

STAFF PAPER

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Project	Rate-regulated Activities		
Paper topic	Discount rate		
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Purpose of this paper

1. The purpose of this paper is to recommend the discount rate to be used when measuring regulatory assets and regulatory liabilities.

Summary of recommendations

2. We have structured the analysis on the discount rates to be used according to the different regulatory timing differences¹ identified in paragraph 25. A summary of our recommendations is included below.
3. For regulatory timing differences that relate to items forming part of the regulatory operating expenditures (reg opex), we recommend that an entity should:
 - (a) use a discount rate that reflects compensation for the time value of money and uncertainty inherent in the cash flows; but
 - (b) when the regulatory interest rate or regulatory return rate provides an additional return above the compensation in (a), but the entity has no

¹ A regulatory timing difference is a timing difference that arises through the operation of the rate-adjustment mechanism when an entity fulfils service requirements in a different period than the period in which those service requirements are charged to customers through the regulated rate.

clear evidence that the excess relates to an identifiable transaction or event, discount the estimated cash flows arising from the regulatory timing difference at the regulatory interest or return rate.

4. For regulatory timing differences that relate to items forming part of the regulatory capital expenditures (reg capex), we recommend that an entity should discount the estimated future cash flows arising from the originating regulatory timing difference, excluding cash flows relating to the regulatory overall return, at a rate of zero per cent.
5. For regulatory timing differences that relate to expenses or income that will be included in/deducted from the future rate(s) when cash is paid/received by the entity, we recommend that an entity should:
 - (a) use the same discount rate that it uses when measuring the underlying liability or underlying asset; and
 - (b) adjust the measurement of the regulatory asset or regulatory liability to reflect any risks that are not present in the related underlying items.

Structure of the paper

6. This paper is structured as follows:
 - (a) discussions to date (paragraphs 8–20);
 - (b) background—types of regulatory timing differences (paragraphs 21–25);
 - (c) regulatory timing differences that relate to items forming part of the regulatory operating expenditures (paragraphs 26–36);
 - (d) regulatory timing differences that relate to items forming part of the regulatory capital expenditures (paragraphs 37–52); and
 - (e) regulatory timing differences that relate to expenses or income that will be included in/deducted from the future rate(s) when cash is paid/received (paragraphs 53–71).
7. The appendix to this paper includes requirements from IFRS 3 *Business Combinations* and IAS 37 *Provisions, Contingent Liabilities and Contingent*

Assets that are relevant to the analysis of regulatory timing differences mentioned in paragraph 6(e).

Discussions to date

A cash-flow-based measurement technique

8. The *Conceptual Framework for Financial Reporting* (the *Conceptual Framework*) distinguishes:
 - (a) a measurement basis—an identified feature—for example historical cost, fair value or fulfilment value—of an item being measured; from²
 - (b) a cash-flow-based measurement technique—a technique used when applying a measurement basis.³
9. At its May and July 2018 meetings,⁴ the Board tentatively decided the model for measuring regulatory assets and regulatory liabilities would use a cash-flow-based measurement technique, which would reflect discounted estimates of future cash flows arising from these assets or liabilities. That measurement technique would require entities to:
 - (a) update estimates of future cash flows if changes occur; and
 - (b) keep the discount rate established at initial recognition unchanged, unless the regulatory agreement changes the interest or return rate applicable to the future cash flows.
10. We do not repeat in this paper the discussion of whether the discount rate should be updated. As noted above, the Board has already reached a tentative decision on that point. Instead, this paper focuses on the characteristics of the discount rate, not on whether it is updated.

² Paragraph 6.1 of the *Conceptual Framework*.

³ Paragraph 6.91 of the *Conceptual Framework*.

⁴ Agenda Paper 9B discussed at the May 2018 Board meeting can be found: <https://www.ifrs.org/-/media/feature/meetings/2018/may/iasb/ap09b-rra.pdf>. Agenda Paper 9B discussed at the July 2018 Board meeting can be found: <https://www.ifrs.org/-/media/feature/meetings/2018/july/iasb/ap09b-rra.pdf>

11. We informed the Board in May 2018 that the measurement technique for regulatory assets and regulatory liabilities could be viewed as the application of either:
- (a) a historical cost measurement basis modified to update it for changes in estimates of future cash flows; or
 - (b) a current value measurement basis modified to use a historical discount rate.
12. We view those two descriptions as equivalent, and do not view one of them as preferable to the other. We plan to ask the Board to review a summary of the entire model in January 2019. When we do that, we will ask the Board whether a future Standard should specify one of those descriptions. In the meantime, at this meeting, we focus on the discount rate to be used in the cash-flow-based measurement technique we have been discussing.
13. Paragraph 6.43 of the *Conceptual Framework* states that ‘in selecting a measurement basis for an asset or liability and for the related income and expenses, it is necessary to consider the nature of the information that the measurement basis will produce in both the statement of financial position and the statement(s) of financial performance [...], as well as other factors.’ The other factors include relevance and faithful representation.
14. In our view, although that statement refers to the selection of a measurement basis, it is equally valid in the context of this paper, in which we are assessing which discount rate to use in the measurement technique already discussed by the Board. Thus, in the following paragraphs, when recommending the discount rate to use when measuring various types of regulatory timing differences, we consider the nature of information that the resulting measurement will produce, the relevance of that information, and whether a faithful representation is provided.

A ‘reasonable’ discount rate

15. At its July 2018 meeting, the Board tentatively decided to use a ‘reasonable’ discount rate and acknowledged that in many cases, the interest or return rate established in the regulatory agreement to compensate/charge the entity for the

time lag between the origination and reversal of the regulatory timing differences would be reasonable to use for discounting.

