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Workshop 3

DB Plans – Managing a Risky Business

Speakers:

Derek Dobson, *CAAT Pension Plan*

Louis Beaulieu, *Desjardins*

Moderator:

Rosalind Gilbert, *Aon*

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Workshop 3

DB Plans –Managing a Risky Business

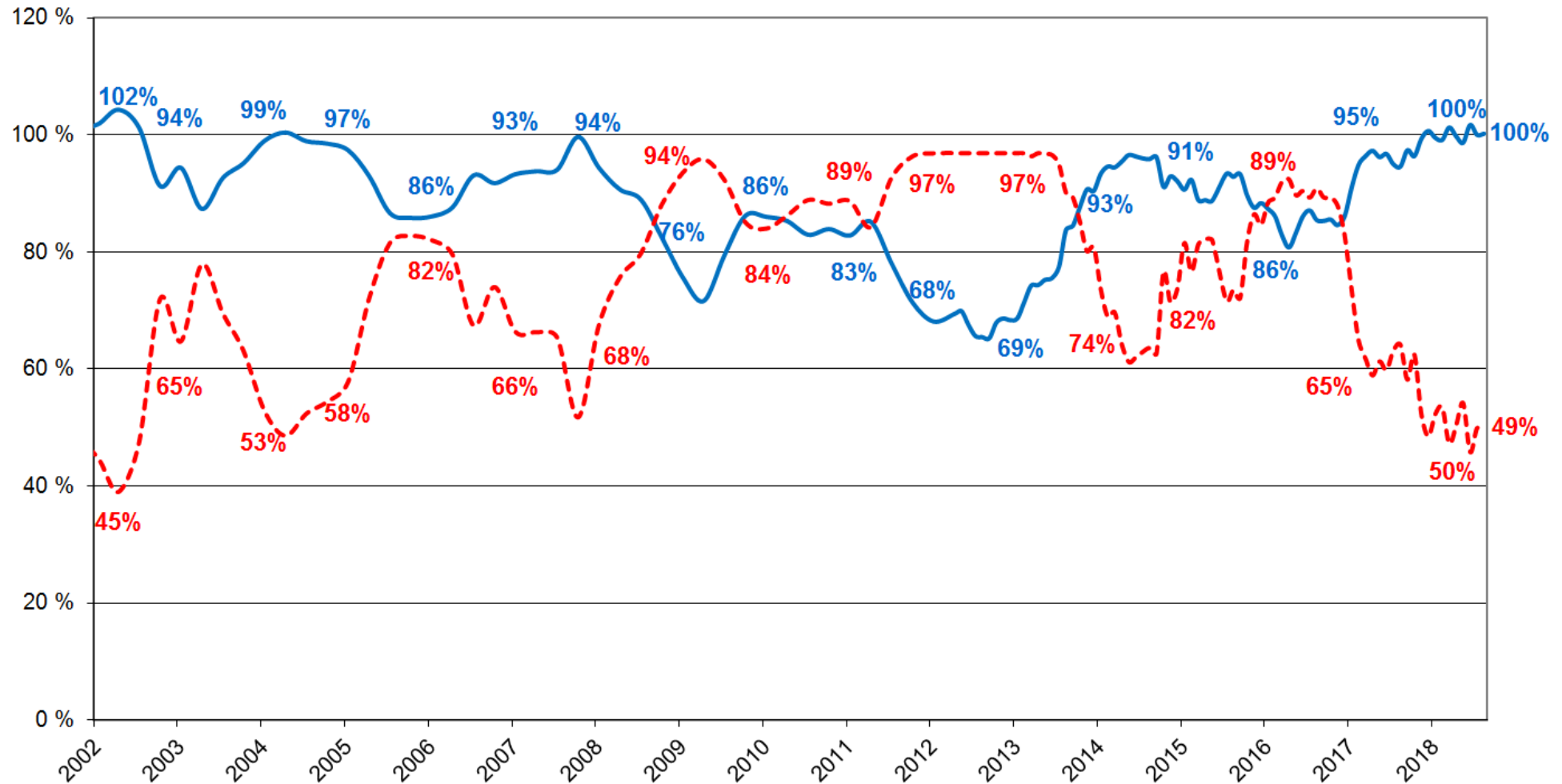
Rosalind Gilbert
Moderator

September 12, 2018

Introduction

- Regardless of the industry, sector, or size, DB plans experience similar risks. However, differences in plan design, member profile, and applicable funding rules mean sponsors manage risks in different ways.
- This workshop will look at two case studies of successful risk management strategies for two different types of DB plans.

Median DB Plan Solvency Index



Source: Aon

Where are we headed?



- Is this the new normal?
 - Aging population, slow growth
 - Persistent weak investment returns
 - Low interest rates
 - Further mortality improvements
- ... and new funding rules!

DB Plans – Managing a Risky Business

Louis Beaulieu

Director Risk management and asset mix

Desjardins Group Pension Plan

Desjardins Group

Leading financial cooperative in Canada

- Total assets of \$282 billion as of March 2018
- Ranked 4th Safest Bank in North America according to Global Finance
- \$320 million returned to members and the community
- A strong and global commitment to the climate challenge

Regulated (AMF)

