



QUANTIFYING RISK, ENABLING OPPORTUNITY

Niel Gerryts

The accounting implications of in-fund
guaranteed annuities in a DC fund

Background

- Regulation 39 came into effect from 1 March 2019:
 - In-fund or out of fund pension
 - Living or guaranteed (life) annuities
- Most funds go out-of-fund
 - Low take-up will make in-fund very expensive
 - In-fund only worthwhile for large funds with many retirees

IAS19

Definition of DB

- *Defined contribution plans are post-employment benefit plans under which an entity pays fixed contributions into a separate entity (a fund) and will have no legal or constructive obligation to pay further contributions if the fund does not hold sufficient assets to pay all employee benefits relating to employee service in the current and prior periods.*
- *Defined benefit plans are post-employment benefit plans other than defined contribution plans.*

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Definition of DB

- Implication:
 - In-fund guaranteed annuity in DC fund makes it DB
 - IAS19 valuation required for employer balance sheet
- Solution:
 - Mechanism where deficit cannot arise (eg balancing assets/ liabilities using pension increase/ decrease)
 - Include clause in rules that employer is responsible for fixed contribution rate and has no obligation provide additional funding for pensions in payment

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Calculation of DB obligation

- *The present value of a defined benefit obligation is the present value, without deducting any plan assets, of expected future payments required to settle the obligation resulting from employee service in the current and prior periods.*
- *An entity shall use the projected unit credit method to determine the present value of its defined benefit obligations*

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Calculation of DB obligation

- Implication:
 - Project future (pension) benefit payments and discount using the bond yield.
 - i.e. project the fund credit build-up to retirement, convert to a pension, project and discount the pension to present day using bond yields and then applying the PUC method (past service / total service).
 - Allow for probability of take-up i.e. benefit = prob x pension + (1- prob) x cash lump sum

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Calculation of DB obligation

- Method 1: full FC credit build-up and apply PUC factor (PS/ TS)
- Method 2: current FC build-up, no PUC factor

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Calculation of DB obligation

- {Full contributions x PUC factor} vs {only past contributions}:
 - Future service (contributions) does not lead to materially higher benefit => straight-line method not required
 - Full contributions x PUC factor is appropriate
 - Projecting only current FC and discounting is grey area
 - but likely to be higher liability

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Calculation of DB obligation

- *Actuarial assumptions are an entity's best estimates of the variables that will determine the ultimate cost of providing post-employment benefits*
- Implication:
 - Project fund credit build build-up and pension increases using expected return and discount using bond yields
 - Inherent inconsistency in IAS19 but that is the rule.

Is it material?

A few scenarios

- Model/ compare liability over lifetime of employee:
 1. Fund credit
 2. Full contributions x PUC factor
 3. Past contributions only

Is it material?

