October 9 , 2012

International Accounting Standards Board (IASB)
30 Cannon Street
London, EC4M 6XH

Financial Accounting Standards Board (FASB)
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Dear Board Members and Staff:

On behalf of the International Accounting Standards Task Force of the American Academy of Actuaries[1], I offer the attached three documents. They have been prepared in response to the request for comments regarding unintended consequences arising from working drafts of the insurance accounting standard. The working drafts were posted on the IASB website in July.

The attached three documents cover three separate topics:

1. The premium allocation approach. This provides comments in response to the working draft, *Feedback on the premium-allocation approach decisions*.
2. Non-insurance components in insurance contracts. This document provides comments in response to the working draft , *Feedback on the Non-Insurance Components*.
3. Measuring earned premium under the building block approach. While there is no working draft on this topic, it has been discussed by the boards and a staff paper was prepared for the June 2012 meeting. The staff paper left some issues for further development. The attached document addresses those issues and provides suggestions regarding the measurement and presentation of earned premium under the building block approach.

If you have any questions, please submit them to Tina Getachew, senior policy analyst, Risk Management and Financial Reporting Council, by phone (202-223-8196) or email (getachew@actuary.org).

[1] The American Academy of Actuaries is 17,000-member professional association whose mission is to serve the public and the U.S. actuarial profession. The Academy assists public policy-makers on all levels by providing leadership, objective expertise and actuarial advice on risk and financial security issues. The Academy also sets qualification, practice and professionalism standards for actuarial in the United States.

Sincerely,
Stephen J. Strommen
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Academy comments to IASB and FASB members and staff regarding the premium allocation approach

The International Accounting Standards Task Force of the American Academy of Actuaries'[1] provides the following comments to the IASB and FASB in response to their invitation to provide feedback regarding unintended consequences arising from published working drafts of the insurance accounting standard. Focusing here on the premium allocation approach, we first note that we are very pleased with changes that have been made in previous drafts to get to the current working draft, since several of the changes respond to issues we have previously raised. Nevertheless we feel there are a few areas that might benefit from further clarification in order to prevent unintended consequences. These are discussed under a separate heading for each area below.

Treatment of Transaction-based Taxes

We agree with the general idea in paragraph 57 to recognize an initial liability equal to the initial premium received (57a) less acquisition costs (57b). However, the definition of acquisition costs in paragraph 57b needs to be clarified to include certain transaction-based taxes, such as premium taxes assessed by state authorities in the United States. We believe that inclusion of such amounts in acquisition costs would be consistent with the principles underlying decisions made so far, and we are concerned that the current draft could be interpreted to exclude those amounts from acquisition costs.

Treatment of premium receivables

There were changes made to Paragraphs 56, 57 and 58 of the Exposure Draft, in that the expected present value of future premiums, if any, that are within the boundary of the existing contract are no longer to be included in the measurement of the liability for remaining coverage. This change appears to address a goal that the balance sheet would not be grossed up for premium receivables; that is, such amounts would not be treated as an asset nor would such amounts be included in the unearned premium liability.

However, when computing the amount of premium earned in a period, those future installments need to be considered for an appropriate measurement of the premium income in the reporting periods. For example, with a one-year contract and insurance premiums paid in two installments, $600 at inception and $600 at mid-year, monthly premium income would be $100. For the first six months of the contract, the future premiums would need to be considered when determining monthly premium income ($1,200 / 12 = $100). If such premiums were not

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considered, then monthly premium income would be $50 ($600 / 12 = $300) for the first six months, and then $150 ($600 / 12 + $600 / 6) for the next six months.
While we understand a goal of not wanting to have the balance sheet grossed up for premium receivables, this goal should be obtained in a manner that allows for premium income during the contract to appropriately reflect the risk insured. As such, we believe that both are achieved by returning to language that is very similar to what was in the Exposure Draft. Accordingly, we recommend that the language in Paragraphs 56, 57 and 58 be changed to be nearly identical to that in the Exposure Draft:

- Par 56: Change to "The ~~pre-claims~~ liability for remaining coverage is the pre-claims (as described in paragraphs 57 and 58), less the expected present value of future premiums, if any, that are within the boundary of the existing contract."

- Par 57: Retain the language in paragraph (a), "plus the expected present value of future premiums, if any, that are within the boundary of the existing contract;"

- Par 58: Remove paragraph (b), "increase the measurement of the liability for the remaining coverage when additional premiums are received."

