



Attributes of the discount rate

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“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.*



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





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.





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



Discussion points

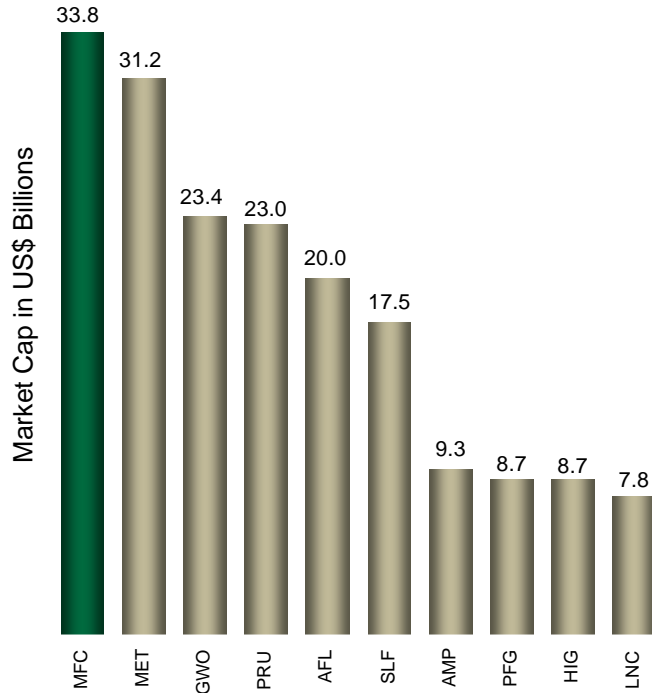
1. Using MFC's second and third quarter results to explain why the Canadian GAAP life insurance standard produces relevant, useful information for users of financial statements.
2. Examples if the discount rate for liabilities is disconnected from the assets?
3. Evaluation of the alternatives



