

**1987 VALUATION
ACTUARY HANDBOOK**

Chapter IV

INTERRELATIONSHIPS OF VARIOUS LIFE INSURANCE COMPANY VALUATIONS

Section 1: Introduction

The fundamental purpose for completing an actuarial valuation of policyholder liabilities and related items is to enable the development of comprehensive financial information with which to assess the financial condition and performance of the insurance company. It should be clear that the actuarial liabilities and assets are a critical part of such financial information. In fact, the development of relevant and useful information depends extensively on the accurate use of appropriate actuarial balances. The use of actuarial principles, practices, and procedures which are designed for one purpose may provide incomplete or misleading information when those data are used for another purpose.

The form of the financial information desired, the production of which is the underlying objective of the valuation process, generally is a function of the audience which intends to use the information. That is, the nature of the audience tends to define the major uses of the financial information and helps shape the user's perspective and primary areas of interest. Thus, the needs of the various users of financial information provide a basis for selecting the most relevant financial information from among the alternate types of data which could be developed.

Stock, mutual, and fraternal companies have various audiences, each with its own needs and perspectives on the most appropriate form of financial information. Some of the audiences and their possible primary focus and intentions for using financial information are discussed below. Also indicated is the general type of financial information which would typically meet their primary needs. The major audiences for insurance company financial information include the following.

Section 2: Audiences for Insurance Company Financial Information

2.1 Regulators

Their primary needs for information relate to the evaluation of solvency issues and the company's ability to fund contractual obligations. Statutory financial information has been the traditional and primary source of such data.

2.2 Company Management

Management must be responsive to all audiences, which leads to the need for information with respect to solvency and solidity, the manner in which capital is deployed and managed, and other specific operating considerations. Thus, management relies on financial information of statutory, GAAP and modified GAAP forms. This information assists management in evaluating the company's ability to meet its contractual obligations, the company's fundamental financial performance, and the effectiveness with which capital is utilized.

In addition, management may use such information, or more detailed data based on one or more financial reporting conventions, in making operating decisions involving matters such as the level of distributable surplus, policyholder dividend determinations, or product profitability analyses related to new product development and pricing functions.

2.3 Policyholders

Current policyholders may be primarily interested in the financial soundness and solidity of the company and its ability to fund its obligations while maintaining a competitive position in product design and price. The information included in statutory and GAAP financial statements would appear relevant to this audience.

2.4 Investors

Current and potential future investors may be most interested in the financial performance of the organization and would likely focus on the use of and return on invested equity capital. Such users are typically most interested in a fundamental economic evaluation of the organization and tend to rely on GAAP or modified GAAP financial data.

2.5 Creditors

This audience is primarily interested in the ability of the company to repay its debt and may focus on cash flow and available earnings. Relevant financial

information with respect to the current and future ability to meet debt requirements is likely to be included in both statutory and GAAP financial data.

2.6 Potential Customers

Potential purchasers of insurance products may be interested in a variety of information, but may focus on matters such as the competitiveness of the product and the company's ability to sustain that level of competitiveness in the long run. This may lead a sophisticated purchaser of insurance products to consider solvency and solidity issues, as well as long-term profitability. With respect to the latter, the potential buyer may accept the need for the organization to earn a fair profit as a prerequisite for remaining in business over the long term. Such diverse uses of financial information would lead to the reliance of this audience on statutory and GAAP-type information.

2.7 Potential Acquisitors

The needs of potential buyers of insurance organizations for financial information go beyond the needs of normal investors. The potential company purchaser is primarily interested in the economic value of the organization as it is currently evaluated and as it is likely to be evaluated in the future. Such an evaluation may lead to the need for financial information which is not normally included in the traditional assets and liabilities of an organization's financial statements. As a result, potential purchasers of insurance companies heavily rely on financial information of a statutory, GAAP, and economic appraisal nature, the latter of which is not generally available to the public.

2.8 Internal Revenue Service

As the nation's taxing authority, the IRS is interested in the preparation of financial statements and tax returns in accordance both with statutory requirements and with principles which are required for tax purposes.

2.9 Employees

The employees of an organization may be most interested in the ability of the company to remain viable over the long term. This would lead to an interest in the solvency and solidity of the organization, as well as its long-term profitability. Statutory and GAAP financial information would be useful for these purposes.

