AMERICAN ACADEMY *of* ACTUARIES

Distribution of Policyholder Equity in a Demutualization

Introduction

This practice note was prepared by a work group organized by the Committee on Life Insurance Financial Reporting of the American Academy of Actuaries. The work group was charged with developing a description of some of the current practices that could be used by actuaries in the United States.

The practice notes represent a description of practices believed by the work group to be commonly employed by actuaries in the United States in 1996. However, no representation of completeness is made; other approaches may also be in common use. It should be recognized that the information contained in the practice notes provides guidance, but is not a definitive statement as to what constitutes generally accepted practice in this area. This practice note has not been promulgated by the Actuarial Standards Board or any other authoritative body of the American Academy of Actuaries, nor is it binding on any actuary.

Comments are welcome as to the appropriateness of the practice notes, desirability of annual updating, validity of substantive disagreements, etc. This practice note covers some possible answers to a number of different questions that were asked by and posed to members of the work group and that have not otherwise been covered in other practice notes.

Q. How is the total value to be distributed determined?

A. In general, this is not an actuarial determination. Instead, the total amount to be distributed to policyholders is generally 100 percent of the market value of the company, excluding any IPO or other capital raising initiatives. The actuary's role is to determine the allocation of that value to a particular policyholder.

Q. How is equity allocated among policyholders?

A. In general, equity is allocated partly on a per policy or per policyholder basis (called the fixed portion) and partly on the basis of policyholders' actuarial contribution (called the variable portion). In theory, the fixed portion compensates the policyholder for loss of membership rights (e.g., voting rights) upon demutualization, while the variable portion compensates for the loss of rights to a distribution of excess assets in the event of liquidation.

Q. How much of the value is allocated on fixed bases and how much on variable bases?

A. There is no uniform approach for this. The attached table shows the percentage allocated on a fixed and variable basis for major demutualizations in the U.S. The following are considerations which management typically takes into account in setting the fixed portion:

- the dollar value of the fixed portion should be small enough that cashing out small shareholders is not too expensive if the company should decide to do so;
- the fixed portion should be large enough that its value is not trivial; and
- the range of values distributed in previous demutualizations.

In addition, the fixed portion has sometimes been increased if the value to be distributed is greater than the value of the aggregated actuarial contributions, calculated as described below.

Q. What is the basis for determination of a policyholder's actuarial contribution (i.e., the variable portion)?

A. Most recent demutualizations have used the following general formula to determine the actuarial contribution (AC) of each policy:

$$AC = PVFP + PVPP$$

where PVFP is the present value of future profits on the policy and PVPP is the present value of past profits on the policy. A few of the older demutualizations used only the present value of past profits as a basis for allocating the variable portion, but the "past plus future" method is currently considered the preferred basis. Since the amount being distributed is related to the market value

of the company, and both past and future profits contribute to that market value, it seems most appropriate to use both items in allocating the value.

The basic process involves creating a model of the business of the company and calculating the AC for each cell in the model as of the date specified in the plan of demutualization. These values are then used to calculate the AC for each policy in force. See below for more on how these present values are determined.

Q. Which policyholders are allocated compensation?

A. This depends on the specific company. Some companies allocate the fixed portion to any policy in force; others allocate to each policyholder with a policy in force. Which method is used will depend on, among other factors, the statutes in the state of domicile, company bylaws, and practical considerations.

The variable portion is generally allocated to any policy which is participating on its face. This may include policies such as individual health or group pension GICs, which never pay a dividend but which are participating on their face. The only policies issued by the mutual company which are not generally allocated a variable share are those which are specifically non-participating.

Q. Do policyholders of subsidiaries receive compensation?

A. In general, policyholders of subsidiaries have not received compensation in a demutualization since they are not policyholders of the mutual company, they are not eligible to vote in elections, and they own non-participating policies.

Q. Do terminated policyholders ever receive compensation?

A. No demutualization since UNUM has allocated compensation to policyholders who have terminate prior to the demutualization. The exact date (or dates) as of which a policy must be in force in order to receive shares is defined in the plan. however, it has been the practice in Some situations to consider whether recent termination, particularly if the termination was part of a company program to convert policyholders from a form eligible to receive compensation to a form not eligible to receive compensation, should be included in the calculation. In addition, the laws of Some states specifically incorporate look-back provisions.

Q. How is present value of past profits determined?

A. Two basic methods have been used. One accumulates (at after-tax annual earned rates)annual statutory profits, the other accumulates statutory cash flows and then subtracts the ending

statutory reserve. In theory, these methods should produce the same results; practical considerations often favor the latter methodology.

