

EXHIBIT E

Blackwood, Kristine (HHS/ASL)

From: Foster, Richard S. (CMS/OACT)
Sent: Monday, July 27, 2009 11:31 AM
To: Gotts, Jill M. (CMS/OL)
Cc: Hall, Amy (CMS/OL); Blum, Jonathan D. (CMS/OA)
Subject: RE: Update on CLASS Act

Jill,

The American Academy of Actuaries and the Society of Actuaries put together a joint workgroup to look at the CLASS proposal. Although I haven't read their full report, based on the press release they appear to have reached similar conclusions to mine regarding the feasibility of the proposed insurance plan.

Please let us know if you have any questions.

Rick



AAA press release
classact_jul...



AAA letter on
class_july09.pdf...

From: Foster, Richard S. (CMS/OACT)
Sent: Thursday, July 09, 2009 5:29 PM
To: Gotts, Jill M. (CMS/OL)
Cc: Hall, Amy (CMS/OL); Blum, Jonathan D. (CMS/OA)
Subject: RE: Update on CLASS Act

Jill,

I've finished reviewing the two studies provided by Sen. Kennedy's staff regarding the CLASS proposal. I'm sorry to report that I remain very doubtful that this proposal is sustainable at the specified premium and benefit amounts.

The actuarial study conducted for AARP assumed participation rates based on a portion (40% to 100%) of current rates for 401(k) plans. In practice, I think current experience for participation in employer-based long-term care plans would be much more applicable, and such participation is far lower than for 401(k)'s (for fairly obvious reasons). The AARP study emphasized the sensitivity of premium levels to the number of healthy participants. Although the actuaries didn't model a plan with participation in the few-percent range, I strongly suspect that the resulting premiums would be so large as to further diminish the number of participants and to fail to achieve the critical mass of participants in average health needed to cover the selection and subsidy costs.

All of the analysis in the Moran study is based on an assumption that the CLASS program would be mandatory. The results look legitimate for such a program, but they are not applicable to the voluntary plan proposed for CLASS.

I haven't been able to talk to CBO yet regarding their participation assumptions. Unless they have a compelling reason to expect greater-than-LTC levels of participation, however, I can't see how there would be enough workers participating to cover the selection costs for those with existing ADL limitations plus the costs for the internal subsidies for students and low-income persons. Thirty-six years of actuarial experience lead me to believe that this program would collapse in short order and require significant Federal subsidies to continue.

I'll let you know if my conversation with CBO changes this view, but I wanted to give you an update in the meantime. As I indicated previously, OACT could undertake a full modeling effort for the CLASS proposal, but such an effort would require more time than we have available just now.

Rick

From: Gotts, Jill M. (CMS/OL)

Sent: Wednesday, July 08, 2009 12:15 PM

To: Hill, Susan N. (CMS/CMSO); Foster, Richard S. (CMS/OACT); George, Effie (CMSO/Intergovtl Personnel Act); Sowers, Mary P. (CMS/CMSO); Bosstick, Suzanne R. (CMS/CMSO); Smith, Carrie A. (CMS/CMSO); Peltz, Linda L. (CMS/CMSO)

Cc: Harris, Monica F. (CMS/CMSO); Hall, Candice J. (CMS/CMSO); Snow, Jennifer M. (CMS/OL); Harris, Kimberly A. (CMS/OACT); Pratt, Theresa A. (CMS/CMSO); Hall, Amy (CMS/OL); Boulanger, Jennifer L. (CMS); Guevara, Natalia T. (CMS/OL); Johnson, Donald N. (CMS/OL)

Subject: RE: Update on CLASS Act

Per the attached, the Administration is now officially on record supporting the CLASS Act.

<< File: 7-6HELPCommitteeLetter.pdf >>

From: Gotts, Jill M. (CMS/OL)

Sent: Tuesday, July 07, 2009 9:23 AM

To: Hill, Susan N. (CMS/CMSO); Foster, Richard S. (CMS/OACT); George, Effie (CMSO/Intergovtl Personnel Act); Sowers, Mary P. (CMS/CMSO); Bosstick, Suzanne R. (CMS/CMSO); Smith, Carrie A. (CMS/CMSO); Peltz, Linda L. (CMS/CMSO)

Cc: Harris, Monica F. (CMS/CMSO); Hall, Candice J. (CMS/CMSO); Snow, Jennifer M. (CMS/OL); Harris, Kimberly A. (CMS/OACT); Pratt, Theresa A. (CMS/CMSO); Hall, Amy (CMS/OL); Boulanger, Jennifer L. (CMS); Guevara, Natalia T. (CMS/OL); Johnson, Donald N. (CMS/OL)

Subject: RE: Update on CLASS Act

FYI. Additional information about how CBO scored CLASS Act is available here:

<http://www.cbo.gov/ftpdocs/104xx/doc10436/07-06-CLASSAct.pdf>

From: Gotts, Jill M. (CMS/OL)

Sent: Thursday, July 02, 2009 12:56 PM

To: Hill, Susan N. (CMS/CMSO); Foster, Richard S. (CMS/OACT); George, Effie (CMSO/Intergovtl Personnel Act); Sowers, Mary P. (CMS/CMSO); Bosstick, Suzanne R. (CMS/CMSO); Smith, Carrie A. (CMS/CMSO); Peltz, Linda L. (CMS/CMSO)

Cc: Harris, Monica F. (CMS/CMSO); Hall, Candice J. (CMS/CMSO); Snow, Jennifer M. (CMS/OL); Harris, Kimberly A. (CMS/OACT); Pratt, Theresa A. (CMS/CMSO); Hall, Amy (CMS/OL); Boulanger, Jennifer L. (CMS); Guevara, Natalia T. (CMS/OL); Johnson, Donald N. (CMS/OL)

Subject: RE: Update on CLASS Act

Here is the CBO score (and footnote g).

<< File: Score.pdf >>

From: Gotts, Jill M. (CMS/OL)

Sent: Monday, June 29, 2009 9:52 AM

To: Hill, Susan N. (CMS/CMSO); Foster, Richard S. (CMS/OACT); George, Effie (CMSO/Intergovtl Personnel Act); Sowers, Mary P. (CMS/CMSO); Bosstick, Suzanne R. (CMS/CMSO); Smith, Carrie A. (CMS/CMSO); Peltz, Linda L. (CMS/CMSO)

Cc: Harris, Monica F. (CMS/CMSO); Hall, Candice J. (CMS/CMSO); Snow, Jennifer M. (CMS/OL); Harris, Kimberly A.

