

行政院所屬各機關因公出國人員出國報告

(出國類別：其他)

參加國際保險監理官協會 (IAIS) 會議報告

服務機關：行政院金融監督管理委員會

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出國時間：98年11月29日至99年12月10日

報告日期：99年3月8日

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壹、 會議目的及過程

一、 IAIS 之清償能力及精算議題工作小組會議 (Solvency and Actuarial Issues Subcommittee, SSC) (2009.11.30~12.4)

(一) 會議目的

IAIS 清償能力及精算議題工作小組係為就保險業清償能力及精算議題研訂可供各國共同參考及遵循之國際性標準 (Standards) 或指南 (Guidance Paper)，並密切與其他相關之國際性組織團體合作，以達到促進國際金融穩定的目標。本次會議係延續 2009 年 9 月 7~9 日於西班牙馬德里召開之小組會議討論，主要繼續就資本適足 (Capital Adequacy)、企業風險管理 (ERM)、內部模型 (Internal Models)、投資 (Investment) 等之標準 (Standard) 草案及指南文件 (Guidance Paper) 草案的內容與文字進行討論，惟本次會議並未完成對該等文件草案之修訂，將於下次會議中繼續討論。本次會議並請相關團體報告工作近況，如：歐洲保險及職業年金管理委員會 (Commission of European Insurance and Occupational Pensions Supervisors, CEIOPS) 及國際保險精算協會 (International Actuarial Association) 等。

(二) 會議過程及重點

1. 有關資本適足部份：會議中各會員國就資本適足率標準及指南文件草案應對集團（Group）及單獨企業（Solo）予以分開亦或共同規範於一項文件之中有諸多討論，最終主席決議將對集團與單獨企業之資本適足共同規範於同一文件中，標準及指南文件草案之架構朝向分三階段訂定：（1）對所有保險業者（2）僅對單獨之保險業者（3）對保險集團。
2. 有關內部模型部份：部分會員認為內部模型文件草案所包含的範圍過於狹隘，內部模型應包含清償能力、策略及營運計畫等，而不應僅止於討論模型本身。內部模型主要為不使用標準法的業者用以證明該模型可用以取代標準模型評估其應具備之資本。
3. 有關 CEIOPS 工作近況：關於多項議題的最終建議文件將提呈供歐盟執委會（European Commission, EC）參考，包含無風險利率的選擇及集團清償能力監理等議題。整個歐盟地區進行的壓力測試將於 2009 年 12 月完成。
4. 有關 IAA 工作近況：有關內部模型文件已經完成，ERM 亦即將完成，目前刻正進行壓力測試及情境測試等文件草擬之工作。目前已有 14 個精算團體共同簽署一項合約，以建立風險管理認證機制（CERA-Chartered Enterprise Risk Analyst）。

二、 IAIS 之保險合約工作小組會議 (Insurance Contracts Subcommittee, ICS) (2009.12.7-8)

(一) 會議目的

IAIS 保險合約工作小組之工作係密切與清償能力及精算議題工作小組，提供相關訊息予國際會計準則理事會 (International Accounting Standards Board)，試圖影響其對相關國際會計準則之制定能考量實際各國保險監理之需求，長期目標係規劃未來於一般財務報表及監理清償能力之財務報表能使用同一套準則，以使相關工作能更有效率的進行及節省業者編制兩套標準報表之成本。

(二) 會議過程及重點

1. 有鑑於 IAS 39 (Financial Instruments: Recognition and Measurement) 之規範過於複雜，不易了解與適用等問題，IASB 爰著手擬定 IFRS 9 以取代 IAS 39 的專案，並已於 2008 年 3 月與 FASB 共同發布一項討論文件 (Discussion Paper)：降低財務報表的複雜度。整個專案預計於 2010 年底完成。
2. IASB 將制定金融商品會計準則 (IFRS 9) 以取代現行 IAS 39 之工作分為三個階段進行，IFRS 9 主要以金融資產為範圍，其並未改變現行 IAS 39 對於金融負債之分類與衡量要求。第

一階段為分類與衡量 (Classification & Measurement)，第二階段為成本攤銷與減損 (Amortized Cost & Impairment)，第三階段為避險會計 (Hedge Accounting)。制定 IFRS 9 以取代 IAS 39 之目的主要使財報使用者更容易對從金融資產而來的現金流發生之時間、金額及不確定性予以評價。

3. IFRS 9 亦從各方面減少 IAS 39 的複雜度，包含：

- 減少金融資產分類，新的分類原則較過去更為清楚。
- 消除 IAS 39 中對於嵌入式衍生性商品的複雜及 rule-based 的要求，不再要求嵌入式衍生性商品金融資產主契約中拆分。
- 對於非以市價評價之金融資產僅有一種減損的方式，且對於所有資產的減損回復 (Reverse) 是允許的。

4. IASB 已於 2009 年 12 月發布第一階段分類與衡量 (Classification & Measurement) 的草案，並請各界於 2010 年 6 月底前表達意見，茲就 IFRS 9 第一階段草案與現行 IAS 39 作簡單的比較如下：

(1) 分類與衡量 (Classification and Measurement)

IAS 39：將金融資產依其持有目的及評價方式分為四

類，且若顯著金額之分類為持有到到期日之金融資產未於到期日即處分，將要求公司對於所有分類為持有到到期日之金融資產重新分類，並以公平價值衡量。

IFRS 9：金融資產的分類減少為二類，以評估公司對該投資工具之管理模式(Business Model)及該投資工具的現金流，判斷該金融資產應以攤銷後成本法評價或公平市價法評價。

(2) 減損 (Impairment)

IAS 39：要求對兩類以攤銷後成本衡量之資產類別作減損的評估，並將減損情形反映於其它綜合收入科目中，除有數種減損評估的模式外，部分已作減損的資產不得回復。

IFRS 9：僅對以攤銷後成本法評價之金融資產需作減損評估，且所有減損皆可回復。

(3) 嵌入式衍生性商品 (Embedded Derivatives)

IAS 39：對於混合型契約(包含非衍生性商品主契約加上衍生性金融商品)的評價方式規定有 3 種，第一種為對於整個混合型契約以公平價值衡量反

映於損益表；第二種為將混合型契約拆分，衍生性商品部份以公價值衡量反映於損益表，主契約部份以攤銷後成本法衡量；第三種為公司可自行選擇使用前揭兩種中之一種方式評價。

IFRS 9：對於主契約為金融資產的混合型契約不可拆分衡量，該種商品應就其整體判斷其歸屬之資產分類。惟對於主契約為金融負債或非金融性項目的混合型契約，IFRS 9 並未改變其會計處理方式。

(4) 透過其它綜合收入科目反應策略性股權投資之公平市價 (Fair Value Through Other Comprehensive Income)

IAS 39：並未對策略性股權投資之評價有相關規定。

IFRS 9：對於符合特定條件的策略性股權投資，公司在一開始就可決定選擇以公平市價評價該投資項目，並在其它綜合收入科目反映其公平市價評價下的未實現損益，該項投資所產生的股利則反映於損益表。

(5) 無活絡市場投資以成本法認列的規定 (The Cost Exception for Unquoted Equity Investment)

IAS 39：對於無活絡市場的股權投資項目(包含交易標的為無活絡市場股權之衍生性金融商品)，考量其公平價值無法可靠衡量，皆以成本法評價。

IFRS 9：所有股權投資項目皆須以公平市價衡量。但考量有些股權投資工具無法衡量其公平價值，公平價值衡量專案將提供實務指引，協助公司判斷在何種情況下，股權投資的成本可代表其公平價值。

(6) 揭露 (Disclosure)：相較於 ISA 39，IFRS 9 對於新的金融資產分類及其衡量方式提出額外的揭露項目要求。

5. 以下就 IASB 對於 IFRS 4(Insurance Contract)的近況及最近討論的議題，重點整理如下：

(1) IFRS 4 第二階段 (IFRS 4 Phase II) 的專案進度較預定稍有落後。部分原因在於國際間對於 IASB 與 FASB 所制定出來的準則能趨近一致，惟兩組織目前在多項議題上尚未能達成共識。

(2) 目前 IASB 傾向於 2010 年 8 月截止 IFRS 4 第二階段 (IFRS 4 Phase II) 的對外意見徵詢，並於 2011 年 6 月完成最後 IFRS 4 的訂定。

(3) IASB 與 FASB 在最近的討會議上對於取得成本的認列方式 (Acquisition Cost)、保險合約評價使用之折現率 (Discount Rate)、裁量參與特性 (participate feature) 等議題皆有不同的看法與意見，且 IASB 對於這些議題最後的決定的處理方式將對於保險業界有重大的影響，因此 IAIS 保險合約小組將在 IASB 發表 IFRS 4 第二階段草案 (Exposure Draft) 前，提出 IAIS 對於該等議題的意見，試圖對 IASB 將做出的決定發揮影響。

貳、 專題重點報告

一、 折現率議題 (Discount Rate)

本次 IAIS 保險合約小組邀請加拿大 Manulife Financial 簡報有關折現率的選擇對該國保險業的影響，該簡報並簡介目前加拿大所使用之一般會計準則，以及對於未來以公平價值方式評價保險合約建議應採之折現率。以下茲就該簡報重點作一摘述：

1. 加拿大保險業的會計制度規範 (Accounting Model) 與保險業之經營模式 (Business Model) 一致。
2. 資產與負債配置對稱為保險及年金商品經營模式之重要基石，因為保險及年金商品擁有存續期間長及保證利率的特性。
 - (1) 保險公司之經營係以收取保費及進行投資，以支付未來之理賠責任。
 - (2) 投資報酬率的假設為商品定價考量之因素之一。
 - (3) 實際之投資報酬率與定價所適用之假設之投資報酬率間之差異係保險公司之經濟利益或損失 (Economic gain or loss)。
3. 考量實際資產報酬率 (Asset Earned Rate) 的會計制度，其所表現的財務結果是對於使用者最攸關也最易了解的。
4. 與經營模式不一致的會計制度，將使業者為避免經營模式與

會計制度不同造成的不一致，業者可能會改變其投資項目的選擇，進而對保戶及資本市場產生重大影響。

5. 有價值的財務報表必須具備攸關、可靠、易了解以及可比較等特性。以下 Manualife Financial 將說明為何加拿大的制度可以滿足上述財務報表應具備的特性，而 IASB 目前提出的建議制度無法滿足該等特性。

6. Manualife Financial 在北美及亞洲各地營運，其總資產約 2.1 億加幣，投資性資產 (Invested Asset) 約 1.9 億加幣，保單責任準備金 (Policyholder Liabilities) 約 1.6 億加幣，股東權益約 3 千萬加幣。在符合資產負債配置管理下，1.9 億加幣之投資資產中，有約 1.6 億加幣之投資係用以支持 1.6 億加幣之保單責任準備。