Section 3: Type of Valuations

In general, life insurance company financial statements are characterized by the actuarial valuation principles inherent in their preparation. Those statements which will meet, or with modifications will meet, the needs of most users of financial information are statutory, GAAP, and tax basis data. An economic appraisal may not be considered an actuarial valuation in the same sense as are statutory or GAAP reserve valuations. That is, the primary objective of completing a statutory or GAAP valuation is the development of an estimate of the outstanding future policyholder obligations and related items. The primary objective of an economic appraisal is the development of an estimate of the underlying economic worth of the total organization.

Appraisals of an organization are typically completed by "valuing" the current and expected future financial position and operations of the company. Specifically, realistic estimates of the organization's existing capital and surplus and the present value of future income streams are developed. This information could be based on a single or various accounting bases or actuarial liability valuation principles. The use of statutory financial statements and related information is the traditional and most accepted approach, although such calculations also can be performed using GAAP or other financial data.

The result of this appraisal or valuation process usually is the determination of value estimates for existing capital and surplus and for the expected present value of future profits, all prepared on a consistent underlying accounting basis. However, financial statements also can be prepared on an "appraisal basis" by recording adjustments from the underlying accounting basis to the realistic economic basis. Thus, for example, the present value of future profits to be derived from business in force could be included among the assets of the organization. This and other adjustments to the underlying financial statements would result in the value of the company being equal to the new surplus or equity of the organization's modified financial statements.

The relationships between statutory and GAAP valuations and between these reserve valuations and economic appraisals are discussed more thoroughly in the following paragraphs.

Section 4: Defining the Basis of Actuarial Valuations

As discussed above, life insurance company financial information can be prepared on any number of underlying accounting bases. The various accounting bases are primarily differentiated by their unique definitions of the valuation of policyholder liabilities and related items. It is the nature of the policyholder reserves which determines the basis, and the relevance, of the financial statements and information.

Statutory liability valuation principles, as well as asset valuation requirements, are presently defined by legal statute and regulation. Actuarial methods and assumptions are defined, although a certain flexibility exists in both areas. The valuation actuary's professional judgment is critical in selecting specific methods and assumptions to use in the preparation of statutory liability valuations. In addition, it is the valuation actuary's responsibility to determine the application of the general statutory and regulatory standards to specific product or transaction circumstances. Thus, while the valuation actuary looks to appropriate statutory guidance in the preparation of statutory valuations, his judgment materially affects the results obtained in any given situation.

Similarly, GAAP valuation matters, both with respect to actuarial and other liabilities and assets, are defined by Financial Accounting Standards Board Statement #60, general usage, and the original Audit Guide. In addition, the Securities Exchange Commission influences GAAP and thereby can affect the specific determination of actuarial liabilities and related assets. SEC requirements apply only to registrants, but tend to become generally accepted accounting principles for registrants and non-registrants alike. Like statutory

valuations, however, the valuation principles constituting GAAP must be interpreted and applied to specific situations, and it is the valuation actuary who must determine the precise application of these underlying principles.

Certain users of insurance company financial information, primarily potential investors and internal management, find that GAAP or statutory information does not meet their needs in all respects. In such circumstances, it is not uncommon to make modifications to the GAAP financial statements. Such changes are designed to permit management, potential investors, or others to better assess the underlying economic position of the organization. This supports the notion that the audience and its objectives and needs for financial information substantially determine the underlying basis of the valuation of the policyholder liabilities and other items.

Finally, as the valuation bases of assets and liabilities are defined for statutory and GAAP reporting, so are they defined for tax basis reporting. Comparable to statutory definitions, tax-basis valuation principles attempt to rigidly define the asset and liability valuation process, including all policyholder liability and related items.

Section 5: Relationships Between Statutory and GAAP Valuations

As general mathematical models, statutory and GAAP valuations of liabilities for individual non-participating life insurance are essentially the same. Both are based on net level premium reserve concepts, although statutory reserve valuations use materially different assumptions than do GAAP valuations. Specifically, statutory reserve calculations are based on designated

mortality and interest assumptions. GAAP assumptions are based on expectations considered most likely to be realized at the time of contract issuance.

Similarly, individual health insurance has more restrictively defined assumptions for statutory purposes than for GAAP. However, in this case, as many statutory valuation requirements do not specifically define the morbidity tables to be utilized, statutory valuations may employ more actuarial judgment in this area, which may lead to the use of more realistic morbidity assumptions for statutory purposes.