(CMS/OACT); Pratt, Theresa A. (CMS/CMSO); Hall, Amy (CMS/OL); Boulanger, Jennifer L. (CMS); Guevara, Natalia T. (CMS/OL); Johnson, Donald N. (CMS/OL)
Subject: RE: Update on CLASS Act

FYI. The following story was published today in BNA. Bottom line, the CLASS Act was scored by CBO with a savings of \$58 billion over 10 years, including a \$2.5 billion savings in Medicaid.

Reform Proposals

Long-Term Care Program Would Save \$58 Billion, Include Medicaid Spending Cuts

A new voluntary long-term care insurance program included in a Senate draft health reform bill would save nearly \$58 billion over 10 years, including a \$2.5 billion reduction in Medicaid spending, according to a cost analysis released June 26.

The Congressional Budget Office and Joint Committee on Taxation estimate that under the Community Living Assistance Services and Supports (CLASS) program, the federal government would collect \$81.5 billion in premiums and pay \$22.6 billion in benefits during the program's first 10 years.

In addition, a senior Democratic advisor to the Health, Education, Labor and Pensions Committee June 26 told reporters the program's long-term health is protected by a provision that would allow the Health and Human Services Department Secretary to cut off new enrollment if the program is headed toward insolvency.

The HHS secretary also would be able to increase premiums and make other changes to maintain the program's solvency, according to a summary of the CLASS Act prepared by the Democratic staff of the HELP Committee.

Monthly Premiums

Under the CLASS program, participants would have to contribute monthly premiums for five years before they qualify for benefits, which are triggered by evidence of functional limitation, including cognitive impairment.

Premiums would average \$65 per month, adjusted for age, although students and those with incomes less than 100 percent of the federal poverty level would pay \$5 per month.

Though CBO and JCT did not offer a detailed explanation for the reduction in Medicaid spending, the Democratic advisor said it is likely because the CLASS program would be the primary payer for those enrolled in both programs, reducing Medicaid's obligation.

Republicans on the HELP committee have argued the program could add \$2 trillion in unfunded liabilities to the federal budget over a period of decades.

The HELP panel will consider the long-term care title of the health reform bill following the congressional July 4 recess.

From: Gotts, Jill M. (CMS/OL)

Sent: Thursday, June 11, 2009 4:07 PM

To: Hill, Susan N. (CMS/CMSO); Foster, Richard S. (CMS/OACT); George, Effie (CMSO/Intergovtl Personnel Act); Sowers, Mary P. (CMS/CMSO); Bosstick, Suzanne R. (CMS/CMSO); Smith, Carrie A. (CMS/CMSO); Peltz, Linda L. (CMS/CMSO)

Cc: Harris, Monica F. (CMS/CMSO); Hall, Candice J. (CMS/CMSO); Snow, Jennifer M. (CMS/OL); Harris, Kimberly A. (CMS/OACT); Pratt, Theresa A. (CMS/CMSO); Hall, Amy (CMS/OL); Boulanger, Jennifer L. (CMS); Guevara, Natalia T. (CMS/OL); Johnson, Donald N. (CMS/OL)

Subject: Update on CLASS Act

Colleagues,

I wanted to alert you to the release of the HELP Committee's health care reform legislation, which includes an updated version of the CLASS Act in Subtitle H beginning on page 153 (see: <http://help.senate.gov/BAI09A84.xml.pdf>). In addition to the one follow up item below, would you please let me know if you have any other comments on from a drafting perspective, after hearing from Connie what her intent is for some of the other issues we had flagged for her?

Most notably, the following comments were addressed, which is a testament to the tremendous value you add.

CMS Comment: New section 3202(2) of the Public Health Service Act. The definition of actively at work defines "work" loosely while "actively employed" may be a more appropriate use, given the intent and scope of this Title. The language/ definition does not appear to take into consideration those individuals that are self-employed, although subsequent sections do.

New Draft: Uses a definition of Actively Employed instead of Actively at Work.

CMS Comment: New section 3203(a)(1)(C) of the Public Health Service Act. Regarding the required # of ADLs or critical life functions, , in order to trigger the benefit, an individual has to be unable to perform (or requires supervision, cueing, etc) not less than 2, but not more than 3. Why is there a maximum number of ADLs or critical life functions for which they need assistance?

New Draft: References a minimum number of ADLs, which may be 2 or 3.

CMS Comment: New section 3203(c) of the Public Health Service Act, Self –Attestation and Verification of Income. Based on the language, it appears that the Secretary will need to establish procedures or rules for such purpose. Yet, the language as presented is primed for fraud. We would recommend including at least examples of verification such as data linking with IRS or income verification with Social Security or other state programs.

New Draft: New language, "(2) verify, using procedures similar to the procedures used by the Commissioner of Social Security under section 1631(e)(1)(B)(ii) of the Social Security Act and consistent with the requirements applicable to the conveyance of data and information under section 1942 of such Act, the validity of such self-attestation; and"

CMSO FOLLOW UP: Would you please verify that the cross references work to allow for income verification with IRS, for example? I thought that under section 1631(e)(1)(B) would be the citation rather than at the clause level.

CMS Comment: New section 3205(a)(2)(C)(ii) of the Public Health Service Act, Presumptive Eligibility for Certain Institutionalized Enrollees Planning to Discharge: We question whether "hospital" should be included here. It appears as though institutionalization qualifies a person for the maximum benefit with a simple attestation. Hospitalization often occurs for non-long-term care reasons and acute episodes should not be included.

New Draft: Clarifies that hospitalization is for long-term care.

CMS Comment: New section 3205(a)(2)(C)(iii) of the Public Health Service Act, Presumptive Eligibility for Certain Institutionalized Enrollees Planning to Discharge: Recommend inserting, "in the process of or within 60 days from the date of discharge from the hospital, facility or institution."

New Draft: Recommended language was inserted.

CMS Comment: New section 3205(c)(7) of the Public Health Service Act reads "SUPPLEMENT, NOT SUPPLANT OTHER HEALTH CARE BENEFITS.--Subject to the Medicaid payment rules under paragraph (1)(C) ..." The reference to paragraph (1)(C) appears to be incorrect. Perhaps the drafter intended to cross-reference paragraph (1)(D).

New Draft: Cross referenced changed.