A few scenarios

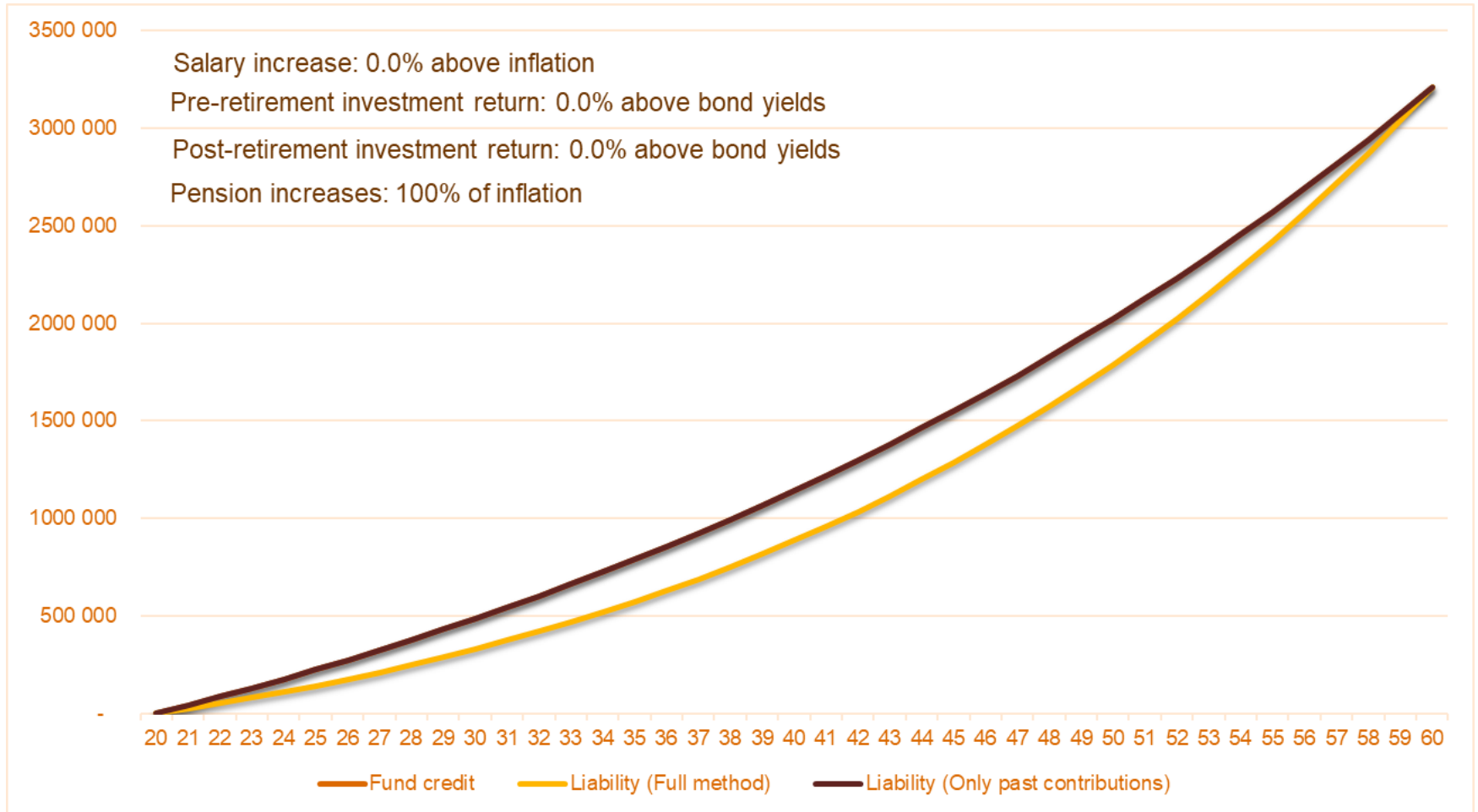
- Assumptions:
 - 20 year old retiring at 60
 - Nominal bond yield = 9%
 - Real yield = 3%
 - Inflation = 5.83%
 - Actual conversion is cost-neutral
 - 100% conversion at retirement (no cash benefit)

Is it material?

