A moving average approach for calculating the return on debt

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Overview

- Overview of guiding principles
- Key design features
- Transitional arrangements
- Benefits of the proposed methodology
- Calculation examples

Guiding principles

- The calculation methodology should not lead to investment distortions on existing and new debt
  - concerns raised by SFG Consulting
- NSPs and consumers should not be exposed to windfall gains or losses due to a change in the calculation methodology for the return on debt
- *All* NSPs should have the opportunity to align their total cost of debt with the return on debt allowance

Problems with the current methodology

- Implies the use of an inefficient debt funding strategy that does not reflect how debt is managed by firms operating in competitive markets
  - length of the control period is arbitrary and distorts NSP debt management practices
- NSPs with large debt balances are exposed to significant pricing risks when attempting to reset their cost of debt over 5 to 40 *consecutive* days
- Consumers are exposed to volatile debt costs when estimates are formed over short time periods

Concerns raised by NSPs

- Interest rate swaps already in place to lock in a fixed base rate for the current control period
  - a sudden change to the calculation methodology may require these transactions to be closed out, thereby incurring windfall gains or losses
- Difficult / impossible to hedge a base rate that is calculated using a moving average of historical rates

Design features of QTC's proposal

- 10 year moving average of the 10 year *total* corporate cost of debt
  - base rate plus debt risk premium (DRP)
- AER continues to determine the methodology and data source used to calculate the spot values for the base rate and DRP
- The moving average is re-calculated quarterly and updated annually

Design features cont'd

- New borrowings are weight-averaged into the moving average based on the prevailing 10 year cost of debt on the assumed borrowing date
  - based on the annual debt profile in the PTRM, not the NSP's actual borrowings
- Further discussion on mechanical issues at the end of this presentation
  - Identified issues can be resolved

Transitional arrangements and gaming

- The potential for windfall gains (or ‘gaming’) is limited by the use of a transitional rule and PTRM data
- Windfall gains can arise if at the time of making a decision:
  - the party knows *some or all* of the interest rate data which is in the average cost of debt
  - *prevailing* actual funding cost is different
- Gaming does not occur where the party is taking a view regarding future rates

Transitional arrangements

- Each NSP could transition to the moving average during their *next* rate reset period
  - timing coincides with the maturity of the existing base rate swap hedges
  - no swap close-out costs
- Starting value for the moving average equals the average prevailing base rate and DRP during the next rate reset period
  - only uses forward-looking data

Transitional arrangements cont'd

- The first 40 observations in the moving average calculation will equal the average base rate and DRP during the next rate reset period
  - rates during the prior 10 years are not relevant
- The original rates will gradually fall out of the moving average calculation as the new prevailing rates are incorporated at the end of each quarter
  - each observation receives a 2.5% weighting

Benefits of the proposed methodology

- Starting value for the benchmark return on debt fully reflects prevailing rates during the next reset period
  - no investment distortions on existing debt
  - no opportunities for gaming by NSPs
- New borrowings are compensated based on prevailing rates on the assumed borrowing dates
  - no investment distortions on new debt
- Consumers protected against short-term volatility in the return on debt parameters