Both individual life and health statutory reserve valuations, of course, ignore withdrawal and expense assumptions. GAAP actuarial valuations contain realistic assumptions with respect to these experience elements.

That statutory and GAAP reserves for individual life products are based on the same general formula, but use different assumptions, also is the case if CRVM reserves are used instead of net level statutory reserves. Again, CRVM and GAAP reserve calculations are based on the same general formulae. Only the level of acquisition expenses included in the calculations varies. To this extent, statutory reserves computed on a CRVM basis can be viewed as net level reserves with an expense deferral, the amount of which is defined by law. This is the same concept which underlies the expense reserves defined by GAAP, although GAAP calculations use different assumptions.

This highlights a key difference between the statutory and GAAP valuation processes—the determination of assumptions. Under statutory valuation procedures, assumptions are selected from a narrow range permitted by statute and related regulations. Valuations for GAAP purposes, however, are based on assumptions which are subject only to broad guidance. GAAP reserve assumptions are generally based on expectations considered appropriate at the time the contract is issued and, therefore, normally bear a close relationship to underlying pricing assumptions. In addition, as the past is not necessarily indicative of the future, GAAP assumptions, while bearing reasonable relationships to recent past experience, also should reflect expected future experience, which may be influenced by different circumstances and conditions.

Statutory and GAAP valuations of reserve liabilities also have an interesting parallel with respect to the concept of reserve adequacy. On a statutory basis, the notion of "good and sufficient" reserves has been a part of the regulatory environment for many years. The concept continues to evolve, and has recently begun to focus on the valuation of policyholder liabilities so that reserves will be able to withstand identified risks. Thus, the C-1 through C-4 risks have become common frames of reference for measuring risk and may be used to establish standards by which to judge the adequacy of statutory liabilities. In the event statutory reserves are considered insufficient to fund benefits and expenses under a range of assumptions and considering these risks, it may be necessary to maintain additional statutory reserves.

The determination of GAAP reserves contains a somewhat similar concept of reserve adequacy. These GAAP concepts are generally referred to as

recoverability or loss recognition issues and relate to new business and inforce business, respectively. The requirement that GAAP reserves remain adequate specifically addresses the C-2 or pricing risk, but a complete evaluation of GAAP reserve adequacy also could consider other risks. These concepts require that GAAP reserves be strengthened if, under reasonable expectations of future experience (which may differ substantially from similar expectations developed at the time of issue), the net GAAP reserves are considered inadequate to fund future benefit and expense cash flows. The typical tests of reserve adequacy for inforce business is the comparison of a gross premium valuation (a form of economic appraisal) and the net GAAP reserve.

Thus, just as statutory valuation procedures contain a reserve adequacy requirement, so do GAAP concepts. In an interesting corollary, The C-1 risk could be handled in the valuation of assets under GAAP reporting practices. In addition, the C-4 risks should be evaluated when considering the going concern presumption which underlies the development of GAAP financial statements. Therefore, it appears that GAAP valuation and reporting practices and statutory concepts both address the basic risk measurements which have become part of the actuarial literature.

The close mathematical relationship between statutory and GAAP reserves for individual life products does not necessarily exist for other product types. For example, for individual and group deferred annuities there generally is not an underlying similarity of the statutory and GAAP formulae for calculating reserves. This is largely due to the fact that the respective regulatory authorities have defined two essentially arbitrary and different methods of

computation. For statutory purposes, the CARVM method has been adopted and defines required minimum reserves for annuity products. The determination of GAAP reserves for deferred annuities has been defined by FASB, with significant input from the SEC. Such reserves usually are essentially equal to account values under the contracts. These reserves are not necessarily the same as statutory reserves, and the mathematical similarity of reserve formulae which exists for individual life products does not exist for deferred annuities.

However, for individual and group immediate annuities the statutory and GAAP liability valuation requirements are quite similar. This is due to the fact that, like individual life reserves, immediate annuity reserves are equal to the present value of future benefits and expenses based on defined assumptions. While such assumptions are narrowly defined under statutory authorities, a wide range of reserve assumptions is permitted under GAAP. However, conceptual formulae are similar.

In the group life and health area, there is generally little, if any, difference between statutory and GAAP liability valuations. In both cases, the typical valuation procedures for active life reserves are consistent with the short duration and exposure periods of the contractual guarantees. Similarly, estimates of claim liabilities and reserves are normally the same as realistic estimates of incurred but unpaid claims which are desired under both accounting systems.

