



# Insurance Accrual Accounting

*Oliver Reichert*

PRIMER SERIES ON INSURANCE  
ISSUE 6, JUNE 2009

NON-BANK FINANCIAL  
INSTITUTIONS GROUP

GLOBAL CAPITAL MARKETS  
DEVELOPMENT DEPARTMENT

FINANCIAL AND PRIVATE SECTOR  
DEVELOPMENT VICE PRESIDENCY



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## THIS ISSUE

Author **Oliver Reichert**, B.Com, FCPA, FCIS, MAICD, has worked exclusively in the financial services industry for the past 23 years, both as a senior executive and as a consultant to industry. In addition, he has chaired a number of insurance industry forums and has published articles on topical financial services matters. Through the World Bank and the Asian Development Bank, Oliver has worked with 15 national regulators of non-bank financial institutions in Eastern Europe, Asia and Africa since 2001. His focus is to assist Governments of emerging economies to develop their insurance industries by improving insurance accounting standards, insurance regulations and insurance supervision through risk based methodology.

Series editor **Rodolfo Wehrhahn** is a senior insurance specialist at the World Bank. He joined the Bank in 2008 after 15 years in the private reinsurance and insurance sector and 10 years in academic research. Before joining the World Bank, he served as President of the Federation of the Interamerican Insurance Associations representing the American Council of Life Insurers. He was board member of the AEGON Insurance and Pension Companies in Mexico, and was CEO of reinsurance operations for Latin America for Munich Reinsurance and for AEGON.

For questions about this primer, or to request additional copies, please contact:  
insurancesector@worldbank.org.

The *Primer Series on Insurance* provides a summary overview of how the insurance industry works, the main challenges of supervision, and key product areas. The series is intended for policymakers, governmental officials, and financial sector generalists who are involved with the insurance sector. The monthly primer series, launched in February 2009 by the World Bank's Insurance Program, is written in a straightforward, non-technical style to share concepts and lessons about insurance with a broad community of non-specialists.

The Non-Bank Financial Institutions Group in the Global Capital Markets Development Department aims to promote the healthy development of insurance, housing finance, and pension markets, and to expand access to a broad spectrum of financial services among the poor. These markets provide opportunities for household investment and long-term savings, and can buffer the poor against the risks of sickness, loss of breadwinner, catastrophic events, and other misfortunes.

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1818 H Street, NW  
Washington, DC 20433  
Internet: [www.worldbank.org/nbf](http://www.worldbank.org/nbf)  
E-mail: [insurancesector@worldbank.org](mailto:insurancesector@worldbank.org)

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# Contents

|  |    |
|--|----|
| Introduction .....   | 1  |
| Unique insurance industry features .....   | 2  |
| The profit and loss statement .....  | 3  |
| The balance sheet .....  | 8  |
| Accounting for solvency and accounting for profit .....  | 11 |
| Insurance accounting for profit .....  | 12 |
| Insurance accounting for solvency .....  | 15 |
| Insurance accounting in developing countries .....   | 15 |
| Should developing countries be encouraged to adopt IFRS or<br>US GAAP? .....                       | 18 |
| Appendix A: Simplified Non-Life/P&C Insurance Profit and Loss<br>Used in Developed Countries ..... | 20 |
| Appendix B: Simplified Insurance Profit and Loss Used in<br>Developing Countries .....             | 21 |





# Insurance Accrual Accounting

*Oliver Reichert*

## Introduction

All companies, no matter which industry they operate in, need to prepare financial statements consisting of a profit and loss account, a balance sheet, funds flow statement and notes to the accounts. These accounts must reflect a true and fair picture of the financial performance and financial position of the company. Insurance companies are no exception, but the nature of insurance is sufficiently unique that special accounting standards have been developed.

For most industries the period between a products or services sale and subsequent payment by the consumer and delivery by the vendor is relatively short. In the insurance industry, this is not the case: an insurance policy can be sold with premiums being due and payable (usually annually) for decades after the contract becomes effective. Similarly, benefits receivable from owning an insurance policy can also take decades to be determined and subsequently settled. Thus operating cycles and financial and management reporting cycles tend to be very different, leading inevitably to significant accounting entries at balance dates representing accrued insurance liabilities and receivables. Accrued insurance liabilities are typically the largest item on a insurance entity's balance sheet.

In addition many insurance contracts include embedded options favoring the policyholder. Examples include implicit or explicit minimum investment return guarantees, the right to surrender early, the right to vary the savings and risk components of a Universal Life contract and the right to renew cover under a yearly renewable term



life contract. These options should be valued and shown as liabilities to the extent that they cannot be hedged.

Accounting for insurance must take these factors into consideration via accrual accounting methodology. This often involves estimating future states of nature and factoring these estimates into complex discounted flow calculations.