Reasonable approximation and uncertainty
Paragraph 59A enumerates conditions under which the premium allocation approach would not produce a reasonable approximation to measurement under the building block approach. We have two concerns.

First, the instruction for runoff of the premium allocation pre-claim liability in paragraph 58(a)(ii) appears to contradict the criterion specified in paragraph 59A(b). Paragraph 58(a)(ii) says that the liability may be reduced over time based on the expected timing of incurred claims and benefits if that pattern differs significantly over the passage of time. One can expect the determination of expected timing to involve some judgment. However, paragraph 59A(b) says that the premium allocation approach cannot be used when significant judgment is required to recognize a premium in each reporting period that reflects the satisfaction of the insurer's obligations in that period. It appears that the same judgment regarding the timing of the obligation is required in both places, and the question is whether it is "significant". Again, we suggest that some implementation guidance might be helpful to clarify what is meant.

Second, we do not understand why the premium allocation approach would not be a reasonable approximation to the building block approach in situations where significant judgment must be exercised. Whether the insurer uses the building block or the premium allocation approach, it must in either case make assumptions regarding future cash flows pertaining to the satisfaction of the insurer's obligations. The premium allocation approach is neither more nor less sensitive to judgment than is the building block approach, so we believe that it remains a good approximation to the building block approach when significant judgment is involved.

Academy comments to IASB and FASB members and staff regarding separation of non-insurance components

The International Accounting Standards Task Force of the American Academy of Actuaries'[1] provides the following comments to the IASB and FASB in response to their invitation to provide feedback regarding unintended consequences arising from published working drafts to implement the IASB's tentative decisions on the Insurance Contract project. We believe that there are unintended consequences that arise from the proposed definition and treatment of non-insurance elements in insurance contracts, especially deposit components and service components.

With regard to deposit components, we recommend that proposed disaggregation of deposit components be removed from the standard. Our view is that the amounts that would be disaggregated represent unearned premiums rather than deposits, and that treating them as deposits amounts to a fundamental change to the definition of an insurance contract and does not agree with the common sense understanding of a deposit.

With regard to service components, we suggest that there is a need for additional application guidance regarding situations where a service component may or may not need to be identified for accounting purposes.

Deposit components

There are two types of deposit components, those that are not closely related to insurance contracts and those that are. We concur that deposit components not closely related should be unbundled from insurance contracts. However, we have concerns with the required disaggregation of deposit elements that are closely related.

In the following we review the definition of an insurance contract and then describe unintended consequences of the definition of the disaggregated investment component. We explain differences between an insurer view and a banker view of a life insurance contract, and provide an example based on one in the working draft.

The definition of an insurance contract

Much time has been spent clarifying the accounting definition of an insurance contract. The feature that distinguishes an insurance contract from a financial instrument is the presence of

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insurance risk to the issuer of the contract. Risk can involve uncertainty regarding the amount or the timing of payment, or both. A simple permanent life insurance contract[2] is an example of a contract where the amount of benefit is certain but risk is present due to unknown timing of payment. Such a contract clearly falls under the definition of insurance. In our view no purpose is served by trying to re-define it as a combination of two components. Disaggregation in this fashion changes both the definition of an insurance contract and the common understanding of what a deposit represents. The amount to be disaggregated as a deposit cannot be measured with certainty until after the fact, and updating after the fact requires retrospective adjustments to reported revenue that will be hard to understand.

The definition of deposit element, and unintended consequences

The working draft recommends that the disaggregated investment component be defined as any amount the insurer is obligated to pay regardless of whether an insured event occurs. There are several unintended consequences of this definition.

1. Change to the common understanding of a deposit. Banking usage of the term "deposit" refers to a clearly identified monetary amount. Banks readily measure the amount of a deposit when it is made. However, under the proposed definition, the amount of any insurance premium that is characterized as a deposit must be estimated. It cannot be known with certainty at the time the deposit is made – one must wait until the contract expires to know with certainty how much of the original revenue constituted deposits under the proposed definition. We do not believe that this change to the common understanding of a deposit is necessary or appropriate.
2. Need to retrospectively adjust revenue. Since the amount of a "deposit" cannot be known at the time it is made, the estimate made at that time will need to be adjusted later if there is to be any connection between deposits and withdrawals. It is not clear how or when such retrospective adjustments to revenue are to be made. Example 1 (attached) illustrates the problem.
3. Counter-intuitive revenue reporting. A life insurer that issues contracts with no cash surrender benefits will show substantially greater revenue than one that provides cash surrender benefits on otherwise identical contracts. The fact that a contract with fewer benefits results in larger reported revenue does not make sense, and does not provide meaningful information.
4. Treating unearned revenue as deposits. Many non-life insurance contracts include a provision that upon early termination the premiums paid for coverage beyond the termination date will be refunded. Since this refund is available whether or not there is a claim, this benefit falls under the definition of a deposit element even though it bears none of the normal characteristics of a deposit. We believe that most benefits that fall