- Minimum capital ratio to maintain

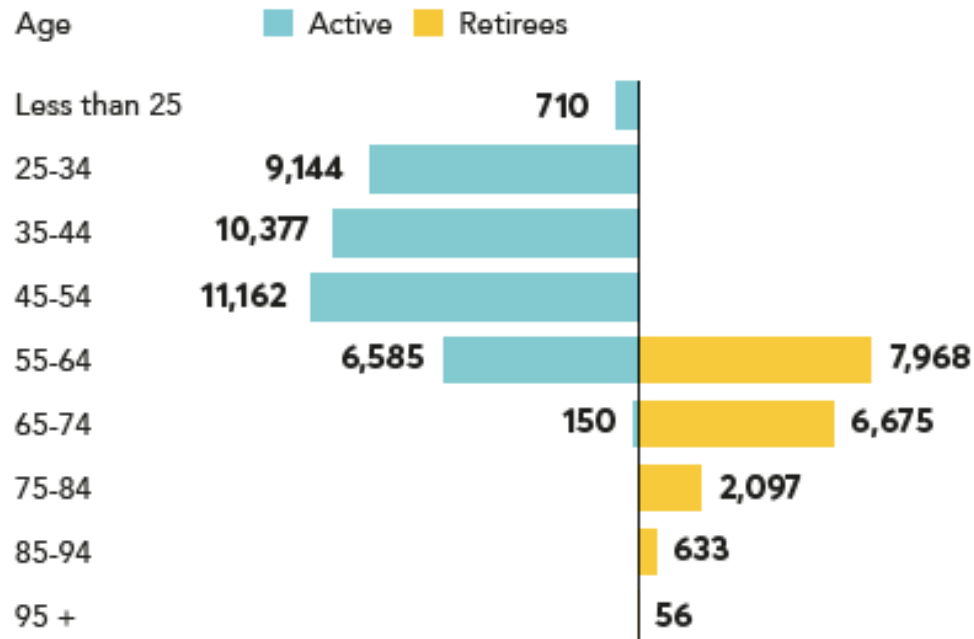
Cooperative

- Issuance of share capital is not an option
- Capital consist mainly of reserves

