

Underwriting Principles and Controls Part II

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Underwriting Principles and Controls Part II

Chapter 9 PRIVACY ISSUES AND UNDERWRITING

To perform the job, an underwriter needs accurate information. But a question arises: At what point does the underwriter's need for information conflict with an individual's right to privacy? The conflict between these two positions has been receiving much deserved attention.

The more accurate the information the insurer has, the fairer the premium charges can be. But does an insurer have the right to determine if an insured uses marijuana, or is a sexual deviate, or is an adulterer? To what length must an insurer go to protect the confidentiality of its information? Should all information be routinely passed along to the MIB or Equifax? What rights should a consumer have to correct any mistakes or distortions of information? These are all difficult questions, and class discussions with students over the past few years have convinced me that each of us would probably draw a slightly different line between the insurer's need to know and an individual's right to privacy, between what is an acceptable business practice and what is not acceptable.

Privacy Protection

The U.S. Congress created the Privacy Protection Study Commission to investigate many different aspects of the questions we have just raised. The committee's report, *Personal Privacy in an Information Society*, is interesting and informative, although it deals with a broader scope of transactions than just insurance. The report came out in 1977, but the issues it deals with are still pertinent today. In many ways, the report anticipates the issues that are faced in the tradeoff between privacy and the insurer's need to know. Where is the line drawn between conflicting rights in a democratic society?

Personal Privacy in an Information Society

This is material from the Preface to the Personal Privacy Report of the Privacy Protection Study Commission--

Issues of public policy rarely, if ever, emerge on the political scene fully developed and fully articulated. Rather, they result from gradual changes in the social and economic environment, which are then identified and intensively debated. This has been the pattern with the subject of this report. The relationships between individuals and various record-keeping organizations have been developing over a long period of time. An analysis of these relationships and their consequences for personal privacy lie at the heart of the findings and recommendations in this report.

In seeking to address the privacy issue as it emerges in a variety of settings, the Commission has constantly sought to examine the balance between the legitimate, sometimes competing, interests of the individual, the record-keeping organization, and society in general. Each of these interests has been weighed carefully, and, the Commission believes, given fair and forthright treatment. While broad principles did emerge as our investigations proceeded, for our report we decided not to center our recommendations on an omnibus approach. We concentrated, instead, on

recommendations for the specific record-keeping relationships that characterize each of the areas we studied. It was clear to the Commission that historic development and current realities required each area to be dealt with separately.....

Introduction

This is Chapter 1 of the Personal Privacy Report of the Privacy Protection Study Commission--

This report is about records and people. It looks toward a national policy to guide the way public and private organizations treat the records they keep about individuals. Its findings reflect the fact that in American society today records mediate relationships between individuals and organizations and thus affect an individual more easily, more broadly, and often more unfairly than was possible in the past. This is true in spite of almost a decade of effort to frame the objectives of a national policy to protect personal privacy in an information-dependent society. It will remain true unless steps are taken soon to strike a proper balance between the individual's personal privacy interests and society's information needs. In this report, the Privacy Protection Study Commission identifies the steps necessary to strike that balance and presents the Commission's specific recommendations for achieving it. This introductory chapter briefly describes the problem and focuses and defines the objectives of a national policy. It also weighs major competing values and interests and explains how the Commission believes its policy recommendations should be implemented.

RECORD KEEPING AND PERSONAL PRIVACY

One need only glance at the dramatic changes in our country during the last hundred years to understand why the relationship between organizational record keeping and personal privacy has become an issue in almost all modern societies. The records of a hundred years ago tell little about the average American, except when he died, perhaps when and where he was born, and if he owned land, how he got his title to it. Three quarters of the adult population worked for themselves on farms or in small towns. Attendance at the village schoolhouse was not compulsory and only a tiny fraction pursued formal education beyond it. No national military service was required, and few programs brought individuals into contact with the Federal government. Local governments to be sure made decisions about individuals, but these mainly had to do with taxation, business promotion and regulation, prevention and prosecution of crime, and in some instances, public relief for the poor or the insane. Record keeping about individuals was correspondingly limited and local in nature. The most complete record was probably kept by churches, who recorded births, baptisms, marriages, and deaths. Town officials and county courts kept records of similar activities. Merchants and bankers maintained financial accounts for their customers, and when they extended credit, it was on the basis of personal knowledge of the borrower's circumstances. Few individuals had insurance of any kind, and a patient's medical record very likely existed only in the doctor's memory. Records about individuals rarely circulated beyond the place they were made.

The past hundred years, and particularly the last three decades, have changed all that. Three out of four Americans now live in cities or their surrounding suburbs, only one in

ten of the individuals in the workforce today is self-employed, and education is compulsory for every child. The yeoman farmer and small-town merchant have given way to the skilled workers and white-collar employees who manage and staff the organizations, both public and private, that keep society functioning. A significant consequence of this marked change in the variety and concentration of institutional relationships with individuals is that record keeping about individuals now covers almost everyone and influences everyone's life, from the business executive applying for a personal loan to the school teacher applying for a national credit card, from the riveter seeking check-guarantee privileges from the local bank to the young married couple trying to finance furniture for its first home. All will have their creditworthiness evaluated on the basis of recorded information in the files of one or more organizations. So also with insurance, medical care, employment, education, and social services. Each of those relationships requires the individual to divulge information about himself, and usually leads to some evaluation of him based on information about him that some other record keeper has compiled.

The substitution of records for face-to-face contact in these relationships is what makes the situation today dramatically different from the way it was even as recently as 30 years ago. It is now commonplace for an individual to be asked to divulge information about himself for use by unseen strangers who make decisions about him that directly affect his everyday life. Furthermore, because so many of the services offered by organizations are, or have come to be considered, necessities, an individual has little choice but to submit to whatever demands for information about him an organization may make. Organizations must have some substitute for personal evaluation in order to distinguish between one individual and the next in the endless stream of otherwise anonymous individuals they deal with, and most organizations have come to rely on records as that substitute. It is important to note, moreover, that organizations increasingly desire information that will facilitate fine-grained decisions about individuals. A credit-card issuer wants to avoid people who do not pay their bills, but it also strives to identify slow payers and well intentioned people who could easily get into debt beyond their ability to repay. Insurance companies seek to avoid people whose reputation or life style suggest that they may have more than the average number of accidents or other types of losses. Employers look for job applicants who give promise of being healthy, productive members of a work force. Social services agencies must sort individuals according to legally established eligibility criteria, but also try to see that people in need take advantage of all the services available to them. Schools try to take "the whole child" into account in making decisions about his progress, and government authorities make increasingly detailed evaluations of an individual's tax liability.

Each individual plays a dual role in this connection-as an object of information gathering and as a consumer of the benefits and services that depend on it. Public opinion data suggest that most Americans treasure their personal privacy, both in the abstract and in their own daily lives, but individuals are clearly also willing to give information about themselves, or allow others to do so, when they can see a concrete benefit to be gained by it. Most of us are pleased to have the conveniences that fine-grained, record-based decisions about us make possible. It is the rare individual who will forego having a credit card because he knows that if he has one, details about his use of it will accumulate in the card issuer's files. Often one also hears people assert that nobody minds organizational record-keeping practices "if you have nothing to hide," and many apparently like to think of themselves as having nothing to hide, not realizing that whether an individual does or not can be a matter of opinion. We live, inescapably, in an

"information society," and few of us have the option of avoiding relationships with record-keeping organizations. To do so is to forego not only credit but also insurance, employment, medical care, education, and all forms of government services to individuals. This being so, each individual has, or should have, a concern that the records organizations make and keep about him do not lead to unfair decisions about him.....

The Insurance Relationship

This is material from Chapter 5 of the Personal Privacy Report of the Privacy Protection Study Commission--

..... Because the chief functions of an insurer-underwriting and rating risks and paying claims-are decision-making processes that involve evaluations of people and their property, the insurance industry is among society's largest gatherers and users of information about individuals. This chapter reports the results of the Commission's inquiry into the personal-data record-keeping practices of insurance companies and the support organizations that provide them with various services, including record keeping.....

INFORMATION FLOWS FROM INSURANCE INSTITUTIONS

Both life and health and property and liability insurers routinely disclose information about an applicant or insured to the agent, to the extent necessary to service the policy; to reinsurers (when a company underwriting a large policy wants to reduce its exposure to loss); to an insured's physician; to inspection bureaus to facilitate the preparation of an investigative report; and to other types of investigators asked to prepare such reports. Because insurance is often required to buy a house, operate a car, pursue a career, or conduct a business, they may also disclose information about an individual to loan institutions and employers. Further, life and health insurers, as indicated in the preceding sections, also disclose information to the Medical Information Bureau or the Impairment Bureau, and may provide details to another member insurer when requested to do so. Property and liability insurers, for their part, routinely notify the loss indexes of certain claims, and, in some cases, may notify the Insurance Crime Prevention Institute.

Some potential insureds are judged to be so likely to produce adverse claim experience that they cannot obtain insurance in the normal manner. The driver with a poor record poses two problems. The first is meeting his own acute need for financial protection and perhaps his ability to qualify legally as a registered vehicle owner. The second is protecting society from the harm which an unsafe driver is likely to inflict on others. State "assigned-risk" insurance plans were formed to provide coverage to a driver whom companies consider an unacceptable risk and thus can require information about him to be disclosed to the administrators of the plan as well as to the insurance company to which his application is assigned.

THE INTRUSIVENESS OF CERTAIN COLLECTION PRACTICES

Insurance underwriting involves two separate decisions: (1) whether the insurer wants to insure the applicant at all (selection); and if so, (2) at what price and terms (classification). The need to make these two judgments dictates the kind and quality of

information an insurance institution collects and maintains about an individual applicant or policyholder. In making these two types of decisions insurers look to physical hazards-medical hazards in life and health underwriting and in property and liability underwriting, the condition of the property, its use, and its surroundings. Underwriters also look to what is termed moral hazard. Evaluation of moral hazard is made by examining attributes of the applicant which suggest a greater than average likelihood of a loss occurring or the potential for unusual severity of loss-either an absence of a desire on the part of the individual to safeguard himself or his property from loss or a positive willingness to create a loss or to deliberately inflate a claim.

Thus, it is not surprising that the evaluation of moral hazards, particularly in property and liability underwriting, is the area where the greatest number of objections to insurers' information collection practices have been raised. An inquiry may cover drinking habits, drug use, personal and business associates, reputation in the community, credit worthiness, occupational stability, deportment, housekeeping practices, criminal history, and activities that deviate from conventional standards of morality, such as living arrangements and sexual habits and preferences. Because the relevance of many of these particulars can be hard to demonstrate, and because the judgment as to their relevance is often left to the underwriter handling a particular case, their propriety has become subject to question.

From the standpoint of many applicants and insureds, the dichotomy between the individual's privacy interest and the insurer's interest in evaluating risk is probably not as great as it seems at first glance. The low-risk applicant benefits from an underwriting evaluation that results in unusual risks being eliminated or written at a higher premium because that keeps the cost of his insurance down. The Commission was continually reminded that it is in the interest of the applicant to have complete and accurate information on which this judgment can be based so that he can be insured at the proper rate; that the insurer must be able to evaluate the risk it is being asked to assume if premium charges are to bear a reasonable relationship to expected losses and expenses for all insureds within a similar classification. Economic forces may, however, work against a given individual. Because insurers compete against each other for the better risks, they do not have much incentive to look behind some of the criteria they use to sort the good risks from the bad. If their experience suggests, for example, that slovenly housekeepers make poor automobile insurance risks, they tend to be wary of all slovenly housekeepers. The problem, in other words, is not that the category of information lacks predictive value in all instances, but rather that it is applied too broadly.



Genetics and Underwriting

Debate over the use of genetic testing in underwriting develops with that technology. This would seem to be a pretty significant issue, and one which politicians and the insurance industry monitor. Information follows on federal legislation.

GINA Overview

The Genetic Information Nondiscrimination Act of 2008 (GINA) prohibits discrimination

by health insurers and employers based on genetic information.¹ Genetic information is considered sensitive for a number of reasons, including that it may be predictive or indicate a predisposition to disease, and that it can affect not only an individual but also family members. In general, Title XVII of the PHSA, along with parallel provisions in Part 7 of ERISA and Subchapter B of chapter 100 of the IRC, govern the nature and content of health insurance coverage provided primarily in the private sector. Prior to PPACA, many of the provisions dealing with the regulation of private health insurance in these three laws were added by the Health Insurance Portability and Accountability Act (HIPAA), which was designed to improve health care access, portability, and renewability (P.L. 104-191, 110 Stat. 1936 (1996)). PPACA also amends these three laws to create new requirements for private health coverage.

GINA is divided into two main parts: Title I, which prohibits discrimination in health insurance based on genetic information, and Title II, which prohibits discrimination in employment based on genetic information. Title I of GINA amends the Employee Retirement Income Security Act of 1974 (ERISA), the Public Health Services Act (PHSA), and the Internal Revenue Code (IRC), as well as the Social Security Act (SSA), to prohibit group health plans and health insurance issuers providing group and individual health coverage from engaging in genetic discrimination and to strengthen and clarify existing HIPAA nondiscrimination and portability provisions with respect to genetic information and genetic testing.

HIPAA established certain nondiscrimination requirements that are intended to prevent group health plans and health insurance issuers from discriminating against individual participants or beneficiaries based on a "health status-related factor." In particular, HIPAA amended the PHSA, ERISA, and the IRC to prohibit group health plans and health insurance issuers from basing coverage eligibility rules on these health status factors, which include health status (physical or mental), claims experience, receipt of health care, medical history, evidence of insurability, or disability, and genetic information. In addition, group health plans and health insurance issuers may not require that an individual pay a higher premium or contribution than another "similarly situated" participant based on these factors. PPACA retains these requirements and extends them to health insurance issuers in the individual market.

The complexity of the health care financing system required this multifaceted approach in order to ensure protection for all individuals, regardless of their coverage arrangements.

In general, the PHSA, ERISA, and the IRC govern different types of health plans and health insurance coverage. For example, the PHSA covers some self-insured group health plans (non-federal governmental plans), as well as health insurance issuers providing group health coverage and coverage in the individual market (See 42 U.S.C. § 300gg-21). ERISA covers group health plans (including private-sector self-insured plans) and health insurance issuers providing group health coverage, and it does not cover governmental plans, church plans, or insurance in the individual market (See 29 U.S.C. § 1003). The IRC covers group health plans, including church plans, but does not cover health insurers.

On October 7, 2009, the Departments of Labor, Health and Human Services, and

¹ Information from Congressional Research Service Rpt R41314, July 2010

Treasury issued interim final regulations implementing the provisions in Title I of GINA. These regulations became effective as of December 7, 2009, and specifically for plan years beginning on or after December 7, 2009, for group health plans and health insurance issuers.

Title II of GINA prohibits discrimination in employment based on genetic information and, with certain exceptions, prohibits an employer from requesting, requiring, or purchasing genetic information. The law prohibits the use of genetic information in employment decisions—including hiring, firing, job assignments, and promotions—by employers, unions, employment agencies, and labor management training programs. On March 2, 2009, the Equal Employment Opportunity Commission (EEOC) issued proposed regulations for Title II that generally closely track the statutory language.

GINA Title I and PPACA

GINA prohibits the use of genetic information in determining premiums for individuals or groups or for serving as the basis for conditioning health coverage. PPACA, on the other hand, specifically defines the factors on which insurers may predicate issuance of coverage or determination of premiums. Thus, questions may be raised as to how the two statutes might interact with one another in the specific area of private health insurance market reforms. This section provides an overview of relevant GINA and PPACA provisions concerning coverage eligibility and premium determination to provide context for a statutory analysis outlining the potential interactions between the relevant provisions.

Prohibitions

Broadly, GINA prohibits group health plans and health insurance issuers from engaging in three practices:

- (1) using genetic information about an individual to adjust a group plan's premiums, or, in the case of individual plans, to deny coverage, adjust premiums, or impose a preexisting condition exclusion;
- (2) requesting, requiring, or purchasing genetic information for underwriting purposes or prior to enrollment; and (3) requiring or requesting genetic testing. Each of these prohibitions is discussed below in more detail.

For purposes of the GINA and PPACA requirements, a "preexisting condition exclusion" means a limitation or exclusion of benefits relating to a condition that was present before the date of enrollment for health coverage, whether or not any medical advice, diagnosis, care, or treatment was recommended or received before such date. 42 U.S.C. § 300gg-3(b)(1)(A). Excluding coverage for preexisting conditions refers to the case in which an applicant for coverage is offered a health insurance policy but that policy does not provide benefits for certain medical conditions.

Premium Determination

GINA prohibits health plans, group and individual health insurance issuers, and issuers of Medicare supplemental policies from adjusting a group or individual's premium or contribution amount based on genetic information about an individual in the group, an individual seeking individual coverage, or an individual's family members.²

² See, e.g., P.L. 110-233, § 101(a). 29 U.S.C. § 1182(b)(3)

Collection and Use of Genetic Information Restricted

GINA prohibits health plans, group and individual health insurers and issuers, and issuers of Medicare supplemental policies from requesting, requiring, or purchasing genetic information for the purposes of underwriting or prior to an individual's enrollment or in connection with enrollment.³

"Incidental collection" of genetic information—genetic information obtained incidentally to the requesting, requiring, or purchasing of other information concerning any individual—would not be considered a violation of the prohibition on collecting genetic information prior to enrollment if it is not done for underwriting purposes. 'Underwriting purposes,' as defined by GINA, includes

- (1) rules for, or determination of, eligibility for benefits;
- (2) the computation of premium or contribution amounts;
- (3) the application of any preexisting condition exclusion; and
- (4) other activities related to the creation, renewal, or replacement of a contract of health insurance or health benefits.¹²

GINA also prohibits individual insurers from conditioning eligibility or continuing eligibility on genetic information, and prohibits individual insurers from treating genetic information as a preexisting condition. Issuers of supplemental Medicare policies may not deny or condition the issuance of a policy based on genetic information (and may not impose a preexisting condition exclusion based on genetic information).¹³

Genetic Testing Requirements Prohibited

GINA prohibits health plans, group and individual health insurance issuers, and issuers of Medicare supplemental policies from requesting or requiring that individuals or their family members undergo a genetic test. This prohibition does not limit the authority of a health care professional to request that an individual undergo genetic testing as part of his or her course of health care. The Act provides for a research exception to this provision, by allowing a group or individual insurance issuer to request, but not require, an individual to undergo genetic testing if specific conditions are met.⁴

PPACA

As noted above, PPACA creates new federal standards applicable to private health insurance coverage. While some of the new federal standards begin to take effect this year, others take effect for plan years beginning on or after January 1, 2014. Among these later reforms, PPACA establishes new rating requirements that allow insurers to vary premiums based only on certain key characteristics. These characteristics are self or family enrollment in a plan or coverage; rating area (as established by a state and reviewed by the Secretary); age (by no more than a 3:1 ratio across age rating bands established by the Secretary, in consultation with the National Association of Insurance Commissioners [NAIC]); and tobacco use (by no more than a 1.5:1 ratio). Thus, health insurance issuers subject to this provision are precluded from charging premiums based on health factors and other additional criteria (e.g., the sex of

³ See, e.g., P.L. 110-233, § 101(b). 29 U.S.C. § 1182(d).

