Life and Health Actuarial Task Force

Amendment Proposal Form*

1.   Identify yourself, your affiliation and a very brief description (title) of the issue.

Dave Neve, chairperson of the American Academy of Actuaries Life Reserves Work Group.

Clarification of the approach in VM-20 to model policy loan cash flows in the deterministic reserve and stochastic reserve calculations.

2.   Identify the document, including the date if the document is "released for comment," and the location in the document where the amendment is proposed:

VM-20: Requirements for Principle-based Reserves for Life Products, Draft dated 12/2/2012, Sections 4A and 7F.

3.   Show what changes are needed by providing a red-line version of the original verbiage with deletions and identify the verbiage to be deleted, inserted or changed by providing a red-line (turn on "track changes" in Word®) version of the verbiage. (You may do this through an attachment.)

See attached document. Also attached is output from an Excel spreadsheet that gives a simple example.

4.   State the reason for the proposed amendment? (You may do this through an attachment.)

The purpose of the proposed amendment is to provide greater clarity of the approach described in VM-20 to model policy loan cash flows.   These changes do not modify the current requirements in VM-20 on how policy loan cash flows are to be modeled; it only provides greater clarity of these requirements.

The treatment of policy loans in VM-20 is somewhat non-intuitive. Key points in the current VM-20 approach to model policy loan cash flows are:

- The initial policy loan balance is treated as a benefit cash flow at time zero.
- Future policy loan interest (if paid in cash) and principal repayments are treated as positive cash flows, and new loan principal amounts are treated as negative cash flows.

Attached are two examples that illustrate the policy loan cash flows used in the calculation of the deterministic reserve. The first example assumes the policy loan interest rate is equal to the Net Asset Earned Rate (NAER).   In this example, there is no impact on the deterministic reserve (i.e., the PV of the policy loan cash flows net to zero). The second example shows the impact on the deterministic reserve when the policy loan interest rate is greater than the NAER. In this case, the deterministic reserve is reduced (i.e., the PV of the policy loan cash flows is negative).

* This form is not intended for minor corrections, such as formatting, grammar, cross–references or spelling. Those types of changes do not require action by the entire group and may be submitted via letter or email to the NAIC staff support person for the NAIC group where the document originated.

NAIC Staff Comments:

Dates: Received	Reviewed by Staff	Distributed	Considered
Notes:			

Section 4.　　Deterministic Reserve

For a group of one or more policies for which a deterministic reserve must be calculated pursuant to Sections 2.A or 2.B, the company shall calculate the deterministic reserve for the group as follows:

A.　　Calculate the deterministic reserve equal to the actuarial present value of benefits, expenses, and related amounts less the actuarial present value of premiums and related amounts where:

　　3.　　The actuarial present value of benefits, expenses and related amount equals the sum of

　　　　a.　　Present value of future benefits, but before netting the repayment of any policy loans;

　　　Guidance Note: Future benefits include but are not limited to death and cash surrender benefits.

　　　　d.　　Policy loan balance at the valuation date with appropriate reflection of any relevant due, accrued or unearned loan interest, if policy loans are explicitly modeled under Section 7.~~E.~~F.3.

　　4.　　The actuarial present value of premiums and related amounts equals the sum of the present values of

　　　　a.　　Future gross premium payments and/or other applicable revenue;

　　　　b.　　Future net cash flows to or from the general account, or from or to the separate account;

　　　　c.　　Future net policy loan cash flows, if policy loans are explicitly modeled under Section 7.~~EF~~F.3;

　　　Guidance Note: Future net policy loan cash flows include: policy loan interest paid in cash plus ~~;~~ ~~additional loan principal; and~~ repayments of policy loan principal, including repayments occurring at death or surrender (note that the future benefits in Section 4.A.3.a are before consideration of policy loans), less additional policy loan principal. ~~.~~

Section 7.　　Cash Flow Models

F.　　Cash Flows from Invested Assets

　　The company shall determine cash flows from invested assets, including starting and reinvestment assets, as follows:

　　3.　　Determine cash flows for each projection interval for policy loan assets by modeling existing loan balances either explicitly, or by substituting assets that are a proxy for policy loans (e.g., bonds, cash, etc.) subject to the following:

　　　　a.　　If the company substitutes assets that are a proxy for policy loans, the company must demonstrate that such substitution

　　　　　　i.　　Produces reserves that are no less than those produced by modeling existing loan balances explicitly; and

　　　　　　ii.　　Complies with the policyholder behavior requirements stated in Section 9.D.

　　　　b.　　If the company models policy loans explicitly, the company shall:

　　　　　　i.　　Treat policy loan activity as an aspect of policyholder behavior and subject to the requirements of Section 9.D.

ii.   For both the deterministic reserve and the stochastic reserve, assign loan balances either to exactly match each policy's utilization or to reflect average utilization over a model segment or sub-segments.

iii.   Model policy loan interest in a manner consistent with policy provisions and with the scenario. In calculating the deterministic reserve and stochastic reserve, include interest paid in cash as a positive policy loan cash flow in that projection interval, per Section 4.A.4, but do not include interest added to the loan balance as a policy loan cash flow (the increased balance will require increased repayment cash flows in future projection intervals).

iv.   Model policy loan principal repayments, including those which occur automatically upon death or surrender. In calculating the deterministic reserve and stochastic reserve, include policy loan principal repayments as a positive policy loan cash flow, per Section 4.A.4.

v.   Model additional policy loan principal. In calculating the deterministic reserve, include additional policy loan principal as a negative policy loan cash flow, per Section 4.A.4.

vi.   Model any investment expenses allocated to policy loans and include them either with policy loan cash flows or insurance expense cash flows.