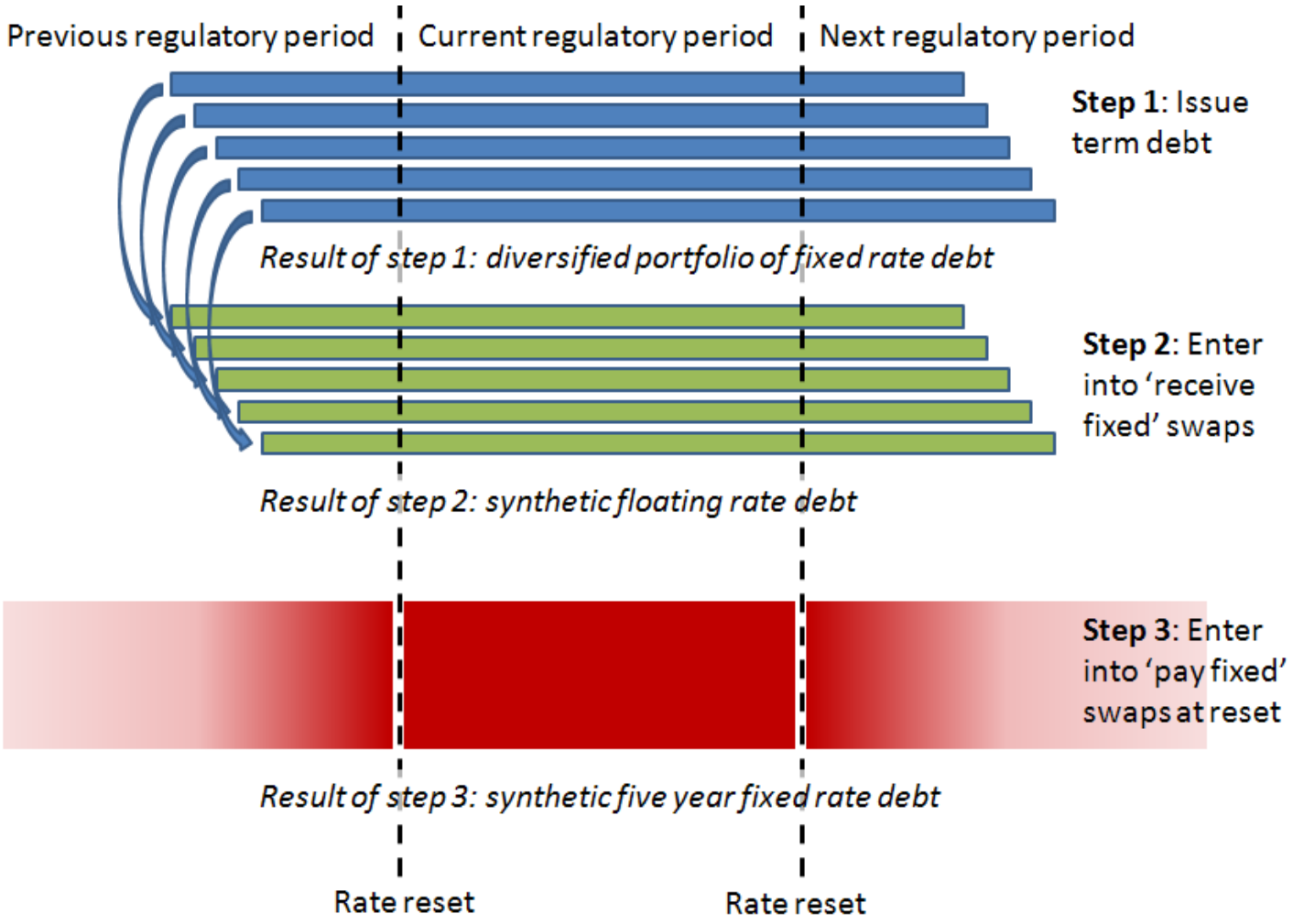
Benefits cont'd

- NSPs can hedge the base rate by entering into a portfolio of swaps during the next rate reset period with staggered maturity dates out to 10 years
  - replaces the current strategy of entering into a single 5 year swap during each rate reset period
  - some NSPs may use a portfolio of fixed rate debt
- Each maturing swap/bond is replaced with a new 10 year swap/bond at the prevailing rate
  - aligned with benchmark return on debt calculation

