

THE COMING REVOLUTION IN INSURANCE ACCOUNTING

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ABSTRACT

This paper briefly examines some trends that could affect future financial reporting for insurance companies and will explore some of the fundamental issues being discussed. Topics covered include: what needs to be fixed at the national and international level, the factors that contribute to the changes, evaluation of a new or enhanced financial reporting system, and the big issues in financial reporting of insurance.

1. INTRODUCTION

Significant changes in the standards of financial reporting for all insurance companies are expected to continue to emerge at the international and national levels. This applies for statements prepared in accordance with generally accepted accounting principles (often referred to as GAAP) and those prepared on regulatory or “statutory” principles. These changes will likely affect the measurement of insurers’ major assets and liabilities, as well as regulatory-required minimum surplus levels.

Regulatory approaches are likely to continue to evolve, resulting in an increasing focus on risk and risk management, gradually converging with approaches applied to other financial service sectors, such as banks. Several fundamental trends are driving these changes, including:

- The need for transparency in financial statements.
- A focus on risk and risk management.
- Relevance of capital markets.
- Financial theory and practice.
- Globalization of business.
- Accounting emphasis on the balance sheet rather than the income statement.
- Convergence of accounting standards worldwide.
- Convergence of the financial services industry’s products and regulatory practice.

These trends precipitated a move toward fair-value-based accounting models for GAAP and risk-based regulatory financial benchmarks or solvency standards. With no existing international accounting or solvency standards for insurance contracts or insurers, and significant changes being considered in the overall approach that will be applied to financial assets and liabilities accounting, insurance accounting for GAAP is being reinvented. Current activities are being driven by the International Accounting Standards Board (IASB). Developments in this area are particularly relevant to European insurers. Financial reports prepared on an International Financial Reporting Standards (IFRS) basis are currently scheduled to be required by 2005. At the same time, solvency and regulatory issues, including more emphasis on risk-based measures and reliance on in-house models and appointed actuaries, are being discussed by the International Association of Insurance Supervisors (IAIS) for insurers and the Bank for International Settlements (BIS) for banks, both based in Basel, Switzerland.

The 2001 Bowles Symposium included in-depth exploration through conceptual research into and practical implications of the important issues involved. The papers presented at the symposium covered areas such as a comparison of direct and indirect approaches to measurement of liabilities, application of replicating portfolio analysis, determination of discount rates and the role of a company’s cost of capital, alternative approaches to risk adjustment, correlation of in-

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insurance and financial risks, regulatory oversight of risk management models in insurers and banks, and presentation of financial statements in a fair-value reporting environment. These are illustrated through several case studies involving a variety of insurance products offered worldwide. Several related projects sponsored by actuarial organizations also were presented, including those sponsored by the International Actuarial Association (IAA), the American Academy of Actuaries/Society of Actuaries, the Institute of Actuaries, and the Institute of Actuaries of Australia.

This paper will briefly examine some of these trends as they could affect future financial reporting and will explore some of the fundamental issues currently being discussed in this area.

2. WHAT'S BROKEN?

What are the objectives of the system? What needs does it not adequately address? Why make a change? Will the proposed change be better than current practice or just different? How rotten does the current system have to become before a change is needed? These questions should be confronted before a "reform" or significant change is undertaken. A firm grasp on the current deficiencies should help focus attention on areas that need to be addressed and possible approaches that can be used to fix the system.

In today's multinational world of business, both the international and national contexts should be evaluated.

2.1 International Level

Globally, rather than needing to determine whether something is broken, the decision is easy, because there simply isn't anything to be broken. No official international standard for financial reporting for insurance contracts currently exists. For the first time, some of the relevant industry-specific issues are being addressed on a global level and are drawing international attention and coordinated efforts.

