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การประกอบธุรกิจประกันภัย(คปภ.)  
Office of Insurance Commission

23 March 2009

To: Chief Executives of all insurers  
Thai Life Assurance Association  
General Insurance Association  
Society of Actuaries

We are please to attach the First Consultation Paper setting out the proposed Risk Based Capital Framework. This paper was sponsored by the WorldBank and developed by PricewaterhouseCoopers FAS Limited in conjunction with industry representatives.

The Consultation Paper is available for public comment on the Office of Insurance Commission website ([www.oic.or.th](http://www.oic.or.th)), and details of the consultation process are included in the Explanatory Foreword attached.

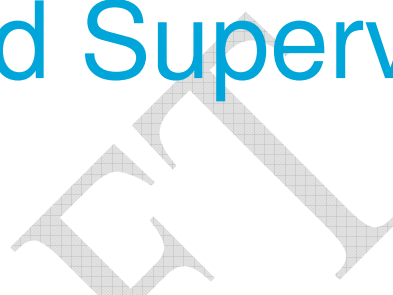
Given the importance of this initiative, we require all insurers and their respective associations to respond to the Consultation Paper by 1 May 2009. To facilitate this process, a feedback form has been developed which sets out the format of the required feedback. A copy is available on our website: [www.oic.or.th](http://www.oic.or.th)

If you have any inquiries on the Consultation Paper, they can be directed to the above address or e-mailed to: [rbc@oic.or.th](mailto:rbc@oic.or.th). Alternatively, you may contact the following officers if you require further clarification:

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# Thailand: Enhancing Insurance Regulation and Supervision

March 21, 2009 (Version 4)





## **Disclaimer and confidentiality statement**

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# THAILAND PROPOSED RISK BASED CAPITAL FRAMEWORK

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**NOTICE:**

*Throughout this consultation document, examples illustrate the calculations required. The example company is fictitious and is not intended to represent any individual Thai company. Nor are the results derived meant to be representative of the impact of RBC on Thai companies.*

## 1. Aims of Risk Based Capital in Thailand

The objective of Solvency Capital is to provide a buffer to protect the interests of policyholders. This buffer should be sufficiently large to allow time for management action or regulator action to counter the impact of adverse experience on the ability of the insurer to meet its liabilities to customers.

The proposed new basis for Solvency Capital is a Risk Based Capital Framework (“RBC Framework”).

That is, the required Solvency Capital will directly reflect the risks to which an individual company is exposed. RBC would replace the existing “one size fits all” system.

The RBC Framework specifies the capital which an insurer needs to have in excess of its liabilities (mostly technical reserves). The difference between the proposed new approach and the current formula is that:

- The required capital depends on the risk profile of the specific insurer, rather than just the size of its business; and
- The basis for valuation of assets and liabilities is more transparent than before, and no longer incorporates undisclosed margins.

Such a Framework will drive better risk management and more efficient use of capital.

The proposed RBC Framework itself will trigger changes to regulation in a number of areas. In addition, the role of actuaries and auditors will change to reflect the increased weight given to an insurer’s own situation in assessing its Solvency Capital requirement.

The RBC Framework has been designed specifically for Thailand, recognizing and reflecting the current situation of the whole industry. In particular, the process recognized that the size and capabilities of different insurers are different, and this is reflected in the relatively standardized and straightforward approach which is proposed.

Where appropriate, certain features of international best practice, drawn in particular from Solvency II and the Malaysian and Singaporean regimes have been incorporated in the proposed RBC Framework. However, the circumstances and interests of Thai companies have always been uppermost in the designers’ minds.

## 2. Principles of Risk Based Capital and Applicability

All insurers and reinsurers, including branches, will be subject to the RBC requirements. The following principles underlie the proposed RBC Framework:

- Allow insurers greater opportunity to achieve efficient use of their capital by linking the required capital more closely to the level of risk entailed by the chosen business strategy.
- Aligned, where possible, with international best practice.
- Provide the regulator with relevant and timely information within the context of specific risk capital levels, to provide adequate early warning for timely intervention.
- Consistent between life and non-life companies.
- Capital Requirement varies with risk and scale: the capital required of two insurers with similar liabilities and similar risks to be consistent; conversely, two insurers whose risk profile is significantly different should experience corresponding capital requirements.
- Thai Government guarantee to be considered the highest level of security (i.e. risk free).
- Separation of buffers and margins from the estimates of technical reserves, combined with explicit levels for the technical reserves, to allow greater transparency and greater comparability of insurers' solvency positions.

Some insurers may have developed or have access to internal models for setting their own capital targets or for the purposes of reporting under the Solvency II regime. While the Office of Insurance Commission ("OIC") wishes to encourage the development of such models, all companies must still comply with the standard RBC Framework and the results from internal models may not be used as a substitute at present. The OIC will consider allowing the use of such models in the future.

### 3. The formula for the Capital Requirement

The Capital Adequacy Ratio for an insurer is defined as:

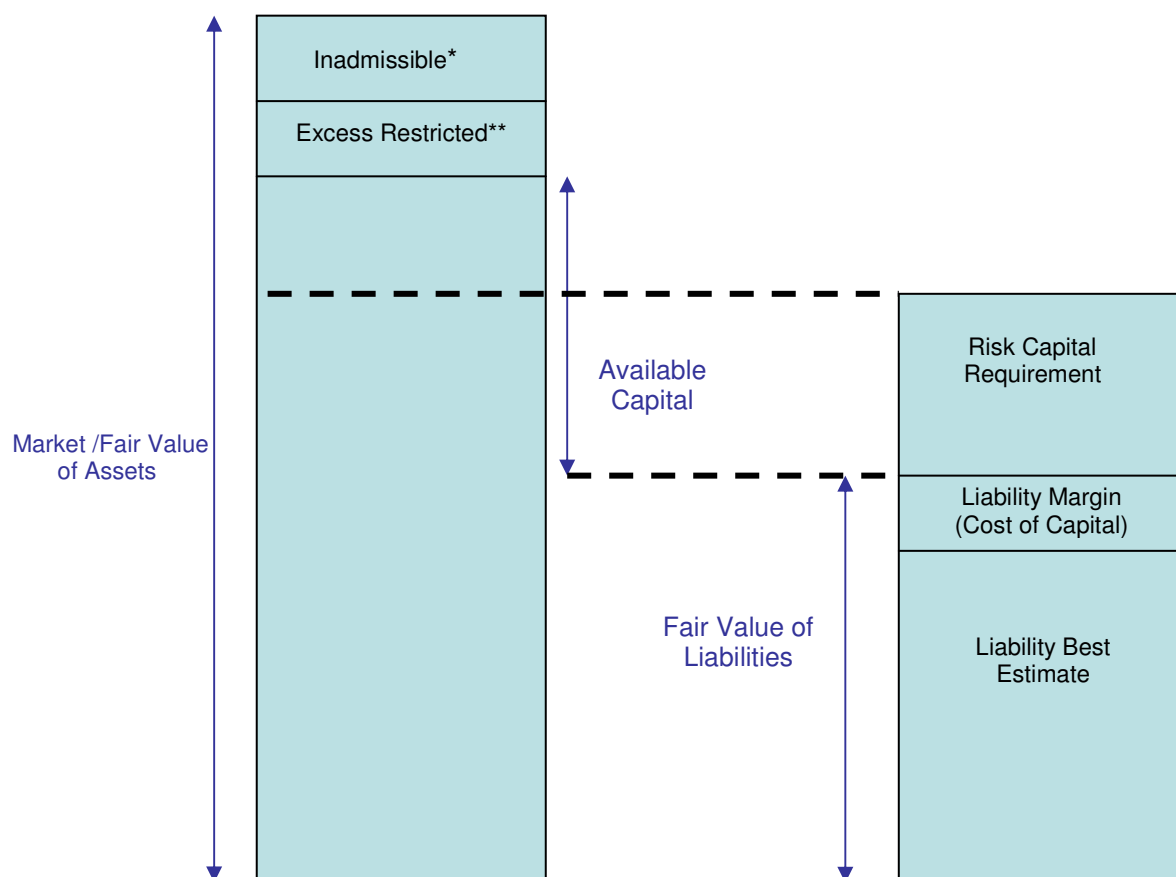
(Total Available Capital) divided by (Risk Capital Requirement)

The RBC Framework sets the target to be met by an insurer as a Capital Adequacy Ratio at least equal to 100%.

The starting point for measuring the Total Available Capital for an insurer is the insurer's balance sheet in which:

1. Assets have been valued at fair or market value
2. Liabilities such as technical reserves have been assessed at an equivalent fair value

Only certain capital is allowed to be counted for this purpose and the amount to be counted may be restricted, depending on its characteristics.



\* For example: assets pledged as collateral for credit facilities

\*\* The excess of Tier 2 capital over Tier 1 capital (see later)

The approach to the valuation of assets and liabilities is in line with the principles in relation to transparency, the explicit statement of buffers and margins and is aligned with the direction of Solvency II and International Financial Reporting Standards ("IFRS").



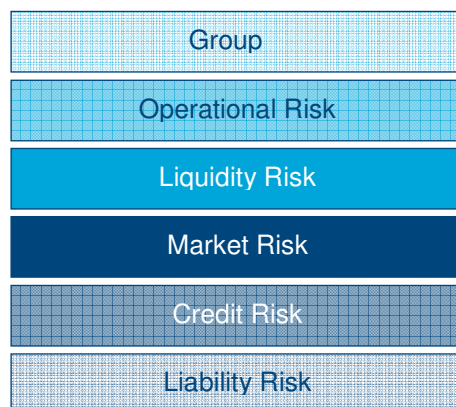
The benchmark for setting the Risk Capital Requirement is that the likelihood of remaining solvent throughout the next 12 months is 99.5%. The definition of solvency for this purpose is having market value of assets in excess of fair value of liabilities.

