

CIPFA CFO Actuarial Briefing

Discount rates

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Agenda

-  **Purpose of the valuation**
-  **How do we do it - reminder**
-  **Selecting discount rate**
-  **Summary and Conclusions**
-  **Questions and discussion**

Purpose of valuations

Approach depends on question being asked

- Many questions!

Ongoing triennial funding valuation

- How much do employers need to pay in future to have enough assets to pay benefits?

Annual accounting valuations (IAS19/FRS17)

- Help accountants compare
- If we were a plc how much would we need to borrow to finance liabilities?

Cessation valuations

- Have we enough assets to meet liabilities?
- How much risk do we leave on the table?
- Different approaches depending on employer situation

Triennial Funding Valuation

Set out in LGPS Regulations

- to *certify* levels of employer contributions to secure the *solvency* of the Fund

Also have to look at Funding Strategy Statement

- As determined by administering authority
- With some actuarial help!

Actuary to “have regard to desirability of maintaining as **stable** a contribution rate as possible”

- Function of Funding Model / investment strategy
- Spreading and stepping

Different approaches possible for different employer types

- Statutory/non statutory bodies
- Open or closed admission agreements

Annual Accounting Valuations

FRS17 or IAS19

- Essentially the same

Key objective is consistency of measurement

- Help accountants compare

Some “hard coding” of assumptions

- Discount rate

Inconsistent asset and liability valuations

- Lots of volatility
- Some counter intuitive results sometimes

How do we do it?

Step 1

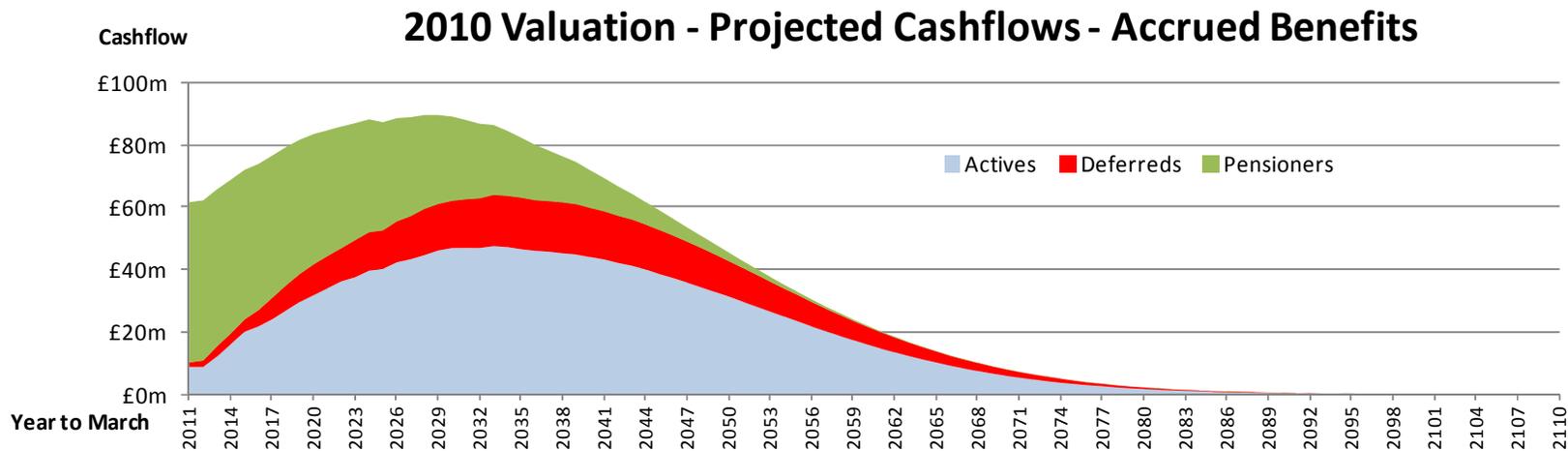
- Projection of all possible benefit payments for each member

Step 2

- Attach probabilities to each possible payment to get “expected” payments

Step 3

- Discount “expected” payments to obtain “value”



Funding models and assumptions

First half of 20th century – book value approach

- **Assets at book value**
- **Discount rate = income yield on book cost**

Second half of 20th century – discounted income approach

- **Long term assumptions**
- **Assets at discounted income value**

Both approaches essentially long term

- **Focus on stability of valuation**
- **But not “marked to market”**

Move to market related approach in last 10 - 15 years

- **More for accounting reasons**
- **But has also influenced approach to funding**