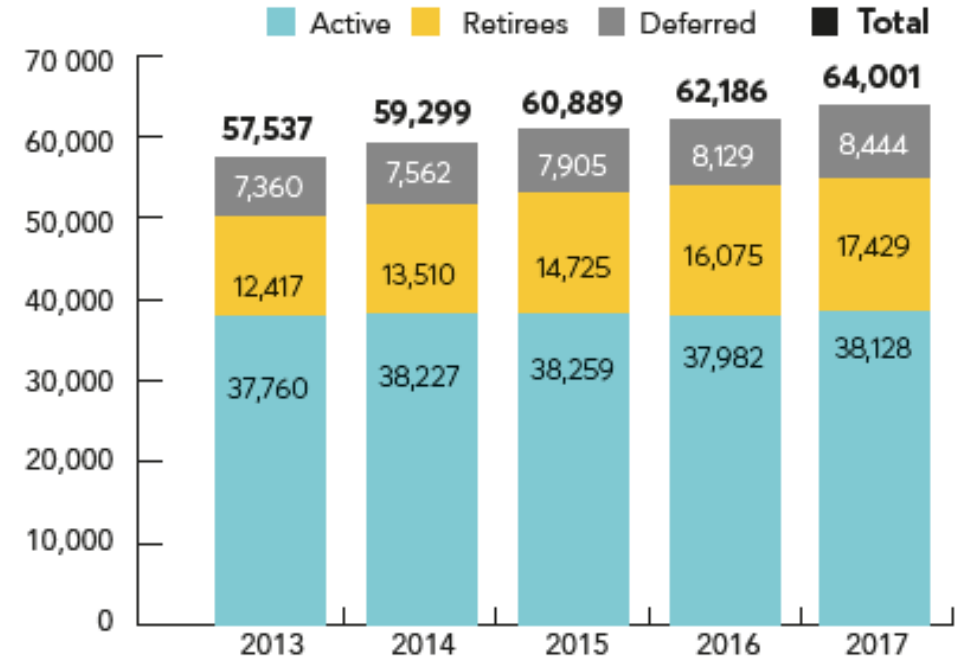
Desjardins Group Pension Plan

- Multi-employer
- Since 1979

Demographic profile

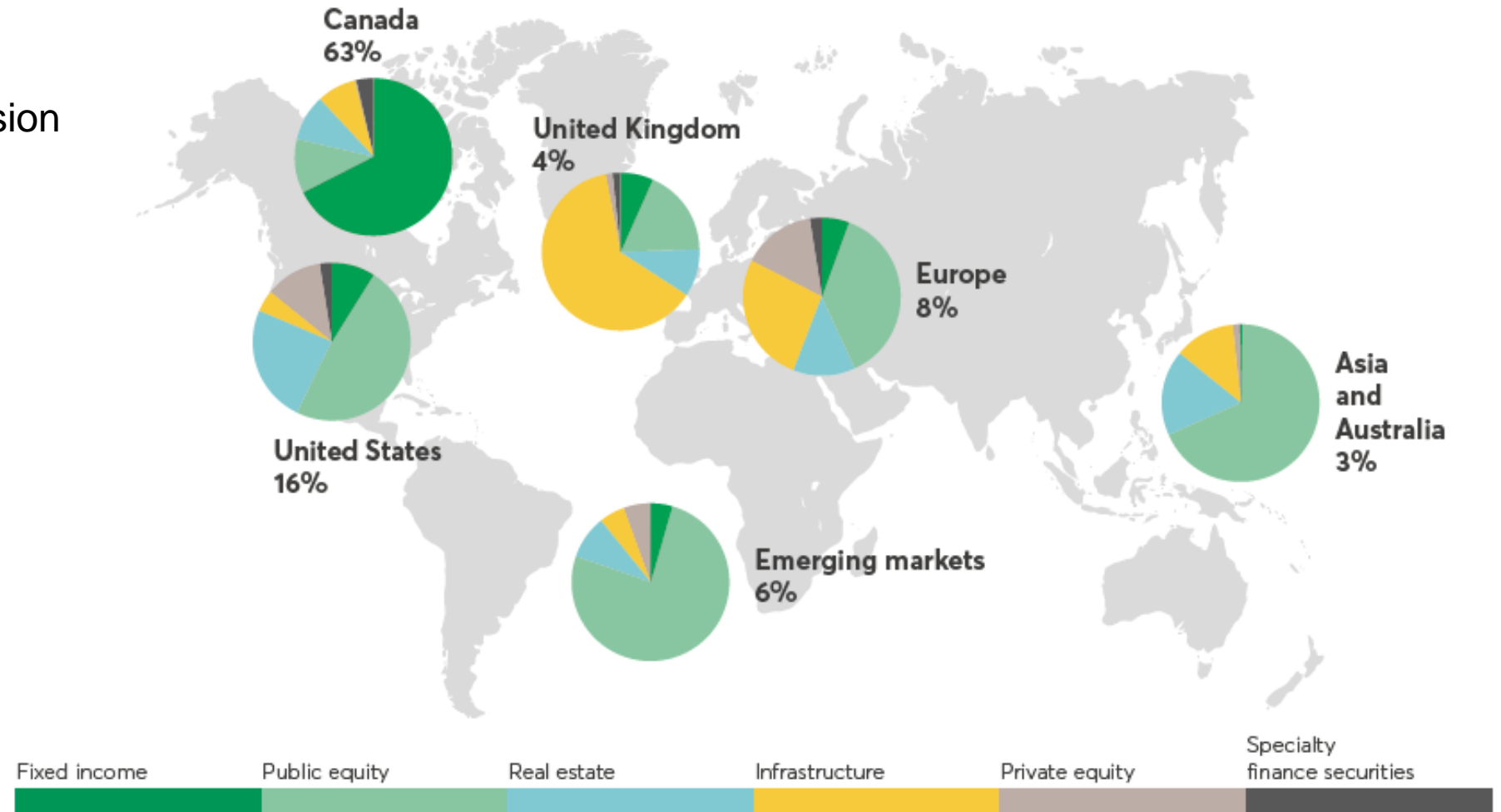


Demographic trend



Desjardins Group Pension Plan

- Assets > \$13B
- 7th private pension plan in Canada
- 12.7 % in 2017



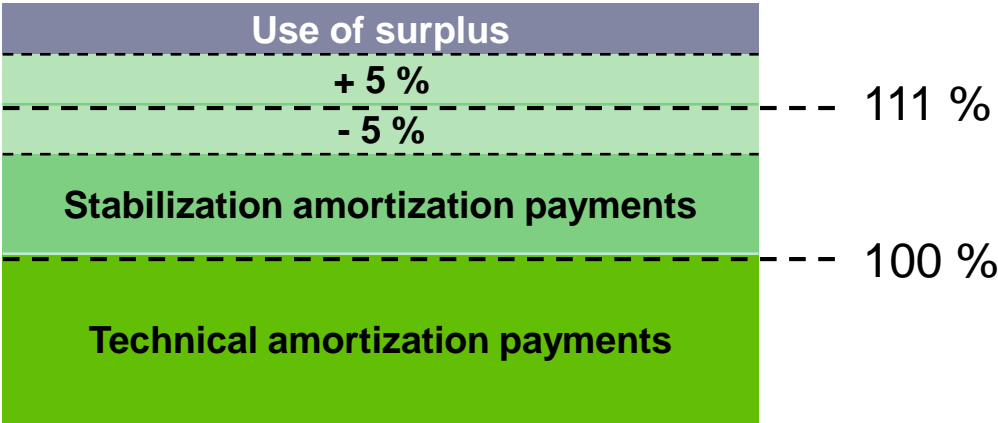
Constraints

Provincial Law : *Retraite Québec*

Accounting

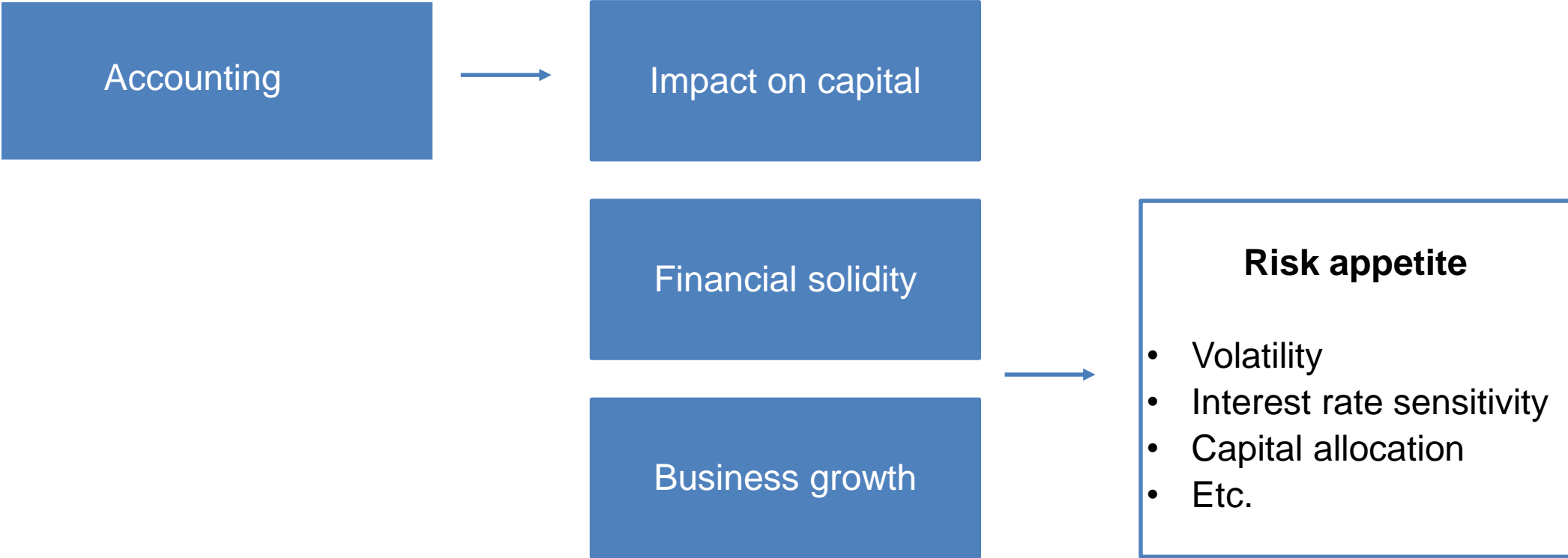
On-going

Solvency



Constraints

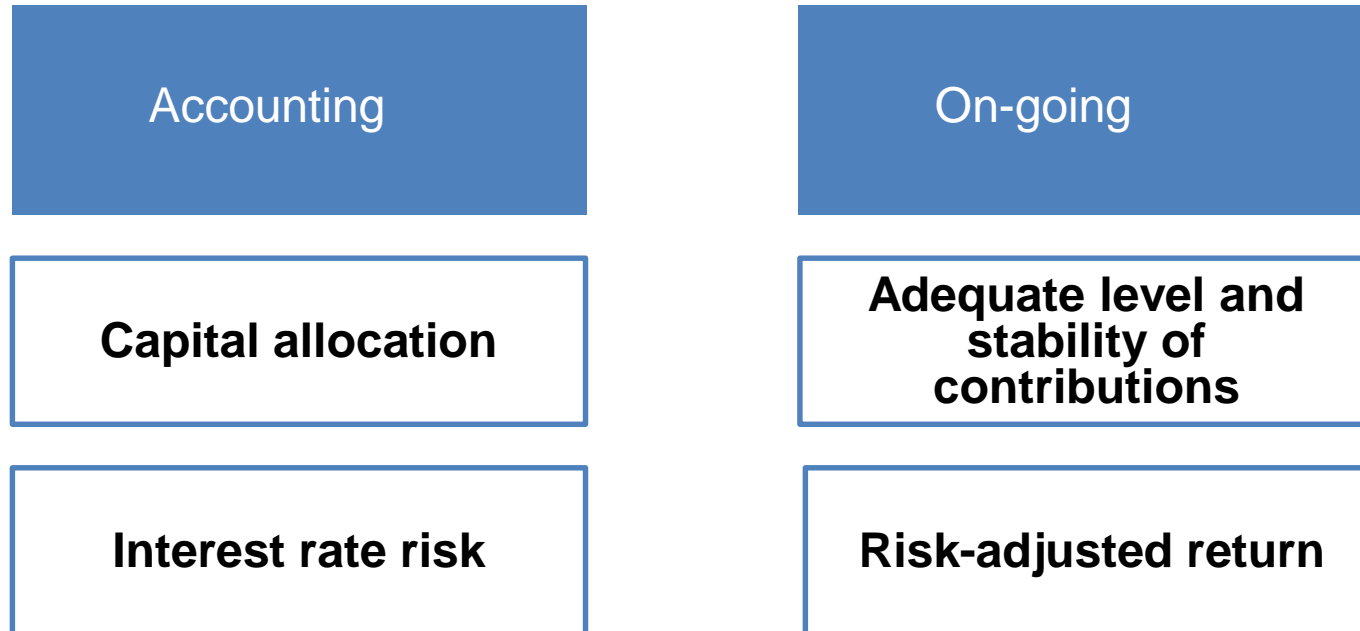
Capital management is paramount



Constraints

Desjardins general risk appetite statement for defined benefit plans

Provide our employees with annuity plans that provide financial security while limiting their impact on the capital ratio and limiting the level and volatility of contributions.



