Managing Through Economic Turmoil: How to Reduce Defined Benefit Pension Plan Risks

FEI Canada 2009 National Conference

Breakfast Seminar

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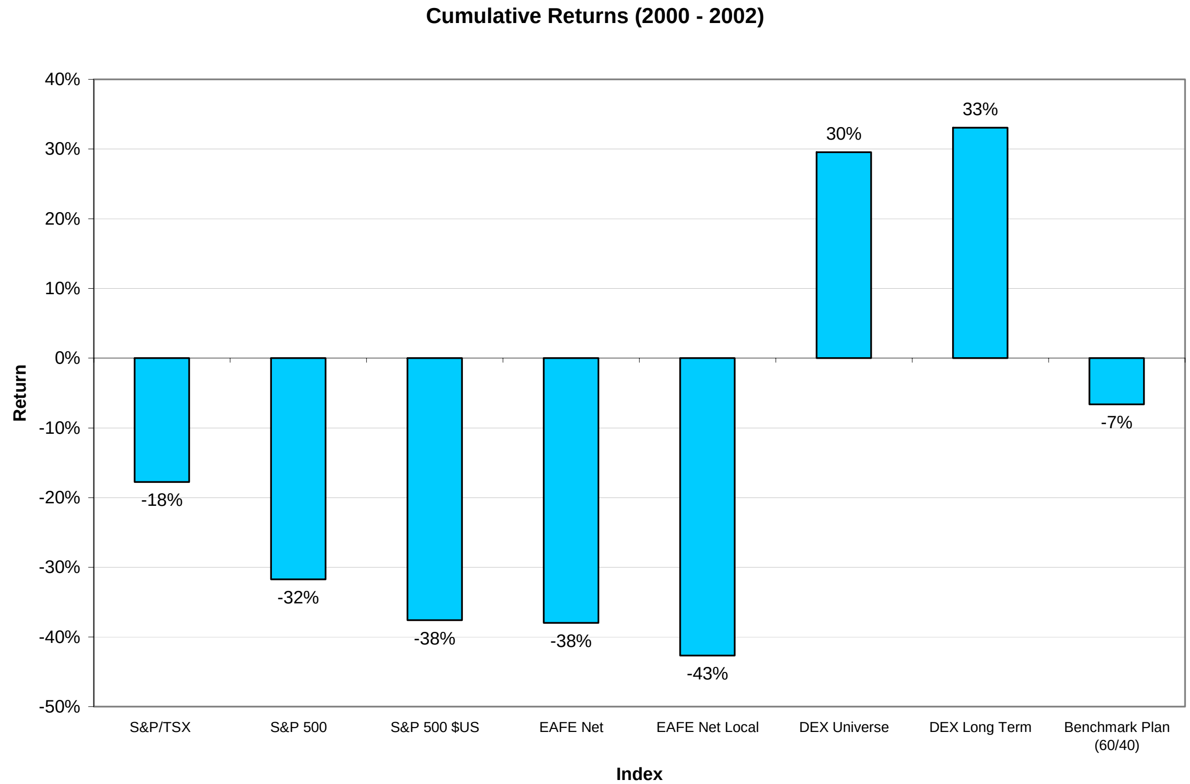
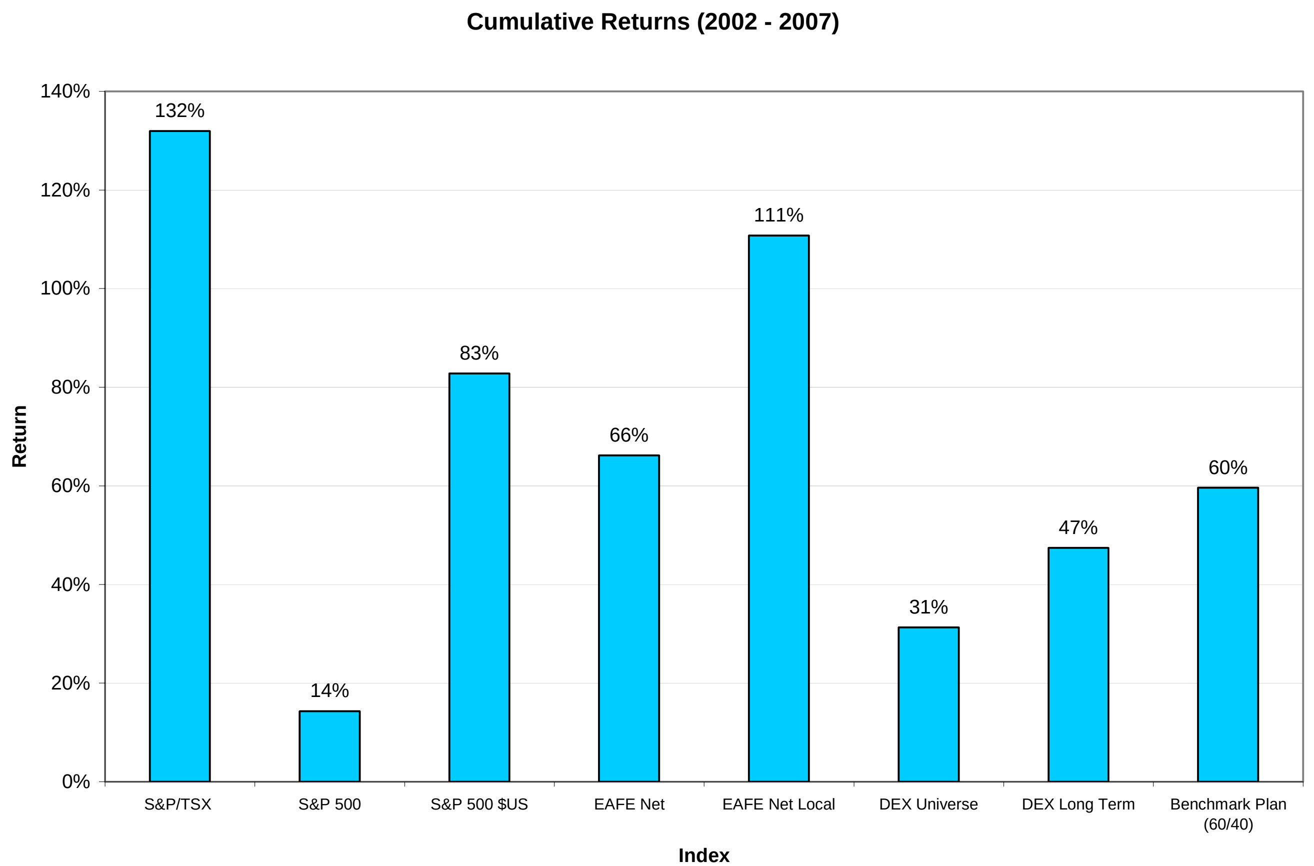
2000 – 2002 « Perfect storm »