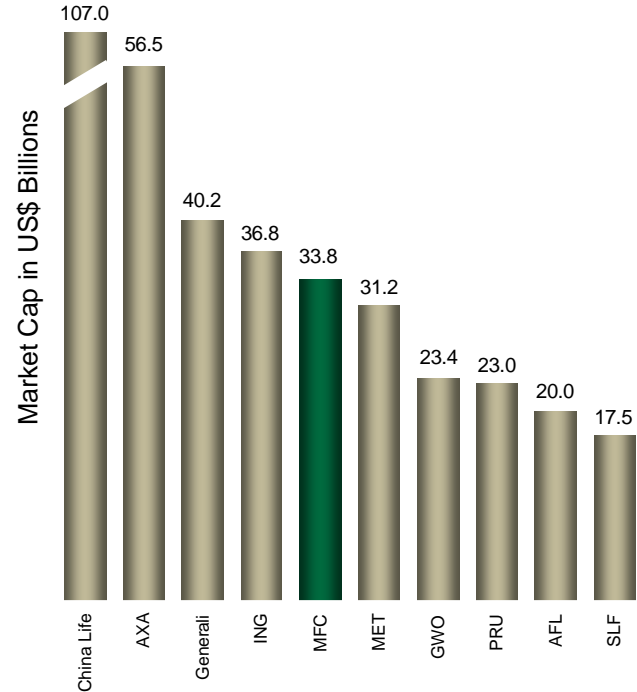


Manulife Financial Corporation

North American Life Insurers



Global Life Insurers



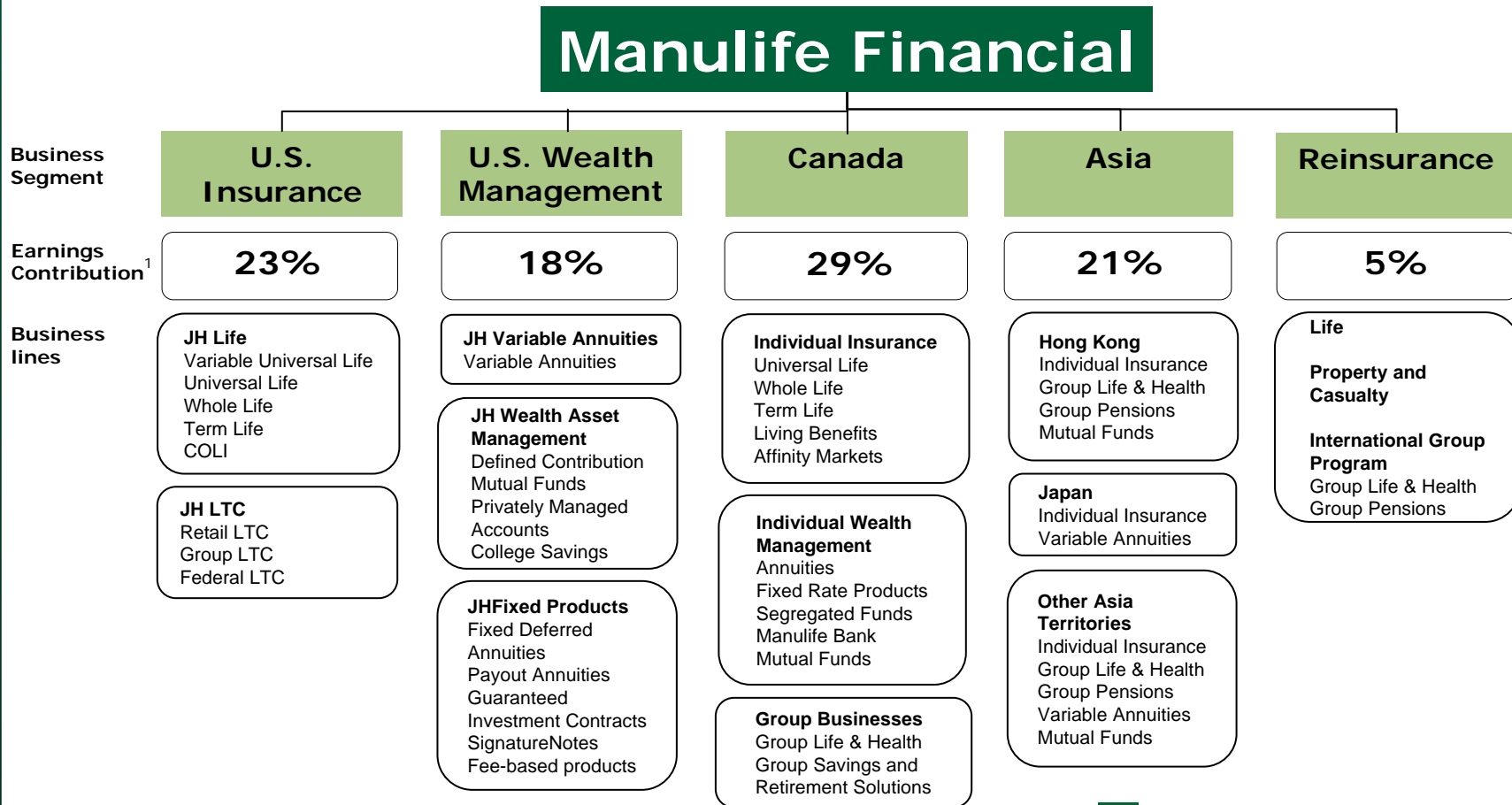
- Manulife's size and scale translate into a higher capital base, a diversified operating platform and ample resources to fund growth opportunities

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



MFC at a glance ...

