CBC Pension Plan

Liability Driven Investing in the Post-Pandemic World

Investing for YOUR Future

Risk Management Conference

August 18, 2023

PLAN OVERVIEW

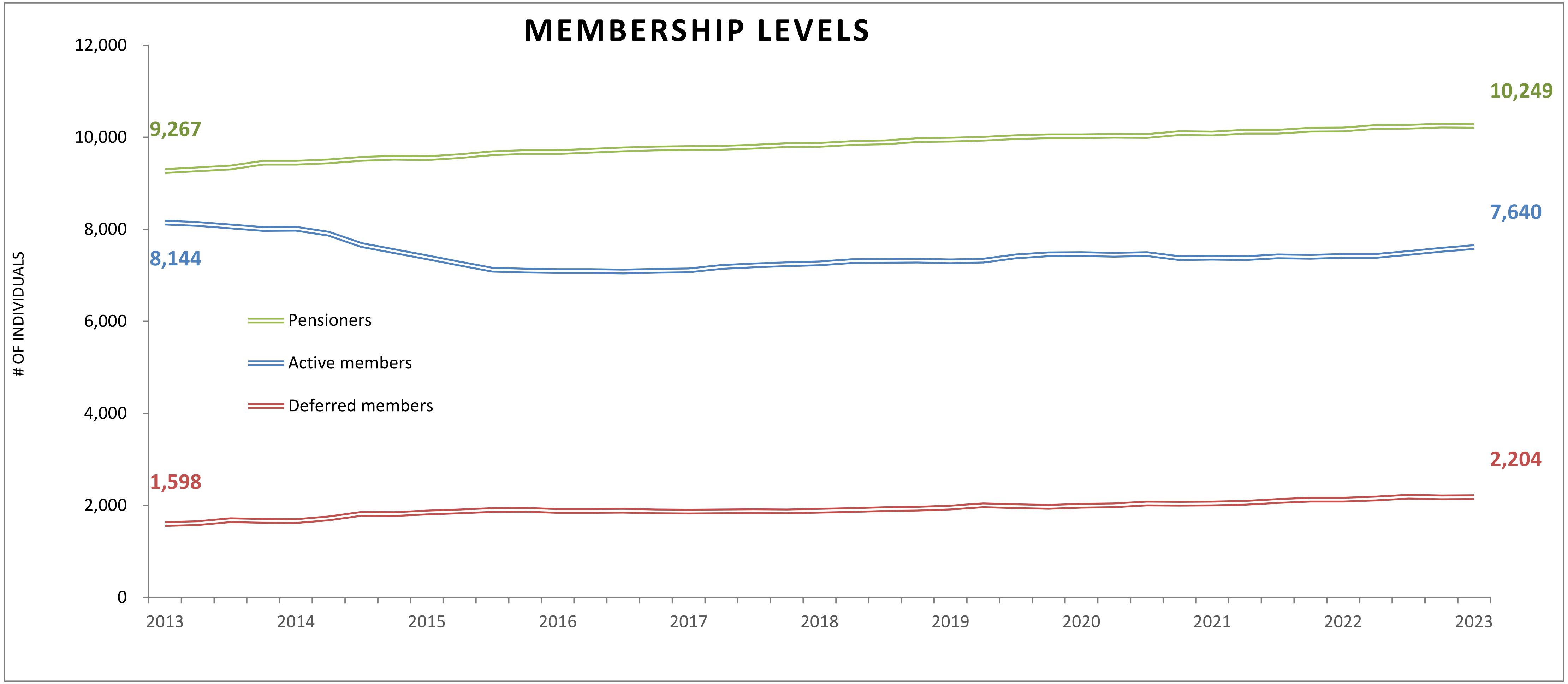
PLAN BACKGROUND

- Final salary Defined Benefit pension plan
- Benefits indexed to inflation with a cap (2.70%)
- CAD$ 8 billion of assets
- Established in 1961
- 20,000 plan members split 38% active, 51% pensioners and 11% deferred
- 50% / 50% Employer – Employee funded
- Sponsor on a contribution holiday
- Very mature / negative cash flow plan
- Plan is highly material to the sponsor (CBC/Radio-Canada)
- Adopted a Liability-Driven Investing strategy in 2005

Our Purpose

To provide a secure / sustainable pension benefit to our members at a highly affordable current service cost.