This benchmark would imply that an insurance company would need to make a projection of assets and liabilities arising from new business in the 12 months following the date of the calculation of the Risk Capital Requirement. In order to simplify the calculations, the projection of new business is omitted from the Risk Capital Requirement calculation. Management will continue to be responsible for managing the risks associated with new business, however, and in addition regulations and the regulator will continue to control, to some extent, the terms on which such business is written.

The principle that the Risk Capital Requirement should vary with level of risk and scale, implies that diversification effects should be reflected in capital requirements.

There will also be an adjustment overall to Required Risk Capital to ensure that the likelihood target applies in aggregate.

The risks to be taken into account in the Risk Capital requirement are grouped into the following categories:



1. **Group risk** represents the risks associated with membership of a wider business grouping such that risks to which other group companies are exposed could have a financial or operational impact on the insurer.
2. **Operational risk** is produced by inadequate or failing internal processes, persons or systems, or by external events. Examples are fraud or liability for mis-selling.
3. **Liquidity risk** describes the risk that an insurer while balance sheet solvent, cannot generate enough cash to pay claims and other outgoings.
4. **Market risk** derives from market prices themselves or from the volatility of those market prices. Among other risks, market risk includes equity risk, interest rate risk, property risk and currency risk.
5. **Credit risk** includes both the risk that issuer of a bond, or other creditor defaults and the risk that the counterparty in a risk mitigating contract is unable to meet its obligations to the insurer. This latter risk is especially relevant to reinsurance contracts, but also arises in the case of financial derivatives.

6. **Life insurance liability risk** is the risk specific to policies held with life insurers. It includes the risk of unexpectedly high or low mortality or morbidity among policyholders, or an unexpectedly large increase in administrative costs.
7. **Non-life insurance liability risk** is the risk specific to non-life insurance policies associated in particular with unexpectedly many or unexpectedly high claims.

Strategic risk is not explicitly considered in the proposed Framework. This is because the other risk categories capture some aspects of strategic risk, while other aspects relate largely to new business. As mentioned above, risks relating to new business will continue to be regulated separately.

The Risk Capital Requirement is calculated by applying risk charges to the value of specific items within the assets and the liabilities and to exposure measures for other risks. Each type of asset or liability attracts a charge according to the risks to which it is exposed and the sum (subject to diversification adjustments) of these charges equals the Risk Capital Requirement.

The proposed Framework looks at group risk, operational risk and liquidity risk differently from other risks at this stage. The approach to each and the reasons for the doing so, which are different in each case, are explained later in this document.

There will continue to be an absolute minimum amount of capital which an insurer or reinsurer must hold. This amount is currently Baht 50m for life insurers and Baht 30m for general insurers. These amounts will be reviewed once the RBC Framework is completed.

The RBC Framework is not a substitute for good risk management, but acts to strengthen it. Insurers are expected to continue to develop and implement sound risk management and governance regimes. Insurers will be required to make sure that their strategy, internal controls and decision making processes are effective in ensuring that they assume only their intended level of risk. In addition, insurers will be expected to actively manage their capital adequacy ratio by taking into account the potential impact of business strategies on the insurers risk profile as part of the decision making process. The OIC will retain the power to intervene in the management of companies which do not meet adequate risk management standards.

## 4. Total available capital

The starting point for measuring the Total Available Capital for an insurer is the insurer's balance sheet in which:

1. Assets have been valued at fair or market value; and
2. Liabilities such as technical reserves have been assessed at an equivalent fair value.

The OIC hopes that changes to the accounting standards for financial reporting will align Thai Accounting Standards with this requirement.

The amount of certain types of capital which may be counted for RBC Framework purposes may be restricted and there may be additional deductions from the capital which can be counted. These restrictions depend on the structure of the individual insurer's balance sheet as explained below.

Available capital must fall into one of the following categories

Tier 1 is capital which meets the following criteria in full:

- (a) Subordination to policyholder liabilities
- (b) Fully available to absorb losses in the event of a winding up
- (c) Fully available to absorb losses in a going concern situation
- (d) Of substantially sufficient duration given the nature of the liabilities
- (e) Free of mandatory servicing costs

For example, many regulators stipulate an original term of at least 10 years and a remaining term of at least 5 years.

Tier 2 is Capital which meets all except point c) above. All other types of capital are inadmissible. The amount of Tier 2 capital is not to exceed Tier 1 capital.

The following table shows the analysis for common types of capital and how they would be classified according to the criteria above:

Tier 1
Retained earnings
Aggregate of the surpluses of the assets over liabilities of insurance funds <sup>1</sup>
Issued and paid-up ordinary shares (or the equivalent, in the case of a branch of a foreign insurer)
Irredeemable and non-cumulative paid-up preference shares
Share premiums
Any other capital instruments*, approved by the OIC, issued for long term investment. These items are not to exceed 15% of Tier 1 capital. Surplus amounts to this may be included in Tier 2
Tier 2
Irredeemable and cumulative paid –up preference shares
Reserve or surplus from revaluation of self-occupied property
Reserve or surplus from investment revaluation <sup>2</sup>
General reserves
Any other capital instruments*, approved by the OIC, issued for long term investment that are surplus to amounts allowed in Tier 1. The value of such qualifying Tier 2 instruments shall not exceed 50% of Tier 1 capital

<sup>(1)</sup> The insurance fund here refers to assets backing the insurance liabilities. Although there is no current requirement to identify such assets separately, the intention is that surplus arising, whether from valuation of assets or otherwise, not credited to earnings should be capable of being counted as tier one capital.

<sup>(2)</sup> Relates only to assets other than those backing insurance liabilities. See note (1) above.

Note that any deficit amount in the above Tier 1 and Tier 2 capital items shall be treated as a deduction from Total Available Capital.

\* *Guidelines for Other Capital Instruments*

1. The instruments are fully issued and paid up by cash.
2. Dividend, coupon or other rewards are non cumulative.
3. No dividend, coupon, or principal, or any part thereof, shall be paid under the instrument so long as such payment would result in the insurer being insolvent.
4. In the case of bankruptcy, the instrument holders are subordinated to the claims of insurer, other creditors and also instruments which can be included in Tier 2 capital.
5. Instrument holders waive the right to set-off any amount it owes the insurer against the amount owed on the instrument.
6. The instrument is not secured, nor covered by guarantee, nor subject to any arrangement, that enhances the priority of the claim by the insurer or its related corporation.
7. The instrument does not have a maturity date, subject to 8 below.
8. Where redemption is possible, the redemption may only occur with the consent of the company after a minimum of 5 years after issuance and with prior approval of the OIC.

9. The instrument does not have any provision that mandates, or creates an incentive for, the insurer redeem the instrument early, other than a provision that;
- Makes the instrument redeemable by the insurer no earlier than 10 years after the issuance of the instrument; and
  - If the insurer chooses not to call when it has the opportunity to do so, the dividend or coupon rate payable under the instrument increases by no more than 1% per annum.
10. As an issuer, the insurer has discretion regarding making the decision over the amount and timing of dividend or coupon payment.
- a. Dividend payment, interest or other reward of instruments can be made only to the extent of distributable profits determined from the last statement of accounts lodged.
  - b. Dividend payment, interest or other reward shall be fixed at the time of issuance of the instrument and not linked to the credit standing of the insurer.
  - c. The insurer must clearly and accurately disclose the features and conditions of the instrument so that it can be easily understood by investors
  - d. Any amendments of conditions must have permission from the OIC.
  - e. An appropriate memorandum relating to the instrument shall be submitted to the OIC showing how the above items have been complied with

For the purpose of calculating the Capital Adequacy Ratio, the following deductions should be made from the aggregate of Tier 1 and Tier 2 capital to arrive at the total available capital:

- (i) goodwill and other intangible assets (e.g. capitalized expenditure);
- (ii) future income tax benefits and deferred tax assets;
- (iii) assets pledged to support credit facilities obtained by an insurer; and
- (iv) investment in subsidiaries.

The following example shows how the calculation of Total Available Capital might work for a hypothetical balance sheet.

**Total Available Capital Calculation Example**

	Baht (millions)
<b>Tier 1</b>	
Retained earnings	1,234
Surplus funds	564
Ordinary shares	750
Irredeemable, non-cumulative preference shares	250
Share premiums	300
Subordinated loans	200
	3,298
<b>Tier 2</b>	
Irredeemable, cumulative preference shares	460
Surplus from premises revaluation	(123)
Surplus from investment revaluation	45
General reserves	125
Subordinated loans	300
	807
<b>Total Tier 1 and 2</b>	<b>4,105</b>
<b>Deductions</b>	
Goodwill	230
Capitalised expenditure	21
Deferred tax assets	15
Assets pledged to support credit facilities	0
Investment in subsidiaries	56
	322
<b>Total Available Capital</b>	<b>3,783</b>

## 5. Risk Charges

The total capital required is calculated by first summing the risk charges for each of the following categories of risk: Group, Operational, Liquidity, Market, Credit, Liability and then multiplying the result by the aggregation factor.

### Group risk capital charge

The capital charge to be determined when the insurer has a financial dependence on another group company in order to meet its liabilities, or has a potential financial obligation to another group company. The present circumstances of the Thai insurance industry are likely to mean that this element of Required Capital will not be significant. This is because the risks presented by typical group dependencies are already taken into account in the proposed risk charges for credit and concentration risks. Accordingly, it is proposed that the charge for group risk will be zero initially.

### Operational risk capital charge

The operational risk capital charge (“ORCC”) aims to mitigate risks of financial losses arising from inadequate or failed internal processes, people and systems.