16. The Board also tentatively decided that if a regulatory agreement does not provide explicit compensation or charge for a regulatory timing difference, an entity should use judgement to determine whether the financing component of the timing difference is significant. If the entity concludes the financing component is not significant, discounting the future cash flows is not required. This situation may arise when, for example, there is a short time between the origination and reversal of the timing difference or when the prevailing market interest rates are low.⁵ If, alternatively, the financing component is significant, the Board tentatively decided that the entity should use a 'reasonable rate' to discount the estimated future cash flows and recognise any loss in profit or loss immediately.
17. Our views on the accounting for that event have not changed but we have decided not to continue using the term 'significant financing component' in this project because this term is also used in IFRS 15 *Revenue from Contracts with Customers*, but in a different context. IFRS 15 requires an entity to adjust the promised amount of consideration for the effects of the time value of money (and for risks inherent in the resulting cash flows) when the contract provides a financing service in addition to the promised goods or services transferred to the customer and the price reflects the separate financing service. The purpose of this adjustment is to recognise revenue that reflects the cash price a customer would have paid for the promised goods or services if the customer had paid immediately.
18. In contrast, this project focuses on regulatory timing differences. Such timing differences arise through the operation of the rate-adjustment mechanism, which is all about time lags between transactions or other events that determine the amount that an entity can charge its customers and the date when it can charge them. As a result, some degree of financing is always inherent in the rate-adjustment mechanism, whereas this is not necessarily the case for contracts with customers.

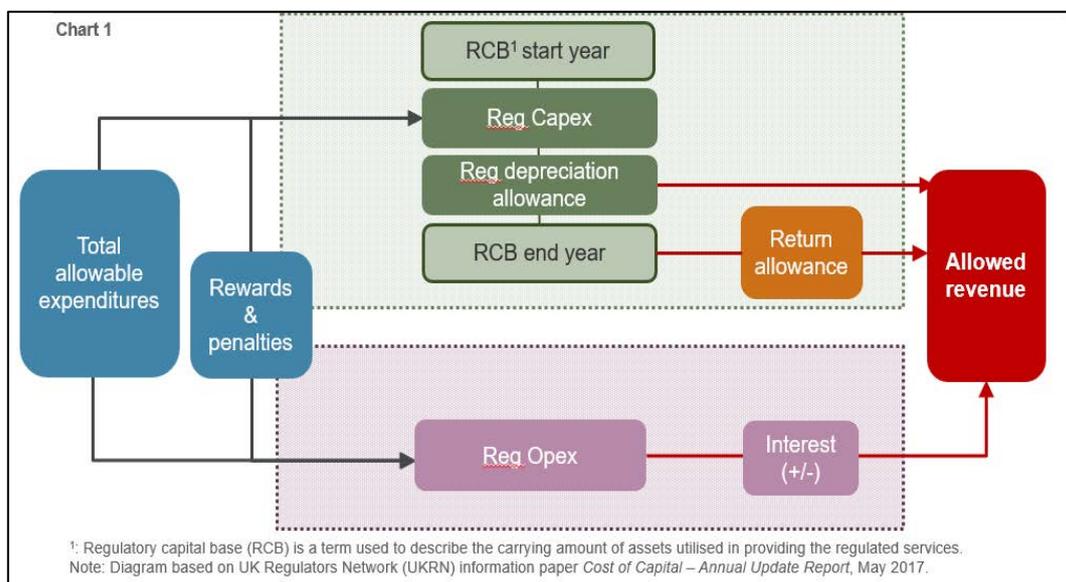
⁵ Notes to slide 22, Agenda Paper 9B, July 2018 Board meeting: <https://www.ifrs.org/-/media/feature/meetings/2018/july/iasb/ap09b-rra.pdf>.

19. At the same July 2018 meeting, the Board also tentatively decided that when the interest/return rate that an entity receives is above or below an appropriate compensation/charge for time value of money and for the uncertainty inherent in cash flows, the entity will need to assess whether the excess/shortfall is related to an identifiable transaction or event. If the entity:
- (a) has clear evidence that the excess/shortfall relates to an identifiable transaction or event, the entity would recognise the excess or shortfall as a gain or loss in the period in which that transaction or event occurs;
 - (b) in all other cases, the entity would recognise the excess or shortfall as income or expense over the periods in which the regulatory asset or regulatory liability is outstanding.
20. The Board asked the staff to develop guidance on factors to consider when determining a ‘reasonable rate’. This paper tackles this request by providing further analysis on what we consider to be an appropriate discount rate to use when measuring different regulatory timing differences. That analysis shows us that there is not a single answer for which discount rate provides the most relevant information in all cases (see paragraphs 26–71).

Background—types of regulatory timing differences

21. The Board discussed in May 2018 that the basis for setting the rate(s) typically enables a reasonably efficient entity:
- (a) to recover the cost of assets utilised and operating expenses incurred in providing regulated services; and
 - (b) to earn a return on the cost of assets utilised in providing regulated services.
22. The components (a) and (b) above form part of the ‘allowed revenue’. The ‘allowed revenue’ is used to calculate the rate (‘P’) based on estimated quantity (‘Q’). Consequently, the rate formula typically calculates the rate(s) using a ‘building block’ approach (see Chart 1).

23. This approach identifies the total expenditure that the entity is allowed to include within the regulated rate—such expenditure is then treated as:⁶
- ‘regulatory capital expenditure’ (reg capex), intended to pass through the rate over a longer period together with an allowed return on the cost of assets utilised in providing regulated services (green shadowed area in Chart 1); or
 - ‘regulatory operating expenditure’ (reg opex), intended to pass through the rate in the same period as the expenses are incurred with typically no interest rate or margin applied (lilac shadowed area in Chart 1).



