



## The Canadian Experience with Principle Based Valuation and Fair Values

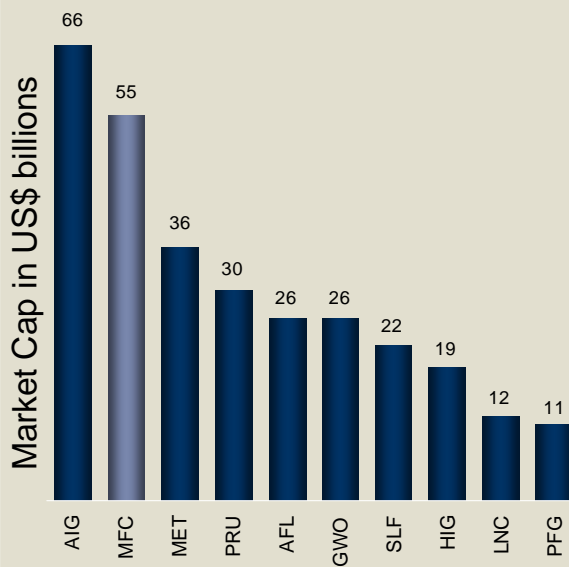
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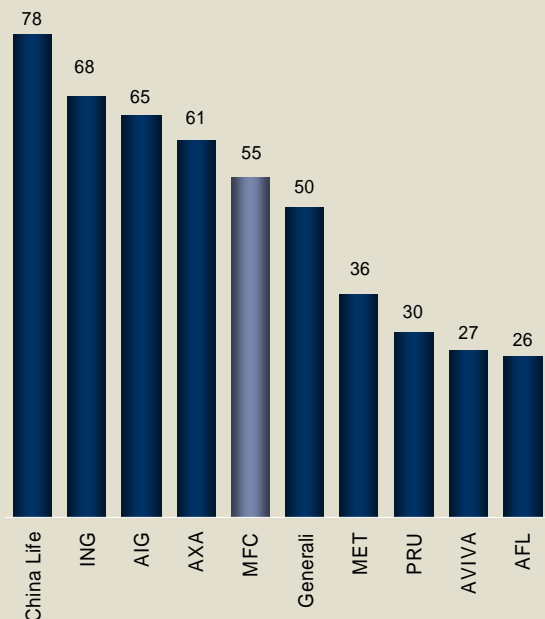


## Significant Scale

N. American Life Insurers



Global Life Insurers





# Manulife Financial – Operating in over 19 different Countries and Territories Globally

## Canada

- Individual Insurance
- Individual Wealth Management
- Group Benefits
- Group Pensions

## United States

- Insurance
- Long Term Care
- Annuities
- Group Pensions
- Mutual Funds
- Fixed Products

## Investments

United States, Canada, United Kingdom, Japan, Australia, Hong Kong, Southeast Asia

## Asia

Hong Kong, Philippines, Singapore, Indonesia, Vietnam, Malaysia, Thailand, Taiwan, China

- Individual Life Insurance
- Group Life & Health Insurance
- Variable Annuities
- Pension Products
- Mutual Funds