### Unique insurance industry features

Key features of the insurance business are:

- *Policy acquisition:* as is the case with all business, the insurance industry is sales driven. It is very costly for an insurance company to acquire, or “sell” an insurance policy: initial commissions to insurance agents or brokers are high. Furthermore, expenses related to the evaluation process as to whether to accept an individual policyholder are also high: for example, in the case of a life insurance policy, this may involve a doctor’s examination, including blood tests. Therefore, the cash outflow related to putting a policy on the books can frequently exceed the cash received for the first year’s premium. These acquisition costs are generally deferred and recovered from the insurance premium inflow which will take place over the following years.
- *Premium income:* frequently, premiums are paid by policyholders over a number of years. Premiums received for the current year are accounted for as income. Premiums received/receivable for future years effectively represent an asset of the insurance company. The quantification of this asset is a complex matter, partially as the duration of the policy cannot be calculated accurately: for example, in the case of certain types of policies, the insurance company does not have the right to cancel a policy once it has been accepted through the underwriting process. The policyholder, however, may cancel the policy at any stage.
- *Claims and Benefits payable to policyholders:* the cash outflow relating to insured events is uncertain. An insured event for a specific policy may never take place, such as an auto theft, or a building fire. Alternatively, an insured event may take place much more quickly than contemplated, such as an accidental death of a policyholder who recently purchased a life insurance policy. Claims and benefits payable to policyholders need to be accounted for as a liability of the insurance company, and as noted it is a complex matter to quantify this liability.

These features usually give rise to large differences between cash flow and accounting for profit in any one year. Thus the cash based accounting still used in a number of jurisdictions provides a poor, and almost always overly optimistic, picture of the performance and financial position of the insurers involved.

In reality, no matter how these cash flows are accounted for, the profit, or loss, on any one policy will be the same over the life of the insurance policy. However, insurance companies are legally required to produce statements of profits and losses, and balance sheets, at least annually. As part of the insurance accounting accrual process, they must therefore estimate, on an annual basis, as accurately as possible:

- The deferral of acquisition costs;
- The cash inflows from premiums payable in future years; and
- Claims and benefits payable to policyholders—including those that have already occurred and are yet to be fully settled and those that will occur in the future.

Specialists called actuaries are required to carry out some of these calculations. A paper dealing with the work of actuaries is included as module 7 of the insurance primer series.

A further important factor, although by no means unique to the insurance industry (the banking industry, in particular, has a similar issue) is the importance of matching the duration of investment assets with the estimated duration of policyholder liabilities, and holding sufficient capital if there is a mismatch. This matter is dealt with in further detail in the section on investment assets.

### **The profit and loss statement**

The Profit and Loss Statement consists of the following insurance-specific items:

#### *Revenue*

##### PREMIUM INCOME

The major income source for insurance companies is premiums received. Premiums may be received as a result of:

- single premium contracts where a lump sum is payable up-front, such as an auto policy;
- Regular premium contracts, where the policyholder is contractually obliged to make payments at regular intervals, such as monthly, or semi-annually, or annually (in the case of long term life insurance). An example of a regular premium contract is voluntary health insurance cover, where premiums are generally paid monthly; or
- Recurring single premium contracts, where the policyholder is able to make payments at irregular intervals. Savings products, such as a universal life contract, may be structured in this manner.

For Property and Casualty insurers (also known as non life or general insurers), premiums in the insurance company's financial statements have historically usually been calculated on a "net earned" basis as follows: gross premiums received are adjusted for reinsurance payments made, converting them to net premiums. These net premiums are then further adjusted to take account of the fact that only those premiums which cover risks arising during the current financial year, are taken up as revenue. For example, if a premium of US\$1,200 has been received by an insurance company for a 12 month cover on May 1, then only US\$800 (eight months' worth) of that insurance revenue can be taken up as revenue in the year ended December 31 – the remainder of US\$400 relates to four months of insurance cover for the following year. Further adjustments for initial expenses, such as commission may also be made. For example only 80% of the net premium may be prorated over the financial year components of the policy year.

#### REINSURANCE

Some risks underwritten by insurance companies may exceed their own underwriting capacity as defined by their financial strength; for example insuring a US\$1 billion industrial complex against fire risk with only US\$500 million of net assets to back this contingent liability. The insurance company therefore "lays off" that portion of risk which it cannot cover with a reinsurance company, which does have the financial strength to bear such a large loss, especially after a further laying off of risk to other reinsurers (known as retrocession). Module 2 in this series covers the topic of reinsurance in detail.

Similarly, claims expenses are offset by any reinsurance recoveries, and the net amount is regarded as the claims expense for reporting purposes.