7. 加拿大一般公認會計準則 (Canadian GAAP) 對於保險合約評價規範概述：

- (1) 資產評價係依據 IAS 39 之架構。
- (2) 負債評價係由三個區塊組成：I. 對所有有效保單未來現金流量之最佳估計；II. 就實際現金流量相較於最佳估計現金流量可能之偏離，對各項假設加計 margin；III. 考量時間因素將預估之現金流量折現。

- (3) 最佳估計現金流量所使用的假設，及折現所使用的利率，必須與公司當時實際經驗及市場狀況一致：判斷方式 I. 藉由外部稽核制度、監理機關或 peer review 的方式檢查；II. 依據加拿大精算學會制定的重要專業準則判斷檢查。
- (4) 折現率的決定反映實際資產報酬率及預期投資策略。
8. 在加拿大現行制度下，2009 年第三季 Manulife Financial 財報上顯示營業損失總計約 1 億 7 千萬加幣，其中包含因利率降低（含 credit spread）造成該公司約 12 億加幣的損失。

Q3'09 Reported Loss	\$(172)
Notable items impacting earnings:	
Segregated fund guarantees and other equity items	\$1,201
Decline in interest rates and corporate bond spreads	(1,222)
Impact of annual valuation basis change	(783)
Credit impairments and reserves for downgrades	(36)
Equity related impairments	(75)
Currency rates	(27)
Other items ¹	(33)
Net Impact	\$(975)
Adjusted Earnings from Operations²	\$803

All items are on a post-tax basis, in C\$ Millions.
¹ Other items include: the impact of lower real estate values and other private asset class returns partially offset by the favourable impact of several tax items, gains related to the recapture of reinsurance treaties and a small amount of policyholder experience gains.
² Non GAAP measure.

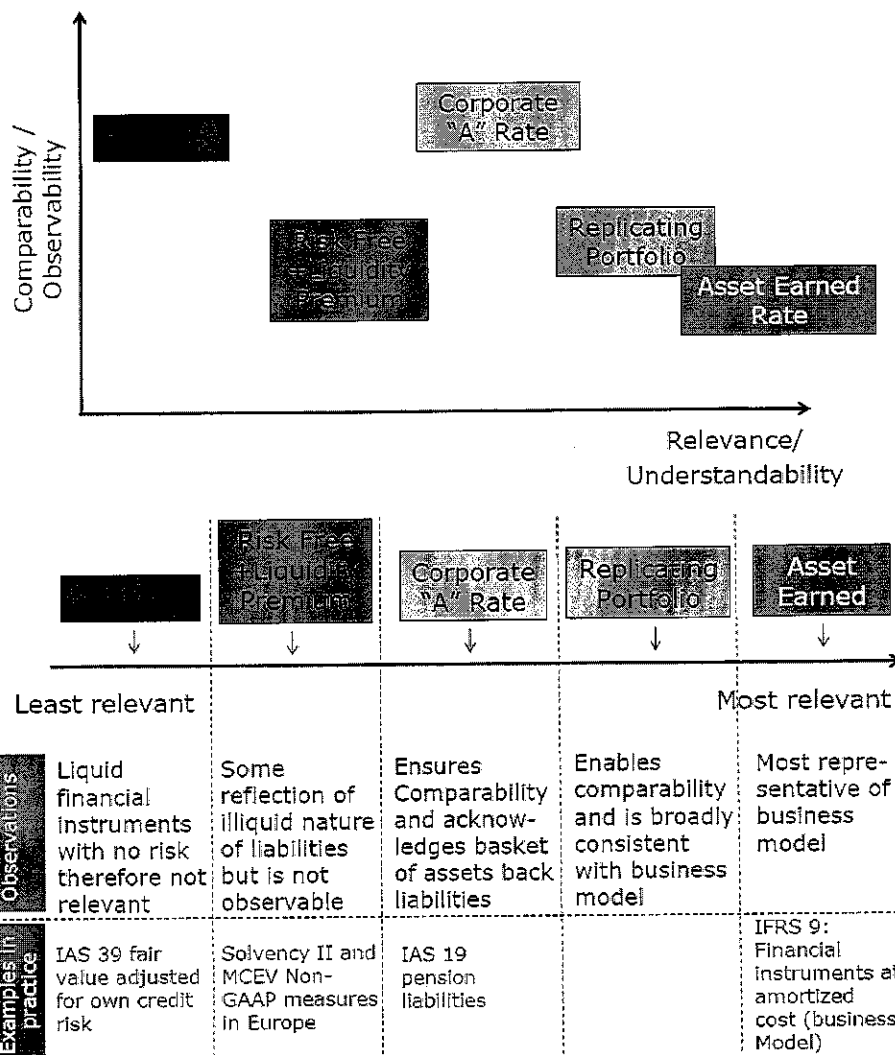
9. Manulife Financial 對其 2009 年第 3 季盈餘做利率敏感度測試，估計利率增加約 100bps，其盈餘約增加 1 千 6 百萬加幣，利率降低約 100bps，其盈餘約減少 2 千萬加幣。
10. 然而，若以風險利率(或 swap rate 或國庫券利率)做為負債

責任準備金之折現率，而非以實際相對應資產之報酬率折現，將因該等負債之相對應資產(如：配置於公司債評等 A 之債券)之利率與無風險利率之間的差異變動 (spread change)，造成盈餘之利率敏感度大幅增加。以 2009 年 spread movement 實際情況為例，Manulife Financial 季盈餘之波動度約為原本的 10 倍。

11. Manulife Financial 認為，若評價負債使用之折現率與資產實際報酬率相關連，在有效的資產負債配置下，利率變動對資產與負債的價值影響將會相互抵銷，對盈餘波動的影響性較小，除非資產負債配置不對稱，利率變動對資產與負債的價值影響才會對盈餘產生大幅影響。

12. 以 2008 年利率持續降低，spread 極度的增加（從 150bps~400bps）除造成固定收益資產價格暴跌，亦加成影響權益性資產價值大幅降低，惟 2009 年前揭情況已大幅逆轉。以近年實際經濟情況觀之，以無風險利率評價負債的方式，將造成損益及淨值大幅波動的情況。

13. Manulife Financial 就目前 IASB 討論中其他可能的折現率就可比較性、可取得性、攸關性及理解性等方面比較如下：



14. 關於目前國際間熱烈討論的折現率為無風險利率加計流動

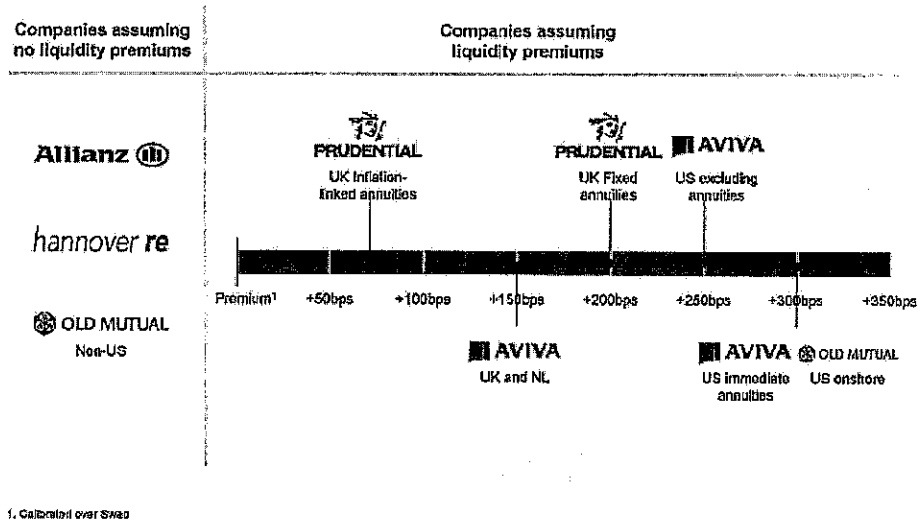
性風險溢酬 (Risk Free Rate + Liquidity Premium)，

Manulife Financial 認為有下述幾點問題存在：

- (1) 流動性風險溢酬不易觀察取得、無法一致的被應用且無法反映公司實際經營模式。
- (2) 流動性風險溢酬需要補充指引文件說明該如何產生。
- (3) 以 2008 年底各公司公佈 MCEV 結果之比較顯示，各公司使用之流動性風險溢酬從 0~300bps 不等，顯示其有無法被一致

應用的問題。

Amongst companies publishing YE'08 MCEV results, a wide range of liquidity premium levels were assumed



(4) 結論：Manulife Financial 最後對於目前加拿大 GAAP 及目前國際間熱烈討論的負債評價方式作一比較，該等比較已在前面幾點描述，本處謹以原文呈現其總結如下：

CGAAP Concepts meet the criteria:

Relevance	✓Reflects a point in time measure of our economic exposure
Reliable	✓Uses market observable inputs where available
Understandable	✓Helps the reader assess how results may actually unfold
Comparable	✓Disclosures and sensitivities ensure comparability ✓Comparison of economic exposures is useful information

Quality financial reporting requires alignment of accounting standards to the business model. Therefore the answer is an earned rate concept with disclosures of rates and sensitivities.

Risk free + liquidity premium does not meet criteria

Relevance	✗ Does not reflect the business model and therefore is not relevant for decision making purposes.
Reliable	✗ Liquidity premium is not observable and is inconsistently applied in practice.
Understandable	✗ Will lead to non GAAP measures. ✗ Earnings can only be explained by external factors and not representative of how event will unfold.
Comparable	✗ Liquidity premium is not consistently applied.

