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Integrating Life Annuities and Long-Term Care Insurance: Theory, Evidence, Practice, and Policy

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Chapter 9

Integrating Life Annuities and Long-Term Care Insurance: Theory, Evidence, Practice, and Policy

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The aging of the baby boom generation, the lengthening of life spans, and the political shift away from government and employer solutions to retirement issues toward individual responsibility have all combined to heighten concerns about how future retirees will manage and assure their financial security in old age. This chapter explores two separate financial and insurance instruments—life annuities and long-term care insurance—that we suggest could address the need for income security and the potential need for age- and disability-related long-term care. We evaluate reasons why these currently available products are not widely used and explore limits on current markets for both products. It appears that a combination of the two products has the potential to make them available to a broader range of the population, with minimal underwriting and at lower cost. We also explore tax and design issues that may affect the ability to introduce this and other innovative products.

In what follows, we first examine the current market for life annuities and long-term care insurance. Next we contrast the economic and conventional wisdom concerning the optimal use of life annuities, review current trends in annuitization, and note possible reasons for market failure, particularly adverse selection. We then describe how an individual's risk of needing costly long-term care services represents a substantial threat to his or her economic wellbeing, explain the current financing of long-term care services, and review the literature on why coverage through private long-term care insurance remains relatively low. In particular we discuss the impact of medical underwriting on access to long-term care insurance.

The Market for Life Annuities

A life annuity is an insurance product that pays out a periodic amount for the life of an individual or the lives of a couple in exchange for a premium charge. Annuity payments may be either guaranteed (fixed or increasing) or variable, depending on the contract structure and underlying investments. Life annuities frequently offer a guaranteed period over which benefits will be paid even if the annuitant does not survive. A life annuity can be offered through an employer-sponsored retirement plan or as an individual product, funded either on a pre-tax or after-tax basis. It is also the form of payment from the U.S. social security system.

Economic and Conventional Wisdom Contrasted

According to the economic theory of life cycle savings, a straight life annuity should be the cornerstone of financial planning and practice in retirement. In this context the chief principle governing household saving behavior is the desire to smooth consumption patterns over an uncertain lifetime, within the constraints imposed by limited lifetime resources; here life annuities should be used widely (Friedman and Warshawsky, 1990). Without access to life annuities, elderly individuals would need to conserve wealth to self-insure against the risk of having to reduce consumption in later years, should their life span turn out to be unexpectedly long. As a result of husbanding wealth, the consumption path that these individuals can safely pursue is lower than one afforded by a fairly priced annuity.

The amount of wealth an individual would be prepared to give up in order to gain access to a life annuity, so as to avoid the constrained self annuitization strategy, has been calculated by Mitchell, Poterba, Warshawsky, and Brown (hereafter MPWB 1999). They employ an expected utility/dynamic stochastic optimization framework and use reasonable estimates for market (interest and mortality rates) and preference (risk aversion and time discount) parameters in their simulations. The results show that individuals would forgo 20–30 percent of discretionary wealth (that is, wealth exclusive of the present value of social security benefits) to obtain a life annuity.

A mystery, then, is why life annuities are not widely recommended by the financial planning community. Indeed, almost all financial planning software programs and websites ignore mortality uncertainty and hence the possible beneficial use of life annuities. Instead, planners recommend that households should expect to finance retirement expenditures over a static life expectancy (or to be conservative, life expectancy plus 10 years; see Warshawsky and Ameriks, 2000). Professional financial advisors rarely recommend life annuities to their retiree clients but instead suggest a combina-

tion of withdrawal rates and investment strategies for asset portfolios to try to assure adequate income in retirement (Rekenthaler 2000; Jarrett and Stringfellow 2000).

Current Annuitization Trends

Almost 43 percent of the income flow of the average retired worker age 65 and older in the U.S. currently comes from social security (EBRI 1997). These benefits are provided in the form of a joint and survivor inflation-indexed straight life annuity, that is, an annuity whose benefits cease with the death of the last surviving member of the elderly household. Already, the social security annuity payout is being delayed as the normal retirement age under the system is gradually raised. Moreover, the system's actuarial imbalance may necessitate some fairly fundamental changes in the future, changes that could include benefit cuts or privatization (see Mitchell, Myers, and Young 1999). These changes would be likely to produce lower automatic annuity payments at the same time that life expectancies of the population are projected to rise, thus increasing risk exposure from lifetime uncertainty.

There have also been significant changes in the employer-sponsored pension plan environment. Defined benefit plans traditionally provided a life annuity as the only payment form, but these have been giving way to defined contribution plans that are much less likely to even offer a life annuity as a payment option, let alone mandate it as one (Gordon et al. 1997). Even defined benefit plans and their cash balance progeny are now increasingly offering plan participants the choice between a life annuity and other payment methods such as systematic and lump sum withdrawals.[1]

These trends imply that there will be an increased need for the private market to offer attractive life annuity products in the future. Currently, however, the market for single premium immediate annuities (SPIAs) is small and annuitization rates from deferred annuities are quite low. Premium payments for individual immediate annuities were just under $8 billion in 1998 with reserves of $69.4 billion and 2.3 million covered persons (ACLI 1999). Just over 112,000 new contracts were issued in 1998, and there were 1.5 million contracts in force. Marketing statistics show that, in 1995, the average single premium immediate annuity sold in 1995 cost $79,600 (MPWB 1999); most (55 percent) SPIAs were sold to men, and most (74 percent) were not part of a tax qualified retirement plan such as an IRA. As of 1996, just over one percent of individual variable deferred annuities were making periodic payments, presumably in life annuity form; total annualized income to annuitants, $381 million, also represented just one percent of premiums (ACLI 1997). These low annuitization rates could represent a growing and still immature market, or they might represent more fundamental aversion to the annuity payment form.

