

IAA Risk Book
Chapter 14 - Financial Statements
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1. Executive Summary

This paper has been produced to help readers unfamiliar with insurer financial statements gain some knowledge of the different types of financial statements insurers produce as well as to understand their purpose. The paper is limited in that it does not go into great detail concerning the elements of the financial statements but rather keeps at a level that enables a high level understanding. It is focussed on the more general components of financial statements rather than on items specifically related to risk or risk margins. This paper should be read by anyone who wishes to have this overview.

Financial statements provide insurer stakeholders with information useful for making business decisions and to give insights into the development of the Company. Financial statements are prepared in several different forms and according to many different design concepts according to the needs of each stakeholder. Common components include (but are not limited to),

- Statement of financial position – also known as a balance sheet; provides assets, liabilities and equity at a given date
- Income statement – also known as a profit and loss statement or statement of revenue and expenditure; provides the profits of the business between two dates
- Cash flow statement – movement of cash over a period
- Change in equity – movement in equity over a period

Financial statements are frequently accompanied by various forms of supporting disclosures.

Insurer stakeholders include supervisors, policyholders, owners, investors, rating agencies, tax authorities, employees etc. Each stakeholder has their own objectives in selecting financial statements useful for their purposes. These objectives may dictate the form of statement that is most useful to them (e.g., supervisors may make greater use of the statement of financial position while tax authorities may use the income statement) as well as the design concepts that underlie those financial statements (e.g., supervisors may require that financial statements useful for their purposes use specific valuation methods for assets and liabilities).

A useful quality of financial statements for some insurer stakeholders (e.g., supervisors, rating agencies etc.) is their ability to compare the results of entities conducting similar types of business (e.g. insurers as distinct from manufacturers) within a jurisdiction as well as globally.

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Standard setters play an important role in developing financial statement standards. They may include professional accountancy organizations (e.g. the International Accounting Standards Board or the Financial Accounting Standards Board), financial sector supervisors and, in the case of insurance and pensions, professional actuarial organizations.

This chapter focuses on the specific financial statement issues faced by insurers as seen from an actuarial perspective.

The key messages of interest to stakeholders interested in insurer financial statements are:

1. Unique features of insurance make the financial statements for insurers highly sensitive to the design concepts employed in those statements, particularly with respect to the valuation of insurance obligations and assets, as well as the components of the income statement and the presentation of equity.
2. Unique features of insurance include the (frequently) long term nature of its insurance obligations; the need for professional actuarial judgement in the valuation of future insurance obligations taking into account (among other things) the timing, amount, variability/uncertainty etc. of the underlying risk exposures; and the rate of return expected from the supporting assets.
3. Stakeholders most interested in insurer financial strength, sale and/or solvency tend to focus on financial statement design concepts that include the following (not all are mutually consistent):
 - a. Economic valuation methods
 - b. Valuation of all guarantees and options including policyholder behaviour and product adjustability
 - c. Ability to discern separately best estimates and any associated margins of conservatism
 - d. Consistency of valuing both assets and liabilities
 - e. The availability and quality of the capital resources
 - f. Shocks/stress tests/capital requirements to illustrate the capital needed to protect against adversity
4. Stakeholders most interested in the performance of insurers tend to focus on financial statement design concepts that include the following:
 - a. Definition of what constitutes profit
 - b. Emergence of profit over time (i.e., What is the proper emergence of profit for long duration insurance contracts? At issue? Over the length of the contract?)
5. Actuaries assist stakeholders in the design, preparation and use of insurer financial statements in many ways including,
 - a. The development, selection and analysis of financial statement design choices
 - b. The preparation of various actuarial related estimates involved in financial statements including the projection of future cash flows on policies in force.

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Actuarial estimates need to be updated regularly as new experience or information regarding the performance of the policies and their underlying risks becomes available.

- c. The interpretation of various financial statement estimates for relevant stakeholders, not only their current view but also as to their possible future values.

2. Purposes of Financial Statements

Financial statements provide insurer stakeholders with information useful for making business decisions. Such decisions typically include consideration of a wide variety of other information and analysis (e.g., risk management, capital management, strategic, economic, operational, legal etc. input) relevant to the decisions being made.

Financial statements are prepared in several different forms and according to many different design concepts according to the needs of each stakeholder. Common components include (but are not limited to),

- Statement of financial position – also known as a balance sheet; statement of assets, liabilities and equity at a given date
- Income statement – also known as a profit and loss statement or statement of revenue and expenditure
- Cash flow statement – movement of cash over a period
- Change in equity – movement in equity over a period

The statement of financial position presents information about the financial strength (the excess of assets over liabilities) of the insurer. The income statement presents the profit (or loss) that was made in the reporting period. The cash flow statement is useful in presenting the movement of cash as distinct from the many non-cash accruals and changes to asset and liability provisions common in insurer operations. This information is used by stakeholders, which include investors, regulators, management, employees and policyholders, to make decisions relevant to their role.

Financial statements are frequently accompanied by various forms of supporting disclosures. Accounting standard setters in some jurisdictions may deem certain forms of disclosure to be a formal part of the financial statements and therefore be subject to audit. Disclosures typically provide additional, more detailed, information about the information in the financial statements as well as additional information regarding the nature of expenses, assets, liabilities and risks to which the company is exposed. Management may also prepare a commentary which will include more details on the underlying business such as sales volumes, sources of earnings, line of business performance, geographic distributions, critical accounting estimates and other elements of interest to readers.

Financial statements are prepared as frequently as is expected by various stakeholders. Depending on jurisdiction, they may be prepared annually, half-yearly, quarterly and/or monthly. When viewed over multiple time periods, the financial statements can be used to analyze trends in the results of company operations.

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Due to the many different perspectives of insurer stakeholders, as well as differing geographic views on these matters, there are many different sets of financial statements, each employing unique sets of design concepts chosen by or for their particular stakeholders. Many stakeholders value being able to compare insurer financial results among their peers and across those conducting similar business. The need for comparability is particularly strong among stakeholders interested in public reporting (e.g., investors, policyholders, analysts, rating agencies, auditors etc.) and supervisory reporting (e.g., financial sector supervisors, rating agencies etc.). In recent decades, insurer stakeholders are seeking greater international comparability of insurer financial statements (for both public and supervisory reporting purposes). The advances by the IASB in insurer public reporting and the IAIS with respect to insurer capital requirements (a form of supervisory reporting) signal the heightened focus on the need for international insurer financial statement comparability.