The current GAAP study of insurance being conducted by the IASB has taken a top-down approach, concentrating on the development of fundamental concepts rather than refining an existing system. As international professional orga-

nizations are maturing, these issues are being discussed on both a worldwide and national basis. Just as importantly, there is no insurance-specific international solvency measurement system. It should be noted that the differences in national practice relating to insurance have recently been increasing rather than converging.

2.2 National Level

Diverging practice provides a good indication that something is broken at a national level. Although U.S. GAAP is becoming more commonly used in insurance accounting around the world, this may be more attributable to the U.S. capital markets' dominant position and the size of its insurance market rather than to the superiority of the principles underlying it. The current GAAP accounting regime for insurance contracts in the U.S. is a mixed system, varying by the type of products covered, inconsistent with prospective fair-value-based values.

For regulatory and GAAP purposes, the creativity of actuaries and insurers has made keeping up with product innovations a major standards challenge. For example, because of the lack of economic-based (undiscounted) loss reserves, creative reinsurance programs have arisen that have responded more to the deficiency in the accounting system than the underlying economics. Risk-based capital measurement and an appointed actuary type system have been around long enough in the United States that the system has been focusing on refinement rather than reinvention.

New types of insurance products and coverages are constantly being created. Some of these changes arise as a result of a desire to take advantage of existing accounting rules ("accounting arbitrage"), regulatory rules ("regulatory arbitrage") or to minimize required invested capital, rather than better meeting customer needs or being more economically desirable. Financial statement values, in some cases, reflect historical rather than prospective costs. In some cases, prudence is emphasized at the expense of realistic evaluations of the enterprise's economics. In many cases, users of financial information cannot easily determine comparable values or figure out an enterprise's financial condition and performance from what is reported.

3. FACTORS CONTRIBUTING TO CHANGES

Several factors have contributed to a recent surge in demand for changes in insurers' financial reporting systems relating to insurance contracts. These have been driven by market changes and recognition by users that the current system has not responded sufficiently to their changing needs. For example, the late 1990's Asian financial crisis highlighted the need for more transparent financial information and drove politicians to demand change. And, in many parts of the world, the financial services sector enterprises' financial difficulties focused attention on the need for better regulatory benchmarks for monitoring participants' continued financial viability.

Pressure has arisen from regulators of the securities and their issuers and regulators of the business that the financial enterprises conduct. The following discusses some of these factors. Their convergence will likely result in changes, some of which may be dramatic.

3.1 Transparency in Financial Statements

Most investors and analysts can't understand insurers' financial statements. Some studies have indicated that this lack of transparency has contributed to lower price/earnings multiples for the insurance industry. An actuary should not be needed to interpret the financial statements of insurers. Although insurance products and risks can be complicated (the long-term nature of many of their obligations certainly contribute to this difficulty in interpretation), standards or benchmarks for presentation and disclosure should be constructed to improve the understandability and relevance of their accounts.

Political pressures, coming from such sources as share regulators (IOSCO), business regulators (IAIS), and politicians (the OECD and the European Union) to require increased transparency in all companies' financial statements, including those of insurers, have intensified over the last few years.

3.2 Risk and Risk Management

Risk management has become increasingly sophisticated. In many financial services' enterprises, the use of derivatives and financial engineering techniques has increased substantially. Companies are more frequently facing decisions

regarding the extent risks should be hedged, by evaluating hedges' value in reducing risk compared to their costs. Internal risk models applied to assets, liabilities, and asset/liability management increasingly are used. Actuarial models, such as asset adequacy testing, and cash flow testing under stochastically generated models or several alternative scenarios previously only used to comply with regulatory requirements, are beginning to be used to evaluate and manage the risk of the entire enterprise (enterprise risk).

So far, risk assessment has been quite different among participants in the financial services industry, primarily because of differences in their risk profiles. Banks have relied on value-at-risk models to quantify market risk; however, these have a very short-term focus, with horizons often measured in terms of days. By contrast, many insurers have measured their risk in terms of years. Both have changed, converging somewhat in areas such as credit risk analysis, but wide differences remain in other areas.