At present, the insurance industry in Thailand is at an early stage in codifying its operational risk management and the regulator is still considering how company policies should interact with regulatory requirements. Accordingly, it is proposed that the charge for group risk will be zero initially.

### Liquidity risk capital charge

Liquidity risk may be associated with a situation such as when meeting liabilities relies on the sale of certain assets which may in particular conditions be unsaleable (e.g. property), or when certain extreme conditions afflict normally liquid markets.

The monitoring of the former aspect of liquidity risk will rely on the valuation calculations undertaken by the actuary in the case of a life company or cash flow projections in the case of a non-life company.

Sound liquidity management goes beyond this, however, the OIC will expect all insurers to have in place a framework for liquidity risk management, including policies, cash flow measurement, scenario analysis and clearly defined roles and responsibilities.

No explicit capital charge is proposed for liquidity risk.

### Market risk capital charge

The market risk capital charge (“MRCC”) aims to mitigate risks of financial losses arising from the reduction in the market value of assets due to exposures to:

- (i) Equity prices
- (ii) Interest rates
- (iii) Property prices
- (iv) Commodity prices, and
- (v) Foreign currency rates

For categories (i), (iii), (iv) and (v), the component of the risk charge is calculated as (Market exposures x Market risk charge). For example, for equities, the market value of the equity portfolio is multiplied by a prescribed parameter.

For category (ii), the risk charge is calculated as the fall in values of fixed interest investments resulting from a prescribed shift in interest rates. For life insurance business, however, this charge can be offset by the corresponding change in best estimate liability values resulting from the same shift in interest rates. Thus, a portfolio of interest sensitive life products which is exactly matched by fixed interest assets will not incur any interest rate risk charge. In practice, most life companies will benefit from a reduction in their interest rate charge when compared to the charge which would have applied in the impact of interest rate movements on the liabilities was ignored.

There will be an allowance for any benefits related to portfolio diversification effects between different asset categories.

The MRCC is calculated as the sum of the risk charges for categories (i) to (v) above less Diversification.

### **Credit risk capital charge**

The credit risk capital charge (“CRCC”) aims to mitigate risks of losses resulting from asset defaults, related losses of income and the inability or unwillingness of a counterparty to fully meet its contractual financial obligations.

The CRCC will be broken down into categories according to type of credit exposure, such as:

- i. Debt instruments
  - a. Government - Sovereigns and central banks of various countries (including the Thai Government, Bank of Thailand and Thai PSE's with Ministry of Finance guarantee)
  - b. Multi-lateral development banks
  - c. Financial institutions - financial institutions / securities companies / Thai PSEs with no MoF guarantee / other government entities and state enterprise specified by OIC
  - d. Corporate
  - e. Secured by property (including mortgages).
- ii. Other loans
  - a. Policy loans
  - b. Leasing / hire purchase
  - c. Staff and Agents of the insurer
- iii. Other assets
  - a. Deposits - non-guaranteed amounts
  - b. Amounts due in respect of salvage and subrogation
  - c. Reinsurance assets
  - d. Accrued investment income – excluding: government / sovereign / PSE / guaranteed deposits / declared SET listed dividends / policy loans
  - e. Premiums due and uncollected, including those due from other insurers
  - f. Derivatives

A scale of credit risk charges will be applied according to the measure of credit worthiness. These will be based on a scale of 1 to 6 and consistent with the Bank of Thailand rules for banks. The grades for Thailand companies will use Thai specific credit ratings. The proposed scale and credit ratings are as follows:

### Credit Risk Grades - Long Term Rating Scale

Rating	Thailand Company		Offshore		
	TRIS	Fitch (Thailand)	S&P	Moody's	Fitch
1	AAA	AAA(THA)	AAA	Aaa	AAA
	AA+	AA+(THA)	AA+	Aa1	AA+
	AA	AA(THA)	AA	Aa2	AA
	AA-	AA-(THA)	AA-	Aa3	AA-
2	A+	A+(THA)	A+	A1	A+
	A	A(THA)	A	A2	A
	A-	A-(THA)	A-	A3	A-
3	BBB+	BBB+(THA)	BBB+	Baa1	BBB+
	BBB	BBB(THA)	BBB	Baa2	BBB
	BBB-	BBB-(THA)	BBB-	Baa3	BBB-
4	-	-	BB+	Ba1	BB+
			BB	Ba2	BB
			BB-	Ba3	BB-
5	BB+	BB+(THA)	B+	B1	B+
	BB	BB(THA)	B	B2	B
	BB-	BB-(THA)	B-	B3	B-
6	B+	B+(THA)	CCC+	Caa1	CCC+
	B	B(THA)	CCC	Caa2	CCC
	B-	B-(THA)	CCC-	Caa3	CCC-
	CCC+	CCC+(THA)	CC	Ca	CC
	CCC	CCC(THA)	C	C	C
	CCC-	CCC-(THA)	D		D
	CC	CC(THA)			
	C	C(THA)			
	D	DDD(THA)			
		DD(THA)			
	D(THA)				

### Credit Risk Grades - Short Term Rating Scale

Rating	Thailand Company		Offshore		
	TRIS	Fitch (Thailand)	S&P	Moody's	Fitch
1	T1+	F1+(THA)	A-1+	P-1	F1+
	T1	F1(THA)	A-1		F1
2	T2	F2(THA)	A-2	P-2	F2
3	T3	F3(THA)	A-3	P-3	F3
4	unrated	unrated	unrated	unrated	unrated

The CRCC may be offset by the use of eligible Credit Risk Mitigate such as collateral, netting and guarantees. It is proposed to adopt the rules established by the Bank of Thailand for the determination of eligible items and amounts, modified if necessary to reflect circumstances peculiar to the insurance industry.

The CRCC is calculated as the sum of (Exposures to counterparties x Credit risk charge) except that the charge imposed on reinsurance assets will be 50% of the charge calculated by this formula. This reduction in the charge for reinsurance assets follows the approach presently proposed for Solvency II, recognizing the position of the insurer as a policyholder of the reinsurer and that in the event of default a portion of the reinsurance asset may still be recovered.

The exposure in the case of reinsurance assets will be the value calculated for those assets under the procedures set out in the appendices relating to valuation of policy liabilities but after deducting any amounts due to the reinsurer actually held by the insurer.



## Counterparty Concentration Risk Capital Charge

The counterparty concentration risk capital charge (ConRCC) aims to mitigate risks of financial losses arising from having excessive exposure related to the size of the assets to a particular counterparty. This exposure is related to a particular company or a group of related companies and includes all types of assets exposed to the particular counterparty.

The exposure in the case of reinsurance assets will be the value calculated for those assets under the procedures set out in the appendices relating to valuation of policy liabilities but after deducting any amounts due to the reinsurer actually held by the insurer.

It is an additional risk capital charge which is based on the total asset value that is in excess of a concentration limit.

The OIC currently imposes investment limits and that this approach could be maintained to address concentration risk. It is noted, however, that many regulators address this by using a ConRCC and that this is the direction of Solvency II.

Industry participants are invited to provide their comments in respect to the approaches for concentration risk.

## Non-life liability risk capital charge

The non-life liabilities capital charge (“NLRCC”) is aimed at addressing the risk of under-estimation of the insurance liabilities and adverse claims experience, over and above the amount of reserves shown in the balance sheet, (The liabilities shown in the balance sheet will be computed according to the prescribed method set out later in this document and correspond to the projected liabilities at a 75% confidence level after allowing for diversification.).

The formula to compute the NLCC is as follows:

$$\sum_{\text{All business lines } i} \{ \text{claim liabilities at 75\% confidence after diversification (if applicable)} \}_i \times \{ \text{Risk Charge} \}_i$$

+

$$\sum_{\text{All business lines } i} \{ \text{unexpired risk reserve at 75\% confidence after diversification (if applicable)} \}_i \times \{ \text{Risk Charge} \}_i$$

where “i” refers to the different classes of business.

The risk charge for each line of business will be a prescribed percentage.

**Life liability risk capital charge**

For life business, the risk charge will be calculated by repeating the valuation of policy liabilities but applying a set of conservative assumptions. Thus the risk charge will be equal to the excess of the valuation result using a set of assumptions which have been derived by applying the prescribed multipliers to the actuary's best estimate assumptions and then deducting the policy liabilities shown in the balance sheet. (The liabilities shown in the balance sheet will be computed according to the prescribed method set out later in this document and correspond to the projected liabilities at a 75% confidence level after allowing for diversification).

**Extreme Situations**

In certain extreme economic situations or in circumstances where an adverse event has had a large impact on a significant segment of the industry, it is proposed that industry associations may approach the OIC to seek a temporary amendment to the RBC Regulations. The OIC would have power to make such temporary amendments and make these applicable to the affected industry segment.

## 6. Valuation of Assets and Other Liabilities

The starting point for measuring the Total Available Capital for an insurer and calculating the Risk Capital Requirement is the insurer's balance sheet in which:

1. Assets have been valued at fair or market value; and
2. Liabilities such as technical reserves have been assessed at an equivalent fair value.

This section addresses the valuation of assets, other than reinsurance assets, and the valuation of liabilities other than the technical insurance liabilities.

Where the current Thai Accounting Framework for valuation of assets does not meet the aim of valuing assets either consistently with a fair value or consistently with the approach to valuing the insurance policy liabilities, the RBC Framework will include separate valuation rules.

These rules will usually be drawn from the IFRS Framework because it provides a ready-made valuation framework which addresses all of the assets likely to be held by Thai insurers and will address new forms of assets as they arise. A similar approach has been adopted in respect of non-insurance policy liabilities. Assets have been valued at fair or market value; and Liabilities such as technical reserves have been assessed at an equivalent fair value.

