Evaluation of Approaches to Reducing Women's Longevity Risks

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Abstract

Elderly women living alone experience some of the highest poverty rates in the United States. One reason for their financial frailty is that they face more longevity risk than men. Existing financial products that can mitigate this risk are not attractive to many people. Can alternative vehicles for pooling longevity risk be developed outside the insurance market that would appeal to these individuals? This paper suggests some risk-pooling approaches and compares their effectiveness and viability.

1. Introduction

Longevity risk includes both the uncertainty of how long one will live and the financial risk of outliving one's assets. For a variety of reasons, women face greater longevity risk than men. Some reasons are at least partly based on biology. Women live longer than men on average, and also tend to marry older men. Therefore, they tend to outlive their husbands. The event of experiencing widowhood can be financially severe. Average income for older widows drops 47 percent following the death of the husband.[†] By another measure, poverty rates for elderly widows are 18 percent, compared to 4 percent for married couples.[‡]

Other reasons for women's higher longevity risk have a cultural basis. Women are less likely to have earned a retirement pension in their own right, although many are eligible for survivor benefits from their husbands' pensions. Working women experience lower lifetime earnings because of their lower average wages and more time spent out of the workforce. They also tend to work in jobs that are less likely to provide retirement benefits. These factors translate to lower average retirement savings. Single elderly women are less financially secure than married women, and most elderly women are widowed, divorced or never married.

Because women experience greater longevity risk, they have a greater need for strategies to make their retirement assets last. Yet women, not unlike men, are reluctant to purchase life annuities to mitigate this risk. The reasons are varied. Many lack knowledge of how annuities work and the security they offer. Others have a distrust of insurance companies and agents. Some perceive annuities as too expensive or not a good value. Some have a bequest motive and do not want assets tied up by an annuity purchase. The biggest reason may be that the public, in general, does not appreciate how severe a financial risk their own longevity can pose.

2. Future Trends and Their Implications for Women

[†] Karen C. Holden and Cathleen Zick. "Distributional Changes in Income and Wealth upon Widowhood: Implications for Private Insurance and Public Policy." In Retirement Needs Framework. SOA Monograph M-RS00-1. Schaumburg, IL. Society of Actuaries. 2000.

[‡] Alicia H. Munnell. "Why Are So Many Older Women Poor?" Just the Facts, No. 10. Center for Retirement Research at Boston College. April 2004.

Most demographic studies indicate that we will experience further increases in longevity, continuing a long-term trend.[§,**] If realized, future increases in longevity will increase the likelihood that women will outlive their assets. Now, and also likely in the future, the vast majority of centenarians are women.[††]

Did these centenarians plan for living so long? Probably not. Research indicates that longevity is not strongly influenced by heredity. Less than 25 percent of longevity is explained by how long one's parents lived.[‡‡,§§] Basing one's savings strategy and retirement asset management on family longevity patterns can mean not saving enough, spending savings too fast or both.

There are more women in the workforce now than in previous generations. This cultural change has had profound social implications over the past half century. One implication is that elderly women in the future will be better prepared financially for old age. More working women are currently managing 401(k) and other defined contribution (DC) plan assets than in the past. They appear to be more conservative investors than men, however, so their assets might not grow sufficiently to sustain decades in retirement.[***]

Another implication of more women in the workforce is that, in the future, fewer daughters will be available to care for elderly parents. A shift from family caregivers to professional caregivers may cause elder care to be more costly due to higher demand. As a result, elderly women who need such care will experience more strain on their retirement assets.

[§] United Nations. Report of the Second World Assembly on Aging. Madrid, Spain. April 8-12, 2002.

[**] Hilary Waldron. "Literature Review of Long-Term Mortality Projections." Social Security Bulletin. Vol. 66, No. 1, pp. 16-30. 2005.

[††] U.S. Census Bureau. Statistical Abstract of the United States: 2007. Section 1, Population. Washington, DC. 2006.

[‡‡] Kaare Christensen, Thomas E. Johnson, and James W. Vanpel. "The Quest for Genetic Determinants of Human Longevity: Challenges and Insights." Nature Reviews Genetics. Vol. 7, pp 436-448. June 2006.