Membership Trends



LDI INVESTMENT STRATEGY

Liability-Driven Investing (LDI)

- Is an investment strategy that looks at both the plan assets and the liabilities
  - Objective is to reduce funding volatility through making assets have a similar interest rate and inflation sensitivity to the plan's solvency liabilities
  - Hedges a portion of a pension plan's (uncompensated) solvency interest rate and inflation risk and lowers equity market risk

"If you don't know where you are going, any road will get you there." Lewis Carroll

Our LDI Approach

1. **Interest Rate Risk** ↓ - Reduces the interest and inflation rate mismatch between a plan's assets and its solvency liabilities
   - Uses both long duration physical bonds and interest rate derivatives
2. **Equity Exposure** ↓ - Reduces equity exposure compared to a traditional (60/40) asset mix
3. **Alternatives Exposure** ↑ - Increases exposure to alternatives with (hoped for) uncorrelated returns

"Climate is what we expect, weather is what we get." – Mark Twain

LDI Does Not Eliminate Plan Risk

Legal risk

Early retirement risk

Mortality risk

Financial reporting risk

Operational risk

Interest rate risk

Implementation risk

Valuation/Pricing risk

Decision risk

FX risk

Credit Risk

Longevity risk

Liquidity risk

Model risk

Liability measurement risk

Career risk

Assessment risk

Counterparty risk

Equity market risk

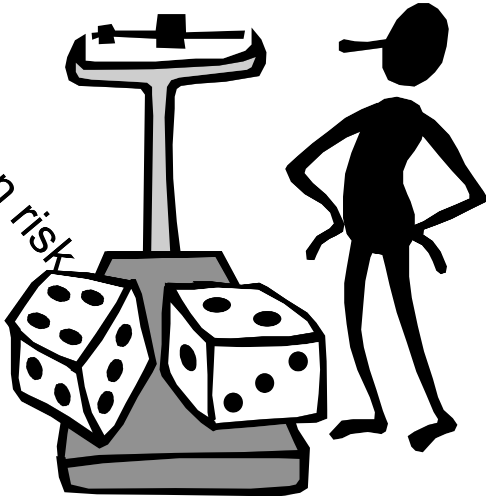
Active management risk

Inflation risk

Fraud risk

Regulatory risk

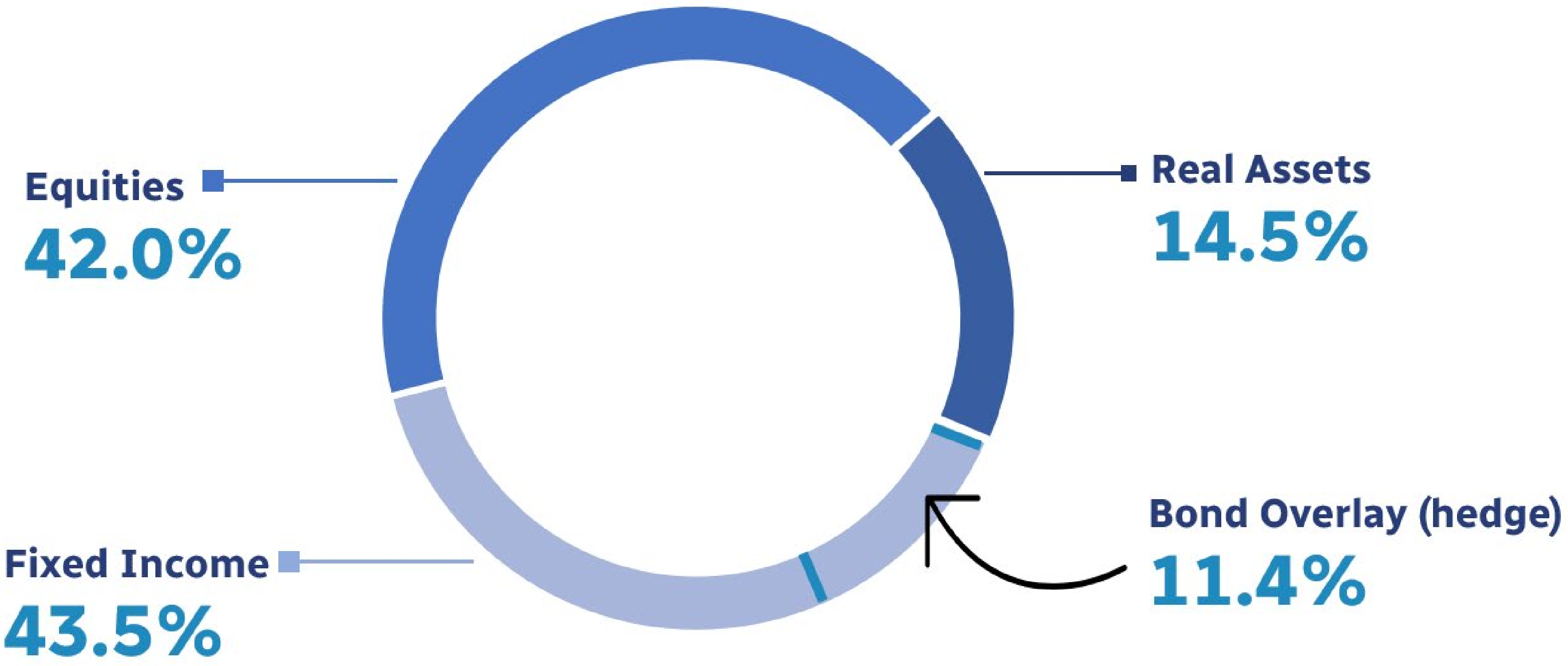
Systematic risk



The Downside of LDI

- Increases asset volatility
- Can involve the extensive use of derivatives so introduces new risks to be managed
- It may have a lower expected rate of return
- It will underperform in a variety of situations:
  - When equity markets are rising rapidly
  - When interest rates are increasing
  - When alternative investments underperform
  - When yield curve is flat

