

STAFF PAPER

June 2019

IASB® meeting

Project	Rate-regulated Activities		
Paper topic	Measurement: discounting estimated cash flows		
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Purpose of this paper

1. Agenda Paper 9C *Measurement principles* sets out the principles of measurement for the proposed rate-regulated activities accounting model. This purpose of this paper is to supplement Agenda Paper 9C by discussing how an entity will select a discount rate to use in applying these measurement principles.
2. This paper is structured as follows:
 - (a) staff recommendations (paragraphs 3-5);
 - (b) background (paragraphs 6-8);
 - (c) assessing the adequacy of the rate for regulatory assets (paragraphs 9-35);
 - (d) determining the rate of interest or return provided by the regulatory agreement (paragraphs 36-40);
 - (e) identifiable event or transaction (paragraphs 41-47);
 - (f) measurement of regulatory liabilities (paragraphs 48-57);
 - (g) illustrative summary of discount rate selection guidance (paragraphs 58-60); and
 - (h) accounting for changes in estimate (paragraphs 61-66).

Staff recommendations

3. We recommend that the model not include:
 - (a) a separate step that requires an entity to assess whether the effects of the time value of money and risks inherent in the cash flows are significant; and
 - (b) a practical expedient that would avoid the need for discounting if the effects of the time and risks were not significant.
4. We recommend that the model:
 - (a) applies an indicator-based approach to assessing whether the regulatory interest rate or return rate is adequate and includes guidance on indicators to consider in making that assessment;
 - (b) specifies that the minimum adequate rate is one that the entity would expect to receive for a stream of cash flows with the same timing and uncertainty as those of the regulatory asset; and
 - (c) requires initial and subsequent measurement using the minimum adequate rate when an entity concludes that the rate of interest or return provided by the regulatory agreement is inadequate.
5. We recommend that the model should apply the same measurement requirements for regulatory liabilities as for regulatory assets, ie requiring measurement of regulatory liabilities to employ a discount rate equal to the rate of interest or return provided by the regulatory agreement, except in the limited circumstance where that rate reflects the impact of an identifiable event or transaction, the impact of which should be recognised separately.

Background

6. A typical regulatory agreement will seek to balance various objectives, such as providing price stability and affordability to customers, while at the same time **protecting the financial viability of the regulated entity** and encouraging its

ongoing investment in the rate-regulated activities (eg improvements to network assets, service quality, customer satisfaction, etc.).

7. One of the most common and most important mechanisms for protecting the financial viability of the regulated entity is through the provision of a rate of interest or return on amounts which have not yet been included in the rates charged to customers. Mechanically, this interest or return is typically applied to a base specified by the regulatory agreement (eg short-term input cost variances, the regulatory capital base (RCB), etc.). Some, but generally not all, of these bases relate to assets that are recognised under existing IFRS standards—for example, property, plant and equipment used in the rate-regulated activities will typically form part of the RCB, but the RCB may also include other amounts.

8. Because such returns are provided, in part, to protect the financial viability of the regulated entity, it seems reasonable to assume that, in most cases, the interest rate or return rate provided by the regulatory agreement will be adequate to compensate the entity for the time value of money and the risks inherent in the cash flows between the origination and reversal of a regulatory asset (referred to as ‘time and risks’ in the remainder of this paper). Conversely, the same rate will often be adequate to *charge* an entity for the time and risks inherent between the origination and fulfilment of a regulatory liability.

Assessing the adequacy of the rate for regulatory assets

9. Our analysis in this section focuses on the measurement of regulatory assets. For discussion on regulatory liabilities, please refer to paragraphs 48-57.

10. In Agenda Paper 9C presented to the Board in May 2019, staff highlighted the following measurement principles of the model:
 - (a) discounting of the estimated cash flows is not required if the effects of the time value of money and risks inherent in the cash flows are not significant.

 - (b) if the interest rate or return rate provided (charged) by the regulatory agreement is adequate to sufficiently compensate (charge) the entity for

the effects of time value of money and risks inherent in the cash flows between origination and reversal of the regulatory asset (regulatory liability), the compensation (charge) is recognised in the statement(s) of financial performance **over time, unless** the interest rate or return rate provides excess compensation to the entity that **relates to an identifiable transaction or event**. In the latter case, the excess compensation is accounted for separately in the corresponding period to which it relates.

(c) **for regulatory assets only**, if the regulatory interest rate or return rate is inadequate to sufficiently compensation for the effects of time value of money and risks inherent in the cash flows between origination and reversal of a regulatory asset, the entity will not fully recover the regulatory asset and so should recognise an expense immediately in profit or loss for the **partial disallowance**.