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



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





\$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



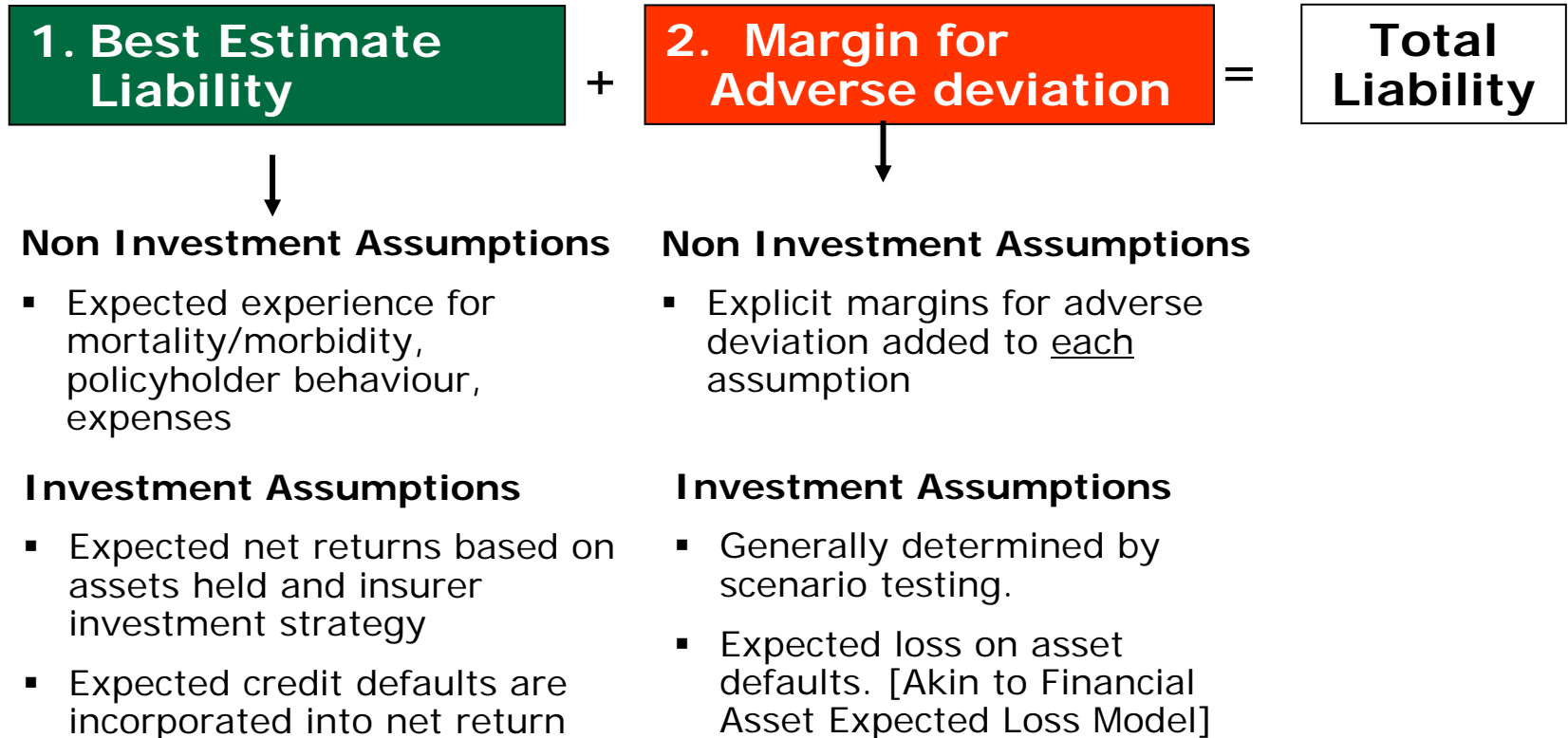
Overview of Life Insurance Contract Valuation under Canadian GAAP

- 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



Overview of Insurance Contract Valuation under Canadian GAAP

Components of CGAAP liability:



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

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



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 items¹ (33)

Net Impact **\$(975)**

Adjusted Earnings from Operations² **\$803**

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

¹Other 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.



