \$48,000 (including the income benefit), is roughly the average cost of a year of nursing home care in 2000, the base year of our analysis. The disability benefits are \$66 per day at the two-ADL level and \$98 per day at the four-ADL level.

We model inflation protection of 3% per year compounded for the income annuity and 5% per year compounded for the disability benefit, and expense and profit loadings of 3.5% and 18%, respectively, for the income and disability premiums. We do not, however, include any additional loading for other charges typically included in conventional LTCI pricing. These include agent commissions, expenses for administering periodic premiums, and adjustments for adverse selection and induced demand arising because insurance reduces the price of services to the consumer. The same methodology and assumptions are used to estimate premiums for three alternative annuity designs, which differ from the base design only in the level, configuration, and timing of benefits.

For comparison with immediate income annuities on the market, we also provide the premium for the portion of the base design combined annuity attributable to the income benefit in Table 1, computed for persons passing conventional underwriting.

Because of their greater longevity, we use this group as a proxy for annuitants.¹⁷ The market premiums for annuities with the same features and benefit level were estimated using online calculators available on the Internet for the federal Thrift Savings Plan (TSP) and American International Group, Inc. (AIG) through Vanguard. Our estimated premiums are slightly higher than unisex premiums from the TSP, and slightly below the range of the gender-specific rates from Vanguard/AIG. The TSP uses a 5.5% interest rate (compared with our 6% nominal rate), which would imply a higher premium. Lower costs in a large employment group may contribute to lower TSP premiums. The Vanguard/AIG annuity premiums are based on a 5% interest rate assumption, which would make them higher, all else equal. Different life expectancy assumptions also may contribute to differences, but we conclude that our estimates are reasonable approximations of market premiums for life annuities.

Long-Term Care Insurance/Disability Premiums

It is less straightforward to compare the lifetime disability benefits we model with conventional LTCI with an unlimited benefit period. The disability benefits are in one sense more generous because the full benefit is paid regardless of whether it is used to purchase services. In contrast, most conventional LTCI reimburses for covered services actually used up to a daily, weekly, or monthly benefit maximum. On the other hand, our two-tiered disability benefits rise only with disability level, not with the need for more costly services, such as nursing home care. Conventional LTCI commonly has service-based tiered benefits, reimbursing for home care at a rate below that for facility care, regardless of disability level--for example, 50% of the nursing home per diem.¹⁸

In our previous work, we have compared lump-sum disability premiums under conventional and minimal underwriting to focus on the “discount” on premiums from relaxed underwriting in the combined annuity, rather than on replicating actual LTCI market premiums. LTCI premiums, however, most commonly are level periodic premiums, with waiver of premium when claims begin. Level premiums must be set at a level to assure that premium accumulations adequately pre-fund benefits for the pool of insured persons. To approximate a market LTCI premium for a similar benefit package, our estimated LTCI premiums in Table 1 are level annual premiums with the same benefit structure, assumptions, and loading used to compute the lump-sum disability premium in the combined annuity. They are computed using the experience of the group passing conventional underwriting at each age as the premium at which the present discounted value of expected premiums paid in just covers the present discounted value of benefits, and then marked up by the 18% loading to cover expenses and profit. Because we do not model policy lapses, our premium estimate is equivalent to one including an actuarially fair nonforfeiture benefit.

¹⁷ Life expectancy at age 65 for persons passing conventional underwriting is about 2 years longer than all persons age 65, and about 1 year below that for annuitants based on data from the Society of Actuaries. At age 75, the approximation is far closer, with persons passing conventional underwriting at that age having life expectancy 2 years longer than all persons age 75, but only 0.1 year below that for annuitants.

¹⁸ Some newer policies use a “pool of money” benefit structure, in which there is a single periodic benefit maximum for services received at home or in a nursing facility.

Market premiums for policies with benefits as similar as possible to those we model are taken from three sources. The first source is an online premium calculator provided by the Federal Long-Term Care Insurance Program (FLTCIP), which would be expected to offer lower premiums because it is a large employment group plan. The second are estimates from Weiss Ratings, Inc.,¹⁹ and the third is an online calculator provided by AARP for its LTCI plan. Details of the policies and sources are provided in footnotes to Table 1. At age 65, our estimated level periodic premium is within the range of market premiums for policies with reasonably comparable benefits. We would expect our premiums to be somewhat low because, as noted, we do not include additional charges typical in the private market, but on the other hand, neither the FLTCIP nor Weiss Ratings premiums include nonforfeiture benefits. At age 75, however, our estimated premium is low relative to all market premiums. It is within the range of premiums only for the FLTCIP policies, which do not include a nonforfeiture benefit. The FLTCIP premiums also would be expected to be lower than individual premiums owing to group rates. Thus, our estimates of the proportion of older persons who could purchase an LTCI policy with the features we model under the United Seniors Health Council and the National Association of Insurance Commissioners (NAIC) guidelines may be somewhat more generous at older ages than at least these individual market premiums would suggest.

Financial Access Assumptions

Table 2 provides the financial access guidelines used in our estimates, based on two published “affordability” or “suitability” guidelines for LTCI. These guidelines arose out of concern that policies were being sold to consumers for whom the product did not make sense--persons with low income and assets who would quickly qualify for Medicaid if they had long-term care needs. Affordability is not, however, a clear-cut economic concept. Actual demand for LTCI--or for an annuity--depends on many factors not observable in our data, such as the array of prices and products available to an individual, individual aversion to risk, expectations about the likelihood of living a long time or becoming disabled, and, in the case of the annuity, the extent to which wealth is already annuitized.

Long-Term Care Insurance Guidelines

The most often-cited guidelines for LTCI purchase are those from United Seniors²⁰ and NAIC.²¹ Both ignore housing wealth, but include rules of thumb for the minimum

¹⁹ Report in Brown, JR, and A Finkelstein. 2004. "Supply or Demand: Why Is the Market for Long-term Care Insurance So Small?" National Bureau of Economic Research (NBER) Working Paper #10782.

²⁰ United Seniors Health Council. undated. "Private Long Term Care Insurance: To Buy or Not to Buy." Special Report from the United Seniors Health Council (<http://www.acli.com/NR/rdonlyres/C41B0CE0-B008-45E1-AAB7-C109634381A1/197/VitalAgingVol19No3SR.pdf>).

²¹ NIAC. 2003. "A Shopper's Guide to Long-Term Care Insurance." (http://www.ltcfeds.com/documents/files/NAIC_Shoppers_Guide.pdf).

level of *nonhousing* assets at which purchase may be appropriate. Asset guidelines are rationalized both because protecting assets is an important motivation for LTCI purchase and as a cushion against future premium increases that might cause purchasers to allow their policies to lapse. United Seniors recommends a range of minimum income levels for singles and married couples--a minimum of \$25,000 at age 65 and \$35,000 at age 75--and at least \$75,000 in nonhousing assets. The NAIC recommends that the premium be no more than 7% of income. Because it depends on the size of the premium, the NAIC guideline, as will be seen, is more restrictive than the United Seniors income standard when compared with both our estimated premiums and average premiums from other sources. The NAIC minimum nonhousing asset guideline of only \$30,000, on the other hand, is substantially less stringent than the United Seniors asset guideline.

Combined Annuity Assumptions

Issues of pricing and “affordability” of the combined annuity differ from those for conventional LTCI. Premiums for the type of annuity we model are paid as a lump-sum at purchase age, rather than as periodic premiums, so that available assets are the key factor and must be high enough to cover the large initial investment. Because it includes a life annuity, providing a guaranteed income stream from purchase until death, the joint annuity is far more costly than even a lump-sum premium for conventional LTCI alone, although the disability portion of the annuity premium is lower than a lump-sum premium for a similar LTCI policy with conventional underwriting.