⁴ See, e.g., P.L. 110-233, § 101(b). 29 U.S.C. § 1182(c)(4).

the covered individual). Further, PPACA prohibits group health plans and health insurance issuers in the individual and group markets from excluding coverage for preexisting health conditions.⁵

PPACA requires individual and group health insurance issuers to offer coverage on a guaranteed issue and guaranteed renewal basis.¹⁸ Under the Act, health insurance issuers offering health insurance coverage in the individual or group market in a state must accept every employer and individual in the state that applies for such coverage, subject to certain conditions. Further, PPACA provides that health insurance issuers offering coverage in the individual or group market must renew or continue in force such coverage at the option of the plan sponsor or the individual, subject to exceptions such as nonpayment of premiums, or an act or practice of fraud.

Thus, based on these provisions, a health insurance issuer would be precluded from denying coverage, or denying a renewal of coverage, based on factors such as the individual's health.

Provisions of Title I of GINA and PPACA

In examining provisions of GINA in relation to comparable provisions in Title I of PPACA pertaining to health insurance, there appears to be some overlap in the reach of these Acts. For example, under GINA, a group health plan and a health insurance issuer may not adjust premium or contribution amounts on the basis of genetic information.⁶

Alternatively, under section 2701 of the PHSA, as created by PPACA, certain health insurance issuers may only vary premiums based on certain specified factors (i.e., tobacco use, age, geographic area, and self-only or family enrollment). In evaluating the interaction of these two statutes, one may argue that it is possible to read these statutes together as establishing non-conflicting limitations on insurance premiums. While PPACA creates criteria for premium rates, GINA prohibits premium adjustments based on genetic information. Further, it seems that a health insurance issuer can simultaneously comply with the requirements of PPACA and GINA. While a violation of this provision of GINA may also be a violation of section 2701 of the PHSA, there does not appear to be a barrier to offering penalties for the same conduct under these two statutes. Though one may argue that section 2701 of the PHSA renders GINA, at least in part, ineffective and therefore amends or repeals GINA by implication, given that amendments by implication are disfavored, and without a demonstrated clear intention to override its provisions, a court may be more likely to dismiss this argument.

Further, it should be noted that these provisions of PPACA and GINA are not identical in scope. For example, the limitations on premium amounts as added by PPACA apply only to health insurance issuers in the individual and small group markets, and do not apply (as GINA does), for example, to self-insured group health plans or insurers in the large group market. Further, this section of PPACA applies only to premium rates, whereas GINA applies to premiums as well as contribution amounts. GINA and its accompanying regulations do not define contribution amounts, but it is possible that contribution amounts encompass certain cost-sharing elements of health insurance coverage, including co-payments and deductibles.

⁵ P.L. 111-148, § 1201 (section 2704 of the PHSA).

⁶ See, e.g., P.L. 110-233. Section 202(b); 29 U.S.C. § 1182(b)(3).

In addition, as discussed above, health insurance issuers must accept every individual and employer that applies for coverage and renew or continue such coverage at the option of the plan sponsor or individual. Thus, it seems that the provisions of PPACA may obviate some of the requirements of GINA. If a health insurance issuer generally cannot use certain underwriting practices or limit enrollment to certain individuals, they may not be inclined to obtain genetic information for these purposes. However, this is not to say that GINA is therefore repealed by PPACA. It is likely that a court may read these statutes in concert with each other: while PPACA removes certain limitations to obtaining health insurance, GINA prohibits obtaining genetic information as part of certain insurance practices. Further, it should also be noted that these provisions of GINA and PPACA are also not identical in scope. For example, the guaranteed availability and renewability requirements of PPACA apply only to health insurance issuers and, accordingly, the effects of this provision of GINA on self-insured group health plans may not be affected by PPACA.

GINA Title II and PPACA

GINA and PPACA both include provisions that relate specifically to employer wellness programs, although neither statute specifically requires the use of wellness programs. In GINA, the relevant provisions are limited to the conditions under which an employer might lawfully collect genetic information pursuant to an employer wellness program. PPACA's provisions are broader, encourage the use of wellness programs, and include specifics about these programs, including the extent of financial incentives that an employer may use to encourage participation in wellness programs. This raises questions about the potential interaction between these two statutes with respect to employer wellness programs. This section provides an overview of relevant employer wellness program provisions in GINA and PPACA to provide context for a statutory analysis of the potential interactions between these provisions. It should also be noted that the provisions of PPACA discussed in this section do not apply to Medicare supplemental benefits. 42 U.S.C. § 300gg-91(c)(4). Thus, these requirements of GINA are likely unaffected by PPACA.

Employer Wellness Programs

Health care costs have risen dramatically in recent years, and employers providing health insurance, as well as other insurance providers, have struggled to find ways to contain costs. This has led to the introduction of incentives to promote healthy behaviors, often referred to as wellness programs. These programs take a myriad of forms, from providing a gym at the workplace to subsidizing the co-pays of certain medications and linking health care benefits or discounts to certain healthy lifestyles. In Arkansas, for example, state employees who exercise more frequently or eat healthier foods can earn up to three extra days off from work each year.⁷ These healthy lifestyle programs can include requirements for no tobacco use, as well as requirements for certain cholesterol, blood pressure, and body mass index (BMI) measurements. (Weighing the Wellness Programs: The Legal Implications of Imposing Personal Responsibility Obligations, L. Jesson, 15 Va. J. Soc. Policy and Law 217)

Medical Information

⁷ National Conference of State Legislatures, *State Employee Health Benefits* (Updated February 28, 2010)

Most, if not all, employer wellness programs collect medical information from participants. Programs may request or require participating employees to answer questions about family history of certain diseases, conditions, or disorders. This information falls under the definition of genetic information under GINA, and therefore its acquisition and use by employers is strictly regulated and is protected differently than is employer acquisition of other medical information.⁸

GINA broadly prohibits both the acquisition of genetic information, as well as the use of genetic information by employers in employment decisions; however, it does provide for several exceptions to the prohibition on employer acquisition of this information. Specifically, Title II of GINA allows employers, employment agencies, labor organizations, and training programs to acquire genetic information pursuant to the offering of health or genetic services, including services offered as part of a wellness program.

Chapter 10 RESERVES AND UNDERWRITING

Loss reserving is an activity that is central to the achievement of an insurance company's goals. It involves estimating the magnitude and timing of future claim payments on accidents that have already occurred. These estimates take into account not only claims that are in the process of being settled, but also claims on accidents that have happened but have not yet been reported to the Company. Accurate reserving is important for capital adequacy, investment strategy and pricing. Risk managers and actuaries identify risks to which the insurer is subject.

Decision Trade-offs

For financial managers in any type of business, decisions require a trade-off between risk and return. The aim of a successful manager is to obtain the maximum return possible with no more than an acceptable level of risk. As accepting risks is the business of insurance companies, their financial managers need to be especially alert in making the choice between risk and return. Four major types of risks for insurance companies in their normal operations are excessive claim costs, sales declines, losses in investments and policy loans and cancellations for life insurance companies. Natural disasters can produce excessive claim costs, as can inflation raising claims amounts to unexpected levels or actual losses exceeding estimates. Economic downturns can cause sales declines. Rising interest rates can result in portfolio value loss for bonds and fixed-rate mortgages, and a recession can bring on declines in stock value and defaults on bonds and mortgages. Life insurance companies that offer whole life and endowment policies can face cancellation and policy loan risks, usually during high

⁸ Title II of GINA defines genetic information as "with respect to any individual, information about such individual's genetic tests, the genetic tests of family members of such individual, and the manifestation of a disease or disorder in family members of such individual." P.L. 110-233, Section 201(4)(A); 42 U.S.C. §2000ff(4)

interest rate periods.

The financial manager's role is to offset such risks with conservative investments designed to compensate for losses and with matching maturity structures. Risk in insurance operations is uncertainty about the occurrence of an economic loss. Risk in investments concerns the possibility of receiving lower returns than expected from an investment. Investors can only estimate what future returns will be. Actual returns may differ from expectations. The deviation of the actual from the expected return represents the risk associated with this particular investment. There are different uses of the term "risk" in insurance. One concerns the outcomes of events depending on whether they can produce losses or both gains and losses. A pure risk or exposure, such as the possibility of an automobile accident, can only produce a monetary loss, while a speculative risk, like playing the lottery, can produce either a loss or a gain. Only pure risks are considered insurable.

A second way of using "risk" in insurance applies to the variability in distribution of losses for a pure or insurable risk. There are also "objective" and "subjective" risks.

Only risk averse individuals, who wish to avert risks, are willing to buy insurance in order to avoid the uncertainty of future losses. Risk neutral individuals and risk lovers are not good insurance prospects.

In financial theory, individuals are assumed to be risk averse. Because they dislike risk, higher compensation must be offered to persuade them to risk losses. With this assumption, the higher the risk of a security the higher the expected return must be. A risk-free security, such as a Treasury bill, will not have as high a return as a risky security. The difference in returns between two such securities is known in financial theory as the risk premium.

The portfolio theory offers a means of reducing risk through diversification. A portfolio is the term applied to a collection of securities. As part of a portfolio, a security is less risky than it would be if held in isolation, because returns of securities in a portfolio are correlated. Most securities are not held in isolation. State law requires insurance companies to hold diversified portfolios of securities. The return and risk relationship of an individual security is analyzed as to how it affects the return and risk of the portfolio. The weighted average return of individual securities in the portfolio gives the expected rate of return of the whole.

If the securities in a portfolio were in perfect negative correlation, all risk would be diversified away, that is, eliminated. In real life, however, most securities are positively correlated. Stock prices or investment returns tend to move up or down together. Thus while combining investments in a portfolio reduces risk, it cannot be expected to eliminate the risk completely. How effective the diversification effort is in the selection of securities with the needed positive or negative correlation to add to the portfolio will determine the amount of risk that will be eliminated.

The total risk of an individual security is judged accordingly in proportion to its diversifiable or nondiversifiable status. The portion of risk which cannot be eliminated by diversification is known as nondiversifiable, market or systematic risk. What can be eliminated is called diversifiable, company-specific or unsystematic risk. Related to the firm whose securities are being considered, unsystematic risk is caused by such factors

as new projects, revised marketing programs or personnel problems. Systematic risk is related to the behavior of the market as a whole and is caused by factors such as inflation or interest rate changes. Since unsystematic risk can be diversified away, the market measures only the portion of the total risk of an individual security that is systematic. Thus the riskiness of a security most important to a prospective investor is not its total risk, measured by standard deviation, but the effect its individual risk will have on the riskiness of the portfolio.

An insurance company handling a number of different lines can be thought of as having a portfolio of insurance investments. The return from underwriting this portfolio would be the weighted average of the underwriting return on each insurance line, and the systematic risk would be the weighted average of the individual lines' systematic risk. Insurance lines, however, are not traded on the market as investment securities are. In practice, indirect methods have to be used for estimating the systematic risk of underwriting various insurance lines.

Two new dimensions of risk are involved in considering the subject from the viewpoint of the individual firm. They are business risk and financial risk. Business risk refers to the riskiness in the specific operations of the firm itself when it is using no debt. Financial risk is the additional risk facing the owners when they decide to use debt. The two kinds of leverage associated with these two types of risk are operating leverage and financial leverage. Operating leverage depends on the effect of sales on the operating income. Financial leverage deals with the effect of debt on the earnings of firm owners. The combination of operating leverage and financial leverage determines the firm's total leverage. The leverage levels depend on the degree of risk the owners of a firm are willing to accept.

Uncertainty in projecting future income, or earnings before interest and taxes (EBIT), produces business risk. This varies among industries and among firms within an industry. Changes in demand for a product, fluctuations in price and cost of operation, and fixed costs as a percentage of total costs can affect EBIT. A firm with high fixed costs has a high degree of operating leverage, meaning that a relatively small variation in sales will cause a large change in the operating income of the firm. Operating leverage is directly related to business risk, which is measured by the variability of EBIT. The degree of operating leverage is the percentage of change in operating income associated with a given percentage of change in sales.

The technology involved in a business operation determines operating leverage. An industry with heavy investment in plant and equipment, such as a utility, has high fixed costs, a high degree of operating leverage, and therefore a high level of business risk. In contrast, a corner newsstand would have relatively low fixed costs, low operating leverage and low levels of business risk. However, even though the level of operating leverage depends to a great extent on the type of business, an individual firm usually still has some control over its operating leverage through appropriate decisions with regard to capital budgeting.

Actual v. Expected

As seen in the previous discussion, risk can take on several definitions. In its most practical trappings, risk can be defined as the chance that actual events turn out to be significantly different than expected and result in a loss of capital. Risks are classified

into the following three categories, listed with their associated goals:

- Underwriting -- maintaining an adequate profit on insurance operations
- Financing -- maintaining adequate capital to support growth
- Investing -- maintaining a liquid, diversified investment portfolio that withstands adverse market trends

Loss reserving is an underwriting risk because significant variations in loss reserve estimates will affect underwriting profit.

Relationship Between Loss Reserving and Pricing Functions

Unlike most industries, insurers do not know their costs until well after a sale has been made. One of the most important functions for an insurer is setting rates or “pricing.” The goal of the pricing function is to properly evaluate future risks the insurer will assume but has not yet written. Estimates of future claim payments are essential for accurately measuring the company’s underwriting profit and for determining whether pricing changes are needed to achieve the target underwriting profit amount. Reserve estimates that are too low can lead to the conclusion that pricing is adequate when it is not, so there is a failure to achieve underwriting target in future periods, and unprofitable growth may be experienced. Reserve estimates that are too high may limit growth opportunities and establish a price umbrella for competitors.

A product-focused business seeks ways to advance the science of ratemaking to achieve accurate cost-based pricing at the lowest level reliable data will support. This allows the insurer to more accurately match rates with expected loss costs by risk classification. The role of the pricing function is to determine rates that are adequate to achieve company profitability goals without being excessive or unfairly discriminatory to customers. Although the pricing function is very different from the loss reserving function, both functions use similar data to do their jobs. Typical information shared by the loss reserving with the pricing organization includes:

- Overall changes in the level of reserves by type of reserve
- History of claim development and selected ultimate losses by accident period
- Changes in selected ultimate loss amounts over time
- Selected severity by historical accident period and resulting trends
- Selected frequency by historical accident period and resulting trends
- Changes in actuarially determined case average reserves by age
- Changes in the level of average adjuster-set case reserve estimates
- Changes in claim closure rates
- Changes in the rate of claims closed without payment (CWP rate)

Judgments made by both the loss reserving and pricing areas consider additional issues. Growth and process changes may cause claims to settle faster or slower than previous experience. Changes made by state insurance departments and changes in the underwriting process may also contribute to unexpected changes in the data. Insurers can use a cost-plus strategy in pricing, beginning with the projected ultimate losses and loss adjustment expenses (LAE). Insurance pricing experts estimate the ultimate losses and LAE for each coverage under review. Their projection methods are similar to those used by the loss reserving area, as described in Section IV.

Trend selections have a significant impact on how much the rates will change. Changes

in the average cost of a claim (severity trend) and changes in the proportion of insureds that have a claim (frequency trend) are analyzed and selected. The loss reserving departments meet regularly with the product management, pricing and claims teams to discuss these issues.

About Reserves and Development

The following sections use automobile liability insurance as a reserving example in the following sections. Information on life insurance reserves can be found in a section further along. Reserves are liabilities established on the insurer's balance sheet as of a specific accounting date and are estimates of the unpaid portion of what the Company ultimately expects to pay out on claims. They are estimates of future payments for insured events (claims) that occurred prior to the accounting date, whether or not those claims have been reported. These estimates are reported net of the amounts recoverable from salvage and subrogation. Loss reserves are the company's best estimate of future payments to claimants, and loss adjustment expense (LAE) reserves are the estimated future expense payments to adjust the claims. The types of reserves are reviewed later in this section.

Definition and Stated Goals

The estimate of needed reserves is based on facts and circumstances known at the time of the reserve evaluation. There is inherent uncertainty in the process of establishing loss and LAE reserves, caused in part by changes in the insurance company's mix of business (by state, policy limit, etc.), changes in claims staffing and claims processes, inflation on automobile repair costs and medical costs, changes in state legal and regulatory environments, and judicial decisions regarding lawsuits, expanded theories of liability, and interpretation of insurance policy provisions. The underwriting goal is to ensure that total reserves are adequate to cover all loss costs while sustaining minimal variation from the time reserves are initially established until claims are fully paid and closed. The insurer's actuarial department is accountable for the reserve adequacy and accuracy. The loss reserving area reports to the Corporate Actuary and is part of the corporate finance department. Product management and pricing are generally dispersed over the company's marketing areas, be it automobiles, liability, fire, theft, or other casualty. The loss reserving area works closely with the marketing and claims areas to fully understand the underlying data used. Actuaries use this information to make the reserving decisions independent of the marketing and claims areas. In order to make the most accurate estimation, we analyze our reserves by segment, defined as specific state/product/coverage groupings with reasonably similar loss characteristics. Reserve estimation and segmentation include discussions of the issues considered during analysis.

Calendar Year versus Accident Year

Financial statements report data on a calendar year basis. However, payments and reserve changes may be made on accidents that occurred in prior years, thus not giving an accurate picture of the business that is currently insured. Therefore, it is important to understand the difference between calendar year and accident year losses. (Note that calendar year and accident year concepts may apply to periods other than annual periods, but the term "year" is often used generically).

Calendar Period Losses consist of payments and reserve changes that are recorded on the Company's financial records during the period in question, without regard to the period in which the accident occurred. Calendar period results do not change after the end of the period, even as new claim information develops.

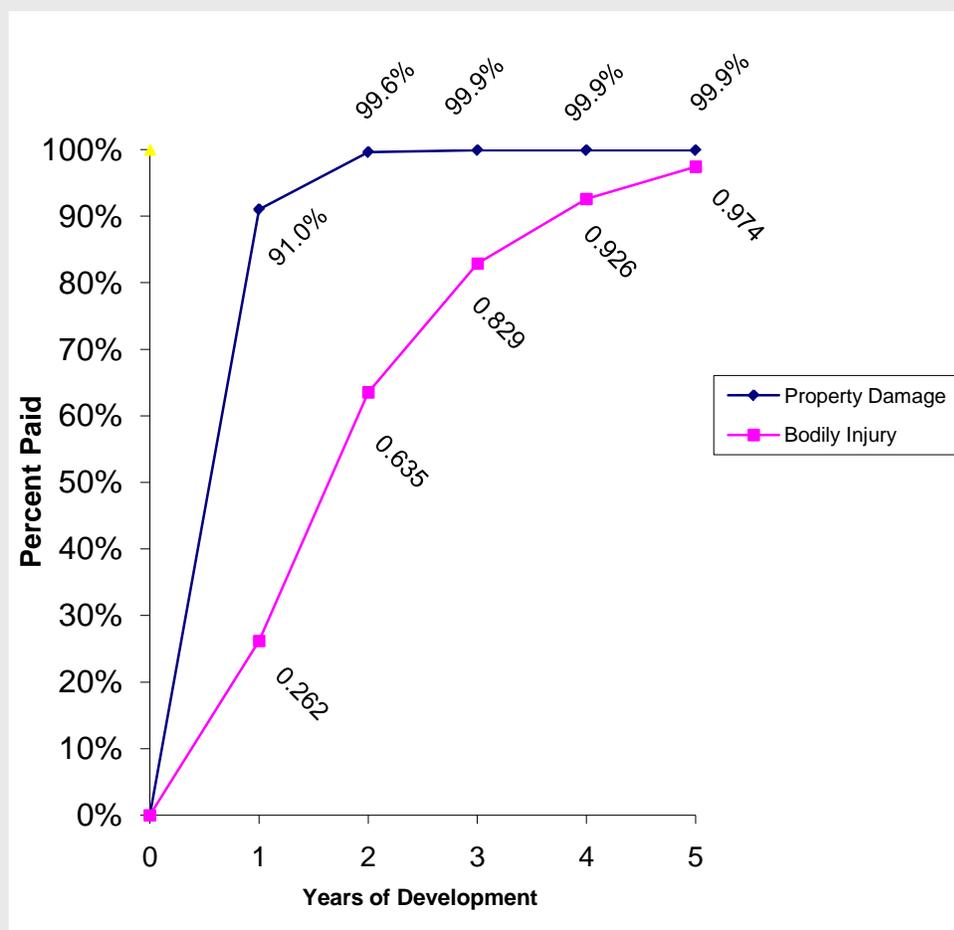
Accident Period Losses consist of payments and reserves that are assigned to the period in which the accident occurred. Accident period results will change over time as the estimates of losses change due to payments and reserve changes for all accidents that occurred during that period. Projection of ultimate losses by accident period is an important part of the reserve analysis.