11. These principles require an entity to discount its estimated future cash flows arising from a regulatory asset using the rate of interest or return provided by the regulatory agreement, except in the limited circumstances identified in paragraphs 10(b)-10(c).
12. Board members asked staff to consider whether the principles could be simplified and clarified and to provide further analysis about how the adequacy of the rate could be assessed¹. The following paragraphs provide our further analysis, together with an analysis of how the principles could apply to the limited circumstances identified.

Suggested practical expedient

13. The principle expressed in paragraph 10(a) provides a possible practical expedient that would avoid the need for discounting if the effects of the time and risks were not significant. However, to apply the practical expedient, an entity would need to test whether the effects of time and risks are significant. Board members raised some concerns about how this expedient would be applied in practice, specifically:

¹ As part of the overall refinement and simplification of the model, staff have recommended no longer distinguishing between operating and capital items for measurement purposes (refer to discussion in paragraphs 16-20 of Agenda Paper 9C). The analysis in this paper reflects this, and the principles set out herein would be applied to the measurement of all regulatory assets and regulatory liabilities except those that relate to expenses or income that will be included in/deducted from the future rate(s) when cash is paid/received.

- (a) the interaction of that practical expedient with the assessment of whether the regulatory interest or return rate adequately compensates an entity for the time and risks; and
 - (b) the design of such a practical expedient and any materiality considerations that would need to be considered in applying it.
14. As a result, the staff have reconsidered this proposal and its potential costs and benefits to entities.
15. In this regard, we present the following observations:
- (a) retaining the expedient effectively imposes another required layer of assessment upon entities to determine whether the time value of money and risks inherent in the cash flows are significant for the regulatory asset before considering whether the rate is adequate. Although in most cases we expect that this would be readily apparent, it may require judgment in other circumstances.
 - (b) given the nature of rate-regulated activities, it would be difficult to define a ‘bright line’ time period within which the effects of the time and risks would not be expected to be significant. Some other IFRS Standards provide such bright lines (eg the practical expedient provided by IFRS 15 *Revenue from Contracts with Customers*, which provides relief from adjusting for the impact of a significant financing component if payment will be received in one year or less). For instance, because of inherent time lags in the process for determining rates, regulatory agreements often permit recovery of input cost variances in the year X+2—this would imply that a minimum exemption period of three years would have to be applied to exempt even these shorter-term items. However, the longer the period of the exemption, the more likely it is that the effects of the time and risks would be significant in some circumstances.
 - (c) we expect the interest or return rate provided by the regulatory agreement will adequately compensate an entity for the time and risks inherent in the cash flows in most cases, and consequently, that in most cases it will be appropriate to use that rate as the discount rate.

- (d) we expect that in any event, apart from the requirements of the model, regulated entities will need to apply the interest or return rate to the regulatory assets for regulatory purposes, and thus the cost of obtaining this information for the purposes of the application of the model is low.
 - (e) if there is no significant difference between the timing of the accrual of any interest or returns and the timing of the inclusion of these amounts in the rates, incorporating the interest or return in the estimates of the future cash flows and discounting them using the same rate will result in measurement that is identical or similar to that which would have been obtained without discounting.
16. We think that incorporating the practical expedient mentioned above would introduce unnecessary complexity into the model and impose costs on entities that would outweigh the associated benefits. Consequently, we recommend that the significance test and associated practical expedient in paragraph 10(a) not be included in the model.

Question for the Board

Significance assessment and practical expedient

1. Does the Board agree with the staff's recommendation not to include in the model:
 - (a) a separate step that requires an entity to assess whether the effects of the time value of money and risks inherent in the cash flows are significant; and
 - (b) a practical expedient that would avoid the need for discounting if the effects of the time and risks were not significant?

Further analysis of the adequacy requirement

17. The Board also requested that staff further analyse the process an entity should follow to assess whether the rate of interest or return provided by the regulatory agreement is adequate, while minimising the complexity of the assessment for entities. The remainder of this section contains this further analysis.
18. In order to minimise the model's complexity, the proposed measurement principles have been developed around the concept of a rate of interest or return provided by the regulatory agreement that is 'adequate', rather than the determination of an 'exact' rate that precisely compensates the entity for time and risks.
19. As discussed in paragraph 13 of Agenda Paper 9C, the regulatory agreement will often delineate these amounts which have not yet been included in the rates charged to customers into different specified 'time bands' and provide a rate of interest or return specific to each time band.
20. We would recommend that an entity applying the model should seek to **understand the process** the regulatory agreement has followed to derive **the rate applicable to each time band** in order to form a view on whether it is being provided with adequate compensation for any regulatory assets recognised which belong to that time band.
21. For instance:
 - (a) the regulatory agreement may provide a return on longer-term items that approximates the entity's actual or theoretical weighted-average cost of capital (WACC). Such a rate, which includes a 'profit' element in the form of a return for equity holders, would typically be expected to be adequate.
 - (b) likewise, shorter-term items may attract a rate based either on corporate borrowing rates or the entity's incremental borrowing rate. As corporate borrowing rates are expected to reflect the time value of money plus a small risk premium (in this case to reflect the typically low-risk environment in which entities subject to defined rate regulation operate²), these would also typically be expected to be adequate.