24. Not all allowable expenditures pass through into the rate in the same period in which the expenditure is incurred. This leads to the ‘regulatory timing differences’ the accounting model being developed for defined rate regulation (the model) aims to account for.
25. For the purposes of recommending the discount rate to be used when measuring regulatory assets or regulatory liabilities, we distinguish between:
- regulatory timing differences that relate to items forming part of the regulatory operating expenditures (reg opex—see paragraphs 26–36); and

⁶ The bases used by the regulator for distinguishing capex from opex may differ from the bases used in IFRS Standards to distinguish between expenditure included in the cost of acquiring, constructing or enhancing assets and expenditure recognised as an expense in profit or loss when incurred.

- (b) regulatory timing differences that relate to items forming part of the regulatory capital base (RCB)—(reg capex—see paragraphs 37–52); and
- (c) regulatory timing differences that relate to expenses or income that will be included in/deducted from the future rate(s) when cash is paid/received (see paragraphs 53–71).

Regulatory timing differences that relate to items forming part of the regulatory operating expenditures

26. Reg opex are expenditures that are intended to pass through into the rate in the same period as the expenses are incurred with typically no interest rate or margin applied. However, in some cases, recovery of reg opex may not be passed through in the current period's rate. These regulatory timing differences are typically short- or medium-term.⁷ They may attract an interest/return rate.
27. The identification of an appropriate discount rate for this type of regulatory timing differences requires consideration of the characteristics of the cash flows that will result from those timing differences. In our view, an appropriate rate to use to discount the cash flows arising from this type of regulatory timing difference would reflect those characteristics.
28. There are two main components of such a discount rate:
- (a) compensation /charge for time value of money—this is typically represented by the interest/return rate on risk-free instruments that have maturities comparable to the period covered by the cash flows.
 - (b) risk premium to provide compensation for bearing uncertainty in the cash flows. As we have previously explained, the main such uncertainties are demand risk and credit risk, and both those risks are typically relatively low for regulatory assets and regulatory liabilities.
29. In the case of regulatory liabilities, the credit profile of the regulated entity could also be a risk generating uncertainty in the cash flows. Entities subject to defined

⁷ Short-term regulatory timing differences are generally recovered within 24 months. Medium-term regulatory timing differences are generally recovered within 2–5 years.

rate regulation are typically classified as low risk with strong credit ratings. As a result, they typically face low borrowing rates when obtaining short- and medium-term debt finance.

30. Due to the low risk environment and high credit rating of the entities, regulatory agreements tend to use a generic rate for both regulatory assets and regulatory liabilities that will reverse over similar periods, often close to corporate borrowing rates for financial instruments with similar maturities or rates that reflect the entity's incremental borrowing rate. We note that our expectation of low interest/return rates being applied to these regulatory timing differences is aligned to the interest/return rates that regulators typically apply to them.
31. In many cases, entities may be able to establish without undue cost and effort that the amounts recognised in the financial statements as a result of discounting using interest rates or return rates set by the regulator for such regulatory timing differences do not differ materially from the amounts that would result from using discount rates reflecting the characteristics of the cash flows arising from the regulatory assets and regulatory liabilities.

Accounting gains/losses when regulatory interest/return rate differs from a discount rate that reflects the characteristics of the regulatory asset or regulatory liability

32. As stated in paragraph 19, in July 2018, the Board already tentatively decided on the accounting for any excess/shortfall arising from the difference between the appropriate discount rate and the regulatory interest/return rate. As a result, our questions for the Board focus on our description of the appropriate discount rate to use when measuring regulatory assets or regulatory liabilities that relate to items forming part of the reg opex, rather than on the treatment of any excess/shortfall.
33. In some cases, the regulatory interest rate or regulatory return rate fails to provide sufficient compensation for the time value of money and for the risks inherent in the cash flows. In such cases, the shortfall reflects a partial disallowance of the originating regulatory asset. Consequently, the entity would discount the estimated cash flows using a discount rate that reflects the characteristics of the cash flows arising from the regulatory asset (paragraphs 26–31) and recognise the resulting loss immediately in profit or loss.

34. In other cases, the regulatory interest rate or regulatory return rate may provide an additional return but the entity has no clear evidence that the excess relates to an identifiable transaction or event. As a result, the entity would recognise the gain over the period in which the regulatory asset or regulatory liability is outstanding (paragraph 19(b)).⁸
35. In this case, we recommend that, when measuring the regulatory asset, the entity should include all the estimated cash flows reflecting both the recovery of the originating regulatory timing difference and the overall return provided by the regulatory interest rate or return rate. The entity should then discount those estimated cash flows at the same regulatory interest or return rate.
36. Although the overall discount rate does not reflect the characteristics of the regulatory asset and so is inconsistent with the general principle we seek to apply in the model, we consider the difference is unlikely to be material. Consequently, we think that any benefits of a higher degree of accuracy in the amounts recognised do not outweigh the related costs.

Questions for the Board

Regulatory timing differences that relate to items forming part of the reg opex

1. When measuring regulatory assets and regulatory liabilities that result from regulatory timing differences relating to items forming part of the regulatory operating expenditure, does the Board agree that the discount rates used should reflect compensation for the time value of money and uncertainty inherent in their resulting cash flows?
2. When the regulatory interest rate or regulatory return rate provides an additional return, but the entity has no clear evidence that the excess relates to an identifiable transaction or event, does the

⁸ This approach is similar to that required by paragraph B5.1.2A(b) of IFRS 9 *Financial Instruments*, which requires an entity to defer the difference between the fair value at initial recognition and the transaction price of a financial instrument when the fair value is not evidenced by a quoted market price in an active market.

Board agree that the entity should discount the estimated cash flows arising from the regulatory timing difference at the regulatory interest or return rate?