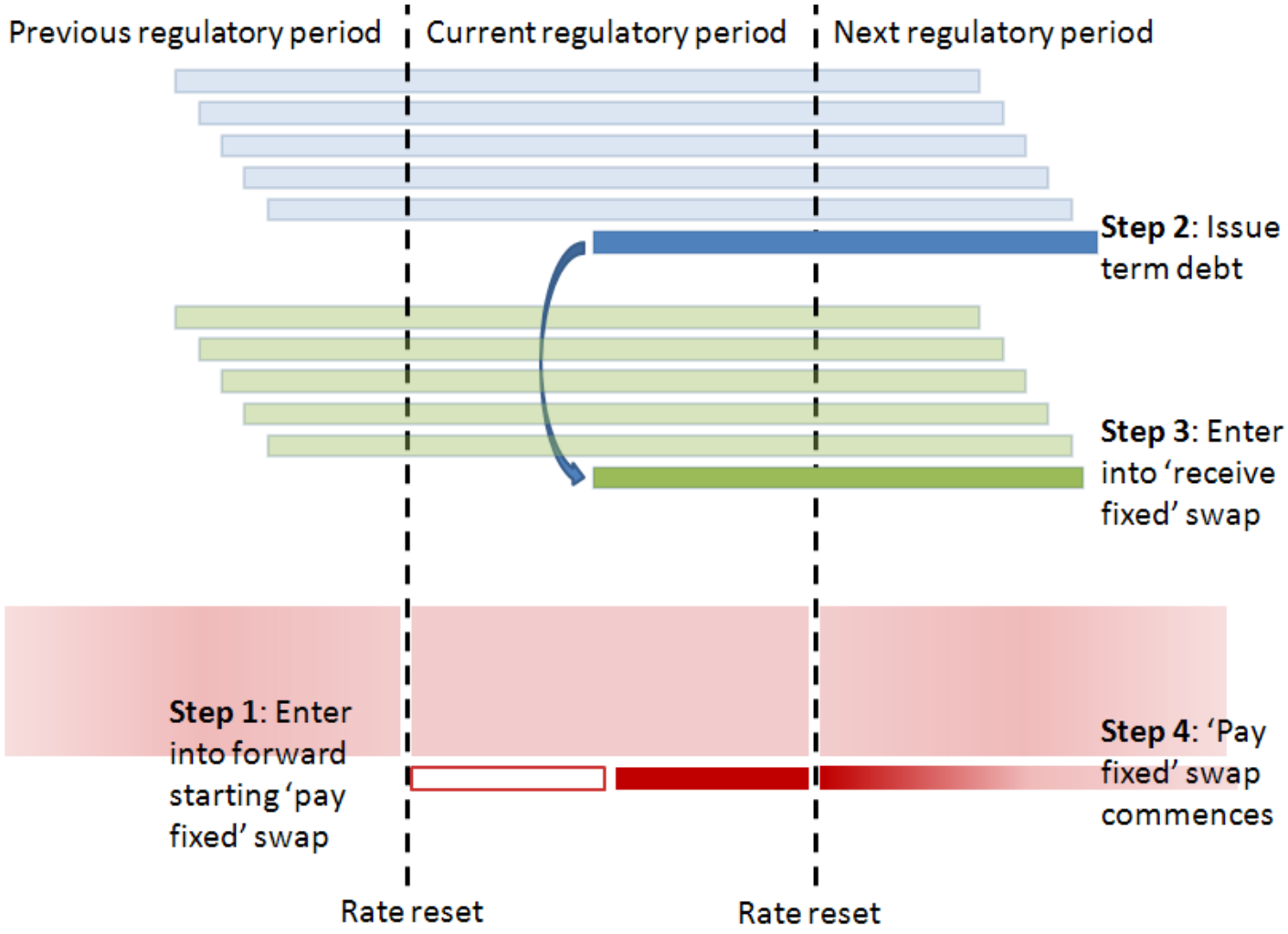
Benefits cont'd

- NSPs should be able to reduce their reliance on swaps to hedge the base rate on their debt portfolio
  - direct issuance of some 10 year fixed rate debt
  - potential reduction in transaction costs
- Particularly relevant given the implementation of the Basel III capital standards
  - likely to increase swap transaction costs