Current Failures in the Private Voluntary Market

Adverse selection figures prominently as a possible explanation for the lack of popularity of individual life annuities (Friedman and Warshawsky, 1990; MPWB, 1999). A recent study (MPWB 1999) found that the expected present discounted value of annuity payments per dollar of SPIA premium averages between 80 and 85 cents for an individual with the mortality prospects of the general population, and between 90 and 94 cents for an individual with mortality prospects of annuitants. Stated another way, the cost of adverse selection is about 10 cents on the dollar. In addition, there are transactions costs unique to insurance products, covering marketing and sales commissions to agents, at about seven cents on the dollar. Together these costs could discourage purchase of individual life annuities.

Several other factors also may contribute to restraining the market for individual annuities. One is that the life annuity purchase is irreversible and irrevocable, so it can be construed as an illiquid investment, resulting in loss of control for the annuitant. Yet some individuals highly value liquidity and control, particularly those facing possible long-term care expenses. A second issue is that a life annuity does not help finance a bequest motive. Although the economic literature debates how significant bequest motives are, for at least some middle and upper income households, they may be a factor deterring their purchase of a life annuity. A third explanation may be institutional considerations, including unimaginative marketing by the insurance industry, sales incentives that discourage selling immediate annuities, and negative recommendations from financial advisors that may confuse investors, who are ignorant of the longevity insurance provided by life annuities. Finally, excluding annuities available through social security and a few pension systems, life annuities in the United States do not adjust for inflation.[2] Elderly households are therefore exposed to the risk of uncertain inflation that they might be able to hedge better through other means, such as asset allocation strategies. All of these reasons may explain why the U.S. marketplace for annuities remains thin despite what would seem to be a rise in factors prompting the demand for life annuities.

Current Methods for Financing Long-term Care Services[3]

The term long-term care (LTC) represents a broad range of services and assistance for people with chronic illnesses or disabilities who are unable to care for themselves over a relatively long period of time. The need for long-term care services is particularly high among the elderly, especially the "old-old" (85 or above), and this is a segment of the population projected to grow rapidly as the baby boom generation ages. LTC services are expensive, and their cost is increasing more rapidly than that of other goods and services in the economy, including other health care services.

In the U.S., federal and state governments currently provide substantial resources to support households that cannot finance their own long-term care needs. Some would argue that the existence of this social safety net has impinged on the growth of private insurance coverage. Nevertheless some individuals and families do use long-term care insurance policies to finance their own future needs. Current market mechanisms, however, have certain drawbacks and there seems to be some resistance to, and a lack of understanding among the public about, the need for insurance coverage for long-term care needs.

Costs of Long-Term Care Services

LTC services include skilled nursing care as well as supportive services such as assistance with activities of daily living; these can be provided in a person's home or in a residential care facility. More than 40 percent of people aged 65+ are expected to spend some time in a nursing home, and almost one in 10 will spend five or more years there before death (Kemper and Murtaugh 1991). A larger proportion will need some long-term care, including home care, in their remaining lifetimes. About 17 percent of those age 65+ had a disability requiring some type of human help, yet only 29 percent of these were in nursing homes in 1994 (Spector et al. n.d.). The likelihood of spending some time in a nursing home at some point during the remainder of life increases with age, from 39 percent at age 65, to 56 percent at age 85 (Murtaugh et al. 1995). Similarly, the probability of needing help with the "Activities of Daily Living" (or ADLs, including bathing, dressing, feeding, toileting, and transferring) increases with age. People tend to lose their ADL functions in the opposite order in which they acquired them when young. For example, only 3.5 percent will need help bathing between ages 65 and 74, but more than 20 percent will need such assistance at age 85 or older.

The average stay in a nursing home among users of all ages is 2.4 years (Murtaugh et al. 1999). The expected stay for most is less than one year; but for 16 percent of users, it is more than five years. Women, whites, those widowed or never married, and midwesterners are more likely to experience a stay in a nursing home and have relatively longer expected stays. The mean number of years of nursin home residence among users declines with age at first admission, from 2.8 years in the 65 to 74 age group, to 1.9 years in the 85+ age groups. The average lifetime home health care use is just over 200 visits. About half of those expected to use home health care will use fewer than 90 visits during their lifetimes, while 12 percent can expect to use more than 730 visits (HIAA 1997).

The cost of long-term care service represents a substantial expenditure for older individuals and their families. The nature of the care received, whether at home or in a facility, will clearly influence costs, as will the

intensity of medical care referred. Individuals who are more dependent, or who need more skilled care that can normally only be rendered by a medical professional, will realize greater costs than someone who requires limited assistance in bathing or dressing. The average annual cost in 1995 for a stay in a nursing home was about $40,000; assisted living facilities charge about $26,000 per year; and home care visits cost $50–$100, depending on the skill level of services provided (Warshawsky, Granza, and Madamba 2000).

Figure 1 compares cost trends for nursing homes, health services, and all goods and services over the period 1995–99, drawing on data from the USBLS (various years). Nursing home services costs have consistently risen faster than health services and all goods and services, even as the overall inflation rate in the economy has declined. In particular, nursing home cost increases exceeded general inflation in the economy by three percentage points in the latter half of the 1990s. At that rate, the real cost of nursing home care will double over the next 23 years. The rate of cost inflation for nursing home services does not appear to be influenced by the same factors that influence the broader category of health services. This may reflect the importance of HMO penetration and other innovations in health care production and financing over this period, that have not yet affected nursing homes. It may also reflect a change in the population served by nursing homes from a predominantly long-term population to more of a post-acute care population.

The cost of a stay in a nursing home varies widely by the area of the country. As one might expect, urban areas are usually costlier than suburban or rural areas. In 1998, a nursing home in New York City, for example, could cost more than $250 a day, for an annual cost of more than $91,000. In Oklahoma, on the other hand, the cost was closer to $70 a day. The cost of nursing facilities also depends on the level of sophistication and breadth of the amenities offered. Those with private insurance or substantial assets appear to purchase more costly long-term care services, as private-pay nursing home stays are about 25 percent more expensive than stays paid by Medicaid (Warshawsky, Granza, and Madamba 2000).