- Hit on the two main fronts
  - Significant drop in equity markets
  - Significant drop in interest rates



- Significant drop in Asset/Liability ratios
  - E.g., 25% to 30% on accounting basis

What happened since? 2003 – 2007



- Improvement in Asset/Liability ratios, but mainly from additional contributions
  - Growth from equity markets partially offset by decrease in discount rates

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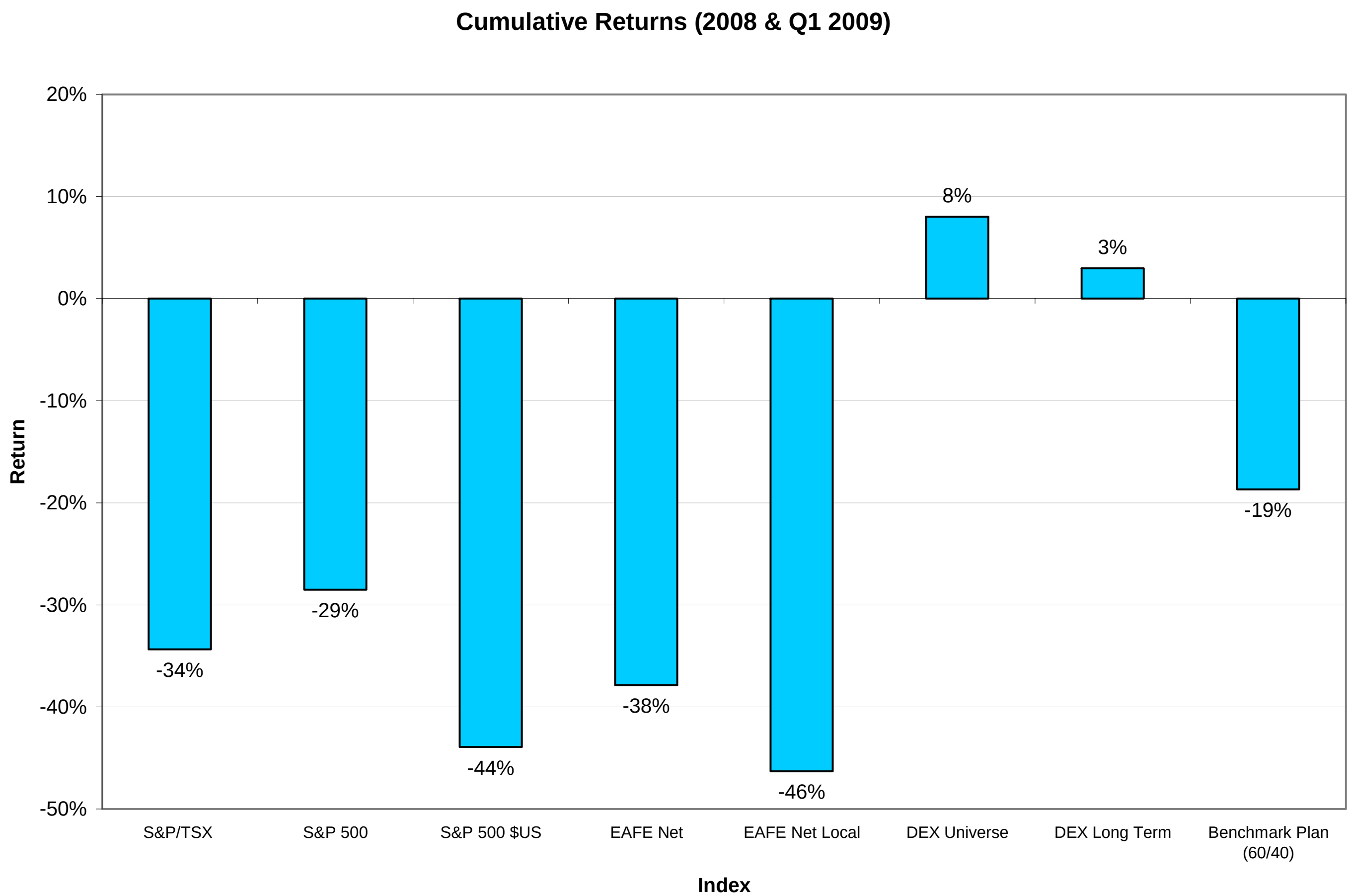
What happened since? 2008 & Q1 2009



- Significant deterioration of Asset/Liability ratios
  - E.g., about 15% on accounting basis, > 20% on solvency basis