[§§] Dennis Ahlburg. "Intergenerational Transmission of Health." The American Economic Review. Vol. 88, No. 2, pp. 265-270. May 1998.

[***] Michael S. Gutter, Tabassum Saleem, and Kevin Gross. "Are There Gender Differences in Risk Tolerance or Is It a Question of Measurement?" Consumer Interests Annual. Vol. 49, pp. 1-12. 2003.

Current retirees and surviving spouses depend largely on Social Security benefits supplemented by annuities from defined benefit (DB) plans.[†††] As more and more DB plans are replaced by DC-only benefits, the guaranteed life income from a DB plan may become a relic of a more secure past. Even governmental employers are replacing DB plans with DC plans for newly hired employees. This greater reliance on DC plans means that more elderly women will have to manage a pool of assets instead of relying on a DB life annuity. Currently only 23 percent of DC plans offer annuity distribution options.[‡‡‡] And more DB plans, particularly cash balance and other hybrid plans, now offer lump sums in addition to the traditional annuity options, with a large percentage of retirees electing the lump sum. With more retirement savings being paid in lump sums, longevity risk is shifted from employers to individuals. Longevity risk is very manageable when pooled over large groups of individuals, as in a pension plan. When borne by an individual, however, it is unpredictable and difficult to mitigate.

Another concern is that the future of Social Security is uncertain. Without Congressional action to increase the taxes supporting the Social Security system, benefits must be reduced at some point. Given that Social Security benefits are the major source of income for a large percentage of elderly women, reductions in these benefits will put many at even greater risk.[§§§]

Finally, rates of divorce are higher now than in the past, and are projected to increase in the future. Social Security Administration data indicate that more women born between 1956 and 1960 will be divorced (20 percent) than widowed (18 percent) at age 67.[****] This increase will have negative financial implications for elderly women, as divorced women exhibit higher poverty rates than women who have never married or who are married or widowed.[††††]

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††† Irena Dushi and Anthony Webb. “Annuitization: Keeping Your Options Open.” In Managing Retirement Assets Symposium. SOA Monograph M-RS04-2. Schaumburg, IL. Society of Actuaries. 2004.

‡‡‡ Profit Sharing Council of America. Annual Survey of Profit Sharing and 401(k) Plans. Chicago, IL. 2006.

§§§ Social Security Administration. “Fact Sheet: Social Security Is Important to Women.” Baltimore, MD. June 2006.

**** Barbara A. Butrica and Howard M. Iams. “Divorced Women at Retirement: Projections of Economic Well-Being in the Near Future.” Social Security Bulletin. Vol. 63, No. 3, pp. 3-12. 2000.

†††† Butrica and Iams.

Looking at these trends in the aggregate, one subgroup of elderly women likely will be better prepared financially for widowhood than past generations: those who have earned retirement benefits in their own right and have already developed asset management skills during their working lives. Others will be at greater risk of poverty in old age due to increasing longevity trends, higher divorce rates, the shift from DB annuities to lump sums and probable reductions in future Social Security benefits. Reduced availability of family caregivers would exacerbate this risk.

3. Risk Reduction through Annuities

Outside of a DB plan, including Social Security, the best approach for reducing longevity risk is through the purchase of a life annuity. Individuals who lack a DB annuity can annuitize a portion of their retirement savings and pool their longevity risk. Currently, few retirees in the United States purchase immediate life annuities. Variable annuities are popular as tax-deferral vehicles but are rarely converted to a guaranteed life income stream.[‡‡‡‡,§§§§,*****] As mentioned above, the reasons are many and varied.

Longevity insurance is a newer type of annuity product being marketed by several of the large U.S. insurance companies. A single premium, say $50,000, is invested at age 65. If the policyholder lives to a specified age, such as 80 or 85, a monthly annuity is paid. Some versions include a death benefit if the policyholder dies before that age, in exchange for a lower monthly annuity payout.

Despite the availability of life annuity products, the market in the United States currently is very small. Educational campaigns could help retirees to understand the value of annuities. Already, the financial press is beginning to address the mechanics of how annuities work, but

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[‡‡‡‡] James H. Smalhout. “Benefit Design Choices for Personal Social Security Accounts,” Benefits Quarterly. Second Quarter 2002, pp. 44-64.