[2] A permanent life insurance contract is one where the insurance benefit is a contracted amount to be paid when the insured party dies, whenever that may be. This is in contrast to term life insurance, where the death benefit is only payable if the insured dies during the term of the contract, where the term is a limited period of time.

under the proposed definition of deposits are really a means of refunding unearned revenue, and should be recognized and reported as such for accounting purposes.

5. Creating deposit elements in unintended places. Deposit elements will be created in connection with contracts that bear no resemblance to deposits. For example, some retrospectively rated insurance contracts include a benefit payable at the end of the coverage period if there are no claims, as a means of reducing premiums for policyholders with favorable experience. Under the working draft such a benefit would be treated as a deposit element because it is payable whether or not there is a claim.
6. Influence on the design of insurance contracts. If the working draft is adopted, insurers will be motivated to design contracts that reduce or eliminate benefits payable upon early contract termination, because premiums related to any such benefits are likely to be reported as deposits and result in a reduction in reported revenue. It would be inappropriate for an accounting rule to influence the way business is done in this way.

Two views of a permanent life insurance contract

The working draft is based on a particular view of a permanent life insurance contract. Under this view, the contract is the sum of two parts: a deposit component that increases over time and an insurance component that declines over time. At some very advanced age, the deposit component increases to equal the total death benefit and the insurance component disappears. This is a banking-centric view and can be contrasted with an insurer view of the same contract. Under an insurer view, the contract guarantees payment of a fixed amount no matter when the insured individual dies – the risk is in the timing of the payment. If the contract is surrendered before death there may be payment of a cash value that represents unearned premiums, that is, the portion of premiums paid in the past that are in excess of amounts needed to pay for coverage in the past. Under this view, the cost of providing coverage for any period is the full amount of the death benefits paid during the period, not just the amount of death benefits in excess of cash surrender values. At some advanced age, the cost of providing coverage for any period approaches the full death benefit because payment is almost certain within the next reporting period.

If one adopts the insurer view, then the portion of premiums to report as revenue in the current period would be the full earned premium, and the contract liability at the end of the period would represent unearned revenue. When a contract is surrendered, the full liability (that is, the full amount of unearned revenue) would be released and contribute to net earnings. If there is a benefit payable on surrender, this would be understood to offset the release of liability for unearned revenue and would reduce the reported earnings for the period. In cases where the benefit payable on surrender is based on the unearned revenue, the surrender of a contract would not result in any significant reported earnings.

The difference between the banking view and the insurer view is that under the insurer view all premiums paid for an insurance contract are counted as revenue when earned (e.g., required to pay for current expected claims), whereas under the banker's view earned premiums need to be reduced by an estimated amount of "deposits". Insurers view this hypothetical estimate of deposits to be an estimate of that part of deferred revenue that will be refunded on premature

contract terminations rather than used as revenue to pay insurance benefits under the contract. The estimate depends on the assumed fraction of policyholders that will terminate their contracts early. The fact that this amount of "deposits" must be estimated and cannot be known with certainty suggests that the banking view is contrived and does not accurately represent an insurance contract.

Fundamentally, insurers view the disaggregated "deposits" as deferred revenue.

Example 1

This example is based on the same set of facts as Example 2 in the material attached to the working draft:

> An insurer issues a traditional whole life policy for CU 1,000 of premium with a death benefit of CU 5,000 that allows the policyholder to cancel the policy and receive a cash surrender value of CU 100 initially and increasing by 10% per annum. An insurer has a claims processing department to process the claims received and a team of asset managers to manage its investments.
>
> Assume that the insurer estimates that there is a 25% probability that the policyholder will cancel the policy after 5 years, a 25% chance that the policyholder will cancel after 10 years, and a 50% chance that the policyholder will die at the 30th anniversary of contract issuance (while the policy is in effect). Further assume that the insurer determines the applicable discount rate that reflects the characteristics of the liability is 5%.
>
> Based on the above assumptions, the probability weighted present value of amounts payable to the policyholder regardless of an insured event is CU 273. Removing this amount from the CU 1,000 of premiums would result in CU 627 of premiums for the insurance component to be recognised in the statement of comprehensive income (in aggregate over the life of the contract).