This accounting practice results in reporting premium incomes and claims expenses which reflect the net amount of risk which the insurance company is bearing. A side benefit is that it prevents double counting of insurance premiums across the industry – as direct insurance companies can also accept reinsurance premiums from other insurers. Despite this modern accounting and statutory reporting approaches are now tending to require that gross premium and claims figures and recoveries are shown separately, but the net approach still applies in most developing countries.

#### INVESTMENT INCOME

Investment Income, generally consisting of interest, dividends and rental income, is also a major revenue item for insurance companies. The treatment of investment income is exactly the same as it is for other industries: realized gains and losses (ie the difference between the cost of an investment asset, and the amount it is sold for) are brought to account in the Profit and Loss Statement. Unrealized gains and losses may either be passed through the Profit and Loss account, or taken up as a reserve on the balance sheet. As this can be a major item, care needs to be taken when reading financial statements as to the accounting approach in respect of unrealized gains and losses which the company has taken. As with banks there may be a distinction between fixed interest securities held to maturity and the trading portfolio, with the latter being valued at market and the former on an amortized basis (see US GAAP discussion below).

From an accounting perspective, the usual practices apply, whereby investment income receivable, at the end of the financial year, is accrued and therefore allocated to the correct financial year.

#### *Expenses*

##### CLAIMS EXPENSE AND PAYMENTS OF POLICYHOLDER BENEFITS

The major expense incurred by an insurance company is claims paid. For non-life/P&C companies, this consists of actual claims paid during the year, and claims accrued prior to the end of the year. A further P&C expense needs to be accrued, relating to claims which

have been incurred towards the end of the financial year, but have not been reported as yet. These claims are referred to as incurred but not reported (“IBNR”) claims. For example, an auto insurer may have an average of 1,000 claims per month, but for the last month of the year, only 600 claims have been reported. It is probable that a further 400 auto accidents did occur in that last month, which had not been reported by December 31. These 400 claims need to accrued, as an IBNR claims expense, with the other side of the accounting entry being an increase to the IBNR liability.

In fact, for some specialized product lines, it often takes many years for claims to be reported to the insurance company, such as asbestos claims. This also makes liabilities difficult to estimate and general reserves are sometimes established to cover such contingencies (although they may not be allowable for tax).

Payments of policyholder benefits generally relate to life insurance. Benefits to be paid could be discretionary (non guaranteed) dividends or bonuses payable annually to policyholders of life policies with a savings element, or terminal bonuses payable on maturity of the policy or death of the policyholder.

Claims expenses and payments of policyholder benefits need to be disclosed net of reinsurance recoveries.

#### OPERATING EXPENSES—NEW BUSINESS

This expense category consists of commissions paid or payable and other expenses which relate to the cost of acquiring policies. These “expenses” are generally initially recognized as an asset, and then amortized each year over the life of the insurance policy.

#### OPERATING EXPENSES—OTHER

This expense category relates to the expenses incurred in the day-to-day running of the insurance company. Investment management expenses are included in this category.

#### *Changes in policyholder liabilities*

Changes in Policyholder Liabilities are in fact an adjustment to the largest liability a life or a long term non-life/P&C insurance company has. Changes to the value of this liability are generally taken through

the profit and loss account. This item can have a significant impact on the profit or loss of an insurance company.

It needs to be noted that changes in Policyholder Liabilities can either be an increase (in which case it is an expense), or a decrease (in which case it is a contributor to profit). By way of example, other things being equal, the actuary has determined that in the light of recent experience, mortality has been too conservatively calculated in the past. As a result, mortality assumptions are changed to reflect that policyholders live longer. Therefore death claims are deferred by some years, and this change in assumptions results in an improvement in profit. This example applies to the application of international standards, rather than US GAAP.

### *Ratio analysis*

There are three key ratios calculated for non-life/P&C insurance companies:

1. *The claims ratio, or loss ratio:* This is calculated by dividing total claims expense by net earned premiums. This ratio generally represents the amount paid to policyholders, from every dollar of premium received. Whilst this ratio varies by type of business, developed countries generally have an average claims ratio of around 60% to 70%, ie in total insurance companies pay out, to policyholders, around 60–70 cents for each dollar of premium received.
2. *Expense ratio:* This is calculated by dividing operating expenses by net earned premiums. This ratio is a measure of efficiency, and also a measure of the level of service supplied to policyholders. Developed countries have an average expense ratio of around 20% to 30%.
3. *Combined ratio:* This ratio is arithmetically the addition of the claims ratio and the expense ratio. A combined ratio of less than 100% represents an underwriting profit; a ratio of more than 100% represents an underwriting loss. Insurers generally aim for a combined ratio of 90% to 95%, thus making an underwriting profit of 5% to 10%. It needs to be noted that investment income is excluded from this ratio, and hence insurance companies can still make an overall profit even if they have made an underwriting loss.