Strategy

How can the sponsor's tolerance for short-term risks be respected without reducing the long term expected return?

- A liability-hedging portfolio that replicates the liability as best as possible
- Interaction between liability-hedging portfolio and performance-seeking portfolio

Liability-hedging
portfolio

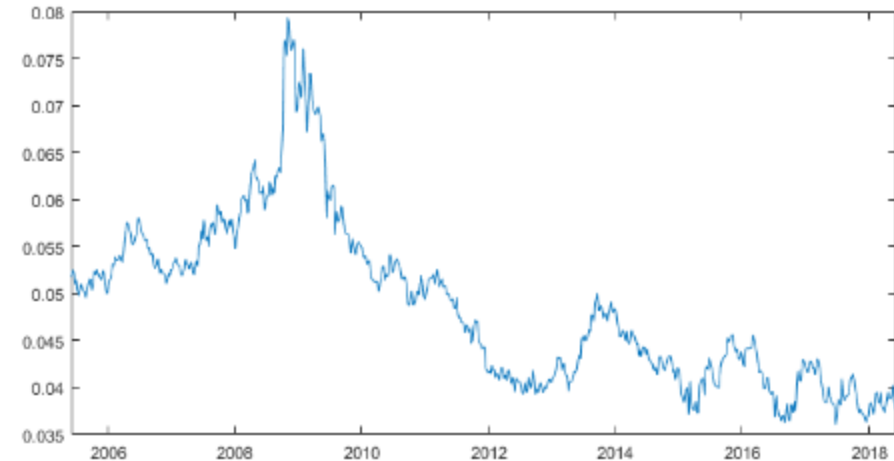
Performance-
seeking portfolio

- Dynamic management between liability-hedging and performance-seeking

Effective liability-hedging

Effective liability-hedging allows more exposure to performance-seeking assets for the same level of volatility of the surplus

- Bond index
- Duration matching
- Key rate duration matching
- Corporate bonds
- Basket of bonds used to infer the reference curve