<< File: CLASSAct comments.doc >>

From: Gotts, Jill M. (CMS/OL)

Sent: Wednesday, June 03, 2009 3:40 PM

To: Hill, Susan N. (CMS/CMSO); Foster, Richard S. (CMS/OACT); George, Effie (CMSO/Intergovtl Personnel Act); Sowers, Mary P. (CMS/CMSO); Bosstick, Suzanne R. (CMS/CMSO); Smith, Carrie A. (CMS/CMSO); Peltz, Linda L. (CMS/CMSO)

Cc: Harris, Monica F. (CMS/CMSO); Hall, Candice J. (CMS/CMSO); Snow, Jennifer M. (CMS/OL); Harris, Kimberly A. (CMS/OACT); Pratt, Theresa A. (CMS/CMSO)

Subject: RE: Hold for Conference Call with Connie Garner with the HELP Committee

Thank you all for participating on today's call, especially on such short notice and with the snafu with the written comments, which are attached. I apologize for not getting you the version that had been conveyed to Connie. With that said, we here in OL were very pleased with how the call went.

As soon as I have the new draft, I will circulate it among this group.

Your continued support is appreciated, and I look forward to continuing to work with you.

<< File: CLASSAct comments.doc >>

-----Original Appointment-----

From: Gotts, Jill M. (CMS/OL)

Sent: Monday, June 01, 2009 4:32 PM

To: Pratt, Theresa A. (CMS/CMSO); Hill, Susan N. (CMS/CMSO); Snow, Jennifer M. (CMS/OL); Hall, Amy (CMS/OL); Foster, Richard S. (CMS/OACT)

Cc: Guevara, Natalia T. (CMS/OL); Harris, Monica F. (CMS/CMSO); Hall, Candice J. (CMS/CMSO); Harris, Kimberly A. (CMS/OACT); George, Effie (CMSO/Intergovtl Personnel Act)

Subject: Hold for Conference Call with Connie Garner with the HELP Committee

When: Wednesday, June 03, 2009 2:15 PM-3:00 PM (GMT-05:00) Eastern Time (US & Canada).

Where: DC meets in 341H; Baltimore staff call: 1-877-CMS-1577, pin code: 212592

5/3 Update: The meeting is being pushed back until 2:15, and we will likely be joined by Jeanne Lambrew who may kick off the call.

5/2 Update: I've updated the conference line accordingly with the new time. Let's also plan to keep this meeting to an hour given our limited availability after 3pm and determine at the conclusion of the call if we need to reschedule. I will also be inviting OACT.



Immediate Release

NEWS RELEASE

Contact: Andrew Simonelli
Phone: 202.785.7872
Email: simonelli@actuary.org

Actuaries: Federal Long-Term Care Legislation Falls Short on Coverage Goals

WASHINGTON – 22 July 2009 – According to a recent analysis by a nonpartisan group of actuaries, the currently proposed benefit structure in the *Community Living Assistance Services and Supports Act* (CLASS Act) will require premiums that may exceed affordable levels for those in the intended population and is unlikely to achieve broad participation. The CLASS Act is included as a provision in the current version of the U.S. Senate Health, Education, Labor and Pensions Committee's *Affordable Health Choices Act*.

“Due to its design and the high level of required premiums, the program is unlikely to cover more than a very small proportion of the intended population,” said Eric Stallard, the chairperson of the American Academy of Actuaries Federal Long-Term Care Task Force.

Stallard said he is encouraged that the legislation recognizes the need to develop actuarially sound premiums to ensure that the program is sustainable for at least 75 years, compared to a previous proposal that had set insufficient premiums and raised significant concerns regarding sustainability and solvency. He said that while actuaries commend the change, other considerations may need to be addressed to achieve a sustainable voluntary federal long-term care program that can accomplish its coverage goals. Among other considerations, the actuaries recommend enhancing participant opt-out/opt-in restrictions, drafting a precise “actively-at-work” definition, and developing an underwriting approach for the coverage of non-working spouses.

The analysis and additional considerations are detailed in a letter from the American Academy of Actuaries to Congress. The letter is available at:
http://www.actuary.org/pdf/health/class_july09.pdf.

The analysis was performed by a joint work group of the American Academy of Actuaries Federal Long-Term Care Task Force and the Society of Actuaries Long-Term Care Insurance Section Council. For more information or to schedule an interview, please contact Andrew

2-2-2 – LONG-TERM CARE

Simonelli, assistant director of communications for the American Academy of Actuaries, at 202.785.7872.

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The American Academy of Actuaries is a 16,000-member professional association whose mission is to serve the public on behalf of the U.S. actuarial profession. The Academy assists public policymakers on all levels by providing leadership, objective expertise, and actuarial advice on risk and financial security issues. The Academy also sets qualification, practice, and professionalism standards for actuaries in the United States.



AMERICAN ACADEMY of ACTUARIES

July 22, 2009

U.S. Senate Committee on Health, Education, Labor and Pensions
428 Senate Dirksen Office Building
Washington, DC 20510

Re: Actuarial Issues and Policy Implications of a Federal Long-Term Care Insurance Program

Dear Senator:

To address increased expenses under state Medicaid programs and impending demographic changes that will further threaten these programs, proposals for the public funding of long-term care (LTC) services have been offered in recent years. This letter presents the comments of a joint work group of the American Academy of Actuaries¹ and the Society of Actuaries² on one of those proposals, the *Community Living Assistance Services and Supports Act* (CLASS Act). Our comments are based on an objective actuarial review of the version of this act included in section 191 of the *Affordable Health Choices Act*, which was introduced on June 9, 2009 by certain members of the Senate Committee on Health, Education, Labor and Pensions and passed with amendments by the committee on July 15, 2009. This analysis uses industry and population statistics, with scenarios derived from expected participant behavior under programs with elements of the CLASS Act design. Any subsequent changes to the proposed legislation could alter the direction and interpretation of our comments.

This document is not intended to replace the actuarial analysis of the 75-year costs for the program called for in Senator Gregg's amendment to the June 9 legislation. Instead, it is intended to provide a summary of the issues that require consideration and a general analysis of the program provisions and their financial implications.

Executive Summary

Our actuarial analysis indicates that the proposed structure and funding approaches in the CLASS Act, as introduced on June 9th, will not only be unsustainable within the foreseeable future, but are unlikely to cover more than a very small proportion of the intended population. In the absence of an actuarially sound requirement, we project that the Fund will be insolvent as early as 2021, or within 11 years. The opt-out and guaranteed issue provisions of the plan pose a significant and likely risk that, in a relatively short time period, the program will either need increased premiums and/or significant reductions.