Life insurance companies which only sell risk products are also able to use these ratios. However, life insurance companies that also sell investment products, or “bundled” products which contain both risk and savings elements (for example, whole life policies) cannot be analyzed using such ratios.

### The balance sheet

There are three key items on the balance sheet of insurance companies which warrant comment. Specifically, these are:

- Investment Assets;
- Deferred Acquisition Costs; and
- Policyholder Liabilities

The remainder of assets and liabilities are in line with balance sheets of companies from other industries.

#### *Investment assets*

Investment Assets are usually the largest asset on the balance sheet of an insurance company (if they are not this is normally a red flag). Investment Assets frequently represent in excess of 80% of total assets of an insurance company. These assets are mainly required to be able to be drawn upon to meet the payment of policyholder liabilities (see below) as and when these fall due. It is therefore imperative that insurance companies attempt to match the duration of their investment assets with the anticipated future payments of policyholder liabilities. Consequently, insurance companies who sell “short tail” insurance products, such as auto insurance and householders’ insurance, hold predominantly investment assets which can be readily converted into cash at relatively short notice with comparatively little price fluctuation or credit risk, such as bank deposits and government bonds.

The quality of investment assets to be held by insurance companies is generally legally prescribed, and may be linked to investment quality grading introduced by independent ratings agencies such as Standard & Poor or Moodys. Investment assets held by insurance companies tend to be of high quality, with many being “AAA” rated. Insurance companies generally disclose the quality of their investment assets in their financial statements. By way of example, Allianz disclosed in its financial statements for the year ended 31 December 2007 that 56% of

its assets were “AAA” rated by Standard & Poor, 32% were “AA” rated and 11% were “A” rated—only 0.7% percent of investment assets were unrated or had an investment grading lower than “A.”

Investment assets are generally marked to market. Unrealized gains and losses are generally held in a balance sheet reserve established for this purpose; they are not taken through the Profit and Loss Statement.

#### *Deferred acquisition costs (“DAC”)*

Costs relating to the acquisition of longer term insurance policies are generally capitalized and taken up as an asset on the balance sheet. The DAC asset is then amortized over the expected duration of the insurance contracts (or such shorter period as prudence or regulation may specify), in order to match the future revenue stream of incoming premiums with the expensing of the costs of bringing these policies onto the books of the insurance company.

#### *Policyholder liabilities*

The *raison d'être* for insurance companies is to pay claims and benefits to policyholders—and hence the provision for such payments is the largest liability on the balance sheet of insurance companies. Frequently, in excess of 90% of all insurance company liabilities is represented by this single item.

The total policyholder liabilities—claims and benefits payable to policyholders—effectively consist of:

- Technical reserves; and
- Future benefits payable to policyholders.

#### TECHNICAL RESERVES

These reserves relate primarily to non-life/P&C insurance companies but can also be relevant to life insurers. They consist of the following key items:

- *Unearned Premium Reserve*: this reserve relates to that portion of premium received which has not been earned as yet. For example, if a premium of US\$1,200 has been received by an insurance company for a 12 month cover on May 1, then only

US\$800 (eight months' worth) of that insurance revenue is taken up as revenue in the year ended December 31 – the remainder of US\$400 relates to four months of insurance cover for the following year, and this amount is taken up as a liability (“Unearned Premium Reserve”) in the accounts at 31 December. The example represents the balance sheet entry of the example used previously above.

- *Outstanding Claims Reserve*: claims which have been lodged with the insurance company, but have not been paid as yet. The calculation of this reserve is based on “open claims file methodology”: An estimate as to the total cost of each reported claim is prepared, and the total of all claims payable, less the amount already paid on outstanding claims, is aggregated into the total outstanding claims reserve; and
- *Incurred But Not Reported (“IBNR”) Claims*: claims incurred at the end of the financial year which have not been reported as yet. For example, an auto insurer may have an average of 1,000 claims per month, but for the last month of the year, only 600 claims have been reported. It is probable that a further 400 auto accidents did occur in that last month, and these 400 claims need to be taken up as a liability, the “IBNR Reserve.”

The calculations for Outstanding Claims Reserves and IBNR claims can be quite complex for long term non-life/P&C business. Actuaries are generally required to calculate the more complex elements of these reserves.