## Japan

- Individual Insurance
- Variable Annuities

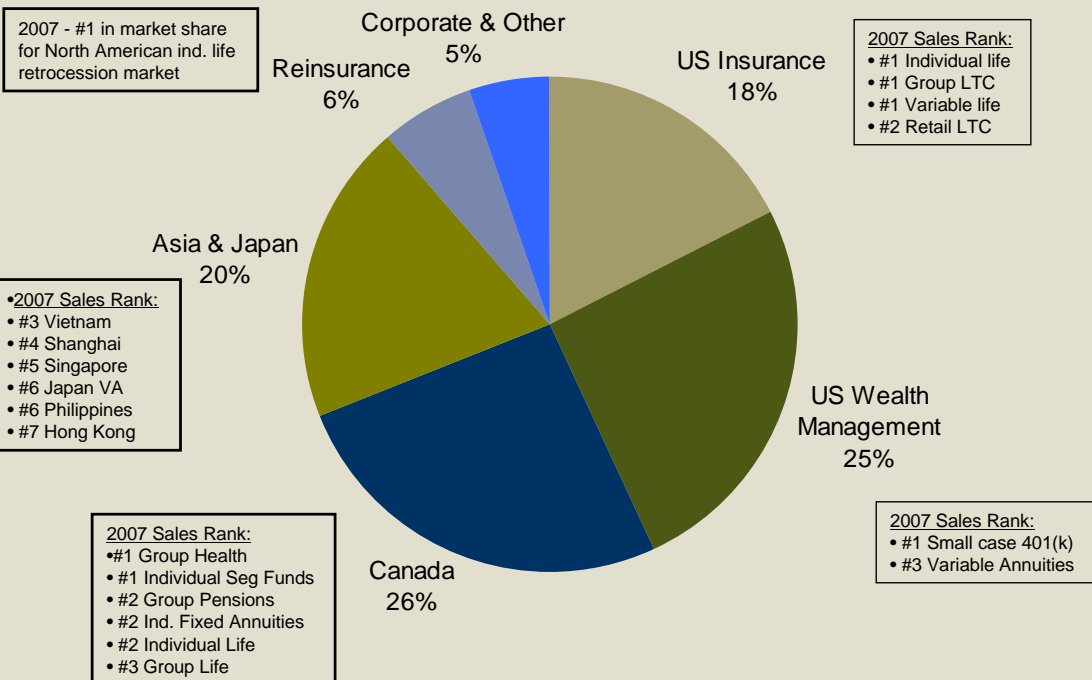
## Reinsurance

United States  
Canada  
Europe  
Asia

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# Manulife Financial - Diverse Earnings Base



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Based on 2007 shareholders' earnings in C\$.





# Canadian GAAP

Canadian GAAP today applies many of the principles that are likely to emerge in IFRS

- Assets are largely valued on fair value basis on balance sheet
- Policy liabilities are valued on three building blocks
  - ❖ Best estimate assumption
  - ❖ Explicit margins
  - ❖ Time value of money based on current market yields
- All assumptions for policy liability valuation unlock and are updated on ongoing basis



# Canadian GAAP

All financial instruments (assets and liabilities) must be classified into one of the following based on intention, not type of

Category	Accounting Treatment
Held for Trading	Fair value: gains/losses included in income Cannot reclassify a financial instrument into or out of this category while held
Available for Sale (AFS)	Fair value: unrealized gains/losses included in Other Comprehensive Income (OCI)
Held to Maturity (HTM)	Amortized cost

- Loans and receivables – Amortized cost however subject to fair value option
- Real Estate – move to fair value at 3% per quarter
- Fair Value Option (FVO) – Allows an entity to designate any financial instrument as “trading” at inception
- Derivatives – Fair Value: Gains/losses included in income unless part of hedge relationship
- Insurance contracts excluded and valued under CALM method prescribed by Canadian Institute of Actuaries



## Canadian GAAP

### In Practice:

- Held to maturity designation is not used because of portfolio tainting rules
- Held for trading designation is used for assets supporting liabilities to avoid accounting mismatch as liabilities must be based on balance sheet value of assets
- Available for sale designation is used for assets supporting surplus to avoid undue income volatility (unrealized gains/losses not in income)

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## Canadian Insurance Contract Valuation

- Basic method is CALM

### CANADIAN ASSET LIABILITY METHOD

THE POLICY LIABILITY IS THE STATEMENT VALUE OF ASSETS WHOSE CASHFLOWS ARE JUST SUFFICIENT TO SETTLE THE LIABILITY CASHFLOWS

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## How does CALM work?