[§§§§] Matthew Drinkwater and Eric T. Sondergeld. “Perceptions of Mortality Risk: Implications for Annuities.” Pension Research Council Working Paper (PRC WP 2003-20). The Wharton School, University of Pennsylvania. 2003.

[*****] Art MacPherson and Lisa Plotnick, “VA Crossed Signals: Built for Income, Sold for Accumulation.” National Underwriter. Jan. 7, 2002, p. 23.

still often portrays them as not being a good value. If a majority of U.S. retirees wanted to purchase annuities, would or could the annuity market grow large enough to meet the demand? Insurance companies in the United Kingdom are complaining that the higher premiums they must charge in order to manage the uncertain longevity risk at extreme ages make their products unattractive to the public. One proposal in the United Kingdom would shift the longevity risk after age 85 to the government so that annuities would be more attractively priced.[†††††]

Recognizing that most individuals are not favorably inclined to purchase annuities backed by insurance products, are there other alternatives that exist or can be developed to mitigate longevity risk? One possible solution would be a product combining long-term care insurance with a life annuity. Individuals who fear dying before receiving their "money's worth" from an annuity contract might be more willing to purchase a combination product. Plus, it would alleviate a source of potential hardship, the need to pay for long-term care, that can arise when assets are annuitized.[‡‡‡‡‡, §§§§§, ******, ††††††]

Married couples pool their longevity risk to a limited extent.[‡‡‡‡‡‡] After the first death, however, how can the survivor (usually the wife) reduce her now unpooled longevity risk? Can a DB-like pool be created outside the insurance market for individuals to enjoy risk-pooling characteristics similar to DB plans?

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††††† Peter Lilley, MP. "Save Our Pensions." Parliamentary Speeches and Publications. The Social Market Foundation. Sept. 19, 2003.

‡‡‡‡‡ Drinkwater and Sondergeld, p. 12.

§§§§§ John Ameriks and Paul Yakoboski. "Reducing Retirement Income Risks: The Role of Annuitization." Benefits Quarterly. Fourth Quarter 2003, pp. 13-24.

****** Beverly J. Orth, "Managing Longevity Risk in U.S. Retirement Plans through Mandatory Annuitization." North American Actuarial Journal. Vol. 10, No. 3, pp. 32-44. July 2006.

†††††† David Brazell, Jason Brown, and Mark Warshawsky. "Tax Issues and Life Care Annuities." Pension Research Council Working Paper (PRC WP2007-22). The Wharton School, University of Pennsylvania. 2007.

‡‡‡‡‡‡ Ameriks and Yakoboski, p. 19.

4. Risk-Pooling Approaches

Presented here are a few approaches that could simulate the risk-pooling characteristics of a DB plan. Most would require legislative changes; one, while uncommon, already exists.

4.1 Approach 1: Form Associations for Pooling Longevity Risk

Structure:

State insurance laws could be modified to allow the formation of non-profit associations intended strictly for the purpose of pooling longevity risk. Currently, such associations must have a non-insurance purpose to which the insurance benefits are ancillary.

Individual members would purchase units in a risk pool tranche for individuals of the same age and gender. Because only healthy individuals would be interested in the pooling approach, health status would not be considered. The assets in the risk pool tranche would be invested, and monthly payments would be made to the pool members from income on the assets. The same asset management techniques used by DB plans would be appropriate for investing the assets of the risk pool. For example, asset-liability duration matching could be used.

The monthly payments to the tranche members would be adjusted up or down annually to reflect the deaths of tranche members. In other words, actuarial gains and losses due to mortality would be passed through annually to the members, thereby pooling the longevity risk. It would be possible to pool both investment and longevity risks by passing through the gains and losses due to both investments and mortality.

As with insurance products, short-lived members would subsidize the payments made to long-lived members, but individual longevity risk is mitigated. Piggot, Valdez and Detzel demonstrate that pooling over several age cohorts in an annuity pool can reduce payment volatility.[§§§§§§]

There would be no guarantee that funds would last as long as the members, because there are no insurance reserves supporting the payouts. As the number of remaining members in a tranche dwindles, the risk pooling effect is substantially lost. At a sufficiently low number of tranche members, the remaining assets could be annuitized through purchase of traditional annuities from an insurance company.