Interaction theorem

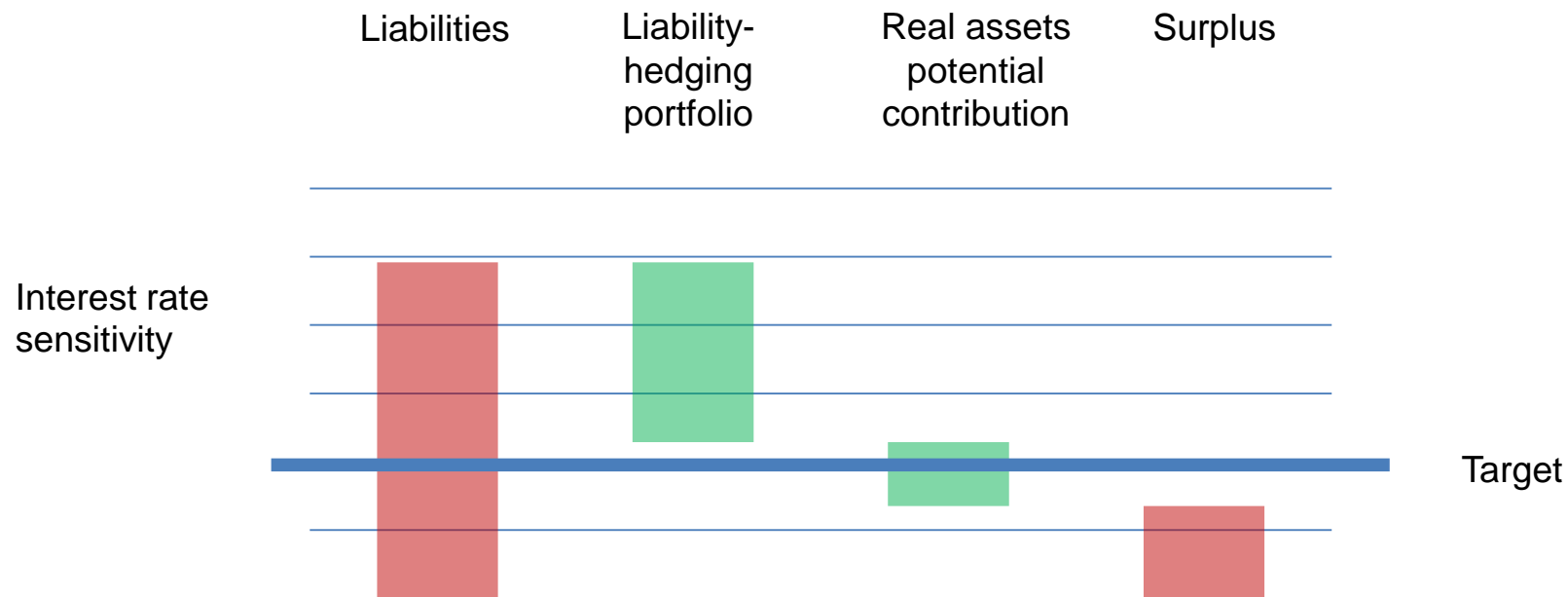
Bond overlay

- Significant liability-hedging improvement without reducing the allocation to the performance-seeking portfolio.
- The return on the total portfolio is enhanced by investing in securities that earn more than the cost of financing.
- Liquidity risk: smoothing contract maturities and insuring proper collateral access and netting needs coverage

Interaction theorem

Real assets are good candidates.

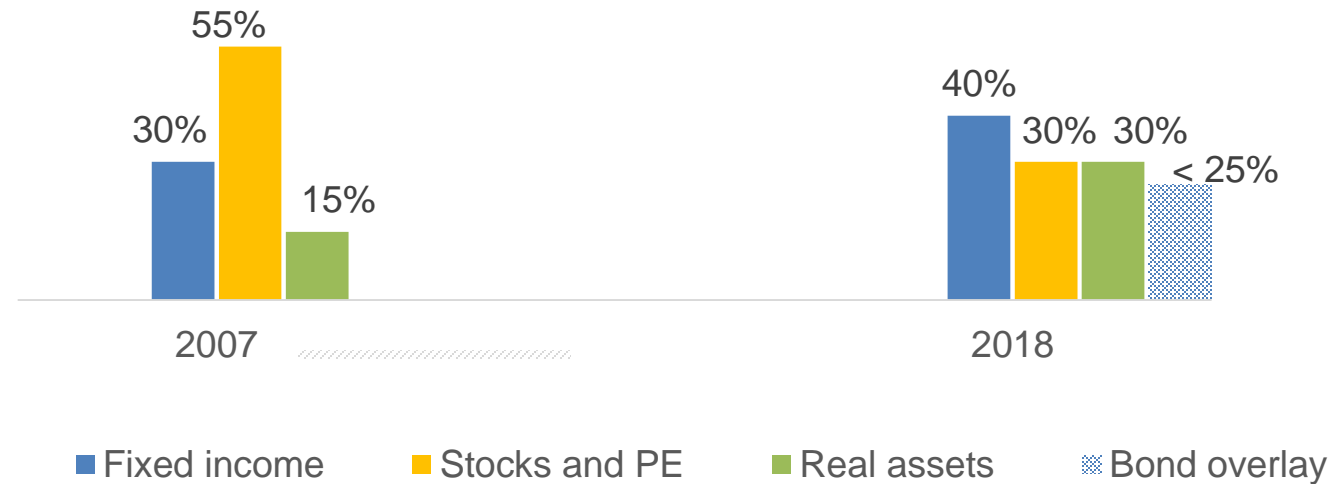
- Good risk-adjusted performance and portfolio diversification.
- Stable, long-term cash flows that can provide some sensitivity to interest rates.



Interaction theorem

De-risking path

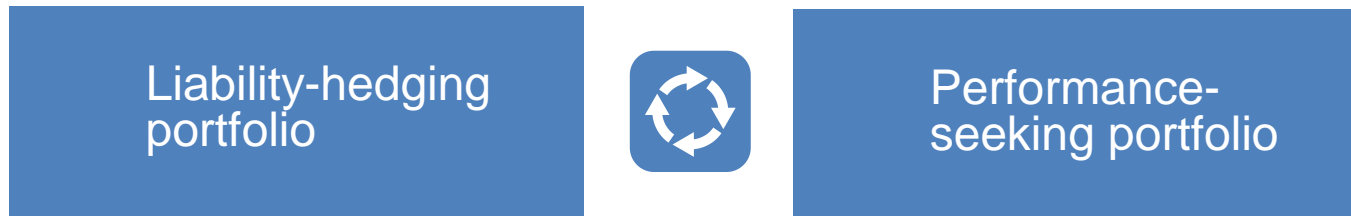
- Accounting surplus stability target exceeded.
- The required expected return is achieved before value-added, with certain margins and with lower volatility.