#### FUTURE BENEFITS PAYABLE TO POLICYHOLDERS

Insurance companies must provide for benefits payable in the future, allowing for any options embedded in the contracts (which can significantly change the apparent duration of the contract and hence optimal investment policy). The type of benefit to be provided for depends on the type of policy which has been sold. By way of example, a life insurance whole of life policy provides for a large lump sum payment in the event of the death of the policyholder or, typically, once an advanced age (say 85) has been reached. A liability must be calculated for all whole of life policies taking into account such factors as the age of policyholders, whether they are male or female (females live an average of 7 years longer than males), whether they are smokers or non-smokers (that is, the consequent mortality statistics), future investment earning rate and future discontinuance rates. Another example may be an

income insurance policy, where future policyholder benefits are based on such statistics as morbidity by employment category. Typically a prospective approach is used, whereby the reserve (often called the mathematical reserve) is defined as the present value of future benefits and expenses less the present value of future premiums.

The reserving approach also depends on whether risk capital needs to be maintained. Modern accounting and regulatory doctrine normally requires that most risks are carried by capital, with a modest resilience level being built into technical and mathematical reserves.

The estimation of future benefits to policyholders is the most complex calculation in the balance sheet of insurance companies, particularly for life insurers. Actuaries are required to perform this calculation.

### **Accounting for solvency and accounting for profit**

In almost all jurisdictions, insurance companies need to prepare their financial accounts in two separate ways:

- For ordinary readers of financial statements, financial accounts consisting of balance sheets, profit and loss statements and notes to the accounts need to be completed. These accounts are used by stakeholders such as potential investors, shareholders, bankers, stock exchanges (most insurance companies are publicly listed) and industry observers.
- There are two major accounting methodologies applied in the developed world for normal 'going concern' reporting:
  - Generally Accepted Accounting Principles used in the United States (US GAAP); and
  - International Financial Reporting Standards (IFRS).

These two methodologies are expanded upon below.

- Separate financial statements need to be prepared for insurance industry regulators. These are more in the nature of conservative 'wind up' cash forecasts.

## Insurance accounting for profit

### US GAAP

The first accounting methodology specifically designed for insurance companies was established in the United States and is part of the reporting framework which is commonly referred to as US GAAP. The first US GAAP insurance standard, FAS 060, was published in 1982. Other accounting standards specifically applicable to the insurance industry are FAS 097, FAS 120 and FAS 144.

These US GAAP standards deal with all matters relating to insurance companies: life insurance, non life insurance, reinsurance and also investment products sold by insurance companies.

The US GAAP approach is prescriptive, and many specific rules apply as to how the profit on a book of insurance business is to be calculated. US GAAP generally requires that assumptions be set in the year in which a group of similar insurance policies is sold: this includes the quantum of deferred acquisition costs relating specifically to this book of business, and assumptions relevant to estimating future policy cash flows. These assumptions are then maintained throughout the life of those policies. Consequently, US GAAP determines profit in future years by locking in assumptions, rather than adjusting assumptions based on emerging experience. This is generally regarded as being a conservative approach, and the tendency towards “back end profit recognition” is compounded by US GAAP deferring only variable acquisition costs.

### *International Financial Reporting Standards (IFRS)*

In order to harmonize accounting across the world, and thereby promote comparability of financial results, international accounting standards (“IFRS”) have been developed over the past decade. Almost all developed countries, with the exception of the United States, have decided to fully adopt the IFRS standards.

The specific standard pertaining to insurance is “IFRS 4 Insurance Contracts.” The standard was developed in 2001, and applied from 2006. IFRS 4 is regarded as an interim standard, as the International Accounting Standards Board has requested further public input, and expects to put in place a revised standard in 2010.

IFRS 4 applies to all insurance contracts which carry insurance risk. The standard does not apply to other assets and liabilities, such as financial assets and financial liabilities – “IFRS 39 Financial Instru-

ments” deals with these matters for all types of financial service companies, not solely insurance companies.

The IFRS approach is to measure the value of policyholder assets and liabilities using a “mark to market,” or “fair value” approach, and hence assumptions in valuing assets and liabilities are changed each year: for example, if interest rates rise during the year, the interest rate assumption for discounting purposes is changed. A change in this assumption alone has a major impact on those insurers with long term liabilities: by way of example, the value of policyholder liabilities increases significantly when the discount rate is decreased. At the same time, with a decrease of the discount rate, the value of investment assets will increase significantly as well, and therefore if there is a perfect asset–liability match, there will be no impact on profit.

The IFRS philosophy is to cover the issues in principle, rather than using a prescriptive approach. It then stipulates that companies explain their financial statements with extensive use of notes attached to the financial accounts. By way of example, companies are required to disclose the key assumptions used in valuing policyholder liabilities. A sensitivity analysis on the effect of changes to key assumptions is also required.