The financial statements employed by different stakeholders use (in whole or in part) the design concepts codified by various accounting standard setters (e.g., IASB, FASB etc.). The design concepts used for different purposes (e.g., public versus supervisory reporting) may differ.

One of the significant elements of insurer financial statements is the amount of insurance obligations (e.g., also called insurance liability, reserves, technical provisions or other similar terms). Due to the specialized nature of these obligations they are frequently subject to accounting standards specific to their determination.

Their determination also requires specialized actuarial expertise. The work of actuaries is governed by a professional code of conduct, standards of practice and continuing education requirements. Their work is subject to a disciplinary process and in many cases, to peer review. Actuaries are subject to actuarial standards in the determination of amounts related to insurance obligations within a set of financial statements. These standards may be tailored to the intended financial statement purpose (e.g. public versus supervisory reporting) or they may be more general in nature.

The preparation of public insurer financial statements also involves auditing professionals who are subject to their own set of professional standards.

While the various accounting standard setters are prominent in codifying the design concepts to be used in financial statements for some purposes (e.g., public financial reporting), specific stakeholders may require that the forms of financial statements prepared for their purposes be subject to additional or different design concepts/requirements (e.g. for supervisory reporting). Some examples of the various reporting purposes include:

- **Public reporting:** For the larger insurance groups this will normally be on one of the two globally used accounting bases, International Financial Reporting Standards (IFRS) or US Generally Accepted Accounting Concepts (US GAAP). The rules and concepts for these accounting bases are established by specific accounting bodies, namely the International Accounting Standards Board (IASB) for IFRS and the Financial Accounting Standards Board (FASB) for US GAAP.
- **Tax reporting:** Accounts on which a company pays tax which will normally be based on the location of the legal entity writing the business. Governments

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frequently establish their own accounting basis for determining taxable income but often these are simply adjustments to existing bases, such as US statutory, IFRS, UK GAAP, Swiss FER, etc.

- **Supervisory reporting:** Supervisory financial reporting provides the supervisor with a clear view of the financial strength of the insurer. Not surprisingly, the supervisors will focus on the statement of financial position form of the financial statements. Due to this focus, the supervisor will often require that one or more aspects of the financial statements be prepared on a more conservative basis than public financial reporting. Frequently, it is the policyholder obligations which are to be more conservatively valued by the actuary. In almost all jurisdictions (Canada is one exception) the supervisory and public reporting are separate. Supervisory reporting differs from jurisdiction to jurisdiction although with the introduction of Solvency II in the European Union and the ICS by the IAIS, a greater commonality across jurisdictions than is currently the case may be anticipated. Important in the development of useful supervisory reporting is that the design concepts they employ be consistent with (or integrated with) their associated supervisory solvency reporting (e.g. capital requirements).
- **Solvency reporting.** The purpose of solvency reporting is to explicitly measure the financial strength of a company and its ability to meet policyholder obligations, particularly in significantly stressed conditions. Typically, this reporting builds from the statement of financial position and features a determination and comparison of available versus required capital, a key measure of financial strength. Increasing levels of supervisory attention, action and or intervention are triggered as the financial strength of an insurer falls below insurer/supervisor agreed upon levels. Increasingly, the design of solvency reporting is being integrated with the design of overall supervisory reporting so that the two work together as an integrated view of financial strength. Originally designed for supervisory purposes only, such reporting is increasingly being used publicly by insurers. Examples of solvency reporting include US RBC (risk based capital), Solvency II for the European Union, the Swiss Solvency Test in Switzerland, C-ROSS for China etc. In addition, Companies may internally look at their solvency position under different measures such as the bases used by rating agencies or using their own economic capital methodology.
- **Economic reporting:** In addition, insurers may present a financial statement based on economic concepts. This is particularly true for life companies as the traditional accounting methods described above do not recognize the "hidden value" of their in-force business. Many life companies publish a set of accounts under Market Consistent Embedded Value (MCEV) concepts which are designed to show market based economic values. Some companies produce economic financial statements using their own economic accounting concepts.

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3. Financial reporting principles

Financial reporting principles vary to meet the needs of its key users and stakeholders. In this section the needs for public and supervisory (and solvency) reporting will be outlined along with actuarial involvement with each.

I. Public reporting

For example, public reporting is subject to the standards set by an independent accounting standards body. Two well recognized bodies include the International Accounting Standards Board (IASB) and the Financial Accounting Standards Board (FASB).

On the other hand, the financial reporting design of both supervisory and solvency reporting are driven by the needs of the relevant supervisors of the jurisdictions in which the insurer operates. In setting their supervisory reporting requirements, some supervisors find the public financial reporting standards (in whole or in part) useful as a reference point from which to build their requirements.

The actuarial profession has been active and influential in the design of financial reporting for insurers, both internationally through the IAA and locally in each jurisdiction through the various member actuarial associations of the IAA. Within the IAA, the Insurance Accounting Committee (IAC) and the Insurance Regulation Committee (IRC) are active in developing actuarial views on financial reporting design. The IAC tends to focus on public reporting while IRC focuses on supervisory and solvency reporting.

Some examples of the IAA's contributions to financial reporting design include,

- A Global Framework for Insurer Solvency Assessment (2004)
- Measurement of Liabilities for Insurance Contracts: Current Estimates and Risk Margins (2009)
- Development of International Actuarial Standards of Practice (ISAPs) for IFRS reporting (ongoing)
- Consultation and feedback to the IAIS on its proposals for an International Capital Standard (ICS) (ongoing).

In building a public financial reporting framework, major accounting standard setters make use of common concepts such as relevance, faithful presentation, comparability, verifiability, timeliness, understandability etc., to provide a basic framework so that users of the financial statements are not misled. In designing a financial reporting framework, stakeholders will place greater importance on the concepts which are of greater relevance to them.