A final item of interest with respect to the relationship between statutory and GAAP valuation practices is the manner in which reinsurance credits are

recognized on a statutory and GAAP basis. The present statutory recognition of reinsurance transactions tends to follow the legal terms of the contracts. GAAP, on the other hand, is more concerned with appropriately reflecting the economic impact of the contract and may result in significantly different asset and liability adjustments. Where statutory and GAAP evaluations of the nature of the transaction are similar, different reserve adjustments are often attributable to differences in assumptions, not differences in concept or reserve formulae. For example, this is the case in traditional coinsurance or YRT treaties, wherein reserve credits, like individual life reserves discussed above, are simply a function of the different assumptions. In other situations, where an economic analysis of the contract varies from its strict legal interpretation, liability adjustments for GAAP valuation purposes may be materially different than the corresponding statutory items.

Section 6: Relationships Between GAAP and Modified GAAP Valuations

The use of modified GAAP financial information has been referred to above, primarily with respect to internal management's evaluation of financial performance. Modifications to GAAP for publicly reporting companies have developed as a result of GAAP's inability to accurately reflect the long-term economic performance of certain products and transactions. In this sense, the requirements which must be adhered to in the valuation of assets and liabilities for GAAP purposes impair the usefulness of GAAP information, just as similar, but more onerous, restrictions under statutory rules severely restrict the usefulness of statutory financial information. Many of the adjustments which have been incorporated into modified GAAP financial statements for internal use reflect adjustment to asset values as opposed to actuarial valuations of

liabilities. Therefore, further discussion of the nature of these modifications will not be presented here. However, it should be understood that this is an additional example of the need for the financial information to be relevant to the intended use of the information by the user of such data. When key financial information is not presented in a relevant form, adjustments must be made to make that information more useful.

Section 7: Relationships Between Tax and Other Valuations

The valuation of tax reserves is more similar to statutory concepts than to GAAP. For example, like statutory valuations, the tax basis valuation is defined by what many consider to be an arbitrary set of requirements and guidelines. As a result, there may not be direct mathematical relationships to statutory reserve valuations. Nonetheless, in general, tax basis valuations are calculated using methods and assumptions required by statutory rules. In both instances, though, the tax assumptions and methods may vary from the basis of actual statutory reserves. For example, tax basis valuations are required to be based on CRVM and specified mortality and interest assumptions. Both of these items may vary from statutory reserves in any particular company, although underlying calculations are not dissimilar.

In addition, the determination of tax basis reserves is subject to other minimum reserve tests which may cause final reserves to differ from the initially computed, minimum basis reserves. Similarly, the manner in which due and deferred premiums, reinsurance credits, and other items are determined in the tax basis valuation may be at variance with the manner in which these items are computed on a statutory basis. In summary, while there are certain

similarities and an overall orientation toward statutory reserves, in any situation there may be many specific reserve differences due to the arbitrary and differing requirements of statutory and tax basis valuations.

Section 8: Relationships Between Economic Appraisals and Reserve Valuations

As indicated above, economic appraisals may not be valuations of policyholder liabilities and related items in the same sense as are statutory, GAAP, or tax basis reserve valuations. An economic appraisal is usually intended to place a going concern value on an organization and is accomplished by analyzing the company's existing surplus position and the present value of future profits expected to be generated from the inforce. In addition, the present value of future profits on business to be written in the future, which may be referred to as the value of the entity's agency plant or distribution system, is often included. Also, other items which are considered to have value, such as management expertise, trade names, licenses to do business, and other intangibles, are often included in the total worth of an organization. Clearly, an economic appraisal includes considerations other than those normally included in an actuarial valuation of policyholder obligations and related items.

Nonetheless, an economic appraisal or "valuation" of existing and new business generally takes the form of a calculation of the present value of future profits expected to be generated from that business. In these calculations, the future profits which are "valued" are based on a defined accounting method, usually statutory. In this sense, as the current value of estimated future cash

flows, reserve changes, and interest thereon is being examined, the valuation of the worth of the existing or new business can be likened to a traditional actuarial valuation.

As noted, in these computations future profits could be defined on any accounting/actuarial basis, although traditionally the calculations are based on statutory requirements. Thus, the economic appraisal or value of the inforce or new business requires a projection of statutory income, including interest to the extent it is earned on assets supporting statutory reserves. These estimates of future statutory income are then discounted to the appraisal date using an appropriate risk rate of return, which is likely to be somewhat higher than the net investment earnings rate at the time.