The table below lists all the asset classes which are relevant to insurers, together with their current treatment under both TAS and the OIC valuation rules, along with the proposed RBC Valuation rules

Balance Sheet Item	Definition	Current approach			Proposed RBC Valuation
		Applicable IFRS	TAS Valuation	Applicable OIC	
<b>ASSETS</b>					
<b>Cash and cash equivalent</b>	<p><i>Cash</i> comprises cash on hand and demand deposits which are not restricted from being exchanged or used to settle a liability for at least twelve months after the balance sheet date. (IAS 1 paragraph 66)</p> <p><i>Cash equivalents</i> are short-term, highly liquid investments that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value. (IAS7 paragraph 6)</p>	Not less than the amount payable on demand, discounted for the first date that the amount could be required to be paid.	Same as IFRS.	Carrying value at balance sheet date.	<p>The treatment under accounting standard IAS 7 and IAS 39 is considered an acceptable proxy for fair value.</p> <p>If a different basis is used, full explanation must be given.</p>
<b>Accrued investment receivable</b>	Not specifically defined however under IAS39 it meets the loan and receivable category. See IAS39 paragraph 9.	Amortisation cost less impairment under IAS39	Contractual value less allowance for doubtful account	<p><b>Government and stated enterprise bond</b> Contractual value</p> <p><b>Corporate bond and debenture</b> Contractual value but not overdue over 12 months</p> <p><b>Loans and receivable</b> Contractual value but not overdue over 12 months</p>	<p>The treatment under IAS 39 is considered an acceptable proxy for fair value.</p> <p>If a different basis is used, full explanation must be given.</p>
<b>Premium receivable</b>	Not specifically defined however under IAS39 it meets the loan and receivable category. See IAS39 paragraph 9.	Amortisation cost less impairment under IAS39	Contractual value less allowance for doubtful account*	Contractual value but not overdue over 60 days counted from effective date or from due or settlement date	<p>The treatment under IAS 39 is considered an acceptable proxy for fair value.</p> <p>If a different basis is used, full explanation must be given.</p>

Balance Sheet Item	Definition	Current approach			Proposed RBC Valuation
		Applicable IFRS	TAS Valuation	Applicable OIC	
<b>Receivable from reinsurance</b>	Not specific defined however under IAS39 it meets the loan and receivable category. See IAS39 paragraph 9.	Amortisation cost less impairment under IAS39	Contractual value less allowance for doubtful account	Contractual value	The treatment under IAS 39 is considered an acceptable proxy for fair value.  If a different basis is used, full explanation must be given.
<b>Financial assets-Derivative</b>	See in IAS39 paragraph 9	Fair value with valuation adjustment either through profit and loss or equity depending if hedge accounting is applied. .	No specific accounting standard. It depends on company accounting policy.	Not an admissible asset except where permission is requested from the OIC.	The treatment under IAS 39 is considered an acceptable proxy for fair value.  If a different basis is used, full explanation must be given.
<b>Financial assets-fair value through profit and loss (FVTP)</b>	See in IAS39 paragraph 9	Fair value with valuation adjustment through profit and loss account	Thai GAAP does not have a FVTP definition.  However, TAS 40 does define trading securities where the fair value adjustment does go through the profit and loss account.  Note that whilst TAS 40 relates to investments in debt and equity securities, the IFRS definition covers all types of financial assets not only investment.	Not addressed by the OIC.	The treatment under IAS 39 is considered an acceptable proxy for fair value.  If a different basis is used, full explanation must be given.
<b>Available for sale financial assets</b>	See in IAS39 paragraph 9	Initially record at cost and subsequently present at fair value with valuation adjustments through equity.  Non marketable securities are also required fair value adjustment.	Initially record at cost and subsequently present at fair value with valuation adjustment through equity	Initially record at cost and subsequently presented at fair value with valuation adjustment through equity. Except for the non-marketable securities where the admissible value is the net book value in the latest financial statement.	The treatment under IAS 39 is considered an acceptable proxy for fair value.  If a different basis is used, full explanation must be given.

Balance Sheet Item	Definition	Current approach			Proposed RBC Valuation
		Applicable IFRS	TAS Valuation	Applicable OIC	
<b>Held-to-maturity financial assets</b>	See in IAS39 paragraph 9	Amortisation cost less impairment under IAS 39.	Amortisation cost less impairment under TAS40.	As same as available for sale.	<p>These assets should be revalued to fair value in accordance with IAS 39 fair value guideline to match with insurance liability which is valued at fair value as well.</p> <p>If a different basis is used, full explanation must be given.</p>
<b>Participants in subsidiaries, associates and joint ventures</b>	Definitions in IAS 27, IAS 28 and IAS 31	IAS 27, IAS 28 IAS 31 - In the separate accounts of the holding company, investments in subsidiaries, associates and JVs can be accounted for either: <ul style="list-style-type: none"> <li>- at cost, or; in accordance with IAS 39. IAS 28 (if IAS 27 is not applied to an investment in an associate): application of the equity method</li> </ul>	TAS 44, TAS 45 and TAS 46 is not significantly difference with IFRS. However, these standards are exempted for non public company.	<p>This is not applicable because under the existing OIC investment guideline, an insurer is not allowed insurer to invest in subsidiaries, associates and joint ventures except for when OIC approve.</p> <p>Where it is approved by OIC, an admissible asset value is net book asset value presenting in the latest financial statement.</p>	<p>The fair value treatment under IAS 39 guideline should be applied.</p> <p>If a different basis is used, full explanation must be given.</p>

Balance Sheet Item	Definition	Current approach			Proposed RBC Valuation
		Applicable IFRS	TAS Valuation	Applicable OIC	
<b>Loan and receivable</b>	See in IAS39 paragraph 9	Amortisation cost less impairment under IAS 39.	<p><b><u>Guarantee and mortgage loan</u></b> Contractual value less allowance for impairment under TAS 36.</p> <p><b><u>Non-guarantee loan</u></b> Contractual value less allowance doubtful account under TAS 11.</p>	<p><b><u>Policy loan</u></b> Loan principal and its accrued are admissible but cannot be greater than the cash surrender value.</p> <p><b><u>Mortgage loans</u></b> If the loan is not overdue more than 12 months then the full amount of loan principal and its accrued interest receivable is admissible</p> <p>If the loan is overdue more than 12 months then the loan plus accrued interest receivable is admissible up to 60% of collateral value where the appraisal is not more than 24 months. If the appraisal is more than 24 months then only 40% of the collateral can be admitted.</p> <p><b><u>Bill and note</u></b> Contractual right except for its default over timing mention in accrued interest receivable.</p> <p><b><u>Hire purchase and lease receivable</u></b> Contractual value except for overdue over 6 months.</p>	<p>Loan and receivable should be revalued to fair value in accordance with IAS 39 fair value guidance.</p> <p>If a different basis is used, full explanation must be given. .</p>
<b>Investment in property</b>	Property held to earn rental or for capital appreciation or both (IAS40 paragraph 4)	Initially at cost; then either fair value model or cost model.	<p>No specific TAS for investment in property. However, the equivalent IAS 40 is being in draft.</p> <p>The current accounting practice is as same as property, plant and equipment.</p>	OIC treat in as same as property plant and equipment.	<p>The fair value treatment under IAS 40 is considered an acceptable proxy for fair value.</p> <p>If a different valuation basis is used, full explanation must be provided</p>

Balance Sheet Item	Definition	Current approach			Proposed RBC Valuation
		Applicable IFRS	TAS Valuation	Applicable OIC	
<b>Due from reinsurer</b>	No specific defined however under IAS39 it is met loan and receivable category. See in IAS 39 paragraph 9	Amortisation cost less impairment under IAS39	Contractual value less allowance for doubtful account	Contractual value	The treatment under IAS 39 is considered an acceptable proxy for fair value.  If a different basis is used, full explanation must be given.
<b>Foreclosed property</b>	Not specific defined under IFRS. They can be treated either under IAS 40: Investment in property or IFRS 5: asset held for sale.	Initially at fair value; then either treatment under investment in property (IAS40) or Asset held for sale (IFRS5).  Under IAS 40, fair value model or cost model.  Under IFRS5, lower of carrying amount and fair value less projected sale transactions.	Initially at fair value under TAS34, trouble debt restructuring (TAS 34.29).  Subsequently at carrying amount less impairment.	Depends on type of foreclosed assets.  If it is a land, then 100% of appraisal value from Treasury department will be used.  If it is other property, fair value would be allowed when OIC approve on case by case basis.  In case of foreclosed assets under hire purchase or leasing agreement, fair value of foreclosed assets at repossession date less the highest useful life under Revenue Code.	The fair value treatment under IAS 40 or IFRS 5 is considered an acceptable proxy for fair value.  If a different valuation basis is used, full explanation must be provided