The 627 (62.7%) of premiums that are to be recognized over the life of the contract is just an estimate – it cannot be known with certainty. If, for example, all policyholders surrender for their cash value at the end of the 10th year, then all of the premiums would need to be retrospectively categorized as deposits and any previously reported insurance revenue would need to be reversed. In the same way, if no policyholders ever surrendered for cash and all died at the end of the 10th year, then only 5% of the revenue should have been categorized as deposits and the other 95% as insurance revenue.

A methodology to retrospectively adjust revenue based on the actual mix of benefits paid under the contract has not been proposed. The actual mix of benefits will always differ from the anticipated mix to some degree, so a matching of estimated deposits with actual withdrawals[3] will require retrospective adjustments to deposits. Such a need for retrospective adjustment of a deposit goes against common sense and will be time consuming and expensive to calculate. We

[3] Any roll-forward of the liability for the deposit component will require some connection between deposits and withdrawals, and this will lead to a need to retrospectively adjust the reported deposits and insurance revenue.

believe it would be confusing to the user of financial reports and would not provide useful information.

Service components

A standard that requires separation of service components from an insurance contract has one consequence that may be unintended, and that is the amount of judgment that must be applied when deciding when there is a service component and how it should be separated.
There are certain insurance contracts which, based on a change in a single parameter, can fall anywhere on a continuum from a pure service contract to a pure insurance contract. An example is an employer's contract to provide health insurance for its employees. The insurer collects a premium and agrees to pay all employee health insurance claims and provide claims administration services. The employer may wish to reduce its premiums and retain some of the risk on such a contract, thus the contract would be modified so that the employer pays all claims up to some limit each year and the insurer only pays claims in excess of that limit, if any.

Now if the limit is zero, then the insurer pays all claims and this is clearly an insurance contract. However, if the limit is high enough, the insurer provides claims administration services but might never pay any claims. This is clearly a service contract. If the limit is somewhere in between, then there may or may not be a need to split the contract into service and insurance portions. There is no clear dividing line that one can use as a benchmark to decide when a separate component for claims administration services must be separated.

The discussion included with the draft standard includes examples concerning separation of claims processing services. Example 2a is similar to the situation described above, and suggests that in any case where the stop-loss limit is non-zero one should separate the claims processing services as a service component.

The discussion included with the draft standard also includes Example 3, a high-deductible health plan. In this example there is no separation of services from insurance. However, the example is based on some assumptions that may not always hold. We agree with the following conclusions that services should not be separated from insurance for a health plan, even if the assumptions we are about to discuss do not hold; however, we are concerned that other readers may infer that the conclusion depends on the validity of those assumptions. In particular, the Example 3 assumes that "the claims processing services and network access are not sold separately by the insurer, nor could they be purchased from a third party." This would typically not be true in the US. Also, with regard to claims processing and network access, Example 3 states that "the policyholder receives no separate benefit from those activities". In the US, where network access is associated with significant discounts in charges for health care services, network access may be viewed as one of the main benefits to the policyholder under the contract[4].

[4] See the attached excerpt from "Margins in Claim Liabilities under Future Accounting Models", Rowen B. Bell, The Actuarial Practice Forum, July 2008.

The discussion with the draft standard reaches the correct conclusions regarding the need to separate a claims processing service component from a health insurance contract. However, the issues raised in this document require application of judgment. Consistent worldwide application of the standard could be enhanced by additional published examples along the lines discussed. Two additional examples are outlined below.

Insurers that offer worker's compensation insurance to manufacturers sometimes provide "loss engineering" services along with the insurance. This involves providing factory inspections and guidance regarding safe manufacturing practices, directed at reducing potential claims costs. We view this to be part of an insurer's effort to reduce its cost, and not as a separable service to the manufacturer/policyholder. However, a manufacturer who chooses not to purchase insurance can purchase the same service separately. Does this mean that the service must be separated when provided in connection with an insurance contract? We do not believe the service needs to be separated in this case because the service is for the benefit of the party bearing the risk – the insurer.