3.3 Capital Markets

The expansion and proliferation of capital markets in many countries, has led to increased use of these markets by the insurance industry. Two aspects of expansion have made this trend even more noticeable: demutualization has increased insurer use of the capital markets and the increase in market share occupied by publicly traded multinational insurers.

These and other factors have resulted in the use of more than one market for a given insurer or financial services enterprise. One reason the use of U.S. GAAP has become widespread is the importance of the U.S. capital markets, as well as its business market. Thus, the cost of capital for an individual insurer and overall capital capacity have influenced management decision making. In addition, if a suitably active market is available for a given asset or liability, the market can be used as a benchmark for assessing or validating market or fair value.

3.4 Financial Theory and Practice

Financial theory has come a long way since the 1960s when Black and Scholes wrote about option pricing and the valuation of financial assets and liabilities. Markets for derivatives have

boomed, facilitating hedges to become available for many risks. Fair valuation would not be possible without such a development. Actuarial practice has expanded its use of many of the practical applications of this theory, although there is still a way to go.

3.5 Accounting Emphasis on the Balance Sheet Rather Than the Income Statement

Over the last century, the focus of attention and emphasis in the development and revision of accounting standards has shifted between the income statement and the balance sheet. Currently, there appears to be a general movement toward a re-emphasis on the balance sheet. For a long time, historical cost and deferral-and-matching were the primary approaches used for measurement purposes, as evidenced in the current U.S. GAAP practice of deferring historical acquisition cost over the revenue stream of insurance contracts. Many now believe that historical cost methods are not relevant and were only used for practical reasons (note that they represent entrance values).

The focus on fair values promotes a prospective view of a financial statement's components. A possible regulatory approach would be to use a fair-value-based system to measure liabilities for insurance contracts, supplemented by disclosure of a more conservative risk-based capital measure that would incorporate all entity-specific risks.

3.6 Globalization of Business

In most regions of the world, globalization of ownership, trade, and investment has already occurred. This trend has occurred as much in the insurance industry as it has in other industries. It seems that a couple of times each month the media reports cross-border mergers and acquisitions of insurance enterprises. Multinational insurers are coming to dominate the industry in many countries, the United States being no exception.

Although there will always be specialty and local insurers, the larger multinational insurers are becoming dominant in many markets. And even though it is difficult enough to measure performance consistently in long-term businesses such as insurance, it is even more difficult when

different accounting bases are used in different countries.

3.7 Worldwide Accounting and Actuarial Standards

Because of the expanding global marketplace and concerns with regional financial crises, it has become increasingly important for national accounting standards to converge, as well as become more transparent. Recent organizational developments have resulted in increased international cooperation and greater importance of international organizations, in particular the recently reorganized IASB and the International Federation of Accountants (IFAC). Increased recent cooperation among accounting standard-setters should further enhance future convergence.

Within the actuarial profession, the last few years have seen the reorganization of the IAA. As a consequence, it has become far more active than in the past and more responsive to many international developments. In response to the establishment of international accounting standards regarding insurance contracts, the IAA will likely develop corresponding actuarial standards. It has already developed what is in essence a common code of professional conduct and minimum educational guidelines for new fully qualified actuaries.

3.8 Convergence of the Financial Services Industry and Its Regulators

Historically, in most countries, insurance and other financial service sectors have been viewed as separate entities. However, over the last several decades, it has become clear that many of the products offered and risks undertaken by these entities have become increasingly similar. In fact, in some cases, the products of one have even been included in wrapper products of the other; for example, the underlying investment elements of some insurance company annuities are bank products or mutual funds.

The convergence of financial industries has also led to a convergence in the organization of financial services industry's regulators, including those of insurance companies. For example, in Canada and the United Kingdom, there is a single organization overseeing all sectors of the financial services industry. Internationally, even though

the organizations that coordinate national regulators—the BIS and the IAIS—are independent, their administrative base is in the same building in Basel, Switzerland. This trend has occurred partly for political reasons because the industry is converging, but it is also attributable to the realization that the entire financial sector is subject to many of the same risks, and the same expertise is needed to manage these risks.