No established guidelines exist for annuities. Thus, estimating the proportion of persons who have the resources to purchase a combined annuity requires making assumptions about the proportion of assets the older population would be *willing to annuitize* in addition to assets already involuntarily annuitized through Social Security and employment pensions. Although the upward trend in defined contribution retirement plans suggests both larger available asset accumulations at retirement and potentially greater demand for private annuities to replace defined-benefit pensions, assumptions still rely primarily on theoretical models.

In the absence of accepted guidelines for annuitization decisions, we use two criteria for purchase of the combined annuity. The first is that the premium does not exceed total wealth not already annuitized, including housing wealth, and the second is that the premium does not exceed half of total nonannuitized wealth. These assumptions are meant to provide a threshold for the proportion of persons who possibly could convert their wealth to an annuity with the base design we examine, rather than to suggest a “suitable” level of wealth or annuitization for annuity purchase. The stricter threshold of assets at least twice the annuity premium identifies a high wealth group who could more easily purchase an annuity and retain substantial wealth outside the annuity. The less restrictive threshold including all who would have to convert up to 100% of all nonhousing and housing wealth defines a lower wealth group, some of whom might not be able to purchase with current limits on access to housing equity. It is important to note that we cannot model limits on the amount of equity that

could actually be accessed by individuals through reverse mortgage financing because of transaction costs or local geographic and age-related restrictions on loan size. Thus, our estimates for complete annuitization of wealth overstate the proportion of persons who could actually access enough housing equity to purchase the combined annuity if they had to rely on reverse mortgage financing.

Complete annuitization is the optimal level of annuitization found in the theoretical literature under a variety of circumstances. Lower levels of annuitization may be optimal, however,

- if some of wealth is already annuitized, such as in Social Security and pensions;
- because of adverse selection in the annuity markets, which has been estimated to increase income annuity premiums by as much as 10%;
- for married couples; and
- in the presence of health risks, such as the need for long-term care, that increase the precautionary desire for liquidity.

Because the combined annuity we model addresses the need for higher income in the event of disability, aversion to annuitization because of the risk of needing long-term care presumably would be less than for a conventional income annuity.

Both of our thresholds imply a substantially higher level of voluntary private annuitization than currently occurs in the United States. According to recent estimates of the extent of annuitization among the older population, the average level of annuitization among persons in the top 20% of the wealth distribution is 13% of wealth, including Social Security, pensions, and voluntary private annuities, and about half is accounted for by Social Security.²² For the next quintile, annuitization amounts to 25% of wealth, with Social Security accounting for nearly two-thirds of the total. At the mean, under our 50% assumption, this would imply that combined annuity purchasers in these two quintiles would annuitize 63% and 75% of total wealth, respectively, although actual implied annuitization rates would be higher or lower depending on where an individual is in the wealth distribution within each quintile.

²² Johnson, RW, LE Burman, and DI Kobes. 2004. "Annuitized Wealth at Older Ages: Evidence from the Health and Retirement Study." Final Report to the Employee Benefits Security Administration, U.S. Department of Labor, Contract #J-9-P-2-0034 (http://www.urban.org/UploadedPDF/411000_annuitized_wealth.pdf).

POTENTIAL FINANCIAL ACCESS TO THE COMBINED ANNUITY AND LONG-TERM CARE INSURANCE

In this section, we provide our estimates of the proportion of persons meeting--and not meeting--the various financial thresholds in our assumptions and profile their income and wealth. These estimates rely entirely on the HRS samples and do not reflect the additional impact of medical underwriting, which will be examined in the next section.

Combined Annuity

For the combined annuity (Table 3), we show the proportion of the population for whom the combined annuity premium would represent no more than half of total wealth, and the marginal group for whom the premium would represent between 50% and 100% of wealth. For simplicity, we refer to these groups as the higher wealth and lower wealth groups, respectively. In both cases, wealth is defined as all wealth that is not already annuitized, including housing equity. Recalling that our estimated premium for the combined annuity is about \$219,000 at age 65, the implied total wealth level is \$438,000 or greater for the higher wealth group, and between \$219,000 and \$438,000 for the lower wealth group at age 65. The approximate thresholds at age 75 are \$362,000 for the higher wealth group and between \$181,000 and \$362,000 for the lower wealth group. We report estimated mean household income and total, nonhousing, and housing assets. In the final column we report the percent of persons in each group meeting each assumption *only* if they can draw on their housing equity.

At both age 65 and at age 75, nearly one in four persons is in the higher wealth group and nearly one in five is in the lower wealth group. In all, 45% of persons have sufficient assets to at least cover the premium cost. Average income for persons in the open-ended higher wealth group, approaches twice the average for all persons, and their average assets are higher by a factor of three. In contrast, although the lower wealth group has income slightly above the mean for all persons, their assets are below average. There is a far higher degree of skewing in the high wealth group, with median income and wealth well below the mean, whereas medians are much closer to the mean for the lower wealth group.

Average nonhousing wealth exceeds average housing wealth for both wealth levels, but housing wealth is far more important for the lower wealth group. At both ages, the primary residence represents an average 20% of nonannuitized wealth for the higher wealth group, but 40% of wealth for the lower wealth group (not shown). Thus, it is not surprising that a far larger proportion of the lower wealth group would have to tap into housing equity in order to purchase a combined annuity. At both ages, only a small percentage of the higher wealth group would need to use housing equity, compared with more than two-thirds of the lower wealth group.

We noted earlier that by counting 100% of housing equity, our estimates overstate the proportion with sufficient assets to cover the cost of the premium if their only or best option for accessing housing equity is reverse mortgage financing. As a sensitivity test, we estimated the impact of assuming that all persons needing to use housing equity to purchase would have to obtain a reverse mortgage and would be able to obtain no more than half their equity because of caps on loan size, transaction costs, and their life expectancy. A 50% yield is roughly consistent with equity amounts available through HECM loans, according to an online calculator provided on the AARP website.²³ Using this crude test, our estimates of “affordability” would be reduced to about 37% of persons at each age, with about 16% needing to use some or all of their available equity. Not surprisingly, all of the excluded persons are in the lower wealth group.

We also provide estimates by marital status in Table 3 because of the different implications for decisions to access home equity and different Medicaid treatment of the primary residence for married couples.²⁴ Because the samples of unmarried persons are small, the estimates should be viewed with caution. Married persons have both higher income and asset levels and are more likely to meet the higher asset threshold, but there is no consequential difference by marital status in housing wealth as a proportion of the total or the likelihood of needing to tap into equity to cover the annuity premium cost.

In Table 4, estimates focus on the distribution of housing wealth for persons who would have to draw on equity in order to purchase a combined annuity, and illustrate that only a small proportion of such persons have substantial equity to tap into. Persons in the higher wealth group who would have to rely at least in part on housing assets are less than 2% of the population at each age, but all at age 65 and more than 90% at age 75 have housing assets of at least \$200,000. In contrast, the two-thirds of the lower wealth group who would have to draw on housing equity represent about 13% of the population at each age, and they are far less likely to have substantial housing wealth. Roughly three in four at each age have equity in their primary residence of at least \$100,000, but only about 20% at each age have as much as \$200,000 in equity.

²³ Available at <http://www.aarp.org/money/revmort/>.

²⁴ Historically the value of a primary residence, whatever the value, is excluded from eligibility determinations for single persons unless there is no expectation that the individual may return home and for married persons if a spouse or dependent lives in the home. The Deficit Reduction Act of 2005 excluded persons with "substantial" housing equity, defined as more than \$500,000 (\$750,000 at state option), from Medicaid eligibility except when a spouse or child with disability is residing in the home. In the HRS sample, only 1.5% of persons reported housing equity that great.