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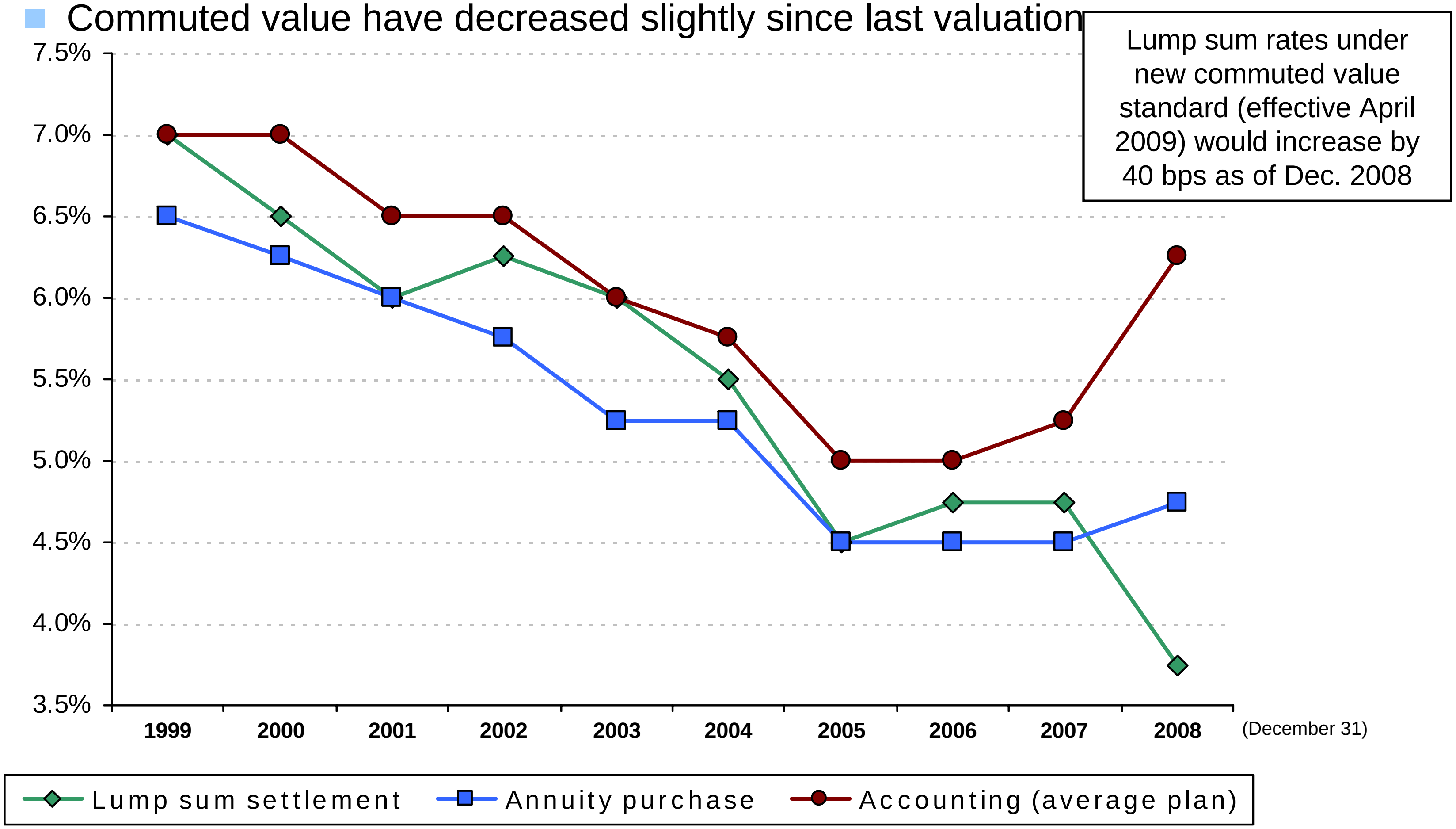
Funding/accounting discount rates

- Solvency discount rates remain at historical lows as at December 31, 2008
  - Annuity purchase discount rates have slightly increased since last valuation
  - Commuted value have decreased slightly since last valuation



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Key sources of risk in defined benefit pension plans

Type of Risk	Source
Market risk	■ Market risk posed by investments held in pension trust (e.g., equity, real estate, etc.) ■ Market risk can be **compensated**: Greater returns are expected in the long run for greater risk undertaken
Interest rate risk	■ Risk posed by inflation rate changes, changes in spreads and yield curve shapes, pension asset/liability mismatch ■ Interest rate risk is **not compensated**: Greater returns are generally NOT expected from interest sensitivity mismatches
Demographic risk	■ Risk posed by participant longevity and embedded design options (e.g., lump sums, early retirement subsidies)
Regulatory risk	■ Risk from regulatory changes by pension or accounting authorities ■ Asymmetric risk of surplus rules
Operational risk	■ Plan governance ■ Plan administration

These risks can be managed

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Some of these risks can be mitigated through investments

Type of Risk	Mitigation
Market risk	■ Can mitigate through investment strategies
Interest rate risk	■ Can partially mitigate through LDI investment strategy — *"There is no such thing as a perfect interest rate hedge"*
Demographic risk	■ Can mitigate through design for active participants ■ Can mitigate through annuity purchase for participants in pay — either settlement or as an investment of the trust ■ Can partially mitigate through longevity SWAPS— *theoretically*

- Degree of mismatch risk generally influenced by:
  - Plan design
  - Maturity of plan (proportion of active versus retiree liability)
  - Investment time horizon
  - Funded status of plan
  - Financial health and risk tolerance of the plan sponsor
  - Materiality of the pension plan to the sponsor
  - For overlay strategies, plan sponsor's comfort level with the use of derivatives