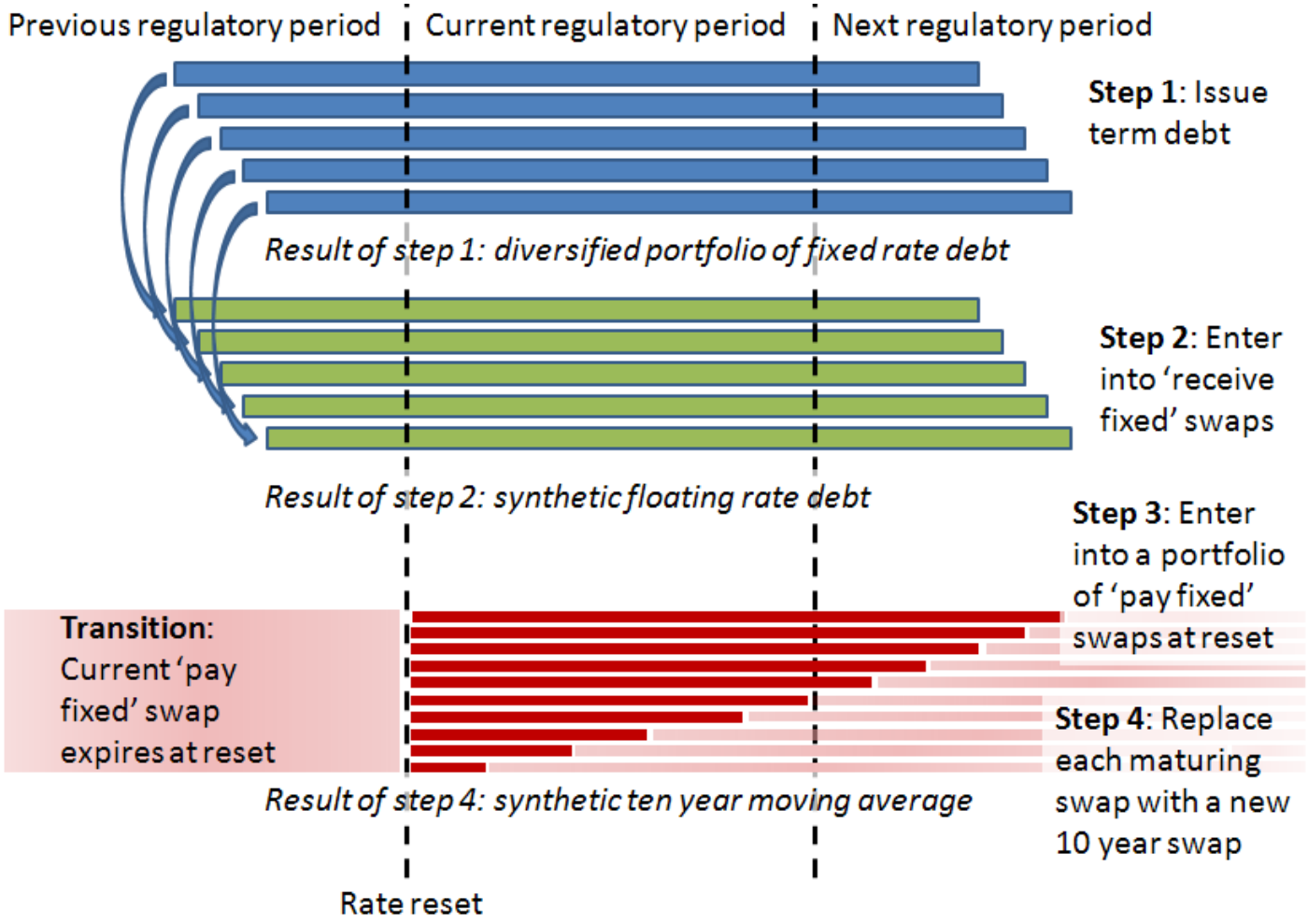
Current approach for hedging the base rate on existing borrowings