Comprehensive Long-Term Care Insurance

Table 5 provides the estimated proportion of persons who would meet either and each of the two LTCI affordability guidelines and their estimated income and assets. Over all, 35% at age 65 and 25% at age 75 would meet one or the other guideline.²⁵

It will be recalled that under the United Seniors guidelines the minimum suggested incomes are \$25,000 for single persons and \$35,000 for married persons. Our estimated LTCI premiums of \$3,593 per year at age 65 and \$5,045 at age 75 represent between 10% and 14% of these minimums at age 65 and between 14% and 20% at age 75. The NAIC guideline that the premium not exceed 7% of income implies minimum incomes of roughly \$50,000 at age 65 and \$72,000 at age 75. Thus, it is not surprising that significantly larger proportions meet the United Seniors guideline. About one-third of persons age 65 and one-quarter of persons at age 75 would meet the United Seniors guideline, compared with a little more than one in five at age 65 and a little less than one in five at age 75 meeting the NAIC guideline.

Income and all categories of wealth for persons meeting either guideline far exceed the average for all persons at each age, and, without exception, nonhousing wealth is far larger than housing wealth. Married persons tend to have higher income and assets in all categories than unmarried persons.

With the relatively high income standards and relatively modest asset standards in both LTCI guidelines--and the high correlation between income and asset levels--income is most often the binding constraint in whether individuals meet the guidelines. Even among well-to-do persons meeting the higher wealth threshold in the annuity analysis, nearly 20% at age 65 have income below the United Seniors guideline, and about twice that proportion do not meet the NAIC income guideline (not shown). Nearly 40% of the lower wealth group at age 65 has income below the United Seniors guideline, and more than two-thirds have income below the NAIC guideline. Given higher LTCI premiums at age 75, it is not surprising that the proportions with insufficient income relative to the guidelines are far larger (not shown).

The importance of these findings with respect to income is that they imply that for small but significant proportion of the older population--and particularly persons age 75 or older facing high age-rated premiums if they can still pass conventional underwriting--using assets to purchase a combination annuity might provide access to long-term care protection with minimal underwriting while also providing a higher standard of living than is supported by their asset accumulations without annuitization.

²⁵ It should be recalled that our premium estimate for 75 year olds, which includes nonforfeiture benefits, was similar to FLTCIP premiums without nonforfeiture and well below the other external market premiums used for comparison in Table 1, implying that our estimates of the proportion of persons meeting the LTCI guidelines are generous. Premiums at age 65 are more similar to market premiums.

Persons Meeting Neither Annuity Nor Long-Term Care Insurance Guidelines

To examine the population facing actual or potential financial barriers to either a combined annuity or LTCI for financial reasons, we grouped persons at each age by whether their total assets were at least as great as the combined annuity premium (Table 6). As seen in Table 3, 45% of the population at both ages has assets at least that great. We then subdivided this group potentially able to purchase a combined annuity into groups by whether they would need to tap into housing equity to do so. Most of the 25% at each age who could afford the annuity without using equity are in the higher wealth group from Table 3 for whom the premium represents no more than half of total assets. In fact, for 70% of the high wealth group, the annuity premium would be no more than half of **nonhousing assets** alone, and they would retain substantial liquidity even after purchase (not shown). Nearly half of the high wealth group has total assets of at least \$800,000, and one-third has nonhousing assets that large. Conversely, nearly all of the group who would need to use housing equity are in the lower wealth group for whom the premium represents up to 100% of total wealth.

The remaining about 55% of persons at each age do not have enough total assets to cover the combined annuity premium, and nearly all also have income and/or nonhousing resources below the LTCI guidelines. Table 7 focuses on the income and assets of this group with financial access problems either because of low income and wealth or because illiquid housing equity represents a large proportion of their wealth. At both ages, income and especially total wealth are well below the averages for all persons. Mean income is about \$27,000 at age 65 and \$19,000 at age 75, and average total assets are roughly \$79,000 at age 65 and \$66,000 at age 75. Contrary to our estimates for persons meeting the annuity and LTCI guidelines (Table 3 and Table 5), average housing equity in this group--including the small proportion who meet LTCI guidelines--exceeds average nonhousing assets. Few, however, have substantial housing assets that they might access. More than one-third at age 65 and 42% at age 75 have less than \$25,000 in housing equity, and only 15% at age 65 and 13% at age 75 have as much as \$100,000 in equity. Not surprisingly, since the combined annuity premium is \$219,000 at age 65 and \$181,000 at age 75, none have as much as \$200,000 in housing equity.

OTHER ISSUES AFFECTING ACCESS

In this section we consider two additional issues that affect conclusions about how many older Americans are potentially able to pre-fund their long-term care needs. The first is medical underwriting, which excludes persons with certain medical and physical conditions from purchasing long-term care protection. The second is design of a combined annuity. Alternate designs could reduce the cost and expand access.

Medical Underwriting

Financial barriers are, of course, only one potential obstacle to pre-funding long-term care needs. Insurers use medical underwriting to exclude applicants who they believe will be more costly. One promising aspect of a combined annuity is the theoretical viability of relaxed underwriting for the disability benefit when income and disability risks are pooled. Table 8 shows the expansion of access possible with minimal underwriting excluding only persons who would immediately be eligible to receive disability benefits. Under minimal underwriting, 97% of persons at age 65 and 94% of persons at age 75 could pass underwriting. This contrasts with 72% of persons at age 65 and 61% of persons at age 75 who would be likely to pass conventional underwriting. The reason why persons excluded by conventional underwriting could be included in the risk pool for the combined annuity but are excluded from LTCI is revealed by their longevity and disability experience. The three columns on the right of Table 8 show life expectancy, the risk of reaching the disability level at which disability benefits begin, and expected years of disability benefits.

Life expectancy for all persons at age 65 is 18 years, just under two years of which will be spent with chronic disability in at least two ADLs or cognitive impairment--the criterion for receiving disability benefits. For persons age 75, life expectancy is 11 years, and they also can expect to spend slightly less than two years with two or more ADLs or cognitive impairment. At both ages, the risk of experiencing this level of disability is approximately two in three. Consistent with the findings in our earlier work,²⁶ persons who could gain access to disability coverage only if minimal underwriting were available differ from persons passing conventional underwriting primarily in that their life expectancy is far shorter. Persons age 65 who are able to pass only minimal underwriting can expect to live another 13 years, about 7 years less than persons passing conventional underwriting. Similarly, persons age 75 passing only minimal underwriting will die on average about 5 years earlier than persons passing conventional underwriting. At both ages expected years with disability are similar for the two underwriting groups, but because of the shorter life expectancy of the minimal underwriting group, their disability would occur sooner.

²⁶ Murtaugh, et al. 2001.

The significance of this for LTCI is that installment premiums would have to be substantially higher to pre-fund the earlier claims. In contrast, timing is less important for the combined annuity premium because it is fully pre-paid and because of the reduction in income benefits in the expanded risk pool resulting from shorter average life expectancy. In fact, with proportional participation by persons passing conventional underwriting and persons passing only minimal underwriting, the combined annuity premium can be about 5% lower than in a pool restricted to persons passing conventional underwriting, primarily because of the reduction in expected years of income benefits. As shown earlier, income benefits account for about \$191,000 (87%) of the \$219,000 combined annuity premium at age 65, and about \$147,000 (81%) of the \$181,000 premium at age 75.

Table 9 examines the risk profile by financial situation of the total pool of persons passing minimal underwriting--including both those who pass conventional underwriting and those who pass only minimal underwriting. Excluding persons who could not pass even minimal underwriting has little impact on the proportion of persons who would and would not have access to the combined annuity under our financial assumptions. For example, 45% of persons at age 65 have assets sufficient to cover the annuity premium (Table 2), and 44% both have sufficient assets *and* pass minimal underwriting. There is virtually no difference at either age in the risks faced or the likelihood of passing conventional LTCI underwriting by persons whose assets are sufficient to cover the combined annuity premium, regardless of whether they would have to draw on housing equity. In fact, persons who have total assets less than the premium also have similar expected years receiving benefits, although their life expectancy and disability risk are slightly lower. They also are slightly less likely to pass conventional underwriting at age 65, so that access to a product requiring only minimal underwriting would be somewhat more important in their ability to pre-fund long-term care expenses.