To apply the method:

- 1) Start with projected liability cashflows on expected assumptions
- 2) Add conservatism to liability cashflows by adding a margin directly to best estimate assumption
  - ❖ Margin is generally 5-20% of expected assumption
- 3) Project existing asset cashflows and re-investment of net cashflows using re-investment strategy
- 4) A number of reinvestment strategy scenarios are tested and "worst" scenario is identified
- 5) Add/subtract assets until assets are just sufficient to extinguish liability cashflows
- 6) Policy liability is statement value of these assets in 5)

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## Expected Valuation Assumptions

- Actuary uses judgment under professional standards to establish best estimate assumptions
- Best estimate assumptions are reviewed each period and "unlocked" as necessary to keep them consistent with current experience
- This approach is used for all key assumptions impacting liability and asset cashflows
  - ❖ Mortality/morbidity
  - ❖ Lapses/withdrawals
  - ❖ Premium persistency
  - ❖ Expenses
  - ❖ Asset re-investment strategies
  - ❖ Asset credit loss assumptions
  - ❖ Asset non-fixed income returns

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## Margins for Adverse Deviation

- Margins for adverse deviation applied to each assumption by one of two methods
  - ❖ Direct increase/decrease in level of expected assumption (typically range of 5% to 20%)
  - ❖ Scenario testing the assumption (typically used only for re-investment assumptions)
- Professional guidance establishes range of margins with general guidance on when to use a high/medium/low margin

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## Re-investment Scenario Testing

- Re-investment strategies for assets reflect company re-investment strategies
- 9 CIA-prescribed scenarios + Internally defined scenarios
  - ❖ Scenarios relate to the 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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# Re-investment Strategy Testing Implications

- CGAAP valuation fully reflects returns on actual assets supporting reserves at each valuation date
  - ❖ Asset trading impacts reserves
- CGAAP valuation reflects interest rate and ALM mismatch
  - ❖ Impact of interest rate movements and changes in non-fixed income fair values fully reflected
- CGAAP valuation reflects asset default risk
  - ❖ Impact of changes in credit quality fully reflected in reserves
- The use of insurer specific re-investment/dis-investment strategies introduces significant judgment into the valuation

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# Profit Emergence

- For new business there can be gain/loss at issue
  - ❖ If value of margins greater than expected profit margins, loss at issue reflected
  - ❖ If value of margins less than expected profit margins, gain at issue reflected
  - ❖ In practice, insurers using Canadian GAAP generally show break-even or small loss at issue (significant profit is not upfronted)
- For in-force business
  - ❖ Expected profit released over time as released from risk (PfAD release)
  - ❖ Experience gains/losses for actual experience different from expected
  - ❖ Gain/loss from capitalizing changes in assumptions

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## Observations on Canadian Experience

Use of current best estimate assumptions with continuous unlocking and detailed incorporation of asset/liability mismatch has several positive impacts

- 1) Improves insurer risk management by closely linking current pricing, current financial reporting and current experience
- 2) Reduces solvency risks, as “holes” are not allowed to emerge on the balance sheet
- 3) Creates a detailed focus on management of ALM risk
- 4) Results in earnings that are directly reconcilable to embedded value/value creation in the period

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## Observations on Canadian Experience (cont'd)

But there are challenges

- 1) Volatility in income statement/balance sheet can be significant because of unlocking and capitalization
- 2) Significant supplementary disclosure can be needed to “explain” earnings and changes in financial position to external audiences
- 3) Principle based approach with judgment requires strong actuarial professionals with strong supporting governance infra-structure
- 4) The Canadian approach of linking policy liability valuation to actual asset portfolios and reinvestment strategies makes financial reporting extremely sensitive to day to day investment management decisions
- 5) Use of insurer specific re-investment strategies introduces significant company specific aspects to the valuation

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## Canadian GAAP vs. IASB Proposals

- Canadian valuation model for life insurance policy liabilities is a “principles based” and is considered by many to be most similar to emerging IFRS phase 2 model
- Framework has worked well in practice in Canada
- While there are many similarities, there are also key differences, most important of which is recognition of asset/liability interdependence in Canadian valuation model, versus independent valuation of assets/liabilities under IFRS proposals

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## Canadian GAAP vs. IASB Proposals