Balance Sheet Item	Definition	Current approach			Proposed RBC Valuation
		Applicable IFRS	TAS Valuation	Applicable OIC	
<b>Property, plant and equipment (PPE)</b>	<p>Tangible items that: (a) are held for use in the production or supply of goods or services; and (b) are expected to be used during more than one period.</p> <p>Recognized if, and only if: (a) it is probable that future economic benefits associated with the item will flow to the entity; and (b) the cost of the item can be measured reliably (IAS 16.6,7,37)</p>	<p>Initially at cost (IAS 16.15)</p> <p>Subsequent measurement either:</p> <ul style="list-style-type: none"> <li>- cost model: cost less any depreciation and impairment loss;</li> <li>- revaluation model: fair value at date of revaluation less any depreciation or impairment (IAS 16.29,30,31)</li> </ul>	TAS 32 is no significant difference with IFRS.	<p>Depend on type of property.</p> <p>If it is a land, the 100% of appraisal value from Treasury department will be used.</p> <p>Leasehold improvement is not an admissible asset except where it is for property directly owned by the insurer</p> <p>If it is other property beside above, either cost model with the highest useful life under Revenue Code is admissible or fair value would be allowed when OIC approve on case by case basis which must be evaluate frequently.</p>	<p>The fair value treatment under IAS 40 or IFRS 5 is considered an acceptable proxy for fair value.</p> <p>If a different valuation basis is used, full explanation must be provided</p>
<b>Finance Leases (lessees)</b>	Classification of leases is based on the extent to which risks and rewards incidental to ownership of a leased asset lie with the less or the lessee. (IAS 17 paragraph 4 and 8)	Initially at the lower of fair value or the present value of the minimum lease payment (IAS 17 paragraph 20)	TAS 29 is not significantly different to IFRS however; it is effective for the contracts signed after 1 January 2008.	The same as property, plants and equipment.	<p>The fair value treatment under IAS 17 is considered an acceptable proxy for fair value.</p> <p>If a different valuation basis is used, full explanation must be provided</p>

Balance Sheet Item	Definition	Current approach			Proposed RBC Valuation
		Applicable IFRS	TAS Valuation	Applicable OIC	
<b>Intangible assets</b>	<p>An intangible asset can be identified only if it is either:</p> <ul style="list-style-type: none"> <li>capable of being separated from the entity; or</li> <li>arises from contractual or other legal rights;</li> </ul> <p>And the insurer has the power to obtain the future economic benefit, and restrict the access of others to those benefits.</p> <p>Recognize if, and only if: (a) it is probable that the expected future economic benefits will flow to the entity; and (b) the cost of the asset can be measured reliably.</p>	<p>Initially at cost</p> <p>Definite useful life intangible is subsequent measurement either:</p> <ul style="list-style-type: none"> <li>cost model i.e. cost less any accumulated amortisation and any accumulated impairment losses</li> <li>revaluation mode i.e. fair value less any amortisation and impairment</li> </ul> <p>Indefinite useful life intangible shall not be amortised and have to charge only impairment losses</p> <p>(IAS 38 .24-64, 74, 75)</p>	TAS 52 has no significant difference to IFRS.	No account for admitted asset except for special request to OIC.	<p>The fair value method under IAS 38 could be considered an acceptable proxy.</p> <p>However, intangibles are not easily marketable, and as a result there is an argument to deduct them from Total Available Capital.</p> <p>We seek comments on this issue.</p>
<b>Goodwill on Acquisition</b>	IFRS 3.51 Goodwill acquired in a business combination	<p>Goodwill is recognized by the acquirer as an asset from the acquisition date, initially measured as the excess of the cost of the business combination over the acquirer's interest in the net fair value of the acquirer's identifiable assets, liabilities and contingent liabilities.( IFRS 3.51)</p> <p>After recognition: at cost less any impairment loss.</p> <p>If the acquirer's interest exceeds the cost of the business combination, the acquirer shall reassess the identification and measurement and recognize immediately in profit or loss any excess remaining after that reassessment (IFRS3.54,56)</p>	TAS 43 is similar to IFRS.	No account for admitted asset except for special request to OIC.	<p>Goodwill is not a marketable asset and as a result there is an argument to deduct them from Total Available Capital.</p> <p>We seek comments on this issue.</p>

Balance Sheet Item	Definition	Current approach			Proposed RBC Valuation
		Applicable IFRS	TAS Valuation	Applicable OIC	
<b>Goodwill on Acquisition (Insurance portfolio transfer)</b>	IFRS 4.31,32 Expanded presentation for insurance contract acquired in a business combination or transfer (tentative decision in the DP)	Intangible assets representing the difference between the fair value of the liability (insurance rights acquired and insurance obligations assumed) and the value of the liability according to insurer's accounting policy. (IFRS 4.31-32/ DP (167)  Subsequent measurement consistent with measurement of the related insurance liability. For contracts acquired in portfolio transfer, the Board's preliminary view is that the difference between the exit value and the consideration Received should be recognized as income or expense (DP 172).	No TAS for insurance contract however the equivalent of IFRS 4 is in the process of being drafted.	Currently, such case has never incurred in Thailand due to the fact that legal system is not allow to transfer.  However, under the existing OIC admissible asset guideline; it could be no account for admitted asset.	As same as goodwill above.
<b>Other assets-Inventory</b>	Assets that are: (a) held for sale in the ordinary course of business; (b) in the process of production for such sale; or (c) in the form of materials or supplies to be consumed in the production process or in the rendering of services. ( IAS 2 paragraph 6)	At the lower of cost and net realizable value (IAS 2.9)	TAS 31 is not significantly different to IFRS	No account for admitted asset except for special request to OIC.	The net realizable treatment under IAS 2 is considered an acceptable proxy for fair value.  If a different valuation basis is used, full explanation must be provided
<b>Other assets-asset held for sale</b>	Assets whose carrying amount will be recovered principally through a sale transaction (IFRS 5.6)	Lower of carrying amount and fair value less costs to sell (IFRS 5.15)	TAS 54, which is effective for the financial year begin 1 January 2009, is not significantly different to IFRS.	No account for admitted asset except for special request to OIC.	The fair value treatment under IFRS 5 is an acceptable proxy.  If a different valuation basis is used, full explanation must be provided

Balance Sheet Item	Definition	Current approach			Proposed RBC Valuation
		Applicable IFRS	TAS Valuation	Applicable OIC	
<b>Other assets-Deferred tax assets</b>	<p>The amounts of income taxes recoverable in future periods in respect of ;</p> <p>a) deductible temporary differences;</p> <p>b) the carryforward of unused tax losses; and</p> <p>c) the carryforward of used tax credits</p> <p>(IAS 12 paragraph 5)</p>	<p>A deferred tax asset of unused tax losses/credits can be recognized to the extent it is probable that future taxable profit will be available for offset.</p> <p>Deferred tax assets cannot be discounted and are measured at the tax rates expected to apply when the asset is realized.</p> <p>Deferred tax assets must be reviewed at each balance sheet date.</p>	<p>No specific TAS for taxation however, the equivalent IAS12 is being in draft.</p>	<p>No account for admitted asset except for special request to OIC.</p>	<p>The treatment under IAS 12 is considered an acceptable proxy for fair value, however, it is recognized that deferred tax assets are not tradable.</p> <p>As a result there is an argument to deduct them from Total Available Capital.</p> <p>We seek comments on this issue.</p>
<b>Other assets-other</b>	<p>The other future economic benefit controlled by insurer other than mention above.</p>	<p>Other assets are measured at the amount expected to be recovered (frame work)</p>	<p>As same as IFRS</p>	<p>No account for admitted asset except for special request to OIC.</p>	<p>An impaired costs basis would be an acceptable proxy for fair value, except if long term in which case discounting should be applied.</p>
<b>Impairment</b>	<p>Impairment of financial asset and impairment of non financial assets</p>	<p>A Financial asset is subjected to Impairment charge under IAS 39 and for non financial asset is under IAS 36.</p>	<p>IAS 39 is in draft. And TAS 36 (revised 2008), equivalent IAS 36, is effective for the financial year begin 1 January 2009. However, Impairment under IAS 36 is being waived for non-public company.</p>	<p>No specific guideline and requirement to set impairment.</p>	<p>The impairment under IAS 36 and IAS 39 should be applied where relevant.</p>
<b>LIABILITIES</b>					
<b>Current income tax payable</b>	<p><i>Current tax</i> is the amount of income taxes payable (recoverable) in respect of the taxable profit (tax loss) for a period. (IAS 12 paragraph 5)</p>	<p>Unpaid tax for current and prior periods is recognized as a liability. Current tax liabilities are measured at the amount expected to be paid.</p>	<p>No specific TAS for taxation however, the equivalent to IAS12 is being in draft.</p>	<p>Carrying value on account book.</p>	<p>The treatment under IAS 12 is considered an acceptable proxy for fair value.</p>

Balance Sheet Item	Definition	Current approach			Proposed RBC Valuation
		Applicable IFRS	TAS Valuation	Applicable OIC	
<b>Due to reinsurer</b>	Not specifically defined, however under IAS39 it would meet the financial liability definition, see in IAS39 paragraph 9.	Amortised cost under IAS39.	Amount expected to be paid.	Carrying value on account book.	The treatment under IAS 39 is considered an acceptable proxy for fair value.  If a different basis is used, full explanation must be given.
<b>Financial liabilities –derivative</b>	IAS 39 paragraph 9	Fair value with valuation adjustment through profit and loss or apply hedge accounting, which also fair value but the valuation adjustment be flown through profit and loss or equity depend on type of hedge accounting.	No specific accounting standard. It depends on company accounting policy.	Carrying value on account book.	The treatment under IAS 39 is considered an acceptable proxy for fair value.  If a different basis is used, full explanation must be given.