Regulatory timing differences that relate to items forming part of the regulatory capital base (RCB)

37. As noted in paragraph 23, the RCB represents amounts invested in assets utilised in providing regulated goods and services on which the regulatory agreement provides a return. This return is typically a key element to achieve the regulator's objectives.⁹ Consequently, the overall return provides the entity with compensation for:
- (a) the time value of money and for costs of bearing the uncertainty inherent in the cash flows relating to the assets or liabilities within the RCB.
 - (b) fulfilling the regulatory objectives (ie compensation for 'other factors'). This component of the overall return is intended to support the entity's ongoing rate-regulated activities, including incentivising continuous investment and protecting the financial viability of the entity.
38. When the regulatory agreement uses the rate-adjustment mechanism to adjust the carrying amount of the RCB, those adjustments, in turn, affect the total return that the entity is permitted to charge in future periods.
39. The overall return rate that the regulatory agreement provides on the RCB is typically based on the regulator's estimate of the entity's weighted average cost of capital (WACC). Such a rate is:
- (a) a blended aggregate rate for the whole RCB—it is not tailored to reflect the characteristics of any individual assets or liabilities within the RCB; and

⁹ At its document '*Financeability and financing the asset base – a discussion paper*' published in 2010, Ofwat, the regulator of the water sector in England and Wales, showed that 'return on capital' represented approximately 26.8 per cent of the revenue requirement for 2010-2015.

- (b) it is typically higher than an interest rate that reflects the characteristics of the cash flows arising from any regulatory asset or regulatory liability resulting from a regulatory timing difference that relates to items forming part of the RCB.

40. We consider an example based on the following fact pattern:

- (a) An entity incurs CU100 of expenses during the period X0, which it recognises as an expense in profit or loss, applying IFRS Standards.¹⁰
- (b) The regulatory agreement identifies the CU100 as an allowable expenditure, which is added to the RCB at the end of X0. As a result, the CU100 is identified as a regulatory timing difference that the model would recognise as a regulatory asset.
- (c) The entity will include an additional CU20 in the amount charged to customers in each of the next five years—X1 through X5.
- (d) The regulatory agreement provides an annual overall return rate of 8% on the opening balance of RCB. The 8% for each year is included in the rate billed to customers in that year.
- (e) For the purposes of this illustrative example, an interest rate of 3% would reflect the time value of money and risks inherent in cash flows arising from the regulatory asset.

41. As a result of adding the regulatory asset to the RCB, the entity will receive, through the rate charged to customers in X1-X5, additional cash inflows of CU124 (see Table 1). If this amount was to be analysed into its separate components:

- (a) CU100 represents the recovery of the originating regulatory timing difference (regulatory asset);
- (b) CU9 represents the compensation (at 3%) for the time lag between origination and recovery of the regulatory timing difference; and
- (c) the remaining CU15 represents the compensation (at 5% = 8% - 3%) associated with the overall return applicable to the entity's rate-

¹⁰ In this Agenda Paper, currency amounts are denominated in 'currency units' (CU).

regulated activities; ie the additional return that compensates the entity for fulfilling regulatory objectives.

Table 1 - Recovery of regulatory asset with billing of regulatory return in same period it accrues

Regulatory asset	X0	X1	X2	X3	X4	X5	TOTAL
Starting balance	-	100.00	80.00	60.00	40.00	20.00	-
Originating regulatory timing difference	100.00	-	-	-	-	-	100.00
Overall return at 8% on starting balance	-	8.00	6.40	4.80	3.20	1.60	24.00
Recovery through revenue (see below)	-	(28.00)	(26.40)	(24.80)	(23.20)	(21.60)	(124.00)
Ending balance	100.00	80.00	60.00	40.00	20.00	0.00	-
Revenue		X1	X2	X3	X4	X5	TOTAL
Revenue comprises:							
Recovery of regulatory asset		20.00	20.00	20.00	20.00	20.00	100.00
Compensation for time value of money and risks inherent in the cash flows (regulatory interest at 3%)		3.00	2.40	1.80	1.20	0.60	9.00
Additional return—compensation for additional factors (at 5%)		5.00	4.00	3.00	2.00	1.00	15.00
Revenue (including overall return of 8%)		28.00	26.40	24.80	23.20	21.60	124
Recognition of regulatory return	-	24 (ie 9 for 3% + 15 for 5%)					24

42. We acknowledge that the amount of CU15 is additional return above the amount required to compensate the entity for time value of money and the risks inherent in the cash flows arising from the regulatory asset. That amount arises as a result of the transaction or other event that gave rise to the origination of the regulatory timing difference. Consequently, we can understand why some would support recognising this as a ‘day 1 gain’ during X0.

43. However, we see little or no benefit to users of financial statements in recognising that day 1 gain. As noted above, the return rate applicable to the RCB is intended to compensate the entity for its overall rate-regulated activities—ie it provides the entity with the overall profitability it is entitled to through the regulatory agreement. Regulatory timing differences contribute a relatively small portion of the overall RCB carrying amount, which comprises primarily amounts relating to infrastructure assets (ie property, plant and equipment). The return on the rest of the RCB (ie the portion of the RCB not arising from regulatory timing differences) is appropriately recognised in profit or loss when it is included in amounts chargeable to customers using IFRS 15. Consequently, we think that treating a small portion of this overall return differently would result in financial information that would be difficult for users of financial statements to understand.