Title insurance is another example where judgment must be applied to the separation of a service component. The primary business purpose of title insurance is not to indemnify policyholders, but to prevent title-related losses from ever occurring. Title insurers use most of their premium income performing a title search and examination, which identifies potential title problems, prior to issuing the insurance. Much less than 10% of premium is typically reserved for claims. The title search and examination is a service for the policyholder that we believe should be separated.

# # #

Published discussion regarding the benefit of network access:
Excerpted from "Margins in Claim Liabilities Under Future Accounting Models", Rowen B. Bell, The Actuarial Practice Forum, July 2008.

Most medical insurance in the United States is sold by companies that do not themselves directly provide health care services, but instead have entered into a variety of contractual arrangements with hospitals, physicians, and other health care providers. As such, when an individual covered by a medical insurance policy obtains health care services from a provider with whom the insurance company has a contract, the provider agrees to accept a discounted payment level for those services as specified in its contract with the insurer, rather than the provider's retail charge for those services. It is important to note that this applies regardless of whether or not the insured individual is entitled to any insurance benefits from the insurer with respect to the health care services in question. For example, if the insurance policy includes a deductible that needs to be satisfied before the insurer is responsible for any claims, the insured nevertheless receives the benefits of the insurer's provider contracts for all health care services, regardless of whether or not the policy deductible has yet been satisfied.

As such, in the current environment a U.S. medical insurer is providing two important but distinct services to its customers. First, the insurer is assuming insurance risk—the insurer accepts premiums, typically paid on a monthly basis but fixed for a 12-month period, in exchange for paying valid claims under the insurance contract with respect to health care services incurred during the coverage period, regardless of when those claims are reported to the insurer. Second, insured individuals receive the benefit of the insurer's provider contracts with respect to all health care services they receive from contracted providers during the coverage period, and the insurer adjudicates the amounts owed to the providers for those services, regardless of whether those amounts are ultimately owed by the insurer or by the insured.

This second service has become extremely important in the context of the current U.S. healthcare system.[5] That the medical benefits adjudication process has value to the insured, independent of the claims to which the insured might be entitled under the policy, distinguishes U.S. medical insurance from many other non-life insurance coverages. Under many other types of non-life policies, the claims adjustment process may be of interest to the insured only as a means to an end, namely, the determination of insurance benefits. Under a medical policy, however, the claims adjustment process mitigates the insured's out-of-pocket costs even for health care services that do not generate insurance benefits.

[5] For example, in the popular press one frequently sees a statement to the effect that the uninsured do not have access to health care. Uninsured individuals may well have physical access to health care providers, but in addition to lacking the financing provided by medical insurance, they also lack access to the provider discounts that medical insurers have established with those providers. Consequently, an individual lacking a contractual relationship with a medical insurer may end up having to pay considerably higher amounts for health care services than what that individual (and/or the insurer) would pay for those same services if the individual had a contractual relationship with an insurer.

Exploring a method of reporting earned premiums

The IASB and FASB have indicated strong interest in reporting earned premium for contracts under the building block approach, and a staff paper on the subject[1] has been published. In this paper, the International Accounting Standards Task Force of the American Academy of Actuaries'[2] makes several comments on the methodology that is discussed in the staff paper, and offer some insight into the operational issues that could arise when implementing such a methodology. Since we are discussing the building block approach, this paper is primarily focused on long duration contracts.

These comments are organized around three significant issues in the staff paper. The comments lead to the following suggestions for change to the proposed methodology:

1. The amount labeled "earned premium" in paragraph 20 of the staff paper should be labeled "earned revenue" because it reflects investment revenue as well as premiums.
2. In presenting profit or loss, the interest accreted on the insurance contract liability should be offset against investment income to arrive at a profit or loss on investment activities. It should not be offset against earned premium to arrive at profit or loss on insurance contracts, as shown in the staff paper.
3. When calculating earned revenue for a reporting period, the formula in the staff paper needs slight modification to reflect all variations from expected contract activity during the period.
4. The staff paper suggested that "an insurer might need to treat changes in estimates differently depending on their source". We suggest that a single methodology can be used to reflect all changes in estimates of the future.