4. EVALUATION OF A NEW OR ENHANCED FINANCIAL REPORTING SYSTEM

To determine whether a new system is more desirable than the existing system, it is useful to consider the criteria used to judge whether changes are an improvement to the current system. The considerations I have used in this process include:

- *Relevance*: The extent to which financial values represent relevant and meaningful measures of the future financial activity related to insurance contracts and the current financial condition of insurers was reflected.
- *Objectivity*: To as great an extent as practical, it would be desirable to base values on objectively derived assumptions. A certain degree of assurance could be obtained through a separate actuarial opinion. Concerns have been expressed that a fully prospective system that depends on judgment-based assumptions might be subject to manipulation (particularly with respect to one-time changes in actuarial assumptions).
- *Producing comparable results*: A concern with any model-based system is the extent to which, given similar circumstances, different experts and companies will produce comparable results. It is important to consider the approaches available to provide for reasonably comparable financial results across companies.
- *Stability versus responsiveness*: A concern that has been expressed regarding a fair-value-based financial reporting system is its potential for unnecessary instability of reported results. In evaluating this issue, the focus should not be on the stability of a single component on a financial statement. Rather, it should be on the total financial statement. Stability of a component for its own sake, rather than provide useful financial performance information to the user, may actually hide it.

- *Prospective approach*: History is nice to study, but it may not be relevant to the evaluation of an insurer's financial condition. Nor is it indicative of upcoming periods' financial performance or expected risks.
- *Practicality*: Many of the changes being discussed will lead to significant changes in some enterprises, not only in the values recorded in financial statements, but in re-education of both those preparing them and those using them. Of course, the timing available and the implementation cost are always a concern. In addition, for a large block of long-duration contracts, responding to daily market changes may be difficult to implement in a meaningful and responsive manner. As well, effectively integrating the new information into management's decision-making process will take even more time.

5. BIG ISSUES IN FINANCIAL REPORTING OF INSURANCE

A wide range of significant financial reporting issues that might impact insurers is currently being addressed in several international and national forums. During the symposium, several of the most significant of these were explored. Some have caused considerable controversy, often on a conceptual basis. As we approach adoption and implementation, more issues will arise from practical grounds. Some concerns involve potential ramifications of these changes, such as the possible effect on taxation of insurers and on the capital markets' assessments of the changes. An overview of some of these issues follows.

5.1 Overall Approaches

5.1.1 Totally Prospective Approach with Possible Profit/Loss at Issue

A prospective approach seems to be consistent not only with the concept of a liability, but also with the increased accounting emphasis on the balance sheet. This approach is also consistent with a fair-value-based asset and liability value system and risk-based solvency requirements.

Some judge the acceptability of a set of accounting standards by how future performance, and in turn profit, is recognized at policy issue. The possible approaches are:

- *No profit at issue.* A historical cost (entry price) basis usually results in no profit at issue, a so-called “deferral and matching” approach. To accomplish this, the expected profit or risk margin is generally amortized over the contract’s life, possibly as a function of the revenue stream, as is the case under current U.S. GAAP. Some proponents of this methodology are uncomfortable with recognizing a profit at the insurance contract’s time of issue, either for reasons of prudence or fear that the profit will be too front-loaded and subject to management manipulation.
- *Profit at issue.* Others believe a financial statement should recognize a profit at issue, because this provides useful financial information and is indicative of the effect of expected contract performance as recognized on a successful product sale, often adjusted as risk is released.
- *Profit or loss at issue.* Using an exit value basis, the amount that a buyer would be willing to pay for a group of contracts may or may not result in profits at issue. In some cases, either as a result of full recognition of the risks associated with possible costs of embedded options, or if discount rates are risk-free rates (one definition of which is the financial instrument of the relevant governmental entity for the corresponding cash flow duration), losses might be recognized at issue of many insurance products. It is interesting to note that, if the assumptions used by the potential purchaser are identical to those used to determine the original price, initial exit value would be equivalent to initial or entry price, with no resulting profit at issue.