Discount Rates

Choice of discount rate depends on the question being asked

Funding valuation

- **What contributions are required to build up a fund of assets to meet pension liabilities for a given investment strategy?**

Accounting valuation

- **How much would a corporate body need to borrow to finance their pension liabilities?**

Cessation valuation

- **How much cash would we need to buy gilts to fund liabilities?**

Discount Rates

Accounting valuation

- Corporate bond yields / cost of borrowing

Minimum risk cessation

- Gilt yields

Ongoing funding valuation

- Expected future investment returns from actual investment strategy

Gilts and bonds – easy....

- Redemption yields

Equities – less easy....

- Fixed risk premium over gilts
- Economic model / dynamic risk premium

Property/alternatives – keep it simple

- Somewhere between equities and gilts

Discount Rates / Equity Returns

Gilt Plus models

“Risk based” approach based on alleged tPR approach

- Doesn't apply to LGPS!

Value liabilities on minimum risk gilts basis

- Increase risk factor via fixed risk premium
- Discount rate then gilts plus something
- Plus something based on asset strategy and employer covenant
- Seems quite sensible and nice and simple

But liability values then behave like gilts

- Potential for lots of volatility

Problems with quantitative easing

- BoE making pensions “more expensive”
- Government taking an interest

Discount Rates / Equity Returns

Economic model

Assumes equity returns function of

- **Dividend income plus**
- **Economic growth/dividend growth/capital return**

Close cousin of the dividend discount model

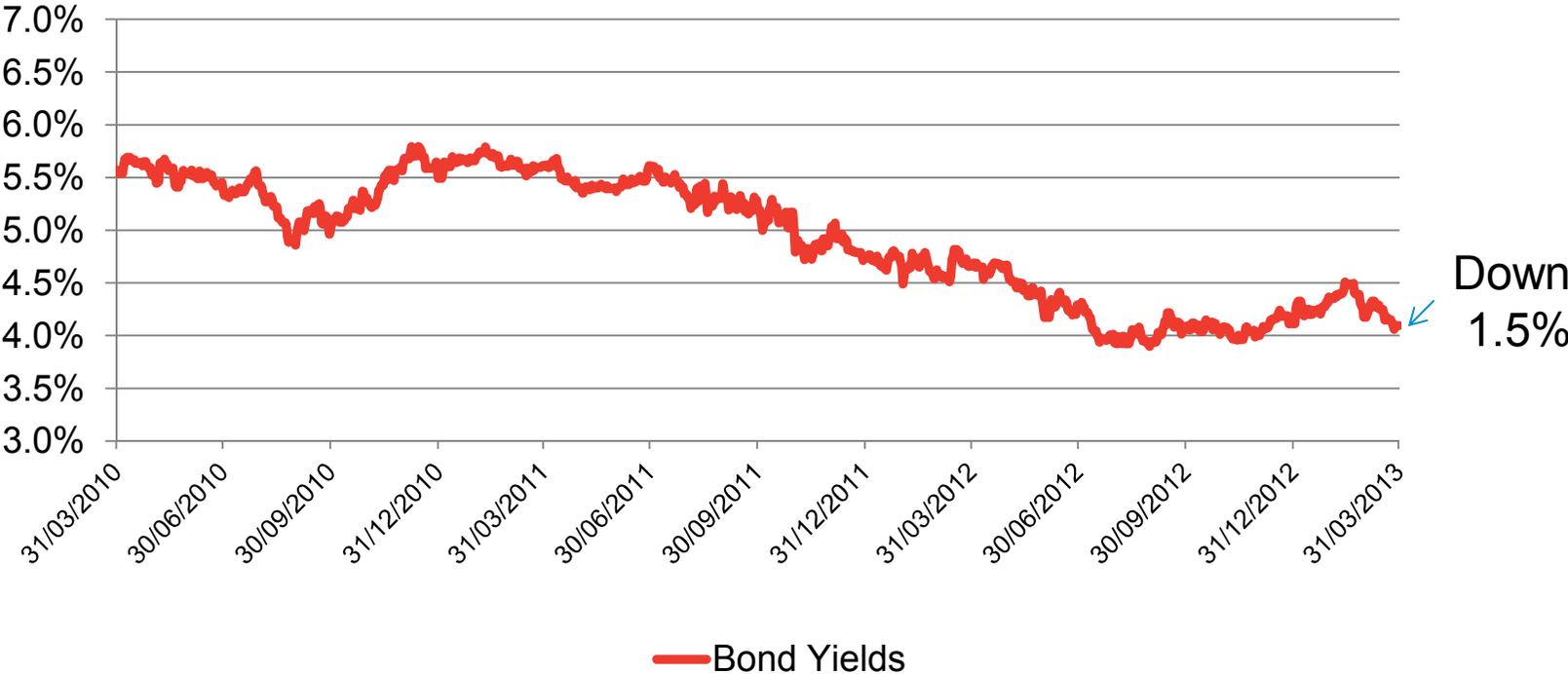
Results in arguably a dynamic gilt plus model