Paid Development Patterns

Incurred losses consist of payments and reserve changes, so it is important to understand paid development patterns. The longer a claim is expected to stay open (not settled), the more difficult it is to establish an accurate reserve at the time the accident is reported. Since injury claims tend to take longer to settle than property claims, reserve estimates for injury claims are more sensitive to the uncertainties mentioned above, such as changes in mix of business, inflation, and legal, regulatory and judicial issues. As more information is obtained about claims, the reserves are revised accordingly, however, the ultimate amount is not known until the claims are settled and paid.

The following chart compares the time it takes to settle a bodily injury liability claim vs. a property damage liability claim at a typical insurance company.

Chart 10-1



Reserve Development

Ultimate paid losses and loss adjustment expenses may deviate, perhaps substantially, from point-in-time estimates of reserves contained in the insurer's financial statements. Actual claim payments may exceed or may be less than its loss reserves causing the insurer to incur losses in subsequent calendar years that are higher or lower than anticipated. Changes in the estimated ultimate cost of claims are referred to as development. There are several ways for reserve development to occur. They are:

- Claims settle for more or less than the established reserves for those claims
- Adjuster-set reserve estimates on open (reported) claims change
- Average reserves set by the actuaries for open (reported) claims change
- Unreported claims emerge (reported after the accounting date) at a rate greater or less than anticipated. This can be due to either or both of the following:
 - The actual number (frequency) of "late reported" claims differs from the estimate
 - The average amount (severity) of these claims differs from the estimate
- Actuaries' estimates of future emergence patterns on unreported claims change
- Salvage and subrogation recoveries are greater or less than anticipated

The following chart illustrates reserve development over the past ten years for XYZ Insurance. It shows the booked reserves at each year-end, and the re-estimated reserves at each subsequent year-end (down the column for each original accounting

date). The last “diagonal” on the chart represents the company reserve evaluation as of December 31, 20x5, of reserves for each respective year-end. The difference between the current evaluation (last diagonal) and the original booked amount of reserves in each column represents cumulative reserve development for that accident year and all prior accident years combined. This measures performance against the goal, stated above, that total reserves are adequate and develop with minimal variation.

Table 10-1 Analysis of Loss and Loss Adjustment Expense (LAE) Development (in thousands of dollars)

For years-	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Yr 10	Yr 11
Loss and LAE reserves, net	1,012.4	1,098.7	1,314.4	1,532.9	1,867.5	1,945.8	2,200.2	2,785.3	3,069.7	3,632.1	4,346.4
Re-estimated reserves as of:											
One year later	869.9	1,042.1	1,208.6	1,429.6	1,683.3	1,916.0	2,276.0	2,686.3	3,073.2	3,576.0	
Two years later	837.8	991.7	1,149.5	1,364.5	1,668.5	1,910.6	2,285.4	2,708.3	3,024.2		
Three years later	811.3	961.2	1,118.6	1,432.3	1,673.1	1,917.3	2,277.7	2,671.2			
Four years later	794.6	940.6	1,137.7	1,451.0	1,669.2	1,908.2	2,272.3				
Five years later	782.9	945.5	1,153.3	1,445.1	1,664.7	1,919.0					
Six years later	780.1	952.7	1,150.1	1,442.0	1,674.5						
Seven years later	788.6	952.6	1,146.2	1,445.6							
Eight years later	787.5	949.7	1,147.4								
Nine years later	787.0	950.9									
Ten years later											
Cumulative Development:											
Conservative/ (Deficient)	224.7	147.8	167.0	87.3	193.0	26.8	(72.1)	114.1	45.5	56.1	
% of Original Reserves	22.2%	13.5%	12.7%	5.7%	10.3%	1.4%	(3.3)%	4.1%	1.5%	1.5%	

In every year shown other than 2001, the original reserves were conservative, resulting in subsequent favorable development. In other words, claims will cost less than originally estimated. Reserves that are conservative can lead to over-pricing, which may limit growth opportunities and establish a price umbrella for competitors. Reserves that are deficient can lead to under-pricing, which may contribute to unprofitable growth. It is important to recognize both favorable and unfavorable development as quickly as possible, so that these inefficiencies are corrected. Note that the company recognized its 1999 reserve deficiency and moved to an adequate reserve position within the next year.

Reserves developed favorably during 20x5 (as shown at the bottom of the 20x4 column), with \$56.1 million or 1.5% favorable development from accident years prior to 20x3, which represents 0.5% of 20x3 earned premium. Reserving accuracy contributes to the insurer’s ability to price product accurately, which supports efforts to maintain rate adequacy.

Many projections are made in loss reserve analyses, which may change as the claims mature. The least mature claims are those that occurred during the most recent accident year. The example shows that the insurer believes the estimated severity for the 20x5 accident year is the projection with the highest likelihood of change. If the company were to change its estimate of severity by 1% for accident year 20x3, the required reserves would change by approximately \$41 million.

Note the following points regarding unpredictability in establishing reserve liabilities:

- Reserve development on claims that settle more slowly (e.g., bodily injury liability claims) can be highly variable and extremely difficult to evaluate.
- Regardless of how close the initial accident year estimates are, they will never be 100% accurate, and there will always be development until all claims are settled.
- When significant reserve development in either direction is experienced, knowledge is gained and as a result the company gets better at estimating future reserves.

In addition, loss reserves can only be established for events that have already occurred. Reserves cannot be established for a hurricane, hail, flood or other catastrophic event that may occur later in the year. This can cause substantial fluctuations in monthly results when catastrophic events do occur.

External Reporting of Reserve Changes and Reserve Development

Since reserve changes affect earnings, it is important that insurers disclose the relationship between reserves and income as part of the published earnings data. Here is an example earnings release.

1st Quarter 20x5 (\$ in millions)	Totals
Net Premium Earned	\$3,093.5
<u>Actuarial Adjustments</u>	
Total Calendar Year Adjustment Favorable/(Unfavorable)	\$11.5
Reserve Decrease/(Increase)	
Prior accident years	\$11.4
Current accident year	<u>0.1</u>
Calendar year actuarial adjustment	<u>\$11.5</u>
<u>Prior Accident Years Development</u>	
Favorable/(Unfavorable)	
Actuarial adjustment	\$11.4
All other development	<u>(34.3)</u>
Total development	<u>\$(22.9)</u>
Calendar year loss/LAE Ratio	63.5
Accident year loss/LAE Ratio	62.8

The table shows that loss and LAE reserves were decreased during the first 3 months of 20x5 by \$11.5 million as a result of regularly scheduled actuarial reviews. The total change is reported as “Actuarial Adjustments” in the table. A reserve decrease is shown as a positive value on the earnings report because it increases earnings for the reporting period.

Through the first quarter of 20x5, \$11.4 million of the actuarial reserve decrease was for claims in prior accident years, while the remaining \$0.1 million decrease was for claims in the current accident year. However, the actuarial reserve decrease of \$11.4 million that applies to claims in prior accident years is only part of the total development. The total prior accident years’ development through 1Q, 20x5, was unfavorable by \$22.9 million. The insurer now estimates that the reserves as of December 31, 20x4, should

have been \$22.9 million higher than they were, based on updated information.

As stated earlier in this section, favorable or unfavorable development is due to a combination of claims settling for more or less than the established reserves, changes to adjuster-set reserve estimates and **averages on open claims**, actual and **estimated emergence** of claims that were unreported as of the prior year-end, and salvage and subrogation recoveries greater or less than expected.

The \$22.9 million unfavorable prior accident years' development as of the end of the first quarter of 20x5 is included in the insurer's calendar year results. As a result, the current calendar year incurred loss and LAE ratio of 63.5% is higher than the current accident year incurred loss and LAE ratio of 62.8%. The difference of 0.7 points reflects the \$22.9 million unfavorable development through the end of first quarter, divided by the net earned premium of \$3,093.5 million.

It is not unusual that reserves are decreased for prior accident years (per the actuarial reviews) at the same time that total development was unfavorable. This situation can occur due to timing differences in the actuarial review, as well as relative changes and development by reserve component -- loss case, loss IBNR and LAE (which are described in other sections). Reserve changes made as a result of actuarial reviews are intended to keep current reserve liability adequate. Changes are made to the reserves for the reviewed segments based upon current information and projections of expected future development. This is not the same as the aggregate development of prior year-end reserves.

Internal Reporting of Reserve Changes and Reserve Development

To help employees understand the case reserve changes shown on income summaries similar to the one shown above, periodic reports are often issued showing categorical changes-

- Features that closed
- Features that opened (including reopened features)
- Changes in reserve averages on new features (due to loss reserving)
- Changes in reserve averages on open features (due to loss reserving)
- Inflationary impact on open features (inflation factor applied to average reserves)
- Aging of open features (changing age groupings)
- Changes from adjuster-set to average reserve (reserve amount changes from above threshold to below threshold)
- Changes from average reserve to adjuster-set (reserve amount changes from below threshold to above threshold)
- Changes in adjuster-set reserves (reserve amount changes but stays above threshold)
- Changes due to resegmentation of data

Departments and employees concerned are also provided with updated information regarding the impact of prior accident years' development on their current calendar year results. Case reserve development (on claims reported as of the prior year-end) is tracked separately from IBNR reserve development (on claims unreported as of the prior year-end). This allows retrospective testing of prior assumptions and application of new knowledge in future judgments. It also helps the business managers better

understand how their earnings are affected by reserve development.

Types of Reserves

Reserves are considered an operating liability on the balance sheet. Reserves are separated into two categories -- loss and loss adjustment expense (LAE). While each of these two reserve categories is reported in aggregate on the balance sheet, when loss reserves are analyzed, they are broken into two distinct types of reserves -- case and IBNR (Incurred But Not Recorded). It is important that these reserve types and are evaluated in order to get the total reserve balance as accurate as possible. Chart 10-1 illustrates the types of reserves as a percent of total reserve liability for XYZ Insurance. The table shown indicates that 81% of reserve liability (Loss case + Loss IBNR) is set aside to pay claimants while 19% of reserve liability (LAE case + LAE IBNR combined) is established to accommodate costs associated with adjusting those claims.

Chart 10-2

Reserve Distribution		
Loss Case 63%	Total LAE 19%	Loss IBNR 18 %

Loss Reserves

Total indicated loss reserve need is evaluated by sorting and analyzing claims by accident date.

Case Reserves

Loss case reserves represented 63% of total carried reserves for XYZ Insurance at the end of the accounting period. Case reserves are used to pay claims that have already been reported and recorded into XYZ's systems, but have not yet been fully paid. An evaluation is made of indicated case reserve need,

For each open claim, the case reserve that is carried on XYZ's books (the financial reserve) is either an average reserve (determined by the actuaries) or an adjuster-set reserve.

Average Reserves: All open claims estimated to cost the insurer less than a certain dollar threshold (explained below) are assigned an average reserve, regardless of the individual claim characteristics. When a claim is first recorded, there may not be enough known about the claim for an adjuster to determine its severity. The use of average reserves allows claims personnel to concentrate their efforts on adjusting claims rather than merely accounting for them. Therefore, use of average reserves provides more accurate financial reporting in aggregate, and they are not affected by changes in claims processes. The actuaries determine the average reserves, which vary by segment of business. It is not practical to review each segment of business each month, so an inflation factor is applied to average reserves in all other months. The inflation factor is based on projected severity trend from the most recent actuarial analysis for each particular segment of business.

Age of a Claim- The age of a claim is monitored once an average reserve is assigned

to a claim. The age of a claim is defined as the length of time from the date of the accident to the current accounting date. The more severe bodily injury claims tend to remain open longer than less severe claims and tend to be more expensive due to litigation, medical treatments, etc. In order to recognize this cost differential, XYZ staff generally increases the average reserves as the claims age. However, the averages for property damage, comprehensive and collision claims are not increased for age, since these claims tend to settle more quickly, and the length of time since the accident is not normally related to their severity.

Threshold: A practical matter is to use the average reserve for claims that have a more predictable level of severity. However, the amount paid for claims above a certain dollar threshold (which varies by coverage) can vary significantly depending on individual claim characteristics. For claims above the threshold dependence is placed on adjuster-set reserve rather than the average reserve.

Adjuster-Set Reserves: When the claims adjuster's estimate of the cost of a claim is above the threshold, the financial reserve includes this estimate rather than the average reserve. The adjuster-set reserves more accurately estimate ultimate liability for claims in excess of the threshold because the adjusters have typically spent a great deal of time on these larger claims and understand their unique characteristics. While only about 2% of the total open claim count for personal auto bodily injury is above the current threshold, these same claims represent about 20% of total personal auto bodily injury case reserve liability.

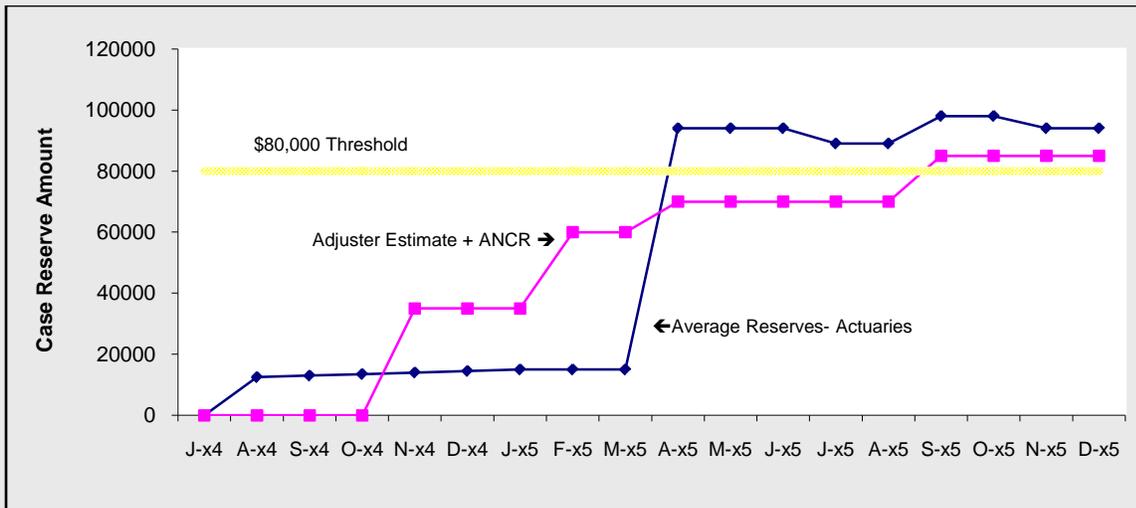
Additional Needed Case Reserves (ANCR): XYZ Insurance carries additional needed case reserves (ANCR) to cover expected future development of claims above the threshold. ANCR is an actuarially determined reserve that is mechanically allocated across segments using ANCR factors. ANCR factors vary by segment and by age, and are applied to bodily injury and uninsured/underinsured motorist bodily injury reserves in excess of the threshold (or slightly below the threshold). These factors decrease as the claims age since more information is known about claims as they age, plus more claims emerge into this layer over time so the need for this reserve diminishes. The ANCR is determined during the segment review process by analyzing the development of claims over the threshold.

Example:

Chart 10-4 illustrates the life of a hypothetical auto bodily injury claim. When the claim was originally recorded, XYZ assigned the actuarially determined average reserve. As the claim aged from the time it was recorded in August through the end of March, the average reserve changed due to inflation, actuarial reserve reviews and aging. Over this same period of time, the adjuster increased the reserve estimate multiple times as more information was obtained about the claim. Once the adjuster increased the reserve to just below the sample threshold of \$80,000, the ANCR factor was applied. The resulting reserve amount exceeded the threshold of \$80,000, so the booked reserve changed from an average reserve to an adjuster-set reserve. For XYZ Insurance, the ANCR factor is mechanically applied to this claim in order to allocate the additional needed case reserves. It is not intended to improve the accuracy of individual claims.

Chart 10-3 Case Reserving

XYZ Insurance Case Reserving Over the Life of a Large Auto Bodily Injury Claim Accident Occurred in July, 20x4, Recorded in August, 20x4, Claim Settled January, 20x6 for \$90,000



Incurred But Not Recorded (IBNR) Reserves

Reserves are established for claims which will be required to be paid but which have not been reported by the claimants or recorded by the Company as of the accounting date. Incurred But Not Recorded (IBNR) Reserves are estimates of amounts needed to pay for these claims. As shown in the bar chart previously, the loss IBNR reserves for XYZ Insurance were 18% of total carried reserves.

The IBNR reserve need is evaluated by the same segmentation process used for case reserves. This analysis is performed by sorting historical claims according to the time lag between the accident dates and the dates that these claims were recorded by the Company.

Late reported claims are claims whose reporting to the company lag behind those immediately reported. A time lag is an interval of time between two related phenomena; in this case an accident and its reporting. The late reported claims are evaluated to determine the estimated ultimate losses for each accident quarter within each covered period. For example, "Q-1" consists of claims for which the accidents occurred during one quarter but were not recorded until the next quarter. Similarly, "Q-2" consists of all claims for which the accidents occurred during one quarter but they were recorded by the Company two quarters later. "Q-0" claims were recorded in the same quarter they occurred. The following chart shows the approximate percent of recorded features by record quarter lag for auto bodily injury. This chart shows that over 82% of accidents are reported by the claimant and recorded in XYZ's system by the end of the quarter in which they occurred. However, that means approximately 18% of the features are not yet recorded and an estimate of IBNR reserves must be made for these claims.

Late Reported Claims		
Reporting Quarter	Incremental %	Total
Q-0	82.1%	82.1%
Q-1	13.7%	95.8%
Q's 2-3	2.3%	98.1%
Q's 4-6	1.2%	99.3%
Q's 7-9	0.4%	99.7%
Q's ≥ 10	0.3%	100%

IBNR reserves are recorded at the end of each month (by segment) by applying IBNR factors to each 3-month-ending period of earned premium for the past 3 to 4 years. The

largest IBNR factors are in the most recent accident periods. This is because the greatest IBNR reserve need is for these accident periods. As premium volume increases, the IBNR reserves also increase, which allow these reserves to keep up with growth and inflation.

Loss Adjustment Expense (LAE) Reserves

In addition to loss payments (which indemnify the claimants), insurers incur expenses in the process of settling claims. Therefore, XYZ Insurance needs to estimate a reserve liability for loss adjustment expenses (LAE). At the end of the accounting year, the LAE reserves were 19% of total carried loss and LAE reserves. There are two major categories of loss adjustment expenses – Defense and Cost Containment (DCC) and Adjusting & Other (A&O). LAE reserves are periodically reviewed by segment. The evaluations of DCC expense reserves and A&O expense reserves are performed independently of each other.