Approaches to measuring the regulatory asset (or regulatory liability)

44. Having concluded that the additional return that compensates the entity for its overall rate-regulated activities should be recognised as it is charged to customers (and thus recognised in revenue by applying IFRS 15), we identified three possible approaches that could provide useful and understandable information to users of financial statements:
- (a) Approach 1: include only the estimated cash flows (CU109) needed for recovery of the originating regulatory asset together with an interest rate reflecting the time value of money and the risks inherent in the cash flows and discount at the rate that reflects compensation for only those characteristics (3%). Any excess reflecting the compensation for other factors (5%) is recognised in profit or loss as it is included in revenue, ie included in the rate charged to customers.
 - (b) Approach 2: include all the estimated cash flows reflecting both recovery of the originating regulatory timing difference and the overall return (CU124) and discount at the regulatory overall return rate (8%).
 - (c) Approach 3: include only the estimated cash flows reflecting the originating regulatory timing difference (CU100) and discount at 0%—ie exclude the cash flows reflecting the overall return (CU24) and recognise it in profit or loss as it is included in revenue, ie included in the rate charged to customers.
45. The three approaches lead to similar measures for the regulatory asset because the regulatory return is typically billed in the period in which it accumulates for regulatory purposes and in which it would accrue if it were being added to the balance as interest with the passage of time. However, as shown in Table 2, they differ in what they report as the amount of unwinding of the discount (regulatory interest or regulatory return) and the reversal of the regulatory timing difference.¹¹ In Table 2, the label ‘regulatory interest’ is used to reflect compensation for time

¹¹ In line with the Board’s tentative decisions in November 2018 on presentation, an entity would present these items in the same line item.

value of money and uncertainty inherent in the cash flows (the 3% in the example) and the label 'regulatory return' is used for the overall return discussed above (8% in the example).

Table 2 - comparison of approaches 1-3, period interest/ return accrual is same as billing							
Approach 1							
Profit or loss	X0	X1	X2	X3	X4	X5	TOTAL
Revenue (including overall return of 8%)	-	28.00	26.40	24.80	23.20	21.60	124.00
Reg income/(expense)	100.00						100.00
Recovery of regulatory asset including interest		(23.00)	(22.40)	(21.80)	(21.20)	(20.60)	(109.00)
'Regulatory interest' at 3%		3.00	2.40	1.80	1.20	0.60	9.00
Expenses	(100)	-	-	-	-	-	(100.00)
Profit/(loss)	-	8.00	6.40	4.80	3.20	1.60	24
Approach 2							
Profit or loss	X0	X1	X2	X3	X4	X5	TOTAL
Revenue (including overall return of 8%)	-	28.00	26.40	24.80	23.20	21.60	124.00
Reg income/(expense)	100.00						100.00
Recovery of regulatory asset including return		(28.00)	(26.40)	(24.80)	(23.20)	(21.60)	(124.00)
'Regulatory return' at 8%		8.00	6.40	4.80	3.20	1.60	24.00
Expenses	(100)	-	-	-	-	-	(100.00)
Profit/(loss)	-	8.00	6.40	4.80	3.20	1.60	24
Approach 3							
Profit or loss	X0	X1	X2	X3	X4	X5	TOTAL
Revenue (including overall return of 8%)	-	28.00	26.40	24.80	23.20	21.60	124.00
Reg income/(expense)	100.00						100.00
Recovery of regulatory asset		(20.00)	(20.00)	(20.00)	(20.00)	(20.00)	(100.00)
'Regulatory interest or return'		-	-	-	-	-	-
Expenses	(100)	-	-	-	-	-	(100.00)
Profit/(loss)	-	8.00	6.40	4.80	3.20	1.60	24

46. In some cases, there may be a gap between the period in which the return accumulates for regulatory purposes (or in which it would accrue if it were being added to the balance as interest with the passage of time) and the period when it is included in the rate charged to customers. In such cases, the three approaches produce slightly different results, as shown in Table 3.
47. Consider the same example as in Table 2, except that the entity has the right to include the overall return in the rate in periods X2-X6, instead of X1-X5. In this example, assume that the regulatory agreement provides no additional compensation for the short time lag. As a result, the total amount of the cash flows remains at CU124, of which CU100 continues to reflect the recovery of the originating timing difference and CU24 relates to the overall return of 8%.¹²

¹² The table does not reflect the small present value effect caused by the delay in billing the CU24.

Table 3 - comparison of approaches 1-3, period interest/ return accrual is different from billing (billing is one year later)								
Approach 1								
Profit or loss	X0	X1	X2	X3	X4	X5	X6	TOTAL
Revenue (including overall return of 8%)	-	20.00	28.00	26.40	24.80	23.20	1.60	124.00
Reg income/(expense)	100.00							100.00
Recovery of regulatory asset including interest		(20.00)	(23.00)	(22.40)	(21.80)	(21.20)	(0.60)	(109.00)
'Regulatory interest' at 3%		3.00	2.40	1.80	1.20	0.60		9.00
Expenses	(100)	-	-	-	-	-	-	(100.00)
Profit/(loss)	-	3.00	7.40	5.80	4.20	2.60	1.00	24
Approach 2								
Profit or loss	X0	X1	X2	X3	X4	X5	X6	TOTAL
Revenue (including overall return of 8%)	-	20.00	28.00	26.40	24.80	23.20	1.60	124.00
Reg income/(expense)	100.00							100.00
Recovery of regulatory asset including return		(20.00)	(28.00)	(26.40)	(24.80)	(23.20)	(1.60)	(124.00)
'Regulatory return' at 8%		8.00	6.40	4.80	3.20	1.60		24.00
Expenses	(100)	-	-	-	-	-	-	(100.00)
Profit/(loss)	-	8.00	6.40	4.80	3.20	1.60	0.00	24
Approach 3								
Profit or loss	X0	X1	X2	X3	X4	X5	X6	TOTAL
Revenue (including overall return of 8%)	-	20.00	28.00	26.40	24.80	23.20	1.60	124.00
Reg income/(expense)	100.00							100.00
Recovery of regulatory asset		(20.00)	(20.00)	(20.00)	(20.00)	(20.00)	-	(100.00)
'Regulatory interest or return'		-	-	-	-	-	-	-
Expenses	(100)	-	-	-	-	-	-	(100.00)
Profit/(loss)	-	0.00	8.00	6.40	4.80	3.20	1.60	24