Balance Sheet Item	Definition	Current approach			Proposed RBC Valuation
		Applicable IFRS	TAS Valuation	Applicable OIC	
<b>Financial liabilities</b> <ul style="list-style-type: none"> <li>• overdraft and borrowing</li> <li>• Invested liability</li> <li>• Other financial liability including deposit component or investment type contracts</li> </ul>	Not specifically defined, however under IAS39 it would meet the financial liability definition, see in IAS39 paragraph 9.	<p>On initial recognition, financial liabilities are measured at fair value plus, for financial liabilities not at fair value through profit or loss, directly attributable transaction costs.</p> <p>After initial recognition, measured at amortized cost using the effective interest method, except for:</p> <p>(a) financial liabilities at fair value through profit or loss, shall be measurement at fair value;</p> <p>(b) financial liabilities that arise when a transfer of a financial asset does not qualify for derecognition shall be applied the valuation under IAS 39 paragraph 29 and paragraph 31;</p> <p>(c) financial guarantee contracts - measured at the higher of:</p> <p style="padding-left: 20px;">(i) the amount determined in accordance with IAS 37 (Provision, contingent liabilities and Contingent assets); and</p> <p style="padding-left: 20px;">(ii) the amount initially recognized less, when appropriate, cumulative amortization;</p> <p>(d) commitments to provide a loan at a below-market interest rate - measured at the higher of:</p> <p style="padding-left: 20px;">(i) the amount determined in accordance with IAS 37 (Provision, contingent liabilities and Contingent assets); and</p> <p style="padding-left: 20px;">(ii) the amount initially recognized less, when appropriate, cumulative amortization;</p>	Generally, financial liabilities are amount expected to be paid or are stated at amortisation cost. Financial liability through profit and loss is not allowed.	Carrying value on account book. And financial liability through profit and loss is not allowed.	<p>All financial liabilities should be valued at fair value in accordance with the guidance provided in IAS 39.</p> <p>If a different valuation basis is used, full explanation must be provided</p>

Balance Sheet Item	Definition	Current approach			Proposed RBC Valuation
		Applicable IFRS	TAS Valuation	Applicable OIC	
<b>Due to insurer Unpaid policy benefit Due to reinsurer Other liability and accrued expenses</b>	No specific defined however under IAS39 it is met financial liability category.	IAS39, same as same financial liability	Amount expected to be paid. Financial liability through profit and loss is not allowed.	Carrying value on account book.	The treatment under IAS 39 is considered an acceptable proxy for fair value.  If a different basis is used, full explanation must be given.
<b>Provisions</b>	A provision is a liability of uncertain timing or amount. A provision should be recognized when, and only when: (a) an entity has a present obligation (legal or constructive) as a result of a past event; (b) it is probable (i.e. more likely than not) that an outflow of resources will be required to settle the obligation; and (c) a reliable estimate can be made of the amount of the obligation. (IAS37)	The amount recognized is the best estimate of the expenditure required to settle the present obligation at the balance sheet date.  The best estimate is the amount an entity would rationally pay to settle the obligation or to transfer it to a third party at the balance sheet date.  Discounted cash flow basis is required for over one year obligation.	TAS 53 is not significantly different to IFRS	Carrying value on account book.	The treatment under IAS 37 is considered an acceptable proxy for fair value.  If a different basis is used, full explanation must be given.
<b>Deferred tax liability</b>	<i>Deferred tax liabilities</i> are the amounts of income taxes payable in future periods in respect of taxable temporary differences.  (IAS 12 paragraph 5)	Deferred tax liabilities cannot be discounted and are measured at the tax rates expected to apply when the liability is settled.  Deferred tax liabilities must be reviewed at each balance sheet date	No specific TAS for taxation however, the equivalent IAS12 is being in draft.	No account for admitted asset except for special request to OIC.	The treatment under IAS 12 is considered an acceptable proxy for fair value.
<b>Employee benefits-short term benefits</b>	Employee benefits falling due within 12 months after the period in which employee services were rendered. (IAS 19)	Recognize undiscounted amount expected to be paid as a liability (accrued expense) after deducting any amount already paid.	No specific TAS for taxation however, the equivalent of IAS19 is being in draft.	Carrying value on account book if the issuer book into account.	The treatment under IAS 19 is considered an acceptable proxy for fair value.  If a different valuation basis is used, full explanation must be provided.

Balance Sheet Item	Definition	Current approach			Proposed RBC Valuation
		Applicable IFRS	TAS Valuation	Applicable OIC	
<b>Post employment benefits (incl. pension, severance benefits at normal retirement)</b>	<p>Employee benefits other than termination benefits payable after completion of employment.</p> <p>Post-employment benefit plans are classified as either defined contribution plans or defined benefit plans.</p>	<p>(i) Defined contribution plan: Recognize the contribution payable:</p> <p>(a) as a liability (accrued expense), after deducting any contribution already paid. If the contribution already paid exceeds the contribution due for service before the balance sheet date, that excess should be recognized as an asset (prepaid expense) to the extent that the prepayment will lead to a reduction in future payments or a cash refund; and</p> <p>(b) as an expense, unless another Standard requires or permits the inclusion of the contribution in the cost of an asset</p> <p>(ii) Accounting for defined benefit plans involves:</p> <p>(a) making a reliable actuarial estimate of the benefit employees have earned in current and prior periods</p> <p>(b) discounting that benefit using the Projected Unit Credit Method to determine the PV of the defined benefit obligation and the current service cost</p> <p>(c) determining the fair value of any plan assets</p> <p>(d) determining the total amount of actuarial gains and losses to be recognized.</p>	No specific TAS for taxation however, the equivalent IAS19 is being in draft.	Carrying value on account book if the issuer book into account.	<p>The treatment under IAS 19 is considered an acceptable proxy for fair value.</p> <p>If a different valuation basis is used, full explanation must be provided.</p>
<b>Other long term employee benefits</b>	Other employee benefits not falling due within 12 months after the end of the period in which employee services were rendered	Simpler method of accounting - actuarial gains and losses and past service costs are recognized immediately.	No specific TAS for taxation however, the equivalent IAS19 is being in draft.	Carrying value on account book if the issuer book into account.	<p>The treatment under IAS 19 is considered an acceptable proxy for fair value.</p> <p>If a different valuation basis is used, full explanation must be provided.</p>



Balance Sheet Item	Definition	Current approach			Proposed RBC Valuation
		Applicable IFRS	TAS Valuation	Applicable OIC	
<b>Termination Benefits</b>	<p>Benefits payable as a result of either:</p> <p>(a) an entity's decision to terminate an employee's employment or</p> <p>(b) an employee's decision to accept voluntary redundancy</p>	<p>Recognize termination benefits as a liability and an expense only when, demonstrably committed to either:</p> <p>(a) terminate employment; or</p> <p>(b) provide termination benefits.</p> <p>Discount termination benefits falling due more than 12 months after the balance sheet date.</p> <p>For voluntary redundancy, measurement of termination benefits is based on number of employees expected to accept offer.</p>	<p>No specific TAS for taxation however, the equivalent IAS19 is being in draft.</p>	<p>Carrying value on account book if the issuer book into account.</p>	<p>The treatment under IAS 19 is considered an acceptable proxy for fair value.</p> <p>If a different valuation basis is used, full explanation must be provided.</p>

## 7. Valuation of Technical Liabilities and Reinsurance Assets

The starting point for measuring the Total Available Capital for an insurer is the insurer's balance sheet in which:

1. Assets have been valued at fair or market value; and
2. Liabilities such as technical reserves have been assessed at an equivalent fair value

The liability valuations will be the responsibility of the actuary.

This section addresses the fair valuation of technical reserves (that is insurance policy liabilities) and reinsurance assets.

The proposed RBC Framework prescribes a calculation method for the fair value. This prescribed method differs from the approach of Solvency II, but has the same intention: namely, to arrive at the amount which the insurance market would demand to meet the obligations inherent in the liabilities.

This valuation amount is to be calculated by first deriving a best estimate for the liabilities and then adding an additional amount such that the resulting total is sufficient to meet the liabilities as they fall due at a level of confidence of 75%.

The fair value of the liabilities, or reinsurance assets, must reflect the full contractual obligations within those liabilities. In addition, an allowance must be made for future discretionary benefits payable under the contracts.

In line with Solvency II, no adjustment is made to the value of liabilities to reflect the creditworthiness of the insurance company. Thus the fair value is an "exit value" concept and ensures that two identical liabilities held by different companies have the same values, irrespective of the credit standing of the individual companies.

### Valuation of technical reserves

#### (a) Definition of life and non-life

In general, policies issued by life companies will be valued according to the rules for life business. Non-life company issued policies will usually be valued according to the rules for non-life business. In Thailand, however, life insurance companies sometimes issue accident and health policies, often in the form of riders, which have some of the characteristics of non-life insurance. Conversely, some non-life insurance companies issue policies which pay out on life or health based contingencies and which offer a longer term guarantee which causes the policy to share some of the characteristics of long term life insurance products. The proposed framework requires that accident and health policies issued by an insurer are classified into life and non-life business according to the following definition, and that the valuation and RBC calculations follow the methods prescribed for life and non life business respectively.

Accident and health products with contractual term of more than 1 year which are non-cancellable by the insurer and under which the insurer cannot freely change the premiums during the policy lifetime are treated as life products. All other accident and health products are to be treated as non-life business.

**(b) Non-life valuation method**

For non-life business, the technical liabilities fall into two parts: the reserve for outstanding claims and the reserve for unexpired risks.

The best estimate of outstanding claims is to be made in accordance with the regulations for non-life claims reserves. Along with the introduction of RBC, the existing regulations, namely Notification of the Ministry of Commerce “Allocation of Unearned Premium Reserve and Loss Reserve by Non-Life Insurance Companies” issued on 30<sup>th</sup> September 2006 will be updated.

The addition to the best estimate to reach the 75% confidence level may be estimated according to company specific data by the actuary, or calculated using standard percentage additions specified by OIC for each line of business.

The best estimate of the Unexpired Risk Reserve will be made by projecting the claims and expenses expected to be incurred in relation to the Unearned Premium Reserve at the year end. The addition to the best estimate to reach the 75% confidence level may be estimated, by the actuary, according to company specific data, including an allowance for diversification across different lines of business, or calculated using standard percentage additions specified by OIC for each line of business but without a diversification allowance.

Non-life liabilities must include an allowance for future expenses.

Taking into account the relatively short run off period for non-life business in Thailand at present, no discount for the time value of money is to be applied in calculating the non-life liabilities on grounds of immateriality.