These calculations have some similarities to an actuarial valuation of policyholder liabilities and related items in that they require projections of insurance cash flows. In addition, statutory (or possibly GAAP) reserves and interest thereon also are projected. The assumptions used to project cash flows will certainly vary from statutory assumptions and are likely to be different than the expectations included in historical GAAP reserve valuations. Historical GAAP valuations are based on assumptions appropriate at the time of issue, while an economic appraisal utilizes assumptions which are appropriate at the time of the appraisal and which are expected to be realized in the future. In this sense, assumptions may be similar to those which would underlie a gross premium valuation could be used to test the adequacy of net GAAP reserves.

Section 9: Other General Considerations

All stock and mutual companies must complete at least the statutory and tax basis reserve valuations on a routine basis. Both must be relatively sophisticated and accurate. Close approximations and estimates for insignificant items are not uncommon for statutory purposes and may be used in certain instances for tax basis valuations. It would appear that only fraternal organizations, as they are not subject to federal income tax, can complete only the statutory valuation.

Publicly reporting stock companies must, of course, also complete a GAAP valuation. As discussed, various modifications of the GAAP valuation may be made for internal management purposes. Other valuations, such as a gross premium valuation, may be completed to analyze reserves or to support the adequacy of GAAP reserves.

In addition, mutual insurers are finding it useful to complete valuations other than statutory and to prepare non-statutory basis financial statements. Such an exercise is generally intended for management purposes and can produce valuable financial information for the comprehensive evaluation of the realistic financial performance of an organization. At the present time a significant number of mutual companies are developing non-statutory financial information which is supported by actuarial valuations of a non-statutory nature (and possibly of a non-GAAP nature) to meet their major needs for relevant and useful financial information.

Section 10: Relationship Between the Valuation and Financial Management Process

An appropriate actuarial valuation of policyholder liabilities and related acquisition expenses and servicing costs is an essential element in the development of financial information which can be useful in evaluating the financial condition and performance of a life insurance company. In addition, a proper evaluation of the current financial position or operating results of an organization requires that management establish explicit or implicit financial objectives. Such objectives provide the framework for the financial management process, a primary objective of which is the effective management of the financial and capital resources of the organization. These objectives also permit the periodic assessment of the organization's performance compared with key financial goals.

This ability to compare results with goals and to identify the causes for significant variations is a critical element of the financial management process. As such, relevant and reliable financial information is needed to measure and evaluate the financial position and performance of the organization, which is normally completed within the structure provided by the financial reporting process. Thus, the focus on financial reporting provides a reliable vehicle to use to examine actual performance compared with that expected or that which is necessary to the achievement of key financial goals.

The valuation of policyholder liabilities and related items is the major determinant of the relevance of the financial information generated by an

insurance company. Thus, the appropriate, accurate, and consistent valuation of policyholder obligations assures the credibility and relevance of underlying financial information and provides a sound basis for performance measurement and decision-making. In this sense, the valuation process is a cornerstone of any effective financial management exercise.

Clearly, the form of the financial information being developed and, therefore, the basis of the actuarial valuation must be consistent with the performance measurement being examined. Statutory valuations and statutory financial information may not completely meet this need for appropriate financial information, and other valuations and data are commonly developed. This other information is normally not based on statutory principles, as an important ingredient in the actuarial valuations inherent in such financial statements is the use of more realistic assumptions. Thus, a thorough assessment of financial performance is likely to require more than one actuarial valuation and, therefore, the use of financial information based on more than one set of principles and standards.

For example, it is quite common to establish statutory surplus goals for an organization. A proper evaluation of the organization's progress toward achieving these objectives depends on the availability of reliable statutory financial statements and other statutory information. It is the valuation actuary's responsibility to perform such valuations and to make the necessary judgments to select the valuation process which best meets management's overall needs in this area.

If, on the other hand, management desires a realistic economic assessment of the amount of capital deployed, possibly by product, and also needs to measure the returns on those capital investments, then non-statutory financial statements and other financial information are most useful. Generally, the development of such financial information depends on an actuarial valuation of policyholder obligations and related items on a GAAP or modified GAAP basis. Again, the usefulness of the financial information depends on the underlying consistency of the item being measured and the basis of the financial data being generated. Here, too, it is the valuation actuary's responsibility to assure that principles, methods, and techniques used in the non-statutory valuations are responsive to management's needs and are relevant to the financial position or performance measures being used to evaluate the success of the organization.