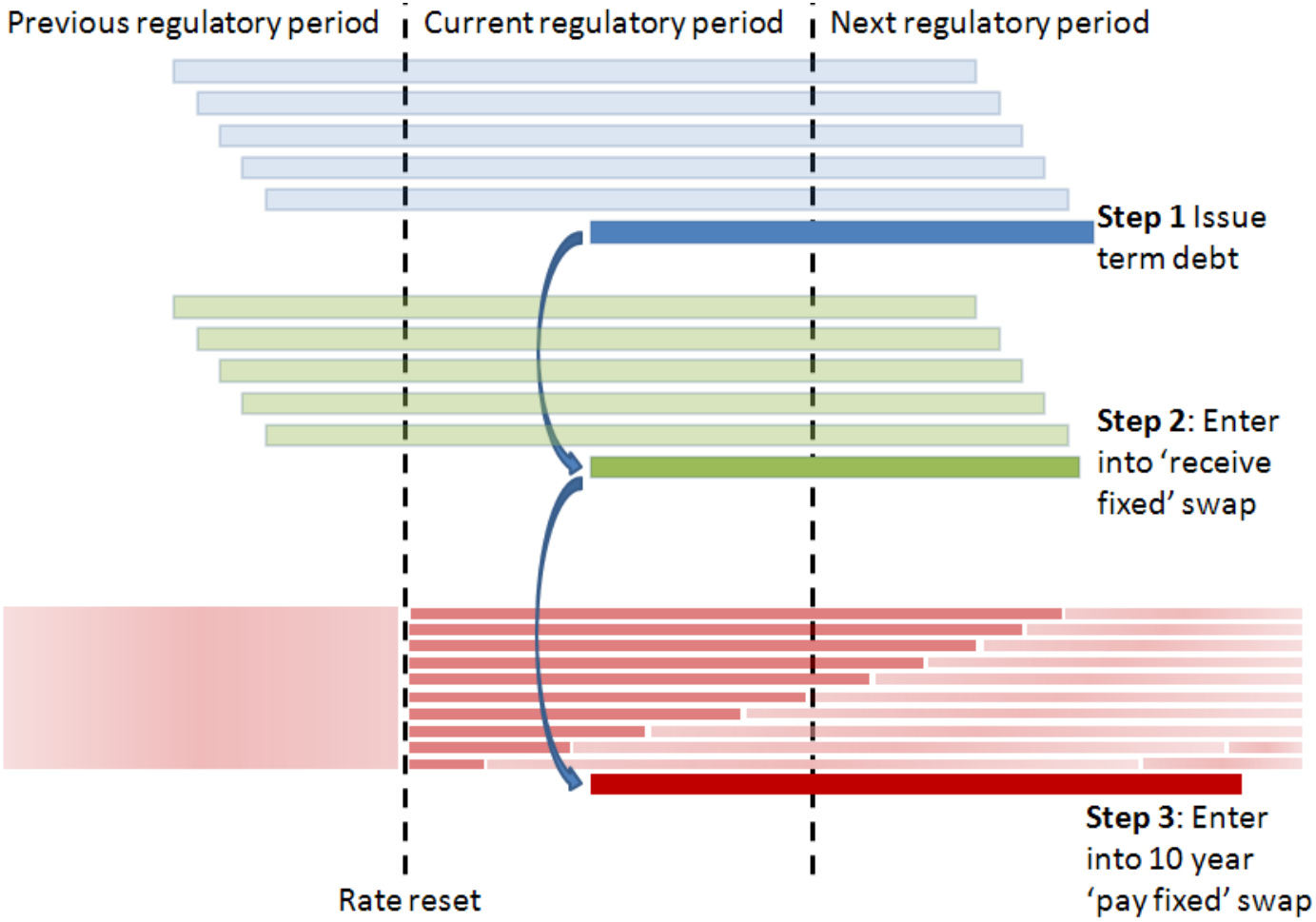
Current approach for hedging the base rate on new borrowings