A related issue is that life expectancies of American adults have increased significantly in the last century and are projected to increase further. Longer life expectancy has meant that increasing numbers of individuals will survive into what has been called "old-old" age (age 85 or above). In fact, individuals in this age group will be the fastest growing segment of the population by the year 2030. This population aging will also contribute to higher LTC costs in the future. Of course it is not completely clear whether longer life expectancies are the result of an increase in the age at which certain diseases present themselves, or the outcome of lower age-specific death rates among the infirm (Crimmins et al. 1997). Some researchers now believe that the older population is healthier than ever, and that the simultaneous rate of decline in mortality and disability will continue because these

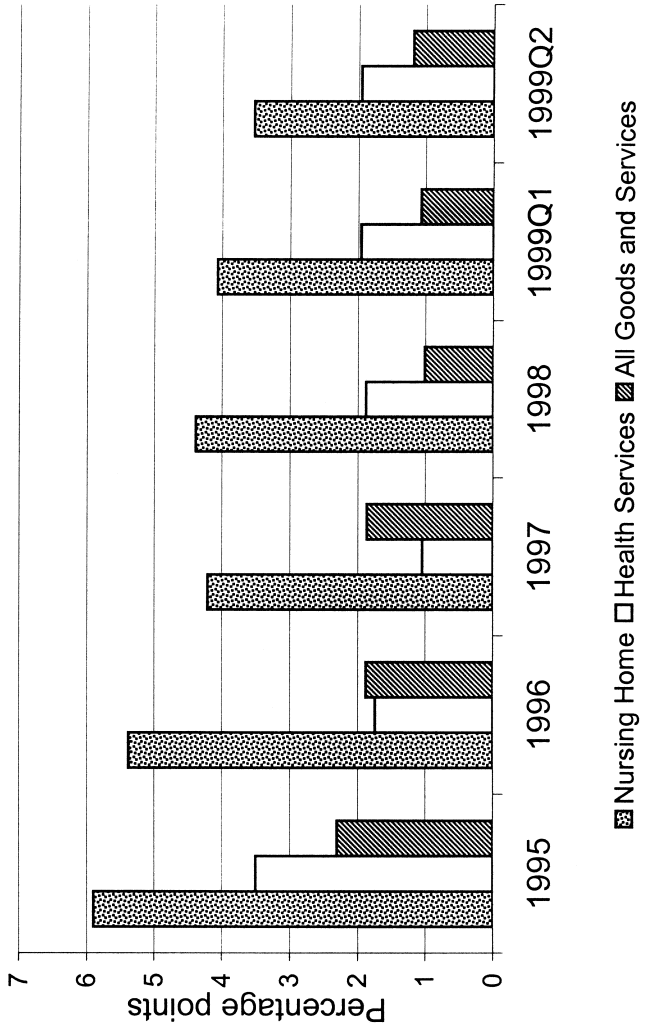

Figure 1. Medical care cost inflation, 1995–99. Source: Warshawsky, Granza, and Madamba (2000).

TABLE 1. Sources of Funding for Long-term Care Expenses (1997)

Funding Source	*Nursing Home (%)*	*Home Health Care (%)*
Out-of-Pocket	31.10	21.67
Private Insurance	4.90	11.46
Other Private	1.90	12.07
Medicare	12.30	39.63
Medicaid	47.60	14.55
Other Government	2.30	0.31

Source: Braden et al. (1998).

rates are lower in younger cohorts (Manton, Stallard, and Corder 1997a, b). Nevertheless, those who survive to "old-old" age are much more likely to need long-term care than those in their 60s, so the growth in the number of such individuals will continue to inspire demand for TCL services in the future.

Americans spent almost $83 billion on nursing home services and more than $32 billion on home health care in 1997.[4] Table 1 shows the sources of funding for these expenditures in percentage terms. Clearly, government support is significant, but there are several constraints on that support.

One issue is that Medicare is designed to pay for acute and post-acute care needs. That program covers care in a skilled nursing facility for up to 100 days (with a substantial copayment applied after the twentieth day), following a hospital stay of at least three days. In aggregate, Medicare pays for about 12 percent of nursing home expenses. That program also provides home health care benefits on a part-time or intermittent basis; this entitlement has grown rapidly over time and now pays for 40 percent of aggregate home health care expenses. Medicare benefits, however, must be medically oriented; once care is no longer rehabilitative and becomes custodial in nature, benefits may no longer be payable.[5] Moreover, in 1997, Medicare instituted strict limits on payments to home health care agencies and vigorously began to pursue instances of fraud and abuse. A prospective payment system was recently introduced for skilled nursing facilities and home health care benefits under Medicare, in response to increases in cost and to fears that Medicare was becoming a long-term care benefit. Future funding for long-term care from Medicare is also likely to be limited due to fiscal trends. The Hospital Insurance Trust Fund is projected to be depleted by 2015, and payroll taxes are projected to cover only one-half of its cost 75 years from now (Social Security Administration, 1999).

Medicaid is a joint federal/state health care program for those with low income and few assets (or those who deplete their assets paying for long-term care) that currently pays for almost 50 percent of aggregate nursing home expenses and almost 15 percent of home health care expenses.[6] For most middle and high income households, however, Medicaid is either un-

available or undesirable. Few resources are exempt from the eligibility guidelines, asset transfers are strictly controlled during a look-back period, spousal protection is somewhat limited, and only participating providers can be used, which in practice often limits choice.[7] Neither Medicaid nor Medicare pays for the room and board segments of expenses incurred in assisted living facilities. Future funding for long-term care from Medicaid may come under some pressure due to fiscal trends. Assuming current law and reasonable demographic and economic projections, growth in Medicaid spending will likely outpace growth in tax revenues traditionally devoted to Medicaid over the next 30 years (Mulvey and Stucki 1998).