Although suggested as a good approach for women, men could also purchase units in a gender-specific pool. However, men experience significantly lower longevity-based financial risks and, therefore, less need for such a vehicle.

The risk pool concept bears resemblance to participating annuities, which are variable annuities that share both investment risk and longevity risk with the annuity buyer. Many carriers offer annuities that share investment risk. TIAA-CREF offers the only participating annuity in the United States that also shares longevity risk and has done so since 1952, under specific enabling legislation in the state of New York. These "CREF annuities" or similar products are also offered in Bolivia and Peru.[*******]

Mellon Financial is proposing a similar "hybrid tontine" product that could be marketed to individuals, 401(k) and cash balance plans. Unlike insured annuity products, the employees in the pool absorb the longevity risk.[†††††††,‡‡‡‡‡‡‡] State insurance law changes would be needed to permit sales of such a product.

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§§§§§§ J. Piggott, E.A. Valdez, and B. Detzel. "The Simple Analytics of a Pooled Annuity Fund." In Managing Retirement Assets Symposium. SOA Monograph M-RS04-2. Schaumburg, IL. Society of Actuaries. 2004.

******* Smalhout.

††††††† Ashlea Ebeling. "The Tontine Returns: Last Retiree Standing." Forbes. March 12, 2007.

‡‡‡‡‡‡‡ Mellon Financial Corporation. "New Twist on 350-Year Old Investment Instrument Could Help Secure Retirements of Those Without Pension Plans." Press Release. San Francisco, CA. Jan. 29, 2007.

Implications for individuals:

Risk pool units could be purchased at the time of widowhood out of savings, retirement accounts, death benefits, life insurance proceeds or proceeds from the sale of a residence. For single women, Dushi and Webb show that annuitization should occur at age 65.[§§§§§§§] Monthly income from the risk pool would supplement other retirement resources, such as Social Security, survivor benefits from a pension plan, other retirement benefits, individual retirement account (IRA) distributions, etc.

There would be no guarantee that the payments would continue until death or that they would not reduce in amount. There would be no survivor benefits paid from the pool and no residue at death. Thus, the lack of insurance underwriting and reserves means that the pool annuities would be riskier for the individual than a traditional annuity. However, the risk pool approach would be an improvement over “self-annuitizing” through scheduled or unscheduled asset drawdown approaches.

4.2 Approach 2: Transfer Benefits from a DC Plan to a DB Plan

Structure:

This approach currently exists, but is not commonly used. An employer that maintains both a DB plan and a DC plan could amend the DB plan to permit DC plan participants to transfer their DC account balance to the DB plan at retirement age. The transferred balance would be converted to any annuity option offered under the DB plan, using the plan’s basis for actuarial equivalence. This approach would be viable if the DB plan is an active (i.e., not frozen) plan. If the plan is frozen, the employer may be less willing to guarantee the longevity and investment risks.

[§§§§§§§] Dushi and Webb.

Implications for individuals:

This approach would put an individual's DB and DC benefits in the same risk pool. If the employer is financially weak, the plan might be terminated in an underfunded position. While both the DB benefits and the transferred DC benefits would be eligible for the Pension Benefit Guaranty Corporation (PBGC) guarantees, the protection is limited. The risk is mitigated but not eliminated. However, the marginal risk for transferred DC benefits is very low because they have a high priority in the PBGC guarantee structure.

The approach would simplify the individual's annuitization decision. For example, there would be no need to research and compare competing annuity products. However, the options offered by the DB plan might not be the best available choice, especially for men. Qualified plans must use an actuarial basis that is gender-neutral. Female annuitants would benefit from the plan's subsidized conversion factors, relative to commercially available contracts, while male annuitants would be adversely affected. Legislation could be enacted to permit gender-distinct conversion factors specifically for transferred DC benefits, however. Another concern is that the plan might not offer annuities with cost-of-living adjustments (COLAs) or other features offered by insurance companies.

4.3 Approach 3: Expand Social Security System to Allow Purchase of Supplemental Annuities

Structure:

Under this approach, the Social Security system would be expanded to allow individuals to purchase a supplemental immediate life annuity directly from the Social Security Administration (SSA). The most practical time for purchase would be around the time Social Security benefits begin. The supplemental annuity payments would be reported separately for tax purposes and taxed under the basis recovery rules of Internal Revenue Code (IRC) Section 72.