Defense and Cost Containment (DCC) includes all defense and litigation-related expenses, as well as medical cost containment expenses. This category is comparable to, but not exactly the same as, what was called Allocated Loss Adjustment Expenses (ALAE) prior to the definition change by the National Association of Insurance Commissioners (NAIC) in 1998. The total indicated DCC expense reserve needs are evaluated by sorting and analyzing these expenses by accident date. XYZ Insurance further segments the category by splitting the DCC expenses into the “Attorney and Legal” and “Medical and Other” components.

Most of the same mechanisms that are used to allocate loss case reserves are also used to allocate DCC case reserves. Average reserves are determined by age within each segment. The older-aged claims (based on the time between accident date and accounting date) carry higher averages, and those averages are increased each month based upon a selected inflation factor. When the adjuster estimates the DCC reserve to be over a certain threshold, the adjuster-set DCC reserve is carried rather than the actuarially determined average reserve. Carried DCC IBNR reserves are calculated as a percentage of the carried loss IBNR reserves for each respective segment.

Adjusting & Other (A&O) includes all claims adjusting expenses, whether internal or external. This includes fees, salaries and overhead expenses relative to those involved in a claim adjusting function, as well as other related expenses incurred in determination of coverage. This category is comparable to, but not exactly the same as, what was called Unallocated Loss Adjustment Expenses (ULAE) prior to the definition change by the NAIC in 1998. For A&O expense reserves, total indicated reserve needs are allocated by comparing adjusting and other expense payments with loss payments over the past several calendar quarters. The selected ratios are applied to the loss reserves and then modified to derive indicated A&O expense reserves. Carried A&O case reserves are calculated by applying the selected average A&O expense reserve to each open claim. Carried A&O IBNR reserves are calculated by applying the selected IBNR factor to the carried loss IBNR reserves.

Salvage and Subrogation

Generally Accepted Accounting Principles (GAAP) require that loss reserves be stated net of anticipated salvage and subrogation recoveries. Statutory Accounting Principles (SAP) allow reduction of reserves by the amounts that the company expects to recover,

but do not require it. However, the company does not report loss reserves net of anticipated salvage and subrogation recoveries. Salvage and subrogation are similar because they reduce the net claim amount, but they are different types of transactions.

Salvage: The insurer assumes the title to a vehicle when it has been declared a total loss. The vehicle is then sold to a salvage dealer, and these proceeds are referred to as salvage. Salvage is most relevant for collision claims.

Subrogation: When a policyholder is involved in an accident in which the other party is at fault or partially at fault, he/she may submit the claim to us. When that claim is paid, the company obtains the policyholder's right to recover damages from the at-fault party (usually the at-fault party's insurance company). Subrogation is most relevant for collision (damage to vehicles) and personal injury protection claims (injuries in no-fault states).

As salvage or subrogation is collected from third parties, it reduces the net paid and incurred loss amount for that claim. When claim data is evaluated to determine needed reserves, the evaluation is completed net of these recoveries. Estimated ultimate loss amounts are shown as net of anticipated salvage and subrogation. Since recoveries generally occur after claims have been closed and then reopened, negative IBNR reserves are carried on an insurer's books for anticipated salvage and subrogation.

Segmentation and Loss Reserves Estimates

For loss reserve review purposes, insurers often divide their book of business into smaller groups of data known as segments. A segment is defined by a specific state/product/coverage grouping with reasonably similar loss characteristics. During a segment review XYZ Insurance will generally estimate the ultimate loss amounts for the past seven accident years using six different projections. The insurer may use additional techniques if there are wide variations between the six projections or if underlying process changes make those projections less reliable. Payments made on claims that occurred during the same period are subtracted in order to estimate the required reserve balance (unpaid losses) for the segment. In this way the reserve level for that segment can be changed or modified based upon this review. In a dynamic environment, with rapidly changing operational parameters, the application of judgment by experienced staff will be a key component of any reserve analysis. This is especially true in a situation where changes in mix of business (e.g., by policy limit and geographic area) can be significant.

Segmentation of Reserves for Analysis

Segments are identified to allow the review of reserve needs at the most detailed level supported by data on hand. This is especially true in a market in which changes in mix of business, such as by policy limit and geographic area, can be significant. It provides the ability to identify and measure variances and trends in severity and frequency. They also allow process changes to be identified and reflected in a review. Each segment is required to have enough data to deliver reliable (credible) results. The objective is to achieve adequacy in the reserve levels with minimal variation for each segment. This enhances the accuracy of financial reporting, supports the income statements of business units, and allows company management to make better business decisions.

Projections of Ultimate Losses

XYZ Insurance, like many other insurers, reviews the results of six different projections in order to determine if a reserve change is required. Three of the six projections use paid data and the other three projections use incurred data (payments plus reserves). There are strengths and weaknesses to each of the projections.

The three paid projections -- amount paid, average paid and Bornhuetter-Ferguson paid -- all use paid loss data. The paid projections estimate growth and development of claims in an accident period by looking at the paid development of earlier accident periods. This assumes that past paid loss development is a predictor of future paid loss development. The primary strength of using paid data is that it removes the potential for distortions that may be created by including estimated data. The drawback is that it is more difficult to accurately project ultimate losses in the most recent periods under review. For example, with longer-tailed lines of insurance such as bodily injury, the early development periods are more volatile because a large proportion of the payments are made later. Accurate paid projections also depend heavily on consistent claims closure or settlement practices. If the closure rate changes, the paid projections could be misleading. In addition, shifts in mix of business (e.g., changes by policy limit) are not as readily identified in paid development as in incurred development.

The three incurred projections -- amount incurred, average incurred and Bornhuetter-Ferguson incurred -- use paid losses plus case loss reserves in each accident period. They assume that historical incurred loss development will be predictive of future incurred loss development. The primary strength of using incurred data is that it can make use of reserve estimates for open claims. These estimates are based on the judgment of claims adjusters in addition to the prior actuarial reviews. This is especially critical when estimating ultimate losses for longer-tailed claims such as bodily injury. The drawback of using incurred data for projection is that it depends heavily on consistent adjuster reserve estimates. The incurred projections could be distorted if the average adjuster reserve adequacy fluctuates over time.

It is necessary to identify changes in closure rates and average adjuster reserve levels through segmentation and also through discussions with insurance company management. Adjustments are made for these changes in the projections of losses.

The six standard projections used to estimate ultimate losses are:

1. **Amount Paid-** In this method, the total loss dollars paid by accident period and age of development are organized into a triangular format and projected to estimated ultimate amounts. Selections of future loss development are based largely on the historical development of prior periods.
2. **Average Paid-** A standard projection in which the paid severity (average amount paid per feature) are organized by accident period and age of development into a triangular format and the severities are projected to estimated ultimate levels. Ultimate loss amounts are then calculated as the ultimate severities multiplied by the estimated ultimate number of features to be paid.
3. **Bornhuetter-Ferguson Paid-** This uses the paid loss development pattern to determine the percent unpaid. The percent unpaid is applied to the expected ultimate loss amount to arrive at the expected unpaid amount, which is added to actual losses paid-to-date.
4. **Amount Incurred-** This projection organizes the total loss dollars incurred by

accident period and age of development into a triangular format and projects them to estimated ultimate amounts. Future loss development is based largely on the historical development of prior periods.

5. **Average Incurred-** This is a method in which the incurred severity (average amount incurred per feature) is organized by accident period and age of development into a triangular format and the severities are projected in order to estimated ultimate levels. Ultimate loss amounts are then calculated as the ultimate severities multiplied by the estimated ultimate number of features to be paid.

6. **Bornhuetter-Ferguson Incurred-** This is a method which uses the incurred loss development pattern to determine the percent not yet recorded. The percent unrecorded is applied to the expected ultimate losses to arrive at the expected unrecorded amount, which is added to actual losses incurred-to-date.

Chapter 11 RESERVES, TAXATION AND THE IRS

Attention is now turned to life insurance reserving. Policy reserves are the major liability item of life insurers. The characteristics, purpose, and kinds of life insurance policy reserves are discussed in this section

Characteristics of Life Insurance Reserve

Under a level-premium plan of life insurance, the premiums paid during the early years of the contract are higher than is necessary to pay death claims, while those paid during the later years are insufficient to pay death claims. The excess or redundant premiums collected during the early years of the contract must be accounted for and held for future payment to beneficiaries. The surplus premiums paid during the early years result in the creation of a policy reserve.

Accounting for Life Reserves

Incorporate this with file 'Life Insurance Reserve Computation Rules'

Policy reserves are a liability item on the company's balance sheet. They represent an obligation by the insurer to pay future policy benefits to policyholders or their beneficiaries. Reserves must be offset by assets equal to the reserve amount. The policy reserves held by the insurer plus future premiums and future interest earnings will enable the insurer to pay all future policy benefits. This will hold true if the actual experience conforms to the actuarial assumptions used in calculating the reserve. Policy reserves are often called **legal reserves**, since state insurance laws specify the minimum basis for calculating them.

The policy reserve has two fundamental purposes-

1. The reserve is a formal recognition of the company's obligation to pay future benefits. The policy reserve plus future premiums and interest earnings must be sufficient to pay all future policy benefits.
2. It is a statutorily mandated test of the company's solvency. The insurer must hold assets equal to its legal reserves and other liabilities.

This is the legal test of the insurer's ability to meet its present and future obligations to its policyholders. Policy reserves should not, therefore, be viewed as a fund. Rather, they are a liability item that must be offset by "funds" or assets. About 80 percent of the insurer's assets are needed to offset its reserve liabilities.

Policy Reserve Defined

At the inception of the policy, the net single premium is also equal to the present value of future net premiums. The net single premium can be converted into a series of annual installment payments without changing this relationship. Once the first installment premium payment is made, this is no longer true. The present value of future benefits and the present value of future net premiums are no longer equal to each other. Policy reserve can be defined as the difference between the present value of future benefits and the present value of future net premiums. The net single premium is equal to the present value of future benefits. The present value of future benefits will increase over time, since the date of death is drawing closer, while the present value of future net

premiums will decline, since fewer premiums will be paid. Thus, the difference between the two is the policy reserve.

Chart 11-1

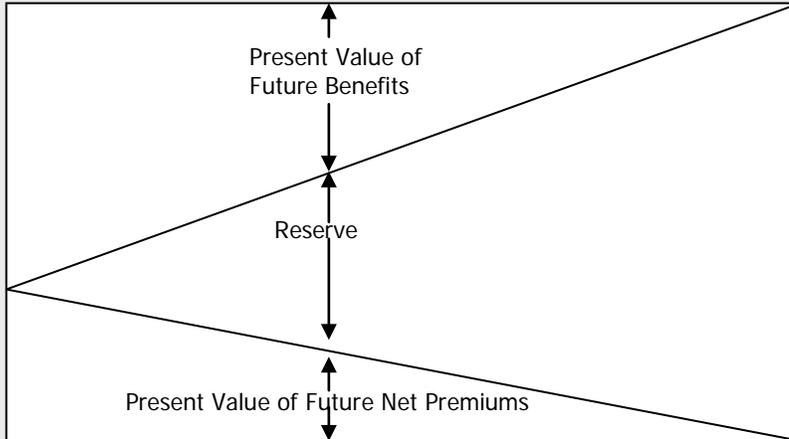


Chart 11-1 illustrates this difference. It shows the prospective reserve for an ordinary life policy issued at age 47. At the inception of the policy, the net single premium is equal to the present value of future benefits and the present value of future net premiums. The present value of future benefits increases over time, while the present value of future net premiums declines, and the reserve is the difference between them. For instance, if the policy matures at age 100, at that time, the reserve is equal to the policy face amount. If the insured is still alive at that time, the face amount of insurance is paid to the policyholder. The equation for net annual level premium-

$$\text{NALP} = \frac{\text{NSP}}{\text{PVLAD of \$1}}$$

Utilizes this relationship and is illustrated in Chapter 6.

Types of Reserves

Retrospective Reserve- The reserve can be viewed either retrospectively or prospectively. If it is referring to the past experience, the reserve is known as a retrospective reserve. The retrospective reserve represents the net premiums collected by the insurer for a particular block of policies, plus interest earnings at an assumed rate, less the amounts paid out as death claims. The retrospective reserve is the excess of the net premiums accumulated at interest over the death claims paid out.

Prospective Reserve- The reserve can also be viewed prospectively when looked at from the future. The prospective reserve is the difference between the present value of future benefits and the present value of future net premiums. The retrospective and prospective methods are the mathematical equivalent of each other. Both methods will produce the same level of reserves at the end of any given year if the same set of actuarial assumptions is used.

Reserve Timing

Reserves can also be classified based on the time of valuation. At the time the reserves are valued, they can be classified in one of the following three ways.

Terminal Reserve- A terminal reserve is the reserve at the end of any given policy

year. It is used by companies to determine cash surrender values and also to determine the net amount at risk for purposes of determining dividends.

Initial Reserve- This is the reserve at the beginning of any policy year. It is equal to the preceding terminal reserve plus the net level annual premium for the current year. The initial reserve is also used by insurers to determine dividends.

Mean Reserve- The mean reserve is the average of the terminal and initial reserves. It is used to indicate the insurer's reserve liabilities on its annual statement.

Reserves and Taxation

The following are ordinary connotations of the term "reserve" as used for most accounting and income tax purposes:

Valuation Reserves —Such reserves indicate that the value of an associated asset is overstated by the amount of that reserve. A common example of this type of reserve is a depreciation reserve or account. This is a contra asset account, commonly called accumulated depreciation.

Reserves for Contingent Liabilities —These measure the value of potential future losses. An example of this type of reserve might be a reserve set up for an anticipated loss that could arise from a pending lawsuit against the corporation.

Surplus Reserves —Such reserves are really allocations of surplus earmarked for special purposes. An example would be appropriated retained earnings.

Fluctuation Reserves —Such reserves are hybrid reserves between valuation reserves and surplus reserves. Such reserves are used to cushion fluctuations in the market value of marketable securities valued on the balance sheet.

Annual Statement

The Annual Statement is a report made by a company at the close of the fiscal year, stating the company's receipts and disbursements, assets and liabilities. Such statements usually include an account of the progress made by the company during the year. This can also be the same as the annual report as of the end of the calendar year made by an insurer to the state insurance department. The report shows assets and liabilities, receipts and disbursements, and other information.

Space considerations mean that only referenced sections of the Annual Statement can be illustrated. To view Annual Statements, the Texas Department of Insurance points out at its website-

Annual statement information that companies file with the National Association of Insurance Commissioners (NAIC) can now be accessed online.

Go to: <http://www.naic.org/cis/>

A program capable of reading PDF documents is needed to view the annual statements. To find the financial information, enter the company name and the state in which it is licensed - Aetna Insurance Company, licensed in Texas, for example. If possible, check the policy for the company's correct name because coverage may be issued by a subsidiary with a different name.

When entering the company, use only those words unique to that name - Aetna, for example, not Aetna Insurance Company. The lookup function does not work when using

the company's full name because the NAIC uses abbreviations for more common words such as INS for insurance and CO for company.

Company information is provided "AS IS" with "no guarantee of the truth, accuracy or completeness of the information," according to the NAIC. For more information about the financial statements, please contact the NAIC's Insurance Data Products at 816-783-8700.

NOTE: The NAIC Company Search page provides a variety of information. Financial data includes key annual statement data, a key financial profile and basic data about business written, assets and liabilities. Closed Consumer Complaint data also may be available, as well as a chart noting whether that company is writing business in all fifty-five states and territories.

Insurers develop balance sheets for both GAAP and SAP reports. On an insurer's Annual Statement the term 'balance sheet' does not appear on any of the exhibits or schedules. The Annual Statement's equivalent of a balance sheet is shown as two pages; the Assets page and the Liabilities, Surplus and Other Funds page. The Annual Statement of a life insurance company will often reflect each of the above ordinary types of reserves, even though the formal accounts of the company may not include any of them. A valuation reserve such as a depreciation reserve will be reflected in the net value of the asset on the balance sheet. However, for income tax purposes, life insurance companies are not permitted to report their bad debts on a reserve basis; rather, the specific write-off method is required. A contingent liability reserve will generally be reported under either the line for Miscellaneous Liabilities or the line for Aggregate Write-in Liabilities shown on page 3 of the Annual Statement.

- A. A surplus reserve should always be reported under the applicable line for Special Surplus Funds on page 3 of the Annual Statement. Certain surplus reserves may be required by the statutory authorities.
- B. Life insurance companies had been required to maintain a fluctuation reserve which, prior to 1991, was known as the "Mandatory Securities Valuation Reserve" (MSVR). However, beginning with the 1991 Convention Blank, the MSVR was replaced by two new required fluctuation reserves designated as the "Asset Valuation Reserve" (AVR) and the "Interest Maintenance Reserve" (IMR). These fluctuation reserve items are not different in substance from surplus reserves, except that they are required by the statutory authorities and are preprinted on the Convention Blank as liability items (rather than as special surplus items) on lines 21.4 and 11.4, respectively, of page 3 of the Annual Statement.
2. A special circumstance arises for mutual life insurance companies because of the elimination of the MSVR in 1991. Under IRC section 809, applicable only to mutual life insurance companies, the MSVR was included in the determination of the company's average equity base. However, it is expected that, for 1991 and later years, the AVR and IMR will replace the MSVR in the equity base determination (see "Differential Earnings Amount," later).
3. Insurance companies are different from ordinary commercial corporations in that they must set aside and maintain significant levels of special reserves which they need to pay insurance policy benefits. A life insurance company sells insurance and annuity contracts which, in consideration of premiums received from its policyholders, obligate the company to pay benefits if certain future contingent events occur. These contingent events (risks) include death, survival, disability, accidental injury and sickness. The financial impact of an insurance contract cannot be known exactly until the insured risks occur or the contract otherwise terminates. This may occur soon after a policy is issued, or many years later. For an extremely large number of issued

and outstanding insurance policies, however, these risks can be predicted with reasonable accuracy based on the laws of statistical averages. In order to systematically build assets to support their future obligations, a life insurance company must set aside a considerable portion of the premiums it collects, but which it has not yet used to pay benefits, as a reserve fund. These reserve funds, combined with premiums it will receive in the future plus investment earnings, will accumulate over the years and be available to pay benefit obligations.

4. Therefore, in addition to the common types of reserves that ordinary corporations maintain, life insurance companies must also establish and maintain in their annual statements the following special types of reserve liabilities:
 - A. Actuarial reserves (policy reserves).
 - B. Unearned premium reserves.
 - C. Unpaid loss reserves.
 - D. Other liabilities or reserves under insurance or annuity contracts, which may or may not accumulate at interest.
5. The nature, significance, and tax relevance and treatment of these special types of reserves will be described in the following sections.

Actuarial Reserves and Statutory Accounting

Under state insurance laws, a life insurance company is licensed to sell only contracts of life insurance, annuities, accident and health insurance, and special types of group annuity contracts used to provide employee retirement benefits. A contract may be issued to insure only one person (individual contract) or to insure many persons (group contract). A life insurance company, therefore, generally maintains actuarial reserves for many different types of policy forms and benefits. For most life insurance companies, reserves for life insurance policies represent the bulk of their actuarial reserves. Whole life insurance policies provide protection for the entire life of the insured. Term life insurance policies provide protection only for a limited period of time. If a term life policy also pays a lump sum amount to the insured if he lives to the end of the term, the policy is called an endowment life policy. The discussion in this section will be focused on traditional individual whole life insurance policies. Reserves for term life and endowment life policies, as well as for annuities and accident and health insurance, are based on the same fundamental principles.