It is clear from Table 1 that private insurance currently pays for a small but important portion of long-term care expenses in the United States. Private-insurance-paid expenses that are medical in nature are covered by health insurance (including Medigap); the remainder are covered by private long-term care insurance, whether purchased individually or through a group plan.[8] Surveys of insurance companies selling LTC coverage find that the market is growing and evolving rapidly, but it is still relatively small. Between 1972, when the product was first introduced, and the end of 1996, 120 insurance companies had sold almost 5 million policies; approximately 80 percent of these policies were purchased individually. A different survey found that terminations were occurring at 5.4 percent annual rate, so that the number of LTC policies outstanding (2.8 million in 1998) was lower than the number of policies sold (ACLI 1999). The average annual premium on an individual LTC insurance policy with inflation protection issued to a 65-year-old was $1,829 in 1996 (Coronel 1998).

This number of outstanding policies translates into a coverage rate for overall American population of only about 1 percent. This definition understates effective coverage through the private market, however, since the risk of needing care arises substantially in middle and old age, and most individual LTC policies are purchased by older people — the average age of buyers in 1996 was 67 (Coronel 1998). If the coverage rate is limited to people age 65 and older, then about 8 percent of older individuals are covered by private long-term care insurance. This coverage rate also differs substantially by state: north and midwestern states with sparse and relatively old populations, like Montana, North and South Dakota, and Iowa, have much higher private LTC insurance penetration than some southern and northeastern states (Coronel 1998). Alabama, where income is low, and New York, where Medicaid benefits are relatively generous, have low private LTC insurance penetration.

Private LTC coverage rates can also be computed from national surveys — including the Asset and Health Dynamics of the Oldest Old Study (AHEAD) and the Health and Retirement Study (HRS) (Sloan and Norton, 1997). In 1993 the AHEAD interviewed a national sample of community-based individuals aged 70 and over and their spouses of any age, whereas the 1992 HRS

surveyed a national cohort of individuals aged 51 to 61. In the AHEAD and HRS respectively, 2.2 and 1.6 percent of persons had private LTC insurance. Clearly, these coverage rates are much lower than those reported from insurance company sources; the difference may be due to the growth of the private market over time, or to reporting errors.

Thus far, most LTC policies have been sold to individuals, but of late there is growing interest and activity in sales through employer-sponsored group plans. According to the U.S. Bureau of Labor Statistics (1998), almost 3 million workers (7 percent of the relevant workforce) were eligible to participate in group LTC plans sponsored by medium and large private establishments in 1997; only 2.1 million workers in medium and large firms had been eligible as of 1995. As of 1996, almost 600 thousand workers (1.5 percent of the relevant workforce) were eligible to participate in group LTC plans sponsored by small private establishments; only 200 thousand workers in small firms were eligible as of 1994. A survey of employers with between 1,000 and 5,000 employees accounted for the largest percentage of firms sponsoring this benefit (40 percent); the majority of sponsoring employers offered a voluntary, employee-pay-all LTC insurance benefit (80 percent) (McSweeney and Aarhus 1999). In addition to private sponsors, many state and local governments sponsor group LTC plans for their public workers. In particular, California and Alaska have very successful, carefully designed, and strongly promoted programs; the Alaska plan is totally integrated with retirement planning and is available to employees at retirement without underwriting (Pincus 2000). It should be noted that eligibility numbers for group plans mask much lower participation rates. Nearly three-quarters of employers sponsoring group LTC insurance had participation rates under 10 percent, with the majority of those having participation rates under 5 percent (McSweeney and Aarhus 1999). The average age of a purchaser of LTC insurance through a group plan is 43 (Coronel 1998).

The advantages of group LTC plans include lower administrative costs for large employers, convenience to employees, and guaranteed issuance, yet there are business considerations and risks that may also discourage employers from establishing such plans. One reason is that young employees may not appreciate such a program in the absence of a strong educational effort by the employer. Given that one of the main business reasons for sponsoring employee benefit programs is their attractiveness to workers, especially prospective ones, most employers will tend to devote their attention to benefits areas better appreciated, such as health insurance and child care benefits. Another reason for reluctance is that employers avoid creating a new employee entitlement program, especially one involving long range health care costs that could add unknown costs and liabilities in the distant future. Finally, employers tend to avoid sponsoring programs that, in the future, may be burdened by government regulations that could increase costs or limit flexibility.

Could increased ownership of long-term care insurance by the general population help to finance future long-term care expenditures? A recent study by Mulvey and Stucki (1998) uses a large-scale simulation model and concludes that increased ownership could cut future Medicaid nursing home expenditures by 21 percent and reduce out-of-pocket expenditures for nursing home care by 40 percent. The key assumptions of this model are that everyone age 35 and older in the year 2000 who can afford to purchase a long-term care policy will do so, and that three-fourths of the purchasers will retain their policy until old age. Realization of these assumptions would evidently require a major change in behavior among consumers; as mentioned above, at most eight percent of the current elderly have private LTC, and even fewer younger individuals have coverage. There would also need to be great public trust placed in the long-term financial capability of insurers, and a strong belief that government and social insurance programs will not be forthcoming in the future to cover long-term care needs. The main advantages to the purchase of LTC at younger ages are lower annual premiums and fewer underwriting problems; about three-quarters of the individuals age 35 to 44 could afford a policy if they spent 2 percent or less of their income on private insurance, and if a policy were available to nearly all individuals in that age grouping. It is unclear whether younger individuals would be willing to incur such a significant expenditure to insure against a risk that is so abstract and distant at that age.