5.1.2 Direct vs. Indirect

Many actuarial methods have been applied to determine the values of liabilities in different contexts. Both actuarial appraisal methods and embedded value methods used for life and health insurance and annuities have used indirect approaches, focusing on the measurement of the present value of future available distributable statutory profits (which reflects the expected value of overall company performance, relying on the relationship that liabilities = assets – surplus).

Both direct and indirect approaches aim to develop risk-adjusted estimates of the present value of the liability, but the indirect method also fo-

cuses on the reality of a regulated industry by recognizing the constraints on the availability of statutory earnings. This measure is based on the assertion that a company’s owner in a regulated industry would only be interested in the amount of money that could be distributed.

5.1.3 Prudence/Conservatism and Implicit Assumptions

Most actuarial approaches used are rooted in prudence, reflecting a fundamental concern with the insurer’s financial soundness. “When in doubt, use conservative assumptions” is often relied upon by actuaries when calculating many actuarial projections. “When there is uncertainty, rely on prudent values” is applied by accountants in many situations.

Today, this tried-and-true approach may no longer yield the most useful financial information. Although overall these past approaches may have yielded reasonable results, financial statement users now demand more rigorous measurement and disclosure of major assumptions.

The use of explicit assumptions tends to open up the black boxes that have been used in the past. Explicit assumptions and benchmarks are needed to evaluate performance effectively. Using explicit assumptions without undue prudence enhances measurement and should serve as a better indicator of future performance.

5.1.4 Minimum Deposit Floor Constraint

In some accounting contexts, a minimum floor for liabilities has been applied. Examples include:

- Guaranteed cash values for life insurance and annuities.
- Account balances for bank deposits.
- Worst-case scenario analysis for annuities in the United States for regulatory purposes, such as, the Commissioners Annuity Reserve Valuation Method (CARVM).
- Zero for most insurance products, even when the net present value of expected future cash flows for a contract is negative.

A minimum floor, although conservative, is not consistent with a fair-value-based system, because any economically based exit value measurement would not reflect such a floor. In addition, resulting values can adversely affect the understanding of financial performance. In sum-

mary, such constrained values do not correspond with expected values, nor do they relate to what other parties might be willing to pay for the liabilities.

5.1.5 Consistency with Accounting (and Actuarial) Objectives

It is crucial that the standards and approaches adopted satisfy the intended accounting objectives (as described in documents such as the Framework of the IASB) and be determined on a basis consistent with sound actuarial principles.

It is relatively straightforward for actuaries to estimate most insurance liabilities under different sets of basic principles (for example, those reflecting different amounts of or allocation of adjustment for risk, different methods for determining discount rates, discounted versus undiscounted values, or historical, partially prospective or fully prospective bases). In any event, it is appropriate for financial reporting purposes that measurements be developed in a manner consistent with the accounting structure in which they are developed.

5.2 Recognition of Margins and Risk

5.2.1 Types of Margin

To most who are knowledgeable in this area, the types or sources of margins to be included in liability measurement are obvious. Unfortunately, the conclusions reached differ by the person's experience and background. While there would be general acceptance that margins could include those derived from mortality, claims, and expenses, disagreements arise with respect to investment margins.

Two factors usually interfere with consensus: (1) traditional treatment in other financial institutions that do not reflect any element of future interest margins and (2) the definition of what an investment margin represents differs. For this purpose, proponents of incorporating future investment margins define them as being equal to expected future investment income, less interest credits expected default costs.

Many actuaries think that such investment margins should be given consistent treatment with other margins, whereas those involved in accounting for banking and mutual funds are used to treating these margins as service fees, to be

recognized only when the service is provided. This difference in perspective has to be resolved before there can be a consensus on its resolution.