#### *Comparison between the US GAAP approach and the IFRS approach*

Both IFRS and US GAAP have the same objective: to disclose the financial performance (profit and loss) and the financial position (balance sheet) of insurance companies in a realistic manner. However, the philosophies applying to those two methodologies are distinctly different, and therefore they can produce quite different financial results:

- The “lock in assumptions” approach for both future policyholder liabilities and deferred acquisition costs produces a reasonably predictable profit picture, year after year, under US GAAP. As IFRS assumptions are changed each year in order to apply the most relevant assumptions, the value of liabilities will fluctuate more under IFRS.
- Under IFRS, investment “premiums” and “claims” under policies such as savings plans, are treated in a similar manner to bank deposits and withdrawals, and are thus excluded from premium revenue and claims expenses. Under US GAAP, all policyholder revenue, including revenue received on savings and investment policies, is included as premium revenue.

- In terms of investment asset revaluations, both US GAAP and IFRS use a “mark to market” approach. IFRS uses this approach for all investment assets, whereas US GAAP requires insurers to hold investment bond assets, a major asset class for insurance companies, at book value if they are intended to hold these assets to maturity. There will therefore be greater fluctuations in the value of investment assets under IFRS.

In summary, financial statements are likely to be more “accurate” under IFRS, because changes to underlying assumptions reflect the most recent information. US GAAP, on the other hand, in applying the “locked in” principles, largely relies on assumptions which were applicable a number of years ago, when each block of business was sold. However, changing key assumptions every year results in greater volatility of financial results from year to year under IFRS. Consequently, reported profit results for insurance companies are far more predictable under US GAAP methodology than they are using the IFRS approach.

A concern with using IFRS methodology is that it is difficult, if not impossible to mark liabilities (payment of future policy benefits) to market. Given that the IFRS approach has only been implemented since 2006, and at any event it is regarded as being an interim standard only, it is difficult to determine as yet just how volatile the financial results will be over the years.

A concern with US GAAP is its relative inflexibility: it is a complex framework for simple insurance products, and yet it seems too rigid to cope with complex product designs.

### *Embedded value*

Many life insurance companies have converted from mutual to shareholders structures in the last 40 years. As standard accounting practice can mask high profitability for life insurers (particularly when they are growing rapidly and have heavy front end costs) an approach was developed whereby the ‘true’ value of the insurer is shown in the notes to the accounts to properly inform the market and forestall take-overs. This involves disclosing the embedded value which consist of the adjusted net assets of the life insurer plus the present value of profits emerging from the policies on the books of the insurer (the in force) at the balance date. Where a life insurer is being taken over appraisal values are employed. These consist of the embedded value plus the estimated present value of the future business that will be produced by the current distribution system.

### Insurance accounting for solvency

Insurance regulators are important stakeholders who are primarily concerned with an insurance company's solvency, and therefore its ability to pay claims and benefits to policyholders as and when they fall due. In carrying out their duty, insurance regulators take into account that:

- a number of assets disclosed in the balance sheet cannot be converted into cash (such as computer software, office fittings and deferred acquisition costs);
- Various classes of investment assets have different risk profiles attached to them: for example, the investment categories cash and government bonds are far more likely to retain their value than stocks, shares and real estate;
- Investment assets may be worth a great deal less than their present value on the balance sheets (for example, due to a stock market crash or a real estate market downturn); and
- Future claims and benefits payable to policyholders may be significantly higher than the reported liabilities and future premiums payable. Insured catastrophes and disasters such as Katrina and September 11 do occur—that, after all, is the purpose of policyholders purchasing insurance products.

As a result of the risks attached to the above factors, insurance regulators require insurance companies to adjust their accounts in such a manner that they can prove that they have sufficient capital and investment assets to pay for claims as and when they fall due under potential adverse circumstances. Regulators examine solvency in detail, which includes the demonstration by insurance companies that they have significant financial buffers in place, to cover for such factors as investment market turmoil. The methodologies used by regulators of developed countries vary significantly.

As a result, the adjusted accounts, frequently referred to as “statutory accounts,” which insurance companies need to submit to their regulators, set out a company's financial position on a conservative basis.

### Insurance accounting in developing countries

Most developing countries use neither IFRS nor US GAAP as a basis for preparing financial statements for insurance companies. Their financial reporting methodology is frequently based on European

solvency approaches from the 1960s and 1970s. The elements generally are as follows:

#### *Key profit and loss items*

Revenue from premiums received: many developing countries account for premium revenue on a “gross premium received” basis, rather than calculating, in detail, an “earned” premium. Statistics kept by regulators relate only to gross premiums written. There is therefore a danger that some premiums are double counted for the industry, particularly in circumstances where insurance companies reinsure with each other. In those developing countries where a “net earned” approach applies, the amount calculated as the Unearned Premium Reserve is usually based on a percentage of gross premiums.