Individual Life Insurance Policy Reserves

Under an individual life insurance policy, a policyholder selects one of several premium payment options. Under a "single premium" policy, the policyholder purchases the policy with a single premium payment at the issue date. It is more common, however, to pay premiums on an annual or more frequent periodic basis, and this discussion will assume that method of payment. The reserve for a fully paid-up premium policy, such as a single premium life insurance policy or a policy for which no further premiums are due, is simply a special case of the reserve for a premium-paying policy.

Traditional Whole Life Policy Reserves

Under a traditional whole life insurance policy, the insured death benefit (the face amount) remains level and guaranteed for the lifetime of the insured person, provided the required premiums are timely paid. The premiums are usually paid in equal annual

installments over the lifetime of the insured, or over a fixed number of years. Since the risk of death increases as the insured person ages, the annual cost of insurance under the policy also increases. The annual cost of insurance is called the annual mortality cost, which is simply the expected amount of claim for that year ("amount at risk") based on the insured's assumed death rate for that year. The assumed annual death rates are obtained from standard actuarial tables, called mortality tables, which the insurance company uses to calculate its premiums and reserves. In order for the insurance company to charge a level annual premium for the policy, when the annual mortality cost is increasing, the premium charge during the early policy years must be greater than the mortality costs for those years. Accordingly, the premium charge for later policy years will be less than the mortality costs for those years. This gives rise to the concept of a policy reserve during the life of the policy because, if the insurance company is to have sufficient funds to pay the claim costs in the later years when those costs exceed the level premiums, it must accumulate the excess level premiums in earlier years. It is this "accumulation" with interest, of past excess level premiums that generates the reserve at each policy duration. Thus, the function served by the reserve is to balance the premiums with the rising mortality costs.

The policy reserves, however, are not actually computed by accumulating, with interest, the actual premiums charged the policyholder and then subtracting the actual past mortality costs. The actual premium charged is called the "gross" premium, which is the total amount that the insurance company determines is required to cover estimated mortality costs, policy expenses and a margin for profit and contingencies.

Naturally, the gross premiums must also be competitive with gross premiums charged by other insurance companies if the policy is to be marketable. As discussed in elsewhere in the book (Chapter 6), the setting of gross premium scales for insurance policies, called "pricing," involves many different actuarial assumptions and complex calculations. Life insurance reserves, on the other hand, are calculated by using an entirely different set of premiums calculated on a "net" basis. These net premiums, sometimes called "valuation net premiums" or "tabular net premiums," are calculated using only mortality and interest assumptions, so as to cover just the mortality costs with no allowance for expenses or profits. The premiums are calculated independently of the gross premiums charged and are used strictly to determine the actuarial reserves. As a margin of safety, the reserve valuation laws of the various states require that life insurance policy reserves for the company's annual statement must be determined on a net premium basis. The gross premiums charged generally exceed the reserve valuation net premiums. This excess has often been called the "loading." However, since the gross and the valuation net premiums are calculated independently of each other, there are instances where that relationship changes and the valuation net premiums exceed the gross premiums. When that is the case, the state regulatory authorities require that adjustments be made to the reserves otherwise determined so that the annual statement reserves for those policies will not be deficient. Such additional reserves are known as "deficiency reserves."

Calculating Policy Reserves

The first step in the reserve process is to calculate the valuation net premiums using an assumed mortality table and an assumed interest rate, which are the key actuarial assumptions, Under one of several different valuation methods of calculating reserves,

such as the Net Level Premium Method, these net premiums are determined as a level amount over the entire premium paying period. Other reserve valuation methods may be used which affect the pattern in which the reserves accumulate, and these will be mentioned later in this section. Once this net premium is determined, policy reserves may be calculated for any policy duration by utilizing either of the two reserve balancing equations—the Retrospective Equation or the Prospective Equation:

A. Under the retrospective equation, the reserve equals the accumulated value of all past net premiums less the accumulated value of all past assumed mortality costs.

B. Under the prospective equation, the reserve equals the present value of all future assumed mortality costs less the present value of all future net premiums.

C. Under both equations, the reserve calculation uses the same mortality and interest assumptions used to derive the net premiums. Both produce identical reserve amounts; the choice depending only on which equation better facilitates the calculation. The accumulations and present values under these reserve equations are determined using actuarial mathematics, i.e., these summations reflect both mortality and interest discounting. To better understand the reserve process, apply the prospective equation at the inception of the policy, i.e., at the policy duration zero, when the reserve must be zero. By substituting zero for the reserve, the prospective equation reduces to the following equation to the present value of all future net premiums, equals the present value of all future assumed mortality costs.

D. This equation now expresses the fundamental relationship between the net premiums and the expected mortality costs over the entire life of the policy, and becomes the formula initially used to calculate the net premiums.

Reserve Valuation Methods

After selecting a mortality basis and an assumed interest rate and calculating the net premiums, select one of several acceptable reserve valuation methods. The valuation method defines the pattern or rate at which the reserves accumulate over the life of the policy whichever valuation method is selected. The reserve will become the same at some designated future duration eventually. The reserve must accumulate ultimately to the face amount of the policy when the insured attains the terminal age of the mortality table (i.e., the age by which all insured individuals are assumed to have died). The Net Level Premium Method is one of these valuation methods.

Net Level Premium (NLP) Method- This method has been the traditional method of calculating life insurance reserves used by life insurance companies. Other valuation methods, called "modified reserve methods," have been developed to compensate for an inherent weakness in the NLP method. Under the NLP method, the net valuation premiums remain level over the entire premium paying period. Consequently, the loading included in the gross premium charge, intended to cover policy expenses, is clearly the same amount for each policy year.

Expenses Higher at First

A life insurance company's actual policy expenses, however, are not level and, moreover, are significantly higher in the first policy year than in renewal years. The very high first year expenses are a natural consequence of the process of selling and issuing an individual life insurance policy. Agents' sales commissions are much higher in the first year than in renewal years. There are also first-year non-recurring expenses to underwrite and approve the insurance application, for medical examinations, and for

clerical functions to set up initial records and to issue the policy. The total first year expenses generally exceed the expense loading charged in the first year gross premium, and may even exceed the entire first year gross premium. Under the NLP method, the first year net premium is entirely used to cover the assumed mortality costs of that year and establish the first year policy reserve. As a result, the remaining expense loading from the gross premium becomes insufficient to cover first year actual expenses. The life insurance company is then forced to make up this insufficiency by borrowing from its surplus funds, in effect a "surplus loan," which then gets returned to surplus in renewal years as the gross premium expense loading becomes more than sufficient to cover actual renewal year expenses. Normally, this first year new business surplus strain creates little difficulty for well established companies with ample surplus funds. For small or newly established companies with limited surplus, however, this need to draw on surplus to finance new business ("surplus strain") could impair their financial position and their ability to generate new business.

First Year Modification

This situation is alleviated by deploying a modified valuation method that recognizes the decreasing incidence of expenses and provides a greater amount of expense loading in the first policy year than in renewal years. This modification accumulates reserves from a first year net premium that is smaller than the net premiums for renewal years. Under modified reserve methods, the sequence of net level premiums under the NLP method is replaced by a reduced first year net premium followed by a series of increased net level premiums for renewal years over a specified number of years. At the end of the specified modification period, the original net level premiums are restored and full NLP reserves are carried. This modified net premium sequence must be equivalent in actuarial value to the sequence of original unmodified net level premiums, so that the modified reserves will grade up to the NLP reserves. Modified reserve methods produce lower reserves than the NLP method in the first policy year and throughout the entire modification or grading period. The intent of these reserve methods is to reduce the first year net level premium, thereby increasing the amount of the first year expense loading. In effect, the modified method borrows some portion of the first year net premium under the NLP method to partially offset the expense loading insufficiency, and progressively returns the borrowed portion to the reserves in renewal years.

FPT and Other

Several of the recognized modified valuation methods that have been in general use for calculating life insurance reserves are the Full Preliminary Term (FPT) Method; Commissioners' Reserve Valuation (CRVM) Method; Illinois Method; New Jersey Method; and the Canadian Method. The FPT method provides the greatest additional first year expense allowance because its first year net premium covers only the assumed mortality cost of the first year. As a result, the reserve at the end of the first policy year is zero. Thereafter, the modified renewal net premium is exactly the same amount as the net premium under the NLP method for an exactly similar policy issued one year later at an age one year older, and the reserves accumulate accordingly. The FPT method is not appropriate for all types of policies because of excessive additional first year expense allowances for high premium policies, and its application is restricted by state regulatory authorities. The other methods listed in this subheading above are called "modified preliminary term methods," because they all modify in some way the additional first year expense allowance under the FPT method. They differ from each

other in the amount of the additional expense allowance and the length of the modification period. The CRVM is significant because it has been adopted by the state regulatory authorities, pursuant to the NAIC Standard Valuation Law, as the prescribed valuation method in defining minimum annual statement reserves for individual life insurance policies. It is also significant for income tax purposes, because it is the prescribed method for calculating life insurance tax reserves for life insurance policies under IRC section 807(d). This is discussed further in the section titled 'Reserves for Tax Deduction Purposes (IRC section 807)'

Statutory Reserve Valuation Law

In order to closely regulate life insurance companies in certain areas of their activities, state insurance laws and regulations impose minimum reserve requirements on all reserves reported in company annual statements. The states' concern is with insurance company solvency and the protection of policyholder interests. Policy reserves for all life insurance policies must, in the aggregate, equal or exceed a total reserve level which is determined by using certain prescribed assumptions for mortality and interest and a prescribed valuation method. These prescribed standards for determining minimum statutory reserves generally follow the provisions of the NAIC Standard Valuation Law and its interpretations. CRVM is the value method model as incorporated in state statutes prescribed by both the NAIC and Federal tax law for defining individual life insurance reserves. The prescribed standards for mortality and interest will vary by line of business and policy issue date. Statutory standards are established to produce conservative minimum reserve levels in keeping with the states' responsibility to regulate financial solvency. It should be noted, however, that companies are permitted to use any actuarial basis for determining statutory reserves, provided the approach results in aggregate reserves that equal or exceed the minimum reserves produced by the statutory standards.

Mortality Tables and Reserves

The life insurance industry conducts ongoing studies of mortality experience under all types of life insurance policies and annuities. For purposes of calculating premiums and reserves, the industry has constructed and published a number of standard mortality tables. A mortality table tabulates annual death rates for each integral age from age 0 (or the earliest significant age) to an arbitrary terminal age, usually around age 100. For ordinary life insurance policy reserves, the mortality tables are, or have been, in common use the Commissioners 1980 Standard Ordinary Tables (1980 CSO); Commissioners 1958 Standard Ordinary Table (1958 CSO); Commissioners 1941 Standard Ordinary Table (1941 CSO); American Experience (AE) Table; and the American Men (AM) Table.

For simplicity's sake, this discussion will restrict itself to the 1980 mortality table. The transition to the 2001 Table is discussed in Chapter 6 of this book.

The 1980 CSO Tables, consisting of separate tables for males and females, are the prescribed mortality standards operative on all life insurance companies for policies issued on or after an "operative date" elected by each company, but where such date could not be later than January 1, 1989. The majority of states had adopted it as their prescribed standard by 1982. Prior to the adoption of the 1980 CSO Tables as the

prescribed standard, the 1958 CSO Table had been the prevailing state standard for policies issued in 1960 and later years, although it did not become mandatory in all states until 1966. The 1958 CSO Table is a male mortality table; female mortality rates are assumed by using an age setback to the male death rates, initially recommended to be 3–years. Reserves are typically lower under the 1980 CSO than under the 1958 CSO. Prior to the adoption of the 1958 CSO Table, the 1941 CSO table had been the prevailing standard for policies issued in 1948 and later years. Since mortality experience under other types of life insurance contracts and under annuity contracts differs substantially from mortality experience under ordinary life insurance contracts, special mortality tables have been constructed and are used for setting reserves under those other type contracts. A few of those more recent mortality tables are as the Commissioners' 1961 Standard Industrial Table (Industrial Life Insurance); Commissioners' 1960 Standard Group Mortality Table (Group Life Insurance); 1971 Individual Annuity Mortality Table (Individual Annuity); 1971 Group Annuity Mortality Table (Group Annuities); 1983 Table "a" (Individual Annuities); and the 1983 Group Annuity Mortality Table (Group Annuities). By 1985, the majority of states had adopted, as their prescribed mortality standards for minimum reserves for annuity contracts, the 1983 Table "a" (for Individual Annuities) and the 1983 Group Annuity Mortality Table (for Group Annuities).

Interest Rates and Reserve Valuation

The Standard Valuation Law prescribes the maximum interest rates that may be used in calculating the minimum reserve standards for life insurance and annuity contracts. Again, this is to ensure that such policy reserves will be conservatively valued. Since life insurance and annuity contracts generally reflect long-term commitments, the effect of the assumed interest rates on their reserves can be highly dramatic. Generally, the higher the interest rate assumption, the lower the required reserve. For many years prior to the 1980 Amendments to the Standard Valuation Law, these prescribed maximum interest rates were at very low levels. For example, for all life insurance contracts, the maximum rate ranged from 3.5 to 4.5 percent. In general, annuities were subject to the same low interest rates up until the latter part of the 1970s, when some relief was given by elevating the maximum rate to 7.5 percent for group annuities and for individual single premium immediate annuities. These low interest rate standards were very unrealistic throughout the 1970s when actual interest rates were escalating to all time high levels with double digit rates commonplace. This excessive conservatism was more fully addressed with the 1980 Amendments by introducing a "dynamic" interest rate approach for establishing the maximum statutory rates. The Standard Valuation Law was changed to define a formula method of determining the statutory interest rate, rather than specifying the actual rate, with such formulas reflecting actual yields on seasoned corporate bonds. Thus, commencing with policies issued after 1982, the maximum interest rates will vary by different product features for life insurance and annuities, and these interest rates are subject to change each calendar year. For example, for life insurance policies, the maximum statutory interest rate varies by the number of years of a policy's guarantee duration, such that for any calendar year of issue there may be three entirely different valuation interest rates that are applicable. By the dynamic formula approach the maximum interest rates are automatically promulgated each year eliminating the need for each state to amend their insurance laws.

Timing Functions

One further component in the calculation of a policy reserve is the timing function. This refers to the assumptions as to the time when claims and premiums will be payable. Normally, it is the practice of life insurance companies to pay death benefits as soon as possible after the death occurs. Premiums, on the other hand, are usually payable at scheduled dates depending on the payment mode elected by the policyholder.

However, to facilitate the computation of premiums and reserves, it is customary to make convenient assumptions as to the timing of claims and premiums.

Curtate Function- Under this function, death benefits are assumed to be paid at the end of the policy year of death, and all annual premiums, irrespective of the actual payment mode, are assumed paid at the beginning of the policy year. This claim payment assumption is convenient because annual death rates, as measured to the end of a year, are exactly calculated from mortality tables.

Continuous Function- Under this function, death benefits are assumed to be paid at the moment of death, and all annual premiums, irrespective of the actual payment mode, are assumed to be paid uniformly throughout the policy year. This idealized premium payment assumption is particularly convenient when the actual premium mode is quite frequent, such as the weekly mode (under industrial life insurance) or the monthly mode (when paid through a payroll deduction plan).

Special actuarial adjustments are made to convert curtate functions to continuous functions. Reserves calculated by continuous functions will be higher than when calculated by curtate functions. The reason for this is that, since, on average death benefits are assumed to be paid one-half year sooner and premiums are assumed to be received one-half year later, additional reserves are needed to compensate for the loss of interest on the death benefit and for the loss of one-half year's premium during the policy year of death.

Semi-continuous Functions- Under these functions, either death benefits are assumed to be paid at the moment of death, or annual premiums are assumed to be paid uniformly throughout the policy year.

Annual Statement Reserve Valuation

For any individual policy, actuarial reserves may be exactly calculated for each policy year as of the end of the policy year. A reserve value at the end of a policy year is called a "terminal" reserve. A reserve value at the beginning of a policy year is called an "initial" reserve, which is simply the sum of the terminal reserve for the preceding policy year plus the net premium for the current policy year. For statutory reporting purposes, however, reserves must be established as of the annual statement's year-end date, December 31, in total for all policies in force as of that date. Life insurance companies issue policies throughout the calendar year and, as a result, policy anniversaries fall on many different dates. For most of the policies in force, the December 31 valuation date will not coincide with a policy year-end date, but will fall at an interim point during the current policy year. When a policy's reserve must be valued as of a date that falls between its policy year-ends, the valuation is called an "interim" valuation. Life insurance companies often use approximation methods, which deploy terminal reserves, to conveniently estimate interim reserves for annual statement purposes where large numbers of policies are involved. Three such approximation methods in common use are the Mean Reserve, Mid-Terminal Reserve and Interpolated Reserve methods.

Mean Reserves- This method assumes that a large group of policies have issue dates evenly distributed throughout the calendar year (so that the "average" anniversary date is July 1, and an average one-half a policy year has elapsed by December 31), and premiums are paid annually at the beginning of the policy year (so that by December 31 it is assumed that every policy has paid a full year's premium for the current policy year). The mean reserve (or, mid-year reserve) for each policy equals the average (mean) of the current policy year's initial and terminal reserves. For a large group of policies which do pay annual premiums, the mean method is a reasonable estimate of their total reserves at December 31; and for those annual premium policies which do have a July 1 anniversary date, the mean reserve is the theoretically correct reserve at December 31. For many of the policies in the group that pay their policy year premiums in installments, the mean reserve method's annual premium assumption overstates the premiums actually paid by December 31 for the current policy year and, thereby, overstates their December 31 reserves. When premiums are paid on a "fractional" or "modal" basis (e.g., semi-annually, quarterly, or monthly) some portion of the total fractional premiums for the current policy year will fall due after December 31, and that portion is called "deferred fractional premiums." To effectively offset the mean method's inherent reserve overstatement for policies with deferred fractional premiums, statutory reporting requires certain accounting procedures. The total of all gross deferred premiums is compiled and explicitly reported in the annual statement and included in premium income for the current calendar year, gross loading charges are deducted from that income as expenses, and a special asset account is established on the balance sheet as of December 31 equal to the related net valuation deferred premiums (as if the net deferred premiums were amounts receivable). Net valuation deferred premiums are used because the sole purpose of this asset account is to offset the excess net premiums included in the mean reserves. If any deferred fractional premiums are actually paid prior to December 31, they are not included in the deferred premium asset and, under statutory reporting conventions, they are not treated as advance premiums. Moreover, any gross premiums that were due prior to December 31, but uncollected as of that date, are accounted for in the same manner as deferred premiums, with the net portion included in the same asset account. This asset account is identified in the balance sheet as "life insurance premiums deferred and uncollected." Life insurance companies may determine their net deferred and uncollected premiums either on a seriatim basis (i.e., a policy-by-policy listing of gross and net premiums), or on an aggregate basis (i.e., applying group ratios of net to gross deferred and uncollected premiums from historical experience). In the special case where terminal reserves are based on continuous functions, whereby premiums are assumed to be paid uniformly throughout the policy year, the mean reserve is simply the average of the terminal reserves for the preceding and current policy years. There are no adjustments required to these reserves, since the annual premium payment assumption under the mean method does not apply. There are no deferred fractional premiums to adjust for. The mean reserve method is commonly used for computing annual statement reserves for ordinary life insurance policies.