Both the IASB and FASB have been working to develop a conceptual framework for financial reporting. For illustration (and brevity), this chapter references the Conceptual Framework as published by the IASB¹. Readers are encouraged to review FASB's own work on the Conceptual Framework².

¹ "Conceptual Framework for Financial Reporting", Exposure Draft, May 2015, IASB, www.ifrs.org

² www.fasb.org

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The application of the Conceptual Framework (CF) topics to insurance and insurers, either for reporting income or inclusion of the value of insurance liabilities in the statement of financial position, has long been a complex topic for all public (and supervisory as well) financial statement standard setters. Consequently, some of these CF topics will be explored further in this IAA Risk Book chapter due to their relevance to insurer financial reporting including,

- qualitative characteristics of useful financial information
- role of financial statements
- elements of financial statements
- measurement.

A. Qualitative characteristics of useful financial information

The CF describes relevance (includes materiality) and faithful presentation as being fundamental qualities for useful financial information. The latter quality refers to the need to represent the economic substance not just the legal form of an accounting entry. In turn, this invokes the need for completeness, neutrality and freedom from bias.

Further, the CF lists enhancing qualitative characteristics as including, comparability (i.e., between similar items and entities with similar items), verifiability, timeliness and understandability.

The connection of some of these characteristics to the actuary's work may be summarized as follows;

1. Relevance (including materiality) - The estimates prepared by the actuary (e.g. technical provisions) should be used in the financial statements and be relevant to the user of the financial statements. If the user is expecting a forward looking view of the risks of the insurer then the actuary's assumptions should not be solely based on past experience but also incorporate the impact of trends, loss development etc beyond the valuation date and/or date of last experience. Relevance also requires the actuary to consider whether the experience studies being considered are fully relevant to the risks undertaken by their specific insurer. Materiality is a commonly used term within accounting circles but it is also meaningful for actuaries in their work as well to ensure that due care is afforded to estimates of risks which are of significance to the insurer. Other associated terms may be proportionality (how much work to employ in preparing an estimate) and risk-based (greater attention paid to larger more impactful risks). Another chapter in this risk book explores the similarities, differences and importance of these related terms.
2. Economic substance - This characteristic requires the actuary to consider all aspects of the contracts being valued (i.e., technical provisions) including such things as policy guarantees, policyholder behavior, policy options, contract renewability, adjustability features etc.
3. Neutrality and freedom from bias (including verifiability) - Many actuarial estimates (e.g., present value of future policy obligations) cannot be determined

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with precision as considerable uncertainty surrounds some combination of the probability, timing and amount of payments under each insurance contract. Regardless, actuaries select methods according to their professional judgement and expertise which are best suited to provide useful estimates of value. Frequently, actuaries can inform users of the financial statements as to the expected value and current estimate as well as additional information regarding uncertainty risk. Freedom from bias and verifiability require that another actuary might reach similar conclusions if armed with the same information about the risks. In addition to adherence to actuarial standards, actuaries use peer review to ensure their work is free from bias and can be verified by others. An extreme view of this characteristic is that it can also be achieved by strictly mandating the methods and assumptions to be used. This extreme view is not generally observed as its adoption would be contrary to other characteristics of the CF.

B. Role of financial statements

The Conceptual Framework is based on the fundamental assumption that the entity will continue as a going concern for the foreseeable future. Should this not be the case the financial statements may need to be prepared on a different basis. The use of the going concern assumption for insurer financial statements can be complex to implement by the actuary. Typically, the going concern assumption entails the insurer continuing in business but future new sales are not included in the financial statement estimates. This distinction can be complex for the actuary to implement throughout their work. Some examples of the actuary's considerations include,

- Contractual renewal premiums will continue to be paid when due
- Continued on-going management of the policies by the insurer is assumed (e.g., investment management, expense management, management of adjustable product elements by the insurer etc.)
- Policyholder behavior (e.g., lapses, surrenders) will continue consistent with the going concern assumption

C. Elements of financial statements

Financial statements provide information about the financial effect of transactions and other events by grouping them into various elements of the financial statements. Of particular relevance to insurance is the definition of a liability, especially for an insurance contract.

Indicative of the difficulty in distinguishing between insurance and other sorts of financial business, the IASB concluded in IFRS 4, Insurance Contracts that,

An insurance contract is a “contract under which one party (the insurer) accepts significant insurance type risk from another party (the policyholder) by agreeing to compensate the policyholder if a specified uncertain future event (the insured event) adversely affects the policyholder.

Other difficult elements within insurer financial statements relate to the definitions of income and expenses, reporting the substance of contractual rights and obligations and the unit of

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account. These elements have been subject to further elaboration by the IASB in IFRS 4, Insurance Contracts.

The accounting bases of IFRS and US GAAP are focused on the emergence of profit and attempt to show profit emerging over the duration of the underlying business. This is done by either (i) locking in slightly conservative assumptions at contract inception such that no profit at inception occurs but then emerges gradually over the duration of the underlying contracts or by (ii) including risk type margins on top of best estimates which also avoids taking any profit at contract inception and profits emerge as the risk margin reduces over the policy term. In both cases actual experience which differs from the underlying assumptions will be immediately reported as profit or loss. The determination of investment profits is rather complex and there are various rules for how assets are valued. In certain instances, gains are only recorded when they are actually realised but unrealised losses may go through the profit and loss account once the value of an asset is considered to be permanently impaired.

D. Measurement

The CF describes two broad approaches to measuring value as being either historical cost or current value. In turn, the latter category is considered to consist of fair value as well as value in use (fulfilment value). This topic is likely the most challenging subject for insurance obligations since historical cost and fair value are not viable measurement options. Current thinking as contained in IFRS 4 is that some sort of fulfilment value determined by discounting projected cash flows should be used. Such a value requires complex consideration of prudence in assumptions, contract boundaries, inclusion of all options and appropriate rates of discount – to name but a few. Given the nature of the contingencies to which insurance contracts are subject as well as the length of some types of contracts, the value of insurance obligations is materially sensitive to the assumptions used.