15. IAIS 保險合約工作小組成員對於加拿大 Manulife Financial

的簡報內容亦提出多項議題，部分成員表示加拿大 GAAP 也存在一些問題與限制，重點是其以現金流量折線觀點與歐盟 Solvency II 闡述之一年內所需風險資本的觀念有所不同。惟會中成員皆同意若以無風險利率評價負債價值，確實對保險業影響甚鉅，除造成業者淨值大幅波動之外，也無法證實該種評價方式可以代表業者經營狀況，因此本工作小組將準備該等議題資料提供給執委會 (Executive Committee)，並於下一次會議中再次討論。

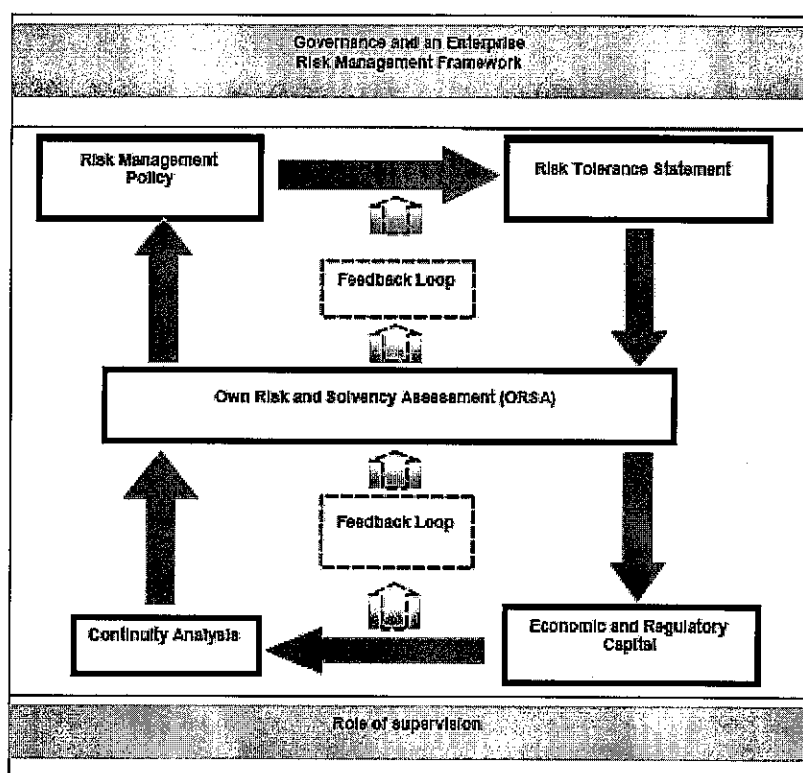
二、 各國實施風險管理制度 (ERM/ORSA) 概況

12 月 3 日上午 NAIC 與 IAIS 舉辦聯合會議，由 NAIC International Solvency Working Group 與 IAIS Solvency & Actuarial Issues Subcommittee 聯合召開，會中介紹 IAIS 目前所公佈 ERM 的標準及使用指南 (Standard and Guidance

Paper on ERM for Capital Adequacy and Solvency Purpose) ,
並請幾位代表簡報其國內實施 ERM 的情況，以下謹就 IAIS 所
公佈的 ERM 標準及加拿大實施 ERM 概況作重點摘述。

1. IAIS ERM 標準及使用指南簡介

(1) 公司治理與企業風險管理架構 (Governance and ERM Framework)



- I. 公司治理與風險管理：企業風險管理應由業者之董事及高階管理階層帶領執行，並整合入整體公司經營、企業文化，就公司可能面臨之重大風險制定風險管理政策。
- II. 風險辨識與衡量：為資本管理及評估清償能力之目的，風險管理架構應包含對於風險量化使用之技術及包含

的範圍有明確的規範；風險衡量應以正確的文件表達，以詳細的描述與解釋風險。

III. 風險管理政策：業者應就其在策略上或營運上管理各種類風險之方式制定政策，並與其風險容忍限額、法定資本要求、經濟資本及風險監督流程相連結。

IV. 風險容忍聲明 (Risk Tolerance Statement)：業者應建立並持續更新其整體值化及量化的風險容忍程度，並對重要的風險類別定義其風險限額；風險容忍限額之訂定應依據該公司的營運策略，並實際落實運用於公司日常風險管理制度中。

V. 風險回應與反饋循環 (Risk Responsiveness and Feedback Loop)：風險管理架構應包含反饋的循環，這個反饋循環係架構於高品質的資訊、管理程序及目標評估，目的在使業者能在其風險概況 (Risk Profile) 有所變化時，及時採取必要措施作為因應。

(2) 定期檢視風險及評估清償能力 (Own Risk and Solvency Assessment, ORSA)

I. 業者應定期檢視其風險並評清償能力，並提供董事及高階經理人現階段對於各項風險的管理是否足夠，及

現階段或未來可能的清償能力情形等資訊。

II. ORSA 之執行應包所有可預見的重要風險項目，如核保、信用、市場、作業、流動性風險等。於評估風險及清償能力時應找出風險管理及其與所需及可取得之財務資源間的關係。

(3) 經濟資本與法定資本 (Economic and Regulatory Capital)

I. ORSA 工作的執行，其中一項重要工作為以其風險容忍度及營運計畫決定其需要的資本，以及說明其符合法定資本要求的情形。

II. 業者的風險管理行動必須兼顧其經濟資本、法定資本要求及其財務資源。

(4) 持續分析 (Continuity Analysis)

I. 業者執行 ORSA 不應僅止於用其計算法定資本，而應用其分析公司未來繼續經營能力，及因應未來所需之風險管理及財務資源。

II. 持續分析的內容應包含對公司中長期營運策略質化與量化資訊的描述，及包含預測公司未來財務概況及分析公司未來是否能滿足法定資本的要求。

(5) 監理機關於風險管理扮演的角色：監理機關應定期檢視業者

的風險管理流程及財務概況，監理機關並應發揮它的職權要求業者強化風險管理制度，包含必須的清償能力評估及資本管理程序。

2. 加拿大風險管理概況

- (1) 加拿大保險業風險管理採用動態資本適足性測試 (Dynamic Capital Adequacy Testing, DCAT) 執行。DCAT 係每年由簽證精算人員就公司財務現況預測未來 (壽險預測未來 5 年，產險業至少預測未來 3 年) 之資本概況或趨勢的一項流程，並用以提供經營管理者作為資本規劃及營運計畫的參考。
- (2) DCAT 係用以發現風險與威脅，並建議董事及高階管理者在繼續經營規劃下應採取之措施。
- (3) DCAT 並非簽證精算人員對於公司未來清償能力的保證。
- (4) DCAT 使用兩套情境：一為基礎情境 (Base Scenario)，通常以公司最近 3 年財務概況進行相關假設之設計，且必須與公司營運計畫具有一致性；另一為可能的負面情境 (Plausible adverse Scenario)，以對公司財務狀況較具敏感性的議題設計情境，且至少設計三組負面情境，並考量多組負面情境同時發生對公司的影響。
- (5) 金融風暴的發生顯露出 DCAT 的限制：2008 年金融風暴的發

生顯示出 DCAT 有其限制，其一限制為 DCAT 所測試之情境係由簽證精算人員自行挑選設計，每位簽證精算人員對於測試困難情境 (Difficult Scenarios) 的意願不盡相同，造成 DCAT 的測試結果不一定客觀；另一限制為，DCAT 通常被認為是一項法令遵循的專業工作，而非整合性的風險管理工作，造成管理階層對其結果的忽視。

- (6) 基於金融風暴所帶來的教訓，業者應更重視極端事件的發生，以及各種風險之間的相關性所帶來更巨大的損失，尤其應透過壓力測試加強整合性風險管理的工作。

參、與美全國州保險監理官協會(The National Association of Insurance Commissioners, NAIC)會談紀要

時間：2009年12月7日下午4時30分至5時30分

地點：美國舊金山 Hilton San Francisco Union Square

事由：雙方洽簽瞭解備忘錄(MOU)事宜

出席人員：

NAIC 代表：

Mr. George Brady, Counsel and Manager of International Relations

Mr. Ekrem Sarper, International Policy Analyst

我方代表：

行政院金融監督管理委員會駐紐約代表辦事處周參事秀玲、周稽

核鳴皋

行政院金融監督管理委員會保險局張組長玉輝

行政院金融監督管理委員會國際業務處吳副研究員璟芳

會談內容：

本會利用98年12月7日至8日出席於美國舊金山舉行之國際保險監理官協會(IAIS)保險契約工作小組會議期間，與美全國州保險監理官協會(NAIC)就雙方洽簽MOU之約文內容進行會談並達成共識。重點如下：

(一) 本會駐紐約代表辦事處（紐處）成立的時間與功能：

1. 紐處自開始籌備至今已滿四年，主要職責在扮演美國與加拿大金融監理機關及金融機構與本會間之溝通聯繫管道，因本會業務涵蓋銀行、保險、證券與期貨業務，且美、加金融監理機制較為複雜，故紐處須同時與聯邦與州(省)監理機關建立聯繫管道，若雙邊有監理資訊交換之需要，紐處即扮演資訊傳遞之管道。
2. 紐處另一主要工作在蒐集分析美加兩國金融監理機制與動態，自 2008 年發生金融風暴以來，本處即持續積極蒐集金融監理機關採取之因應措施及金融機構概況報會參考，另對於重要金融法規增修訂及金融改革計畫亦立即彙總整理報會。

(二) 台灣保險公司在美營運情形及美國保險公司在台營運情形：

1. 目前台灣保險公司尚未有在美營運情形，美國保險公司在台主要有 AIG 之子公司南山人壽（以保費收入計算係第三大人壽保險公司），以及 New York Life、MetLife 及 Prudential 台灣子公司等，因多數由紐約州保險局負責監理，本會業與該局簽署合作備忘錄（本會目前業與紐約州銀行局與保險局以及加州銀行局簽定監理合作備忘錄）。
2. NAIC 建議本會如能提供在台營運之美國保險公司清單，

NAIC 將協助與負責監理各保險公司美國母公司之州保險局
連繫，以了解其與本會洽簽 MOU 之意願。

(三) 兩岸簽署合作備忘錄之情形：

本會業與中國大陸銀監會、保監會及證監會分別簽署監理合作
備忘錄，該等備忘錄將於 2010 年 1 月中生效，屆時兩岸金融
交流將進入一個新的階段，故歡迎 NAIC 高階主管來台訪問，
更多了解兩岸金融之交流與發展情形。

(四) MOU 約文草案之討論：

雙方就 MOU 約文草案之內容進行討論予以修改，並瞭解雙方
未來可能之合作事項與合作方式，同時對本案之簽署時程進行
溝通。

肆、心得及建議

本次於 2009 年 11 月 30 日至 12 月 4 日召開的清償能力精算議題工作會議以及 2009 年 12 月 7 日至 8 日召開的保險合約工作小組會議，主要係繼續前一次會議對各項議題之標準與指南文件（Standard and Guidance Paper）草案進行修訂之討論，並藉由各國監理制度與經驗之交流，致力訂定出一套跨國性的監理標準。會議中參與會員國代表間對相關文件草案之積極討論，可見國際間對制定跨國監理標準之重視，建議請財團法人保險事業發展中心持續追蹤該等標準及指南文件修訂情形，並於適時參採建立於我國清償能力監理制度與國際接軌之工作規劃中。

本次會議另一項重點為安排歐美主要會員國就特定議題（如：負債評價方式及風險管理制度之實施）簡報該國監理現況以供各會員參考，由於與 IASB 將於 2010 年 8 月截止對於 IFRS 4 第二階段向外意見徵詢作業，其中對於保險業影響甚大之議題之一即為負債評價應採用之折現率問題，本議題亦為我國業者密切關注之國際發展重點，其結果對於全球保險業之經營將造成全面重大的影響，爰建議應持續追蹤 IFRS 4 第二階段最新消息以掌握國際動態外，並研擬相關因應及配套措施，為我國實施國際會計準則制度及早準備。

伍、 附錄

- (一) Attributes of the Discount Rate (Manulife Financial)
- (二) Standard and Guidance Paper on Enterprise Risk Management for Capital Adequacy and Solvency Purpose (IAIS Solvency & Actuarial Issues Subcommittee)
- (三) OSFI Dynamic Capital Adequacy Testing (DCAT) (NAIC International Solvency Working Group)





Attributes of the discount rate

Simon Curtis
EVP and Chief Actuary
Manulife Financial

Tim Deacon
Chief Accountant
Manulife Financial

December 8, 2009



"OSFI has relied on the Canadian Institute of Actuaries (CIA) and the Actuarial Standards Board to set sound actuarial standards to ensure that policy liabilities and capital requirements accurately reflect the risk.