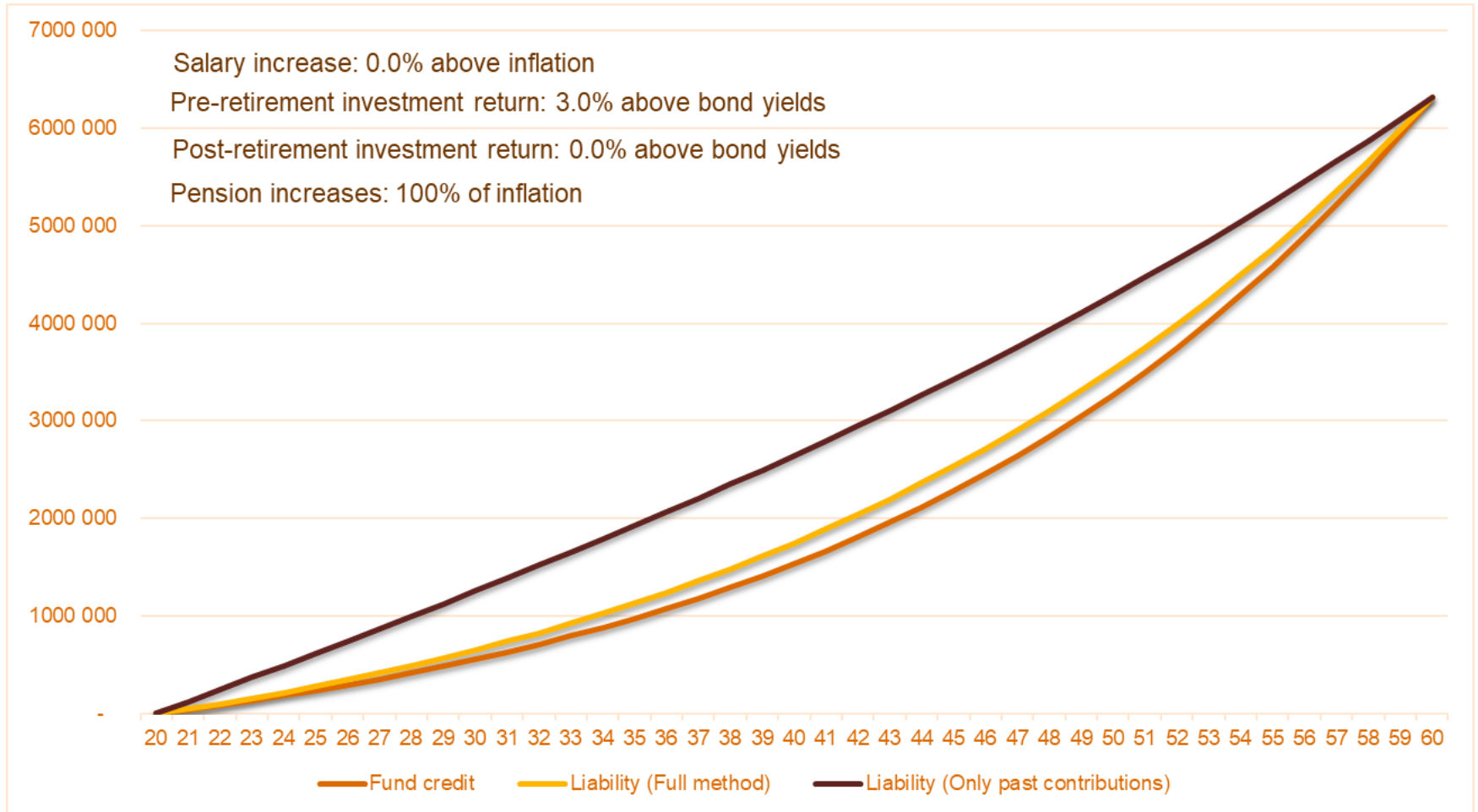
A few scenarios

- Variables:
 - Salary increase assumptions (above inflation)
 - Investment return pre-retirement (above bond yields)
 - Investment return post-retirement (above bond yields)
 - Pension increases (% of inflation)
- Projected value discounted to present date using inflation
 - Easier to see differences