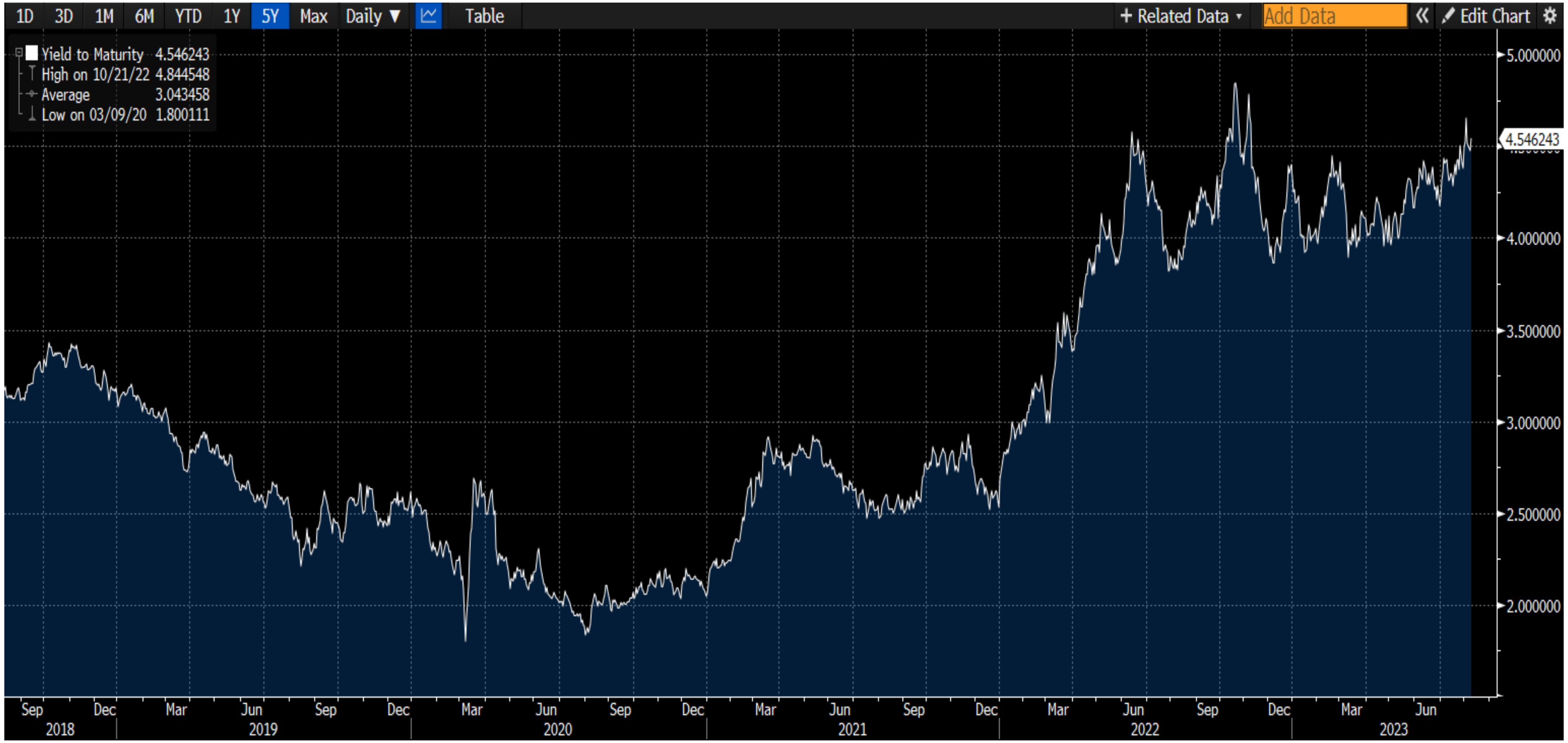
Liability Driven Investment Asset Mix



"We can not predict the future, but we can prepare." – Howard Marks

LDI IN A POST PANDEMIC WORLD

FTSE Canada Long-Term Bond Index