Advantages and disadvantages of the three approaches

48. In the following paragraphs we summarise the advantages and disadvantages we see in each approach before recommending Approach 3.
49. Approach 1 is consistent with the Board's tentative decision to use a discounted cash flow model. This approach also gives some consistency with the reporting of interest on other assets, such as contract asset and receivables because, irrespective of the timing of the billing, it accrues compensation for the time value of money and for the risks inherent in the cash flows throughout the period that those cash flows are outstanding. However, this approach is the most complex and requires an entity to assess what is the appropriate interest rate to provide compensation for the time value of money and the uncertainty inherent in the cash flows. We think that the additional information provided by this approach provides little or no benefit to users of financial statements because the additional information is not likely to be relevant to users. We understand that users view the return applicable to the RCB as a single package, in the same way the regulator views the RCB and the related return on the RCB as a single package.

50. Approach 2 is simpler than Approach 1 and would result in the same outcome as Approach 1 when the overall return is billed within the same period it accumulates for regulatory purposes (and in which it would accrue if it were being added to the balance as interest with the passage of time). The approach is also consistent with using a discounted cash flow model and recognises that the additional return is generated because the regulatory asset was added to the RCB. It is also consistent with the ‘single package’ view of the overall return. However, the overall discount rate does not reflect the characteristics of the regulatory asset and so is inconsistent with the general principle we seek to apply in the model and indeed in other cash-flow-based measurement techniques.
51. Approach 3 is simpler than Approach 1 and Approach 2. It would also result in the same outcome as Approaches 1 and 2 when the overall return is billed within the same period it accumulates for regulatory purposes (and in which it would accrue if it were being added to the balance as interest with the passage of time). This approach is also consistent with the single package view of the overall return. For those cases when the overall return is billed in a later period than the period in which it accumulates, we consider the difference between Approach 3 and Approach 1 is unlikely to be material. Consequently, we think that any benefits of a higher degree of accuracy in the amounts recognised do not outweigh the related costs.
52. On balance, we recommend that the model uses Approach 3 to provide users with useful and understandable information.

Question for the Board

Regulatory timing differences that relate to items forming part of the reg capex

3. When measuring regulatory assets and regulatory liabilities that result from regulatory timing differences relating to items forming part of the RCB, does the Board agree that the entity should include only the estimated cash flows reflecting the originating regulatory timing difference and discount at 0%—ie exclude the

cash flows reflecting the regulatory overall return and recognise that overall return in profit or loss as it is included in revenue, ie included in the rate charged to customers (Approach 3 in paragraph 44)?

Regulatory timing differences that relate to expenses or income that will be included in/deducted from the future rate(s) when cash is paid/received

53. Some regulatory timing differences arise when an entity recognises an expense or income in the current period, but the regulatory agreement will not include that item in ‘allowable expenditures’ until a future period when the entity pays or receives the related cash. Example of items sometimes treated in this way are pension costs, deferred taxation, asset retirement obligations, environmental clean-up provisions and derivatives used for hedging. In many such cases, the related liability or asset is measured explicitly or implicitly on a present value basis in accordance with IFRS Standards.
54. In such circumstances, because the regulatory agreement deals with these items on a cash basis, the regulator does not provide the entity with a separate explicit interest/return rate to compensate it for the time-lag between the recognition of the expense or income in the financial statements, which coincides with the recognition of the related regulatory asset or regulatory liability, and the payment or receipt of cash for those items of expense or income. Nevertheless, there is implicit interest. The following paragraphs discuss what rate should be used when discounting the estimates of future cash flows arising from the related regulatory assets or regulatory liabilities.

Appropriate discount rate

55. The fact that the rate-adjustment mechanism gives an entity the right (or obligation) to pass some of its expenses (or income) through the billings to customers is not different, in our view, from indemnifications or reimbursements. Both IFRS 3 *Business Combinations* and IAS 37 *Provisions, Contingent Liabilities and Contingent Assets* deal with the accounting for these items (see related paragraphs in the Appendix).

56. Paragraph 27 of IFRS 3 includes an example in which a seller indemnifies an acquirer against losses above a specified amount on a liability arising from a particular contingency (the indemnified item). As a result, the acquirer obtains an indemnification asset. IFRS 3 requires the acquirer to recognise that indemnification asset at the same time that it recognises the indemnified item and to measure it on the same basis as the indemnified item, subject to the need for a valuation allowance for uncollectible amounts.
57. IAS 37 does not provide such detailed guidance in this area but requires (in paragraph 53) that the amount recognised for a reimbursement should not exceed the amount of the provision.
58. We think a regulatory asset is similar in character to an indemnification or reimbursement asset, which suggests that it is appropriate to account for it in the same way, ie recognise the regulatory asset when recognising the liability being reimbursed or indemnified and measure it on the same basis. Thus, the discount rate used when accounting for those costs would also be used when measuring the related regulatory asset or regulatory liability. That is appropriate because the future cash flows of the regulatory asset or regulatory liability are a replica of the estimated future cash flows of the underlying items and are subject to the same risks.
59. We think these views are aligned to paragraph 6.58 of the *Conceptual Framework*, which states:

6.58 When assets and liabilities are related in some way, using different measurement bases for those assets and liabilities can create a measurement inconsistency (accounting mismatch). If financial statements contain measurement inconsistencies, those financial statements may not faithfully represent some aspects of the entity's financial position and financial performance. Consequently, in some circumstances, using the same measurement basis for related assets and liabilities may provide users of financial statements with information that is more useful than the information that would result from using different measurement bases. This may be particularly likely when

the cash flows from one asset or liability are directly linked to the cash flows from another asset or liability.