Table 10 presents similar estimates to those in Table 9 broken out by marital status. Access to minimal underwriting is clearly important in expanding the proportion of both married and single persons with access to long-term care coverage, but the benefit to persons who are not married at age 65, less than two-thirds of whom would pass minimal underwriting, is far larger. This difference by marital status does not exist at age 75. As noted earlier, decisions about accessing home equity and Medicaid treatment of the primary residence are different for married couples than for singles. In addition, however, spouses are an important source of informal disability care. Whereas couples may have an incentive to pre-fund some level of care to support a spouse caregiver, singles may have a strong incentive to compensate for the lack of a spousal caregiver. In fact, the estimates in Table 10 highlight that there are inconsequential differences in longevity and disability risks by financial status, but that singles at both ages have somewhat higher expected years with at least two ADLs, and at age 75, their risk of reaching that disability level is also somewhat higher than for married persons.

Alternate Combined Annuity Designs

In this section we consider how three alternate product designs might affect the premium for a combined annuity and the proportion of persons who would have access to it, without reducing pre-funding of long-term care. Table 11 provides premiums for the three alternates, all of which reduce or defer the income benefit while maintaining the disability benefit. Because of the income benefit's importance in the size of the premium, reductions have a large impact, but may have less adverse effect on the desirability of the combined annuity. On the other hand, reductions in the disability benefit might make the combined annuity less desirable, especially to persons who could pass only minimal underwriting and would have fewer expected years of income benefits. The percent reduction in premium relative to the base design used in the previous sections is provided below each premium estimate. In all alternate designs, as in the base policy, income benefits have a 10-year period certain payout, meaning that the insured or the estate receives at least 10 years of income benefits, even if death occurs within 10 years. This feature improves the benefit to premium ratio for persons who can pass only minimal underwriting.

Alternate 1 reduces the income benefit to \$500 per month from the \$1,000 in our base design, but increases the disability benefit at the two-ADL or cognitive impairment level to \$2,500. Thus, the total income and disability benefit received for future disability would remain unchanged at \$4,000, but income benefits preceding disability would be cut in half. This shift of benefits from the income annuity to the disability annuity would reduce the premium by 37% at age 65 and 34% at age 75. Alternate 2 leaves the income benefit at \$1,000 but defers it for 5 years after purchase. This alternate would have a smaller impact on the combined annuity premium, reducing it by 25% at age 65, and 29% at age 75. Alternate 3 combines Alternates 1 and 2 to both reduce the income benefit and defer it 5 years and has the largest impact, essentially cutting the premium in half at both purchase ages.

Table 12 shows the expansion of access to the combined annuity under each alternative design because of the lower premiums. Access for the base design is repeated for comparison. For all alternates, the percent of persons with potential access at each age reflects the combined impacts of financial criteria and minimal underwriting. As would be expected, the magnitude of the expansion in access increases with the magnitude of the premium reduction, with Alternate 3 providing the greatest expansion of access, and Alternate 2 providing the least. Under Alternate 3, about three in five persons at each age would have access to a combined annuity, compared with about two in five under the base design.

DISCUSSION

Purchasing a combined annuity like the one we model is different from drawing on income or spending assets over time to pay for LTCI. In return for a lump-sum payment, the purchaser receives an immediate income annuity--insurance against declining income if assets are drawn down during retirement--and a flexible cash benefit if disability occurs. Encouraging annuitization coupled with long-term care protection may be a particularly constructive policy with the rise in defined contribution pension plans. Purchasers of combined annuities would be converting retirement savings into their own defined-benefit pension and gaining disability protection. There is some evidence that Congress is focusing on measures that would encourage annuitization. At least some in the annuity industry believe that provisions of the Retirement Security for Life Act of 2007, as introduced in the Senate and House in March, will boost the market for SPIAs as a retirement income vehicle, just as the Pension Protection Act is seen as a step in expanding the market for annuity combinations.²⁷ If passed, the Retirement Security for Life Act would shelter up to \$20,000 per year in taxable proceeds from SPIAs for annuitants and beneficiaries.

The Potential for Asset-based Financing

Our results suggest substantial potential for asset-based financing through a combined annuity or other vehicles to increase private pre-funding of long-term care needs, and that easier access to home equity could play an important role, particularly for persons with more modest wealth. However, at both age 65 and age 75, no more than 45% of the population has sufficient resources to cover the premium for our base combined annuity (about 30% could do so without using their housing equity). Our estimates are based on a perhaps unrealistic upper bound, assuming willingness and ability to use up to 100% of housing equity. Although there are other ways to gain access to home equity, to date the proportion of equity available to individuals through the most common type of reverse mortgage financing falls far short of 100% because of expenses, interest, and age-related or geographic limits.

About 25% of the older population at both age 65 and age 75 are in our higher wealth category and could comfortably afford a combined annuity, in most cases without using any housing equity and while retaining substantial liquidity. Persons in this high wealth group have the financial flexibility to choose among methods of providing for their future long-term care, including through self-insurance in many cases, and they are also likely to have other, less costly ways than reverse mortgages to access housing equity if they wish to do so.

²⁷ Bellersen, J. 2007. "SPIA Sales are in Their Infancy." ProducersWeb.com. Retirement Security for Life Act of 2007. Introduced March 28, 2007, as Senate Bill 1010, sponsored by Senators Smith, Clinton, Collins, Conrad, Isakson, and Snowe, and House Resolution 2205, sponsored by Representative Jones and 43 cosponsors.

Thus, almost all of the expansion in combined annuity access possible by facilitating easier and less expensive access to home equity would be among our lower wealth group, for whom the annuity premium would represent more than half of total assets. One in five persons at each age are in this lower wealth group, and more than two-thirds of this group could cover the annuity cost *only* if they could draw on equity. Most persons who would need to draw on equity have moderate amounts of equity--about one in four has less than \$100,000, and only about one in five has as much as \$200,000. The extent to which individuals are able and willing to draw on a high proportion of home equity, therefore, is a much more critical issue for this lower wealth group, as is the risk of spending down to Medicaid eligibility if long-term care is needed.

In fact, when all housing wealth is considered available, more older persons could purchase our base design annuity than meet the relatively high income standards and relatively modest nonhousing asset standards in published guidelines for purchase of a similarly comprehensive LTCI policy. Only 36% at age 65, and 26% at age 75 meet the LTCI purchase guidelines, but income, not nonhousing wealth, is most often the reason for not meeting the guidelines. This suggests that for a significant proportion of the older population, using assets to purchase a combination annuity could provide access to both pre-funded long-term care protection and a higher standard of living than is supported by their assets without annuitization. For persons age 75, such an option would be more valuable because they face higher age-rated LTCI premiums, and a larger proportion are unlikely to pass conventional LTCI underwriting.

Medical Underwriting and Alternate Designs

The relaxed medical underwriting possible, in theory, in a combined annuity product would significantly expand the proportion with potential access to long-term care coverage to 97% at age 65 and 94% at age 75. This expansion potential is similar for all persons who have sufficient assets to purchase a combined annuity, regardless of whether they would need to draw on housing equity, and disability risks also are similar. Slightly greater potential gains from relaxed underwriting would accrue, however, to persons who do not meet financial criteria for purchase of our base design annuity and to unmarried persons at age 65, regardless of financial situation, who also face higher disability risks than married persons.

Our results demonstrate that the cost of a combined annuity could be substantially reduced--and access increased among those with insufficient wealth to purchase our base design annuity--by designs that reduce or defer income benefits without reducing disability protection. For example, a design that both shifted benefits from the income to the disability portion of the combined annuity and deferred the income benefit for 5 years could cut the cost in half and increase the proportion of persons that could purchase the annuity to about 60% at both purchase ages, assuming willingness to annuitize all wealth and access to 100% of housing assets.