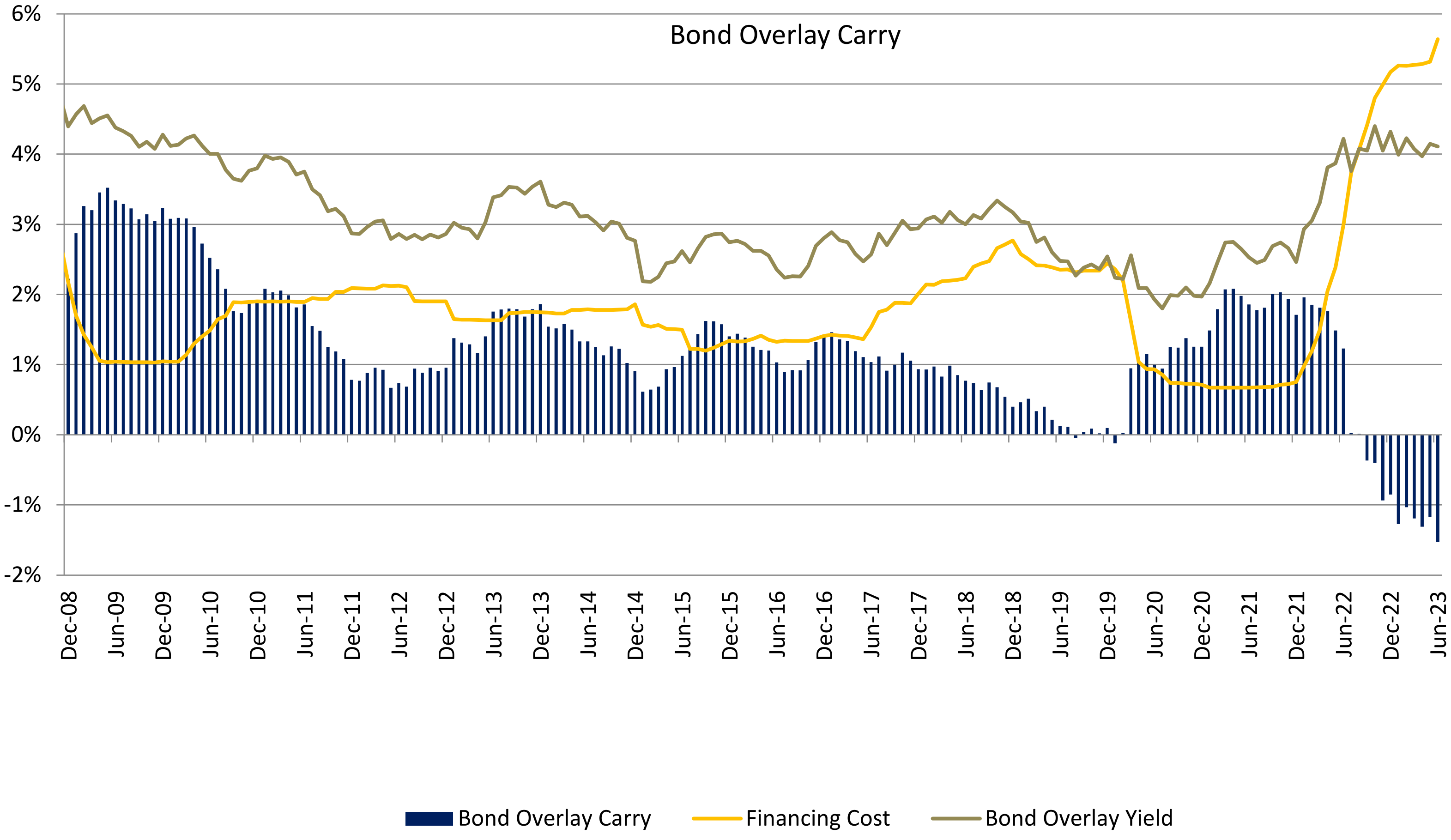


Long-term bond yields are substantially higher post-pandemic

Historical Interest Rates

"The market can stay irrational longer than you can stay solvent." John Maynard Keynes