The version of the bill reported on July 15th includes an amendment requiring an actuarially sound program over a 75-year period. We commend this change in the legislation, with the caveat that the requirement may not be possible to achieve unless the issues explored in this letter are addressed. There is considerable risk of adverse selection, which could necessitate future increases in premiums or reductions

¹ The American Academy of Actuaries is a 16,000-member professional association whose mission is to serve the public on behalf of the U.S. actuarial profession. The Academy assists public policymakers on all levels by providing leadership, objective expertise, and actuarial advice on risk and financial security issues. The Academy also sets qualification, practice, and professionalism standards for actuaries in the United States.

² The Society of Actuaries (SOA) is the largest professional organization dedicated to serving 20,000 actuarial members and the public in the United States and Canada. The SOA's vision is for actuaries to be the leading professionals in the measurement and management of financial risk. To learn more, visit www.soa.org.

in benefits to maintain a sustainable program. As these changes are introduced there is a significant potential for increased adverse selection, necessitating further changes, which may make the program unsustainable. The premium estimates suggested below are optimistic as they assume only a modest level of adverse selection.

Our principal analysis is performed assuming an average daily cash benefit of \$75 increasing annually with the Consumer Price Index (CPI). We have also provided an analysis using the minimum average daily benefit of \$50 called for in the legislation, increasing annually with CPI. Furthermore, we have reviewed two potential premium structures, an entry-age level premium and an annual increasing premium approach.

We estimate that the actuarially sound average monthly premium level would be \$160 using an entry-age level premium approach and assuming an average daily benefit of \$75. Under an annual increasing premium approach, the average monthly premium would be \$125 per month increasing annually with CPI. Based on the originally proposed \$65 average monthly level premium, the fund would be insolvent by 2021. Under the increasing premium approach the fund would be insolvent by 2022.

Using a \$50 initial minimum average benefit, we estimate that an actuarially sound average monthly premium level would be \$110 under the entry-age level premium approach and \$86 using the annual increasing premium approach. Based on the originally proposed \$65 average monthly level premium, the fund would be insolvent by 2027. Under the increasing premium approach the fund would be insolvent by 2032.

Each of these premium estimates is significantly in excess of the \$65 monthly average initially proposed in the CLASS Act. These estimates were based on a series of scenarios, using actuarial assumptions, which we will detail later in our comments.

A voluntary federal LTC program can be developed so that the program is sustainable and minimizes the impact of adverse selection. Such a program would require the use of a stronger actively-at-work definition, an underwriting approach for the coverage of non-working spouses, stronger participant opt-out/opt-in restrictions, consistent eligibility definitions for benefits and potential program design changes that would result in more affordable premiums. These considerations, along with a strong marketing and education effort, could enable the development of an actuarially sound voluntary federal program that encourages broad participation and a sufficient spread of risks.

Actuarial Issues within a Federal Long-Term Care Plan

The actuarial issues in designing a federal long-term care product have been outlined in a monograph published by the American Academy of Actuaries.³ That review referenced issues with respect to access to the program; the impact of potential financing approaches; plan design components, including premium and benefit structures; and considerations for plan administration.

Public voluntary insurance programs have a number of interrelated factors that affect their viability and effectiveness: education, marketing, participation, underwriting criteria, access, and affordability. Critical to their success is a proper balance between these factors. The availability of private insurance, as either supplemental or alternative coverage, and the level of the public's awareness of the need to plan for future long-term care services both add to the complexity of these interrelationships. Any self-sustaining insurance program must adhere to certain principles of sound insurance systems, namely, premium

³ *Long-Term Care: Actuarial Issues in Designing Voluntary Federal-Private LTC Insurance Programs*, American Academy of Actuaries, January 1999. <http://www.actuary.org/pdf/health/LTC.pdf>.

affordability and a reasonable spread of risk within the insured group. A program stands to violate these principles if it is not properly designed or does not consider external influences.

Clearly, the higher the participation rate the more effective a voluntary program will be. A high participation rate is a tremendous challenge for voluntary programs because such programs compete with other needs of the potential participants for disposable income. Affordability and successful marketing are the main facilitators of participation. In order to make premiums affordable, the insured group must have a good spread of risk. If the underwriting criterion is minimal, a greater proportion of less healthy individuals will be attracted to the program. Higher premiums must be employed to accommodate these individuals. As required premiums increase, there is a point at which premiums will be so high that fewer relatively healthy individuals will find program participation worthwhile. However, a significant proportion of the less healthy would still be attracted to the program. Accessibility would be effectively confined to a few, and the program would collapse without external assistance.

A workable and actuarially sound public long-term care insurance program requires restrictions on eligibility to limit the significant impact of adverse selection to a manageable level. This is of critical importance with any voluntary-access provision where participants may opt in and/or out. Such restrictions might include underwriting, actively-at-work provisions, waiting periods, and appropriate penalties for initial opt out and re-enrollment after lapse.

Voluntary programs require the use of some type of underwriting mechanism, especially if participation levels are expected to be less than a majority of the eligible participants. There are many approaches that may be taken, ranging from a direct ineligibility for coverage approach, to an indirect benefit restriction approach. The fundamental underwriting issue for a federal LTC insurance program lies in a balance between the affordability of premiums and the desire for wide accessibility. A voluntary program means that coverage will not be elected by a typical cross section of the population representing a proportional range of the claim risk. When underwriting standards are removed, or set too liberally, a disproportionate number of less healthy individuals will find it more attractive to apply. As a result, per-participant benefit costs rise and premiums may need to be increased to a level that would also drive healthy individuals to choose not to participate, retaining those who are less healthy (and who are more predisposed to make claims), as participants. In addition, the perception by healthier participants of the value of the potential benefits compared with the increasing premiums will decline over time, prompting those healthier participants who elected to participate to then lapse their coverage. With a limited spread of risk initially and even less in subsequent years, the program could eventually become unsustainable at any price.

Conversely, more restrictive underwriting standards will generate a healthier group of insureds. This translates into lower claim costs, lower premiums, and coverage that is affordable to more people. However, those in poorer health will not be covered. The proper underwriting criterion thus becomes the mechanism for attracting the acceptable level of participation at the appropriate price.