- **Resulting risk premium changes with market conditions**

Produces more stable valuation results

Changes in Yields / Discount Rates

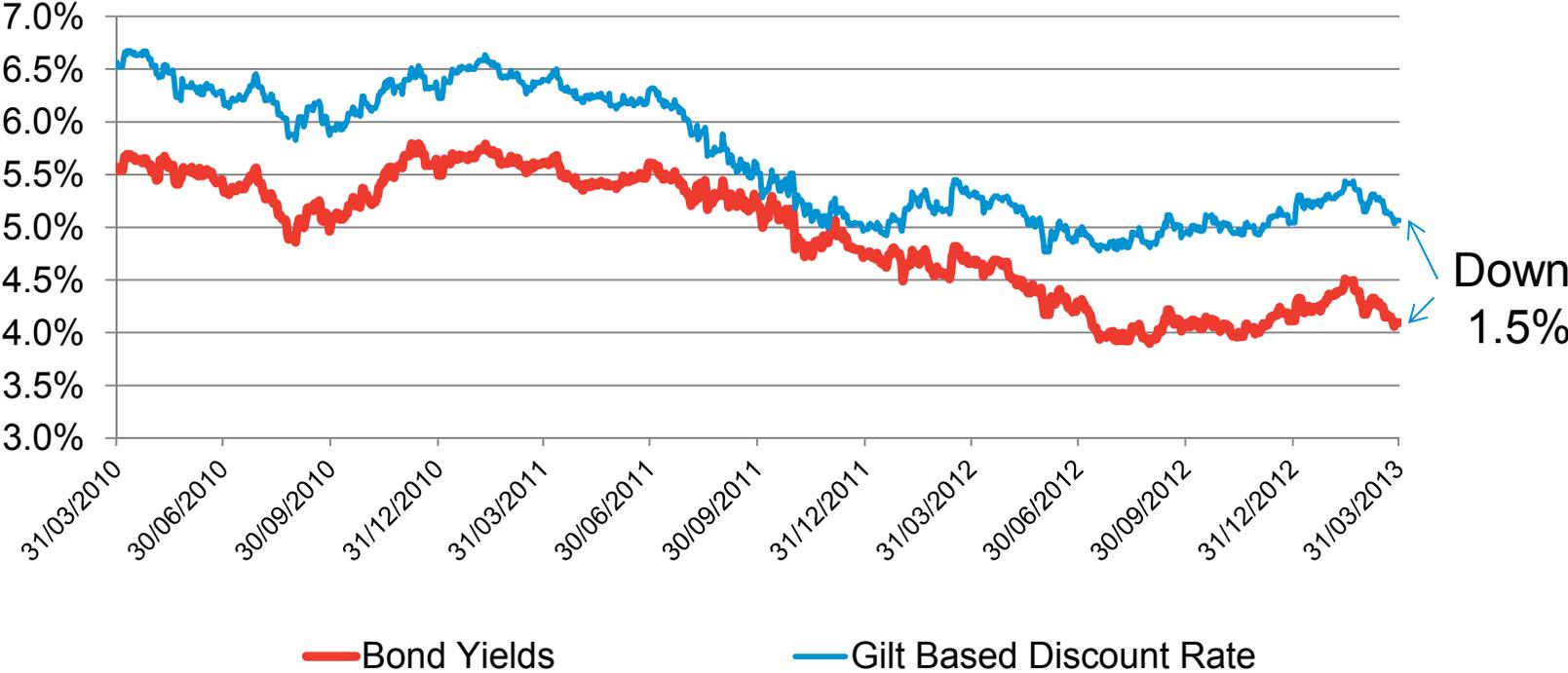
Change in Discount Rates