A key issue for OSFI is always the degree of freedom given to actuaries to make assumptions. The CIA/ASB has delivered a high quality set of standards that served Canada extremely well. I sometimes hear that this set of high quality standards will not be needed or will disappear once IFRS comes into force. That concerns us. If ultimate IFRS standards in terms of actuarial-assumption setting are close to Canadian standards then the issue disappears, but if not, we need to consider next steps. "

Remarks by Superintendent Julie Dickson
Office of the Superintendent of Financial Institutions Canada (OSFI)
To the Actuaries Club of Toronto
Toronto, Ontario
September 23, 2009



Key Messages

1. Canada's life insurance accounting model works because it is aligned with the business model.
 - *The Canadian Asset Liability Method (CALM)*
 - *Earned rate concept*
2. The asset and liability matching ("ALM") concept is the cornerstone of the business model for life insurance and annuity products, which have a long duration and guaranteed rates.
 - *Insurance companies are in the business of collecting and investing premiums to pay claims in the future*
 - *Investment returns are factored into the product pricing*
 - *Actual investment experience that differs from pricing is an economic gain or loss*
3. A standard that incorporates the "asset earned rate" produces the most relevant & understandable financial results for users.
4. Standards not based on the business model will lead to use of non GAAP measures.
 - *To avoid the outcome of an "accounting mismatch" with the business model, companies might change the assets they invest in. This will have significant implications for consumers and for capital markets.*

 Manulife Financial

John Hancock

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Quality financial reporting requires accounting standards to be aligned with the business model

"... The quality of financial reporting, and, by extension, the health and integrity of our capital markets, depends upon vigilant attentiveness to these fundamental principles, and expedience should not be permitted to undermine the objectives these principles describe... Investors trust that an issuer's disclosure statements, and the accounting standards on which they are based, provide them with a complete, unbiased, fair and comparable view of the issuer's performance."

Statement of the Monitoring Board for the International Accounting Standards Committee Foundation on Principles for Accounting Standards and Standard Setting

22 September 2009

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Quality reporting based on the following criteria

Relevance	<ul style="list-style-type: none"> Information that enables user to evaluate past and present events to draw inferences regarding future events
Reliable	<ul style="list-style-type: none"> Faithful (neutral) representation of events Reliability does not equate to certainty
Understandable	<ul style="list-style-type: none"> Can be understood by users for decision making
Comparable	<ul style="list-style-type: none"> Enable comparison of performance over time and against other reporting entities

In the following slides we will outline how the concepts in the Canadian model meet the criteria and why we believe the IASB proposals do not.

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Introduction

CGAAP

Examples

Alternatives

Conclusion


Appendix
Q&A

First, some background on the business model for long term guaranteed products

▪ Example : Whole Life

Whole life insurance provides permanent, lifetime protection for a level premium. Depending on the plan you buy, whole life insurance spreads the cost of your coverage over the lifetime of the policy or over a limited period of time.

- Results in prolonged period of net cash inflows followed by prolonged period of net cash out flows
- We invest future premiums and re-invest current assets when they mature in order to fund the payment of longer dated liabilities.
- It is only over the lifetime of the insurance contract that the ultimate profit or loss related to changes in interest rates will be known.
- The approach to reflecting expected investment returns and changes in market rates is the key driver of financial statement impact

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Discussion points

1. Using MFC's second and third quarter results to explain why the Canadian GAAP life insurance standard produces relevant, useful information for users of financial statements.
2. Examples if the discount rate for liabilities is disconnected from the assets?
3. Evaluation of the alternatives

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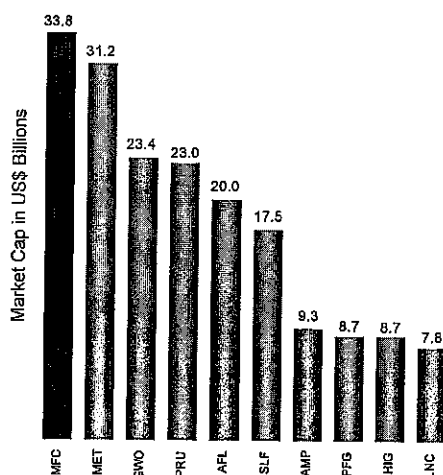
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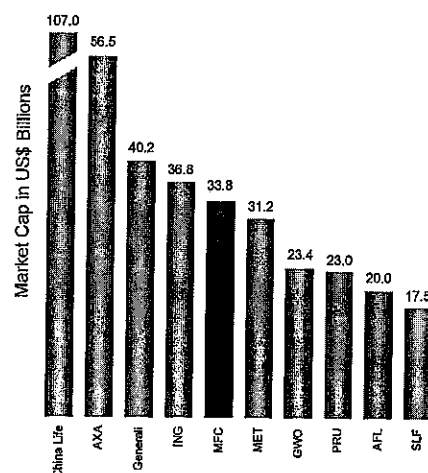


Manulife Financial Corporation

North American Life Insurers



Global Life Insurers



- Manulife's size and scale translate into a higher capital base, a diversified operating platform and ample resources to fund growth opportunities

Market data as at September 30, 2009. Source: Thomson Reuters

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Introduction CGAAP Examples Alternatives Conclusion

Appendix Q&A



MFC at a glance ...

- Manulife Financial is well diversified by product and geography, with premier market positions in North America and Asia

Manulife Financial

Business Segment	U.S. Insurance	U.S. Wealth Management	Canada	Asia	Reinsurance
Earnings Contribution ¹	23%	18%	29%	21%	5%
Business lines	<ul style="list-style-type: none"> JH Life <ul style="list-style-type: none"> Variable Universal Life Universal Life Whole Life Term Life COLI JH LTC <ul style="list-style-type: none"> Retail LTC Group LTC Federal LTC 	<ul style="list-style-type: none"> JH Variable Annuities <ul style="list-style-type: none"> Variable Annuities JH Wealth Asset Management <ul style="list-style-type: none"> Defined Contribution Mutual Funds Privately Managed Accounts College Savings JH Fixed Products <ul style="list-style-type: none"> Fixed Deferred Annuities Payout Annuities Guaranteed Investment Contracts Signature Notes Fee-based products 	<ul style="list-style-type: none"> Individual Insurance <ul style="list-style-type: none"> Universal Life Whole Life Term Life Living Benefits Affinity Markets Individual Wealth Management <ul style="list-style-type: none"> Annuities Fixed Rate Products Segregated Funds Manulife Bank Mutual Funds Group Businesses <ul style="list-style-type: none"> Group Life & Health Group Savings and Retirement Solutions 	<ul style="list-style-type: none"> Hong Kong <ul style="list-style-type: none"> Individual Insurance Group Life & Health Group Pensions Mutual Funds Japan <ul style="list-style-type: none"> Individual Insurance Variable Annuities Other Asia Territories <ul style="list-style-type: none"> Individual Insurance Group Life & Health Group Pensions Variable Annuities Mutual Funds 	<ul style="list-style-type: none"> Life <ul style="list-style-type: none"> Property and Casualty International Group Program Group Life & Health Group Pensions

¹Earnings contribution is calculated based on average over last 4-years

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\$160,000 of the invested assets support the policyholder obligation of \$160,000.

Assets	
Invested assets	\$190,000
Other assets	10,000
Goodwill and intangibles	10,000
Total Assets	\$210,000
Liabilities & Shareholders' equity	
Policyholder liabilities	\$160,000
Other liabilities	10,000
Long term debt	10,000
Shareholder's equity	\$30,000
Total liabilities and equity	\$210,000

\$160,000 to support policyholder liabilities

\$10,000 from investing proceeds of long term debt

\$20,000 backing shareholders' equity; the other \$10,000 is goodwill and intangibles

Manulife Financial

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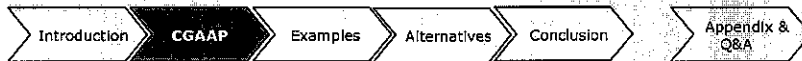
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Overview of Life Insurance Contract Valuation under Canadian GAAP

- Asset accounting follows IAS 39 framework
- Liability valuation consists of Three Building Blocks:
 1. Best estimate assumption for all key determinants of future cash flows on in-force policies
 2. Margins for adverse deviation in cash flows (PfADs)
 3. Discounting for time value of money (expected return net of PfAD)
- Assumptions and discount rates must be unlocked and kept consistent with current experience and market movements:
 - Subject to external audit, regulatory (OSFI) & peer review
 - Significant professional standard and guidance from Canadian Institute of Actuaries
- Discounting reflects asset earned rate model using expected investment strategies

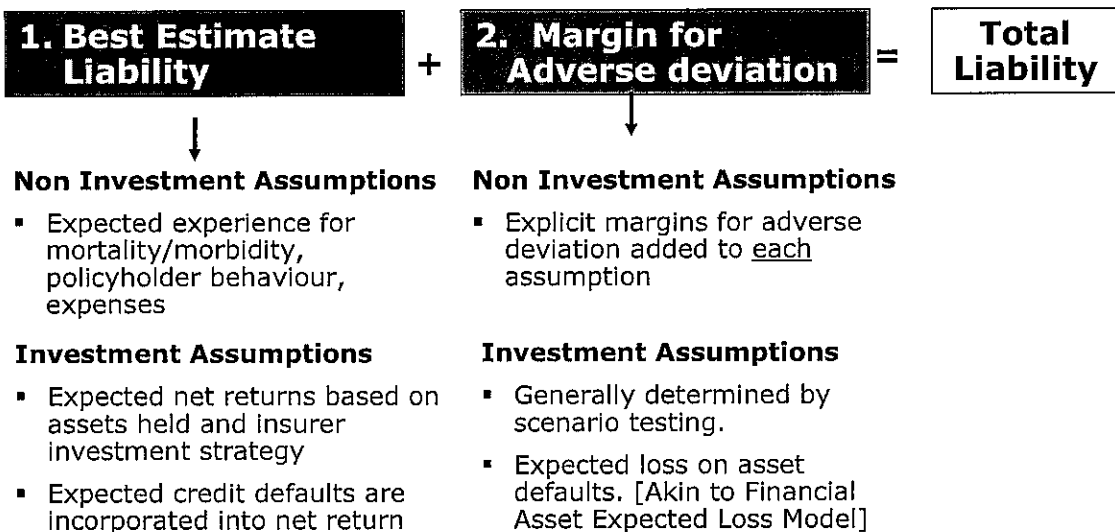


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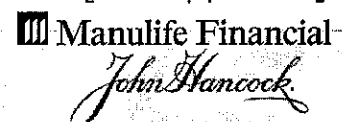