In either case, the actuary first creates a model of the company's in-force business. The detail in the model will vary depending on the business being modeled and its size. In general, the model should contain enough detail to identify the major items affecting profitability for each product line (PL). The product lines will generally be based on statutory annual statement line of business, but subdivisions are common (e.g., traditional IPG pension plans and GICs), and group life and health policies have sometimes been combined. How a company has managed its business in the past is an important consideration in determining what combinations or subdivision will be designated product lines.

Experience factors are then calculated for each year the cell has been in force using the company's available records. These experience factors are then used to calculated the PVPP for the cell.

Q. What are the usual factors used to define an experience cell?

A. For the individual life PL, models generally follow dividend classes. Typically, the factors include policy form, issue age (at decennial or quinquennial points), issue year (usually when a policy form's pricing changes), and, if available, smoker/non-smoker status. Often, differences by sex, underwriting class, or smoker/non-smoker are assumed to be reflected in premiums and dividends consistently, so no special calculations are done for such classes. Other determinants might be used depending on what experience splits are available, and any other factors used by the company to define a dividend class.

For other product lines, the models are often simpler. For individual annuities and individual health products, models often are based only on policy form and issue year.

For small group life and health policies not individually experience-rated, the cells might distinguish only issue year and coverage. At the same time, each large experience-rated group contract might have its own calculation done based on its own experience. Calculations for large group customers may be based on sources of earnings rather than on expense rates, morbidity rates, etc. All material sources of earnings should be considered in such calculations including interest gains on special fluctuation funds held for the client.

For group pensions, the same process as described for group life and health is generally followed; large groups are usually their own cell, but smaller groups are combined based on the way the company analyzes its experience.

Q. How are the experience factors for determining the PVPP arrived at?

A. The company's own experience forms the basic data for this determination. If the company performs periodic mortality studies, those studies will form the basis for the mortality charges in

the historical calculations. If the company hasn't performed such studies, appropriate industry mortality tables might be used for the period of time required. Similarly, if the company has historic unit expense rates from its experience studies, this will be used for the expense factors in determining past profits. If gaps exist for experience studies, the actuary may also use results interpolated between periods where they are available.

Federal income taxes are generally allocated to policies using marginal techniques. These techniques will generally attempt to follow the method used by the company in allocating taxes to annual statement lines of business, assuming there is consistency between the annual statement allocation and the allocation used in dividend work. Should there be a difference, the method used in dividend work will govern.

State income taxes, if any, may be allocated along with federal income taxes, or may be treated as a type of expense. In any event, cells do not generally distinguish between the state of issue of policies so that state income taxes are not allocated only to policies in a particular state, but are spread to all policies in the PL.

Premium taxes are generally based on the company's overall premium tax rate, net of any deductions for dividends, and commissions are computed directly for each policy cell. No termination benefits are incorporated into the calculation for individual policies since the calculations include only profits on continuing policies. For group policies, benefits paid upon individual certificate termination will be part of the calculation.

For minor coverages, rather than using specific mortality or morbidity rates by age, the experience charge may be based on the coverage's overall claim rate, or, in Some cases, a profit rate (e.g., profit as a percentage of premium) might be used when no other information is available.

Actual dividends paid, from the company's records, are determined for each cell. Investment income rates are generally based on the company's experience and allocation method (either portfolio or IYM).

For group policies which are individually experience-rated, the calculation may be based on sources of earnings rather than the income statement approach described above. For instance, gain from expenses may be allocated based on the policy's expense charges without actually deriving a set of unit expense rates.

Q. Should the total PVPP equal a company's surplus?

A. The total PVPP can't be validated against any total, such as accumulated surplus since PVPP is calculated for only those policies still in force. The total PVPP can be larger or smaller than surplus depending on, among other factors, the age of the company, the rate of growth in new business of the company, its persistency experience, and the existence of any discontinued lines of business.

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Q. How is present value of future profits determined?

A. For policies in the closed block, the projected future statutory cash flows and reserves used for the closed block funding calculation are used for the PVFP calculation. If the closed block does not include funding for expenses, commissions, or other items, those items still have to be included in the calculation for PVFP based on the company's best assumptions for the future. For these reasons, the PVFP will not necessarily equal the excess of liabilities over assets for the closed block at any point in time, including the date of establishment of the closed block.

For policies not in the closed block, the PVFP is calculated using the actuary's best estimate of future experience for those policies. Investment income is calculated on a realistic basis assuming assets equal policy liabilities. Terminations of all kinds are considered for the calculation of PVFP.