1% reduction in discount rate increases liability value by ~20%

Changes in Yields / Discount Rates

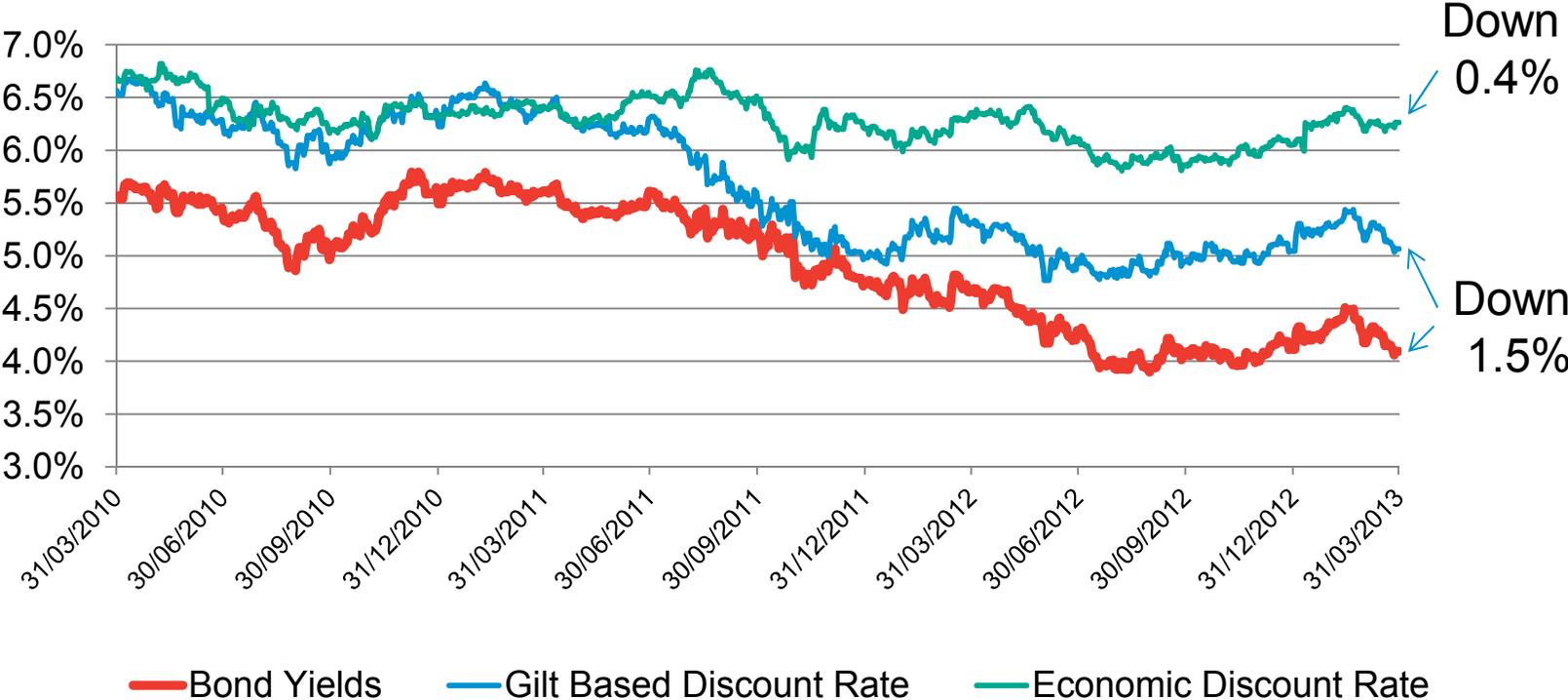
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Changes in Yields / Discount Rates