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

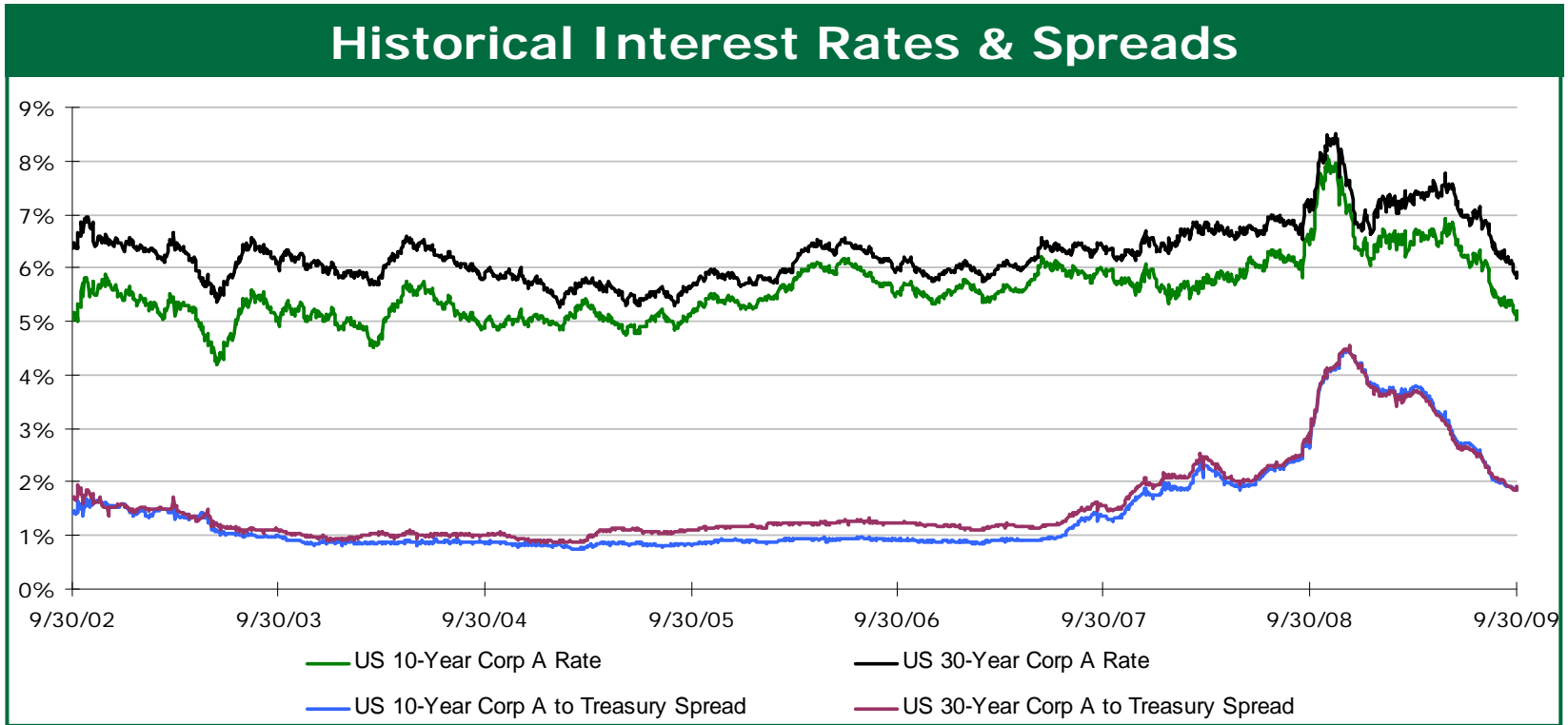
Estimated Earnings Sensitivity to Interest Rates*	31-Dec-08	30-Sept-09
Approximate impact of 100bps parallel increase in interest rates	+\$1.1B	+\$1.6B
Approximate impact of 100bps parallel decrease in interest rates	-\$1.3B	-\$2.0B

* 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.





Interest Rates / Spreads



Source: Bloomberg



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).



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





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?

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



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!



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

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”



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.