Bond Overlay Carry



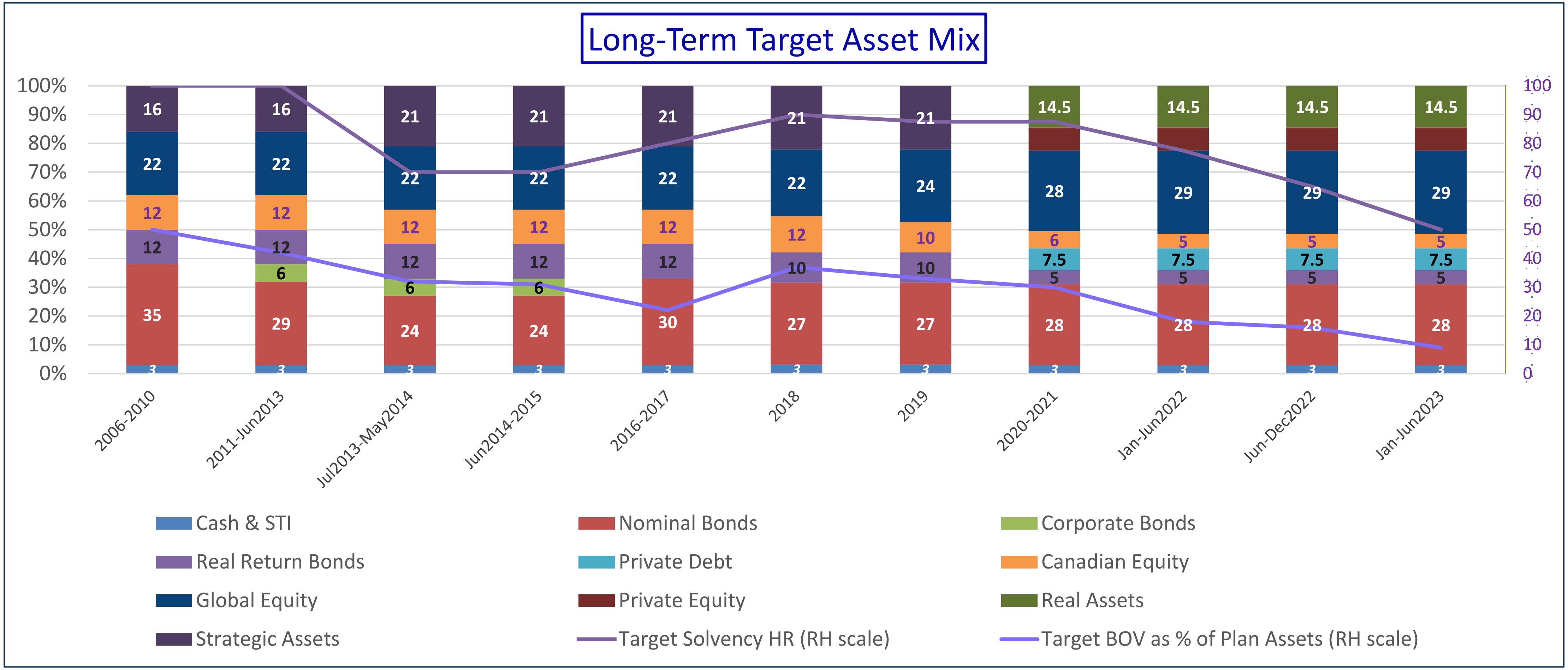
- The Plan pays on the short end of the yield curve and receives on the long end.