5.2.2 Risks Covered

There are many types of risk that affect insurers and their contracts. I believe that all risks that can be estimated should be reflected in an insurer's solvency margin (or risk-based capital). Which ones or to what extent they should be reflected in liability measurement for insurance contracts is a more difficult issue. For this purpose, two distinctions can be considered: the relationship between assets and liabilities, and the extent to which the risk is diversifiable.

- In a pure form of a fair-value-based measurement system, actual assets held by an insurer would not affect the value of liabilities. Nevertheless, most have agreed that if the obligation is stated in terms of actual assets, such as in variable (unit-linked) or in participating (with profits) insurance, it would be appropriate to reflect asset/liability mismatch risk in the measurement of the liability. For other types of insurance, it is unlikely that this risk will be considered in liability measurement, even though the risks in other types of contracts could be viewed as being similar, if not identical.
- Financial theory indicates that those risks that can be diversified should not be reflected in the measurement of liabilities, at least within perfect markets. Although this conveniently ignores the effect of transaction costs, a more considered approach would be to observe the marketplace—if the market (representing the aggregate assessment of many market participants) rewards this type of risk, then the risk should be incorporated in the measurement of liabilities to the extent of this recognition. Different treatment of specific types of risk might be appropriate for measurement purposes, for example, size-related risk might not be considered.

5.2.3 Level of Risk

Although there is broad, but not universal, acceptance of the appropriateness of reflecting risk in the valuation of liabilities for insurance contracts, a consensus has not been reached as to the level of risk to be included.

In measuring the value of assets available in a liquid market, it is common to rely on market measurements. However, calibration to market transactions is not practical for insurance contracts' liabilities, which are not actively traded. These values are not readily available from the daily or on-line financial media. Possible approaches that could be considered include:

- *Implicit or judgmental provisions.* This approach has often been used through judgmental application, such as five percent mortality margin or resulting from a lack of recognition of certain factors or assumptions, such as discounting loss reserves.
- *Specific rules.* Industry/country-specified rules created through formula or specific margin.
- *Professional guidance.* This could take the form of broad principles underlying an appropriate level or a relatively narrow range of acceptable provisions for each assumption, such as the provisions for adverse deviation used by the Canadian Institute of Actuaries during the 1990s for many forms of insurance.
- *Benchmark studies.* Surveys detailing what others are doing could provide benchmarks from which justification could be based if a deviation in practice occurred. By their nature, these tend to be backward looking.
- *Market measurements.* Where available, this approach relies on market (or some surrogate) measurements developed through rules and research analyzing statistical relationships between, for example, risk reflected in the market for specified asset classes and corresponding classes of liabilities.

5.2.4 Multiple Risks

Actuaries have generally taken one of two approaches to including adjustments for risk; recently referred to as market value margins (MVMs). The first and most common method used in insurance has been to add a separate margin or provision for adverse deviation (PAD) to each specified assumption, for example, interest, expense, mortality, claim incidence, and policy persistency.

The second method is to look at aggregate risk margins. Although potentially more accurate and relevant to the risk for the total liability, this method can be more difficult to determine on a

consistent basis, because of limited information regarding the extent of independence or correlation among risks.

Some practical approaches have been used, such as the square root rule used for U.S. risk-based capital calculations that takes the square root of several, but not all, risk categories, reflecting the assertion that not everything will go wrong at once. Another approach used is to combine all margins as an adjustment to the discount rate; however, a risk adjustment applied in this manner may not relate very well to the timing of the actual risks involved. The approach taken has generally been consistent with the application. Until further research is conducted, an application-specific approach may be the most practical one to use.

5.3 Measurement Techniques

5.3.1 Consistency with Other Financial Instruments

It is desirable to measure insurance and almost-insurance products (such as, accumulation annuities and bank deposits) in a similar manner. Otherwise, arbitrage opportunities may result, particularly where products are not unbundled and a conglomerate can offer a product in several types of enterprises.