We purposefully considered only alternate designs that maintained the level disability benefit. Clearly less comprehensive benefits in either a combined annuity or

conventional LTCI would reduce the cost and further increase the proportion of persons who could pre-fund some portion of their long-term care needs. Premiums are lower for LTCI policies that have shorter benefit periods, longer waiting periods before benefits can begin, limits on providers that may be used, or no inflation protection. In some cases limited policies may be a reasonable choice for persons with modest financial resources--for example home care only policies for married persons wishing to remain at home as long as possible and protect resources to support a spouse. Reducing benefits enough to make them "affordable" for persons with modest income and assets, however, runs the risk of reducing their standard of living while providing insufficient protection both for purchasers and for public payers. Such concerns were the reason for development of the published guidelines for LTCI purchase used in this report. Some modest income purchasers may even be worse off than if they had not purchased LTCI, for example, if LTCI benefits are sufficient to make them ineligible for Medicaid but not enough to cover long-term care costs.²⁸

Issues in Development of Asset-Based Vehicles

Serious focus on ways to draw on assets, including home equity, to pre-fund long-term care is relatively new, prompted in part by the low take-up rate for conventional LTCI. Barring less expensive access to housing equity, a combination product like the one we model is likely to appeal to the same high income and wealth groups that have dominated the market for LTCI. In this final section, we discuss issues from the perspective of consumers, insurers, and public programs that remain to be considered carefully and addressed.

Consumer Perspectives

Couples face a particularly complex set of decisions with respect to retirement security. They include the adequacy of income for the lifetime of both spouses, the configuration of long-term care protection, and the use of housing equity when a spouse will need to be provided for in widowhood. One important limitation of our estimates is that they are based on data for individuals and therefore do not address joint decisions by spouses or potential price advantages for joint purchase. Our upper bound estimate of the percent of the population that could "afford" the combined annuity is based on the purchase of a single annuity by both married and unmarried individuals who would annuitize 100% of assets including home equity if necessary. Preserving the home for the surviving spouse is less of an issue for high wealth couples where drawing on housing wealth typically is not necessary to purchase a combined annuity, but a significant issue for our lower wealth group. Although married persons have higher income and asset levels and are more likely to be in our high wealth group, there is no consequential difference by marital status in housing wealth as a proportion of total wealth or the likelihood of needing to use equity to cover the annuity premium cost.

²⁸ Kassner, E. 2004. "Private Long-Term Care Insurance: The Medicaid Interaction." AARP Public Policy Institute Issue Brief #68 (http://assets.aarp.org/rgcenter/health/ib68_ltc.pdf).

Annuity combined with long-term care protection may be particularly valuable to single persons because of their lower likelihood of passing conventional underwriting at retirement age and their higher disability risks. They may also have a lower bequest motive, since they do not need to provide for a surviving spouse. Whereas couples have incentives to pre-fund long-term care to support the efforts of a potential caregiving spouse and to assure the financial future of the surviving spouse, single persons may see pre-funding through a combined annuity or LTCI as a way to provide for care in the absence of a potential spousal caregiver. Medicaid eligibility rules also are stricter for single persons, essentially requiring impoverishment, whereas they provide at least some protection for income and assets of spouses of beneficiaries.

Persons at older ages who are beginning to have physical problems and may see their health and financial situation more clearly than at earlier ages also may find the annuity concept more appealing. Older persons are generally able to obtain a larger proportion of equity through reverse mortgages because of their shorter life expectancy.

A large issue remains, however, of the efficiency and advisability of layering transaction costs for multiple products if reverse mortgage financing is used to pay for either an annuity or LTCI. As noted earlier, Merlis estimates that benefits from LTCI purchased with proceeds from a reverse mortgage may represent only 36 cents per dollar of equity, and United Seniors recommends reverse mortgage financing of long-term care only as an option for persons who cannot afford or cannot qualify medically for LTCI.²⁹ A consumer brochure from the Insurance Marketplace Standards Association (IMSA), an independent standards-setting organization for life insurance, annuities and LTCI, specifically counsels against using a mortgage to purchase a standard annuity, although it does not address combination annuities or reverse mortgages and is not focused specifically on the older population.³⁰ Because reverse mortgages are not repaid until the borrower leaves the home, transaction costs may be less of an issue for purchase of a combination annuity that provides both increased income for life and long-term care protection.

For a sizeable proportion of the 55% of the older population who do not meet the thresholds we model for purchase of either an annuity or LTCI, however, using reverse mortgage proceeds to pay for long-term care needs directly if needed rather than pre-funding them may be the better course. The option to take reverse mortgage proceeds as an interest-earning line of credit and draw on them only as needed may make using home equity more appealing to many and may reduce total costs, but does not address large upfront costs. If housing equity is to make an important contribution to increased pre-funding of long-term care among persons with more modest means or to direct private payment of long-term care expenses, substantial reductions in loan costs for reverse mortgages and higher limits on the amount of equity that can be taken out almost certainly will be needed.

²⁹ Merlis. 2005. United Seniors Health Council. undated.

³⁰ IMSA. 2007. "A Consumer's Guide to Annuities." Chevy Chase, MD: IMSA (http://www.imsaethics.org/brochures/IMSA_Annuities_lr.pdf).

Finally, the relatively low level of financial literacy among the older population poses not only a potential barrier but also serious consumer protection issues, many of them arising from the fact that most annuities and most LTCI are sold in the individual market. The need for consumer protections is even greater for persons with more modest resources for whom mistakes may be financially catastrophic. As noted earlier “suitability” standards for LTCI purchase arose to protect modest income purchasers from unscrupulous sales practices. Choosing the right LTCI policy is a complex and sometimes bewildering process for consumers that has prompted some to call for policies to standardize benefits and policy language,³¹ but it is by no means the only demand on retirees’ financial resources and acumen. Even with nearly universal Medicare coverage, retirees pay almost half of their health costs out of pocket, and employers are becoming less willing to contribute toward or offer retiree health benefits, a trend that shifts both costs and the research required to identify appropriate and affordable coverage to retirees.³² The continuing shift from traditional defined-benefit pensions toward defined contribution plans has the effect both of shifting investment risks to retirees and increasing the financial literacy required to manage accumulations through retirement. Annuitization--with or without long-term care protection--can be one way to simplify the process and reduce risks, but making wise choices may require a level of financial literacy beyond many retirees, given the array of annuities on the market, their complexity, and the need for improved market oversight.³³

Insurer and Market Perspectives

The passage of the Pension Protection Act of 2006 is stimulating industry interest in combined products.³⁴ There are, however, significant barriers to the development and expansion of a private market for the type of combined annuity modeled here. One barrier is higher premiums for and insurer concerns about higher payout levels with cash benefits. Payouts for cash benefits are higher for any given benefit maximum because the full benefit is paid, whereas insurers expect lower payouts under reimbursement policies typical in LTCI, which pay only for allowed services.³⁵ Cash benefit policies are available at a higher premium, sometimes combined with a conventional reimbursement benefit. For example, premiums for “hybrid home care” policies paying a set percentage of the maximum benefit as cash or including a cash benefit as an add-on are 25%-70% higher than for a standard benefit.³⁶

³¹ Burns, B. 2006. "Comparing Long-Term Care Insurance Policies: Bewildering Choices for Consumers." AARP Public Policy Institute Issue Paper #2006-13 (http://assets.aarp.org/recenter/il/2006_13_ltci.pdf).

³² Moon, M. 2005. "Retiree Health Care: Individuals Picking Up Bigger Tab." TIAA-CREF Institute Trends and Issues Report (<http://www.tiaa-crefinstitute.org/research/trends/docs/tr070105.pdf>).

³³ Freiman. 2007.

³⁴ Delane, et al. 2007.

³⁵ Delane, et al. 2007.