Mid-Terminal Reserves- Under this method, it is also assumed that the policies in the group have an average anniversary date of July 1 and that one-half a policy year has elapsed by December 31. However, no direct assumption is made as to the amount of current policy year premiums paid in by December 31. Therefore, the mid-terminal reserve is determined as the average (mean) of the terminal reserves for the preceding and current policy years, plus an unearned premium reserve equal to the portion of the

modal premium due prior to December 31 which covers the period from December 31 to the next modal premium date. The unearned premium reserve may be based on net valuation premiums or gross premiums, and it may be calculated by using either the exact unearned period or a simplified approximation such as one-half the modal period. Under this method, no deferred fractional premium asset is established. If the policy pays annual premiums, then the mid-terminal method is identical to the mean method when one-half year's net premium is used as the unearned premium reserve. The mid-terminal reserve method is generally used for computing annual statement reserves for industrial life insurance and for individual health insurance policies.

Interpolated Reserves- This method introduces a refinement to the mid-terminal reserve method. There is no assumption as to an average anniversary date of July 1. Instead, the actual anniversary date of each policy is taken into account by applying a linear interpolation between the terminal reserves for the preceding and current policy years based on the exact fraction of a year elapsed from the actual anniversary date to December 31. The unearned premium reserve, which is added to the interpolated terminal reserves, is then determined as the exact unearned portion of the net modal premium. As in the case of the mid-terminal method, no deferred fractional premium asset is established, since no direct assumption is made as to the amount of current policy year premiums paid in by December 31. If the policy has an anniversary date of July 1 and it pays annual premiums, then the interpolated reserve method is identical to both the mean and mid-terminal methods. Some companies use the interpolated reserve method for computing annual statement reserves for ordinary life insurance policies as a refinement and to eliminate the need to establish a deferred fractional premium asset.

Description of Life Insurance Reserves for Tax Purposes

The current Federal income tax law relating to life insurance companies was enacted under the Tax Reform Act of 1984 (TRA 1984). Subsequent legislation under the Tax Reform Act of 1986 (TRA 1986), the Omnibus Budget Reconciliation Act of 1987 (OBRA 1987) and later Acts amended the original TRA 1984 in many important respects, including significant aspects of reserves. Notwithstanding these revisions, the reserve sections of the Code remain structurally the same as they were originally enacted under TRA 1984.

Reserves play an extremely important role in the Federal taxation of life insurance companies. Under IRC section 816(a), reserves are the key element in determining whether a company that qualifies to be taxed as an insurance company would further qualify to be taxed specifically as a life insurance company. This key element is known as the "reserve ratio test" which requires that "life insurance reserves," as defined by IRC section 816(b), and certain other reserves, must comprise more than half of the life insurance company's total insurance reserves. Moreover, under IRC section 807, the net increase or decrease during the tax year of these life insurance reserves and certain other reserves directly affect the life insurance company's taxable income for the year. IRC section 807 also prescribes specific rules as to how life insurance reserves and certain other reserves must be computed for the purpose of determining the increase or decrease in reserves for the year. These computational rules are intended to establish uniform Federal tax standards applicable to all life insurance companies in computing certain reserves for tax deduction purposes, and to limit the level of these reserve deductions. These computational rules were the major change to life insurance

company reserves adopted by TRA 1984. The Code definition of life insurance reserves, as those reserves affect the reserve ratio test, and the types of contracts for which life insurance reserves are held, will be discussed in this section. Since the reserves that are used for the reserve ratio test are those held by the company for state regulatory purposes in the annual statement (statutory reserves), the location of those reserves in the Annual Statement can be identified. Some examples of those types of reserves which generally qualify as life insurance reserves, and those that generally do not, will be given. The specific rules for reserve computations prescribed by IRC section 807 are discussed further along in the section titled 'Reserves for Tax Deduction Purposes (IRC section 807)'

Federal Tax Laws Affecting Reserves

To better appreciate the foundation of the current tax law treatment of life insurance company reserves, it is important to begin with a brief summary of the history of key Federal tax laws affecting reserves:

Revenue Act of 1913- Under this Act, life insurance companies were taxed on their total income from all sources. Since reserves were required to meet policy obligations, the assets held in support of those policy reserves were not available to the company for its free use. Under this Act, therefore, companies were permitted to deduct from income the amount required by state law to be added during the year to its reserve funds.

Revenue Act of 1921- Starting with this Act, life insurance companies were taxed only on their investment income. Consequently, it was no longer necessary to allow a deduction for the full increase in reserves. Companies were permitted, however, to deduct from their investment income the amount of interest required to be added to their reserves each year. Under the Act, the deduction was fixed at an interest rate of four percent applied to the company's mean reserves. This interest rate was then changed periodically thereafter by various tax laws enacted through 1957.

Life Insurance Company Income Tax Act of 1959- This Act significantly changed the taxation of life insurance companies effective with the 1958 tax year. Once again companies were taxed on their total income from all sources, but now they were taxed by a complicated three phase structure for determining taxable income. When determining taxable investment income, they were allowed to deduct the policyholder's share of investment income calculated by specific statutory rules. When determining the gain from operations, the net increase in reserves for the year was deductible, but such deduction was reduced to avoid a double reserve deduction. An important provision in the law also allowed companies which valued their life insurance reserves under a preliminary term method to adjust those reserves for tax purposes to higher net level premium reserves, either by exact recalculation or by statutory approximation rules. This adjustment provision was intended to create tax parity for small or newly formed companies, who typically used preliminary term reserves, with large, well established companies who at that time typically used net level premium reserves. As time passed, most companies adopted preliminary term reserves for their statutory reserves, and then capitalized on the tax adjustment rule to obtain significantly increased tax reserve deductions.

TRA 1984- For various reasons, including simplification of the life insurance company tax law, the 1959 Act was repealed and a new tax structure was enacted under TRA 1984, effective with the 1984 tax year. Companies continued to be taxed on their total income, but under a single phase structure consistent with the way other commercial corporations are taxed. Although life insurance companies now receive a deduction for

the full annual increase in their reserves, under this Act the law prescribes specific rules, including actuarial methods and factors, for computing life insurance reserves and certain other reserves strictly for the purpose of determining a life insurance company's taxable income. The definition of life insurance reserves still applies exactly as it did under the 1959 Act, but under TRA 1984 it has practical application only with respect to the reserve ratio test to determine if the insurance company may be taxed as a life company, and to identify that subset of total deductible reserves that must be calculated by the tax law rules.

Tax Code Definition of Life Insurance Reserves

As discussed previously, actuarial reserves are conservative estimates of the amount of funds that must be set aside which, together with future tabular net premiums, will be exactly sufficient to pay the future policy claims as they fall due. The reserve amounts are equal to the present value of future expected benefits less the present value of future tabular net premiums, where the present values are discounted for interest and mortality and, as appropriate, also for morbidity (for example, for disability type benefits).

The Internal Revenue Code contains a precise definition of actuarial reserves for life insurance and annuity benefits and, with certain restrictions, for accident and health (A & H) benefits, and designates these reserves as "life insurance reserves." As defined in IRC section 816(b), life insurance reserves are reserve amounts which satisfy all the following conditions:

- Must be computed or estimated on the basis of recognized mortality and/or morbidity tables, and assumed rates of interest.
- Must be set aside to mature or liquidate, by payment or reinsurance, future unaccrued claims.

Such future claims must arise under life insurance contracts or annuity contracts, or noncancelable A & H insurance contracts (including life insurance or annuity contracts which are combined with noncancelable A & H insurance). Such future claims must involve at the time the particular reserves are computed, life, accident, or health contingencies (i.e., mortality or morbidity risks). The reserves must be required by law (i.e., by state law, rules or regulations), except for two situations specifically cited in IRC section 816(b).

Ratio Basis

It is important to note that it is the statutory life insurance reserves actually held in the company's annual statement that are the tax basis reserves to be used for purposes of the reserve ratio test, provided the reserves meet the conditions above, except that statutory reserves must be reduced by the following adjustments mandated by the Code and the Regulations: Any deficiency reserves included in the statutory life insurance reserves, even though required by state law, must be excluded for tax purposes. This is the case even though IRC section 816(b) has a general requirement that the reserves must be required by state law (See IRC section 816(h)). Any reserve amount set aside and held at interest to satisfy obligations under any contracts which do not provide permanent guarantees with regard to life, accident or health contingencies must be excluded from life insurance reserves, and from all other insurance reserves that otherwise would be included as total reserves in the denominator of the reserve ratio. IRC section 816(f). In other words, such reserves are not taken into account for

qualification purposes. Policy loan amounts outstanding on contracts for which life insurance reserves are held must be excluded from life insurance reserves, but only for qualification purposes. IRC section 816(d). If any deferred and uncollected premiums, or any due and unpaid premiums, are not required to be included in the company's gross income for the tax year, then an appropriate reduction must be made to the life insurance reserves for such premiums. This reduction is to be made only if the life insurance reserves were calculated on the assumption that premiums are paid annually in advance, or that all premiums due prior to the statement date have been paid. (Treas. Reg. 1.801-4(f) and IRC section 811(c))

Qualification Standards for a Life Insurance Company

An insurance company must first meet the doing business standard required under the Internal Revenue Code to qualify for taxation as a life insurance company, rather than as a property and casualty insurance company. The doing business standard requires that the company must be engaged in the business of issuing life insurance and annuity contracts, or noncancelable accident and health (A & H) insurance contracts (IRC section 816(a)). Under state insurance laws, property and casualty insurance companies cannot issue life insurance or annuity contracts but, like life insurance companies, they can issue A & H insurance. Although A & H insurance originated within the casualty insurance industry, it was the life insurance industry's intensive involvement beginning during the 1930s, particularly in group medical care insurance, that accelerated the development of A & H insurance. Today, the marketing of A & H insurance is dominated by life insurance companies. Accident and health insurance is frequently provided under group master contracts issued to employers, associations and other qualified groups to insure employees, members and families. Most group insurance (whether life or A & H) is issued on a term basis, usually one-year term. This permits the insurance company to adjust premium rates at the end of the term or to cancel the master contract. An insurance company that sells life insurance or annuities clearly meets the doing business standard, but a problem can arise if it issues only A & H insurance. In this situation, tax qualification as a life insurance company would be denied unless some of the company's A & H business was issued under noncancelable or guaranteed renewable contracts. Such contracts are typically issued only on an individual basis. If the insurance company meets the life business standard, the next standard that the company's insurance business must meet is the critical measurement standard, the reserve ratio test under IRC section 816(a).

Reserve Ratio Test

The reserve ratio test is a measure of an insurance company's actual activity in the business of issuing long-term commitments under life insurance and annuity contracts, and analogous long-term commitments under noncancelable and guaranteed renewable A & H insurance contracts. If the reserves that support an insurance company's long-term commitments equal more than half of its total insurance reserves for all of its commitments, the reserve ratio test is satisfied. The reserves used in the numerator of the ratio, intended to measure reserves supporting the company's long-term commitments, are the life insurance reserves, plus the unearned premium reserves and unpaid loss reserves held under noncancelable life, accident or health policies that were not otherwise included in the life insurance reserves. The reserves used in the denominator of the ratio are the total insurance reserves that are required by

state law, but adjusted as required by the tax law. Virtually all major life insurance companies could have little problem meeting this test. However, the reserve ratio test can present a problem for small or new life insurance companies, or for insurance companies, chartered as life insurance companies, who have a limited business such as A & H or credit insurance, and who seek to be taxed favorably as a life insurance company.

Accident and Health (A & H) Insurance

A & H insurance provides protection against economic losses that result from accidents or sickness. This insurance may be provided under A & H insurance contracts alone or in combination with life insurance contracts. A & H insurance contracts may be issued under individual or group contract forms, or under special credit insurance contracts used only to insure debtors for loan obligations. A great variety of benefits exist under many forms of A & H contracts, but all such insurance may be classified into three general categories:

Disability Income Insurance (Loss of Time)- This insurance provides periodic payments for a specified period of time while the insured has a qualified disability. It is intended to partially replace income lost by the insured because of inability to work at a gainful occupation. Income benefits vary in amount and duration of payment. Contracts may provide short-term benefits (up to two years), or long-term benefits payable for at least five years, but frequently payable for life or until age 65.

Accidental Death and Dismemberment Insurance (AD&D)- This insurance provides lump-sum payment if the insured dies from a covered accident. It also provides a lump-sum payment if the insured suffers loss of body members (hand, foot or eye) from a covered accident, where the payment amount is a fraction of the death benefit. This insurance may also pay multiples of the accidental death benefit if death is a result of commercial travel.

Medical Care Insurance (Hospital & Medical)- This insurance provides reimbursement of the insured's actual covered expenses for treatment of injuries and sickness. Various contracts may cover hospital, surgical and/or physician's expenses and may also cover diagnostic and nursing services, medicines, medical appliances and dental care. Comprehensive coverage is provided under major medical contracts. Medical care insurance is generally issued to permit coverage of the insured's family members. This insurance is primarily written under master group insurance contracts issued to employers and other qualified groups to insure employees, members and their families. Group insurance contracts are typically issued on a one-year term basis, subject to renewal at the insurance company's discretion.

Accident and Health (A & H) Reserves

Because of the myriad of benefit provisions under A & H insurance and the inherent difficulty in measuring the related morbidity experience, state legal requirements for A & H reserves have generally been less explicit than for life insurance and annuity reserves. The Standard Valuation Law has for many years defined very specific minimum reserve standards for life insurance and annuity policies. For A & H, most state laws simply provided that companies establish sound values for their reserves that would not be less than reserves under standards contained in insurance department regulations. Some states, not having adopted specific reserve standards, based their requirements on reserve item instructions in the statutory annual statement. Specific

reserve standards for individual A & H contracts, adopted by the NAIC in 1964, served over the years as the basis for reserve regulations issued by many state insurance departments. Insurance department regulations could be revised to change reserve requirements, such as the adoption of new morbidity tables, without having to amend state law. In 1989, the NAIC adopted a new model regulation setting forth new minimum A & H reserve standards for both individual and group contracts (other than credit), superseding all previous NAIC A & H reserve standards. The tax law is also generally less explicit about its A & H reserve requirements than it is for life insurance and annuity reserves.

Active Life Reserves

Active life reserves are established to recognize that the premiums charged are intended to cover future liabilities as well as current claim costs. All contracts must have an Unearned Premium Reserve (UPR). The UPR represents that portion of the gross premiums paid or due for the current premium period allocated to the period from December 31 to the next premium due date. Methods of computing the UPR can vary considerably between and within companies. It may be computed on the exact pro rata method using actual premium due dates, or by the "monthly pro rata method" used by many companies. Under the monthly method, all premiums in force at December 31 are tabulated into premium mode/due month cells, and then an appropriate factor is applied to each cell to derive the UPR on the assumption that all policies are issued in the middle of the month. For group policies paying monthly premiums due on the first day of a month, the method will usually be modified so that no UPR is established for that block of policies. Under credit insurance contracts, premiums may either be paid as single premiums based on the initial insured debt, or as monthly premiums based on the monthly outstanding balance of the insured debt. Most credit insurance is now issued under group contracts. For single premium insurance, the single premium is generally included in the debt and the creditor (policyholder) remits the single premium to the insurance company for each newly insured debtor on a monthly basis. Under the monthly premium method, the group creditor remits the premiums due monthly. The UPR for single premium credit insurance may be calculated by the actuarial method, pro rata method or the "rule of 78" method. The actuarial method calculates the reserve as the single premium for the outstanding debt balance and its remaining term, and results in the most accurate reserve. The UPR for monthly premium group credit insurance is usually calculated by the same methods used for other group A & H contracts. The UPR for all types of A & H contracts do not qualify as tax basis life insurance reserves. Moreover, the UPR for cancelable A & H contracts may not be included as qualifying UPR in the numerator of the reserve ratio test. However, for noncancelable or guaranteed renewable A & H contracts, the UPR may be included in the numerator of the reserve ratio test and help to qualify the company as a life insurance company.

Additional Active Life Reserves

For noncancelable or guaranteed renewable A & H contracts only, active life reserves greater than the UPR must be established. This is because the insurance company has a longer commitment to continue coverage under a level premium contract where claim costs increase with the insured's age. The effect of level premiums, increasing claim costs and the contract's renewal guarantee create reserve requirements analogous to those under noncancelable level premium life insurance. The instructions for Exhibit 9 state that an additional policy reserve, above the UPR, must be held for any policy

which provides a guarantee of renewability, and that the NAIC standards adopted in 1964 are acceptable bases for these reserves. The usual practice is to compute the UPR as described above and then determine the additional reserve on the mid-terminal basis. The NAIC minimum reserve standards specify the two-year preliminary term valuation method to calculate this reserve. With respect to long-term care insurance, a one-year preliminary term method may be used. Exhibit 9 has a separate line item for each of the UPR and this additional reserve, but the instructions permit the inclusion of the UPR on the same line for the additional reserve. Current NAIC guidance requires that the UPR not be less than the present value of future claims attributable to the unexpired policy term. This deficiency reserve does not qualify as tax-basis reserve. This additional reserve will usually meet the conditions to be treated as tax basis life insurance reserves, provided the A & H contract meets the definition of a noncancelable or guaranteed renewable contract contained in the Regulations. Moreover, the definition itself requires that the A & H contract has such an additional active life reserve. Therefore, as qualified life insurance reserves, they can be included as such in the numerator of the reserve ratio test, together with the contract's UPR and its includible unpaid loss reserves.

Claim Reserves

Sometimes called "disabled life reserves," these reserves are established when a claim actually occurs and that claim involves continuing loss after the statement date. A claim occurs when the insured becomes disabled, injured or sick giving rise to a benefit obligation under the contract. In the "Glossary of Actuarial Terms" published by the Actuarial Standards Board, A & H claim reserves are defined as "the actuarial present value as of a valuation date of future, contingent claim payments for claims incurred as of the valuation date, whether or not the claims have been reported." The discussion of claim reserves and their distinction from claim liabilities is appropriate in a life insurance context, but not in a property and casualty context. Claim reserves are to be contrasted with "claim liabilities," which refer to the insurance company's obligation for accrued claim payments due on or prior to the statement date, whether or not the claims have been reported, which remain to be paid.

Claim reserves for noncancelable or guaranteed renewable A & H contracts which do not meet the conditions for life insurance reserves, however, may be included as unpaid loss reserves in the numerator of the reserve ratio test. However, claim reserves for an A & H contract which is neither noncancelable nor guaranteed renewable cannot qualify as life insurance reserves, nor can they qualify as unpaid loss reserves that may be included in the numerator of the reserve ratio test. The Internal Revenue Service position is that all claim reserves for cancelable A & H contracts must be shown in the denominator (*Harco Holdings*, 977 F 2d 1027 (7th Cir.) 1992). Hence, in the case of a disability income claim reserve in respect to a disabled life as of the statement date, where the reserve is actuarially computed in compliance with IRC section 816(b), the claim reserve will not qualify as a life insurance reserve if the A & H contract is cancelable, but will qualify if the A & H contract is noncancelable.

Life Insurance and Annuity Reserves

Exhibit 8 is the annual statement exhibit for reporting policy reserves for life insurance and annuity contracts. Exhibit 8 reserves are reported under four major lines of

business or types of contracts — industrial life insurance; ordinary (individual) life insurance or annuities; credit life insurance (for loans not in excess of 120 months); and group life insurance or annuities.

Life insurance policy reserves are reported in Part A and annuity policy reserves are reported in Part B of the Exhibit. Life insurance and annuity reserves which qualify as tax basis life insurance reserves under IRC section 816(b) should be included in Exhibit 8. However, not all Exhibit 8 reserves will qualify as life insurance reserves, because they may not meet all the conditions of IRC section 816(b).