Dynamic management

Dynamic management between liability-hedging and performance-seeking to respect the target on the preferred risk measure

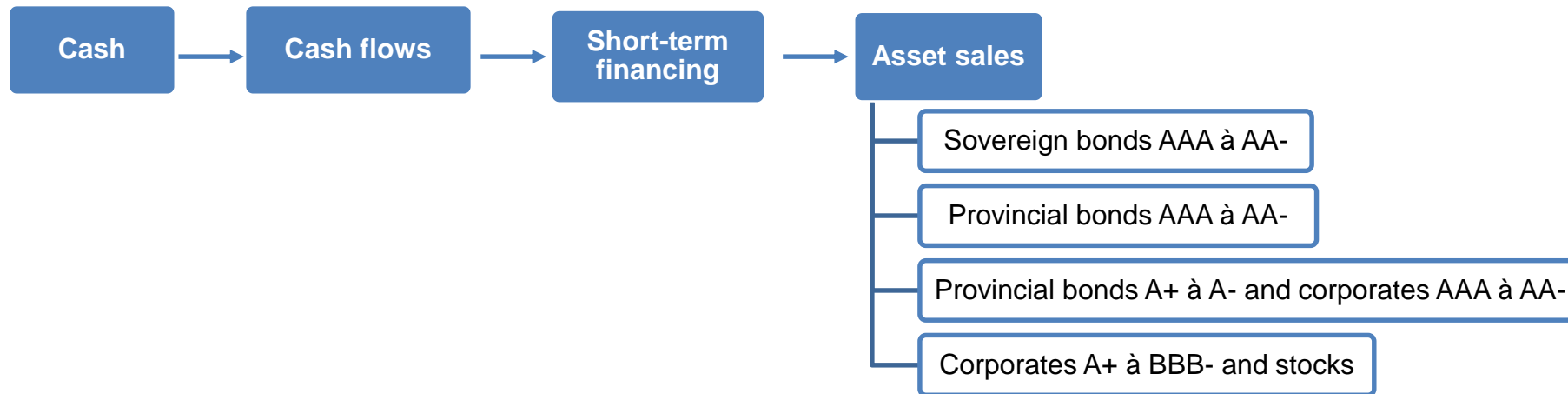
- Depends on financial situation and variables affecting it, demographic profile, risk appetite, etc.



Liquidity risk

Investment solutions that respond well to the interaction theorem can increase liquidity risk

- Currency management and the net flow of the pension fund can exacerbate liquidity risk
- Development of liquidity risk coverage ratio program for stress scenarios



Longevity risk

Reserves emulating the annuity purchase market

- Market scale
 - Equivalent to 150% of the MI-2017 improvement scale
- Contingency margin
 - 3% on liabilities : 75% protection
 - 5% on liabilities : 87.5% protection
- Fees and profits
- But... a reserve, the risk is only mitigated.

Key takeaways

Adequate asset allocation strategy explains a large part of adequate risk management

Effective liability-hedging and the interaction theorem help to reconcile the accounting and on-going valuation that have conflicting objectives.

Investment solutions that respond well to the interaction theorem can significantly increase liquidity risk.

The dynamic management between the two major portfolios makes it possible to rebalance towards the risk targets.

The asset allocation footprint must reach the subclasses and the asset classes must adhere to their role.

DB Plans – Managing a Risky Business

Derek W. Dobson
CEO and Plan Manager
CAAT Pension Plan

A single, bright orange balloon is positioned in the upper right quadrant of the image, floating above a vast field of dark grey balloons. The grey balloons are arranged in a grid-like pattern that recedes into the distance, creating a sense of depth. The background is a smooth, dark blue-grey gradient. The text "Well-run plans do advance thinking" is overlaid in the center of the image in a white, sans-serif font.

Well-run plans do advance thinking

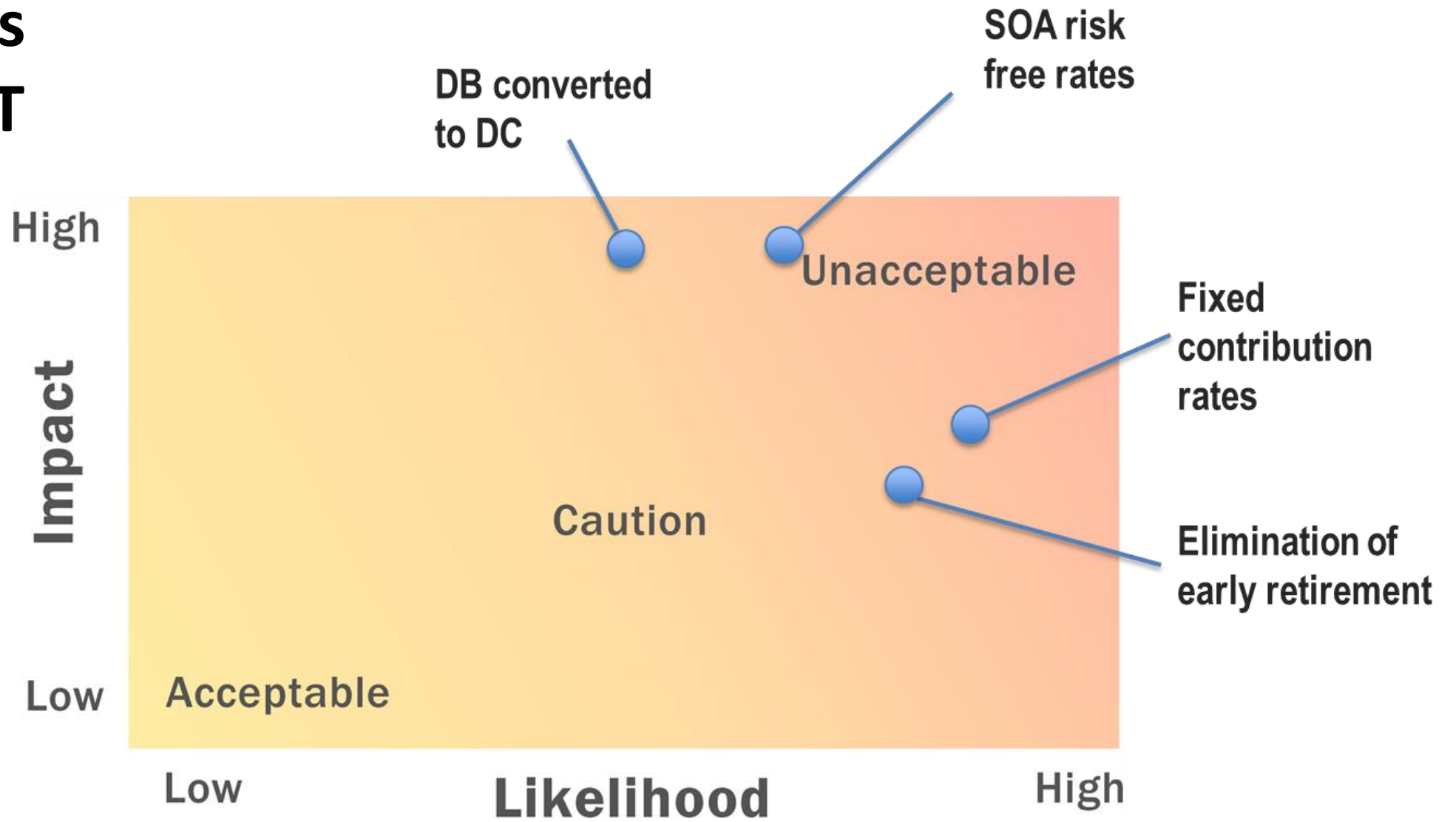
CAAT Plan Funding Policy – prescriptive guidance