Source: Bloomberg June 30, 2023

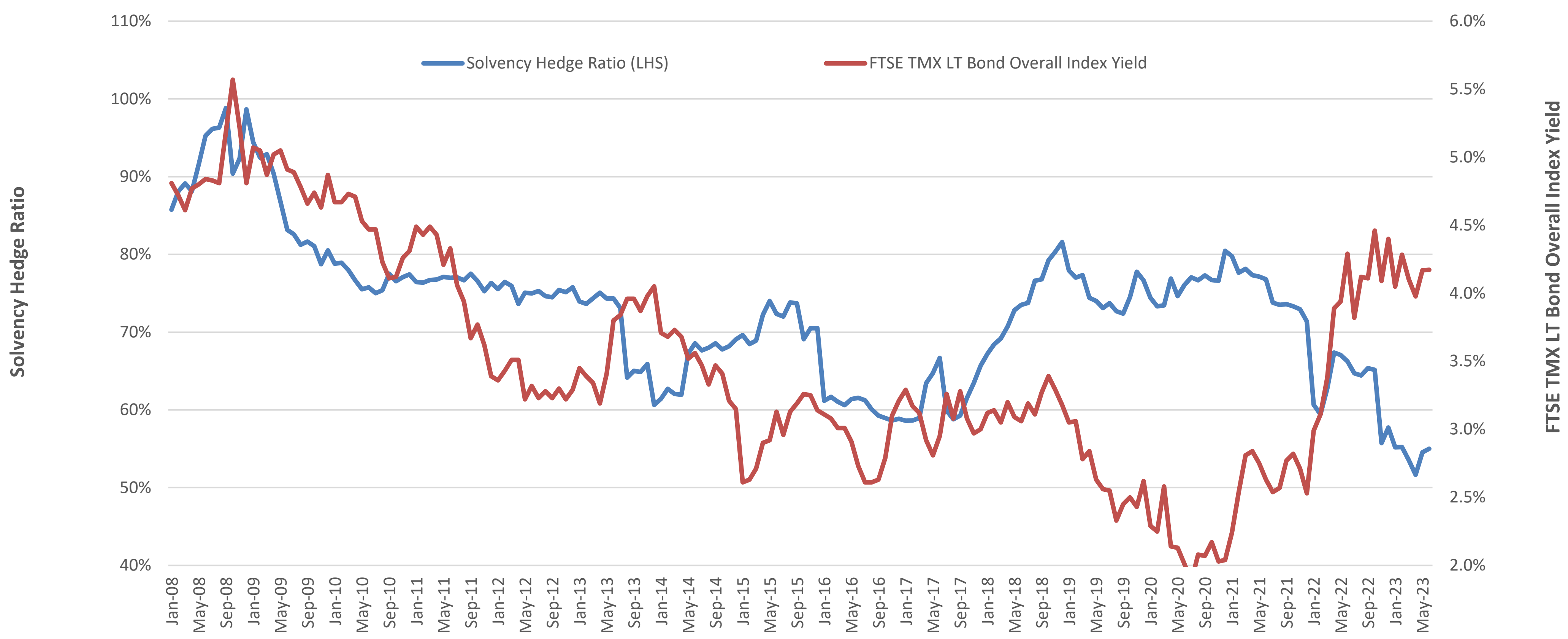
Asset Allocation Objectives

Risk Metrics	Importance	Short Term Objectives	Long Term Objectives
Normal cost	High	Lowest Normal Cost possible	Lowest Normal Cost possible
Solvency ratio (and the 3-year avg ratio) (Benefit security of plan members)	High	>100% with a probability greater than 95%	>100% with a probability greater than 95%
Going concern ratio (Benefit security of plan members)	Medium / High	>100% with a probability greater than 95%	>100% with a probability greater than 95%
Asset drawdown in any one year	Medium	Minimize the probability of losing 10% in any year	
Liquidity requirements	High	Maintain/reduce liquidity needs in stress scenarios	