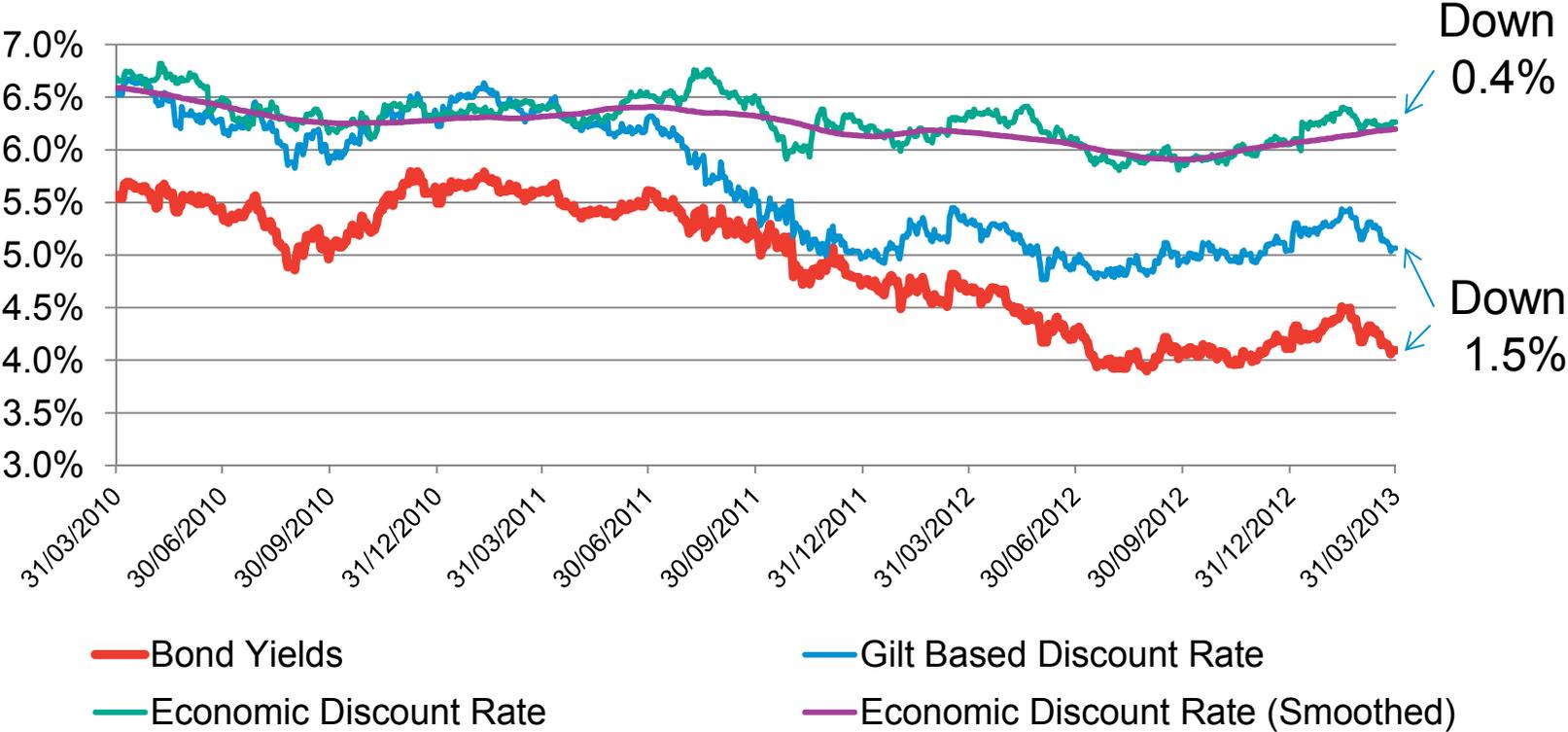
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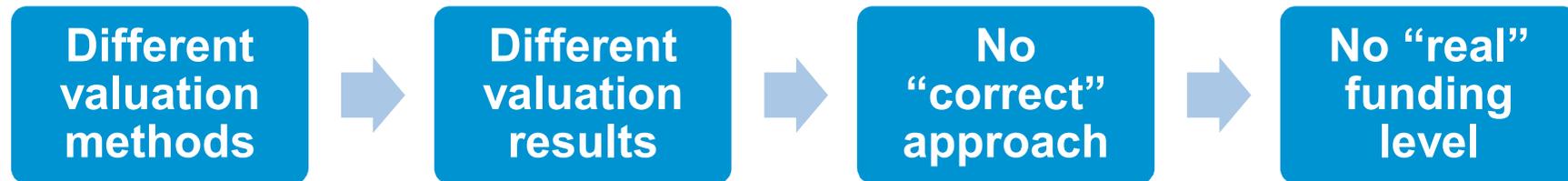
Changes in Yields / Discount Rates

Change in Discount Rates



1% reduction in discount rate increases liability value by ~20%

Conclusions



Discount rate adopted will depend on

- **Question being asked**
- **Purpose of valuation**
- **Funding objectives**

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Any questions?