³⁶ Riekse, TH. 2007. "Are Hybrid Home Care Products Right for Your Client." ProducersWeb.com.

“Moral hazard” in which insured persons use more services than if they faced the full cost--or are more likely to claim eligibility in the case of a cash benefit--also is a concern, but may be less important for pricing in a combination product. In our earlier work we simulated the impact of stylized scenarios assuming that individuals and the providers who certify their functional status have incentives to inflate disability levels in order to obtain benefits at lower disability levels, for disabilities that were not yet chronic, or upon entry into a nursing home. We found impacts of about 40% to almost 60% in the cost of the disability portion of the annuity. This translated, however, into only about a 4%-6% increase in the total premium for the combined annuity because of the dominance of the income benefit.³⁷

Long-term care insurers also have tended to be leery of fully pre-paid benefits because there is no possibility of future premium increases.³⁸ This places all the risks associated with assumptions about earnings and the level of benefit payouts on the insurer. Purchasers bear that risk in conventional LTCI with level periodic premiums. Although they are protected from premium increases as they age, premiums for a class of persons may increase if payouts exceed assumed levels used to set premiums. It is possible that a shift to an annuity base for cash disability benefits may reduce insurer aversion to prepayment, because annuity offerers are more accustomed to pre-paid insurance, but there is no evidence to date.

Even if insurers are willing to assume the potential risks associated with pre-paid premiums and cash disability benefits, other important barriers remain. If the type of combined annuity we examine is to be offered through qualified retirement plans, changes in current laws--or at least clarifications--also are needed.³⁹ Obtaining approval to market hybrid products, in addition, may be a significant challenge in many states given fragmented federal and state responsibilities for regulating different types of insurance.⁴⁰

Medicaid Perspectives

Current public efforts to expand long-term care pre-funding are motivated by a desire to control costs in the Medicaid program and prevent impoverishment among persons who could provide privately for their long-term care needs. The impact on Medicaid of developing a market for combined annuities or other asset-based vehicles is uncertain. Facilitating access to home equity by those with more modest resources is critical if this type of private financing is to be accessible to persons most likely to become eligible for Medicaid if they have substantial long-term care needs. However, home equity is routinely being promoted as a source of funding for college expenses,

³⁷ Murtaugh, et al. 2001.

³⁸ Warshawsky, MJ. 2007. "The Life Care Annuity: A Proposal for an Insurance Product Innovation to Simultaneously Improve Financing and Benefit Provision for Long-Term Care and to Insure the Risk of Outliving Assets in Retirement." Working Paper #2, Georgetown University Long-Term Care Financing Project (<http://ltc.georgetown.edu/forum/2warshawsky062207.pdf>).

³⁹ Warshawsky. 2007.

⁴⁰ Frieman. 2007. Warshawsky. 2007.

paying off debts, and other uses that conflict with the prospect that large amounts of unencumbered equity will remain to be tapped in retirement. To the extent that home equity is intact at retirement, with continued shifts away from employer-sponsored defined-benefit pension plans and retiree health coverage, health care and other routine expenses in retirement (e.g., home repairs, taxes) may compete with long-term care pre-funding as a use for this stored wealth. An even worse scenario for equity as a source of private financing or pre-funding of long-term care is if reverse mortgages grow in popularity as a vehicle for funding the purchase of expensive cars, boats, retirement travel, or second homes.

One way states can recoup Medicaid expenses is from the estates of beneficiaries in cases where there is no surviving spouse or other surviving dependent, such as a co-resident sibling or disabled child. Currently, states recover only between 0.01% and 2.09% of Medicaid long-term care expenditures.⁴¹ Typically, given the financial thresholds for Medicaid eligibility, most of the estate available for recovery is represented by the home, which remains a protected asset if there is a surviving spouse or any possibility of an unmarried person being able to return home.⁴² While many argue that the amount recovered from estates will increase with more aggressive state programs, if it becomes more common to draw down equity for long-term care or other uses the yield from more aggressive estate recovery efforts will be attenuated. Whether and how successfully states apply Medicaid asset transfer rules to home equity conversions remains unclear, in part because they are so far rare.⁴³ The Deficit Reduction Act of 2005 imposed new restrictions on transfers of assets to gain Medicaid and prohibits Medicaid eligibility for persons with housing equity of \$500,000 or more (\$750,000 at state option). It also, however, explicitly allows the use of a reverse mortgage to bring home equity below the new maximum levels but does not specify how proceeds may be used. Clearly the limit on equity would affect relatively few persons with modest levels of wealth, but uses of reverse mortgage proceeds for purposes other than pre-funding or paying for long-term care will not reduce or eliminate the need for Medicaid long-term care but will reduce the amount of equity available to be recovered from estates.

⁴¹ Wood, EF, and EM Klem. 2007. "Protections in Medicaid Estate Recovery: Findings, Promising Practices, and Model Notices." AARP Public Policy Institute Report #2007-07 (http://assets.aarp.org/rgcenter/il/2007_07_medicaid.pdf).

⁴² HHS Office of Disability, Aging, and Long-Term Care Policy. 2005. "Medicaid Treatment of the Home: Determining Eligibility and Repayment for Long-Term Care." *Policy Briefs on Medicaid Eligibility Policies for Long-Term Care Benefits* (<http://aspe.hhs.gov/daltcp/reports/hometreat.htm>).

⁴³ HHS Office of Disability, Aging and Long-Term Care Policy. 2005.

CONCLUSIONS

The level of long-term care pre-funding through conventional LTCI remains low, despite more than 20 years of substantial product improvement and increasing--albeit modest--public incentives. Whether public policy to encourage innovative products and asset-based financing will be any more successful in bringing about more widespread pre-funding of long-term care remains uncertain. New laws enacted and under consideration are opening the door to a wider array of options for private pre-funding of long-term care, as well as focusing on improving retirement security in an era of defined contribution retirement plans. Nevertheless, significant barriers remain. These include insurer attitudes toward prepayment of premiums and cash disability benefits, which may be more appealing to consumers and more flexible in meeting their long-term care needs. Tax and regulatory issues relating to the use of defined contribution retirement accounts to purchase annuities also remain to be addressed.

A combined annuity like the one we model could add to the array of pre-funding options for long-term care, while also providing a vehicle for shielding retirement savings from investment risk and insuring a stable level of income over remaining life. Improved access to lower cost ways of using home equity could expand the population who could consider such a product. Access to home equity is particularly important for the roughly one in five individuals at age 65 and age 75 who have more modest resources than is typical for current LTCI purchasers and are most likely to become eligible for Medicaid should they experience a lengthy period of disability. The relaxed underwriting theoretically possible with a combined income and disability annuity means that few of these individuals would be precluded from buying this type of insurance because of their health. Alternate designs that reduce the income benefit in our base model without reducing the disability benefit preserve the pre-funding of long-term care, while substantially expanding the number of persons potentially able to purchase.

The combined annuity, however, is not a “silver bullet” solution for financing the long-term care needs of Americans, any more than LTCI has proved to be. Like LTCI, it is likely to appeal primarily to persons with substantial financial resources. We estimate that more than half of all persons at both ages have too few resources to purchase such an annuity under our assumption that 100% of housing equity is available. The share who could not purchase grows to almost two-thirds of all persons at both ages if only 50% of home equity can be accessed, an assumption more in keeping with limits on the most commonly used type of reverse mortgage on the market. Thus, it is clear that reverse mortgage costs and limits on the amount of home equity that can be accessed are likely to play an important role in determining the full potential of asset-based financing of long-term care among persons with modest financial resources--through either pre-funding or direct payment. Retiree attitudes toward using housing wealth also are critically important. Current elders tend to be averse to tapping into home equity, for any reason. Retirees in the near future may be much more comfortable using home equity, including for discretionary uses that reduce the amount potentially available to fund or pre-fund long-term care.