A fully guaranteed issue, voluntary plan would likely attract a disproportionate number of less healthy insureds. If a significant portion of all enrollees are not initially healthy, the insurance mechanism would not exist, as the correct premiums would be prohibitively expensive or underpriced initially, which would impair the long-term financial viability of the program. As an alternative, an approach that includes a long waiting period before benefits can be accessed (while premiums are paid) may be used to mitigate, but not eliminate, the adverse selection. Such a period would need to be long enough to discourage timely enrollment when a claim is imminent and therefore deter inappropriate early claims. Such a waiting period could be universally applied or apply only to those conditions in existence at the time of enrollment. Thus, the participants would sign up and pay premiums for 10 or 15 years before either any potential claim could be filed or before those based on pre-existing conditions could be filed. This approach could maximize participation while providing meaningful benefits with reasonable premiums.

The expected level of participation in the program and the costs to market the program can have a significant impact on the program's risk characteristics and its financial viability. In addition, the effectiveness of any marketing for a voluntary federal long-term care insurance program will have a significant impact on the attained risk pool characteristics. Sufficient efforts (and expenses) are required to ensure that a diverse assumption of risk across the morbidity curve is attained. While there are many challenges related to providing a sufficient level of education and to marketing to such a large and widely dispersed eligible population, such efforts are necessary to provide for sufficient participation to enable an effective program with a good spread of risk. A key component of these education and marketing efforts is the ability to discuss the need to plan for potential LTC expenses and explain program features in group meetings with the eligible population.

Private voluntary group long-term care insurance plans issued by private industry typically achieve less than 10 percent participation rates. These plans make use of the actively-at-work approach for underwriting employees and have, at a minimum, a simplified underwriting approach for spouses of employees and certain additional levels of coverage. Furthermore, private plans typically require some form of medical underwriting for reinstatement of lapsed coverage. The federal long-term care insurance program, which is a voluntary large group where employees and spouses are subject to simplified underwriting, began to offer coverage in 2002. A Government Accountability Office (GAO) report issued in December 2006 summarized the many challenges the program faced with respect to marketing efforts.⁴ Currently the participation rate for the federal employee program is estimated to be at approximately 5 percent.

An alternative underwriting standard would require every participant who is actively at work to enroll, regardless of current health status. A program with this mandate would eliminate the impact of participants waiting until an immediate need for long-term care benefits arises and would enable program coverage of a full cross section of the risk.

It is in the nature of long-term care insurance that the average annual costs of benefits increase by age and increase sharply at advanced ages. Thus, insurance premiums, computed on a level premium lifetime basis, are significantly lower for policies issued at younger ages. Due to this relationship of level premiums and sharply increasing costs, there is significant prefunding in the earlier years of coverage and sufficient assets must be accumulated in the Fund to provide for future benefits. A critical component to effectively funding long-term care benefits from the amounts contributed by participants is to maximize investment returns on the accumulated assets. The earlier the funding begins, the greater the proportion of the total costs that will be earned from investment income. The success of a federal long-term care program may well hinge on this ability to successfully attract a high percentage of younger participants.

Details of the CLASS Act and Actuarial Considerations

Enrollment Eligibility

The requirements of the plan to be implemented, as initially drafted, must include an average monthly enrollee premium that is no more than \$65. The amended version of the legislation, however, requires an actuarially sound premium over a 75-year horizon. Premiums may increase annually with CPI for subsequent enrollees and late entrants. This premium must provide for minimum average benefit payments of \$50. A nominal monthly premium of \$5 will be offered to individuals with income below the poverty line and to working students under age 22. Premiums may be adjusted for program solvency with

⁴ *Long-Term Care Insurance: Federal Program Has a Unique Profit Structure and Faced a Significant Marketing Challenge*, United States Government Accounting Office, December 2006, GAO-07-202, <http://www.gao.gov/new.items/d07202.pdf>.

stated exceptions including those older than age 65 and who have paid premiums for 20 years and are not actively at work. Premiums are attained-age adjusted for delaying enrollment and lapse with reenrollment.

Individuals are eligible to enroll in the CLASS program if, at time of enrollment, they are actively at work, self-employed with income that is subject to the Social Security tax, or the spouse of an eligible individual. In addition, at enrollment individuals may not be a patient in a hospital or nursing facility, an intermediate care facility for the mentally retarded, or an institution for mental diseases and receiving medical assistance under Medicaid; or may not be confined in a penal institution or correction facility. Underwriting may not be used to determine the monthly premium for enrollment in the program or to prevent an individual from enrolling in the program. Individuals may waive enrollment under the CLASS program or enroll during periodic enrollment periods. Participants may drop enrollment during an annual specified period. Participants must pay premiums for five years before they are eligible for benefits.

The program as detailed is voluntary and offers guaranteed issue to willing enrollees. Insurance products offered in this manner require an adequate level of protection from adverse selection by enrollees. Without such provisions the product cost is virtually certain to spiral out of control, as increased claims will require premium increases which, in turn, discourage healthier participants from purchasing or continuing to pay premiums.

The use of an actively-at-work provision in a guaranteed issue program is an underwriting approach that is common within the private group long-term care insurance industry for certain employer groups when the carrier believes it can market adequately and achieve a reasonable level of participation. Such coverage is typically only provided to a plan sponsor's employees, working a minimum of 20 to 30 hours per week. However, spouses of these group enrollees are typically only provided coverage after they pass some form of an underwriting screening. This level of underwriting provides for some protection from anti-selective choice among participants.

The presence of the five-year waiting period will not be sufficient to reduce the risk associated with the guaranteed issue to employees and spouses. Those with pre-existing health conditions can begin to receive benefits immediately after the five-year waiting period if conditions persist. The potential magnitude of such a provision may put the viability of the entire program at risk.

In general, the lower the participation rate the greater the opportunity for adverse selection and, therefore, a level of claims above that anticipated within the pricing basis. In particular, the participation rates of those receiving a subsidy, either initially or in subsequent years, presents a challenge to the pricing of the program. At \$5 per month, the participation rates may be greater among those eligible for the subsidy. Approximately 5 percent of the current working population, who are at least 18 years old, earn incomes below the poverty level.

The requirement that premiums are fixed for participants who have attained age 65, have paid premiums for at least 20 years, and are no longer actively at work limits the effectiveness of premium increases that may be necessary should experience dictate. (Current programs typically pass along premium increases equally to all policyholders.) This provision would need to be adjusted for in the pricing of the initial premiums in order to avoid unduly affecting future enrollees and subsequently affecting the Fund's solvency. Moreover, when a premium increase is necessary, those who will be subject to the increase will subsidize these participants. This could potentially entice more participants to opt out of the program.