60. As noted in paragraph 56, IFRS 3 requires an adjustment to the measurement of an indemnification asset to reflect management's assessment of uncollectible amounts. Applying the same principle, we consider that if the regulatory assets and regulatory liabilities are subject to other risks—such as demand risk or credit risk—that do not affect the underlying items, we recommend that when measuring the related regulatory assets or regulatory liabilities, an entity should:
- (a) include its estimate of the effect of those risks in the estimates of the cash flows from the regulatory asset or regulatory liability; and
 - (b) adjust the discount rate to reflect the price for bearing the uncertainty that the ultimate outcome of those risks may differ from the effect included in the estimated cash flows.¹³
61. Paragraphs 62–68 include the example of an environmental clean-up liability to illustrate this type of regulatory timing differences.

Environmental clean-up provision

62. Assume an entity (Entity A) recognises an environmental provision in X0 for clean-up costs it will need to incur in X20. Entity A estimates that in X20 it will incur clean-up costs amounting to CU1,000. Entity A discounts the total estimated costs of CU1,000 using a discount rate of 2.5%, recognising a liability amounting to CU610 at the end of X0 (Figure 1).

Figure 1						
IFRS balances (in CU)	X0	X1	X2	...	X19	X20
Environmental liability - starting balance	-	610	626	...	952	976
Environmental costs	610	-	-	...	-	-
Unwinding of discount	-	15	16	...	24	24
Cash payment	-	-	-	...	-	(1,000)
Environmental liability - closing balance	610	626	641	...	976	-

63. According to the regulatory agreement, environmental clean-up costs are an allowable expenditure. However, the regulatory agreement does not allow

¹³ See paragraph 6.94 of the *Conceptual Framework* for a discussion of the distinction between a central estimate of future cash flows and the price for bearing the uncertainty that the ultimate outcome may differ from the central estimate.

Entity A to include the environmental clean-up costs in the rate billed to customers until Entity A carries out the related cash disbursements (ie until X20). The regulatory agreement gives Entity A the right to recover the environmental clean-up costs in equal instalments over a period of two years from the date of payment (ie during years X21 and X22) by adding them to the regulatory capital base at the beginning of that period and providing a return on the outstanding amounts at the beginning of each year during that period (Figure 2). For simplicity, the example assumes that the regulatory asset is not subject to any additional risks not present in the environmental clean-up provision.

Figure 2					
Regulatory balances (in CU)	X0	...	X20	X21	X22
Regulatory Capital Base (RCB) - starting balance	-	-	-	1,000	500
Environmental costs	-	-	1,000	-	-
Regulatory recovery	-	-	-	(500)	(500)
Regulatory Capital Base (RCB) - ending balance	-	-	1,000	500	-

64. In X0, Entity A recognises a regulatory asset for the same amount as the environmental liability because, as previously mentioned, according to the regulatory agreement those costs are allowed to be recovered through billings to customers. As it can be inferred, when measuring the related regulatory asset, Entity A uses as a discount rate the same rate of 2.5% that it uses when discounting the expected environmental clean-up costs to account for the environmental liability at X0.
65. We think that using the same discount rate for both the environmental clean-up provision and the regulatory asset is appropriate because:
- (a) the expenditures expected to be incurred in X20 coincide with the amount (cash flows) that Entity A will be entitled to include in the rate through billings to customers (the regulatory asset)—(ie the cash flows of both items exactly match);
 - (b) the environmental clean-up provision and the related regulatory asset are subject to the same risks. Using the same discount rate for them provides users of financial statements with relevant and understandable information that faithfully represents the relationship between this liability and the regulatory asset; and

(c) in this example, there are no other risks inherent in the cash flows of the related regulatory asset that are not present in the environmental clean-up provision.

66. The fact that Entity A expects to recover the clean-up costs during the following two years (ie during X21 and X22) after it incurred the costs does not alter the conclusion in paragraph 65. This is because Entity A has the right to receive adequate compensation for the time-lag between origination and recovery.
67. During X1–X20, Entity A unwinds the discount and recognises interest expense increasing the environmental provision by the same amount. During the same period, the movement of the related regulatory asset mirrors the accounting of the environmental liability. This is shown in Figures 3 and 4.

IFRS Profit or loss (in CU)	X0	X1	...	X20	X21	X22	Total
Revenue	-	-		-	525	513	1,038
Regulatory income/(expense)	610	15	...	24	(500)	(500)	-
Environmental expense	(610)	-	...	-	-	-	(610)
Financial cost	-	(15)	...	(24)	-	-	(390)
Profit/(loss)	-	-	...	-	25	13	37

IFRS Financial position (in CU)	X0	X1	...	X20	X21	X22
Assets						
Regulatory asset	610	626	...	1,000	500	-
Liabilities						
Environmental provision	610	626	...	-	-	-

68. During X21–X22, Entity A includes in the rates charged to customers the environmental costs it paid in X20. The regulator further compensates the entity for the time-lag between the payment of the environmental clean-up costs and their subsequent recovery through the rates, by allowing a regulatory interest rate of 2.5% on the balance of the regulatory asset outstanding at the beginning of each year. This regulatory interest is included in the rates charged to customers within the same year(s) as the year(s) that the return accumulates for regulatory purposes (ie it is accrued and billed during the same period). In X20, the entity concludes that the 2.5% regulatory interest rate provides the entity adequate compensation for time value of money and costs for bearing uncertainty inherent in the cash flows. Thus, the entity considers the 2.5% regulatory rate is an appropriate rate to use to discount the expected cash flows from the regulatory asset.