	LEVERS OF CONTROL	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6
DBprime	Stability contributions	3% or more	3%	3%	Consider 1% to 3%	Consider 0% to 1%	0% (Consider reducing basic contributions)
Common	Discount rate reserves	Fully used	Marginal	Consider up to 0.5%	Consider up to 1%	1% plus up to 7.5% increase in liabilities	Further build, up to tax limit
	Future benefits	Consider temporary reductions	Consider restoration of any temporary reductions				Consider improving benefits (e.g., ad hoc increases)
	Post-retirement conditional inflation protection (75% of CPI)	None	Applied	Applied plus consider-catch-up	Applied plus reserves	Applied plus reserves	Consider increases above 75% of CPI
DBplus	Pre-retirement benefit increase (100% of AIW)	None	None	Applied	Applied plus consider catch-up	Applied	Applied
	Lifetime annual pension factor (PF)	Consider reduction below 8.5%	8.5% plus consider catch-up	8.5%	8.5%	Consider 8.5% to 9.5%	9.5% (Consider an increase beyond 9.5%)
	Early retirement factor (ERF) (from age 65)	5% or higher	5%	5%	Consider 3%, 4% or 5% (currently 3%)	3%	3%

What keeps you up at night?



Key risks for CAAT Plan



Strategic Risk Management

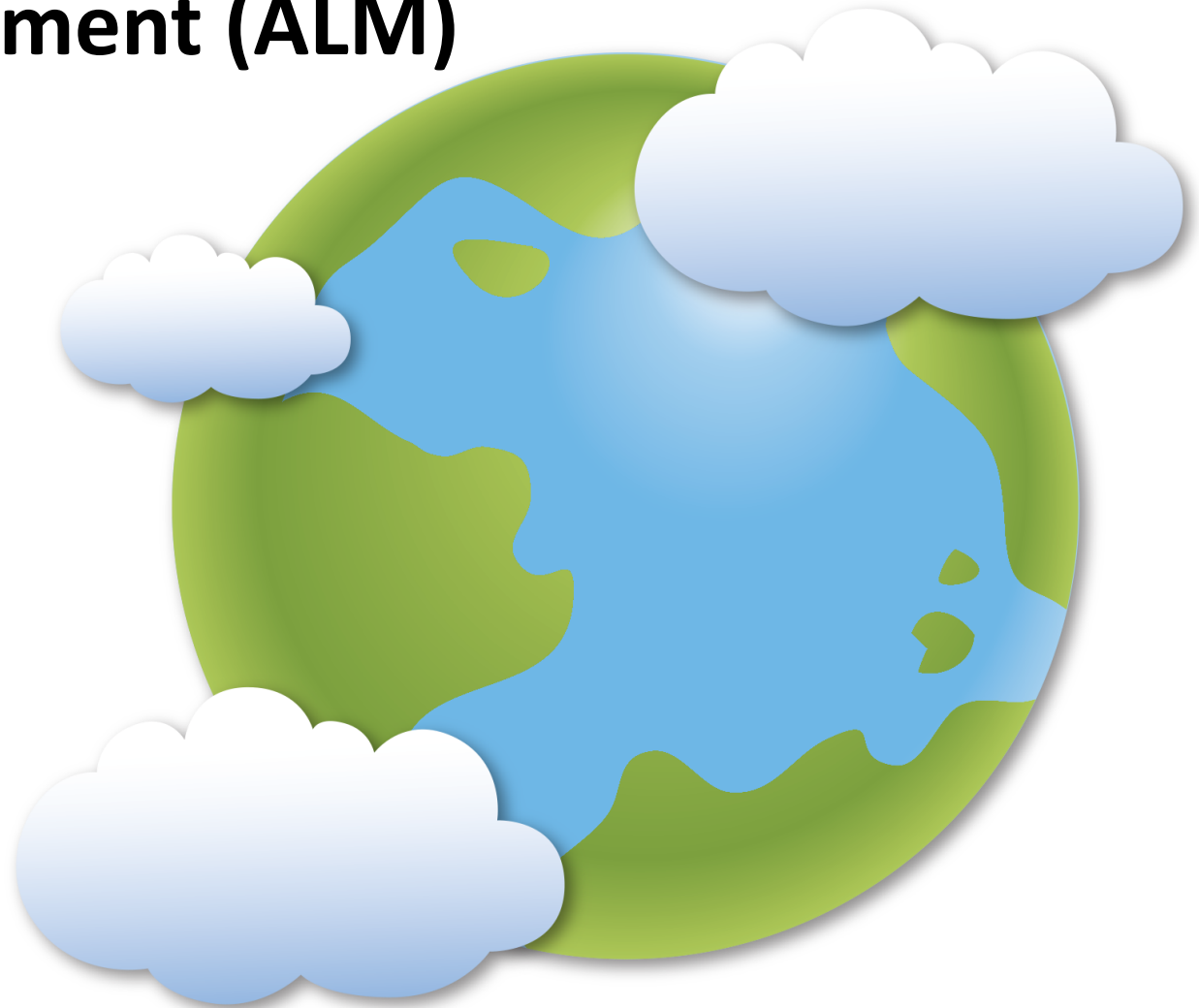
- Funded status
- Advocating on behalf of the Plan
- Managing Plan Maturity Risk and other strategic risks
- Protecting the Plan from key operational risks
- Improving the value proposition of the Plan to its stakeholders
 - Timely and quality service to members and employers
 - Effective communications
 - Ensuring members understand their benefits