Possible Reasons for the Small Market for Private LTC Insurance

Marketing and policy analysts tend to explain the relatively small penetration of private long-term care insurance (small as compared to other types of insurance and employee benefits) by appealing to consumer irrationality and ignorance. In particular, "behavioral" arguments are invoked to explain peoples' tendency to ignore low probability, high-loss events that may occur in the distant future. Some note that people are confused about whether Medicare covers nursing home expenses, while others point to factors traditionally used in explaining lack of demand for, or supply of, insurance, that is, moral hazard and adverse selection. The economic literature, by contrast, attempts to explain the small penetration of long-term care insurance among the population by examining fundamental preference and incentive issues. Pauly's (1990) analysis launched this literature by setting up a rational framework of expected utility maximization for a risk-averse individual with no bequest motive. This consumer is seen as having a pool of assets to finance consumption and to cover a large but uncertain and random cost of chronic illness, over a future of unknown length and health. If perfect insurance markets were available, Pauly shows that the consumer would use his entire wealth to purchase a life annuity that financed an

optimal stream of consumption when well, and paid for the cost of chronic illness when sick. This plan of action is precisely what would be provided with an integrated life annuity and long-term care insurance policy. If such an annuity were not available, an older American could still be assured that the U.S. Medicaid program would provide him with care after nursing home expenses exhausted his wealth. Hence, he would not buy fairly priced long-term care insurance.[9]

While this model offers one rationale for the absence of a correctly designed annuity with a LTC insurance component, others have noted instead the limitations in currently available LTC insurance policies (Cutler 1993; Cohen 1998). That is, LTC insurance tends to adopt the classic indemnity approach, covering only eligible expenses for specified services. This means that even currently well designed policies can become outdated quickly. For this reason, a disability approach might be preferred: income benefits are paid on clear diagnosis of a disability, regardless of the exact nature and amount of the expenses incurred and services selected. Another reasonable explanation for the thin private LTC insurance market is people's desire for control, flexibility, and liquidity. Older households are often concerned about family emergencies, personal contingencies, and other uninsurable and unhedgeable events that might require access to a pool of liquid assets. However LTC purchase is irrevocable and also carries a load for marketing, administrative, and underwriting expenses. Hence, for many households, LTC insurance might not be desired.[10]

Another explanation for lack of LTC coverage among the elderly population arises when medical underwriting indicates that the individual has an elevated risk of needing care and refuses to sell the policy. This phenomenon may explain a significant part of the lack of private coverage, given current purchase patterns. Given underwriting criteria typically used by insurance companies, between 12 and 23 percent of the elderly population would probably be rejected for private LTC insurance for health reasons if everyone applied at age 65 (Murtaugh et al. 1995). According to these same criteria, between 20 and 31 percent would likely be rejected by age 75. Although some insurers are now offering risk-rated premiums, underwriting remains a substantial impediment to the expansion of private LTC insurance coverage with an average decline rate of 20 percent (Collett et al. 1999).

Additional reasons for the lack of LTC coverage might include ignorance, discomfort, and dissonance. Recent surveys suggest that older Americans believe obtaining long-term care poses a significant risk to their standard of living in retirement, and most believe that they could not afford to stay in a nursing home for a substantial length of time. It may be that a massive educational effort on this subject is required to increase consumer knowledge and understanding.[11]

Integrating a Life Annuity and Long-Term Care Insurance Coverage

A product not yet on the market is an integrated life annuity and long-term care insurance coverage, yet integration has the potential to remedy many of the problems just described in the life annuity and long-term care insurance markets. Moreover, encouragement of private life annuities and long-term care insurance may reduce the demand for long-term care financed out-of-pocket or via public programs.

The Theoretical Issues

On theoretical grounds, a fairly priced life annuity with extra benefits payable following the onset of disability would be consistent with the preferences of many households (Pauly 1990). On practical grounds, the integration of the two components would appear to be reinforcing. The life annuity would no longer be seen as quite so illiquid because a major source of uncertainty, long-term care expenses, could be covered with the integrated product. The argument that the life annuity is unresponsive to a bequest motive would also be mitigated, because the long-term care insurance component would hedge parents' nonannuitized assets against the risk of long-term care expenses borne by the estate to be inherited by children. Further, postponing decisions about long-term care insurance until retirement, when households are better able and more willing to consider the options available to them, could solve the reluctance problem. Finally, aversion to long-term care insurance would be counterbalanced by tying it to the purchase of a life annuity, whose payoff, in contrast to a long-term care insurance, would be largest when the annuitant lived a long (and often healthy) life.

Empirical Evidence on an Integrated Product

Murtaugh et al. (2000) evaluate an integrated product using data from the 1986 National Mortality Followback Survey (NMFS) projected to represent hypothetical purchasing pools at age 65 and 75 in 1995. They simulate the number of people eligible to purchase a combined product with minimal medical underwriting for the disability benefit, and also the number of people eligible to purchase LTC insurance and most likely to purchase a life annuity, sold as stand-alone products. Premiums are completed for the combined product and for stand-alone products. "Minimal" underwriting is defined as allowing all individuals to purchase the combined product except those who would be immediately able to make a claim, that is, those already significantly disabled.

The first integrated product modeled is a fixed life annuity with payments

that increase on the determination of a chronic disability. More specifically, the basic product is a life annuity that pays $1,000 a month for life with a guaranteed 10-year minimum payout, combined with a disability annuity that pays an additional $2,000 a month if the purchaser becomes chronically disabled in at least two activities of daily living (ADLs) or cognitively impaired; and an additional $1,000 a month if the purchaser becomes disabled in four ADLs. Premiums are also estimated for a product having annually increasing benefits: three percent for the life annuity segment and five percent for the LTC insurance segment. Small loads are added to cover administrative (but not marketing) costs; the assumed discount rate used in pricing is six percent. Benefit amounts are chosen to be such that, combined with social security, they would cover both basic consumption needs and the cost of nursing home care in most geographic regions, for those with the greatest level of disability. Charges for both the life annuity and LTC disability insurance are estimated as a single premium paid at purchase. Premiums for LTC insurance currently are typically level premiums paid monthly or quarterly. This practice makes the timing of eligibility for LTC benefits of prospective purchasers more important, since it affects the amount of prefunding through premium accumulations. For comparability in this analysis, all premiums were modeled as lump sums paid at purchase.