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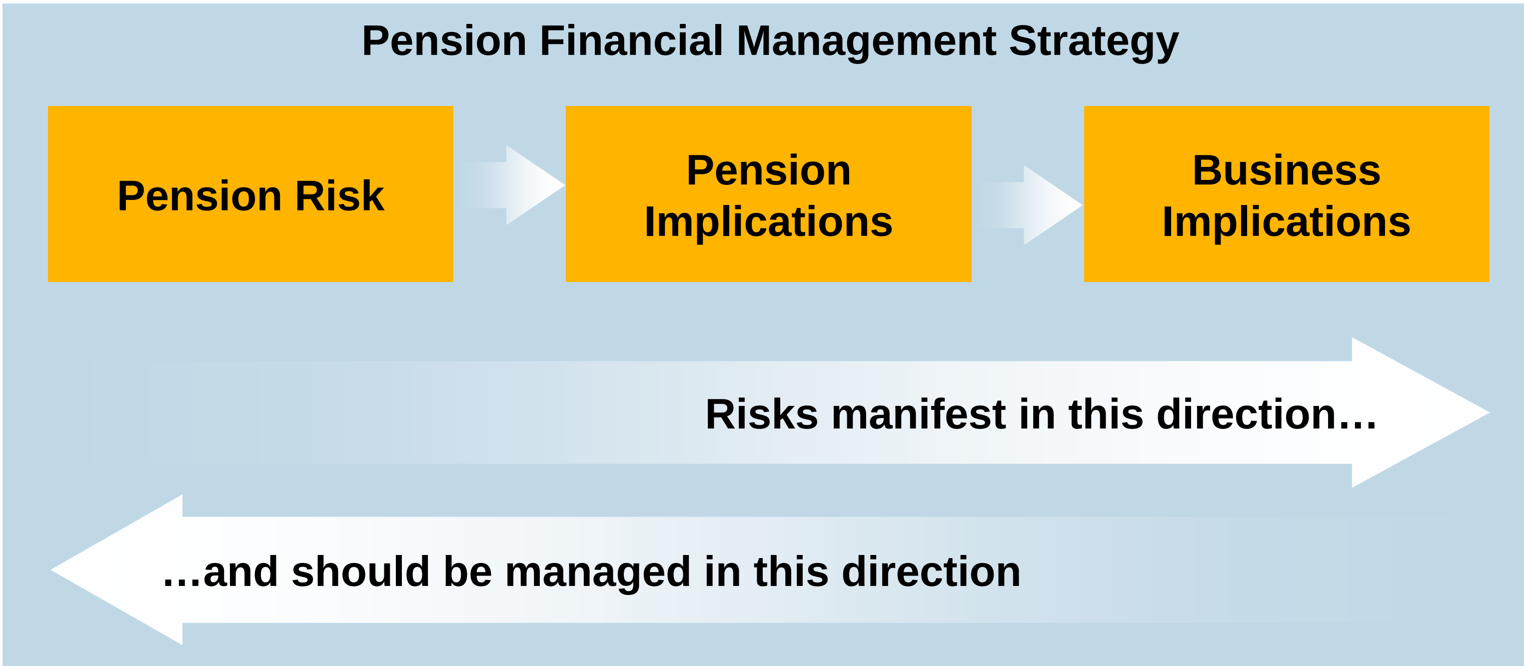
Overview of pension financial management



- The optimal pension financial management strategy addresses pension risks to ensure implications are understood and addressed
- The strategy must be consistent with corporate objectives to ensure proper management of the business implications

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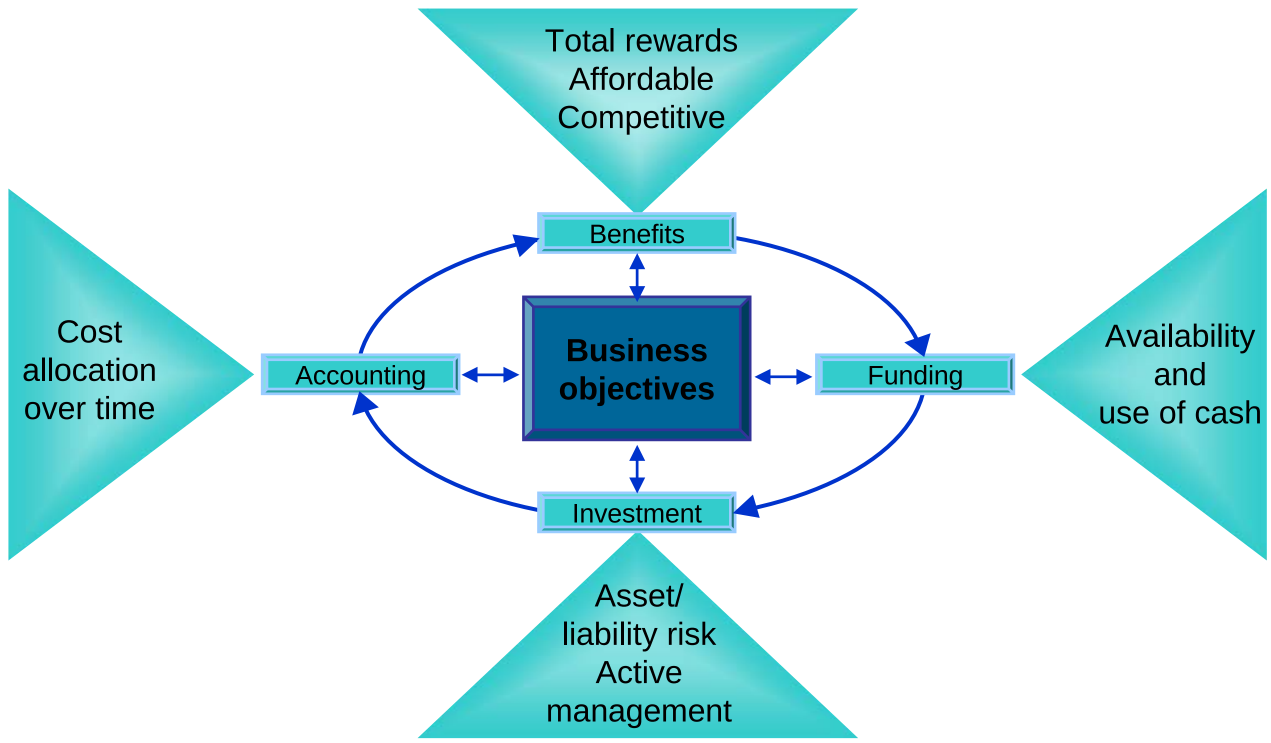
Pension financial management strategy

- An effective plan covers four policy areas that together serve to manage program cost within the sponsor's tolerance for financial risk