Overview of Insurance Contract Valuation under Canadian GAAP

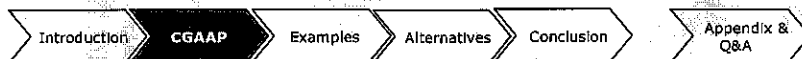
Components of CGAAP liability:



3. Method to apply discounting is the "CALM" method [see Appendix]



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Interest Rates

Interest Rates	Dec 07	Dec 08	Mar 31 09	June 30 09	Sep 30 09
US 10 year Treasury	4.02	2.21	2.66	3.53	3.31
US 10 year Corp A	5.78	6.32	6.42	6.25	5.19
US 10 year Swap	4.67	2.56	2.86	3.78	3.46
Corp A vs. Swap	1.11	3.76	3.56	2.47	1.73
Corp A vs. Treasury	1.76	4.11	3.76	2.72	1.88

Change In Interest Rates (BP)	2007	2008	1Q/09	2Q/09	3Q/09
US 10 year treasury	(68)	(181)	45	87	(22)
US 10 year Corp A	19	54	10	(17)	(106)
US 10 year Swap	(51)	(211)	30	92	(32)
Corp A vs. Swap	22	265	(20)	(109)	(74)
Corp A vs. Treasury	135	235	(35)	(104)	(84)

Source: Bloomberg

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CGAAP reserving includes: Interest rate impact; changes to best estimates and impact of downgrades

Q3'09 Reported Loss

\$(172)

Notable items impacting earnings:

Segregated fund guarantees and other equity items	\$1,201
Decline in interest rates and corporate bond spreads	(1,222)
Impact of annual valuation basis change	(783)
Credit impairments and reserves for downgrades	(36)
Equity related impairments	(75)
Currency rates	(27)
Other items ¹	(33)
Net Impact	\$(975)

Adjusted Earnings from Operations²

\$803

All items are on a post tax basis, in C\$ Millions

¹ Other items include: the impact of lower real estate values and other private asset class returns partially offset by the favourable impact of several tax items, gains related to the recapture of reinsurance treaties and a small amount of policyholder experience gains.

² Non GAAP measure.

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Interest Rate Impact on Earnings

- Decline in corporate bond rates and spreads resulted in net charges of \$1.2 billion
- During the quarter, both long-maturity corporate bond rates declined and spreads narrowed by as much as 84 basis points:

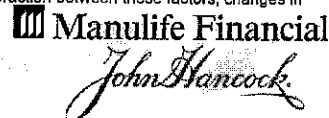
Interest Rate / Spread	30-Jun-09	30-Sept-09	Change
US 10-year Corp A	6.25%	5.19%	-106bps
US 30-year Corp A	6.98%	5.92%	-106bps
US 10-year Corp A to Treasury Spread	272bps	188bps	-84bps
US 30-year Corp A to Treasury Spread	265bps	187bps	-78bps

Source: Bloomberg

- Changes in interest rates impact the actuarial valuation of in-force policies by changing the future returns assumed on the investment of net future cash flows

Estimated Earnings Sensitivity to Interest Rates*	31-Dec-08	30-Sept-09
Approximate impact of 100bps parallel increase in interest rates	+\$1.1B	+\$1.6B
Approximate impact of 100bps parallel decrease in interest rates	-\$1.3B	-\$2.0B

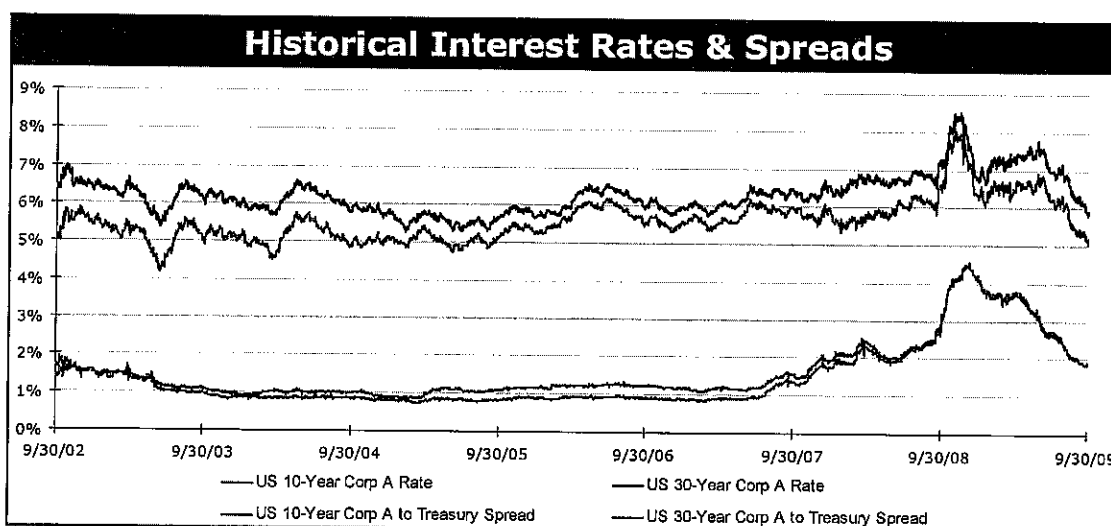
* The impact on earnings for interest rates is based on a starting point and business mix in place at that date, and assumes that all other variables stay constant. Actual results can differ materially from these estimates for a variety of reasons, including the interaction between these factors, changes in actuarial assumptions, changes in business mix, effective tax rates, currency and other market variables.



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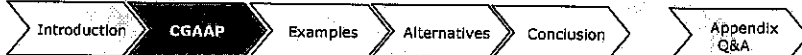
Interest Rates / Spreads



Source: Bloomberg



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CGAAP methodology - conclusions

- ✓ The interest rate impact represents the point in time fair value change on the cash flows yet to be invested based on Company's asset / liability strategy.
- ✓ Valuation includes expected credit losses.
- ✓ Along with sensitivity disclosures, results reflect a point in time measure of our economic exposure, that meets all the criteria (relevant, reliable, understandable, comparable).

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1. Using MFC's Q3 results to explain why the CGAAP insurance standard works
2. Examples if the discount rate for liabilities is disconnected from the assets?
3. Evaluation of the alternatives

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Example 1

\$100 billion of 7 year duration policy liabilities discounted using swap curve

\$100 billion of 7 year duration fixed interest cash flow matched assets (single A bonds) at fair value

Spread movement of 100 bp over the quarter

Impact on earnings = \$100 billion x 7 x 100 bp
= \$7.0 billion pretax!

What is likelihood of a 100 bp spread movement?

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Recent spread movements

Change In Interest Rates (BP)

	2007	2008	1Q/09	2Q/09	3Q/09
Corp A vs. Swap	67	265	(20)	(109)	(74)
Corp A vs. Treasury	84	235	(35)	(104)	(84)

Significant movements are very possible
Quarterly income swings of \$10 billion plus would have occurred
for large multi-national like Manulife

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Implications on Capital / Solvency II

In 2008:

- Risk neutral rates went down considerably, resulting in liabilities valued on a risk free rate materially increasing.
- Extreme spread widening (from 150 bps to 400 bps) caused significant shock decreases in fixed interest asset values, compounding significant decreases in equity asset values

In 2009,

- Position has now largely reversed

Model does not survive a real event stress test!

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Example 2 -

Consider a perfectly cash-flow matched asset and liability (i.e. economically hedged):

Asset

- 20-yr corporate bond purchased 3/31/09
- Yield of 6.5%
- Par 100

Liability

- 20 year debt instrument, issued 3/31/09
- Yield of 5.5%
- Par 100

Assume:

- In Q2, the rate on the asset decreases by 50 bp
- risk free rates of 3% at March 31st and 4% at June 30th

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Example 2 continued

Net income assuming assets at FV and liability discounted at risk free rate

Period	Change in FV of asset	Change in Actuarial Liability	Net Income
3/31/09	0	37	(37)
6/30/09	6	(17)	23

In the banking industry the amortized cost will be used, and earnings will emerge as spread income of 1%, without fair value "noise"

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Example 2 - conclusions

The interest rate risk inherent in the product (in this case a 20 year debt instrument) is managed by investing in a 20 year corporate bond.

The accounting model leads to large reported gains and losses which are not reflective of the underlying risks of the business.

The longer the duration of an asset or liability, the more material an impact of a change in rates.

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Discussion points

1. Using MFC's Q3 results to explain why the CGAAP insurance standard works
2. Examples if the discount rate for liabilities is disconnected from the assets?
3. Evaluation of the alternatives

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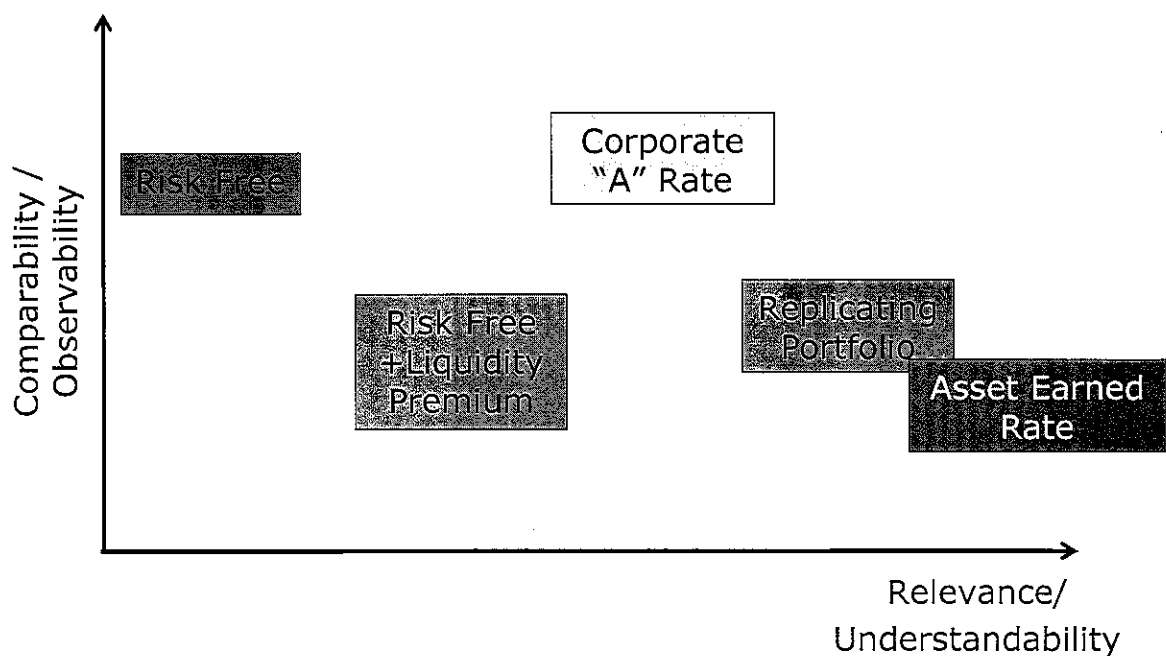
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Comparison of discount rate alternatives according to Financial Statement objectives