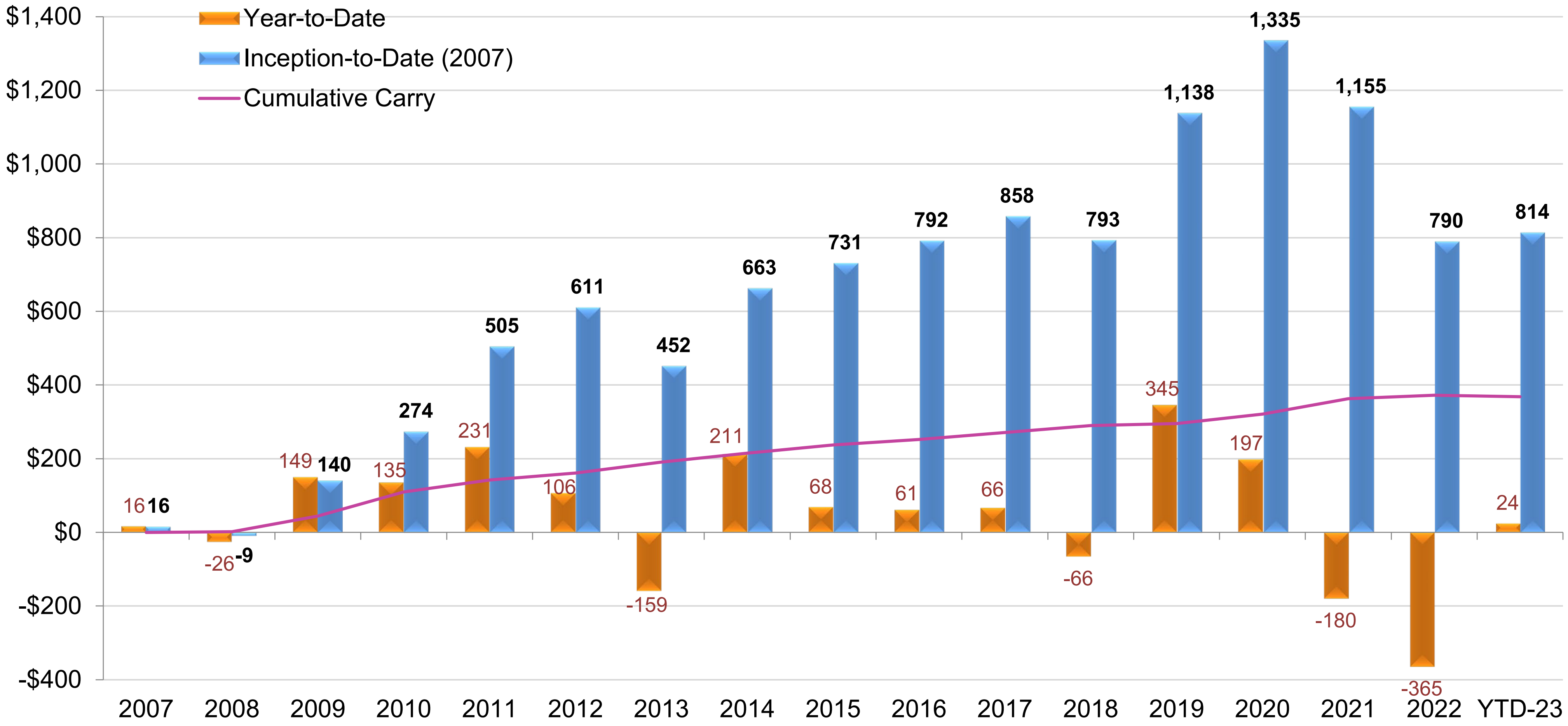
LDI Asset Mix Since Inception



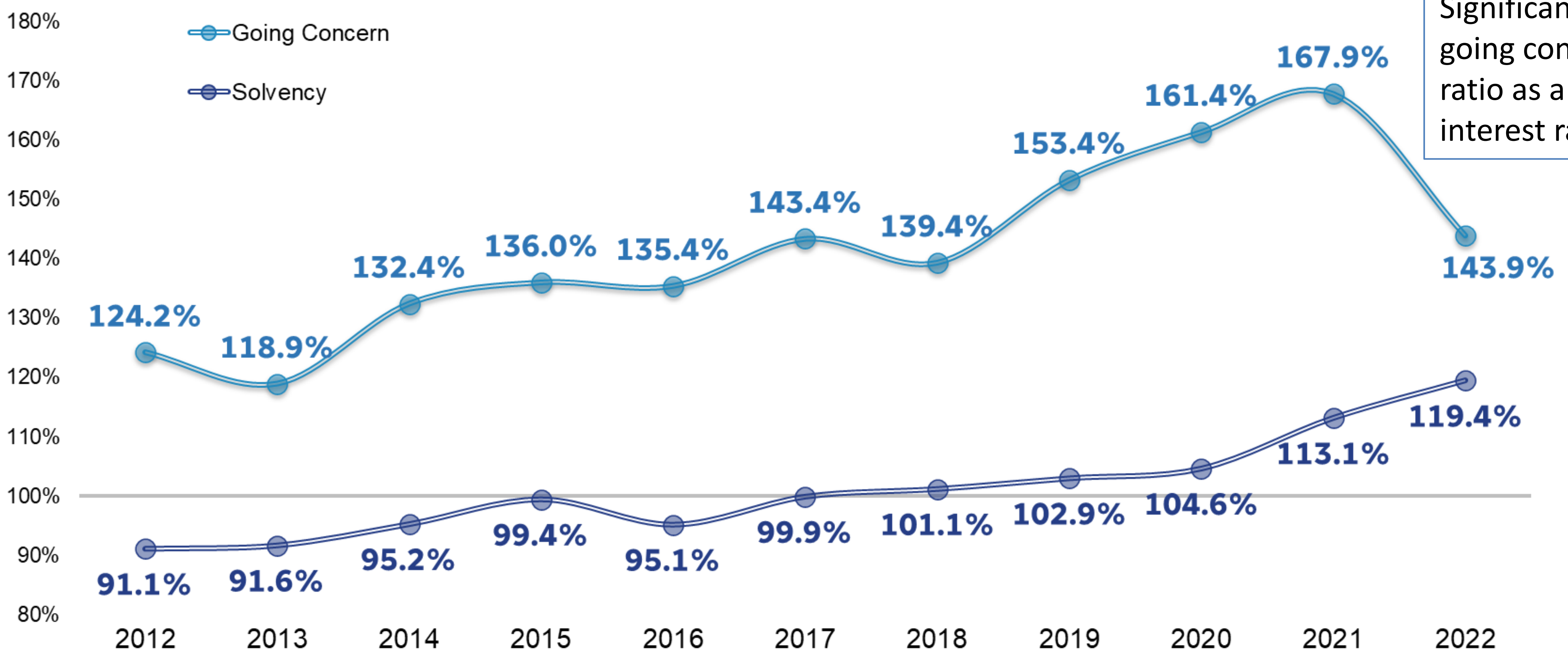
Hedge Ratio and Interest Rates



Bond Overlay Since-Inception Cashflows (in $Millions) – June 30, 2023



Funding Ratios



Significant decline in the going concern funding ratio as a result of higher interest rates