Access and prospective purchasers. The evidence shows that minimal underwriting dramatically increases the pool of eligible purchasers from 77 percent under current underwriting practice to 98 percent of persons at age 65. This expansion has relatively modest impacts on mean risk and expected duration of disability in the prospective purchaser pool under minimal underwriting, but it reduces average survival by 1.5 years. The relatively small difference in risk and duration of disability between the purchaser pools is consistent with the positive relationship between age and disability, and with previous research showing that expected nursing home use among those who would be accepted for LTC insurance at age 65 was higher than for most groups excluded by underwriting (Murtaugh et al. 1995). The key to the higher annual LTC insurance premiums for the excluded groups was the lack of adequate prefunding of benefit costs, because their service use was more likely to happen in the near term. This pattern also applies to the onset of disability, with prospective purchasers of LTC insurance under current strict underwriting who ultimately become eligible for benefits doing so 17 years in the future, compared with generally 10 years or less for the excluded groups.

Nonpurchasers under current underwriting practice are found to differ from eligible purchasers primarily in mean survival time, which is just under 12 years, compared with 19.5 years for currently eligible purchasers. Risk and expected duration of disability are similar to that of currently eligible purchasers. In contrast, minimal underwriting excludes persons whose sur-

TABLE 2. Long-Term Care Premiums at Age 65 for Income Annuity with Disability Benefits, Current Underwriting Versus Minimal Underwriting

	$1,000 mo. Life Annuity only	*$2,000 mo. 2+ ADL Disability Benefit*	*$1,000 mo. 4+ ADL Disability Benefit*	*Combined Premium*
Without inflation protection				
All Persons	$139,098	$ 15,950	$ 3,155	$158,203
Prospective purchasers				
Current LTC Underwriting	$145,041	$ 13,900	$ 2,843	$161,784
Minimal Underwriting Only	$139,827	$ 13,723	$ 2,777	$156,326
Nonpurchasers				
Current LTC Underwriting	$119,051	$ 22,866	$ 4,207	$146,124
Minimal Underwriting Only	$104,147	$122,764	$ 21,293	$248,203
*With inflation protection**				
All Persons	$177,238	$ 35,649	$ 7,630	$220,517
Prospective purchasers				
Current LTC Underwriting	$187,102	$ 35,258	$ 7,791	$230,151
Minimal Underwriting Only	$178,426	$ 33,122	$ 7,220	$218,768
Nonpurchasers				
Current LTC Underwriting	$143,963	$ 36,969	$ 7,086	$188,018
Minimal Underwriting only	$120,268	$156,864	$ 27,295	$304,427

Source: Murtaugh, Spillman, and Warshawsky (2000).
Note: Base income annuity policy is $1,000 per month for life with a minimum 10-year benefit.
* Income annuity inflates at 3 percent per year compounded, and disability benefits inflate at 5 percent per year compounded, consistent with long term care insurance industry standard for inflation protection.

vival is only six years on average and whose expected duration of disability is about four times that of prospective purchasers.

Premium estimates. Table 2 shows individual premium estimates for three levels of benefit and a combined premium for the "at risk" populations just described. Estimates in the top panel assume no annual increase in benefits, while those in the lower panel include annual increases meant to provide protection against likely future rates of inflation. The life annuity premium of $139,827 for the expanded purchaser pool under minimal underwriting is 3.6 percent lower than that for likely purchasers under current practice, because of the expanded pool's lower average survival.[12] The premium for disability benefits, like risk and duration of disability, are similar for the two purchase groups. This is because minimal underwriting excludes two percent of persons representing the worst disability cost risks, and the remaining "poor risks" actually have lower disability costs than those currently accepted for LTC insurance; the inclusion of these risks reduces the average premium for the expanded pool. Combined with the lower annuity costs of prospective purchasers under minimal underwriting, the premium for the

combined product is $156,326, about 3.4 percent lower than that for standalone life annuity and equivalent long term care insurance products under current underwriting practice.

This pattern is similar when inflation protection is added, in the lower panel of Table 2, but differences are larger because of the greater impact of the inflation protection on both life annuity and long-term care benefits received farther in the future by prospective purchasers under current underwriting practice. In particular, this can be seen in the premium for insurance coverage with minimal underwriting, against two-ADL disability, which is $33,122, or six percent lower than under current practice. With inflation protection, the premium for the combined benefits for the expanded pool is about five percent below the premium for the standalone products under current underwriting practice.

A key question is whether the combined product would be attractive to those groups currently excluded from purchasing LTC insurance and unlikely to buy a life annuity. Combining LTC insurance coverage with the life annuity improves the ratio of expected benefits to premium costs for all "at-risk" groups in the population, in some cases significantly so. Including a minimum annuity benefit, or guaranteed period, contributes to this result, as would allowance for some "ADL creep" in the presentation of reported disability among those insured, and flexibility in the offered mix of life annuity and LTC insurance benefits. Nevertheless, the ratio of expected benefits to premium costs is below one for most groups and hence some perceived insurance value will be needed to elicit purchases.

Potential Markets

Life annuities and long-term care insurance are potentially relevant for most retirement age persons. It must be recognized, however, that a combined long-term care insurance/life annuity may not appeal to two socioeconomic groups: the poor and the wealthy. Those with the lowest income and assets are likely to qualify for medical assistance through Medicaid if they need long-term care, particularly nursing home care, and they are unlikely to have income from pensions or accumulated assets with which to purchase private long-term care insurance or annuities. By contrast, and almost by definition, wealthy persons have more than sufficient assets to cover almost all length of life and disability contingencies. Excluding these two groups, however, most retired persons face a risk of outliving their assets, and nursing home and home care costs represent major threats to financial security. For the most part, these persons have incentives to avoid Medicaid eligibility because nonhousing assets must be exhausted, the choice of LTC providers often is limited, and there is greater risk of poor quality of care; for some individuals, their income may be too high to qualify for Medicaid eligibility in some states.