Plan's Risk Appetite Statement



Asset Liability Management (ALM)

CAAT Plan has a
99% probability of
remaining fully
funded in 20 years



Statement of Investment Policies and Procedures

- Long-term focus gets rewarded
- Investment program designed to generate sufficient long-term returns with a level of risk that is appropriate for the Plan to meet its key measures of success:
 - Securing and paying members' pensions
 - Paying conditional inflation protection
 - Maintaining stable contribution rates at levels that are appropriate for the benefits earned.

Consistently strong investment performance

CAAT Plan ranking in the CIBC Mellon universe of funds > \$1 billion

CAAT	1 Year	2 year	3 Year	4 Year	5 Year	6 Year	7 Year	8 Year	9 Year	10 Year
Ranking	2	1	1	2	3	2	2	1	1	2

Not all risks are the same



Risks of single employer Defined Benefit plans

- Employer has fiduciary responsibility
- DB accounting risk
- Balance sheet risks and volatility
- Higher overhead and compliance costs
- PBGF premiums and other risks
- Greater risk of being unsustainable
- Unlikely to have inflation protection, and bankruptcy could lead to benefit reduction



Risks of single employer Defined Contribution plans

- Employer has fiduciary responsibility
- More stressed employees
- Anti-cyclical retirement behavior
- Hidden retirees
- For employees – market timing risk, interest rate risk, stress from investment risk



Jointly sponsored plans don't have these risks





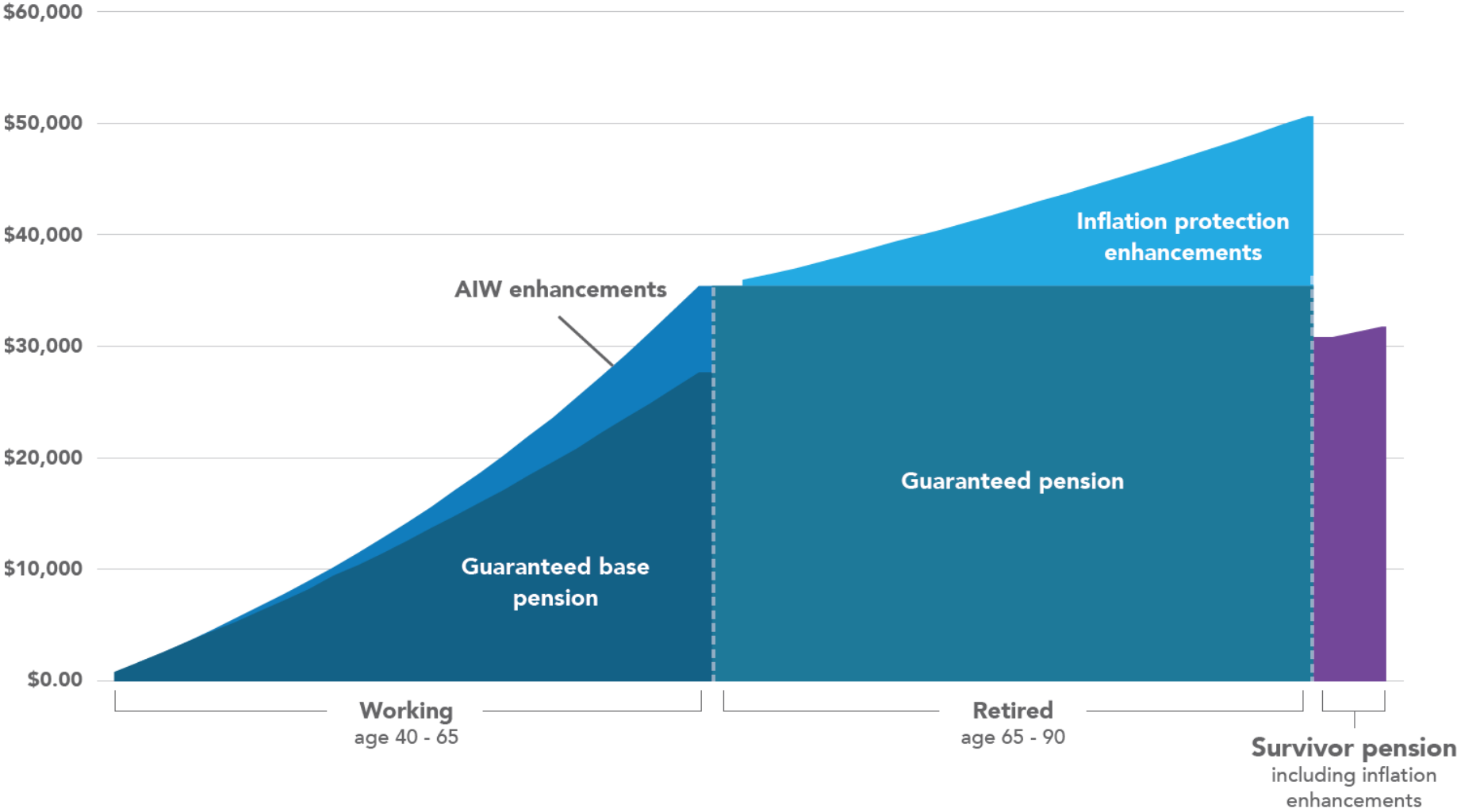
- Benefit security
- Contribution rate stability
- Equity
- Risk Appetite Statement

Game changer for CAAT and the industry



- Benefit security
- Promote DB
- Contribution rate stability
- Value proposition

Guaranteed and conditional



Takeaways

- Strong business case for investment in risk articulation
- Strong business case for investment in effective communication
- Strong business case for DBplus

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