### Key Similarities

- Principles based framework
- Three Building Block Approach
  - ❖ Best estimate cashflows
  - ❖ Margin for risk
  - ❖ Discounting for time value of money
- Continuously unlocking assumptions
- Gains/Loss at issue permitted [IFRS direction unclear]

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# Canadian GAAP vs. IASB Proposals

## Key Differences

- Treatment of asset/liability interdependence (mismatch risk)
- Discount rate used in valuation
- Exit value versus settlement value
- Exclusion of "commercial" cashflows in IASB model
- Inclusion of own credit standing in IASB model
- Margin framework
- Application to insurance contracts versus all policy related liabilities

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# Comparison of CGAAP (CALM) vs. IFRS - Framework

	<b>CGAAP</b>	<b>IFRS</b>
Principles based (i.e. not rules based)	√	√
Prospective cashflow valuation	√	√
Based on best estimate cashflows plus explicit margins for all key variables	√ <small>(value settlement perspective percentile margins)</small>	√ <small>(exit value perspective cost of capital margins)</small>
Best estimate cashflows and margins unlock and are kept current with changes capitalized in current income	√	√
Gain/Loss permitted at contract inception	√	√
Acquisition costs expensed with reserve offset to extend recoverable over valuation term	√	√
No cash value floors	√	√
Use of full "commercial" cash flows in valuation	√	X <small>(limits on discretionary premium)</small>

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# Comparison of CGAAP (CALM) vs. IFRS - Framework (cont'd)

	CGAAP	IFRS
Cost of options/guarantees reflected	√	√ (more rigorous)
Valuation reflects par dividends and contract adjustment features	√	√ (but potentially significant restrictions)
Discount rates based on economics underlying contract	√ (asset earned rate)	X (risk free)
Liabilities include asset/liability mismatch risk	√	X
Standard applies to all policy liabilities of insurance company	√	X (insurance contracts only)
Own credit standing adjustment to liabilities	X	√

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(limits on discretionary premium)



# Is IFRS A Step Forward or Backwards?

Limitations on recognition of "discretionary" future premiums under IFRS

Limitations on recognition of "pass through" or adjustability features under IFRS

Use of risk free discount rates with no direct consideration of asset/liability match

- Clear step backwards as valuation diverges from commercial reality (both settlement and exit value perspective)
- Clear step backwards as valuation diverges from commercial reality (both settlement and exit value perspective)
- Considered more "market consistent" by advocates and clearly less subjective but:
  - ✓ brings liquidation perspective – market liquidity volatility into financial statements for non-liquid liabilities
  - ✓ no observable risk neutral parameters in many instances
  - ✓ ALM and assets supporting liabilities are key driver of liability profitability and hence key drive of price in true exit/settlement calculation
- Overall Canadian actuaries would consider current proposed framework a step backwards

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## Is IFRS A Step Forward or Backwards?

Margin framework different under IFRS (cost of capital)

- Generates more theoretical discussion than true practical concern, both with respect to profit emergence and gain/loss at issue

Own credit standing reflected in IFRS valuation

- A step backwards

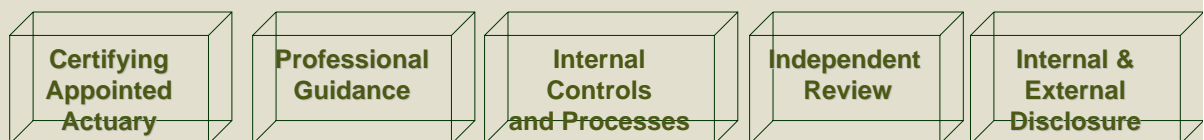
**CURRENT PHASE II PROPOSALS ARE CONSIDERED A STEP BACKWARDS IN A NUMBER OF AREAS**

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## Governance of Principal Based Valuation Has Five Pillars

- Policy liabilities are subject to extensive oversight, including areas where discretion is exercised



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# Pillar 1 – Certifying Appointed Actuary