There are several potential markets where a combined product could be offered. The most obvious and largest is the retirement product market, which includes both employer-sponsored pension plans (defined benefit and defined contribution) and individual retirement accounts. The combined product could also be made available as a distribution option for another huge market, after-tax annuities (deferred and immediate, fixed and variable).

Current Product Developments

Several insurance companies in the United States and the United Kingdom have begun marketing products combining an annuity with a long-term care rider. All these products have the feature that LTC underwriting is eliminated or substantially reduced; most employ after-tax deferred variable annuities as the base product. The combined products vary considerably, however, in the waiting periods imposed to become eligible for LTC benefits. Only one company has a product where benefits are triggered by disability as opposed to incurred expenses, and whose LTC insurance is connected with an immediate life annuity as opposed to an accumulating (that is, deferred) annuity. Hence the integrated product we are examining is unique and not yet available in the marketplace.

Public Policy and Product Design Issues

Although it might be possible to introduce an integrated long-term care insurance policy and life annuity in the current environment, there are legal and product design issues that would have to be dealt with before the product could be offered in its most desirable form.

Tax Environment

The recent enactment in 1996 of the Health Insurance Portability and Accountability Act (HIPAA) clarified the tax treatment of long-term care benefits and premiums, providing that LTC expenses and insurance premiums can be treated like medical expenses with respect to the individual income tax. Accordingly, LTC expenses are now deductible from federal income taxes, provided that the expenses exceed 7.5 percent of adjusted gross income. HIPAA also allows individuals to deduct long-term care insurance premiums up to certain limits based on age, again provided that medical expenses and premiums exceed 7.5 percent of income; single-premium LTC policies, however, are not deductible.[13] It also stipulates that benefits payable under a tax qualified LTC policy will not be treated as taxable income, provided that the policy needs certain benefit trigger and other design conditions stated in the law. In addition, HIPAA provides employers

with a tax incentive if they elect to pay some or all of the LTC insurance premiums for employees. Employees also benefit from this provision, as their employer's contribution is not included in the taxable income of the employee.

One possible logical approach to taxing the integrated product would break the combined long-term care annuity into its competent life annuity and single-premium long-term care insurance policy. The purchase of the insurance policy would presumbly represent a taxable distribution from the qualified retirement plant. The single premium for that policy would not be deductible from the taxable income of the plan participant, but the benefits paid under the policy would not be taxable. The life annuity component would be gradually taxable when periodic payments are made from the retirement plan.

An alternative environment for the integrated product. A more favorable environment would be one where the "purchase" of long-term care insurance was not considered a taxable distribution and the long-term care benefits paid from the plan, like accident and sickness benefits paid from an insurance policy, would be excluded from taxable income. This could be rationalized by analogy with section 401(h) of the Internal Revenue Code permitting tax qualified status for health plans for retired employees, Employer contributions to pay faor such benefits are not taxable income to the employee, and the benefits, when received, are also not included in retiree taxable income. Long-term care benefits can probably be considered health benefits for the purpose of 401(h). There are strict conditions imposed on benefits provided through 401(h), including the necessity to establish a separate account where the employer's contributions are collected; 401(h) was added to the Code in 1964 in response to conditions in certain defined benefit plans. It is unlikely that the long-term care annuity we are envisioning here could meet these conditions, but the precedent of the 401(h) law could allow legislators to craft new provisions that would fit the long-term care annuity option.[14]

Indemnity Versus Cash Disability Approach

Most of the administrative considerations pertinent to the integrated LTC annuity are not unique to the integrated product, but rather affect its component parts, that is, the life annuity or the long-term care benefits. Indeed, our choice of focusing on a disability rather than an indemnity approach to long-term care insurance benefits presents some special administrative issues, both positive and negative.

In an indemnity approach to long-term care insurance, the claims procedure is often quite complicated for the insurer to administer. Insured expenses must be carefully defined in the policy, and claims for reimbursement must be examined in some detail. Furthermore, the insured must

establish a process of dispute adjudication as well as a system for tracking limits or maximums. There is also a tendency for insurance companies to get involved in case management, which can be quite complex and sensitive. Because an indemnity approach must specify covered benefits, it is not dynamically flexible, that is, as new treatment methods and modalities arise, the indemnity policy becomes outdated and must be modified either by rider or by replacement. In contrast, the disability approach has a much simpler claims process to administer and it is dynamically flexible. Because benefits are paid as long as the insured is disabled, regardless of the specific expenses incurred, if any, the only determination necessary is whether and when the disabled insured meets certain specified criteria. Finally, the disability approach is much less prescriptive; it allows, indeed encourages, the insured to consider carefully how best to use the policy benefits being paid to meet his needs.

In both the indemnity and the disability approaches to LTC insurance, disability must be assessed before benefits can be paid and periodically after payments thereafter, but in the disability approach this determination is more critical. There will be an incentive for some insured individuals to claim that they have a disability in order to collect the benefits. It would therefore seem to be preferable for the disability assessments to be done by a trusted third-party organization, evaluating for the presence of a combination of highly objective and well-understood criteria. Criteria for determining whether individuals meet disability thresholds have been successfully developed in both private and public sectors, and they are being administered by nurses, social workers, and other professionals. A few insurance companies sell disability-based long-term care insurance policies. State government agencies administer benefit programs for the elderly providing services solely based on the determination of disability.[15]

The disability approach might be more open to abuse by the insureds and their relatives or guardians, though it is unknown how extensive this problem is or would be. Any insurance policy can lead to greater utilization of (that is, induced demand for) the policy benefit, but in the indemnity approach cost-sharing features are typically introduced to minimize the problem. Perhaps an inability to include cost-sharing features explains the higher premium charged by the few companies utilizing the disability approach for essentially the same level of benefits as those companies using the indemnity approach. Even in the disability approach, of course, it may be possible to include benefit maximums and other design features that give policyholders incentives to consume their benefits appropriately.