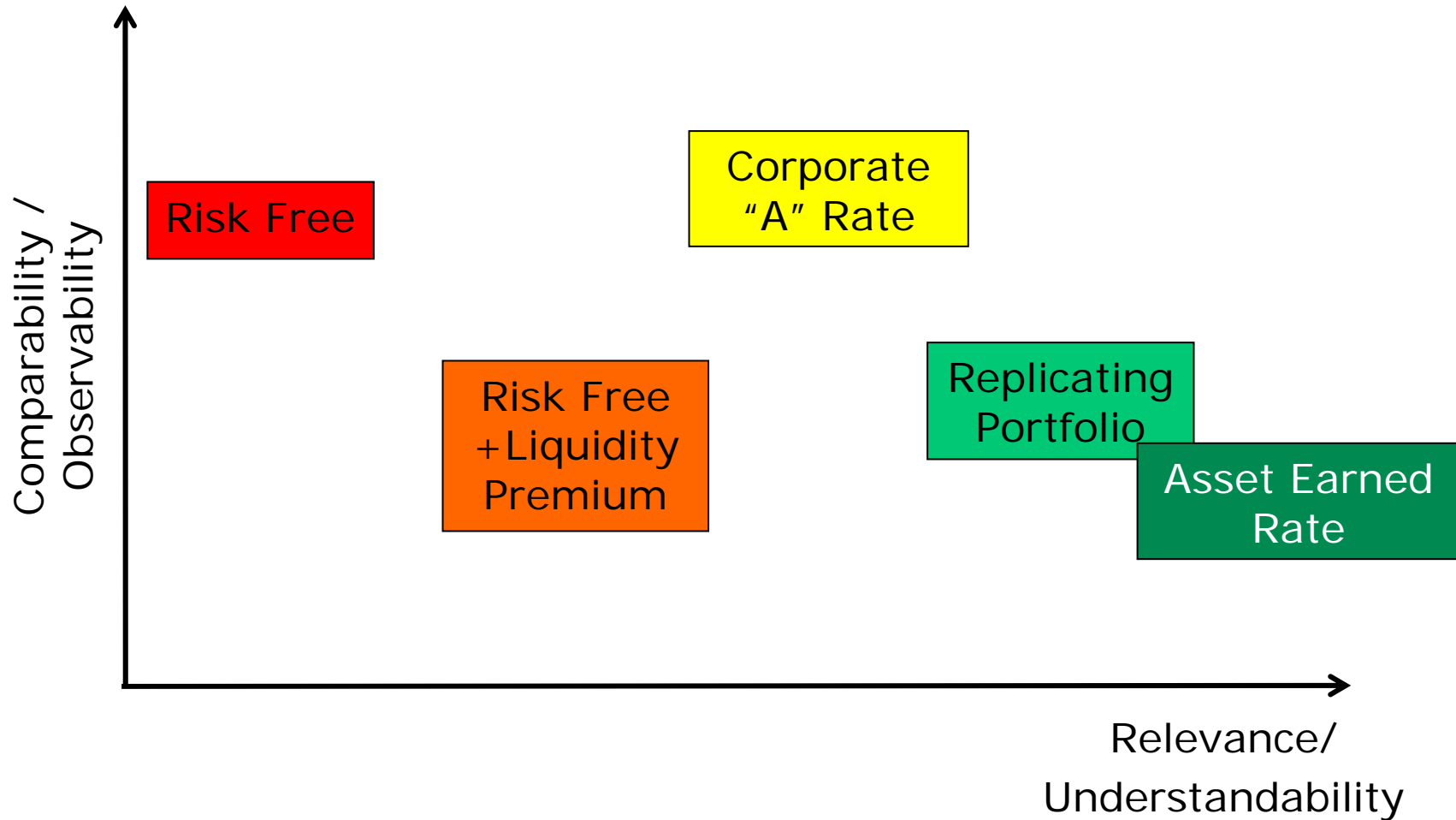
Discussion points

1. Using MFC's Q3 results to explain why the CGAAP insurance standard works
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Comparison of discount rate alternatives according to Financial Statement objectives