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Comparison of discount rate alternatives

	Risk Free	Risk Free + Liquidity Premium	Corporate "A" Rate	Replicating Portfolio	Asset Earned
	↓	↓	↓	↓	↓
	Least relevant			Most relevant	
Observations	Liquid financial instruments with no risk therefore not relevant	Some reflection of illiquid nature of liabilities but is not observable	Ensures Comparability and acknowledges basket of assets back liabilities	Enables comparability and is broadly consistent with business model	Most representative of business model
Examples in practice	IAS 39 fair value adjusted for own credit risk	Solvency II and MCEV Non-GAAP measures in Europe	IAS 19 pension liabilities		IFRS 9: Financial instruments at amortized cost (business Model)

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Risk free rate + liquidity premium

Approach currently being discussed internationally:

$$\text{Risk Free Rate} + \text{Liquidity Premium} = \text{Discount rate for insurance}$$

- Liquidity premium is not:
 - a) observable
 - b) not consistently applied and
 - c) is not reflective of business model
- Would likely require significant supplemental guidance to derive; is it fixed at inception? How to justify changes?
- "Top Down" approach that instead starts with asset linkage more appropriate as it is observable, more comparable and consistent with the business model

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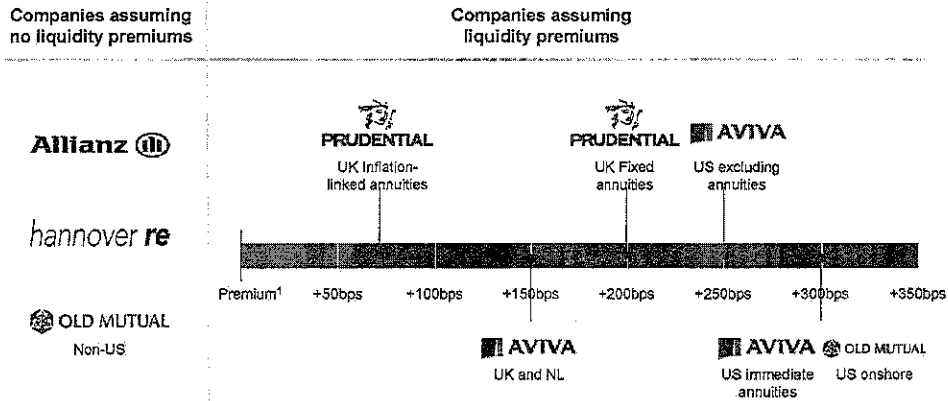
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Liquidity premium not comparable

Amongst companies publishing YE'08 MCEV results, a wide range of liquidity premium levels were assumed



1. Calibrated over Swap

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CGAAP Concepts meet the criteria:

Relevance	✓ Reflects a point in time measure of our economic exposure
Reliable	✓ Uses market observable inputs where available
Understandable	✓ Helps the reader assess how results may actually unfold
Comparable	<ul style="list-style-type: none"> ✓ Disclosures and sensitivities ensure comparability ✓ Comparison of economic exposures is useful information

Quality financial reporting requires alignment of accounting standards to the business model. Therefore the answer is an earned rate concept with disclosures of rates and sensitivities.

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Risk free + liquidity premium does not meet criteria

Relevance	✗ Does not reflect the business model and therefore is not relevant for decision making purposes.
Reliable	✗ Liquidity premium is not observable and is inconsistently applied in practice.
Understandable	✗ Will lead to non GAAP measures. ✗ Earnings can only be explained by external factors and not representative of how event will unfold.
Comparable	✗ Liquidity premium is not consistently applied.

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Summary

1. Canada's insurance accounting model works because it is aligned with the business model.
2. The asset and liability matching ("ALM") concept is the cornerstone of the business model for insurance and annuity products, which have a long duration and guaranteed rates.
3. A standard that incorporates the "asset earned rate" produces the most relevant & understandable financial results for users.
4. Standards not based on the business model will lead to use of non GAAP measures.
 - *To avoid the outcome of an "accounting mismatch" with the business model, companies might change the assets they invest in. This will have significant implications for consumers and for capital markets.*

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Conclusion

- The linkage of assets and liabilities is the cornerstone of the business model for insurance and annuity products, which have a long duration and guaranteed rates.
- Because the new standard proposed to value assets and liabilities separately, which is a basis that is not consistent with our business model, our financial results will not result in meaningful, relevant financial information to users of our financial statements.

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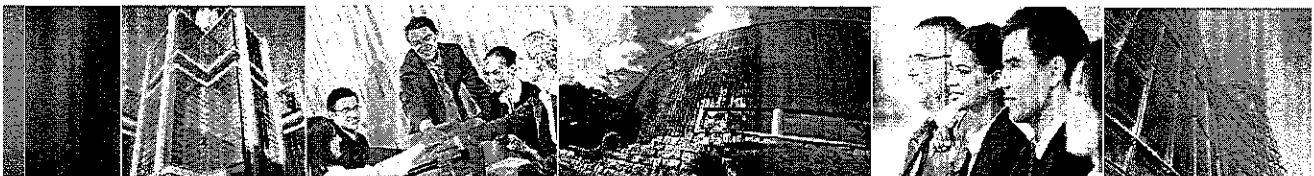
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Appendix – CALM

CALM = Canadian Asset Liability Method

Reflects interdependence of Assets and Liabilities

- The distinguishing element of the Canadian Valuation method for insurance liabilities is the method used to reflect expected impact of investments
- In Canada, the policy liability is determined directly as the statement value of assets held whose cashflows are projected to be just sufficient to settle the liability cash flows
- Based on direct cashflow analysis using assets actually held to support liabilities (on a segmented basis)

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Introduction to CALM

1. Project expected in-force Liability cash flows

- Based on best estimate of policyholder behaviour, mortality/morbidity and expenses including future premiums and benefits derived from these premiums

2. Add conservatism to the liability cash flows by adding a margin directly to each best estimate assumption

- Margin is generally 8% - 20% of expected assumptions

3. Project existing asset cashflows on assets supporting liabilities

- Fixed interest asset cash flows are derived from contractual cash flows
- Non-fixed income assets (stocks and real estate) are modeled using expected cash income rates and market growth assumptions applied to current market values

4. Roll forward net cash flows (assets and liabilities) under re-investment strategy until last liability is extinguished

- Investment and dis-investment strategy based on segment strategy in investment policy (business model)

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Introduction to CALM

5. Add / Subtract Assets to model until Assets are *just sufficient* to discharge Liabilities (i.e. CALM segment is fully funded)
6. Scenario policy liability is the statement value of the assets that are required to discharge the Liabilities in step 5.
7. Repeat steps 1 – 6 for a number of economic scenarios for interest rates
8. Policy liability is the highest scenario policy liability generated for the scenarios tested

The time value of money adjustment in the CGAAP valuation reflects yields based on assets held and planned re-investment strategy

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Investment Scenario Testing

- To apply CALM, company assets are divided into distinct segments supporting blocks of liabilities with similar ALM risk profiles
- Investment strategy for each segment is tailored to ALM risks of the segment
- Scenario modeling reflects actual assets held and actual planned re-investment strategies
- In Canada, the Canadian Institute of Actuaries (CIA) proscribes scenarios which are combined with internal defined scenarios
 - Scenarios relate to the economic assumption of future re-investment rates for fixed income assets
- For non-fixed interest assets, return assumption is based on long-term expected return less a margin less a one-time market correction assumption

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General Account Investment Return Assumptions

	Investment Risks Fixed Interest	Investment Risks Non-Fixed Interest
Assumption Methodology	<ul style="list-style-type: none"> • Reinvestment initially at current market rates/spreads net of credit allowance • Scenario tests evaluate impact of future different paths of interest rates 	<ul style="list-style-type: none"> • Total return based on long term historic market returns applied to current fair value • Returns reduced by: <ol style="list-style-type: none"> a) introducing margin for annual return under performance (10-20% of expected return) b) one time market correction of 25-40% assumed to occur at durations where maximum impact on valuation

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Comparing "CGAAP CALM" to "Risk Free + Liquidity Spread"

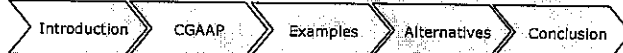
Fixed income:

- For fixed interest assets, approaches should lead to similar outcome:
 - CGAAP approach starts with observed market interest rate for the assets and deducts credit loss expectation
 - Risk Free+ liquidity approach starts with risk free rate and adds back liquidity premium
- CGAAP approach ensures better accounting match and eliminates substantial volatility by appropriately reflecting the market trading dynamics of life insurance business model

Non fixed income:

- CGAAP approach will directly diffuse the future cash flows from these assets against the liabilities (long term) they are expected to support
- Risk free + liquidity premium approach will treat non fixed income assets as zero duration assets increasing mismatch risk so that the full interest movement is reflected in earnings on a market value basis.

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Key Outcomes from CALM Approach

- Liability valuation movement will offset asset valuation movement to the extent there is an effective ALM match
- Non fixed income can be matched against long duration cash flows (still have market volatility for non-pass through products but fixed interest mismatch is reduced)
- Impact of credit impairments / down grades will impact current period income
- Asset trading / re-positioning can directly impact cashflows

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Q&A - Asset Earned Rate

Criticism

Will encourage investment in junk bonds to reduce liability values

Assets and liabilities should be measured independently – no concept of “matching” under IFRS.