Due to their expertise in this area, actuaries and actuarial standards bodies have been engaged with accounting standard setters for many years on the best approaches to use for measurement³. The CF reminds the preparers of financial statements that the measurement approach chosen should meet the qualitative characteristics of relevance and faithful representation.

The issues surrounding measurement are important for both public and supervisory reporting although supervisors have a keen interest in adequate provision for risk and uncertainty. On the other hand, prudence for public reporting is limited, “assets and income are not overstated and liabilities and expenses are not understated”⁴.

This is best illustrated by considering the present value of future claims to be paid from business already written. This value is normally not known with certainty but can be estimated. In the case of life insurance, it is a question of estimating the number of future deaths in each future period and the amounts that will be paid. For motor insurance it is the claim amounts yet to be paid from events that have already occurred and again is a question of estimating when the claims will be paid and for how much. With life insurance there is normally a known policy amount whereas for motor insurance it will depend on the cost of

³ “Measurement of Liabilities for Insurance Contracts: Current Estimates and Risk Margins”, IAA 2009

⁴ IASB Conceptual Framework para 2.18

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repairs at the time of settlement or the cost of providing long term care in the case where there is a serious injury.

As these amounts are unknown they have to be estimated and this is usually done by using past experience, current knowledge and allowing for any likely future trends. In the vast majority of cases the evidence does not lead to a single definitive answer but rather a plausible range of answers depending on one's view of the data considered and one's wish or natural inclination to be optimistic or pessimistic. Hence there is usually a range of plausible estimates and the different financial reporting bases lead companies to select estimates at different positions in this range.

Within the range just described there is the concept of a "best estimate" or "current estimate" which is the mean of the distribution of plausible estimates. The selection of the "current estimate" is dependent on actuarial judgement. As such the current estimate choice will vary depending upon the view of the actual person providing the estimate. However, the range of answers should be within a plausible range and be able to withstand the scrutiny of peer review.

II. Supervisory and solvency reporting

Insurance supervisors in each jurisdiction develop and maintain supervisory and solvency reporting that meets their needs and authorities granted to them under their enabling legislation. The combination of supervisory and solvency reporting is used in combination to help the supervisor assess the financial strength of the insurer. Of course, the full range of supervisory tools, including ORSA⁵, are available to support that assessment process.

The International Association of Insurance Supervisors (IAIS) maintains standards which serve as a safe harbour for its member supervisory bodies. Only one of these Insurance Core Principles (ICPs) relates to financial reporting for supervisory purposes (i.e., ICP 14, Valuation). ICP 16, ERM for Solvency Purposes and ICP 17, Capital Adequacy focus on supervisory expectations related to solvency. At the present time the IAIS is in the process of developing an International Capital Standard (ICS) for internationally active insurance groups (IAIGs).

Supervisory reporting by insurers typically includes a set of financial statements which meets their needs. In almost all jurisdictions the design of this set of financial statements is determined by the supervisor⁶. Supervisors also set capital requirements which when taken together with the statement of financial position (supervisory reporting basis) provide the supervisor with sufficient advance warning of insurer difficulty and help to ensure that policyholders are protected at an appropriate level of confidence⁷.

Common valuation concepts sought by supervisors are included in the standards of ICP 14. The first 3 standards relate to both assets and liabilities:

- The valuation of assets and liabilities is undertaken on consistent bases

⁵ See Chapter 10 of the IAA Risk Book for more information on ORSA

⁶ Canada uses IFRS statements for supervisory purposes as well as public reporting

⁷ For additional background see the IAA publication, "A global framework for insurer solvency assessment", 2004

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- The valuation of assets and liabilities is an economic valuation
- An economic valuation of assets and liabilities reflects the risk-adjusted present values of their cash flows

The remaining standards relate specifically to the technical provisions:

- The valuation of technical provisions exceeds the Current estimate by a margin (Margin over the Current estimate or MOCE).
- The Current estimate reflects the expected present value of all relevant future cash flows that arise in fulfilling insurance obligations, using unbiased, current assumptions
- The MOCE reflects the inherent uncertainty related to all relevant future cash flows that arise in fulfilling insurance obligations over the full time horizon thereof
- The valuation of technical provisions allows for the time value of money. The supervisor establishes criteria for the determination of appropriate rates to be used in the discounting of technical provisions.
- The supervisor requires the valuation of technical provisions to make appropriate allowance for embedded options and guarantees.

This requirement for the consistent treatment of the assets and liabilities is very important to supervisors to help ensure that the capital position of the insurer is meaningfully determined and matches the primary need of the supervisor to protect policyholders. This requirement for valuation on “consistent bases” may be similar to the CF concept of comparability but the IAIS standard is very clear.

The emphasis in supervisory and solvency reporting is on the ability of the insurer to be able to meet policyholder obligations with a high degree of confidence and therefore tends to use more conservative assumptions either in statement of financial position (for supervisory purposes) or via the capital requirements, or in combination. This frequently results in a higher level of conservatism in the statement of financial position for supervisory purposes than for public reporting. In public reporting, actual performance over a period is usually more important than financial strength.

While the IAIS standards represent a “safe harbor” for the supervisors in each jurisdiction, and supervisory and solvency reporting requirements currently exhibit considerable variety globally, there is growing supervisory momentum to supervise insurance groups more effectively using more comparable methods.

As previously mentioned in this chapter, the actuarial profession has contributed and continues to contribute to the needs of supervisors for supervisory financial reporting and solvency reporting design. Beyond the contributions of the professional actuarial associations, individual actuaries are active contributors through their roles as supervisors and within the insurance industry itself.

A unique aspect of the combined supervisory and solvency reporting bases is that the total balance sheet, including the solvency buffer must be sufficiently prudent, consider all risks in the short and long term, and be balanced in terms of not being unduly conservative nor

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offering arbitrage opportunities with other financial sectors. This concern for the “tail of the distribution”, Black Swan scenarios and systemic risk provides most interesting challenges and debate among and between actuaries and supervisors. Distinct from public financial reporting, supervisory financial reporting tends to be more focused on the statement of financial position than the statement of income. In addition, it tends to be more future focused (i.e., use of realistic values) than some aspects of public reporting which may retain reference to historical values.