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)

Risk free rate + liquidity premium

Approach currently being discussed internationally:

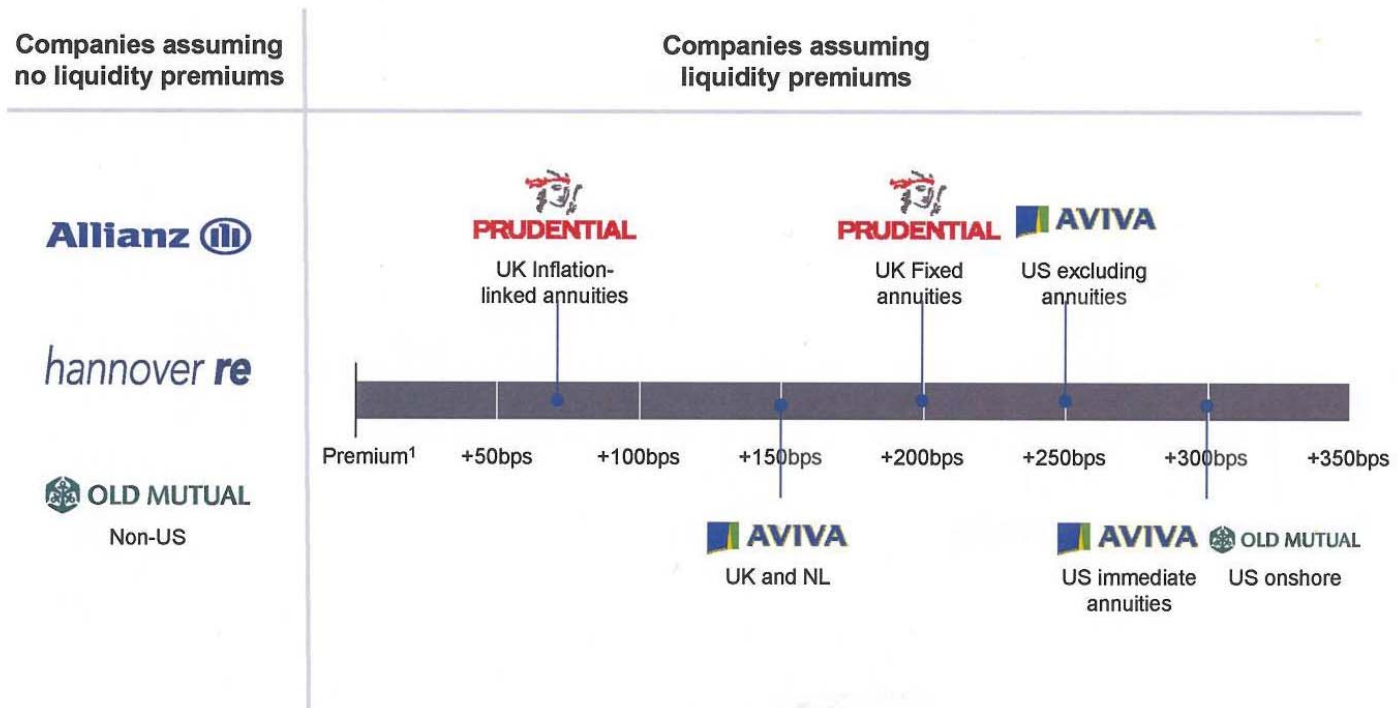
**Risk Free Rate
+ Liquidity Premium**

= 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

Liquidity premium not comparable

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



1. Calibrated over Swap



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.



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.*



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.





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)



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)



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




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



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:<ul 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



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.



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

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)

Q&A – Asset Earned Rate

Asset Earned Rate:

Benefit	Response
Consistent with how liabilities are measured in block transactions and therefore representative of “fair value”	<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.
Consistent with the business model	<ul style="list-style-type: none">• 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