In developing countries, the total claims expense taken up in a year consists of claims paid, plus claims not as yet paid and therefore accrued, plus an estimate for IBNR-claims which have been Incurred but Not Reported. In developing countries, claims paid during the year are generally correctly recorded, so these amounts are regarded as providing the most reliable (or least unreliable) basis for estimating outstanding claims. The amount taken up for claims which have not been paid as yet is generally calculated as a ratio of premiums received. Similarly, IBNR claims are estimated as a percentage of premiums received, rather than being based on open claims file methodology. The legal framework of developing countries generally stipulates the percentage which is to be applied to premiums received, in order to calculate the outstanding claims reserve. This approach makes it easy for regulators to check that the ratio calculation (premiums to claims reserves) has been complied with, but leads to inaccurate financial results – as outstanding claims may be much higher or lower than the legally decreed ratio.

#### *Profit ratios*

##### CLAIMS RATIOS

In developing countries, claims ratios for non-life/P&C insurance companies are generally quite low—around 25% (that is, in total, policyholders receive 25 cents in each premium dollar paid), but they can be as low as 10%. This could imply that policyholders do not receive “value for money” on their insurance products. This can be due to

a number of reasons: in recently opened markets, policyholders frequently believe that their insurance premium is a tax—particularly for compulsory products such as motor insurance, and therefore they do not realize that they can make a claim on an insurance company. A low claims ratio can also result from overpricing of the insurance cover, or as a result of insurance companies refusing to pay claims.

In the longer term, insurance companies in developed countries generally use a benchmark whereby they pay back to policyholders an average, for the company as a whole across all lines of business, of at least 60 cents of each premium dollar received.

#### EXPENSE RATIOS

Expense ratios in developing countries are usually high: over 30%, and up to 60% of every premium dollar received. These ratios are high, generally due to either market inefficiencies, such as the sector having developed only recently, and hence there is a high level of initial investment, or corporate inefficiencies, such as the insurance company having inefficient/ manual systems and procedures, and/or the insurance companies being too small to take advantage of any economies of scale.

In developed countries, expense ratio benchmarks are around 25 cents of each premium dollar received. This benchmark can vary considerably.

#### COMBINED RATIOS

In total, many developing countries have combined ratios similar to those of developed countries. However, as observed above, the elements of the combined ratio are different: insurance companies in developing countries generally spend far more on their administration, and generally far less money is returned to policyholders in the form of benefits and/or claims paid.

#### *Balance sheet*

Many jurisdictions of developing countries still stipulate that investment assets need to be held at historical cost rather than being marked to market. In addition, the legislation of many developing countries stipulates that investment assets must be situated in their country—they are not permitted to invest outside their own country. In some

developing countries, the purchase of international investment assets is permitted, but to a limited degree (say, 10% of the total investment portfolio). The impact of the prohibition to purchase international assets is significant for the insurance industry: investment assets with a long duration cannot be purchased (because this asset class does not exist in many developing countries) and hence long term life insurance products cannot be offered. For example, in Vietnam in the past, the only investment grade assets purchased by insurance companies were Government bonds, which generally had a duration of 5 years. Life insurance companies could therefore only offer five year endowment policies. Whilst the industry would have preferred to sell whole-of-life policies, it could not do so because the asset/liability duration mismatch (a five year asset compared to potentially a 50 year liability) represented a far too great financial risk for the insurance company.

The key liabilities are accrued claims and benefits payable, at some time in the future, to policyholders. In developing countries, non-life/P&C claims liabilities, or “technical reserves,” are generally calculated as a ratio of premium income. This leads to inaccurate financial results, as such ratios are unlikely to reflect an accurate corporate financial position.

The legislative frameworks of many developing countries stipulate that “catastrophe reserves,” usually also expressed as a percentage of premium income, be held. Such reserves are regarded as being totally subjective, and are therefore specifically disallowed by IFRS 4.

Balance Sheet disclosure, via notes to the accounts, is generally low by insurance companies in developing countries. Notes to financial accounts should be extensive, and explain as fully as is reasonably possible the financial position of the company, and provide further detail on individual profit and loss items, and balance sheet items. Most indigenous insurers in developing countries do not provide much information above the raw minimum amount required by law. There are notable exceptions, such as Nigeria, where insurance companies tend to provide detailed explanatory notes to financial statements.

### **Should developing countries be encouraged to adopt IFRS or US GAAP?**

Both US GAAP and IFRS represent insurance accounting at an advanced stage, and therefore require infrastructure in place which is simply not available in developing countries. This infrastructure consists of:

- A legal and regulatory framework which permits the implementation of IFRS and/or US GAAP. Surprisingly, many legal frameworks stipulate concepts which are expressly forbidden by both US GAAP and IFRS, such as the holding of catastrophe reserves;
- Education: detailed knowledge of IFRS or US GAAP, and how to apply the complex accounting concepts;
- The availability of technical expertise to perform the complex calculations required for insurance companies;
- A corporate governance regime which promotes the use of either US GAAP or IFRS methodologies; and
- A skilled insurance regulator and/or corporate regulator possessing the technical expertise required to ensure that insurance companies comply with US GAAP or IFRS rules.