In general, it can be seen that the valuation actuary assures that the liability valuations, and thus the financial statements, are relevant and will adequately support the intended use of the information. The actuary's specific judgments with respect to valuation methods, procedures, and assumptions determine the relevance and ultimate usefulness of the information. In this sense, it is not unreasonable to suggest that the valuation actuary's responsibility includes assuring that the liability valuation and related financial information are consistent with management's needs with respect to the measurement of the organization's financial progress.

Section 11: Relationships Between the Valuation and Pricing Processes

Clearly, there is a close relationship between the product design and pricing functions and the financial management process, of which the actuarial valuation is such an important part. First, the financial goals established as part of the corporate planning and financial management process should be faithfully reflected in the profit criteria adopted for testing the effectiveness and overall financial performance of alternate product designs and prices. For example, the rate at which surplus is invested in new business is often a financial goal; so are profit objectives, which, for example, can be expressed as a percentage of premium revenue, a percentage of total revenue, return on investment, or return on equity. The pricing actuary must be aware of these objectives and, in coordination with the valuation actuary who must develop the liability valuations to consistently measure actual results, must adopt appropriate liability measures in product design and pricing analyses.

With respect to the above goals, the level of the investment of statutory surplus is dependent on the statutory valuation methods and assumptions utilized. Clearly, a range of methods and assumptions is available, and the selection of specific methods will materially affect the level of statutory surplus invested in new business. In turn, the initial surplus invested impacts the profit levels obtained as measured by return on investment and return on equity criteria. It is imperative that the pricing and valuation actuaries closely coordinate their work so as to provide post-issue financial information which can be legitimately compared with pre-issue surplus and profit testing. This will avoid the unpleasant situation wherein the expected use of surplus or the expected level of

profitability is not achieved due solely to the use of different valuation methods, practices, and assumptions in the pricing and financial reporting functions.

Similarly, the valuation actuary must recognize the specific contractual obligations and product features of the policy in reserve computations. For example, the level and duration of interest or mortality guarantees in an interest-sensitive product must be reflected in the statutory valuation process. Inappropriate conclusions concerning the reserve implications of product features could lead the valuation actuary to an incorrect determination of liabilities and thus produce misleading financial information. Alternatively, improperly reflecting reserve requirements in pricing calculations could lead to erroneous profit expectation and poor pricing decisions. Thus, the product design features must be closely coordinated with valuation requirements to assure that pre-issuance profit testing and liability estimates and post-issuance profit measurement are accurately and consistently performed.

It also is necessary to closely coordinate the product design/pricing function with the tax valuation of policyholder liabilities. Specific product design features may materially affect the level of tax basis reserves, which will affect taxes paid, net surplus invested in products, and the after-tax profitability of the product. Again, the valuation actuary needs to be familiar with the product design process to assure a proper analysis of the after-tax financial results of the proposed product. The improper recognition of product features in proposed tax basis reserve calculations and profit testing incurs the risk that key financial goals will not be accomplished.

Section 12: Summary

Clearly, valuation considerations are an important element in the product design and pricing process, just as they are in the subsequent financial management of the organization. Thus, an inappropriate selection of valuation methods and procedures for use in profit testing and subsequent reporting could lead to an overutilization and inefficient use of surplus. Similarly, monitoring the emerging financial performance of products and comparing post-issue performance with pre-issue expectations require a careful and consistent choice of valuation procedures. If return on investment or return on equity is a key financial objective (which also would be reflected in profit criteria), valuation procedures which produce financial information that permits a valid assessment of current returns on the statutory investment or equity committed are essential. It is the valuation actuary's responsibility to select those methods, assumptions, and procedures which generate financial information which can be used to assess progress towards financial objectives and pricing goals.

Ultimately, the actuary's need to value policyholder liabilities and related items is inseparable from the objectives of the financial management and the product development/pricing processes. Both management functions — i.e., financial management and product development — are driven by financial performance objectives. The relevance of the financial information used in these functions and the financial measurements derived from them depends on an appropriate valuation of policyholder obligations and related items. As a result, close coordination of these key actuarial disciplines is a necessary element of a financially successful company.