Would lead to lack of comparability/consistency between insurers

Response

- Asset accounting will require impairments and MTM of any negative asset appreciation thereby punishing risky investment strategies
- Most regulatory bodies severely restrict investment thresholds in below-investment grade assets
- Life insurance business model a reflection of Asset and Liability Matching [more so than any other industry]. Is a broad application of “hedge accounting” in insurance context.
- Use of business model for accounting purposes is consistent with IFRS 9 for financial instruments at amortized cost
- Can readily be addressed through **disclosure** (e.g. excess/deficiency vs risk free discounting)

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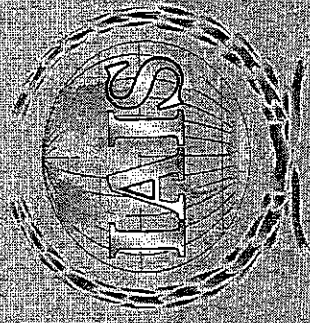


Q&A – Asset Earned Rate

Asset Earned Rate:

Benefit	Response
<p>Consistent with how liabilities are measured in block transactions and therefore representative of "fair value"</p> <p>Consistent with the business model</p>	<ul style="list-style-type: none">• No business combination or purchase of insurance liabilities would ever be completed without a transfer of assets backing those liabilities [i.e. block]• Acquirer will value liabilities in determining purchase price by reflected expected asset return in discount rate.• Will result in financial statements that are the most relevant and useful to users.• Sensitivities, and impacts of other discounting approaches addressed through disclosures for comparability

Standard and Guidance Paper on Enterprise Risk Management
for Capital Adequacy and Solvency Purposes (October 2008)



Solvency & Actuarial Issues Subcommittee

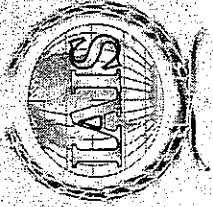
October 2008



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2. Governance and an Enterprise Risk Management framework
 - Governance and risk management
 - Risk Management Policy
 - Risk Tolerance Statement
3. Own Risk and Solvency Assessment (ORSA)
 - Economic and Regulatory Capital
 - Using an internal model for the ORSA
 - Continuity Analysis
4. Role of Supervision in risk management

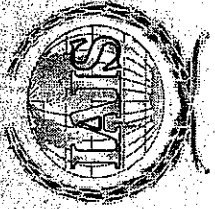
Standard and Guidance Paper of Enterprise Risk Management for Capital Adequacy and Solvency
Purposes (October 2008)



Introduction

The Governance Block of the IAIS Framework for Insurance Supervision refers to:

“governance processes and controls in areas such as the Board, directors, senior management and other organisational aspects, fit and proper testing of directors and management; administrative, organisation and internal controls, including **risk management**; compliance with legislative requirements; shareholder relationships; and the governance risks posed by group structures”



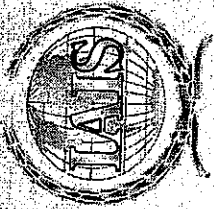
Introduction

- Sound governance is a pre-requisite for solvency regime to operate effectively
- **Enterprise risk management** is the process of identifying, assessing, measuring, controlling and mitigating risk in respect of the insurance enterprise as a whole
- Enterprise risk management underpins effective solvency assessment and capital management

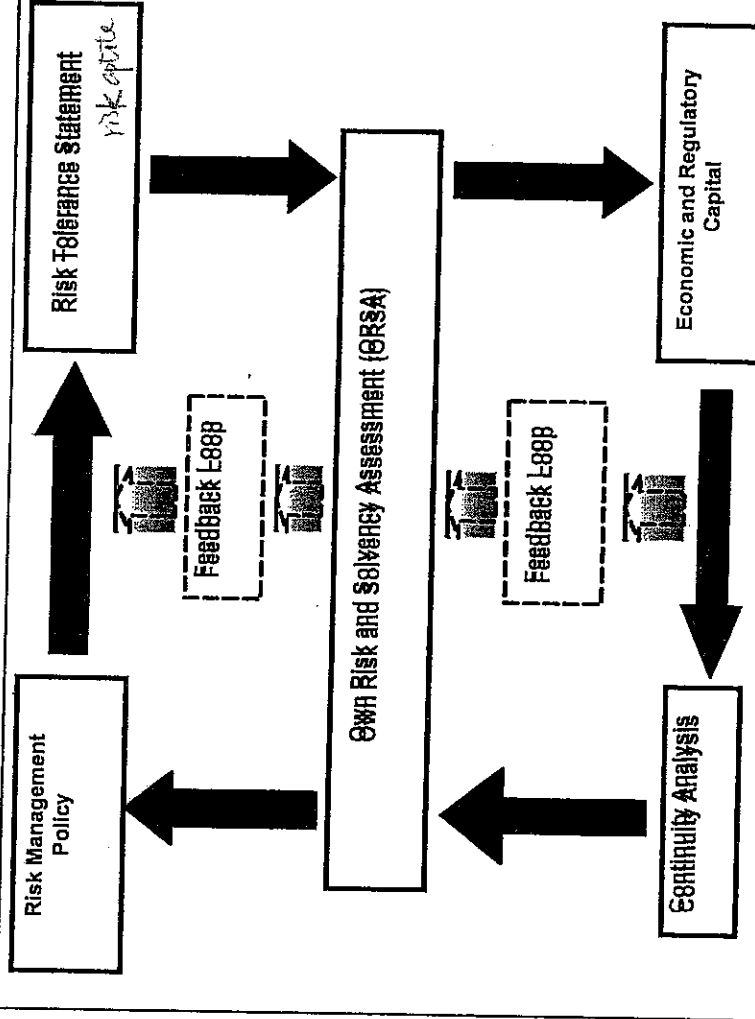


Introduction

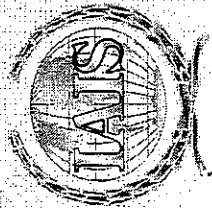
- This standard and guidance focuses on the enterprise risk management framework around the determination of technical provisions and capital for an insurer as a single entity.
- It also discusses conceptual issues related to regulatory financial requirements
- The standard's 19 key requirements are based around a best practice enterprise risk management framework



Introduction



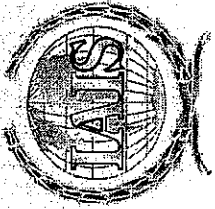
Standard and Guidance Paper of Enterprise Risk Management for Capital Adequacy and Solvency Purposes (October 2008)



Governance and an Enterprise Risk Management framework

Governance and risk management

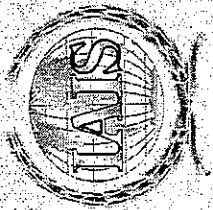
1. As part of its overall governance structure, an insurer should establish, and operate within, a sound Enterprise Risk Management (ERM) framework which is appropriate to the nature, scale and complexity of its business and risks
2. The ERM framework should be integrated with the insurer's business operations and culture, and address all reasonably foreseeable and relevant material risks faced by the insurer in accordance with a properly constructed risk management policy
3. The establishment and operation of the ERM framework should be led and overseen by the insurer's board and senior management



Governance and an Enterprise Risk Management framework

Risk identification and measurement

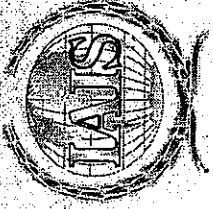
4. For it to be adequate for capital management and solvency purposes, the framework should include provision for the quantification of risk for a sufficiently wide range of outcomes using appropriate techniques
5. Measurement of risk should be supported by accurate documentation providing appropriately detailed descriptions and explanations of risks



Governance and an Enterprise Risk Management framework

Risk management policy

6. An insurer should have a risk management policy which outlines the way in which the insurer manages each relevant and material category of risk, both strategically and operationally
7. The policy should describe the linkage with the insurer's tolerance limits, regulatory capital requirements, economic capital and the processes and methods for monitoring risk



Governance and an Enterprise Risk Management framework

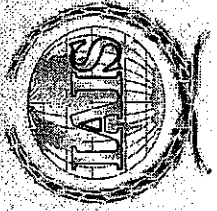
- **Economic Capital** is the capital needed by the insurer to satisfy its risk tolerance and business plans from an economic assessment of the insurer's risks, the relationship between them and the risk mitigation in place
- Techniques should be proportionate to the business and its risks
- Proportionality means that a complex economic capital model is not necessarily needed



Governance and an Enterprise Risk Management framework

Risk tolerance statement

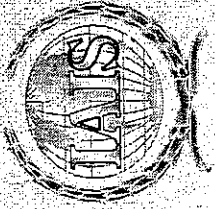
8. An insurer should establish and maintain a risk tolerance statement which sets out its overall quantitative and qualitative tolerance levels and defines tolerance limits for each relevant and material category of risk, taking into account the relationships between these risk categories
9. The risk tolerance levels should be based on the insurer's strategy and be actively applied within its ERM framework and risk management policy
10. The defined risk tolerance limits should be embedded in the insurer's ongoing operations via its risk management policies and procedures



Governance and an Enterprise Risk Management framework

Risk responsiveness and feedback loop

11. The insurer's ERM framework should be responsive to change
12. The ERM framework should incorporate a feedback loop, based on appropriate and good quality information, management processes and objective assessment, which enables the insurer to take the necessary action in a timely manner in response to changes in its risk profile

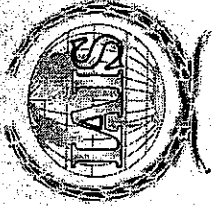


Own Risk and Solvency Assessment (ORSA)

13. An insurer should regularly perform its own risk and solvency assessment (ORSA) to provide the board and senior management with an assessment of the adequacy of its risk management and current, and likely future, solvency position
14. The ORSA should encompass all reasonably foreseeable and relevant material risks including, as a minimum, underwriting, credit, market, operational and liquidity risks. The assessment should identify the relationship between risk management and the level and quality of financial resources needed and available

Standard and Guidance Paper of Enterprise Risk Management for Capital Adequacy and Solvency Purposes (October 2008)

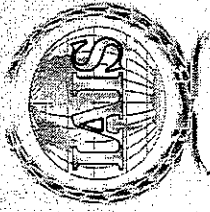
Trevor Cooke, Prudential Policy Division, UK FSA



Own Risk and Solvency Assessment (ORSA)

Economic and Regulatory Capital

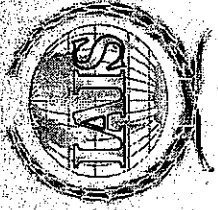
- As part of its ORSA an insurer should determine the overall financial resources it needs to manage its business given its own risk tolerance and business plans, and to demonstrate that supervisory requirements are met
16. The insurer's risk management actions should be based on consideration of its economic capital, regulatory capital requirements and financial resources



Own Risk and Solvency Assessment (ORSA)

Using an internal model for the ORSA

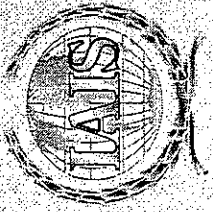
- Most useful if model supports assessment of all risks as well as economic capital determination
- Useful for current capital and continuity analysis
- Model based on insurers own modelling criteria, techniques and inputs and subject to its own governance
- No need for supervisory approval of model for ORSA
- Model useful for supervisory review as part of ORSA



Own Risk and Solvency Assessment (ORSA)

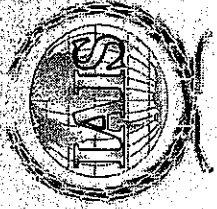
Continuity Analysis

17. As part of its ORSA, an insurer should analyse its ability to continue in business, and the risk management and financial resources required to do so over a longer time horizon than typically used to determine regulatory capital requirements
18. Such continuity analysis should address a combination of quantitative and qualitative elements in the medium and longer term business strategy of the insurer and include projections of the insurer's future financial position and analysis of the insurer's ability to meet future regulatory capital requirements



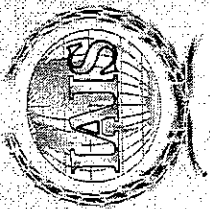
Own Risk and Solvency Assessment (ORSA)

Continuity analysis is the process of ensuring sound, effective, and complete processes, strategies and systems to assess and maintain on an ongoing basis the amounts, types and distribution of financial resources to cover the nature and level of the risks to which an insurer is or might be exposed to and to enable it to identify and manage all reasonably foreseeable and relevant material risks.