The valuation method for non-life liabilities is described more fully in Appendix 2.

**(c) Life valuation method**

For life business, the prescribed method for best estimate requires a cash flow projection of all benefit payments, contractual premiums, and other relevant cash flows until the liability has been fully extinguished; that is, a run-off basis Gross Premium Valuation. The inherently lower risk of non-guaranteed liabilities is reflected by a difference in discount rate applied to the cash flows before adding guaranteed and non-guaranteed liabilities together.

In addition to following the non-life method for certain Accident and Health products, a simplified valuation approach may be prescribed for certain other product categories, such as group life contracts.

The increased reserve required to meet the 75% level of confidence for life business is to be calculated by repeating the valuation using a standard table of loadings to be applied to each best estimate assumption, and then allowing for diversification and stress testing of the assumptions. Such testing is required to reveal features of an individual insurer’s business such that the prescribed loadings in combination significantly understate or overstate the 75% confidence level of reserves.

The valuation method for life liabilities is described more fully in Appendix 3.

**(d) Other considerations****Unit Linked**

The non-unit liabilities, including options and guarantees for unit linked products are to be evaluated in a manner consistent with the rules for conventional life products.

Unit liabilities will be valued at the amount attributable to policyholders at the valuation date.

**Industrial Assurance**

No special treatment is required for this type of distribution. The valuation will be made in the same way as for other life products of comparable type but the best estimate assumptions selected by the actuary will have due regard to the expected policyholder behaviour and management discretion on non-guaranteed benefits.

**Takaful**

The liabilities, including participation, are to be evaluated in a manner consistent with the rules for comparable non-takaful life products.

**(e) Reinsurance assets**

Reinsurance assets should be valued consistently with the policy liabilities.

## 8. Financial Reporting and Audit Requirements

The proposed RBC requirements rely on asset and liability valuations made by insurers themselves. There needs to be an interlocking system of regulations, guidance and audit which ensures that insurers have complied with the intention of the Framework.

In order to achieve this objective it is proposed that the annual RBC returns will be based on the audited financial statements.

The starting point for the RBC return will be the audited assets and liabilities assets adjusted for fair value adjustments to assets and liabilities plus the risk charges, in order to determine the Capital Adequacy Ratio.

The RBC return will be subject to audit.

In order to simplify the reporting process for insurers, it would be desirable that Financial Statements prepared for financial reporting purposes were based on the same valuation approach as RBC. This would mean that the Risk Capital Requirement could be calculated directly from the Financial Statements, increasing transparency and reducing costs of duplication, particularly audit fees.

Accounting Standards for financial reporting purposes are the responsibility of Federation of Accounting Professions (“FAP”). OIC has proposed to FAP that certain accounting standards in relation to financial asset valuations and insurance contracts from the IFRS framework be introduced in Thailand for insurance companies at the same time as the RBC Framework comes into operation. This would achieve the result of harmonising accounting and RBC frameworks.

The policy liability valuations included in the financial statements will rely on assumptions, estimates and judgements made by the actuary for the company concerned. The regulations themselves will not be sufficient to guide actuaries in performing their work. In common with other countries actuaries will be required to follow specific guidance in relation to these matters. Guidance notes will be issued at the same time as the regulations.

Compliance with the actuarial guidelines will need to be policed. Such compliance will be subject to the audit of the financial statements in the normal way. Additional reporting requirements will need to be imposed on auditors in order to ensure that the OIC can rely on the audit to ensure actuarial compliance. The Society of Actuaries of Thailand has a disciplinary process which it can invoke if actuaries who are members fail to follow the guidance and consideration will need to be given whether the Society is the appropriate body to regulate the conduct of actuaries in Thailand.

## Appendix 1: Glossary

Technical terms used in this document which are commonly employed in the Thai insurance industry and have a generally accepted meaning are not defined here. The terms defined below are those which have a specific meaning in this document or are not commonly used in the Thai insurance industry.

### Actuary

A person with actuarial skills and experience appointed by an insurance company to undertake the actuarial calculations required under the Risk Based Capital Framework. Future regulations will specify the qualifications and registration requirements for such actuaries.

### Capital Adequacy Ratio

Total Available Capital divided by Risk Capital Requirement

### Diversification

The impact on the overall level of risk resulting from the combination of different individual risks within the insurance company

### Fair Value

The amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's length transaction.

### Gross Premium Valuation

An actuarial valuation of the present value of policy liabilities for a life insurer which allows for actual premiums due and comprehensive projections of future outgoings

### Guaranteed Benefits

Benefits under a life insurance policy which are absolutely due under the contract and over whose amount the insurer has no discretion

### Non-guaranteed Benefits

Benefits under a life insurance policy which are due under the contract but whose amount or timing are at the insurer's discretion

### Provision for Adverse Deviation (PAD)

An amount added to the estimate of a liability to allow for the possibility that the liability will be greater than estimated.

### Risk Based Capital

The amount of capital calculated under a Risk Based Capital Framework

### Risk Based Capital Framework

An approach to assessing required solvency capital needs which takes direct account of the risks to which an insurer is exposed. The calculation usually depends on the individual circumstances of the insurer concerned.

### Risk Capital Requirement

The minimum amount of Risk Based Capital required by an insurer

**Risk Charge**

The component of the Risk Capital Requirement which relates to a specific risk.

**Solvency Capital**

The capital which an insurer holds in excess of liabilities in order to provide a cushion against future adverse events. Usually, there are legal requirements for the minimum levels of this capital.

**Total Available Capital**

The Capital held by the insurer which meets the requirements of the Risk Based Capital Framework and is thus available to meet the Risk Capital Requirement

**Unexpired Risk Reserve**

The liability for paying and servicing claims which occur in future under insurance contracts into which the insurer has already entered.

## Appendix 2: Non-life business valuation method

### Application

- (a) The valuation method for non-life business applies to non-life business classes, except long term health contracts written by non-life insurers, and to short term accident and health contracts written by life insurance companies. In addition, the method should also be applied to value reinsurance assets in respect of the corresponding liabilities. Throughout this appendix, references to non-life business, liabilities and contracts include the corresponding reinsurance assets and liabilities unless otherwise stated.
- (b) Liabilities for long term health insurance contracts, and corresponding reinsurance assets, are to be valued using the valuation method specified for Life Business.
- (c) The value of the liabilities, or reinsurance assets, must reflect the full contractual obligations within those liabilities. In addition, an allowance must be made for future discretionary payments under the contracts.

### Responsibility

- (d) The valuation of non-life business, and any long term health insurance contracts, should be made by the actuary appointed by the non-life insurer.
- (e) The actuary is required to make the valuation of non-life business in accordance with the method and assumptions specified here, and also in accordance with generally accepted actuarial principles.
- (f) Actuarial Guidance Notes will be provided to help the actuary make the professional judgments required.

### Disclosure

- (g) A report by the actuary on the premium and claim liabilities setting out the methodology, assumptions and results of their investigations shall be submitted to the insurer's board of directors and to the OIC.
- (h) The actuary will be required to disclose all of the data and considerations relevant to their results in their report. In particular, a description of the method or methods they have used, the key assumptions made in relation to loss ratios, development factors, claims escalation and expenses must all be included.
- (i) The actuary must also disclose any significant limitations or restrictions to the scope of their work in their report.

### Basis of Valuation

- (j) The valuation will comprise:
  - The best estimate value of claim liabilities, including IBNR
  - The best estimate value of liabilities for unexpired risks
  - A provision for adverse deviations (PAD) to be applied to increase the respective best estimate values to the 75% confidence level
- (k) The claim liabilities refer to the obligation of an insurer to make future payments in relation to claims which have been incurred at the valuation date whether in respect of reported claims,



claims incurred but not reported or claims incurred but not enough reserved. Such claim liabilities will also include all related direct and indirect claims expenses.

- (l) The liabilities for unexpired risks refer to the future claim payments arising after the valuation date in respect of business in force at the valuation date including all related direct and indirect claims expenses, the expenses of policy administration and any additional reinsurance premiums due in respect of the unexpired risks.
- (m) The best estimate value will reflect the statistical median of the underlying distribution of the insurance liabilities in respect of each class of business and will rely on the professional judgment of the actuary.
- (n) At the insurer's option, the PAD for claim liabilities for each class of business:
  - may be calculated by the actuary based on the insurer's own claim data; or
  - may be taken from the table of PADs published by the OIC.

In the first case, the PAD for each class of business may be scaled down by the actuary by a diversification effect obtained by either combining the claim data for all classes of business or by constructing a correlation matrix covering each class of business. In the second case, no allowance may be made in respect of a diversification effect.

- (o) The PAD for liabilities for unexpired risks in respect of a particular class of business will initially be equal to that applied to claims liabilities.
- (p) Claim and unexpired risk liabilities for direct and inwards business should normally be determined on a net of recoveries from salvage and subrogation basis but before any reduction for reinsurance, to be consistent with the presentation adopted by IFRS, except where for reasons of data limitation a net of reinsurance basis must be adopted.
- (q) In view of the fact that the main business classes are short-tailed, discounting of the liability values to take account of the time value of money shall not be permitted at the present time on grounds of immateriality.

### **Actuarial Methods**

- (r) The actuary must use generally accepted actuarial methods. The methods and assumptions used should be appropriate to the risk profile of the business.
- (s) It is preferable for the actuary to adopt more than one method in view of the uncertainties. In particular where the claim data for a particular accident or underwriting year is insufficiently developed, they may adopt a different method than where the claim data is well developed.
- (t) The actuary may single out large claims for separate attention in their calculations if they feels that this would improve the reasonableness of the results of their investigations. The actuary is required to discuss this issue in their report.
- (u) The actuary is required to take into account in their investigations any changes in the legal and social environment or changes made by management in such matters as claims settlement, reinsurance coverage, underwriting, changes in key personnel and any other aspects they deem could influence their investigations. They are required to comment on such matters in their report.