It is therefore important, as comprehensive standards for all financial instruments are developed (note the current proposal developed by the Joint Working Group of Accounting Standard Setters), that differences in accounting measurement converge, rather than diverge. This may be difficult to accomplish because, although there are inherent similarities among various financial instruments, it is difficult to change existing practice and insurance products tend to be more complex and long-term than, for instance, banking products.

5.3.2 Entity-Specific or Market-Based Assessment

The basis for expected experience might be derived from observation or estimation of market assessments or entity-specific approaches. The first is generally referred to as a "fair value," whereas the second is referred to as an "entity-specific" value. In an insurance context, the difference between these approaches may be signif-

icant in certain cases, particularly but not exclusively because of the influence of the measurement of the future expense assumption.

Should future expense projections be made at a level consistent with the enterprise's current method of operations, at an industry average, or at the lowest level available in the market, which might be realizable through, say, outsourcing? Though I currently prefer the use of assumptions consistent with current operations (with changes in assumption made when there is a demonstrated change in operation), the issue is unresolved at the time this paper was written.

5.3.3 Renewals

The effect of the extent to which renewing existing contracts or receiving existing contracts' renewal premiums should be reflected can in some cases be significant. One extreme position asserts that a future liability should not be recognized for any future cash flow beyond the point where one party has the unilateral right to terminate a contract.

The other extreme position asserts that as long as probabilities of continuing the current exposure can be reliably estimated, all expected future cash flows generated from that contract should be incorporated, including future renewals of that contract. A middle or compromise position would be to recognize only those cash flows during the current contract term or while a guaranteed right of insurability continues.

This issue can be a difficult one to construct a single rule for, partly as a result of the enormous variety of contract provisions in the world and the accounting arbitrage that could result if a specific cutoff rule for recognition is established. For example, if it is to the insurer's best financial interest, a perpetually renewable property/casualty contract could be developed with a mutual right of termination at any time.

Of course, if the objective is to derive a conservative value, a standard could reflect a conservative measurement rule. However, because the objective is to develop a more realistic approach for GAAP purposes, a set of general principles should be applied that can be followed without resulting in accounting arbitrage and that focuses on substance over form.

5.3.4 Keeping Up with New Product Developments

As more specific rules are developed to accommodate products of greater complexity and diversity, the more quickly companies will identify ways to overcome any perceived adverse effects. Thus, at least for developing a consistent basis for measurement, the less specificity relating to contract design provisions or product features is built into the standards the better. As a result, a principles-based approach, relying on the responsible actuary for objective application, may be superior.

5.3.5 Discounting

Discounting is fundamental to the measurement of the value of future cash flows from insurance contracts. Many issues surrounding discounting were raised during the IASB's present value project. These include:

- Whether to reflect risk adjustment with expected cash flows or with the discount rate.
- The use of entity-specific-based or fair-value-based cash flows.
- Applicability of a replicating portfolio.
- The effect of transaction and overhead costs.
- The type and level of risk adjustment.

The basis for determining the discount rate for insurance could take the form of a risk-free rate (a default-free rate) or a high-grade corporate bond rate net of expected defaults.

Two possible applications of discounting that would affect insurers' accounting are the discounting of property/casualty loss reserves and income taxes. Neither of these is currently discounted in most countries. Discounting the expected cash flows that form the basis of loss reserves for property/casualty insurers or provisions makes economic sense, although it is rarely done in practice.

The currently open issues include obtaining agreement concerning the basis for the selected discount rates, and the form and level of risk adjustment needed. For deferred taxes, discounting has not been done historically because of potential estimation difficulty; it might be time to break this tradition.

5.3.6 Replicating Portfolio

Applying a replicating asset portfolio to reproduce the best estimate of the present value of a set of expected cash flows has been raised by the IAA as a possible approach that could be used to measure a liability's value. Several practical problems can be involved in constructing a portfolio on a regularly updated basis; however, its use may be reasonable for this purpose.