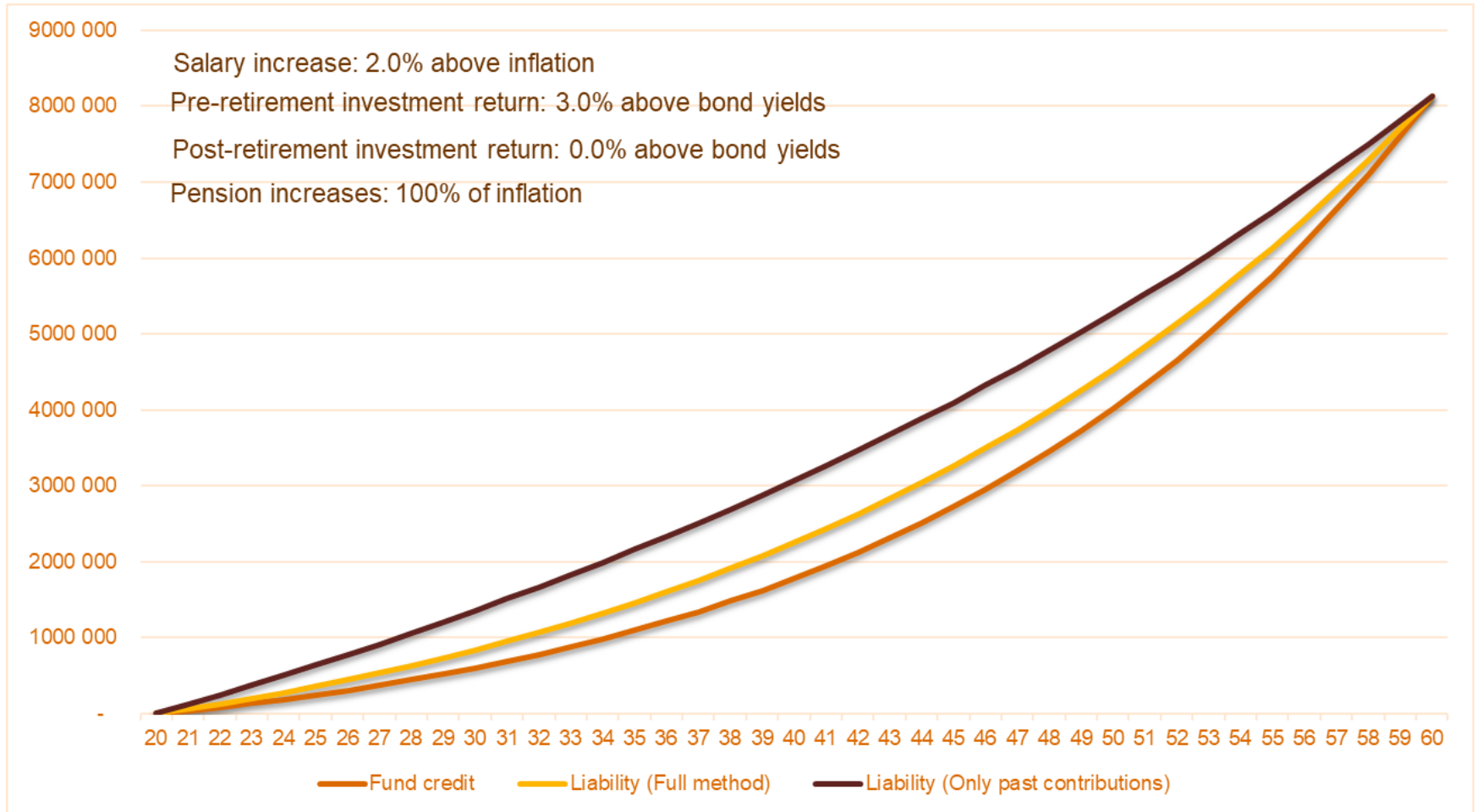
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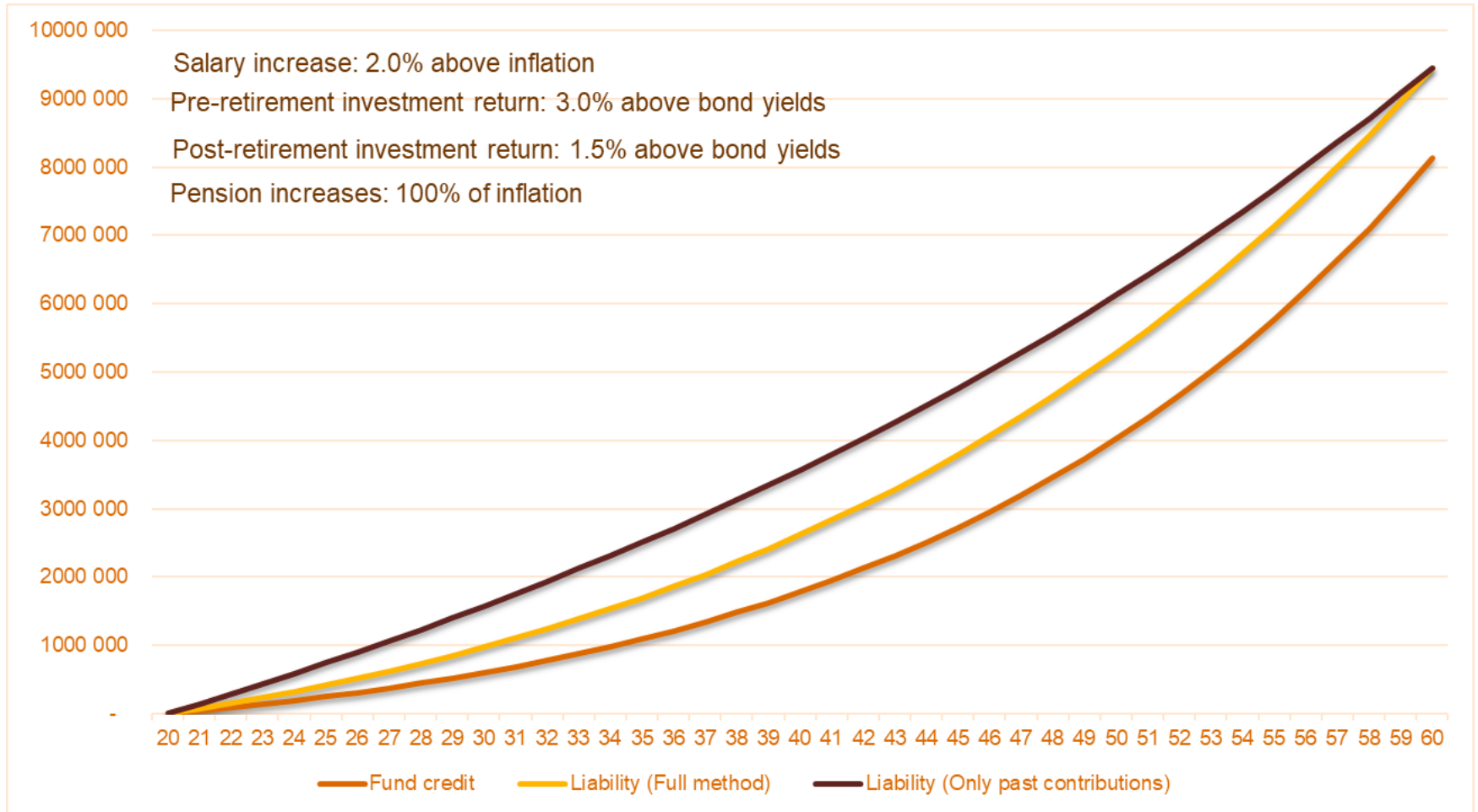
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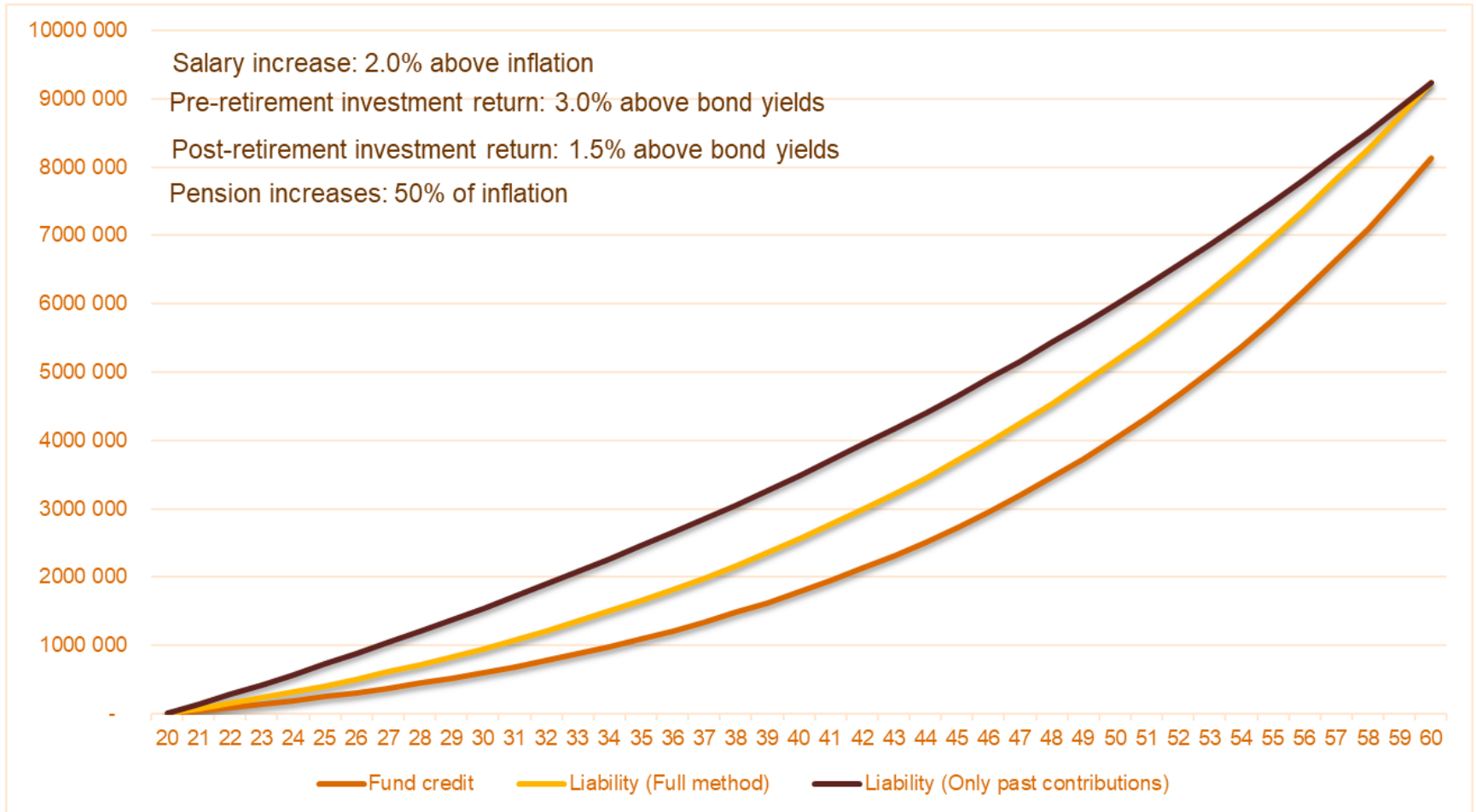
Is it material?



Is it material?



Is it material?



Summary

- Guaranteed pension triggers IAS19 valuation
- Project using expected return (incl risk premium) and discount at risk free
- Choice: full FC and PUC or current FC only
 - Neither is inconsistent with IAS19
 - Current FC only is likely to result in higher liability