Conclusion and Discussion

This chapter describes current life annuity and long-term care insurance markets and explores why these products are not widely used. To solve many

of the problems identified, we suggest integrating the life annuity and long-term care insurance and review how this would operate. The tax treatment of this combination could be improved, and product design issues must be considered carefully. Furthermore, additional research is required to look at more recent data and different permutations of the product as well as more refined analysis of the population groups who might utilize it. A favorable public policy environment, including tax and insurance regulation, is needed to encourage this innovation, and insurance companies must be creative in exploring the possibility of improving the financial security of current and future retirees.

Notes

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1. A cash balance plan is a defined benefit plan that stimulates a defined contribution plan; account balances are created for each worker and are credited with a fixed rate of return. See Rappaport et al. (1997).

2. Inflation-indexed annuities do, however, exist in the United Kingdom and a few other countries; see Brown et al. (this volume; 2001).

3. This section draws on Warshawsky, Granza, and Madamba (2000).

4. These statistics exclude LTC provided by hospital-affiliated facilities and agencies, which amounted to over $17 billion in 1996.

5. Medicare also pays for long-term care for the terminally ill through hospice care.

6. Based on data from 1985, 44 percent of persons who use nursing homes after age 65 start and end as private payers, 27 percent start and end as recipients of Medicaid benefits, and 14 percent spend down assets to become eligible for Medicaid benefits (Spillman and Kemper 1995). A 1995 projection found that 17 percent of those turning 65 in 1995 would enter a nursing home and remain private payers throughout, 6.3 percent would enter as private payers but become Medicaid eligible by exhausting their assets, and 10.7 percent (three in five of those ending up in a nursing home on Medicaid) would already be Medicaid eligible on entry.

7. Some have claimed that there is wide scope for evading the rules requiring the use of assets to pay for nursing home care before the utilization of Medicaid, although there is no formal evidence supporting or denying this assertion.

8. For a description of the benefits typically offered in long-term care insurance policies, see Granza, Madamba, and Warshawsky (1998).

9. Pauly also notes that when Medicaid spending is low but the desired level of care is an increasing function of wealth, there may be some scope for LTC insurance to cover the difference between the desired and fixed levels of care. But under current law Medicaid pays nothing if an individual has LTC insurance, so insurance would be purchased only if the individual highly valued additional quality of care; presumably this would be more likely when the individual is starting retirement with a relatively high standard of living.

10. The Pauly analysis also implies the desirability of LTC insurance with high deductibles or insurance purchased at relatively advanced ages. This is moderated in the presence of a spouse and children. For example, if the death of the spouse did

not affect income and LTC costs are less than the present value of the future consumption had the person survived (which is likely, given the positive correlation of LTC disability and mortality), then LTC insurance for both lives might not be worthwhile. If, further, children are able to provide care to their disabled parents, and if parents prefer care from their children over care from others, children might encourage the early admission or treatment of their parent.

11. Of course there is significant intertemporal uncertainty about future cost of a nursing home, that may be uninsurable in private markets (Cutler 1993). Private insurers can pool cross-section risk, but not aggregate risk (especially if the serial correlation over time of LTC cost increases). In this environment insurance companies may not be able to pool across cohorts as they do in the catastrophe insurance line of business. In practice, LTC insurance policies sold in the marketplace tend to pay a fixed dollar amount for care, use nominal rules to update payments over time, and reserve the right to increase rates in response to adverse cost shocks. These limitations, combined with benefit maximums found in many policies, reduce the risk-sharing features of LTC insurance, and hence curtail the demand for it. Combined with commissions and other marketing expenses, these features may imply that consumers simply view LTC insurance as providing an expected value less than the actual cost of the policy; see also Sloan and Norton (1997).

12. This reduction in the cost of adverse selection is below the 10 percent estimate of the cost of adverse selection cited earlier in the current annuity market. The difference is in part due to the 10-year minimum benefit in these estimates, which increases life annuity benefits disproportionately among groups excluded from the prospective purchaser pool under current practice because of their shorter survival. The straight life annuities on which the 10 percent estimate of the cost of adverse selection was based did not include a minimum benefit. For more direct comparison, Murtaugh, Spillman, and Warshawsky (2000) indicate that the cost of adverse selection in their life income annuity with no minimum benefit would be about six percent. Moreover, the NMFS database is meant to be representative of the entire U.S. population, whereas purchasers of life annuities and LTC insurance are more likely to come from population of higher socioeconomic status, who have higher life expectancies than average.

13. The Long-Term Care and Retirement Security Act of 2000, a bill introduced in March 2000 by Senators Grassley and Graham, would give individuals an above-the-line tax deduction for the cost of their qualified LTC insurance policy, subject to the age-based deduction levels that currently exist. The bill would also allow employers to include the deduction provision in cafeteria plans and flexible spending accounts.

14. Another tax issue is the relatively unfavorable treatment of long-term care reserves within the life insurance company as compared to qualified retirement plan reserves. Previously qualified plan reserves held by life insurance companies were not afforded favorable treatment, but when employers began to establish trusts for their pension plans, putting life insurance companies at a competitive disadvantage, Congress changed the tax treatment. It is possible that the establishment by employers of 401(h) accounts to fund long-term care benefits would result in similar pressure on Congress to change the tax treatment of long-term care reserves. Pauly (1989) argues that there is a basis for public policy encouragement of private long-term care insurance, where the optimal subsidy would be higher for low wealth people. He also argues that a subsidy should be extended as far up the income distribution as there is positive expected value of Medicaid payments; such a subsidy will induce the purchase of insurance.

15. Nyman (1999) speculates that the widespread existence of health insurance contracts using the indemnity approach may be explained by a smaller welfare loss

realized from the purchased-price effect than the welfare loss realized from the expected fraud and fraud avoidance measures or from writing complex contracts when the cash disability approach is used. The choice among approaches in any particular situation is ultimately based on experience, empirical evidence, and intuition regarding the relative magnitudes of these welfare losses.

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