Gross reserves for policies issued directly by the company, as well as business reinsured with the company (reinsurance assumed), are reported on a separate line within each Part of Exhibit 8 for each distinct actuarial basis used to calculate reserves. An actuarial basis is defined by the specific mortality table, interest rate(s) and the valuation method used to calculate the reserves. The insurance company is required to specify the details of the actuarial basis for each reserve line. The total reserves for all business which is reinsured with another company (reinsurance ceded) are reported as a single line item for each major line of business under each Part and are so identified as reinsurance ceded reserves. The reinsurance ceded reserves are then subtracted from the total gross reserves to obtain the net reserves.

Annual Statement 20x5 of the XYZ Life Insurance Company

EXHIBIT 8- CLAIMS FOR LIFE AND ACCIDENT AND HEALTH CONTRACTS

Part 1- Liability End of Current Year

	1 Total	2 Industrial Life	Ordinary			6 Credit Life (Group & Individual)	Group		Accident and Health		
			3 Life Insurance	4 Individual Annuities	5 Supplemen tary Contracts		7 Life Insurance (c)	8 Annuities	9 Group	10 Credit (Group & Individ)	11 Other
1. Settlement during the year											
1.1 Direct	0	0	0	0	0	0	0	0	0	0	0
1.2 Reinsurance assumed	0	0	0	0	0	0	0	0	0	0	0
1.3 Reinsurance ceded	0	0	0	0	0	0	0	0	0	0	0
1.4 Net	0	0	0	0	0	0	0	0	0	0	0
2. In course of Settlement											
2.1 Resisted											
2.11 Direct	151,999	0	151,999	0	0	0	0	0	0	0	0
2.12 Reinsurance assumed	0	0	0	0	0	0	0	0	0	0	0
2.13 Reinsurance ceded	126,871	0	126,871	0	0	0	0	0	0	0	0
2.14 Net	25,128	0	25,128	0	0	0	0	0	0	0	0
2.2 Other											
2.21 Direct	46,772,196	0	16,268,679	6,650,892	0	0	8,261,303	188,845	6,540,550	0	8,861,927
2.22 Reinsurance assumed	275,212	0	275,212	0	0	0	0	0	0	0	0
2.23 Reinsurance ceded	7,526,175	0	2,119,366	3,344,178	0	0	1,403,411	167,008	428,308	0	63,904
2.24 Net	39,521,233	0	14,424,525	3,306,715	0	0	6,857,892	21,836	6,112,242	0	8798,023
3. Incurred but unreported											
3.1 Direct	43,861,545	0	7565,004	4,643,233	0	0	4,254,257	293,922	13,414,719	0	13,690,410
3.2 Reinsurance assumed	109,753	0	109,753	0	0	0	0	0	0	0	0
3.3 Reinsurance ceded	5,973,201	0	1,032,682	2,436,987	0	0	495,272	200,053	1,664,966	0	143,241
3.4 Net	37,998,097	0	6,642,075	2,206,246	0	0	3,758,985	93,869	11,749,753	0	13,547,169
4. Totals											
4.1 Direct	90,785,740	0	23,985,682	11,294,125	0	0	12,515,560	482,767	19,955,269	0	22,552,337
4.2 Reinsurance assumed	384,965	0	384,965	0	0	0	0	0	0	0	0
4.3 Reinsurance ceded	13,626,247	0	3,278,919	5,781,164	0	0	1,898,683	367,061	2,093,274	0	207,145
4.4 Net	77,544,458	0	21,091,728	5,512,961	0	0	10,616,877	115,705	17,861,995	0	22,345,192

(a) Including matured endowments (but not guaranteed annual pure endowments) unpaid amounting to \$ 0 in Column 3 and \$ 0 in Column 7.

(b) Include only portion of disability and accident and health claim liabilities applicable to 'accrued' benefits. Reserves (including reinsurance assumed and net of reinsurance ceded) for unaccrued benefits for Ordinary Life Insurance \$2,413, 573, Individual Annuities \$0, Credit Life (Group and Individual) \$0, and Group Life \$12,956,605 are included in Page 3, Line 1, (See Exhibit 5, Section on Disability Disabled Lives); and for Group Accident and Health \$51,696,742, Credit (Group and Individual) Accident and Health \$0 and Other Accident and Health \$141,142,581.

Annual Statement 20x5 of the XYZ Life Insurance Company

EXHIBIT 8- CLAIMS FOR LIFE AND ACCIDENT AND HEALTH CONTRACTS

Part 2- Incurred During the Year

	1 Total	2 Industrial Life (a)	Ordinary			6 Credit Life (Group & Individual)	Group		Accident and Health		
			3 Life Insurance (b)	4 Individual Annuities	5 Supplemen- tary Contracts		7 Life Insurance (c)	8 Annuities	9 Group	10 Credit (Group & Individ)	11 Other
1. Settlement during the year											
1.1 Direct	1,300,755,096	0	90,400,886	866,129,363	27,231,395	0	44,078,445	128,439,825	81,222,842	0	63,252,340
1.2 Reinsurance assumed	223,069,399	0	1,775,243	0	0	0	0	222,295,502	(1,346)	0	0
1.3 Reinsurance ceded	207,156,678	0	5,772,617	142,270,069	0	0	12,115,440	967,977	45,042,361	0	988,214
1.4 Net	(d) 1,317,667,817	0	86,403,512	723,859,294	27,231,395	0	31,963,005	349,767,350	36,179,135	0	62,264,126
2. Liability December 31, current year from Part 1											
2.1 Direct	90,785,741	0	23,985,682	11,294,125	0	0	12,515,560	482,767	19,955,269	0	22,552,338
2.2 Reinsurance assumed	384,995	0	384,965	0	0	0	0	0	0	0	0
2.3 Reinsurance ceded	13,626,247	0	3,278,919	5781,164	0	0	1,898,683	367,061	2,093,274	0	207,145
2.4 Net	77,544,459	0	21,091,728	5,512,961	0	0	10,616,877	115,705	17,861,995	0	22,345,192
3. Amounts recoverable from reinsurers December 31, current year	3,175,817	0	2,421,112	62,900	0	0	410,439	0	273,173	0	8,193
4. Liability December 31, prior year											
4.1 Direct	80,025,656	0	20,033,971	0	0	0	19,832,785	0	19,487,121	0	20,671,779
4.2 Reinsurance assumed	455,769	0	455,769	0	0	0	0	0	0	0	0
4.3 Reinsurance ceded	15,175,007	0	1,665,262	0	0	0	10,041,396	0	2,878,874	0	589,475
4.4 Net	65,306,418	0	18,824,478	0	0	0	9,791,389	0	16,608,247	0	20,082,304
5. Amounts recoverable from reinsurers December 31, prior year	920,325	0	143,961	172,468	0	0	207,033	0	331,686	0	65,177
4. Totals											
4.1 Direct	1,311,515,180	0	94,352,597	877,423,488	27,231,395	0	36,761,220	128,922,591	81,690,990	0	65,132,898
4.2 Reinsurance assumed	223,998,595	0	1,704,439	0	0	0	0	222,295,502	(1,345)	0	0
4.3 Reinsurance ceded	207,863,410	0	9,663,425	147,941,666	0	0	4,176,133	1,335,038	44,198,248	0	548,900
4.4 Net	77,544,458	0	86,393,611	729,481,822	27,231,395	0	32,585,087	349,883,055	37,491,396	0	64,583,998

(a) including matured endowments (but not guaranteed annual pure endowments) amounting to \$0 in Line 1.1, \$0 in Line 1.4, \$0 in Line 6.1 and \$0 in line 6.4.

(b) including matured endowments (but not guaranteed annual pure endowments) amounting to \$(33,781) in line 1.4, \$(33,781) in Line 6.1 and \$(33,781) in line 6.4.

(c) including matured endowments (but not guaranteed annual pure endowments) amounting to \$0 in Line 1.1, \$0 in Line 1.4, \$0 in Line 6.1 and \$0 in line 6.4.

(d) includes \$6,159,591 premiums waived under total and permanent disability benefits.

Unearned Premium Reserves

Life insurance policy reserves in Part A generally qualify to be treated as tax basis life insurance reserves. Ordinary life insurance policies may be whole life, term life or endowment life, but the reserves for any of these policy forms will usually qualify as life insurance reserves. However, under group term life and credit life insurance policies, unearned premium reserves are examples of policy reserves that often fail to satisfy the actuarial requirements of IRC section 816(b)(1)(A) and, thus, will not qualify as life insurance reserves. Traditional mean reserves for one-year term group life insurance policies are equal to one-half the tabular net valuation premium. If the policy reserves are determined in this manner, they will qualify as tax basis life insurance reserves, provided actual ages and net valuation premiums based on recognized mortality tables are used. However, if the reserves are computed by a gross unearned premium method, the reserves do not qualify as life insurance reserves. Moreover, such reserves may not be included as UPR in the numerator of the reserve ratio test.

Annuity policy reserves in Part B also generally qualify to be treated as life insurance reserves. Group annuity deposit-type contracts are used to accumulate funds to provide retirement benefits for employees under qualified pension plans. Before employees retire and they begin to receive their pensions, deposit funds are held by the insurance company as active life reserves. These active life reserves may be reported in Exhibit 8 or they may be reported elsewhere in the annual statement (as for example, in Exhibit 10). Even if these reserves are reported in Exhibit 8, if the group annuity contract does not contain permanently guaranteed annuity purchase rates, that will be used by the insurance company to charge the deposit fund for the cost of guaranteeing the pension when the employee retires, then the active life reserves do not qualify as tax basis life insurance reserves. Under IRC section 816(f), these reserves are excluded from both the numerator and denominator. However, if the insurance company guarantees the pension at the time the employee retires, the company will then set aside a retired life annuity reserve in Exhibit 8 for that pension, and these retired life reserves will qualify as life insurance reserves. This treatment for group annuity deposit contracts also applies to individual deferred annuity contracts. Under such contracts, the accumulated deposits paid in under the contract may eventually be applied, at the policyholder's election, to acquire an immediate annuity at a deferred retirement age. Individual deferred annuity contracts typically include minimum guaranteed annuity purchase rates which, at the time an immediate annuity election is made, are applied to the accumulated deposits to determine the annuity benefit. Single premium immediate annuity contracts, which guarantee an annuity income for the life of an individual, or for a guaranteed period and then for life, may be purchased directly by individuals by the payment of a single premium to the insurer. Reserves held in Exhibit 8 for such contracts will also qualify as life insurance reserves. However, if the annuity is payable only for a guaranteed period of time, whereby none of the annuity payments depend on the survivorship of the annuitant, then any reserves held in Exhibit 8 for such an annuity will not qualify as life insurance reserves. This form of annuity is called an annuity certain. Annuity reserves are also held in Exhibit 8 for another form of group contract called a group single premium annuity contract. This form of contract, also purchased by the payment of a single premium, is used to provide guaranteed immediate and deferred retirement annuities for a group of individuals if the qualified pension plan which covered the individuals should terminate, or for other reasons. Annuity reserves under such contracts will qualify as life insurance reserves if the annuity payments to

the individual annuitant depend on survivorship.

Other Reserves

Supplementary Contracts with Life Contingencies- These are shown in Part C and will normally qualify as life insurance reserves. Supplementary contracts are agreements under which the death benefit proceeds of a life insurance policy are paid to the beneficiary by a series of payments rather than in a lump sum, and constitute a full settlement of the life insurance contract. If the supplementary contract provides that the settlement payments are contingent upon the life of the beneficiary, even if the contract guarantees the payout of the original death benefit amount, the supplementary contract is classified as one "with life contingencies." In effect, the settlement becomes an immediate life income annuity. If the settlement payments do not depend on the survivorship of the beneficiary, but are paid only for a specified period, the supplementary contract is classified as one "without life contingencies," and the reserves for that type of contract are reported in Exhibit 10 of the annual statement. The reserves for supplementary contracts "without life contingencies" will not qualify as life insurance reserves under the Internal Revenue Code, because the settlement payments do not depend on the life of the beneficiary.

Reserves for accidental death benefits- Shown in Part D, and if actuarially computed will qualify as life insurance reserves. Accidental death benefits under an ordinary life insurance policy are supplemental to the basic death benefit, and are offered as an optional additional benefit for an additional premium charge. The accidental death benefit typically equals the basic death benefit and, when it does, the underlying policy is called a "double indemnity" policy.

Reserves for disability benefits- Those under life insurance policies are shown separately between reserves for active lives and reserves for disabled lives. Active life reserves are shown in Part E, and disabled life reserves are shown in Part F. Active life reserves are established to set aside funds to provide for waiver of premium benefits and other disability type benefits in the event an insured person becomes disabled. Under a waiver of premium provision, the basic death benefit insurance remains in effect, but the required policy premiums are waived while the insured remains disabled. Other disability type benefits include income benefits and extension of group life insurance to disabled employees. Disability benefits under ordinary life insurance policies are offered as optional supplemental benefits for additional premium charges. If the active life disability reserves for ordinary life insurance policies are actuarially computed, they will qualify as life insurance reserves. Disabled life disability reserves are established when the insured person becomes disabled and the claim is incurred. If disabled life disability reserves under ordinary life insurance policies are actuarially computed, they will also qualify as life insurance reserves (Rev. Rul. 70-190). Under group term life insurance contracts, which are cancelable life insurance contracts, active life and disabled life disability reserves will not qualify as life insurance reserves under the Code. However, since the disability provisions under most group term life insurance contracts usually take the form of an extension of the death benefit coverage to disabled employees (occasionally referred to as a "waiver of premium" provision), some courts have held that reserves for disabled lives, but not for active lives, maintained under such a group life provision will qualify as life insurance reserves provided the reserves are actuarially computed.

Miscellaneous additional policy reserves- These are shown in Part G. They may or may not qualify as life insurance reserves. Examples of such reserves are: Deficiency reserves, which are specifically excluded from life insurance reserves by the Code.

Deficiency reserves, however, will generally be implicitly included with basic policy reserves reported in Part A. Reserves for immediate payment of claims will usually qualify as life insurance reserves if actuarially computed. These additional reserves are held if, in rare cases, the basic death benefit reserves held in Part A did not reflect this claim payment assumption. Reserves for nondeduction of deferred fractional premiums, and for the return of any unearned premiums, on the death of the insured will qualify as life insurance reserves if actuarially computed. The nondeduction reserve is held if, after the death of the insured, the remaining fractional premiums due for the current policy year are not deducted from the death benefit, and the basic policy reserve reported in Part A was calculated by the mean reserve method. The reserve for return of unearned premiums is held if the unearned portion of the premiums paid for coverage after the death of the insured is returned at death, but only if this policy provision was not reflected in the basic policy reserve reported in Part A.. As a tax matter, the IRS will determine if any miscellaneous reserves reported in Part G, that otherwise would qualify as life insurance reserves, were not already implicitly included in the reserves reported in other Parts of Exhibit 8. A list illustrating those reserves and liabilities that do not generally qualify as life insurance reserves is included under Treas. Reg. 1.801(4)(e). Although this regulation was originally promulgated under former IRC section 801 of the 1959 Act, it applies as well to IRC section 816 of the current tax code.

Chapter 12 RESERVES FOR INCOME TAX PURPOSES (IRC Section 807)

This section describes the rules laid out in IRC section 807 that govern the deduction from taxable income that life insurance companies are permitted with respect to reserves. TRA 1984 incorporated major changes in such reserve deductions, foremost of which was the introduction of specific computational rules in the Code for determining tax basis life insurance reserves and for certain other reserves. The computational rules for life insurance reserves are prescribed in IRC section 807(d). Additional special rules for computing reserves are prescribed in sections 807(e), 811(c)(1), 811(d) through 812 and adjustment rules for changes in the computation of reserves are prescribed in IRC section 807(f).

Effect of Reserves on Taxable Income

Under IRC section 805(a)(2), a life insurance company is allowed to deduct the net increase during the tax year in those reserves listed in IRC section 807(c). Conversely, under IRC section 803(a)(2), **the company must include in gross income any net decrease in such reserves during the tax year.** The net increase or decrease in the applicable tax basis reserves is determined by comparing the closing and opening balances of these reserves [decrease under IRC section 807(a) and increase under IRC section 807(b)]. The closing balance of the reserves is always reduced by the amount of the policyholders' share of tax-exempt interest and, in the case of mutual life insurance companies, by any excess of policyholder dividends over the company's Differential Earnings Amount determined under IRC section 809.

Reserves Taken Into Account—The specific categories of reserves that are taken into account for the purpose of measuring the net increase or decrease in tax basis

reserves are listed in IRC section 807(c). Six categories of reserves and items similar to reserves are listed, as follows (these appear in the same order as they do in the Code):

- Life insurance reserves [as defined in section 816(b)].
- Unearned premiums and unpaid losses included in total reserves under IRC section 816(c)(2).
- Amounts discounted at the appropriate interest rate necessary to satisfy those obligations under insurance and annuity contracts which do not currently involve life, accident or health contingencies.
- Dividend accumulations and other amounts held at interest under insurance and annuity contracts.
- Premiums received in advance and liabilities for premium deposit funds.
- Reasonable special contingency reserves established and maintained to provide insurance for retired persons and/or premium stabilization under group term life or A & H insurance contracts.

Non-contingency Reserves Under IRC section 807(c)(3)

For the purpose of determining the tax basis reserve amount under IRC section 807(c)(3), the interest rate that is used for discounting is the highest of three interest rates: the Applicable Federal interest Rate (AFR); the Prevailing State assumed interest Rate (PSR); and the underlying interest rate used by the life insurance company in determining the guaranteed benefit. The AFR and the PSR are defined in IRC section 807(d). In the case of the third interest rate, the company's underlying rate, it may be the interest rate implicit in determining the guaranteed benefit obligations for which the liability is established, or it may be the interest rate(s) implicit in the gross premium charge for the guaranteed benefits. The identification of the appropriate underlying rate will depend on the specific character of the benefit obligation that is guaranteed and discounted for interest. The underlying interest rate may not be identified by a simple reference to the reserve item in the annual statement, detailed information is required to determine it. In any event, the tax basis discounted value of any reserve item that is classified under IRC section 807(c)(3), may not be less than the net surrender value, if any, available under the contract.

Unpaid Loss Reserves Under IRC section 807(c)(2)

For the purpose of determining the amount of the unpaid loss reserves under IRC section 807(c)(2), the discounting rules of IRC section 846 shall apply for tax years after 1986 (TRA 1986). Section 846 was enacted primarily to define rules for discounting unpaid loss reserves under casualty insurance policies of property and casualty insurance companies. However, the rules were extended to life insurance companies, but only with respect to their casualty-type business, namely A & H insurance contracts. These rules do not apply to loss reserves under life insurance contracts. In regard to unpaid loss reserves under A & H insurance contracts, there has been some uncertainty as to whether these discounting rules apply only to claim reserves held in Exhibit 9 of the Annual Statement, or to both claim reserves and claim liabilities held in Exhibit 11. It appears that IRC section 846 rules apply to both types of unpaid losses under A & H insurance contracts, since IRC section 807(c) cross-references IRC section 805(a)(1) in describing the scope of the rules to life insurance company unpaid losses, and that section deals with deductions for accrued claims. Disabled lives reserves for disability income benefits under noncancelable or guaranteed renewable contracts are normally

treated as life insurance reserves under section 816(b) and valued as IRC section 807(c)(1) reserves. Therefore, such loss reserves would not be subject to IRC section 846. Under the special rules of IRC section 846(f)(6), applicable to A & H insurance, the interest rate for discounting unpaid loss reserves shall be the AFR in effect for the year in which the claim incident occurred. For disability income unpaid losses under cancelable contracts, the insurance company may use a mortality or morbidity table that reflects the taxpayer's experience. For all other A & H unpaid losses, the insurance company may assume that the unpaid losses will be paid in the middle of the year following the year the claim incident occurred. That means that the discounted unpaid loss reserve should reflect one-half year's interest discount at the applicable interest rate.