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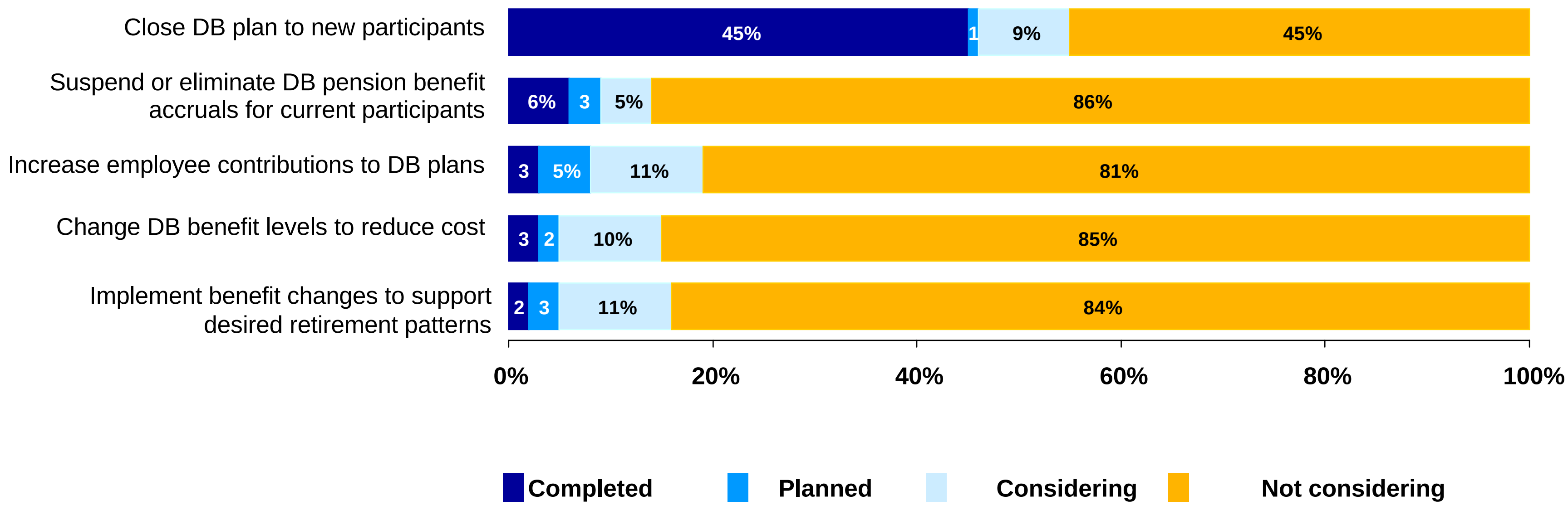
DB pension plan design



Source: Towers Perrin *Benefits in Crisis Pulse Survey – Canada*

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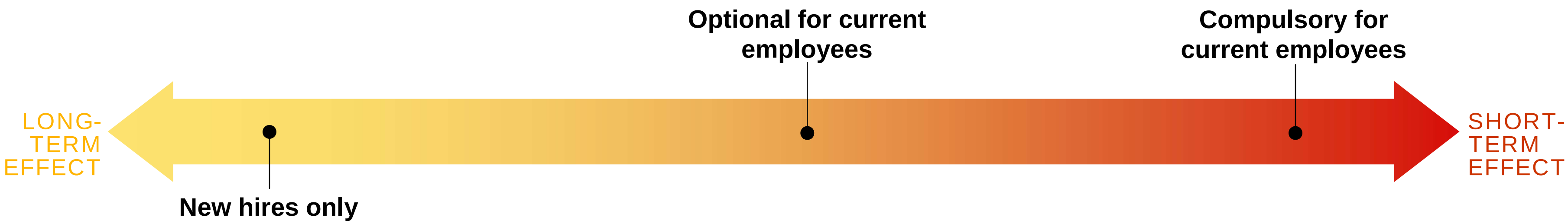
Changes to defined benefit plans



DRIVERS
Level of targeted benefits
Defined contribution component
Pensionable earnings/method for calculating the average
Employee contributions/risk sharing
Ancillary benefits (early retirement, form of payment)
Past service treatment
Indexation, ad hoc adjustments and updates
Targeted phased/early retirement plans
Eligibility rules
Notice period

Other considerations: Negotiations, legal issues, anti-selection, change of actuarial assumptions, introduction of a flexible component, demographic profile, SERP plans

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Regulatory risk – Quebec registered pension plans

- Bill 30 introduces significant limitations with respect to plan funding with effect from January 1, 2010
  - New funding rule, solvency provision for adverse deviations (PfAD) will increase the funding requirement (above 100%)
  - Annual valuation requirement
  - Immediate funding of certain improvements
  - Equitable use of surplus assets rule
    - Will be an obstacle to plan improvement when plan is in surplus
- As a result, sponsors should adopt a minimum funding strategy in order to reduce deficit positions while not creating significant surplus positions between now and 2010

Objective: Determine appropriate funding strategy for the plan in light of the current environment and the expected requirements under Bill 30

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Funding relief : what is proposed*

	Quebec	Ontario	Alberta	B-C.	Federal
Smoothing of assets					
Amortization of deficit over a 10 year period					
Consolidation of amortization schedules					
Letter of credit					
Report on the increase of contributions					

Proposed

Already permitted

Not permitted

Ontario : If consent of the participants
Federal : in 2009 only, no conditions; after 2009, if consent of the participants or letter of credit

If requested by the Superintendent and if authorized

* According to recommendations proposed on May 19, 2009; some conditions may apply

Regulatory risk
Globalization of accounting/financial reporting

- Global market for capital reinforces need for global set of accounting standards
- IFRS acceptance around the world
- Canada adopting IFRS for fiscal years beginning in 2011
- SEC now accepts IFRS for reporting by non-US registrants
- FASB and IASB have committed to work towards convergence of U.S. GAAP and IFRS ("Memorandum of Understanding")
- SEC has proposed a "Road Map" for US public companies to adopt IFRS between 2014 and 2016.
  - Timing depends on market capitalization.

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Regulatory risk
Switching to IFRS – implications for plan sponsors

IAS 19 principle	Implications
Fair value measurement of plan assets	For plan sponsors that use asset smoothing, increased volatility in expense
Recognition of gains/losses through OCI without recycling	P&L volatility concerns will be lessened, but B/S volatility will increase
Immediate recognition of the cost of vested plan changes in P&L	Companies will be less willing to grant "discretionary" benefit increases (eg. COLA, CAE upgrades) How will union negotiations change?
Accounting for inactive plans	Greater focus on LDI to minimize B/S risk, and greater need to build exit strategies
Disclosure of gain/loss history	Greater transparency in assumption setting

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Risk management strategies - Example

Objective – All plans combined

- Reduce by 50% the potential decrease in funded status, or risk, with a 95% confidence level

Changes implemented

- Immunized the Mature Plans, which represent 30% of total liabilities
  - Estimated solvency ratio of around 105%
  - Closed to new entrants; current active population close to retirement
  - Over 80% of liabilities related to inactive members
- Increased the interest rate risk hedge ratio of the Other Plans with LDI strategy
  - Estimated solvency ratio of around 87%
  - Open to new entrants
  - Around 50% of liabilities related to inactive members
- Reduced equity content of Other Plans by 20%
- Introduced partial currency hedging strategy
- Reviewed manager structure