Excellent techniques for assisting insurers and supervisors alike in understanding the strength of their solvency position lie in stress testing⁸ and ORSA⁹. The complexities of insurance group risks are the subject of another IAA Risk Book chapter¹⁰. A further challenge for supervisory and solvency reporting is to appropriately recognize risks in the short term (say a one-year time horizon as this is frequently regarded as a target horizon for supervisory action in the event of severe insurer weakness) while retaining appropriate vigilance (i.e., not ignoring or minimizing) over risks that may emerge in the medium to longer term. This last topic is covered separately in other chapters of this Risk Book¹¹.

III. Economic reporting

Economic reporting is still very much in a development stage. There are as yet no set of independent standards and the accounts are generally subject to an entity's own decisions.

For economic reporting all future cash flows are valued using best estimate assumptions but including a risk margin to allow for the uncertainty in the estimates. There is no restriction on taking profits up front and value is created when business is written rather than over the period when risk is actually covered. Assets are valued by reference to observable market prices or estimated to the same standard where there is no such observable price. Economic based accounts, where the emphasis is to produce a profit and loss statement together with a balance sheet based on observable current market conditions, tend to use assumptions which are best estimates and then allow for a separately identified risk margin or risk capital to value the uncertainty around the best estimate assumptions.

Actuaries play a key role in the development of key values in economic reporting. They also play a key role in helping insurer management and Boards understand the differences between economic reporting capital levels and those required by supervisors. It is important as well that the sensitivities of each approach to key risks be understood, compared, analyzed and justified appropriately.

IV. Summary

In summary, supervisory financial statements are based on the theme of policyholder protection while economic accounts are based on the theme of market value and economic wealth generation. As a result, readers of these financial statements need to bear in mind that supervisory financial statements tend to provide a conservative view of an insurer while economic accounts may give a market type value but this comes with short term volatility in

⁸ IAA paper “Stress Testing and Scenario Analysis” 2013

⁹ Chapter 10 of this IAA Risk Book, “ORSA”

¹⁰ Chapter 8 of this IAA Risk Book, “Addressing the consequences of groups”

¹¹ Chapters x and y of this IAA Risk Book

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line with market volatility. Public financial reporting fit somewhere in the middle and do somewhat dampen volatility as well as producing a more even emergence of profit.

4. Components of Financial Statements

The principal components of financial statements include a statement of financial position (or balance sheet), an income statement, a cash flow statement and a series of disclosures giving further or supplementary information.

I. Balance Sheet

The balance sheet is a financial assessment at a particular point in time of the value of assets held by a company as well as the value of its liabilities. The difference in value between the assets and liabilities is the capital/equity of the company.

A. Assets

For insurance accounting purposes assets are resources owned by a company which have future economic value that can be measured and can be expressed as a monetary value in a currency. The emphasis is on assets that can be reasonably measured in financial terms, which therefore exclude some items that are valuable but cannot be easily or reliably measured, such as the company's reputation, customer base, brands and management team. A precise definition of an asset must exist in order for consistent identification and measurement.

The main types of assets that are normally included on insurer balance sheets are investments such as bonds, mortgages, property and equities. There are various methods prescribed for determining the value of assets reported in the financial statements. The amortized cost method for a bond increases or decreases the initial purchase price to the maturity value ratably over time. It has no relationship to any subsequent market value. Market values may be used for assets where there is a broad and liquid market based on actual prices for recent transactions. If there is a thin and illiquid market, mathematical models may have to be used to ascribe a reported value. Alternatively, values for comparable instruments may provide input to determine a reported value.

Other types of assets are cash, premiums receivable from policyholders, other receivables, reinsurance recoverables, deferred tax assets and deferred acquisition costs (DAC).

Deferred tax assets arise when liabilities exist that are not immediately deductible for the calculation of taxable income, but eventually will be a tax deduction. When that occurs they will lower the otherwise payable income tax.

DAC assets arise from the payment of acquisition expenses up front. Some accounting systems allow deferring the recognition of those expenses until the related income is recognized. For example, an insurer of long duration contracts may pay a large commission up front, in anticipation of a long stream of renewal premiums. The DAC asset is set up when the up-front commission is paid, and then expensed over time as the renewal premiums come in.

Financial reporting under GAAP or IFRS may allow for intangible assets to be reported, such as the Value of Inforce business which represents the present value of profits on existing

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business. Many of these intangible assets are only recognized as a result of an acquisition, when the unrecognized intangibles of an acquired business are required to be recognized and measured at their estimated market value (i.e., “fair value”)

In a company or portfolio purchase situation, goodwill may also appear as an asset. The original goodwill is the excess of the amount paid over the estimated fair value of the net assets of the company or portfolio. This most often represents the value of business yet to be written.

In an economic framework the assets are valued at market value where there is an available market price. Where there is no readily available price, including incoming insurance related cash flows then the values are estimated. The economic balance sheet may, or may not, include a value for future new business yet to be written.

B. Liabilities

Liabilities are debts or obligations that arise during the course of business. In a financial accounting sense, liabilities are the future sacrifices of economic benefits that the entity is obliged to make to others as a result of past transactions or events, the settlement of which may result in the transfer or use of assets or provision of services at specified dates or in the determinable future. Some liabilities, such as the amount owed under a loan, are known amounts. For insurers, most liabilities are not known but are estimates.

The main types of liabilities that are included on the balance sheet of an insurer are:

The liability for already incurred but unpaid claims. These liabilities generally include the costs of adjusting and settling these unpaid claims. This includes the liability for claims that have already been reported, and those incurred but not yet reported

Liability for claims incurred beyond the reporting date which relates to future exposure on policies already written.

1. For non-life companies, the liability is generally the proportion of premium yet to be earned, ie for a policy written July 1 for twelve months this will be 50% as at year-end.
2. For life companies, the largest liability on the balance sheet will be the consideration for claims to be incurred in the future. This reserve can be thought of as the present value of future claims minus the present value of future premiums. (In some accounting regimes the value of future premiums is reported on the asset side of the balance sheet rather than a deduction from the present value of claims)
 - a. The types of future benefits and types of decrement/incident rates to be considered are normally prescribed by the accounting basis.
 - b. The premium deducted may be either a “net” premium which provides for only the coverages specified by the accounting basis or a gross premium.
 - c. The assumptions used in the calculations may be prescribed by the accounting basis; alternatively, the accounting basis may leave the choice of assumptions

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up to the actuary but often with some guidance on how prudent they should be.