Life Insurance Reserves Under IRC section 807(c)(1)

The most significant effect that TRA 1984 had on reserve deductions was with respect to life insurance reserves. This category of reserves is defined by IRC section 816(b), but TRA 1984 changed the permitted amount of these reserves for deduction purposes. Prior to the 1984 tax law, the reserve deduction for life insurance reserves were the statutory reserves with certain tax basis adjustments. With the enactment of TRA 1984, life insurance reserves, for purposes of determining a company's taxable income, must be computed by the rules of IRC section 807(d). The following will summarize the substance of these computational rules.

Federally Prescribed Reserve

When the life insurance reserve for any contract is calculated by the rules of IRC section 807(d)(2), the reserve amount is often called the "Federally Prescribed Reserve" (FPR). Although the Internal Revenue Code does not use this term, it will be used throughout this discussion. The amount of the FPR for a contract is determined by applying prescribed standards for each of three elements that comprise the actuarial basis of the reserve for that contract, as Tax Reserve Method; Interest Rate; and Prevailing Commissioners' Standard Mortality or Morbidity Table. The prescribed standards for each of these three elements are described in IRC section 807(d). These will be discussed in General Computational Rules for Federally Prescribed Reserves.

The final amount of the tax basis life insurance reserve for any contract will not necessarily be the calculated FPR. Under IRC section 807(d)(1), that reserve amount shall be the greater of the FPR and the Net Surrender Value (NSV) of the contract. The NSV of a contract is defined as its cash surrender value, less any penalty or charge deducted on surrender, but disregarding any market value adjustment that may be added or subtracted on surrender. Essentially, the NSV is the cash equivalent amount that the policyholder would be entitled to if the policyholder canceled the policy prior to death or maturity. Thus, the NSV becomes a minimum limitation for the FPR in the event the calculated FPR is less than the NSV. Moreover, the tax basis life insurance reserve may not exceed the contract's Statutory Reserve (SR) actually held in the company's annual statement. At all times, therefore, the maximum limitation for the contract's FPR is its Statutory Reserve. For tax purposes, a company must perform a dual valuation of its life insurance reserves by calculating a FPR in addition to the SR for each contract for which it holds life insurance reserves. After doing that, it must compare the calculated FPR against the NSV, and the Statutory Reserve, to ensure that the FPR falls within the minimum-maximum limitations.

The Code and the committee reports to the 1984 Act indicate that this minimum-maximum comparison for the FPR should be performed on a contract-by-contract basis. This presupposes that life insurance companies will calculate the FPR and the Statutory Reserve on a seriatim basis. Notwithstanding that, the committee reports indicate that the minimum comparison of the FPR to the NSV may be performed by grouping policies with similar characteristics. It is not clear how this could be done, nor is it very practical to do so if the grouping method could not also apply to the maximum comparison to the SR. As a matter of practice, life insurance companies rely on their data processing capacity to perform the seriatim comparison and, in fact, do it that way. If grouping approximations were used, it is important from a tax standpoint that the methods used did not result in significantly overstated deductions for the life insurance reserves.

Several other important conditions are placed on these minimum-maximum FPR comparisons. Except for the designated tax reserve method, interest rate and commissioners' tables that must be used to calculate the FPR, the calculation of the FPR must be done on the same actuarial basis as the statutory reserves. For example, if the statutory reserve was calculated using continuous timing functions, or if the mean reserve method was used, then the FPR must be calculated in the same manner. If the mean reserve method was used, then for fractional premium policies there will be deferred fractional premiums as of the statement date. It is required that the tax basis life insurance reserve be adjusted so that the reserve will not be overstated by the effect of such premiums. The reserve must also be adjusted to remove the effect of any premiums due prior to the statement date that were uncollected as of that date. The reason for these adjustments is to properly match income with deductions, because these deferred and uncollected premiums may not be included in the company's gross income until received. In adjusting the calculated FPR for net deferred and uncollected premiums, the net premiums to be used are those by which the FPR is calculated.

Accordingly, statutory reserves are adjusted for net deferred and uncollected premiums on the corresponding statutory reserve basis. The minimum-maximum comparisons should be performed after the premium adjustments have been made for each contract. It may be found that some companies will make the adjustment for deferred and uncollected premiums on an aggregate basis after the seriatim comparisons have been made, frequently subtracting the statutory deferred and uncollected premiums as a conservative measure. If the adjustment was made that way, the company must make certain that it did not result in any significant overstatement of tax basis life insurance reserves. Reserves for all benefits under the contract should be reflected in the FPR comparisons. This is a critical condition because, if any supplementary benefits under the contract are not included prior to the comparison, the NSV minimum limitation might prevail. This could result in a greater tax basis reserve than would otherwise be the case, because many benefits supplementary to the basic benefit do not have cash surrender values. Under IRC section 807(e), there are some exceptions to this general condition. These exceptions pertain to certain designated supplemental benefits, certain substandard risks and certain benefits under some pre-1989 contracts. These exceptions will be explained in text 4.6.3, paragraph (8). The FPR, as calculated by the Federal tax reserve standards, is not permitted to include any deficiency reserve. Simply put, that means that the valuation net premiums calculated by the Federal standards must be used to calculate the FPR, even if those net premiums are greater than the actual gross premiums charged. However, in the comparison to the statutory reserve, any deficiency reserve included in the contract's statutory reserve is allowed to

be included for purposes of the maximum FPR limitation. Hence, if the maximum limitation prevails, and the SR becomes the contract's tax basis life insurance reserve, it will reflect that deficiency reserve. Pursuant to IRC section 811(d), excess interest reserves under any contract should be excluded from the FPR and statutory reserve. Excess interest reserves arise when any interest that is guaranteed to be credited to the contract beyond the end of the tax year is computed at an interest rate that exceeds the greater of the AFR and the PSR in effect for the contract. Simply put, this restriction means that the FPR and SR shall be computed as if such interest guarantees applied only to the end of the tax year.

General Computational Rules for Federally Prescribed Reserves:

The Federal prescribed factors for calculating the FPR are set forth in IRC section 807(d)(2). They consist of three computational factors that define the Federal actuarial basis for life insurance reserves. The three factors consist of a tax reserve method; an interest rate; and a mortality or morbidity table. The purpose of using Federal reserve factors is to limit the amount of tax deductible life insurance reserves to the minimum level under the prevailing valuation standards of the States. Even though the minimum reserve standards of the States apply on an aggregate basis to all of a company's life insurance and annuity reserves, the federal factors must be applied to each separate contract to which the factors apply. These actuarial factors will be described in detail in the following paragraphs.

Tax Reserve Methods

Under IRC section 807(d) (3), the specific reserve method that must be used will depend on the type of contract for which the FPR is calculated. A reserve method becomes a prescribed tax reserve method when it is designated by the NAIC as a prescribed method for statutory reserves. The tax reserve methods by type of contract are life insurance—CRVM; annuity—CARVM; noncancelable A & H—two-year full preliminary term; and long-term care—one-year preliminary term. If a particular contract is not in one of these categories, the method to be used will be the NAIC prescribed valuation method that applies to that contract at the contract's issue date. Interpretation of CARVM or CRVM should be that prescribed by NAIC in the year the contract is issued. If the NAIC has not prescribed a valuation method for a particular type contract, the method to be used will be a method that is consistent with a prescribed tax reserve method and is most appropriate for that type of contract at its issue date. Under the 1984 Act, a limited exception is permitted for noncancelable A & H contracts. Under this exception, a company that calculated its statutory reserves for these contracts by the net level method may elect to calculate its tax reserves by the same method, provided at least 99 percent of the applicable reserves are calculated by the net level method and the company continues to use the net level method for both statutory and tax purposes. Under CARVM, surrender charges under annuity contracts must be deducted from the annuity reserve. For annuity contracts issued before 1985, contingent surrender charges must be deducted from tax reserves. For annuity contracts issued after 1984, contingent surrender charges are deducted only if the contract's "bail-out" interest rate is not greater than the PSR applicable to a whole life insurance contract. A policyholder may surrender an annuity contract and not incur a contingent surrender charge if the actual interest rate credited by the company falls below the "bail-out" rate.

Interest Rates

For contracts issued after 1987, the applicable interest rate to be used is the greater of the AFR and the PSR. For contracts issued before 1988, the applicable rate is simply the PSR.

PSR- The Prevailing State (interest) Rate is the prevailing State assumed interest rate is defined in IRC section 807(d)(4)(B). For any insurance or annuity contract, it is the highest interest rate permitted by the majority of states to be used in calculating statutory life insurance reserves for that type of contract. The rate is determined as of the beginning of the calendar year in which the contract was issued. Prior to 1988, for non-annuity contracts only, a company could elect to use the PSR for the preceding calendar year. This election option was repealed by OBRA 1987, and it is no longer available for contracts issued after 1987. OBRA 1987 also repealed the requirement that the PSR for whole life insurance contracts be used for noncancelable A & H contracts when no such rate was prevailing for such contracts.

AFR- The Applicable Federal (interest) Rate is defined in IRC section 807(d)(4)(A). This rate was introduced by OBRA 1987, and it is the interest rate to be used in calculating the FPR for a contract issued after 1987, if the AFR for any calendar year is higher than the PSR otherwise applicable to the contract. The AFR is the same interest rate used to discount casualty type loss reserves under IRC section 846. An election may be made by the company to recompute its tax basis life insurance reserves every five years, for all contracts issued in a given calendar year, by using the higher of the new AFR established for that fifth calendar year and the original PSR. This may be done only if the new AFR has changed by at least 0.5 percent from the previously used AFR. Once a company makes this election for a given block of contracts, the life insurance reserves must be recomputed in this manner every five years, unless the company obtains the Secretary's consent to revoke the election. Change in reserves resulting from this election is not treated as a change in basis.

Mortality and Morbidity Tables

The mortality or morbidity tables that must be used to calculate the FPR are defined in IRC section 807(d)(5). They are referred to as the prevailing commissioners' standard tables. For any type contract, the prevailing table is the most recent commissioners' standard table (as prescribed by the NAIC) permitted to be used by the majority of states in calculating statutory minimum reserves for that type contract at the time it was issued. When a prevailing table is replaced by a new table, a company may elect to continue calculating its life insurance tax reserves by using the former table in lieu of the new table for a period of three years. The three year period begins with the calendar year following the year the new table became prevailing. There are special rules on the application of prevailing tables. For any contract issued prior to 1948 for which there was no commissioners' standard table when it was issued, the table to be used is the one used in calculating the statutory reserves. For any contract issued after 1947 for which there was no commissioners' standard table when it was issued, the table to be used will be provided by Treasury regulations (see Treas. Reg. Sec. 1.807-1, December 1989). If multiple tables exist, or multiple options under a single table are available, which otherwise satisfy the general requirements for a prevailing table, the table or option to be used is the one that generally produces the lowest reserves.

Source of Interest Rates and Tables

The required interest rates and prevailing tables for calculating the Federal Prescribed Reserve are obtained from published revenue rulings. Applicable revenue rulings that have been published are Rev. Rul. 92-19 and supplements provided in Rev. Rul. 93-58, Rev. Rul. 94-11 and Rev. Rul. 95-4. These four rulings provide a complete array of PSRs and AFRs. New revenue rulings are and will be issued for future years.

Special Rules for Computing Federal Prescribed Reserves

In determining the tax basis life insurance reserve for any contract, IRC section 807(d)(1) requires that the calculated FPR shall not be less than the contract's Net Surrender Value.

Net Surrender Values

IRC section 807(e)(1) provides a definition of a contract's NSV. In general, the net surrender value of any contract is its cash surrender value, as defined under the contract, reduced by any penalty or charge which may be imposed when the contract is surrendered. For tax reserve purposes, however, the NSV should not reflect any "market value adjustment" that might otherwise be required at the termination and surrender of a contract for its cash value. Market value adjustments are made under certain contracts when they are terminated and a cash distribution is made, so as to adjust its cash distribution value from a book to a market value in recognition of any difference between a new money interest rate and the actual interest rate the contract's assets were earning at the time of its surrender. A market value adjustment decreases the NSV if the new money rate is higher than the contract's actual earnings rate, and it increases the net surrender value if the converse is true. Group annuity contracts frequently have these market value adjustments imposed at surrender. For group annuity contracts, also referred to as group pension contracts, the net surrender value shall be determined as the balance in the "policyholder's fund," reduced by any penalty or forfeiture imposed on surrender, but ignoring any market value adjustment. Pension plan contracts are explicitly defined under IRC section 818(a).

Group Contract Issue Date:

In calculating a contract's FPR, the interest rate and the mortality/morbidity table are determined by reference to the contract's date of issue. For individual contracts, the date of issue is specified on the policy form. For any group insurance or annuity contract, IRC section 807(e)(2) defines the date of issue as, generally, the date the master plan is issued. However, if a benefit becomes guaranteed to a participant after the master plan issue date, then the date the benefit becomes guaranteed must be used as the issue date for calculating the FPR for those benefits.

Supplemental Benefits

In general, all benefits under a single contract must have their life insurance reserves recomputed by the Federal reserve standards of IRC section 807(d)(2), and that total FPR for all benefits combined must be compared to the contract's NSV under IRC section 807(d)(1). However, IRC section 807(e)(3) provides special treatment for certain specified supplemental benefits for which separate statutory reserves are held by the life insurance company in its annual statement. For any of the listed supplemental

benefits, the reserves do not have to be recomputed by the Federal standards. Rather, the statutory reserves for those supplemental benefits are used, and those statutory reserves are then added to the FPR for all other contract benefits before the NSV comparison is effected. Furthermore, if any of the listed supplemental benefits meet the definition of a "qualified FPR supplemental benefit," then such a benefit may be treated as if it was provided under a separate contract in determining the total tax reserve. That means, for a "qualified supplemental benefit," the statutory reserves are used, but those statutory reserves are added in as life insurance tax reserves after the NSR comparison is effected for all other benefits under the base contract. This special treatment, permitted under IRC section 807(e)(3)(A), will often result in a higher tax reserve for the contract than if the reserve comparison had included the qualified supplemental benefit. That result will occur when the NSV exceeds the FPR for all other benefits under the contract, thus becoming the tax reserve for those benefits, to which the statutory reserve for the qualified supplemental benefit is added to produce the contract's total tax reserve. In order to be eligible for special treatment, the benefit must be one of the supplemental benefits listed in IRC section 807(e)(3)(D), which are guaranteed insurability; accidental death or disability benefit; convertibility; disability waiver benefit; and other benefits prescribed by regulations. In order for any of the listed supplemental benefits to be treated as a "qualified supplemental benefit," the supplemental benefit must satisfy the two requirements specified under IRC section 807(e)(3)(C): A separate premium or charge for the supplemental benefit is identifiable, and the NSV of any of the contract's other benefits is not available to fund the supplemental benefit.

Substandard Risks

IRC section 807(e)(5)(A) also provides for special treatment with respect to substandard risks, similar to that given to qualified supplemental benefits. The amount of any life insurance reserve for any "qualified substandard risk" is also computed separately from all other benefit reserves under the contract. That is, the separate tax reserve for such substandard risks is not included with other tax reserves under the contract before the comparison is made with the NSV. However, in contrast to a reserve for a qualified supplemental benefit, the reserve for a qualified substandard risk must be computed using the federal reserve standards of IRC section 807(d)(2); the tax reserve is not simply the statutory reserve, as would be the case for the supplemental benefit. In order for a substandard risk to be deemed "qualified," the following requirements under IRC section 807(e)(5)(B) must all be satisfied: A separate statutory reserve for the risk must be maintained in the company's annual statement. A separate premium or charge for the risk is identifiable. The NSV under the contract may neither be increased nor decreased in value because of such risk. The NSV under the contract cannot be used regularly to pay premium charges for such risk. Two limitations apply to the reserve for qualified substandard risks, as provided under IRC section 807(e)(5)(C) and (D), as follows: The amount of the life insurance reserve cannot exceed the sum of the separately identifiable premiums charged for the risk, plus interest and less mortality charges for the risk. The aggregate amount of insurance in force under those contracts to which the special rule of IRC section 807(e)(5)(A) applies may not exceed 10 percent of the company's total insurance in force under all of its life insurance contracts (excluding its term insurance). For any insurance in force above the 10 percent limitation, the substandard risk is reflected by an appropriate adjustment to the prevailing mortality table otherwise used to compute the FPR for the contract's underlying benefits, as opposed to adding an additional FPR to cover the substandard risk.

Certain Term Life Insurance and Annuity Benefit Riders

Special treatment under IRC section 807(e)(6)(A) is given to certain term insurance and annuity benefits issued as riders under life insurance contracts issued before 1989. The special treatment is the same as provided to qualified supplemental benefits and qualified substandard risks, in that a separate computation of the tax basis life insurance reserve is allowed and that reserve is excluded from all other contract reserves in the comparison with the contract's NSV. However, as for qualified substandard risks, the tax basis reserve must be computed using the Federal reserve standards of IRC section 807(d)(2). A life insurance contract under which this special treatment is provided must have been issued before 1989 under a plan of insurance filed by the life insurance company issuing that contract in at least one State before 1984, and that plan of insurance is currently on file in the appropriate State for that contract. The specific term insurance or annuity benefits for which the special treatment applies must meet the same two requirements for supplemental benefits to be considered "qualified", as follows: A separate premium or charge for the rider benefit is identifiable. The NSV for any of the contract's other benefits is not available to fund the applicable term insurance or annuity benefit.

Unearned Premium Reserves on Cancelable A & H Contracts

Under IRC section 807(e)(7), special rules apply in respect to the recognition for tax deduction purposes of unearned premium reserves and premiums received in advance held under any insurance contracts not described in IRC section 816(b)(1). The contracts for which these rules do apply, therefore, are cancelable A & H insurance contracts, which are primarily group A & H insurance contracts. The general rule under IRC section 807(e)(7)(A) is that only 80 percent of the unearned premium reserves and advanced premiums that the company would otherwise have included as reserve balances under IRC section 807(a) and (b) shall be included as reserve balances under those respective sections. The 20 percent reduction in these types of deductible reserves became effective for taxable years beginning on or after September 30, 1990. A transitional rule under IRC section 807(e)(7)(B) applies for taxable years beginning on or after September 30, 1990, but not beginning after September 29, 1996. Thus, the transition period is six (6) taxable years. Under this transitional rule, the life insurance company must include in its gross income, for each of the six transition taxable years, an amount equal to $3\frac{1}{3}$ percent of its closing reserve balance for its relevant IRC section 807(e)(7) unearned premium reserves and advance premiums for the company's most recent taxable year beginning before September 30, 1990. Thus, if the company's first transition tax year was 1991, then its opening and closing reserve balances for the 1991 tax year would be 80 percent of the relevant reserves, but it would include in its 1991 gross income $3\frac{1}{3}$ percent of its 1990 closing reserve balance for the relevant reserves. Then, for its 1992 tax year, it would include in that year's gross income another $3\frac{1}{3}$ percent of its 1990 closing reserve balance for the relevant reserves; and, so on, for the rest of its transition years, with the last $3\frac{1}{3}$ percent in the 1996 tax year.