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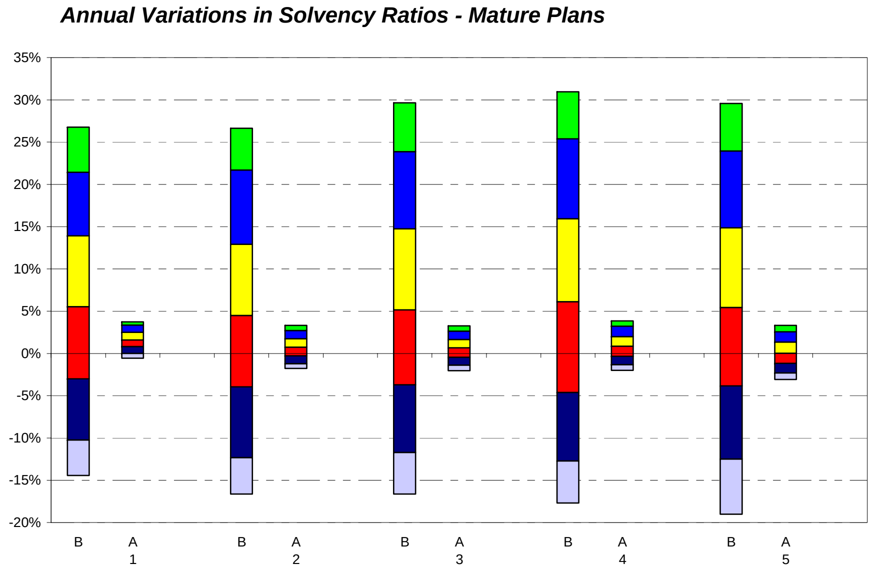
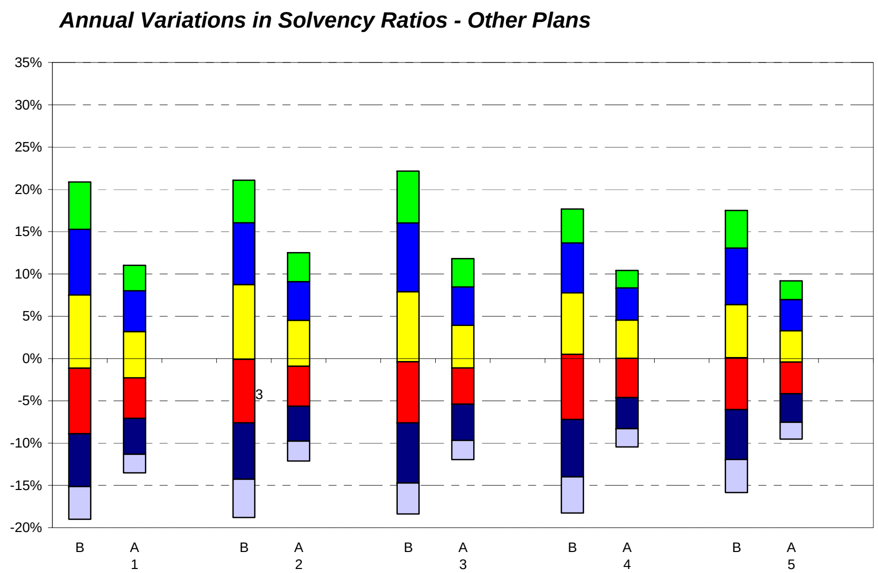
Anticipated and actual results - Example





Actual : 2008 & Q1 2009

- Overall, limited drop in accounting funded ratio to 7%
- Solvency ratios
  - Mature plans : no change
  - Other plans: decrease limited to 16%
- Assets greater than without change by 15%

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Lessons learned and best practices

Governance

- Competencies and leadership of management
- Education of stakeholders
- Optimal allocation of governance budget (time, resources)
- Efficient governance process

Risk management

- From ERM to LDI
- Establishment of clear objectives and risk measures
- Best practices as opposed to common practices
- Coordinated management as opposed to silos
- Action plan and monitoring of key measures

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Understanding asset/liability fixed income benchmarks

	Bond Universe	
	Purpose/Asset Class	**Basis/Benchmark**
Liabilities	**Funding – Going concern**	Actuary's long term estimates with margins Discount rate based on investment policy
	Funding – Solvency	Government of Canada yield curve + fixed spread Pensioners: Spread to estimate annuity market
	Accounting	Discount rate: High quality corporate bond yields Others: Long term best management estimates
Assets	**Cash and short term**	91-Day T-Bills
	Average Bonds	DEX Universe
	Long Duration Bonds	DEX Long Term DEX 20+
	Derivatives	Swap curve / Gov. Canada yields