- Company must have Appointed Actuary who oversees the actuarial valuation of policy liabilities
- Appointed Actuary must be approved by regulator (OSFI)
- Appointed Actuary must provide signed written opinion in GAAP and regulatory statements that
  - ❖ Valuation complies with accepted actuarial practice
  - ❖ Valuation makes appropriate provision for policyholder obligations
  - ❖ Financial statements fairly present results of the valuation
- In practice Appointed Actuaries are the gatekeepers of application of judgment and updating of assumptions

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# Pillar 2 – Professional Guidance

## Professional Structure (CIA)

Independent Actuarial Standards Board sets standards

CIA has Practice Council that issues supplementary guidance

Professional Discipline Process in place

Continuing Education requirements

## Professional Standards

Outline valuation method to be followed (CALM)

Outline assumptions to be covered and how assumptions to be developed

Outline appropriate ranges for margins for adverse deviation

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## Pillar 3 – Internal Controls and Processes

- Chief Actuary office oversees global valuation, including valuation policies (approximately 25 professional staff)
- Valuation performed in businesses, overseen by designated valuation actuaries
- Internal policy database supplements professional guidance
- All valuation processes have documented and tested control infrastructure (equivalent to US Sarbanes-Oxley)

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## Pillar 4 - Independent Review of CGAAP Actuarial Liabilities

Internal Audit	Canadian Regulator (OSFI)	Independent Review (OSFI Mandated)	External Auditors
<ul style="list-style-type: none"> <li>• Reviews Business Units with onsite audits on 3-5 year cycle</li> <li>• Significant completeness and accuracy testing</li> </ul>	<ul style="list-style-type: none"> <li>• Reviews all regulatory/GAAP filings</li> <li>• Periodic onsite audits of Business units</li> <li>• Specific filing requirements including detailed Appointed Actuary Report (2000 pages)</li> </ul>	<ul style="list-style-type: none"> <li>• Reviews all actuarial work requiring Appointed Actuary certification including valuation on 3 year cycle</li> <li>• Provides more feedback on company practices versus peer and external best practices</li> </ul>	<ul style="list-style-type: none"> <li>• Use own actuarial specialists to corroborate Appointed Actuary valuation work each year</li> <li>• Provide independent opinion</li> <li>• Extensive validation of models and data, including supporting experience studies</li> </ul>

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## Pillar 5 – Disclosure

- Quarterly Source of Earnings by geographic territory – Key disclosure
  - ❖ Traditional Income Statement presentation is not useful to users
  
- Disclosure in financial statement notes or MD&A of
  - ❖ Changes in methods and assumptions
  - ❖ Valuation sensitivity to changes in assumptions
  - ❖ Level of actual versus expected experience
  - ❖ Level and composition of provisions foreclose deviation

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## Canadian Source of Earnings Disclosure

Components of the Source Of Earnings	Explanation of Component
Expected Earnings on In-force	Risk margin release
Strain on New Business	Gain/Loss on new policy issuance
Experience Gains/Losses	Actual – Expected experience on Policyholder liabilities
Management Actions and Changes in Assumptions	Capitalized impact of changes in actuarial assumptions
Earnings on Surplus	Interest and other income on surplus assets
Income Taxes	Tax effect of above items
Net Income attributable to Shareholders	

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# Source of Earnings

## Consolidated Source of Earnings – Manulife Financial Example (C\$ millions)

For the Year Ended December	2007	2006	2005
Expected Profit from In-force Business	3,249	3,070	2,806
Impact of New Business	(286)	(218)	(303)
Experience Gains	1,359	1,434	650
Management Actions & Changes in Assumptions	119	42	(49)
Earnings on Surplus Funds	1,250	1,013	1,133
Other	(12)	10	88
<b>Income before Income Taxes</b>	<b>5,679</b>	<b>5,351</b>	<b>4,325</b>
Income Taxes	(1,377)	(1,366)	(1,031)
<b>New Income attributed to Shareholders</b>	<b>4,302</b>	<b>3,985</b>	<b>3,294</b>



# Questions and Answers