In order to develop and support these suggestions, we focus on three issues in the staff paper:

- The revenue associated with the interest accretion on the liability.
- Variances between expected and actual results in the current period, other than claims and expenses. The staff paper leaves the treatment of such variances to further investigation, and we offer some insight. Variances can occur not only in claims and expenses but also in premiums paid, contract persistency, margins released, and in interest accrued on the liability.
- The effect of changes in estimates of the future.

Since we refer to reported amounts very often in this discussion, the meaning of the symbols used to represent those amounts needs to be made clear. In the table below, we use unprimed

[1] This refers to IASB staff paper 2C (FASB staff paper 84C) which was prepared for discussion at the June 2012 joint meeting of the boards.

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symbols for ***expected*** reported amounts, and primed symbols for ***actual*** amounts based on the valuation at the beginning of the period.

Symbol	Meaning
A, A'	Release of risk adjustment
B, B'	Release of residual or single margin
C, C'	Claims and expenses (cash basis)
E, E'	Interest accreted on liability
F, F'	Premium received (cash basis)
I, I'	Total investment income

Here we use C' to represent the actual amount of claims and expenses. This corresponds to the symbol D in the staff paper. We hope that our use of primed and unprimed symbols to represent actual and expected amounts will add clarity to the discussion below.

Dealing with interest accretion on the liability

Paragraph 20 suggests that "earned premiums" are equal to (A + B + C). The logic behind this is based on the idea that any premiums paid in excess of those earned are added to the contract liability, i.e., the unearned premium. The increase in the liability[3] (excluding interest accreted) is therefore a good measure of the amount of premium collected that is not yet earned. If we start from the liability roll-forward in paragraph 21d:

Liability at start of period + F + E - C – A – B = Liability at end of period.
Increase in liability = F + E – C – A – B

We easily derive the earned premium

Earned premium = F – ((increase in liability) – E)
= A + B + C

However, paragraph 21c then points out that "over the life of the contract, the result is that the total measure of earned premiums is greater than the premiums received." This statement is correct, but misleading. The amount (A + B + C) actually represents "earned revenue", not just earned premiums. Over the life of the contract, it includes the interest accreted on the insurance contract liability. The interest accreted is the portion of investment revenue that is required to support insurance contract activities. Since the assets supporting that investment revenue arose from premiums collected in the past, it is reasonable to include that portion of investment revenue in "earned revenue" for insurance contracts.

For contracts that fall under the premium allocation method, no interest is accreted in the calculation of the pre-claims liability. Since this component of earned insurance revenue is treated as zero, all earned revenue comes exclusively from premiums and it is reasonable to refer to it as "earned premium". However, for long term contracts that come under the building block approach, we suggest reporting "earned revenue" rather than "earned premium", because

[3] The "increase in liability" as discussed here is to be measured before any change to estimates of the future. The effect of changes in estimates is discussed later.

revenue is a combination of both premiums and investment income due to the long term nature of the contract.

It is tempting to divide "earned revenue" into the portion attributable to premiums and the portion attributable to investment income supporting interest accretion on the liability. However, the attempt to do so leads to numbers that have no meaning in the context of profit and loss. Consider the case of an insurance contract under which all premiums were paid in the past and all claims are expected years in the future. During the current period there are no expected (or actual) claims. If this contract has no margins, then the total revenue for the contract in the current period (A + B + C) is zero. If we try to split this revenue between premiums and interest accretion, we find that either both must be zero or that the investment revenue supporting interest accretion (which we know is positive) must be balanced by negative earned premium. But a negative earned premium makes no sense in this case.

Therefore we offer our first suggestion.

Suggestion 1: The figure shown as earned premium presentation in paragraph 20 and labeled "earned premium" (A + B + C) should be re-labeled "earned revenue on insurance contracts".

In paragraph 20, interest accreted on the insurance contract liability is subtracted when determining the "profit or loss on insurance contracts". If this is done, many (most) life insurance companies will report "profit or loss on insurance contracts" that is a large negative amount and therefore meaningless. A more meaningful presentation would deduct interest accreted on insurance contract liabilities from total investment income rather than from "profit or loss on insurance contracts". The excess of investment income over interest accreted to the liability is related to the "profit or loss on investment activities", a figure that has meaning to the user of insurer financial statements.

We therefore offer our second suggestion.