## **Data**

- (v) To conduct their investigations, the actuary will require obtaining data from the insurer. They shall apply such tests, including reasonably balancing such data against corresponding audited data, as shall be necessary to satisfy themselves that the data received is consistent, accurate and complete.
- (w) The actuary may use industry data where the insurer's own data is insufficient or a combination of industry data and the insurer's own data. The extent to which the actuary has used industry data, the reason for using such data and the appropriateness of such data should be discussed in the actuary's report.

## Appendix 3: Life business valuation method

### Application

- (a) The valuation method for life business applies to life business classes, except short term accident and health contracts written by life insurers and to long term health contracts written by non-life insurers. In addition, the method should also be applied to value reinsurance assets in respect of the corresponding liabilities. Throughout this appendix, references to life business, liabilities and contracts include the corresponding reinsurance assets and liabilities unless otherwise stated.
- (b) Liabilities for short term accident and health insurance contracts, and corresponding reinsurance assets, are to be valued using the valuation method specified for Non-Life Business.
- (c) The value of the liabilities, or reinsurance assets, must reflect the full contractual obligations within those liabilities. In addition, an allowance must be made for future discretionary payments under the contracts.

### Responsibility

- (a) The valuation of life business, and any short term accident and health contracts, should be made by the actuary appointed by the life insurer.
- (b) The actuary is required to make the valuation of life business in accordance with the method and assumptions specified here, and also in accordance with generally accepted actuarial principles.
- (c) Actuarial Guidance Notes will be provided to help the actuary make the professional judgments required.

### Disclosure

- (d) A report by the actuary on the policy liabilities setting out the methodology, assumptions and results of their investigations shall be submitted to the insurer's board of directors and to the OIC.
- (e) The actuary will be required to disclose all of the data and considerations relevant to their results in their report. In particular, a description of the method or methods they have used and the key assumptions made must all be included.
- (f) The actuary must also disclose any significant limitations or restrictions to the scope of their work in their report.

### Basis of Valuation

- (g) The valuation will comprise:
  - The best estimate value of the policy liabilities discounted to the valuation date
  - A provision for adverse deviations (PAD) to be applied to increase the respective best estimate to the 75% confidence level
- (h) The policy liabilities of the life insurer equal the sum of the liabilities for guaranteed benefits and the liabilities for non-guaranteed benefits.

- (i) All options and guarantees offered under a life policy shall be explicitly identified and the liability of a life policy shall include an amount to cover any increase in liabilities which may result from the exercise of the options and guarantees in future.
- (j) Policy liabilities should normally be determined before any reduction for reinsurance, except where for reasons of data limitation a net of reinsurance basis must be adopted.
- (k) Negative reserves are permitted at a policy level, but not at portfolio level.

### **Actuarial Method and Assumptions**

- (l) The life insurance liabilities are to be calculated using a prospective gross premium valuation method.
- (m) The liabilities in respect of guaranteed benefits shall be determined by discounting cash flows of a particular duration from the valuation date by the risk-free discount rate appropriate to that duration.
- (n) The risk-free discount rate of appropriate duration is to be taken as the yield on Government bonds at comparable durations. For cash flows of duration longer than the available Government bond rates, the longest available Government bond rate will be used.
- (o) The liabilities for non-guaranteed benefits shall be determined by discounting cash flows of a particular duration from the valuation date by the adjusted risk-free discount rate appropriate to that duration.
- (p) The adjusted risk-free discount rate of appropriate duration shall be equal to the risk-free discount rate of such duration plus a prescribed maximum equity risk premium.
- (q) Thus the policy liabilities equal the sum of the present values of the projected cash flows in respect of:

- future guaranteed benefits and
- the expected future management and distribution expenses

Discounted at the risk free rate less:

- the present value of future gross premiums in respect of the policy discounted at the risk free rate

Plus

- the projected non-guaranteed benefits discounted at the adjusted risk free rate.

- (r) Appropriate allowances should be made in respect of:
  - Claim payments due, including IBNR
  - Future expenses and bonuses in the case of limited pay policies and paid-up policies
  - Contingent liabilities in respect of lapsed policies (if reinstatement is permitted for example)
  - Payment of benefits or waiver of premiums on disablement of the life insured
  - A policy covering a substandard risk or high risk occupation
  - Liabilities incurred by policy extensions being exercised
- (s) It is expected that a seriatim (policy by policy) cash flow projection will be used to make the valuation.
- (t) The expected future cash flows shall be determined using best estimate assumptions. The best estimate assumptions will be determined by the actuary according to their professional judgment taking into account the relevant experience of the insurer.

- (u) The expense assumptions shall include distribution and management expenses. Best estimates must take account of actual costs and be capable of reconciliation to the Financial Statements. An allowance for inflation in future should also be made.
- (v) The mortality and morbidity assumptions shall be based on the life insurer's own historical experience or where this is insufficient shall be based, if practical, on the most recent published standard mortality table adjusted as the actuary feels appropriate to reflect the likely future mortality and morbidity experience of the life insurer.
- (w) The persistency assumptions shall be based on the insurer's own experience but where this is insufficient shall be based on published industry persistency rates adjusted as the actuary feels appropriate to reflect the likely future persistency experience of the life insurer.
- (x) Projected surrender values shall be determined taking into account any regulatory requirements in force at the valuation date, or known to be coming into force.
- (y) The assumptions for future bonus levels will be assessed by the actuary taking into account, in order of importance: recent Board policy on future bonuses; recent bonus declarations; sales illustrations.
- (z) In the case where future premiums are indeterminate, as with universal life products, the actuary shall exercise their professional judgement in arriving at an estimate of future premiums. The assumption must take account of historical data and expected future trends.
- (aa) In the case of guarantees and options, appropriate scenario testing or stochastic simulation will be required to determine the policy liabilities.
- (bb) The PAD is derived by applying prescribed margins to the best estimate assumptions. The prescribed margins may be varied if the actuary has strong evidence to suggest that the prescribed margins would not result in a reserve appropriate to the 75% level of confidence.
- (cc) A diversification effect is determined by stress testing the assumptions in a prescribed manner.
- (dd) Taxes should be taken into account if such tax would be chargeable in respect of individual cash flow items irrespective of profitability.

## **Data**

To conduct the investigations, the actuary will require to obtain data from the insurer. The actuary shall apply such tests as shall be necessary to conclude that the data received is consistent, accurate and complete.

## Projected Cash Flow Components

The table below gives an example the individual items which would generally need to be taken into account in the GPV cash flow projections made on a gross of reinsurance basis, although in any actual case, the actuary would be required to include all cash flows relevant to the liabilities. A separate projection of reinsurance premiums and recoveries would also need to be made to compute the value of reinsurance assets although it is likely that the same model would be used to generate the two results simultaneously.

No.	Item	Details	Basis
1	Office premium	Exclude accrued office premium Include extra premium, policy fee	Allow for lapse, surrender, death and other attrition.
	Maintenance expense	Allow in the calculation by incorporate it in – <ul style="list-style-type: none"> <li>• Nominal amount a policy</li> <li>• Percentage of premium</li> <li>• Percentage of sum assured</li> </ul>	<p>Separate company expenses into distribution expenses and management expenses.</p> <p>Management expenses should include maintenance and claims handling expenses, based on the insurer's actual recent experience.</p> <p>If the future experience is likely to be different from actual experience, allowance should be made for any potential deterioration or improvement in the future experience relating to management expenses.</p> <p>Any allowance for the improvement in the projected management expenses should be supported by strong justification and should be based on projections not extending beyond 3 years from the valuation date.</p> <p>Maintenance expense is then allocated based on different expense drivers like policy number, premium and sum assured.</p> <p>The inflation rate should be factored into the projection of the management expenses.</p> <p>On setting the inflation rate</p>

No.	Item	Details	Basis
			one should refer to publicly available information on historic wage and price inflation and economists' forecasts to estimate the future wage and price inflation rates.
2	Commission, overrides and other agency compensation related to policy maintenance	Renewal commission Other agency compensation related to policy maintenance	Actual commission and commission related expenses have to be factored into the cash flow projection
3	Maturity payments	Anticipated endowment, maturity benefits	
4	Surrender payments	Surrender value that is due	Policy surrender value Surrender rates – company specific experience based on product and duration Surrender rate is determined based on percentage of premium lapsed or surrendered during the year compared to premium in-force at beginning of the year. The investigation is to be carried out for products with different features – for example endowment, term, single premium and annuity
5	Claims – death, disability, dread disease		Mortality rates – use company own experience if claim experience is sufficient to determine the rates, if not industry data should be used.
6	Tax		Tax in so far as it affects the build up of reserves. Current tax rates should be assumed.
7	Bonus, dividend to policyholders reversionary and terminal		The assumptions for future bonus levels will be assessed be the actuary taking into account, in order of importance: recent Board policy on future bonuses; recent bonus declarations; sales illustrations.
8	Cost of options		

## Appendix 4: Actuarial guidance notes contents

### Actuarial guidance notes will be developed in the following areas

(a) Non-life

- Definition of non-life including classification of A&H
- Methods of calculating reserves
- Determinations of PADs
- Discounting of reserves
- Expenses – claims and maintenance expenses
- Unearned premium and unexpired risk reserves and related expenses
- Reinsurance
- Data

(b) Life

- Definition of life including classification of A&H
- Gross premium valuation method
- Methods for miscellaneous reserves
- Selection of best estimate assumptions for cash flow
- Reinsurance
- Expenses
- Guidance on how to do experience studies
- Stress testing
- Data