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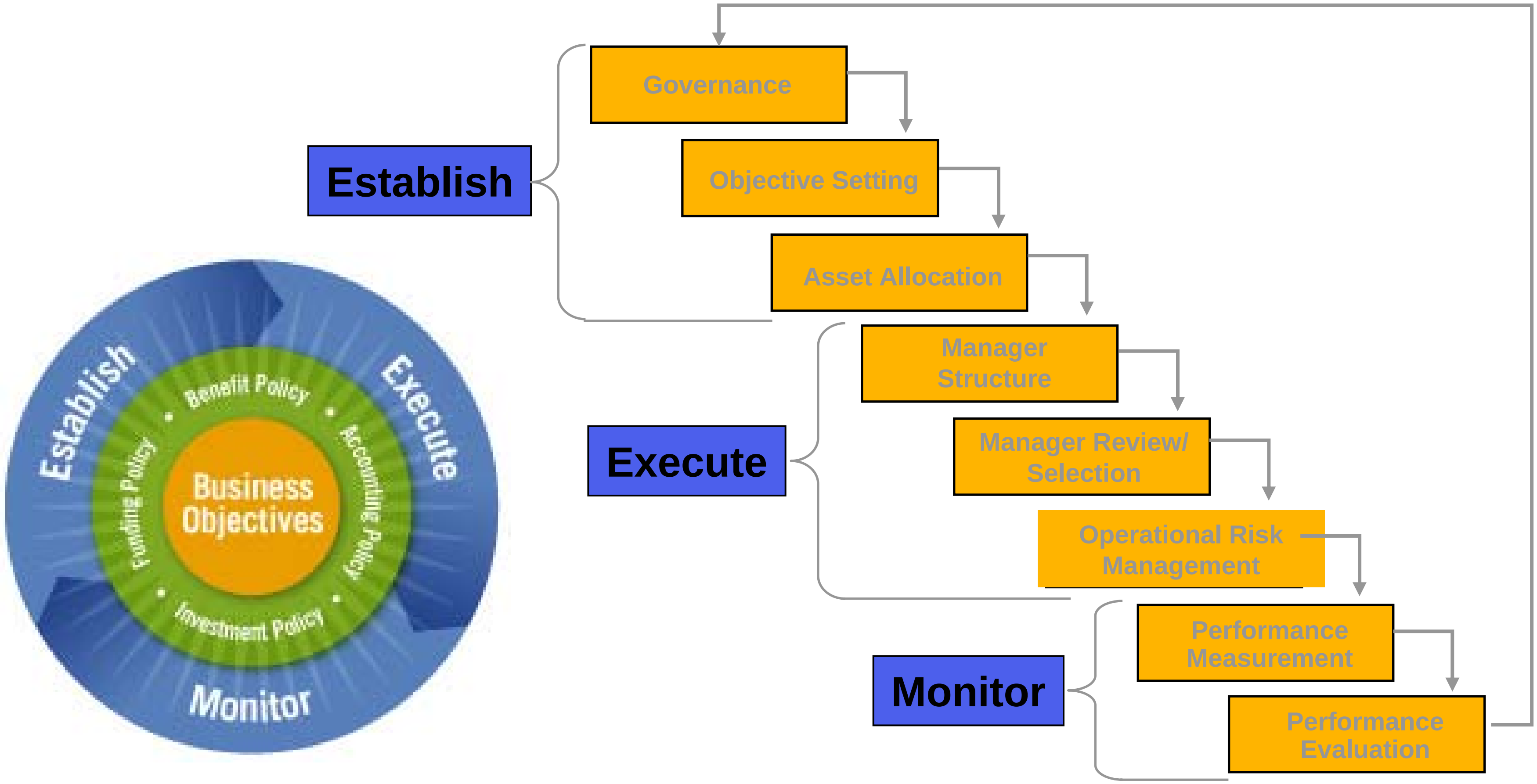
Managing risks through investments - Process

- Entire investment process can be viewed as a continuum
- All elements of the investment process are interlinked and should have a consistent philosophical underpinning



Asset/Liability investment framework

Current thinking is to split asset allocation decisions into the "Liability Risk Management" and "Return Enhancement " components

Plan Assets

Overlay Using Derivatives

- Improves hedging of interest rate risk
- Lengthens duration synthetically to better match liabilities
- May not disrupt asset allocation

Liability Risk Management Assets

- Nature of portfolio
  - Duration
  - Convexity
  - Credit
- Partially addresses mismatch risk and volatility of funded ratio
- Low return, higher long term pension costs but with low volatility

Return Enhancement Assets

- Delivers return premium (over risk-minimizing portfolio)
- Allocation to equities, real estate, infrastructure, absolute return strategies, etc.
- Uncorrelated sources of alpha
- May reduce long term pension costs but with high volatility

How much to hedge?

Asset Liability Risk Management Decision:
Controls degree of exposure to financially risky assets

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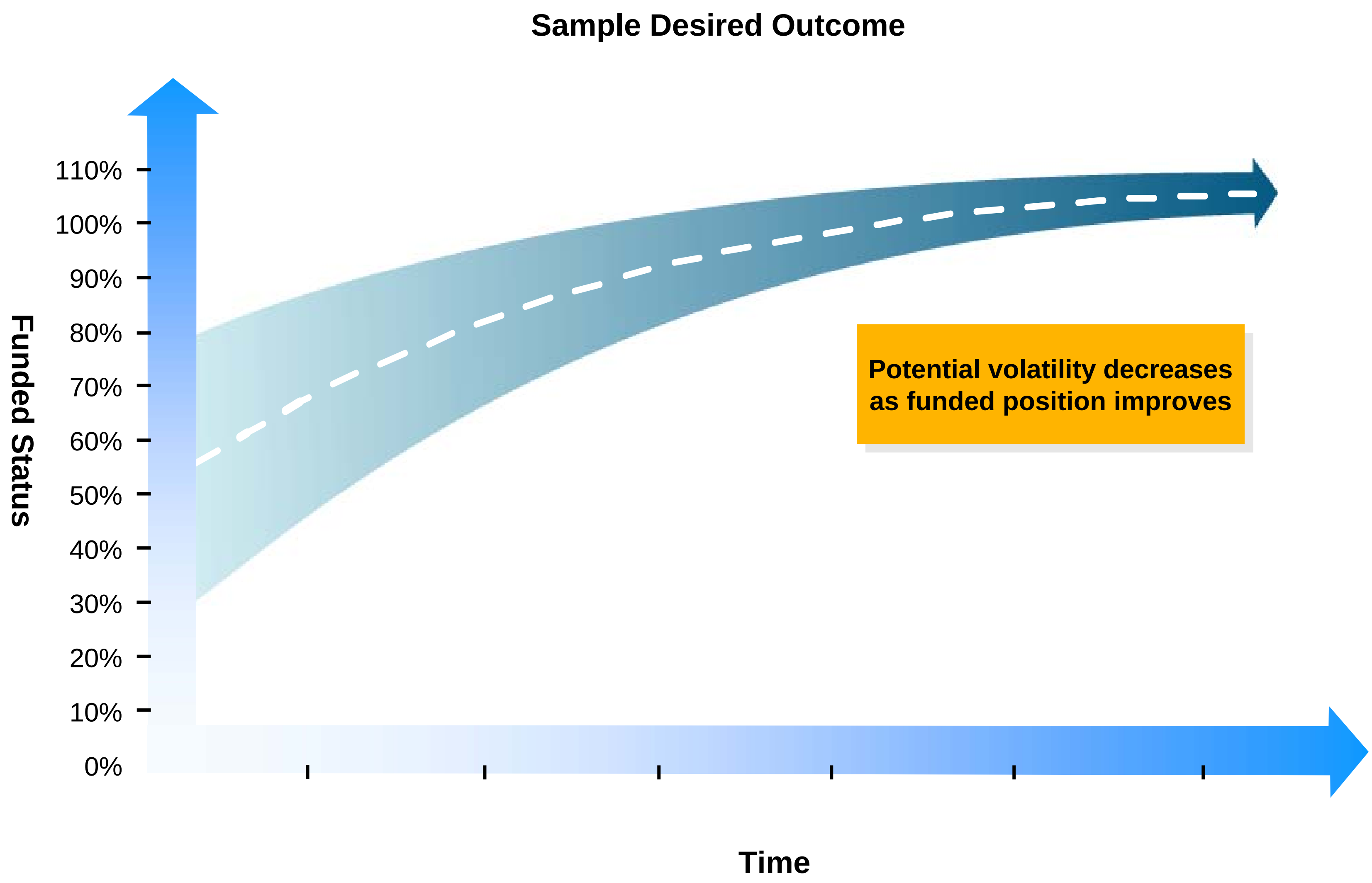
Need for a plan - Dynamic asset allocation strategy