Eligibility for Benefits

Benefits are available only to active participants who have paid premiums for at least 60 months. Benefit triggers mirror the Health Insurance Portability and Accountability Act of 1996 (HIPAA) long-term care insurance benefit triggers, which require determination that an individual has a functional limitation

expected to last more than 90 days due to an inability to perform at least two or three (as defined by the CLASS Act) of the following six activities of daily living (ADL): eating, toileting, transferring, bathing, dressing, and continence; cognitive impairment; or a level of similar limitation prescribed by the Secretary of Health and Human Services (HHS).

Benefit eligibility under the legislation is determined within 30 days of receipt of an application for benefits and requires that an application that is pending after 45 days is deemed approved. Eligibility is determined by state-based disability determination services. Presumptive eligibility is assumed if an enrollee has applied for and attests eligibility for the maximum cash benefit; is a patient in a hospital (for long-term care reasons), a nursing facility, an intermediate care facility for the mentally retarded, or an institution for mental diseases; and is in the process of planning to discharge from the hospital, facility, or institution, or is within 60 days of such a discharge. Beneficiaries are expected to periodically recertify (by submission of medical evidence) their continued eligibility for benefits and to submit records of expenditures attributable to their aggregate daily cash benefit received in the preceding year.

Approaches in the private long-term care market to determine benefit eligibility include the use of independent clinical functional and cognitive assessments, often performed face-to-face in the claimant's home, and the receipt of a plan of care developed by a licensed health care provider. Recertification is typically annual and often more frequent based on condition and the type of care received. The expenses for the assessment work can range from 3 percent up to 7 percent of paid claims, depending on the amount of benefit, with the higher 7 percent amount typical for lower benefit amounts such as \$75 per day.

Presumptive eligibility will increase morbidity levels as the necessity of two or three of six ADL requirements will not be determined through the assessment process for some enrollees. Enrollees may apply for benefits and receive them without an assessment after many types of hospital stays. The lack of a uniform assessment that applies to all eligibility requirements will subject the program to increased claim incidence.

Benefit Levels

The program provides eligible beneficiaries with a cash benefit for the lifetime of the claim. Benefit levels are set initially at a minimum average of \$50 per day and must have at least two tiers based on the beneficiary's level of disability. Benefit levels increase annually with the CPI for both currently eligible beneficiaries and future claimants. Cash benefits may be paid daily or weekly and may be used to purchase nonmedical and support services that beneficiaries need to maintain their independence at home or in another residential setting of their choice in the community (e.g., home modifications, assistive technology, accessible transportation, homemaker services, respite care, personal assistance services, and home care aides and nursing support). Benefits commence beginning with the first month in which an application for benefits is approved.

An average benefit of only \$50 per day is inadequate for the vast majority of participants, and results in considerable out-of-pocket expenditures and continued stress on the Medicaid program. There is a risk that many participants may assume that they have adequately covered this risk since they are enrolled in the federal plan. As such, it is important that a strong public awareness campaign is utilized to encourage the purchase of supplemental coverage as the federal benefit may be inadequate to cover the significantly higher expected LTC costs. According to a July 2009 *Broker World* survey⁵ of the long-term care private

⁵ Thau, Claude and Robert Darnell, *The 11th Annual Individual Long Term Care Survey*, Broker World, July 2009 (Table 5: Distribution of Sales by Maximum Daily Benefit).

insurance market, the current average private long-term care insurance daily benefit is approximately \$165 per day (although this varies geographically from \$120 up to \$400 or more). Long-term care insurance is not in the same category as Medicare supplement—most individuals recognize the need for medical insurance as it is more commonly used. Long-term care services, on the other hand, may not be needed by all participants and is more often decades away for most people of working age.

Administrative Expenses

Administrative expenses during the first five years of the program established by the CLASS Act are restricted to no more than 3 percent of premium. After the first five years of operation, the administrative expenses are restricted to 5 percent of the total amount of expenditures.

The administrative expenses for benefit assessment activities alone can readily use up the 5 percent of claims available for administrative expenses. The addition of enrollment and premium collection activities makes it highly unlikely that the administrative expenses will be within the 5 percent limit. Furthermore, the necessity to adequately market a guaranteed issue product to attain a sufficient spread of risk will add further to these administrative expenses. A successful offering within the private group long-term care market requires a significant education component so that employees may make informed enrollment decisions. Such intensive marketing to eligible insureds is essential to reduce the adverse selection risk to a predictable level.

During an open enrollment period, a guaranteed issue federal program would require much of the same educational initiatives to reach all working individuals and their spouses in the country. Such a campaign may need to include employee meetings at the worksite and mailings to the homes of all eligible participants. To effectively market a guaranteed issue plan would add 2.5 percent to the required premiums. We estimate total administrative expenses for similar private programs to be between 10 percent and 15 percent of premium. This expense includes the marketing costs, the cost of premium collection and billing, and the costs associated with the assessment and payment of claims. This should be further adjusted for the level of enrollees with subsidized premiums.

Trust Fund Mechanism

The Act establishes a trust fund called the CLASS Independence Fund (Fund) with the Treasury Secretary serving as the managing trustee. The Act directs the premiums paid by enrollees, as well as the recoupment of unpaid and accrued benefits, into the Fund from which benefits are paid. The Secretary of the Treasury would invest and manage the CLASS Independence Fund in the same manner, and to the same extent, as the Federal Supplementary Medical Insurance Trust Fund.

The interest credited to the Fund and the method for determining the interest rate play a critical role in establishing the actuarial balance of the Fund and the long-term adequacy of the premiums. It is the real interest rate, the discount rate net of the assumed consumer price index, which is of most importance. However, both the real and nominal rates have an impact. Instead of a risk-free real interest rate,⁶ the Social Security Advisory Board recommended in an October 2007 report a stronger weight on the forward-looking information in recent Treasury yield curves for nominal and real interest rates and for discounting the actuarial balance using risk-adjusted rates. Current long-term expectations following the approach given in the 2009 Federal Supplementary Medical Insurance Trust Fund trustees' report would provide for a nominal interest rate of 5.7 percent and a CPI rate of 2.8 percent.⁷

⁶ Report to the Social Security Advisory Board, October 2007, http://www.ssab.gov/documents/2007_TPAM_REPORT_FINAL_copy.PDF.