Suggestion 2: The presentation of income on an "earned revenue" approach could be done as follows:

Earned revenue presentation	**Currency units**
Earned revenue from insurance contracts	A + B + C
Actual claims and expenses incurred	-C'
Profit or loss on insurance contracts	A + B + C – C'
Total investment income	I
Interest accreted on insurance contract liability	-E
Profit or loss on investment activities	I-E
Total profit or loss	**(A + B + C – C') + (I – E)**

The formulas in the "currency units" column are based on the same assumptions as those in paragraph 20 of the staff paper, where the only variance between actual and expected results is

the level of claims and expenses. In reality there will be other variances. The next section discusses how the methodology can be adapted to deal with them.

Dealing with all variances between actual and expected results for the current period

The current period profit or loss on insurance contracts varies from expectations due to variances in all reported items, not just reported claims and expenses. A practical method for reporting earned premium must reflect this[4].

The roll-forward of the reported liability provides information that will be helpful in this regard. Paragraph 21d of the staff paper shows this roll-forward:

Liability at start of period + F + E - C – A – B = Liability at end of period.

This roll-forward uses expected values for every variable, so the liability at the end of the period is the expected liability, not the actual liability. To arrive at the actual liability, we must change the formula to this:

Liability at start of period + F' + E' – C" – A' – B' = Liability at end of period[5].

The increase in the liability for the period is:

Increase in liability = F' + E' – C" – A' – B'

Note that we have used C" rather than C'. C' represents actual claims and expenses paid, while C" represents the expected level of claims and expenses paid given the actual contract activity rather than given the expected contract activity. The roll forward of the liability uses expected claims rather than actual claims, but we must adjust the expected claims for actual experience in other factors that differs from expected. For example, if there were more early contract terminations than expected, then the amount of claims in C'' would be smaller than the amount of originally expected claims in C because actual activity involved less insurance coverage than expected for the full period. We need this adjusted measure of expected claims to complete the roll forward of the liability. The roll forward from the beginning to the end of the period adjusts the liability to reflect all activity during the period, with the result that each liability, whether at the beginning or end of the period, reflects the actual exposure to risk at that point in time.

[4] The staff paper discusses this in paragraphs 40-44. In this section we are not discussing the effect of changes in future estimates, we focus exclusively on variances in the current reporting period. Therefore, we assume that the valuation at the end of the period is done using the same assumptions as those applied at the beginning of the period. However, the valuation must reflect the state of those contracts at the end of the period, and that state may not be what was expected at the beginning of the period.

[5] This is the liability at the end of the period before adjustment for changes in expectations of the future. Normally there will be changes in expectations of the future, but we anticipate that the amount associated with those changes will be identified and reported separately. The effect of changes in expectations will be quantified by carrying out two valuations at the end of the period, one based on original expectations and another based on the newly revised expectations. The difference between the liability value in those two valuations is the amount associated with the changes.

The reason we focus so closely on the expected claims amount is that it is included in the calculation of earned revenue. Paragraph 20 of the staff paper suggests that earned premium is A + B + C. Whatever is used for C is therefore a critical figure.

Suggestion 3: Earned revenue should be A' + B' + C", since it should reflect actual rather than expected results.

This measure of earned revenue is the same as premium collected (F') less the increase in liability excluding interest accretion. Rearranging the equation above for the increase in the liability we have:

F' – (increase in liability – E') = A' + B' + C"

In order to report this amount we must be able to calculate each of the components. It is not always easy to split out all of the pieces of the increase in liability. One can directly determine these parts:

F'	Actual premiums collected in cash
A'	Difference in total risk margin between the beginning and ending liability
B'	Difference in residual or aggregate margin between the beginning and ending liability

However, it may not be straightforward to determine E' and C". We know that the total increase in the liability is F' + E' – C'' – A' – B', so we can determine the amount E' – C" = (increase in liability) –(F' – A' – B') . If actual premiums F' are close to the expected premiums F, then one can approximate C" = C and then solve for E' as a balancing item:

E' = (increase in liability) – (F' - A' - B') + C

If premiums collected deviate substantially from expectations, other approximation methods for C" and E' may be required when systems are not able to calculate an exact figure at the contract level.

Given the availability of "actual" rather than "expected" data, we suggest that the presentation of income on an "earned revenue" approach could be done as follows:

Earned revenue presentation	**Currency units**
Earned revenue from insurance contracts	A' + B' + C"
Actual claims and expenses incurred	-C'
Profit or loss on insurance contracts	A' + B' + C" – C'
Total investment income	I'
Interest accreted on insurance contract liability	-E'
Profit or loss on investment activities	I'-E'
Total profit or loss	**(A' + B' + C" – C') + (I' – E')**

As footnoted earlier, one can generally expect that there will be changes in expectations of the future that will also affect the ending liability for insurance contracts. We anticipate that the amount associated with those changes will be identified and reported on a separate line somewhere in the statement of comprehensive income.