TABLES

TABLE 1. Estimated Premiums for LTCI and the Combined Annuity		
	Age 65	Age 75
Combination annuity (minimal underwriting)	\$219,172	\$181,179
Immediate income annuity only (conventional underwriting) for comparison	191,096	147,434
Immediate income annuity market premiums		
Federal TSP annuity calculator (unisex, 5.5% interest rate) ¹	183,000	136,000
Vanguard (AIG) annuity calculator (male and female, 5% interest rate) ²	195,000 - 212,000	148,000 - 159,000
LTCI (conventional underwriting)		
Computed level annual premiums ³	3,593	5,045
LTCI market premiums for comparison		
FLTCIP ⁴	2,012 - 2,683	4,424 - 5,628
Weiss Ratings, Inc. ⁵	3,326 - 3,450	6,613 - 7,843
AARP LTCI Plan ⁶	3,965	8,808
<p>NOTE: Disability benefits for LTCI and as part of the combined annuity are \$2,000 per month at the two-ADL level and an additional \$1,000 at the four-ADL level, each continuing as long as disability continues. The benefit level is \$66 per day at the two-ADL and \$98 per day at the four-ADL level. The combined annuity adds a \$1,000 immediate income benefit beginning at purchase and continuing for life. In all cases, disability benefits are inflated by 5% per year compounded and include an 18% expense loading. The income benefit in the combined annuity is inflated by 3% per year compounded and has a 3.5% expense loading. The nominal discount rate is 6%.</p> <ol style="list-style-type: none"> 1. Calculated using the TSP annuity calculator found at http://calc.tsp.gov/annuityCalculators/calcAnnuitySingle.cfm. 2. Calculated using the Vanguard/AIG annuity calculator available at http://www.vanguard.com/visit/incomecalc. 3. The level annual premium is the premium at which the present discounted values of benefits and premium collections are equal. Premiums are assumed to be waived with benefits begin. 4. FLTCIP premium calculator: Premiums for \$75 per day lifetime benefit for care in facilities or at home, with 5% per year compounded inflation protection, and \$100 per day with same features. Neither includes nonforfeiture benefits. (https://www.ltcfeds.com/ltcWeb/do/assessing_your_needs/ratecalc). 5. Median premiums in 2002 from Weiss Ratings, Inc., reported in Brown, Jeffrey R., and Amy Finkelstein. 2004, "Supply or Demand: Why Is the Market for Long-term Care Insurance So Small?" NBER Working Paper #10782. Lower premium estimate is for a comprehensive policy with a \$100 daily maximum benefit, 5% per year compounded inflation protection, no waiting period, and lifetime benefits. The higher premium estimate is for a similar policy with a 30-day waiting period. (See Brown and Finkelstein for explanation.) Neither policy includes nonforfeiture benefits. 6. The AARP LTCI Plan premium calculator Flexchoice: \$2,100 per month lifetime policy with 100% home care benefit, 5% per year compounded inflation protection, and nonforfeiture benefits (http://aarpltc.metlife.com/aarp/AarpRedirectorServlet). AARP offers a monthly cash benefit policy, but it is offered with more limited benefit levels and maximums, so that we could not calculate a valid comparison. 		

TABLE 2. "Affordability" Guidelines for LTCI and Combined Annuity	
Combined annuity	
Assumption 1	Premium is no more than total wealth (excluding wealth already annuitized, primarily Social Security and pensions)
Assumption 2	Premium is no more than 50% of total wealth (excluding wealth already annuitized, primarily Social Security and pensions)
LTCI	
United Seniors	Income is at least \$25,000-\$35,000 (\$35,000-\$50,000 for a couple) and assets, excluding home and automobile, are at least \$75,000
NAIC shoppers guide	Premium is no more than 7% of income, and assets, excluding housing, are at least \$30,000

TABLE 3. Income and Assets of Persons Meeting Assumed Thresholds for Willingness to Annuitize Wealth						
	Percent of Persons	Mean Household Income	Mean Total Assets	Mean Nonhousing Assets	Mean Housing Assets	Percent Meeting Criterion Only Because of Housing Assets
Age 65, all persons	100%	\$45,888	\$399,677	\$293,832	\$105,845	---
Persons meeting annuity guidelines						
Higher wealth group	25	83,867	1,156,654	945,186	211,468	4
Lower wealth group	20	45,939	309,050	182,255	126,795	68
Total	45					
Married						
Higher wealth group	22	87,121	1,192,990	977,003	215,988	4
Lower wealth group	16	48,109	309,489	182,728	126,761	69
Total	37					
Unmarried						
Higher wealth group	4	65,932	956,353	769,802	186,551	4
Lower wealth group	4	37,260	307,295	180,362	126,933	64
Total	8					
Age 75, all persons	100%	\$33,626	\$341,002	\$243,537	\$97,466	---
Persons meeting annuity guidelines						
Higher wealth group	25	64,068	1,012,096	808,795	203,302	6
Lower wealth group	21	33,530	260,308	144,395	115,912	67
Total	46					
Married						
Higher wealth group	18	70,912	1,075,287	876,985	198,303	5
Lower wealth group	14	35,599	260,447	144,395	116,051	68
Total	32					
Unmarried						
Higher wealth group	7	45,984	845,114	628,602	216,512	9
Lower wealth group	7	29,087	260,009	144,395	115,614	65
Total	13					
NOTE: Percentages of persons may not sum to the total because of rounding. Estimates are based on combined base design annuity premiums \$219,172 at age 65 and \$181,179 age 79. The annuity premium would represent no more than 50% of total wealth for the higher wealth group, and between 50% and 100% of total wealth for the lower wealth group. Minimum wealth for the two groups is \$438,344 and \$219,172, respectively, at age 65, and \$362,358 and \$181,179 at age 75. The sum of these entries represents the proportion of persons at each age with total nonannuitized wealth equaling or exceeding the combined annuity premium. This threshold is meant to identify persons who would possibly convert their wealth to a combined annuity with the base design.						

TABLE 4. Housing Assets of Persons Who Would Have to use Housing Wealth in Order to Purchase a Combined Annuity						
	Percent of Persons	Percent Distribution by Housing Wealth				
		Less Than \$25,000	\$25,000 to Less Than \$100,000	\$100,000 to Less Than \$200,000	\$200,000 to Less Than \$300,000	\$300,000 or More
Age 65						
Higher wealth group	1	0	0	0	12	88
Lower wealth group	13	0	23	56	18	3
Age 75						
Higher wealth group	1	0	0	5	30	65
Lower wealth group	14	0	26	55	17	2
NOTE: Estimates are based annuity-based design premiums of \$219,172 at age 65 and \$181,179 age 75. By definition, nonhousing assets are less than these premiums for all persons appearing in the table. The annuity premium would represent no more than 50% of total wealth for the higher wealth group, and between 50% and 100% of total wealth for the lower wealth group. Minimum wealth for the two groups is \$438,344 and \$219,172, respectively, at age 65, and \$362,358 and \$181,179 at age 75.						