For group policies which have an unlimited or very long potential future lifetime (i.e., a corporation can outlive any individual), PVFP is often capped at a horizon that has ranged from 10 to 30 years depending on the nature of the business.

Once the future statutory profits are projected, they must be discounted to the calculation date. Traditionally, they've been discounted at the after-tax annual earned rate consistent with the projection used to get the future statutory profits. For this reason, the rates used to discount for products included in the closed block may be different from those used for products in the closed block.

Q. In determining policyholder equity, how are the financial results of subsidiaries treated?

A. Generally, the financial results of subsidiaries are ignored in calculating actuarial contribution. However, if a product line is supported by assets that include stock of a subsidiary, then that PL's PVPP will include the impact of that subsidiary. If this situation is present for business in the closed block, the PVPP would include the impact, but the PVFP would not incorporate the impact of the subsidiary. Determination of where a PL is supported by the stock of the subsidiary depends on the situation of each individual PL; inclusion of the results for the subsidiary in an annual statement line of business is not sufficient to conclude that the PL is so supported.

Q. Are there any other special situations (types of policies, benefits, etc.) which require special handling?

A. Reinsurance: The effects of normal YRT or coinsurance is generally included in the calculations of PVPP and PVFP if the reinsurance is expected to continue. The effects of pure financial reinsurance are generally not taken into account in calculating actuarial contribution, but is reflected, of course, in the market value of the company.

Policy Loan Treatment: Policy loans are treated as any other asset, but utilization is not generally examined at the policy level, but instead, is spread over all in-force policies.

Paid up additions and other dividend options: If material, profits on these items are included in profits for each cell. Cells with and without PUAs may be calculated and used for the appropriate groupings of policies. However, exact utilization of PUAs by policy is not generally considered.

Riders, Ancillary Benefits, etc.: Depending on the materiality and utilization of riders and ancillary benefits, actuarial contribution may be calculated with or without recognition of the presence of these benefits.

Q. How is actuarial contribution used to allocate shares?

A. First the results of the models for PVFP and PVPP are added for each cell to determine the total actuarial contribution for the cell. This total is then related to a "driver" for each policy type (e.g., statutory reserves for whole life, premium for Disability Income policies). The result is a grid of percentages for the various model cells. Then, the specifics of each policy in force (plan, issue year, issue age, etc.) are used to calculate the appropriate percentage by interpolating within the model grid. This policy level percentage is then multiplied by the appropriate driver (e.g., the actual statutory reserve for that policy) to derive the AC for that policy. For example, if only issue ages 20 and 25 are actually calculated, the value for 22 would be 2/5 of the way between the two outlying values.

Once each policy's AC is calculated, the total for each product line is then determined. One of two approaches has then been followed.

In the two-step approach, the AC of all policies in a product line with a negative total AC are set to zero. Then all negative ACs in other lines of business are also set to zero. The AC for the policies that have positive ACs are then prorated so the amended total for that product line equals the total AC for the PL before negative ACs were eliminated.

These revised actuarial contributions are then used to allocate the variable portion of the total value to be distributed.

In the one-step approach, all negative ACs at the policy level are set to zero, and the allocation is performed based only on those policies with a positive AC.

Q. Does everyone get shares of stock, or can Some policyholders get something different?

A. Most policyholders get shares of stock. Sometimes policyholders will be offered their choice of cash or stock, particularly those receiving only a small number of shares. Where the demutualization is a sponsored buy-out, policyholders would get cash or stock of the acquiring company. Even when most policyholders get shares, certain classes of policyholders will usually

receive cash or policy credits. Owners of policies which are part of a tax-qualified plan without a trust (e.g., IRAs, TSAs) must generally receive policy credits to avoid an unfavorable taxable event. Foreign policyholders (to avoid foreign security registration and other complications) will generally receive cash.

Q. Are subscription rights a valid means of compensation?

A. Subscription rights can be a valid means of distributing policyholder equity to policyholders; however, there must be a determinable value to those subscription rights at the date of issue in order for the allocation to be a valid substitution for shares. In addition, there must be a way for policyholders to be compensated if they elect not to exercise the subscription rights. For these reasons, the subscription rights would have a price which is discounted from the proposed IPO price, either current or future, would be transferable and would generally be only a supplement to other customary compensation arrangements.

Some states require that policyholders be given subscription rights to any IPO the company brings out. In the few instances where this has happened, the offering has been under-subscribed and there has been no discount to the market price. In these situations, the rights have been provided as a supplement to the distribution of value through shares or other means.