Almost all developing countries simply do not have the above infrastructure in place. Therefore, insistence that developing countries implement immediately either IFRS or US GAAP achieves relatively little: the insurance companies generally cannot comply with such a directive. In addition the insurance regulator usually does not have the requisite skill and expertise available (such as fully qualified in-house actuaries) even in cases where some insurance companies can comply (for example, large local insurers or subsidiaries of international insurers).

In the longer term, all countries will need to comply with international accounting standards. Each country should have a “road map” in place which outlines milestones as to how to achieve this objective, and stipulate a time frame. The road map will vary from country to country, as it will depend on such factors as the current level of market development, current levels of expertise and the size of the market. Thus, developing countries such as India and China are much closer to complying (with IFRS) already: both these countries have high levels of expertise, good legal frameworks and, in IRDA and CIRC, strong and effective regulators.

## Appendix A: Simplified Non-Life/P&C Insurance Profit and Loss Used in Developed Countries

|   |               |
|---|---------------|
| Premium Revenue   | 57,000        |
| Less: Outwards Reinsurance Expense                            | (8,000)       |
| Net Premium Revenue   | 49,000        |
| Change in net U.E Premiums                                    | 2,000         |
| <b>Earned Premium</b>   | <b>47,000</b> |
| <br>  |               |
| Gross claims incurred*  | 37,000        |
| Less: Accrued reinsurance and other recoveries*               | (5,000)       |
| <b>Net claims incurred</b>                                    | <b>32,000</b> |
| <br>  |               |
| Selling Expenses  | 6,000         |
| General Business Expenses                                     | 4,000         |
| <b>Other Underwriting Expenses</b>                            | <b>10,000</b> |
| <b>Net Underwriting Result</b>                                | <b>5,000</b>  |
| Investment revenue  | 16,000        |
| Less: Other (investment and non insurance) expenses           | (3,000)       |
| Operating Profit before Tax                                   | 18,000        |
| <br>  |               |
| Tax   | (4,000)       |
| <b>Operating Profit after Tax</b>                             | <b>14,000</b> |
| Ratio Analysis:   |               |
| • Claims Ratio: net claims/net earned premiums                |               |
| • Expense Ratio: expenses/net earned premiums                 |               |
| • Combined Ratio: (net claims + expenses)/net earned premiums |               |

\* After allowing for changes in technical reserves

## Appendix B: Simplified Insurance Profit and Loss Used in Developing Countries

| <i>Item</i>                                   | <i>Amount</i> | <i>Comments</i>   |
|---|---------------|---|
| Premium Revenue                               | 3,200         | Premium revenue is frequently calculated on a "gross received basis, not on a "net earned" basis. In times of high growth, this leads to overstatement of revenue   |
| Less: Outwards Reinsurance Expense            | 50            |   |
| Change in Provision for policy liability      | 2,100         | There seem to be two legislative approaches: either this calculation is highly prescriptive, or it is completely open, saying this amount needs to be "actuarially calculated."   |
| <b>Net revenue from insurance activities</b>  | <b>1,050</b>  |   |
| Claims Expenses                               | 300           | Claims expenses are generally calculated as cash outlays – accrued claims (claims not as yet paid and IBNR claims) are calculated as a percentage of premium income. This can result in a highly distorted claims expense figure which in a strongly growing market understates the expense |
| Commission Expenses                           | 330           | Generally, deferral of these expenses, and treatment of them as deferred acquisition costs, is not permitted.   |
| <b>Gross Profit from insurance activities</b> | <b>420</b>    |   |
| Selling Expenses                              | 410           | Deferral of selling expenses is generally not permitted.  |
| Administration Expenses                       | 320           | These expenses are generally defined in detail.   |

| <i>Item</i>                        | <i>Amount</i> | <i>Comments</i>  |
|------------------------------------|---------------|--|
| <b>Profit before Tax</b>           | <b>90</b>     |  |
| Income Tax                         | 20            | Generally, only cash items are tax deductible.   |
| <b>Net Profit/(Loss) after Tax</b> | <b>70</b>     | The profit calculated is generally much closer to a cash flow statement than a calculation of profit using accrual principles. |

Notes:

1. The above format is based on an East Asian country's accounting and regulatory requirements.
2. The above format, and comments, is used for illustrative purposes, and the comments apply to many developing countries. However, it is difficult to put all developing countries into the same category; for example, India, with a relatively low GDP per capita is well advanced and does not fall into this category.
3. In developing countries, the same form is almost always used for life insurers as it is for non-life/P&C insurers.