⁷ 2009 Supplementary Medical Insurance Trust Fund trustees report.

Understanding the sensitivity to interest rates of the level of premiums necessary to ensure a positive long-term trust fund balance is critical in order to limit the need for significant premium increases.

An Assessment of the Financial Viability of the CLASS Act

With the use of a simplified financial model to project expected enrollees, annual premiums, claims costs, and the trust fund balance, scenarios were run to evaluate the CLASS Act plan as described above and to determine sensitivities to changes in assumptions and provisions. The model is intended to produce rough estimates only. To set proper premiums with greater precision, a more sophisticated model will be required.

Baseline assumptions were developed from the expectations of an insured and underwritten population and are as follows:

Table 1: Baseline Assumptions	
Assumption	Source
U.S. Population – (Actively at work and spouses)	U.S. Census Bureau of the working population – 2009 Statistical Abstract
Mortality	Social Security 2005 table with mortality improvement, 50 percent male/50 percent female
Lapse	1.5 percent per year
Morbidity	Adjusted National Long-Term Care Survey data
Mortality and Morbidity Improvements	0.5 percent per year for 30 years
Expenses	3 percent of premiums in the first 5 years of the program and 5 percent of claims thereafter
Interest Rate	5.7 percent
Consumer Price Index	2.8 percent annually
Program Implementation	2011
Daily Benefit Amount	an average of \$75 per day growing with CPI annually
Benefit Eligibility	Inability to perform at least 2 of 6 activities of daily living or cognitive impairment for all claimants

Our assumption of an initial \$75 average daily benefit level considers the current costs of home-based care, how enrollees will value the benefits in relation to premium levels, the burden of per policy administration costs relative to benefits and recent expectations for the implementation of the program. The Congressional Budget Office⁸ assumed an initial \$75 per day average benefit level in combination with a \$65 average monthly premium. The analysis below also includes the use of the minimum average daily benefit of \$50 called for in the Act.

⁸ Congressional Budget Office, *Additional Information on CBO's Analysis of the Community Living Assistance Services and Supports Act*, July 6, 2009, <http://www.cbo.gov/ftpdocs/104xx/doc10436/07-06-CLASSAct.pdf>.

From these assumptions, adjustments based on the described plan provisions and considerations for participation rates were selected.

Using the current working population, non-working spouses and estimated participation rates by age group, the model projects the participant population in future years by using assumed opt-out rates and a population table. Premium, claim rates and benefit utilization (on an incurred basis) are applied to the future participant population to derive the net flow of funds. The Fund is credited with interest each year. Premiums are assumed to be issue-age based. The required average premium is determined by ensuring fund solvency through the end of 2086. A portion of the working population is assumed to be working poor and its premiums are restricted according to the provisions of the Act. The claim assumptions are derived from the National Long-Term Care Surveys, adjusted for the CLASS Act program structure and benefit design. These surveys provided longitudinal data representative of long-term care usage for the entire U.S. population. The benefit trigger is selected as an inability to perform two or more activities of daily living or severe cognitive impairment with no elimination period during which no benefits are paid. Based on trend data, we applied annual improvement factors for both claim and mortality rates.

The participation proportions by age group came from similar private insurance programs from one insurer. The overall participation rate is assumed to be 6 percent. The model uses a simplifying assumption that the 6 percent participation occurs at program inception. We observed that the participation rates in several large voluntary private insurance group programs are less than that. We believe it is appropriate to further adjust the data from the National LTC Surveys to account for the anticipated adverse selection with such a level of participation, as well as for the adverse selection arising from the lack of underwriting for spouses or for reentry into the program.

Retirees are assumed to continue to pay the same level of monthly premium as when they retired. Expenses are as described above and are not adjusted for the marketing effort required to attain this level of participation. No benefits are paid during the first five years of enrollment. In order to focus on the premium level for the majority of the participation, we assumed that the premiums for new and returning entrants are self-supporting and do not affect the premiums of the current participants. Other modeling simplifications were also utilized. In the aggregate, we believe their impacts on the results are not overly conservative or aggressive.

Measurement and Program Approaches

Two measurement approaches for evaluating the feasibility of the program are considered. First, the original CLASS Act provision of an average initial monthly premium of \$65 across the anticipated enrollment is used to determine the year in which the Fund is expected to become insolvent. Second, we determine the initial average monthly premium that is necessary so that the Fund remains solvent. Solvency is defined as the Fund having enough assets to pay future benefits on claims that have already been incurred.

The two measurement approaches are used to demonstrate program design and scenarios in which the program may be administered. First, premiums are assumed to be level after enrollment unless the HHS Secretary deems the need for a premium rate increase following benefit reductions. Second, premiums paid by all program participants would increase with the CPI rate annually. In each case, premiums vary by enrollment age, the year of enrollment, and the use of subsidized premiums and limits on premium increases are maintained.

The Level Premium Approach

Based on the original premium provisions of the Act, it is anticipated that the Fund would become insolvent by the year 2021. No future increase in premiums other than the annual CPI increase for new enrollees is assumed, nor are future benefits decreased.

The average initial premiums would need to increase by \$95 to \$160 per month under the level-premium approach for the Fund to maintain solvency over the 75-year horizon and to maintain the benefit levels described in the Act. It is critical to note that this premium level is only estimated to be actuarially sound under the assumed participation level of 6 percent. If lower participation is realized (which is possible and perhaps likely given the size of the premiums), the \$160 premium will be inadequate.

The required premiums by age group are shown in the table below:

Table 2: Required Level Premiums by Age at Enrollment	
Age at Enrollment	Initial Monthly Premium — Level Basis
18-29	136
30-39	136
40-49	144
50-59	152
60-69	231
70-79	277
80+	305
Average Premium	160

The Increasing Premium Approach

We also modeled a \$65 initial average monthly premium, increasing annually, at the same CPI rate that is assumed for the benefits modeled. Under this approach it is anticipated that the Fund will become insolvent by the year 2022. No additional increases are assumed nor are future benefits decreased in this scenario.

The average initial premiums would need to increase by \$60 to \$125 per month under the increasing premium approach for the Fund to maintain solvency over a 75-year horizon and to maintain the benefit levels described in the Act. Again, it is critical to note that these premiums are only estimated to be sufficient under the assumed participation rate of 6 percent.