Dealing with changes in estimates of the future

Paragraphs 30-47 of the staff paper discuss changes in estimates of the future. One conclusion is that "an insurer might need to treat changes in estimates differently depending on their source".

Suggestion 4: A single methodology, based on the discussion above, is sufficient for all changes in estimates.

We expect that the amount associated with changes in estimates of the future will be identified and reported separately. Under the building block approach, the effect will be quantified by carrying out two valuations at the end of the period, one based on original expectations and another based on the newly revised expectations. The difference between the liabilities in those two valuations is the amount associated with the changes in estimates.

When we proceed to the next reporting period, we work with a complete new set of expectations. Those new expectations, along with actual results for that period, can be used to derive the reported amount of earned revenue for that period, using the methodology discussed above, but with one additional piece – the use of an adjusted margin in the calculation of earned revenue.

Recall that earned revenue is equal to A' + B' + C", where B' is the current period release of residual or single margin. For purposes of calculating earned revenue, any change in liability due to changes in future expectations should be treated as an adjustment to (unlocking) the amount of margin (single or residual) remaining to be released in future periods. The calculation of earned revenue in future periods should include the amortization of this unlocked margin, even if it is different from the margin actually reported on the balance sheet (statement of financial position).

The use of this unlocked margin is needed to ensure that the total earned revenue over the life of an insurance contract will equal the sum of premiums paid and interest accrued to the liability.

To understand why this is so, note that the liability is zero before the contract is issued and it is zero after the contract terminates. Therefore the sum of all changes to the liability over time must also be zero. We know that the change in liability for any one period is:

Change in liability = F' + E' – C" – A' – B' + (effect of changes in assumptions)

In the absence of any changes in assumptions, the fact that the sum of the changes in liability must be zero means that:

Sum of (F' + E') = Sum of (C'' + A' + B').

Since earned revenue in each period is (C'' + A' + B') we are assured that earned revenue will sum to total premiums and interest credited, in the absence of changes in assumptions. However, when assumptions do change without unlocking margins this equality is lost because changes will affect future premiums (F), interest (E) and claims (C) but not margins (A and B).

In order to maintain the equality shown above, the margins used to calculate the value of B' (the change in residual or single margin remaining) must be unlocked to offset the effect of changing assumptions. For purposes of calculating earned revenue, the ending margins used to calculate B' for the period just ended are the pre-unlocked margins. However, the beginning margins that will be used to calculate B' (and therefore earned revenue) for the next period are the unlocked margins. The difference between the prior period ending margins (pre-unlocking) and current period beginning margins (post-unlocking) that are used to calculate earned revenue is the amount of change in liability due to changes in assumptions.

Under this method:

- An increase in the estimate of future premium collections (F) will increase the unlocked margin, and therefore increase the future earned revenue.
- An increase in the estimate of future claims (C) will decrease the unlocked margin. In the calculation of earned revenue, the smaller margin will offset the larger claim amount (in a present value sense), leaving the present value of total future earned revenue unchanged.
- An increase in the discount rate will typically increase interest credited (E) and the unlocked margin. In the calculation of earned revenue, the larger margin release will lead to larger earned revenue attributable to the accretion of more interest on the liability. Here we again observe that we are calculating and reporting earned revenue rather than earned premium[6]. The total amount of earned revenue over the life of the contract will normally exceed the premium collected by the amount of interest accreted on the liability.

To summarize, the use of an unlocked margin to calculate earned revenue ensures that the total earned revenue over the life of an insurance contract will equal the sum of premiums paid and interest accrued to the liability.

The IASB has suggested that the residual margin should automatically be unlocked, although it should not fall below zero. If that is done in the fashion discussed here, then no further adjustment would be needed except in cases where contracts become onerous and the residual margin becomes negative. For purposes of reporting earned revenue, the negative margin would need to be used to calculate earned revenue in the case of onerous contracts.

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[6] Again we emphasize that for contracts under the premium allocation approach, earned revenue and earned premium are the same thing. The distinction is only applicable to contracts under the building block approach.