5.4 Transparency

5.4.1 Performance Measurement

For GAAP, a revision to performance measurement under the proposed approaches, such as fair value, is just now beginning to be discussed. Information used for internal management decision making has at times been different from that provided externally. It is desirable for these information bases to converge, rather than to remain inconsistent.

A marriage of internal and external measurements should be reflected in external financial reports. A user should be able to make sense of the financial performance information provided to enable informed decisions to be made. This unmet need should be satisfied.

Additional measures should be included in a financial statement's footnotes, such as risk based capital, an assessment of an insurer's intangible assets and liabilities, as well as those values that cannot be expressed in financial terms.

5.4.2 Meaningful Disclosures

A certain tension exists between the desires of different audiences for insurers' publicly available financial information. Financial analysts would like to have additional information, such as the sensitivity of results to alternative scenarios, but some companies strongly prefer to keep this type of additional information confidential. While certain supplementary information is likely to be required, other additional information will likely be provided on a voluntary basis only.

Value reporting, that is, information relating to current or anticipated future performance, supplementary to that provided in the balance sheet, is beginning to be presented more frequently. It is only a matter of time before all companies will provide additional information, although it is too early to guess what form that information will take.

5.5 Regulatory-Specific Issues

5.5.1 Consistency/Coordination with Banking Regulators

With the convergence of the financial services industry, it is increasingly important that approaches to the measurement of financial statement values, performance, and solvency assessment converge as well. Currently, the measurement bases used are completely different because the relative mix of risk and exposures is usually different. Each sector's best regulatory approaches should be applied. For example, there is no reason that credit risk modeling should differ among sectors.

Convergence may occur now that consolidated regulatory organizations are coming into existence in several countries and with the increasing importance of the BIS and the IAIS on the international scene.

5.5.2 Level of Reliance on Internal Risk Management Models

Because of the complexity of the products and the risks of the financial services industry, significant risk assessment efforts are needed to assess companies' risk profiles and financial condition. With a lack of sufficient or appropriate resources, many regulators might wish or need to rely, at least in part, on risk management information produced by internally developed or externally purchased risk management software. Increased reliance on such models may be used in the future. The extent of reliance may have to be addressed on a jurisdiction-specific basis.

5.5.3 Reliance on the Appointed Actuary

For insurance companies in a growing number of countries, the appointed actuary is being relied upon to assess and report on risk. However, regulatory and audit staff cannot simply take her or his word for this assessment. A way to validate the reasonableness of the assumptions and the assessment of risks used is still needed.

The extent of this reliance will most likely expand in an evolutionary process, varying by national jurisdiction. These validations may take the form of regulator-sponsored actuarial reviews, peer reviews conducted internally or by an independent firm, or specific guidelines adopted by the national actuarial organization.

5.5.4 Consistency with GAAP Financial Statements

In several countries, whether to make regulatory accounting consistent with GAAP accounting has been raised many times. Because the focus of the information is different, additional information is needed to satisfy at least one of these two purposes and user communities, for example, through disclosure of a required solvency margin or risk-based capital. Such commonality exists in certain countries now, for example, Canada and Japan. I expect that convergence of approaches will be expanded in the future.

5.6 Own Credit Standing

Although other issues will usually be more important, no issue seems to raise more passionate

debate in GAAP fair-value discussions than whether to reflect an enterprise's credit standing in the measurement of its own liabilities.

Discussion of this issue is outside the scope of this paper. However, reflection of a company's credit standing may appear to be consistent with a pure fair-value system because it does affect the present value of expected future cash flows. Nevertheless, serious concerns have arisen regarding the implication of its application in all cases, particularly in the case of insurance companies.

Discussions on this paper can be submitted until July 2002. The author reserves the right to reply to any discussion. Please see the Submission Guidelines for Authors on the inside back cover for instructions on the submission of discussions.