- d. Assumptions may be locked in at policy inception or revised over the policy duration as experience emerges which indicates that the initial assumptions are no longer appropriate. Assumptions are based on the actuary's or management's current best estimate with or without a provision for adverse deviation.
- e. If assumptions are locked in, the accounting basis usually calls for verification that the liability remains adequate. In US GAAP, this is called loss recognition. In US statutory, this is called asset adequacy analysis or cash flow testing. Most other jurisdictions adopt a principles based approach to the setting of assumptions with regular reassessment.

Liabilities may or may not contain a margin for future experience adverse to the assumptions used to generate the basic liability (sometimes called a risk margin or margin for adverse deviation). If such a margin exists, it may be implicit or explicit. Implicit margins occur when the underlying assumptions, e.g., mortality or lapse are set conservatively. Examples of where margin are set explicitly are economic balance sheets which normally include a specific risk margin as part of the liabilities. This is true for a Solvency 2 balance sheet and is also the direction that IFRS is taking. Swiss Solvency test uses a concept called market value margin which is similar to risk margin but calculated differently.

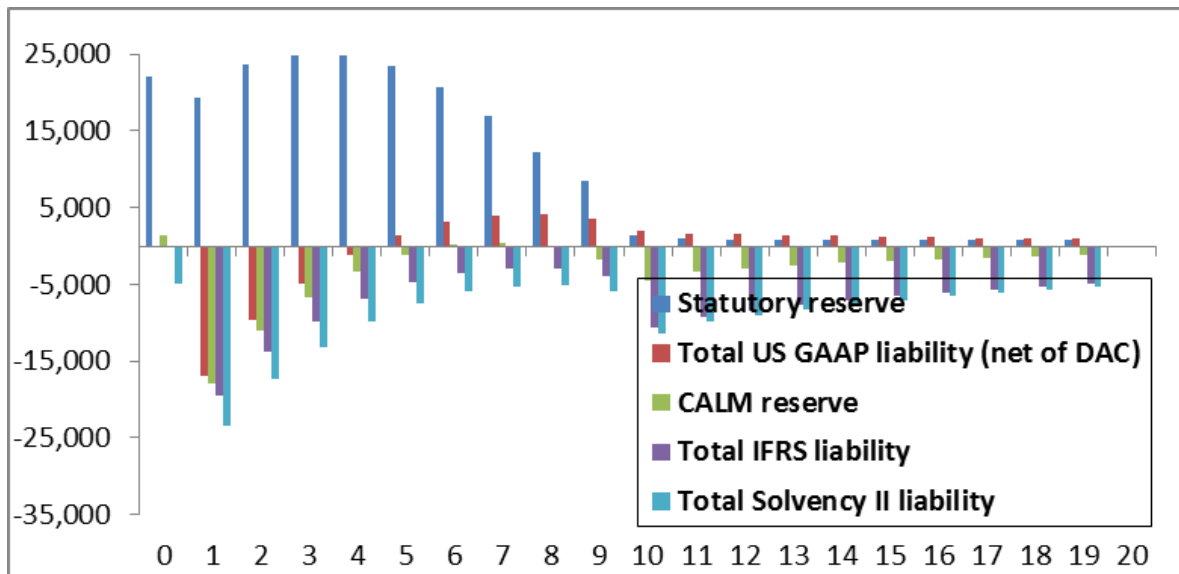
Other liabilities included on the balance sheet would include accounts payable, taxes owed, deferred taxes¹² and any debt incurred by the reporting entity.

The following graph illustrates the variation in liability that different accounting bases can produce for long duration contracts. The underlying product is a twenty year (two consecutive ten-year level premium periods) term insurance policy, which pays out the sum assured on the death of the policyholder. The accounting bases are US statutory, US GAAP, Canadian (CALM), IFRS and Solvency II. The item displayed is the total reported liability (net of Deferred Acquisition Costs (DAC) where applicable). While not all readers will be familiar with the nature of two ten-year products appended into one, the resulting disparity between accounting bases would also exist for a level premium twenty-year product.

The US statutory is an example of a supervisory reporting accounting regime; it establishes the largest initial liability. The US GAAP and IFRS are public reporting accounting regimes; its smaller initial reserves enable a more uniform reporting of earnings. The CALM and Solvency II are more economic bases and display the lowest initial reserves.

¹² For example, the insurer may own publicly traded common stock that has appreciated since first purchased. When or if sold, a related tax payment would be due on the realized gain. That future tax liability is called a Deferred Tax Liability.

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Differences between the different accounting bases are less pronounced for Property and Casualty business. The common theme across all bases is the current estimate of the future claims to be paid. Some bases allow for the discounting of the expected future claim payments whilst others do not and some bases require a level of prudence in the estimates either by increasing actual estimates or by selecting a certain percentile from the distribution of expected future claims. Where best estimates liabilities are discounted an explicit risk margin will be included.

C. Capital

Capital is the difference between reported assets and reported liabilities and is usually the term used in regulatory accounting. Other accounting bases will refer to this concept as surplus, equity, economic net worth, retained earnings, owners' equity, own funds or net assets.

Capital is a major topic and hence forms its own chapter within the IAA risk book. No further comment is made here except to outline a particular point with regard to some regulatory financial statements. Under supervisory reporting in certain countries, there are two types of financial statements, firstly one set financial statements prepared on a conservative basis such that there is a good likelihood that the policyholder obligations over the whole contract term will be met with reasonable expectations without the need to resource new capital. Secondly a solvency statement where assets and liabilities are valued on an economic basis using current market assumptions with the resultant capital able to withstand a very severe event (such as a one in two hundred-year event) in the following 12 months without needing to raise more capital in order to remain solvent. It is important that companies manage to both sets of regulatory financial statements.

