Market Based Discount Rates

Implications on Funding Levels

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WCB Discount Rates

- Canadian WCB's currently use an expected (nominal) rate of return based discount rate that changes infrequently.
- With inflation escalated liabilities, the real (after inflation) discount rate is most relevant.
- As at Dec 31, 2012 the Canadian WCB long term real discount rates range from 3.0% to 4.0%.
- A market based discount rate would change for every valuation period. Likely based on observable real or nominal yields to maturity on publicly traded bonds at that point in time.

Implications of Market Based Discount Rates

1. At adoption, the market discount rate **WILL BE** different than the incumbent rate and the difference could have a material impact on the reported value of liabilities.
2. After adoption, the value of liabilities **WILL BE** more volatile.
3. After adoption, the funded ratio **MIGHT BE** more volatile.

Market Rate: 'Shock'?

	Current Approach (3.0% Real Discount Rate)	Current Market Rate (1.3% Real Discount Rate)
Assets	9.4 bln	9.4 bln
Liabilities	6.3 bln	7.7 bln
Funded Ratio	149%	122%

- $1.4 bln, or 22%, increase in Actuarial Liabilities
- 27% decrease in the Funded Ratio
- Using current real market rates

Market Rates Could Be Higher Than Today

Real Rates	1.3%	2.3%	3.3%	4.3%
Assets*	9.4 bln	9.0 bln	8.7 bln	8.5 bln
Liabilities*	7.7 bln	6.7 bln	5.9 bln	5.3 bln
Funded Ratio	122%	134%	147%	160%

- If market rates move higher, there is an impact on assets and liabilities, but liabilities may be much more sensitive to changes in interest rates than assets (with a diversified asset portfolio).
- Asset and liability market values move in the same direction as a result of interest rate changes.

*asset and liability values generated by WCB Alberta Barra1 risk system

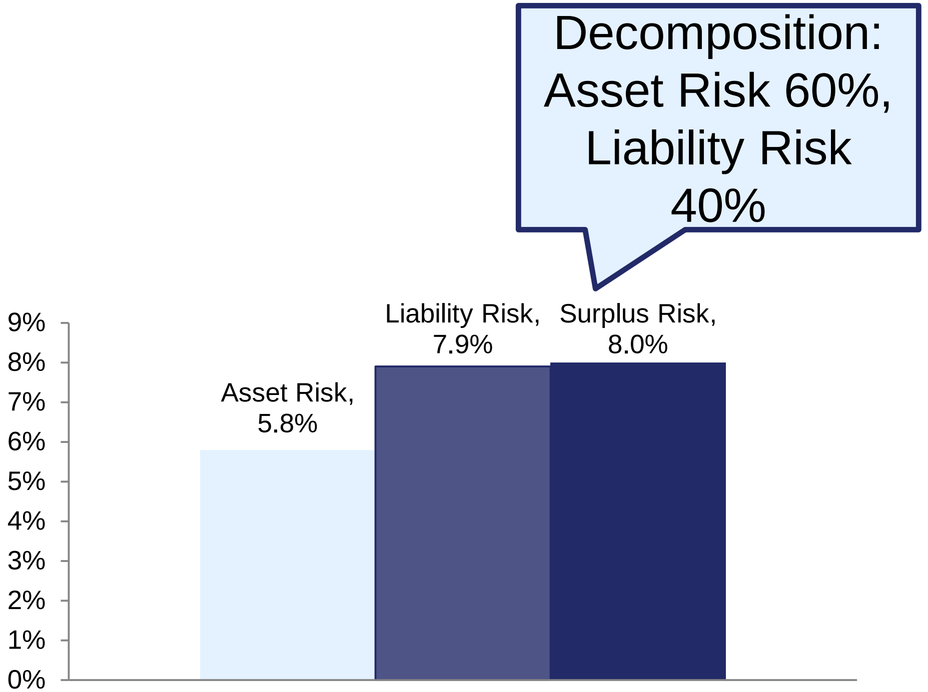
Liability Risk* ≠ Surplus Risk!

Stable Discount Rate

- Asset Risk is 5.8%
- Liability Risk is 0%**
- Surplus Risk is 5.8%

Market Discount Rate

- Asset Risk is 5.8%
- Liability Risk is 7.9%
- Surplus Risk is 8.0%



The translation of liability risk to surplus risk depends on the amount of real rate exposure in the asset portfolio

*risk measures as 1 standard deviation **Liability risk from market based discount rate only

Conclusions

- Impact on liability value at the time of changeover to a market based discount rate could be significant
- Liability volatility will be higher with market based rates
- Surplus/Funded Ratio volatility may be higher…… but it depends on the level of real rate exposure in the investment portfolio (matching liabilities)
- Other considerations: potential impact on premium rate setting