There would be many issues to resolve to implement this concept. For example, how would the conversion factors be determined? Would the conversion factors be gender-neutral? If so, only women would be inclined to purchase the supplemental annuities. Would race or socio-economic status be considered? If not, significant anti-selection would be introduced. Consequently, taxpayers would be subsidizing groups with the greatest longevity, including those with the most wealth.

Would the annuity be single-life only? Or would married couples be able to purchase joint and survivor annuities? If joint and survivor annuities were available, what would happen in the event of divorce? Administrative complexities surrounding treatment in the divorce situation may argue toward a single-life only approach.

Would the supplemental annuity be indexed for inflation, as Social Security benefits are? Indexing makes the purchase price higher, relative to a fixed annuity with the same initial payment amount, but offers greater financial protection. Partial indexing might be an attractive compromise, but would complicate pricing, communication and the individual's decision process.

Implications for individuals:

The individual (or couple if joint and survivor options were offered) would receive a single monthly payment from the SSA, consisting of the Social Security benefit plus the supplement. With the SSA's efficiency and low administration costs, the individual may receive larger supplemental annuity payments than from an association risk pool or from a DB plan (Approaches 1 and 2 above). Lack of profit loading could mean larger payments than those offered by a commercially available product. A particularly valuable advantage to this approach is that there would be virtually no risk of default of the annuity issuer, i.e., the SSA. For this reason, annuity providers might be expected to lobby against this idea, as they could not compete against the SSA. However, insurance industry representatives have indicated that they might not mind giving up this small piece of their overall business. The costs of marketing annuities are high and the payoff is small.

The time of purchase could be problematic. At age 67, currently the highest age for commencement of unreduced Social Security benefits, most women are married.[********] The average age at widowhood is steadily increasing as men's longevity increases.[††††††††,‡‡‡‡‡‡‡‡] If the annuity purchase were limited to the time of commencement of Social Security benefits, the purchase would be premature for many women. Allowing purchase at a later time, however, would increase both adverse selection and the administrative burden on the SSA. It would also negatively affect the system's financial stability. For these significant reasons, flexibility should be sacrificed in favor of efficiency and sustainability.

4.4 Approach 4: Expand Social Security System to Allow Transfer of DC Accounts to SSA to Purchase Supplemental Annuities

Structure:

Most DC plans in the United States today do not offer annuity options, both to simplify administration and to avoid fiduciary liability associated with provider selection. Consequently, women who have earned their own DC benefits and widows who are entitled to their spouse's DC benefits are left with self-managing a lump sum or shopping for an annuity product. As an alternative, Congress could expand the Social Security system and permit the SSA to accept transfers of DC account balances for the purchase of a supplemental annuity, similar to Approach 3 above. The transfer would function like a tax-free direct rollover from the employer-sponsored DC plan to the SSA.

Some potential issues to resolve would include the timing of the transfer. Would it occur when the participant terminates employment? Depending on the age of the annuitant, the

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[********] Butrica and Iams.

[††††††††] Butrica and Iams.

[‡‡‡‡‡‡‡‡] U.S. Bureau of the Census. 65+ in the United States. Current Population Reports, Special Studies, P23-190. U.S. Government Printing Office. Washington, DC. 1996.

annuity would be either immediate (if age 62 or older) or deferred (if under age 62). Or would the transfer be postponed until the annuitant begins payment of Social Security benefits? The first alternative simplifies the process for the annuitant: there would be no need to park the benefits in the DC plan or an IRA until a later time. The second alternative simplifies the process for the SSA: there would be no need to credit transferred amounts with interest during the deferral period.

Another issue is whether transfers should be limited to participants and survivors whose DC plan does not offer an annuity option. Regardless, DC plan sponsors probably would stop offering annuity options altogether. They could not compete with the advantages offered by the SSA: lack of default risk, lack of profit loading, low administrative costs and convenience. A bigger issue is that insurance companies could not compete against the SSA, either. The U.S. market for individual annuities might not survive if this concept were implemented.