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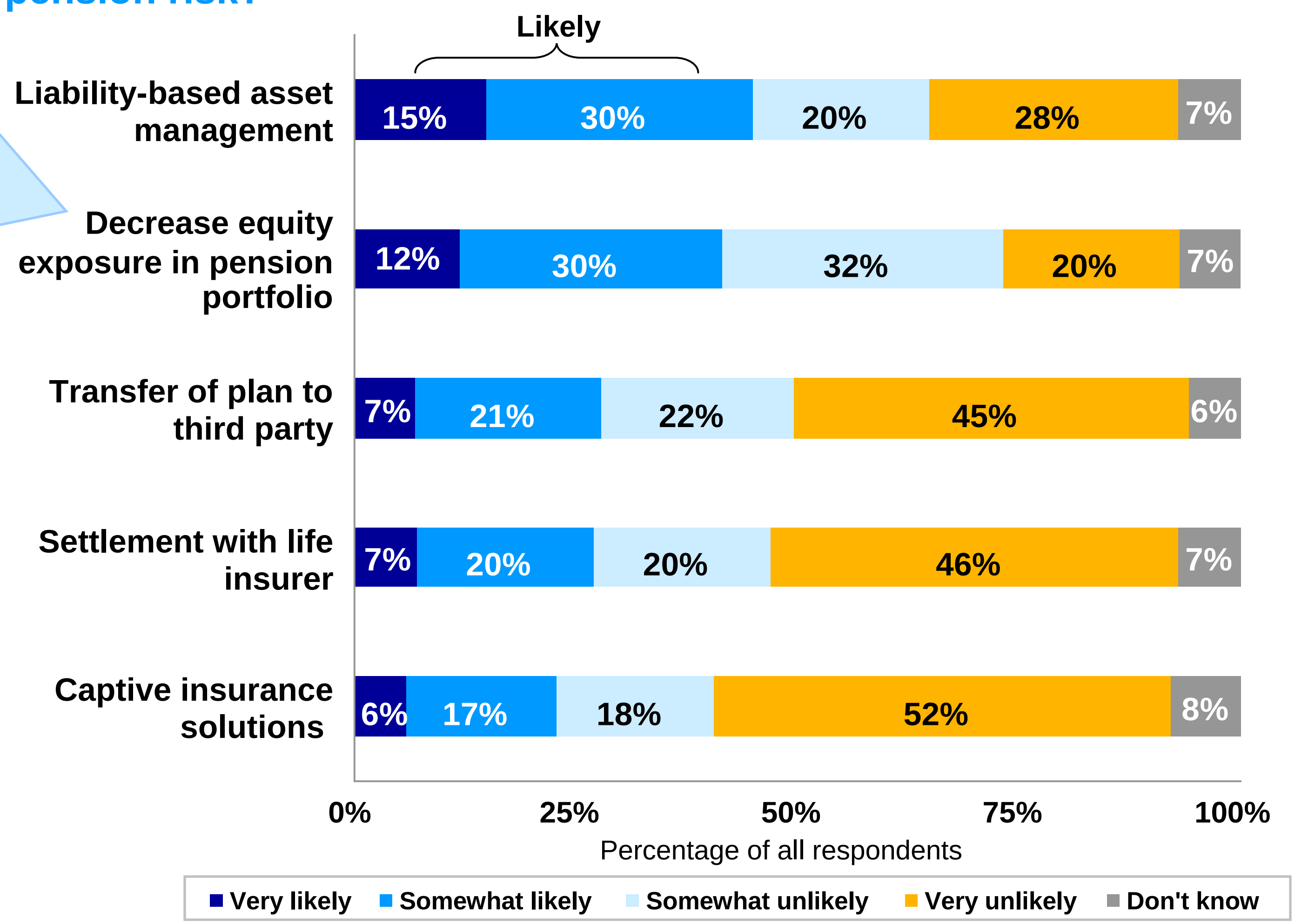
It's portfolio management — not settlement or risk transfer—that proves the most common approach to managing risk

In your opinion, how likely is your company to adopt the following methods for managing pension risk?

Ongoing Management Respondents have a clear preference today for managing the risk as opposed to transferring or settling the risk



Source: CFO Research Services - 2008 survey.

End-game strategy

- Once a defined benefit plan is closed to new participants, an implicit decision has been made to exit plan sponsorship (be it in 50 days or 50 years)
- Developing a dynamic exit strategy enables plan sponsors to:
  - Understand and quantify the accounting and economic costs of available exit strategies
  - Articulate a multi-year plan including…
    - — Explicit trigger points for partial or complete exit actions
    - — Dynamic investment strategies to achieve financial objectives along the way
- Other approaches are available to facilitate settlement
  - Traditional annuity purchase (buy-out)
  - Buy-in
  - Pension captive

Desired Outcome	**A pension risk management policy consistent with corporate financial objectives that ultimately leads to an exit from plan sponsorship while addressing the interim risk tolerances and constraints**

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Questions