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II. Income Statement

The income statement measures performance during the period for which the accounts are being presented. It comprises inflows (revenue), outflows (expense) and the difference, profit. Profit is often differentiated into “regular” and “other” or “one-off” items.

Another way of looking at an income statement is that it is essentially what takes one from the balance sheet at the start of the accounting period to the balance sheet at the end of the accounting period. This is rather a simplistic view as not all the changes between the two balance sheets will necessarily be included as income - this depends upon the rules of the accounting bases being used. Examples would include changes in unrealized gains or the impact of movements in foreign currencies. As a result, there can be a distinction between the income which can be counted as profit and that of total or comprehensive income which would include all items.

A statement of cash flows provides a view of sources and uses of cash. It serves as a reconciliation of opening and closing cash balances.

A. Revenue

Revenue is the compensation for products sold or services provided. This distinguishes revenue from deposits, such as bank deposits^[1], which must be returned and borrowings where cash is also received but must be paid back with interest. This simple description is difficult to implement for any product or service where the delivery of the product or service (such as insurance risk coverage) is spread out over several accounting periods.

A major consideration of any accounting paradigm is the timing of revenue recognition, i.e., when should revenue be recognized in a financial statement. The simplest approach may be to recognize or record revenue when the cash is received, which is commonly the basis for recognizing premium revenue for traditional life insurance products. Another approach may be to recognize premium revenue over the period where the service is performed or the product is transferred, which is a common accounting approach for short duration general insurance^[2] and for Universal Life style life insurance products. Either approach may be complicated by the existence of asset accruals (such as for amounts due but not yet received), or various estimates (such as for possible audit adjustments for certain insurance products sold to businesses).

The main items normally included as revenues are:

Premiums: Premium revenue may be reduced by amounts ceded to reinsurers.

Alternatively, the accounting system may treat ceded reinsurance premiums as an expense.

Investment income: This sometimes includes realized capital gains and losses and may or may not be net of expenses.

^[1] Contracts that fail to meet risk transfer rules may also be labeled as “deposits”.

^[2] Under this approach many insurers also report an item called “written premium”, which represents the amount of insurance premiums sold during the period, whether or not it has been earned yet via the provision of services during the period. Written premium that is not earned during the period is deferred through the establishment of an unearned premium liability.

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Fee income: This can include membership fees and various service fees (such as for investment services for life insurance/annuities or risk inspections for various general insurance products sold to businesses).

B. Expense

The expense component of the income statement in its simplest form is cash outflow (items such as operating expenses, claims, taxes, dividends) plus/minus the increase/decrease in liability accruals. An expense may be recognized when an obligation is created, even if the cash flow occurs later. The elements of expense must correlate to the definition used for its revenue counterparts.

The main items normally considered as expense in the income statement are:

- Claims and claim adjustment expenses. This includes both claims paid and changes in claim reserves.
- Life and health policy benefits. This also includes benefits which are paid and changes in reserves.
- Return (revenue) credited to policyholders (for unit linked and participating business)
- Acquisition costs
- Other underwriting expenses
- Other (non-underwriting) expenses
- (Where premium is recognized as revenue up front, such as for long duration contracts) the increase in liabilities established for any type of future claim
- Income taxes, though they are contingent on the above-mentioned revenues and expenses.

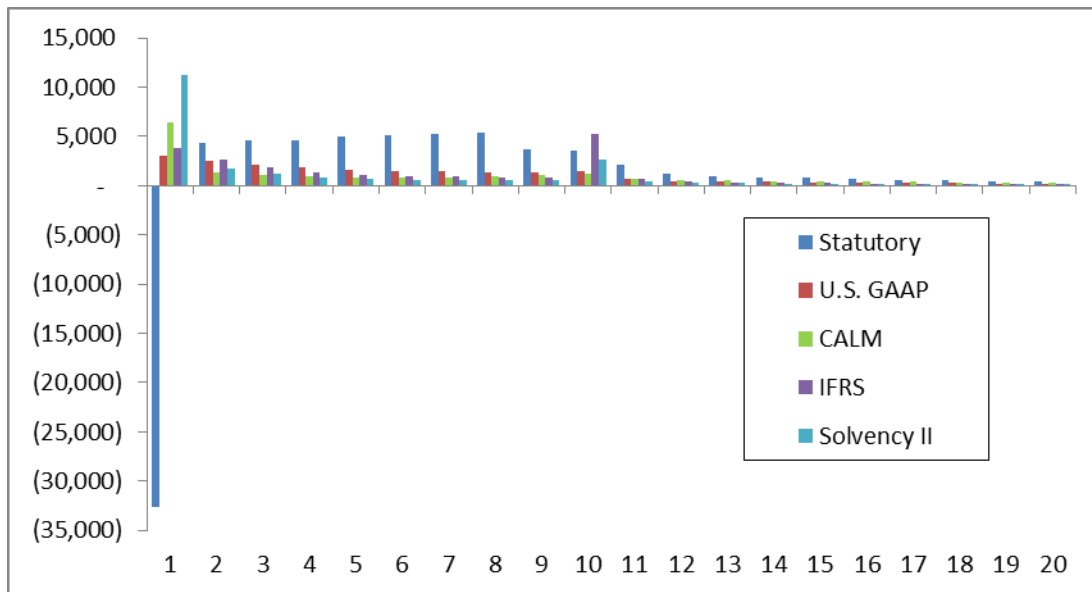
An economic valuation would also include changes to risk margins.

C. Profit

The difference between revenues and expenses has several names: profit, net income, earnings, comprehensive income and others. Before profit can inure to its ultimate destination of retained earnings (capital), consideration needs to be made for shareholder dividends, capital contributions, taxes incurred, unrealized capital gains or losses and effects of change in accounting. These net earnings are the primary reconciling item between prior year and current year capital.

The following graph shows the emergence of earnings for the same term life insurance policy illustrated previously under the five different accounting bases: US Statutory, US GAAP, Canadian CALM, IFRS and Solvency II:

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It can be seen that different accounting bases can produce very different earnings results for the same product and experience. An economic basis of accounting will realize all profits on day one (except for any risk margin that is reflected); an accounting basis with prudent assumptions will defer most of the profits to later periods. Shareholder accounting reveals a more level expected emergence of earnings.