Items for which the discount rate is zero per cent

69. Our views on using the same measurement basis and discount rate used when the entity accounts for the costs/income it is allowed/obliged to recover/pass through when measuring the related regulatory asset or regulatory liability (paragraph 58) extend to cases when the discount rate used to account for the underlying items is zero. One example when this occurs is when the regulatory agreement allows/obliges the entity to pass income taxes through into the rate(s) charged to customers but ignores deferred tax liabilities and deferred tax assets recognised in the financial statements.
70. In accordance with paragraph 53 of IAS 12 *Income Taxes*, deferred tax assets and liabilities are not discounted.¹⁴
71. We therefore think that any regulatory asset or regulatory liability related to deferred taxes should not be discounted either. Permitting or requiring discounting of the regulatory asset or regulatory liability relating to deferred tax would result in:
- (a) an accounting mismatch between the measurement of the tax related items and the measurement of their related reimbursements through the rates (ie regulatory asset) or deductions passed to customers through the rates (ie regulatory liability);
 - (b) added complexity that would not result in providing users of the financial statements with useful information.

¹⁴ Paragraph 54 of IAS 12 provides the rationale for this requirement.

Questions for the Board**Regulatory timing differences that relate to expenses or income that will be included in/deducted from the future rate(s) when cash is paid/received**

4. For regulatory timing differences that relate to expenses or income that will be included in/deducted from the future rate(s) when cash is paid/received, does the Board agree that an entity should use the same discount rate to measure the regulatory asset or regulatory liability as the discount rate it uses to measure the underlying liability or underlying asset?
5. In some cases, the regulatory asset or regulatory liability may be subject to risks—such as credit risk or demand risk—that are not present in the underlying item. Does the Board agree that an entity should:
 - (a) include its estimate of the effect of those risks in the estimates of the cash flows from the regulatory asset or regulatory liability; and
 - (b) adjust the discount rate to reflect the price for bearing the uncertainty that the ultimate outcome of those risks may differ from the effect included in the estimated cash flows?

APPENDIX

A1. This appendix includes requirements from IFRS 3 and IAS 37 that are relevant for the analysis in paragraphs 53–71 of this paper.

IFRS 3 *Business Combinations*

Indemnification assets

- 27 The seller in a business combination may contractually indemnify the acquirer for the outcome of a contingency or uncertainty related to all or part of a specific asset or liability. For example, the seller may indemnify the acquirer against losses above a specified amount on a liability arising from a particular contingency; in other words, the seller will guarantee that the acquirer's liability will not exceed a specified amount. As a result, the acquirer obtains an indemnification asset. The acquirer shall recognise an indemnification asset at the same time that it recognises the indemnified item measured on the same basis as the indemnified item, subject to the need for a valuation allowance for uncollectible amounts. Therefore, if the indemnification relates to an asset or a liability that is recognised at the acquisition date and measured at its acquisition-date fair value, the acquirer shall recognise the indemnification asset at the acquisition date measured at its acquisition-date fair value. For an indemnification asset measured at fair value, the effects of uncertainty about future cash flows because of collectibility considerations are included in the fair value measure and a separate valuation allowance is not necessary (paragraph B41 provides related application guidance).
- 28 In some circumstances, the indemnification may relate to an asset or a liability that is an exception to the recognition or measurement principles. For example, an indemnification may relate to a contingent liability that is not recognised at the acquisition date because its fair value is not reliably measurable at that date. Alternatively, an indemnification may relate to an asset or a liability, for example, one that results from an employee benefit, that is measured on a basis other than acquisition-date fair value. In those circumstances, the indemnification asset shall be

recognised and measured using assumptions consistent with those used to measure the indemnified item, subject to management's assessment of the collectibility of the indemnification asset and any contractual limitations on the indemnified amount. Paragraph 57 provides guidance on the subsequent accounting for an indemnification asset.

Subsequent measurement and accounting

Indemnification assets

- 57 At the end of each subsequent reporting period, the acquirer shall measure an indemnification asset that was recognised at the acquisition date on the same basis as the indemnified liability or asset, subject to any contractual limitations on its amount and, for an indemnification asset that is not subsequently measured at its fair value, management's assessment of the collectibility of the indemnification asset. The acquirer shall derecognise the indemnification asset only when it collects the asset, sells it or otherwise loses the right to it.

IAS 37 Provisions, Contingent Liabilities and Contingent Assets

Reimbursements

- 53 Where some or all of the expenditure required to settle a provision is expected to be reimbursed by another party, the reimbursement shall be recognised when, and only when, it is virtually certain that reimbursement will be received if the entity settles the obligation. The reimbursement shall be treated as a separate asset. The amount recognised for the reimbursement shall not exceed the amount of the provision.
- 54 In the statement of comprehensive income, the expense relating to a provision may be presented net of the amount recognised for a reimbursement.
- 55 Sometimes, an entity is able to look to another party to pay part or all of the expenditure required to settle a provision (for example, through insurance contracts, indemnity clauses or suppliers'

warranties). The other party may either reimburse amounts paid by the entity or pay the amounts directly.

- 56 In most cases the entity will remain liable for the whole of the amount in question so that the entity would have to settle the full amount if the third party failed to pay for any reason. In this situation, a provision is recognised for the full amount of the liability, and a separate asset for the expected reimbursement is recognised when it is virtually certain that reimbursement will be received if the entity settles the liability.
- 57 In some cases, the entity will not be liable for the costs in question if the third party fails to pay. In such a case the entity has no liability for those costs and they are not included in the provision.