Implications for individuals:

The implications would be similar to Approach 3 above. If Roth or after-tax contributions were included in the transfer option, basis recovery rules would be required to account for the taxes already paid on the contributions. With a Roth transfer, the five-year account establishment criterion required for tax-free qualified distributions would be a complicating factor. To simplify administration, the better approach would be to not allow transfers of Roth funds. While the funds could still be transferred, the qualified distribution feature of Roth accounts would not continue to apply to the transferred funds.

5. Conclusion

For many reasons, women are especially vulnerable to longevity risk. The best financial product now available for mitigating this risk, a life annuity purchased from an insurance company, is not appealing to a large percentage of the elderly population. This paper considered some alternative approaches for mitigating women's longevity risk, particularly at the time of widowhood.

In the short term, Approach 2 has the greatest viability. No new legislation is needed to permit employers to allow DC benefits to be transferred to a DB plan. This approach has a limited future, however. As more employers freeze or terminate their DB plans, the opportunity for such transfers will dwindle.

For the middle term, Approach 1, the risk-pooling association concept, has much merit. These associations are similar to the CREF annuities that have existed for more than 50 years. They also bear some resemblance to fraternal benefit societies, which have more than a century of history in the United States. With tax-exempt status under IRC Section 501(c)(8), fraternal benefit societies use the revenue raised from the sale of life, health and other insurance products to support their lodge system, social function and service functions. Essentially, profits derived from the risk-pooling business support the social and service functions of these organizations. The future of their tax-exempt status, however, is uncertain, and only 1.5 percent of life insurance in force in the United States is through fraternals.[§§§§§§§§]

One major impediment to Approach 1 is that, currently, state laws prohibit tontine-like products and prohibit associations formed for the sole purpose of providing insurance benefits. Accordingly, new legislation would be required in every state to permit these associations. Insurance companies would lobby strongly against such legislation, fearing an encroachment on their turf. A more important concern is that the informal risk pooling inherent in a non-profit association is much riskier than formal risk sharing through a regulated insurance company backed by substantial reserves. A less-risky alternative would be mutual insurance companies organized specifically for pooling longevity risk. The negative associations that the public attaches to insurance companies, however, might still be present.

In the longer term, Approaches 3 and 4, both involving the SSA, offer the strongest solutions from the individual's perspective. Purchasing supplemental annuities through the SSA would be more appealing than commercial annuity products to many elderly women. The SSA's efficient administration and the convenience of having a single monthly payment combined with

[§§§§§§§§] Bonnie Brewer Cavanaugh. "From a Whisper to a Shout." Best's Review. December 2005, pp. 64-70.

Social Security benefits are additional advantages. The Aspen Institute recommended a similar approach as part of its 2007 “Savings for Life” proposal to overhaul U.S. national savings policy.[*********] It suggested Security “Plus” annuities that individuals can purchase at time of Social Security eligibility, through the SSA, but underwritten by a private market annuity provider, without premium taxes or advisor fees.

There would be a number of major hurdles to overcome, however, making the viability of Approaches 3 and 4 questionable. The insurance industry might oppose the concept, even though the U.S. annuity market is tiny and current profitability of this business segment is low. The Security “Plus” annuities suggested by the Aspen Institute avoid this potential drawback by having private market providers underwrite the annuities. More significantly, any legislative proposal affecting Social Security would quickly become mired in the politically charged atmosphere that has prevented long-term financing solutions. Adding a voluntary feature to Social Security would dramatically change the nature of the current system. Perhaps the supplemental annuity concept could be accepted as part of a future transition to privatized Social Security accounts.

The most secure approach to reducing longevity risk will continue to be the purchase of a traditional life annuity from the insurance industry. Informal pooling can reduce, but not eliminate, risk to the individual, and does involve administration costs. Adding voluntary annuities to Social Security shifts the risk either to the entire population or to private insurers as suggested in the Aspen Institute proposal. Perhaps the public would be more accepting of annuitizing assets through a Social Security vehicle, even if underwritten by a private company. The personal interface would be with the SSA, which would also provide efficient administration and select the private underwriters. Merely simplifying the annuity purchase decision could encourage many elderly women to buy a supplemental annuity.

[*********] Initiative on Financial Security. “Savings for Life: A Pathway to Financial Security for All Americans.” The Aspen Institute. Washington, D.C. 2007.