On Property and Casualty business there is much less difference between the different bases but the same concepts apply, i.e., under economic reporting profits emerge sooner than under the shareholding and statutory accounting bases.

Financial statements are interpreted by different users in different ways, depending on their interests. Owners, shareholders, and potential buyers look at different profitability metrics to assess how well the Company is performing:

Return on Equity (ROE) is a common measure and is generally defined as the profit/loss during the period divided by the average equity (capital) for the period. This return can then be compared to those of other companies and to other types of investment. Earnings per share (EPS) is another commonly used metric for quoted companies and here the growth from period to period is the most important consideration. For those companies reporting economic figures then Economic Net Growth is a key measure as it shows how the company is adding to its value on an economic basis. Such a method needs to satisfactorily allow for outflows from the company, such as dividend payments.

Distributable earnings are the projected amounts that can be paid as a dividend by the entity, taking into account regulatory limits on shareholder dividends.

Regulators and rating agencies (for financial strength ratings) are usually focused on the insurer's ability to pay its claims through good and bad business cycles. Their analyses

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include the use of risk based capital or other solvency ratios that compare the insurer's capital to estimates of adverse scenarios and/or to regulatory requirements.

Regulators and rating agencies also look at earnings/profit to show that the company has a viable business and to act as a cushion against future adverse events.

III. Disclosures

Disclosures provide users of financial statements with additional information regarding a company's operations. Disclosures may be mandatory or voluntary; they may be footnotes, texts or exhibits. Disclosures typically include statements of accounting policy, organizational overview, information on board and senior management including their remuneration, areas of significant uncertainty, critical accounting estimates and changes in accounting among others. The disclosures may be subject to audit.

Disclosures should assist investors, lenders, creditors, regulators and others in understanding the basis and context of the financial data and in assessing both historical performance and future prospects. Due to the choices made in the accounting bases coupled with the complexity of insurance these disclosures are essential to provide a more complete understanding of the company's performance.

5. Insurance-Specific Challenges to Creating and Interpreting Financial Statements

The previous sections have described the main types of financial statements produced by insurance companies as well as going into more detail on the actual items of a balance sheet and income statement. This section highlights the major considerations for preparing and interpreting insurance company financial statements.

Interpreting the financial statements is a challenge and this can even be so for readers who are familiar with the insurance industry. A detailed understanding of the basis on which a set of statements is produced is necessary. The following is a list of some the major challenges:

1. The largest liability for most insurers is the insurance contract liability. This is normally an estimate, or series of estimates, based on actuarial analyses for which there may be a range of plausible and hence acceptable numbers. Often actuaries must use significant judgment in their analyses and production of these liabilities. These actuarial estimates are often a critical element of the profit or loss which is recorded in the income statement.
2. Many long-duration insurance products, particularly those with investment components, are inherently complex; the accounting rules and concepts follow suit. Understanding the accounting entries related to these products also requires a good understanding of the associated accounting rules.
3. Accounting guidance provides rules, concepts, or sometimes both. There will be variations in interpretation of the same rules or concepts from one company to the next. This is mainly an issue for longer duration products.
4. Insurers may access funds by issuing capital instruments that have provisions stating that repayment is not mandatory until all policyholder obligations have been extinguished or, in other cases, until payments are approved by the regulator.

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These obligations (sometimes called “surplus notes”) may not be explicitly identified as a liability and thus are represented in capital. “Capital Tiering” has evolved to identify amounts of capital that are totally unencumbered. Capital Tiering may also requalify the nature of the asset held.

5. For general insurance, the recorded claim liability is generally the result of a selection from a given a range of estimates using multiple methods of valuation, with the responsibility for the final selection in the hands of senior management and not necessarily an actuary (although there generally is a requirement for an actuary to opine on whether management’s selection is reasonable). For life insurance the methods are fairly standard and it is the assumptions underlying the methods that are subject to intense consideration, but with the final determination typically the responsibility of an actuary.
6. Given the amount of discretion and judgement involved in the production of the financial statements, particularly in respect of reserves for contract liability there is a danger that management incentives can impact the ultimate decisions. Companies need to have good governance in place and controls in place to avoid undue bias. Good governance and controls will help in avoiding situations of under or over reserving because of other influences on either the company or the senior management. Examples are where a lower estimate of liabilities would result in i) higher immediate earnings leading to higher employee bonuses and a more favorable view of the company than is justified, ii) creating a higher surplus which supports more growth capacity or less need for capital and iii) an unwillingness to admit mistakes in pricing or underwriting.
7. There is increased uncertainty for general insurance claim estimates as the claim environment continuously changes and evolves as regulation and court rulings develop. New claim types may also emerge over time (e.g., repair of green buildings, over-prescription of pain-killers, asbestos).
8. The insurance company financial statements reflect the use of counterparties, such as reinsurers and providers of hedges, which may be an important element of reported revenues and liabilities. Thus the financial statement reflects not only the interactions between the insurer and its policyholders, but between the insurer and its counterparties.
9. The actuary must be able to measure experience and detect shifts in order to establish assumptions appropriate for the current period. Different actuaries can have legitimately different viewpoints on whether an observation or event is a one-time event or is establishing a shift in expectations.
10. The ability to predict earnings and capital or to meet earnings and capital predictions is significantly impacted by the use of assumptions. There is a natural lag for reflecting experience, as the implication of recent events is not always immediately apparent. Thus, a part of earnings is the impact of changes in assumptions and delayed recognition of shifts and trends.

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To summarize, actuaries play an important part in the preparation of financial statements for insurers. Measurable quantities, including cash items and market values of assets and certain liabilities are traditionally within the domain of accountants. Items based on estimates of future events, including policy reserves, future premiums or income streams for purposes of amortizing intangibles are often the responsibility of actuaries or have heavy actuarial involvement.

Actuarial organizations around the world promulgate actuarial standards of practice (ASOPs) to guide actuaries in the various aspects of their participation in the financial reporting process.

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