TABLE 5. Income and Assets of Persons Meeting LTCI "Affordability" Guidelines					
	Percent of Persons	Mean Household Income	Mean Total Assets	Mean Nonhousing Assets	Mean Housing Assets
Age 65, all persons	100%	\$45,888	\$399,677	\$293,832	\$105,845
Persons meeting LTCI guidelines					
Either guideline	36	84,068	811,492	650,262	161,231
United Seniors affordability guideline	34	84,391	853,543	687,718	165,825
NAIC affordability guideline	23	107,763	970,206	793,919	176,288
Married					
Either guideline	30	87,700	856,155	689,227	166,928
United Seniors affordability guideline	28	88,082	899,723	728,220	171,504
NAIC affordability guideline	20	108,764	1,007,181	827,982	179,199
Unmarried					
Either guideline	6	66,946	600,938	466,569	134,369
United Seniors affordability guideline	6	66,862	634,186	495,332	138,854
NAIC affordability guideline	3	100,960	718,892	562,391	156,500
Age 75, all persons	100%	\$33,626	\$341,002	\$243,537	\$97,466
Persons meeting LTCI guidelines					
Either guideline	26	71,654	834,207	684,823	149,383
United Seniors affordability guideline	25	71,422	840,387	691,507	148,880
NAIC affordability guideline	8	127,502	1,451,729	1,260,596	191,133
Married					
Either guideline	18	79,708	936,739	778,295	158,444
United Seniors affordability guideline	18	79,488	945,784	788,152	157,632
NAIC affordability guideline	7	129,261	1,490,590	1,290,349	200,240
Unmarried					
Either guideline	8	53,369	601,419	472,606	128,813
United Seniors affordability guideline	8	53,287	603,423	474,218	129,204
NAIC affordability guideline	1	118,409	1,250,808	1,106,762	144,048
NOTE: The LTCI premiums against which income is compared are \$3,593 at age 65 and \$5,045 at age 75. Under the United Seniors guideline, which uses fixed minimum income levels of \$25,000 for single persons and \$35,00 for married couples, the premiums amount to between 10% and 14% of income at age 65 and between 14% and 20% of income at age 75. The NAIC guideline that the premium should be no more than 7% of income imply incomes of about \$50,000 at age 65 and \$72,000 at age 75.					

	Age 65	Age 75
Persons meeting annuity guidelines ¹	45	46
Without housing equity	31	30
Only with housing equity	14	15
Persons not meeting annuity guidelines ²	55	54
Meeting LTCI guidelines	6	2
Not meeting LTCI guidelines	49	52

1. Includes all persons for whom the annuity premium is no more total wealth.
2. Includes all persons for whom the annuity premium exceeds total wealth.

	Age 65	Age 75
Mean household income	\$28,343	\$19,896
Mean total assets	82,497	68,580
Mean nonhousing assets	32,825	26,071
Mean housing assets	49,673	42,509
Distribution by housing wealth		
Less than \$25,000	35	42
\$25,000 to < \$100,000	50	45
\$100,000 to < \$200,000	15	13
\$200,000 to < \$300,000	0	0
\$300,000 or more	0	0

1. Includes all persons for whom the annuity premium exceeds total wealth.

	Percent of Persons	Expected Remaining Years of Life	Expected Percent Meeting 2+ ADL Criteria	Expected Years with 2+ ADLs
Age 65, all persons	100	18	67	1.8
Persons meeting minimal underwriting ¹	97	18	66	1.6
Meets conventional LTCI underwriting	72	20	67	1.6
Meets only minimal underwriting	25	13	63	1.7
Age 75, all persons	100	11	69	1.7
Persons meeting minimal underwriting ¹	94	12	67	1.6
Meets conventional LTCI underwriting	61	13	67	1.5
Meets only minimal underwriting	32	8	65	1.7

1. Excludes only persons who would qualify for disability benefits at time of purchase.

TABLE 9. Risk Profile of Persons Meeting Minimal Underwriting for Combined Annuity by Financial Situation and Marital Status					
	Percent of All Persons	Percent Also Passing Conventional Underwriting	Risk Profile		
			Expected Remaining Years of Life	Expected Percent Meeting 2+ ADL Criteria	Expected Years with 2+ ADLs
Age 65, all persons passing minimal underwriting	97	74	18	66	1.6
Persons meeting annuity threshold ¹	44	77	19	68	1.6
Without housing equity	30	77	19	68	1.6
Only with housing equity	14	77	19	67	1.6
Persons not meeting annuity threshold ²	53	72	18	64	1.6
Age 75, all persons passing minimal underwriting	94	65	12	67	1.6
Persons meeting annuity threshold ¹	40	66	12	69	1.5
Without housing equity	27	66	12	69	1.5
Only with housing equity	13	66	12	68	1.6
Persons not meeting annuity threshold ²	54	65	12	65	1.6
1. Includes all persons for whom the annuity premium is no more than total wealth, including housing equity.					
2. Includes all persons for whom the annuity premium exceeds total wealth.					

TABLE 10. Risk Profile of Persons Meeting Minimal Underwriting for Combined Annuity by Financial Situation and Marital Status					
	Percent of All Persons	Percent Also Passing Conventional Underwriting	Risk Profile		
			Expected Remaining Years of Life	Expected Percent Meeting 2+ ADL Criteria	Expected Years with 2+ ADLs
Age 65					
Persons meeting annuity threshold ¹	44	77	19	68	1.6
Married	36	79	19	68	1.5
Unmarried	7	64	19	68	2.1
Persons not meeting annuity threshold ²	53	72	18	64	1.6
Married	34	76	18	64	1.5
Unmarried	19	63	17	65	2.0
Age 75					
Persons meeting annuity threshold ¹	40	66	12	69	1.5
Married	27	66	12	67	1.3
Unmarried	13	66	12	72	1.9
Persons not meeting annuity threshold ²	54	65	12	65	1.6
Married	27	65	11	63	1.4
Unmarried	27	64	12	67	1.8
1. Includes all persons for whom the annuity premium is no more than total wealth, including housing equity.					
2. Includes all persons for whom the annuity premium exceeds total wealth.					

TABLE 11. Premiums for Three Illustrative Alternate Designs that Would Reduce Annuity Costs		
	Age 65	Age 75
Alternate 1: Reduce base design income benefit to \$500 monthly and increase 2-ADL disability benefit to \$2,500 monthly¹		
Premium	\$137,191	\$119,770
Discount from base design	37%	34%
Alternate 2: Defer base design income benefit for 5 years		
Premium	\$165,465	\$129,447
Discount from base design	25%	29%
Alternate 3: Add 5-year deferral of income benefit to Alternate 1		
Premium	\$110,337	\$93,904
Discount from base design	50%	48%
1. Base design has a \$1,000 per month income benefit with an additional \$2,000 monthly at the onset of two ADLs and another \$1,000 monthly at onset of four ADLs.		

TABLE 12. Percent of Persons with Potential Financial Access and Passing Minimal Underwriting Under Alternate Annuity Designs		
	Age 65	Age 75
Base design¹		
Persons meeting annuity guidelines	44	40
Without housing equity	30	27
Only with housing equity	14	13
Persons not meeting annuity guidelines	53	54
Alternate 1: Reduced income benefit and increased disability benefit²		
Persons meeting annuity guidelines	57	55
Without housing equity	39	36
Only with housing equity	18	20
Persons not meeting annuity guidelines	40	39
Alternate 2: 5-year deferral of income benefit only³		
Persons meeting annuity guidelines	52	53
Without housing equity	35	34
Only with housing equity	16	19
Persons not meeting annuity guidelines	45	41
Alternate 3: Reduced income benefit and 5-year deferral of income benefit⁴		
Persons meeting annuity guidelines	62	60
Without housing equity	43	40
Only with housing equity	19	20
Persons not meeting annuity guidelines	35	34
1. Base design with \$1,000 per month income benefit, \$2,000 per month at the 2-ADL level, and an additional \$1,000 per month at the 4-ADL level.		
2. Income benefit reduced to \$500 per month and disability benefit increased to \$2,500 per month at the 2-ADL level.		
3. Original design income benefit of \$1,000 per month deferred for 5 years.		
4. Reduced income benefit of \$500 per month deferred for 5 years, disability benefit increased to \$2,500 per month at the 2-ADL level.		

To obtain a printed copy of this report, send the full report title and your mailing information to:

U.S. Department of Health and Human Services
Office of Disability, Aging and Long-Term Care Policy
Room 424E, H.H. Humphrey Building
200 Independence Avenue, S.W.
Washington, D.C. 20201
FAX: 202-401-7733
Email: webmaster.DALTCP@hhs.gov

NOTE: All requests must be in writing.

RETURN TO:

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