Hedging the base rate on existing debt under the moving average model

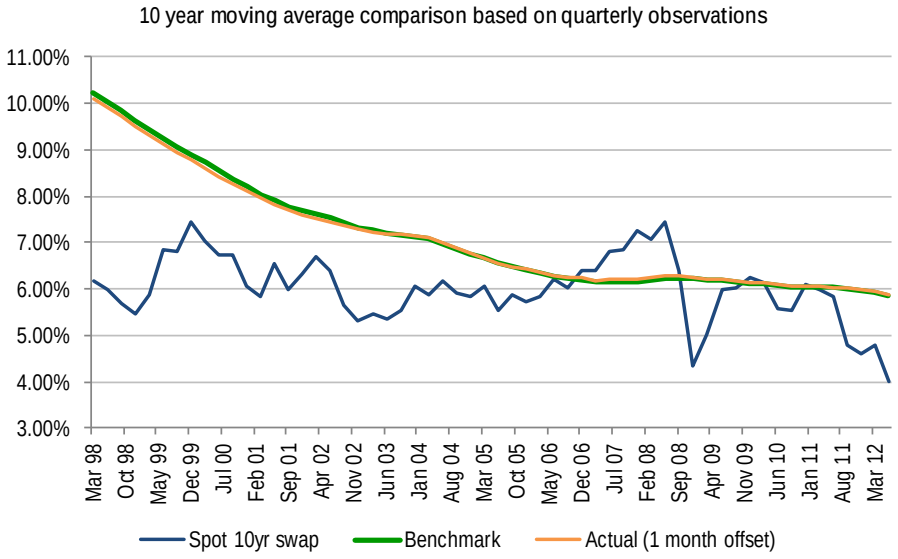


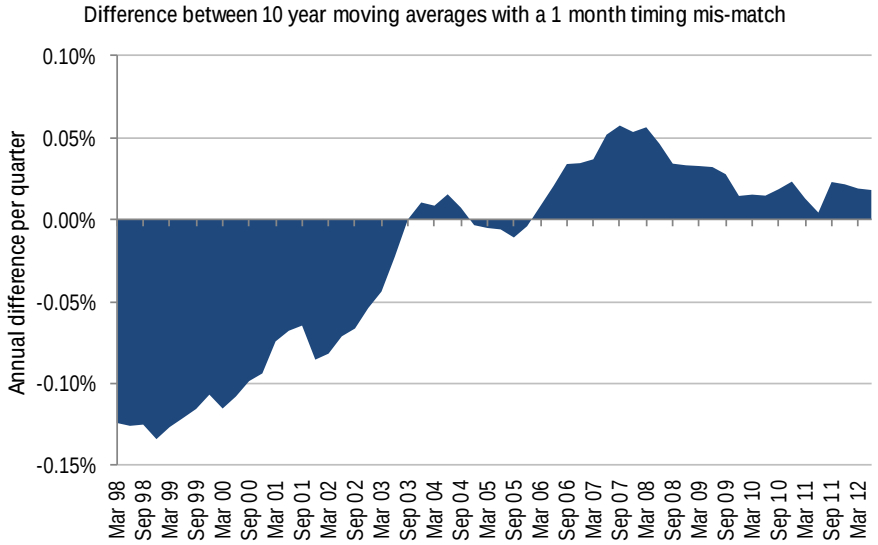
Hedging the base rate on new debt under the moving average model



Timing of hedging transactions

- Executing swap transactions on the measurement date provides closest match
- However, even a 1 month gap between hedging and measurement dates produces very small differences between actual and benchmark costs





Proposed mechanics – annual updating

- Revenue determination would be based on a ‘provisional’ WACC for each year assuming the cost of debt remained at spot rate
- Cost of debt would be updated each year based on quarterly observations
- Return on capital for each year would be re-calculated using actual WACC (pre-smoothing)
- Difference between provisional return on capital and actual return on capital would be a revenue adjustment
- Ten year averaging period will reduce variation

Annual updating of the WACC

- A 10 year moving average of the *total* return on debt will produce small annual changes for a given change in the spot return on debt
  - only 10% of the portfolio is re-priced based on spot rates each year
- CPI indexation has a much larger effect on revenues
  - last indexation was 0.9% lower than the figure assumed in the PTRM
- Increases accuracy of longer-term forecasting

Proposed mechanics – reviews

- Cost of debt methodology set out in revenue determination
  - methodology is still subject to review
- Need to achieve right balance regarding review rights for annual calculations
  - avoid full re-opening of methodology
  - maybe limit to material error or misapplication
- A dynamic ‘bond sample’ approach should still work
  - need to define sample in revenue determination
  - disputes over one or two bonds: immaterial impact

Changing the benchmark tenor

- Averaging period is based on a 10 year benchmark tenor
  - consistent with the efficient debt management strategy that would be used in the absence of regulatory distortions
- Debate over appropriate tenor (surprisingly) continues
- However, it is possible to change averaging period if benchmark tenor is changed
- For example, if shortened from 10 years to 8
  - would apply on a prospective basis from determination
  - revenue adjustment required for cost/benefit of closing out hedging for year 9
  - based on difference between historic and current rates for those years

Summary

- QTC's methodology addresses concerns raised by stakeholders regarding the practical application of a moving average-based return on debt
- Produces a forward-looking estimate for the return on debt that applies to existing and new debt, thereby removing investment distortions
- Consumers benefit from a more stable long-term price path that is not exposed to shocks
- NSPs can recover efficient debt costs