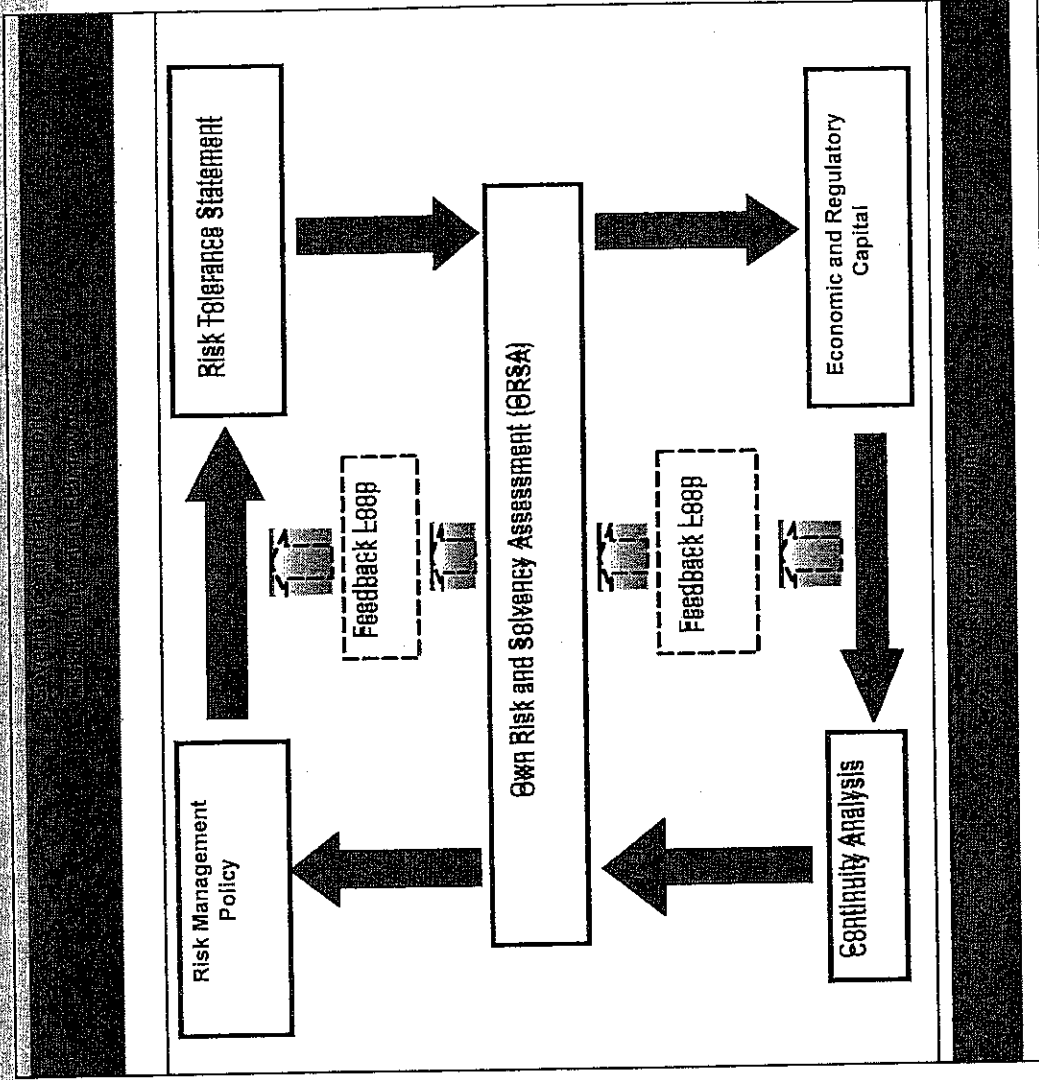


Role of supervision in risk management

19. The supervisor should undertake reviews of an insurer's risk management processes and its financial condition. The supervisor should use its powers to require strengthening of the insurer's risk management, including solvency assessment and capital management processes, where necessary



Summary

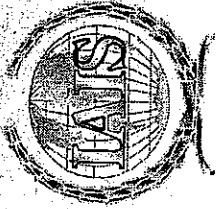


EC
 & Reserve Capital
 > use level of interest funded
 > create small fund
 > different guidelines

Standard and Guidance Paper of Enterprise Risk Management for Capital Adequacy and Solvency Purposes (October 2008)

Trevor Cooke, Prudential Policy Division, UK FSA

San Francisco
 3 December 2009



International Association of Insurance Supervisors (IAIS)

Questions & Answers

www.iaisweb.org

This presentation is prepared by the Solvency and Actuarial Issues Subcommittee

IAIS Secretariat - john.maroney@bis.org

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Office of the Superintendent of
Financial Institutions Canada

Bureau du surintendant des
institutions financières Canada



OSFI
BSIF

OSFI Dynamic Capital Adequacy Testing (DCAT)

NAIC International Solvency
Working Group

December 3, 2008

Canada

Agenda

DCAT background

What is DCAT?

DCAT process

Modeling

Reporting

Opinion

Financial crisis

Strengthened risk management

Summary



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DCAT background

**Report on the future financial condition
of the insurance company**

**Required of the Appointed Actuary
under direction of Superintendent**

Section 368/630 of the Insurance Companies Act

**Governed by Canadian Institute of
Actuaries (CIA) Standards of Practice**

SOP Section 2520



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ESIF

What is DCAT?

- **Process for making an annual investigation into insurer's recent and current financial position**
- **Project trends of capital position under variety of future scenarios**
 - Life insurance – 5 years
 - General (P&C) insurance – at least 3 years
- **Inform management of implications of business plan on capital**



OSFI
BSIF

What is DCAT?

- ✓ **Identify risks and threats and suggest actions to take**
- ✓ **Provide input to the Board and senior management regarding the ongoing future management of the Company**
- ✓ **It is not a guarantee by the Appointed Actuary of the future solvency of the company**
- ✓ **It should not be used to discuss areas of opportunity**



**OSF
BSIF**

DCAT process – Base scenario

- ✓ **Review of operations for recent years (usually 3) and financial position at end of each**
- ✓ **Develop base scenario using “realistic” assumptions to forecast insurers financial position over forecast period**
 - “Realistic” does not preclude assuming future capital injections if part of normal operating process for company
- ✓ **Base scenario should be “consistent” with business plan**
 - “Consistent” does not mean identical



OSFI
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DCAT process – Plausible adverse scenarios

- ✓ Scenario of adverse, but plausible, assumptions about matters to which insurer's financial condition is sensitive
- Identify at least 3 plausible scenarios and carry out more detailed testing

15-05-19

- Consider ripple effects
- Consider extraordinary management actions
- ✓ **Consider integrated scenarios**
- Combine two or more (not necessarily) related adverse scenarios



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Modeling

deterministic
or
dynamic

✓ **Model required to produce key elements of financial statements**

Base scenario used to validate model

✓ **Model should consider corporate structure**

Legal entity level (capital infusions, shareholder dividend payments, income taxes, investment of surplus etc.)

Management decision level (business units, geographical areas, product lines, investment segments)



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Reporting

- ✓ **Inform board of directors and management of company's financial health**
 - Within 12 months of fiscal year-end
- ✓ **OSFI receives a copy of each report**
 - Actuarial Division and Supervision compare and assess reports
- ✓ **Report should be comprehensible with more emphasis on being interpretative than statistical**
 - Make recommendations
 - Progress on past recommendations



Reporting

Results:

Range of outcomes

Trends

Reasonableness of:

Base scenario

Adverse scenarios

Assumptions (business growth, reinvestments etc.)

Management actions

Management and boards should be aware and in control of the risks to which they are exposed

Opinion

**CIA SOP and OSFI require Appointed Actuary to provide a signed opinion on the insurer's future financial condition in the report
SOP 2530**

“The insurer’s financial condition is satisfactory if throughout the forecast period it is able to meet all its future obligations under the base scenario and all plausible adverse scenarios, and under the base scenario it meets the minimum regulatory capital requirement.”



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DCAT limitations revealed by financial crisis

The choice of scenarios to be tested is up to the actuary

Actuaries may differ in their willingness to test and report on difficult scenarios

A lack of uniformity and complexity in the scenarios is a problem

DCAT is often regarded as a narrow professional compliance exercise and not an integral part of ERM

Results may be discounted or ignored by management



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Lessons learned from financial crisis

- ✓ **Increasingly, crises are due to systemic inter-connected events**
- ✓ **Greater consideration needs to be given to extreme events**
- ✓ **Individual insurers can have difficulty identifying industry-wide contagion impacts**
- ✓ **Correlations between risks increase in the tail**
- ✓ **Improved risk management is required**



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Strengthened risk management

- ✓ **Stress testing (including DCAT) is an important risk management tool**

- ✓ **OSFI expects stronger ERM through stress testing**

 - Stress testing clearly documented and available for review

 - Ability to run stress tests frequently through the year

- ✓ **OSFI DCAT expectations**

 - Senior management engagement with DCAT

 - Risk management is more than risk identification
DCAT report experimentation



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Strengthened risk management – Earlier DCAT stress testing

**OSFI has requested that the annual
DCAT report be presented to Board no
later than 6 months after year-end**

The frequency and timing of stress testing must
be sufficient to support timely management
action

DCAT should be an integral part of the risk
management and strategic planning process

DCAT reports should be based on current
financial data

Strengthened risk management – DCAT disclosure improved

**DCAT reports should utilize better
practices currently used by some
insurers:**

- Displaying the results of adverse scenario both before and after relevant management action
- Including recommendations for risk mitigation
- Including integrated scenarios
- Including additional illustrative scenarios
- Including additional years of financial projections to show ripple effects



Summary

DCAT is best viewed as a tool to inform management and Board as to the risks inherent in company's operations

DCAT requires a high degree of judgement by the Appointed Actuary

Need to be realistic in assessing plausible adverse scenarios and management reaction to them

OSFI is outlining its expectations for stress testing to build on DCAT experience and lessons learned from the crisis