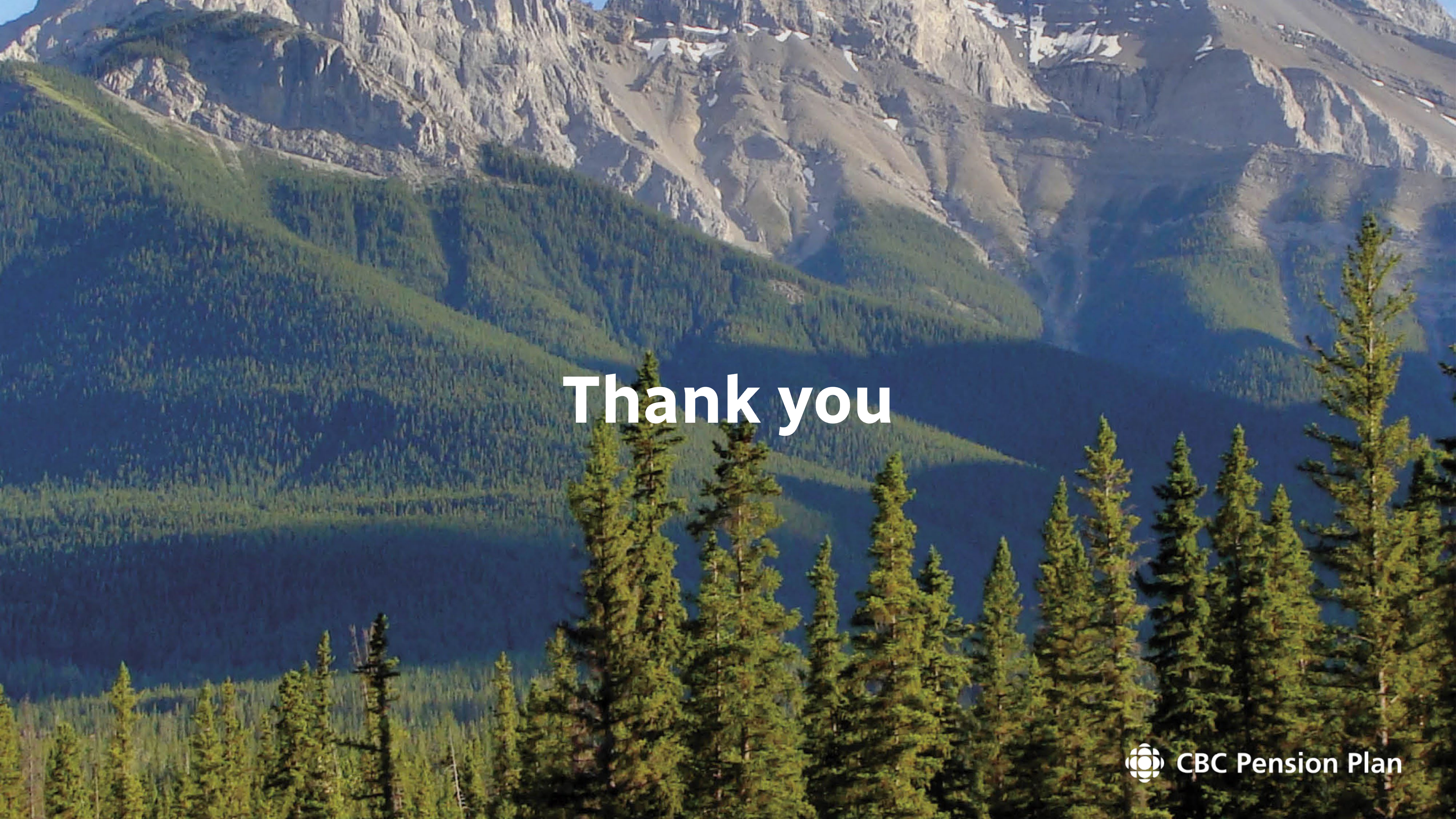
LESSONS LEARNED

Hedging

1. Reduces short-term volatility on the hedged item
2. May <u>not</u> result in a full offset of the risk / volatility
3. Has costs (which can be significant)
4. Introduces additional complexity and new risks (e.g. liquidity)
5. Is frequently a net negative over the long-term
6. May reduce volatility that you are okay absorbing

Post-Pandemic LDI Approach

1. Alignment with achieving our core purpose of providing a secure pension benefit to members
2. Enhanced focus on going concern funded status and asset drawdowns
3. Enhanced focus on liquidity and ability to rebalance
4. Includes some (not a lot) assessment of the medium-term outlook for interest rates
5. Enhanced focus on “outlier” events and their potential impact
6. Reduced emphasis on reducing short-term volatility (as we can absorb this)
7. Less emphasis on “carry” as a source of return
8. Looks at risk tolerance in a broader manner


Thank you
CBC Pension Plan

Liability Driven Investment Strategy

Range of Liability Driven Investment Strategies

Total Return	**Duration Extension**	**Liability Matching & Return Generating**	**Cash Flow Matching or Immunization**	**Annuitize Retirees**

Future Pension Benefit Cash Flows