The required premiums by age group are shown in the table below:

Table 3: Required Increasing Premiums by Age at Enrollment		
Age at Enrollment	Initial Monthly Premium – Increasing Basis	Monthly Premium in 2031
18-29	106	184
30-39	106	184
40-49	112	195
50-59	119	207
60-69	180	313
70-79	216	375
80+	238	413
Average Premium	125	217

Additional Analysis

In order to maintain program solvency, benefit decreases and premium increases may be applied to all enrollees subject to the provisions of the Act. The timeliness of these benefit decreases and premium increases will have a significant impact on the solvency of the program. Using the two premium approaches above, which began with a \$65 average monthly premium, projections were developed to determine the impact on solvency of the timing of benefit decreases and premium increases.

Under the level premium approach, the Fund is expected to be insolvent in 2021. A decrease in benefits from the initial \$75 average to the minimum \$50 average for all levels of impairment (adjusted for CPI) in 2019 and a premium increase of 184 percent to \$185 would be necessary for the Fund to remain solvent until 2086. Likewise, under the increasing premium approach, a decrease in benefits to the minimum \$50 level and a premium increase of 77 percent in 2019 would be necessary to maintain solvency. The average monthly premiums in 2019 would increase to \$144, inclusive of the premium increase and the annual CPI increases.

The \$185 premium would remain level during 2019–2086; the \$144 premium would continue to increase with CPI during the same period. These premium estimates do not account for the large adverse selection lapse that would occur with such large premium increases.

The CLASS Act requires a minimum average daily benefit of \$50 in the first year of the program. Using this minimum, we estimate that an actuarially sound average monthly premium level would be \$110 under the entry-age level premium approach and \$86 using the annual increasing premium approach. Based on the originally proposed \$65 average monthly premium, the fund would be insolvent by 2027 under the entry-age level approach and by 2032 under the increasing premium approach. This analysis is based on the baseline assumptions described in Table 1 and is not adjusted for any potential differences in participation rates, morbidity levels or changes in benefit utilization as a result of the lower benefit amount and lower actuarially sound premiums.

The CLASS Act allows for a benefit trigger using either a minimum of two or three of the six activities of daily living, or cognitive impairment, for benefit eligibility. The above analysis includes the use of at least two of six ADLs. With the use of three of the six ADLs, a sustainable average monthly premium may

decrease by up to 6 percent, assuming that there would be no impact due to claim adjudication differences which may occur.

Conclusion

Our actuarial analysis demonstrates that the proposed structure and the premium requirements within the CLASS Act plan are not sustainable. Due to its design and the high level of required premiums, the program is unlikely to cover more than a very small proportion of the intended population or achieve its goal of broad participation. There are significant concerns that the program's design may limit the ability of the program to be both sustainable and affordable for participants:

- The voluntary nature of the program coupled with the absence of any underwriting at enrollment would very likely result in significant adverse selection, especially among spouses of active employees. Program participants would not represent a uniform spread of health risks and premiums would need to be increased to reflect this.
- The ability to enroll or drop enrollment in the program after initial eligibility with no underwriting and with relatively limited restrictions would compound the potential for adverse selection.
- The use of a five-year waiting period may produce significant adverse selection that could be substantially mitigated by using a 10–15-year waiting period for non-working spouses.
- The use of a guaranteed issue approach for spouses of participants who are actively at work would enable those with existing chronic conditions to enroll and subsequently apply for benefits as early as possible. This level of adverse selection would significantly affect the actuarially necessary premiums, especially given the anticipated lower participation rates.
- The expenses included in the CLASS Act do not allow for the type of meaningful educational and marketing efforts that are required to drive reasonable participation.
- The use of a presumptive eligibility approach without a benefit assessment provision is likely to increase claim incidence when services are not truly needed.
- Under our assumptions, the originally proposed average level premium of \$65 is just over 40 percent of the actuarially appropriate premium for a \$75 initial average daily benefit, and just under 60 percent of the corresponding premium for the \$50 benefit. If either premium is set at the actuarially appropriate level, it would be difficult to enroll enough healthier and unsubsidized lives to keep the program sustainable.
- If future rate increases are necessary, the amount of such increases will be magnified by the combined effects of loss of interest, lapse, and mortality, thus creating an increased burden on those who continue. This is even more severe for any rate increases after 20 years, when most of the initial enrollees are retired and thus excluded from such increases.

A sustainable voluntary federal LTC program should have provisions that address many of the concerns expressed in this analysis. Such a program could include the following:

- An actively-at-work definition with a requirement of a minimum of 20–30-hours of scheduled work or a comparable requirement.
- The use of an underwriting approach for the coverage of spouses who are not actively at work.
- Restrictions on the ability to opt-out and subsequently opt-in with the use of either a second waiting period for benefits or an application for reinstatement with health questions.
- The use of a benefit elimination period, a benefit period duration that is less than lifetime, and/or benefits that are paid based on a reimbursement provision rather than on a cash basis.
- An initial premium structure that provides for scheduled premium increases for active enrollees at either a CPI or alternative lower rate.
- A consistent definition of eligibility for all benefits and benefit levels with use of the HIPAA defined ADL triggers and cognitive impairment definitions.

These provisions, along with a sufficient marketing effort to ensure the desired participation and concentration of risk, may enable the development of an actuarially sound voluntary federal program. We recommend that the final version of the Act permits implementation of the design features described in this letter.

We thank you for the opportunity to present this analysis. Members of the joint AAA/SOA work group are available to assist Congress as it considers proposals to address the issue of long-term care. If you have any questions or would like additional information or assistance, please contact Heather Jerbi, the Academy's senior health policy analyst, at 202.223.8196 or Jerbi@actuary.org.

Sincerely,

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cc: Members of U.S. Senate
Members of U.S. House of Representatives

This analysis was performed by a joint work group of the American Academy of Actuaries' Federal Long-Term Care Task Force and the Society of Actuaries' Long-Term Care Insurance Section Council. The initial draft of this brief was developed by Steven Schoonveld, MAAA, FSA; James Glickman, FSA; and Malcolm Cheung, MAAA, FSA. The analysis and modeling work was performed by Robert Yee, MAAA, FSA and Allen Schmitz, MAAA, FSA. Academic research and guidance was given by P.J. Eric Stallard, MAAA, ASA, FCA. Staff support was provided by Sara Teppema, MAAA, FSA, FCA of the Society of Actuaries.