² Refer to paragraphs 25-27 of Agenda Paper 9C for further discussion of some of the risks which may affect the cash flows resulting from regulatory assets and regulatory liabilities.

22. If, as a result of understanding the regulatory agreement’s process for determining the rate applicable to each time band, an entity **has a valid expectation** that the rates provided by the regulatory agreement provide adequate compensation for the time and risks associated to each time band, it would recognise the interest or return attracted by regulatory asset balances in the statement(s) of financial performance **over time** at the rate of interest or return provided by the regulatory agreement (unless there is evidence that the interest rate or return rate provides the entity with excess compensation that relates to an identifiable transaction or event – refer to paragraphs 41-47).

23. This treatment would not be an exemption from discounting—however, an entity that is earning an adequate return on a regulatory asset balance would include that return in the stream of estimated cash flows arising from the asset and then discount those cash flows at the same rate of return. This would effectively achieve the same measurement result as an entity that had not included the returns in the estimates of cash flows, and had not discounted the cash flows. However, this simplification will not hold if there is a gap period between the time when interest would accrete on the balance and the time when the interest is included in amounts charged to customers, nor would it apply if the implicit return provided by the regulatory agreement differs from the stated return—refer to paragraphs 36-40).

24. An entity should need to make this assessment of the process for each time band within the regulatory agreement only once, unless the method for determining the rate applicable to that time band in the regulatory agreement is subsequently changed.

25. In addition, if the entity has a valid expectation that the rate of interest or return for a time band provides adequate compensation for the time and risks associated with items in that time band, then an assessment would not need to be performed for every recognised regulatory asset within that time band.

Indicator assessment

26. There may exist an indication that the regulatory agreement is not providing a rate of interest or return which is adequate for the time and risks specific to the cash flows between the origination and reversal of either: (a) all items within a particular time

- band; or (b) an individual regulatory asset (that perhaps does not fit clearly within an existing time band).
27. It is expected to be rare that an entity would conclude that the rate of interest or return being provided for an *entire time band* is inadequate. Rather, it is more likely that a regulatory agreement would cause a specific regulatory asset to attract a rate of interest or return which is different than that for other items of similar duration and that this rate may not be adequate.
 28. If there exists any indication that the regulatory agreement is not providing a rate of interest or return which is adequate for the time and risks, then we would recommend that the entity be required to perform a more detailed analysis as set out below.
 29. Indications that the regulatory agreement is not providing a rate which is adequate for the time and risks specific to the cash flows may include, but are not limited to:
 - (a) the rate of interest or return provided for a regulatory asset is lower than for other regulatory assets in the same time band;
 - (b) the rate of interest or return has been modified for a regulatory asset partway through its recovery because of a change in circumstance (eg the abandonment of an item of plant or equipment resulting in it receiving a return of 0% on a go-forwards basis);
 - (c) the regulatory agreement did not contemplate the item giving rise to the regulatory asset and there is a lack of clarity as to how the return has been calculated; or
 - (d) significant changes in market interest rates have not been reflected in the rates provided by the regulatory agreement.
 30. If such indicators are present, we recommend that an entity proceed to establish the minimum rate that it determines would be necessary to compensate it for the time and risks specific to the cash flows of the regulatory asset (the '**minimum adequate rate**'). In so doing, an entity should consider the rate that it would expect to receive for an stream of cash flows with the same timing and uncertainty as those of the regulatory asset.

31. In determining the minimum adequate rate, the entity would not need to attempt to determine the rate it ‘otherwise would have received’ for such an item under the regulatory agreement or attempt to infer the regulator’s intentions in setting the rate for the item in question.
32. Having established the minimum adequate rate, the entity would then need to compare this to the rate being provided by the regulatory agreement for the regulatory asset. In instances where the rate being provided is *less than the minimum adequate rate*, a ‘**partial disallowance**’ has effectively been imposed on the entity – that is, the entity will not recover the entire *nominal* value of the regulatory asset (ie the difference, at origination, between the total allowed compensation and the amount included in the rate(s) charged to customers).
33. Applying the measurement principle in paragraph 10(c), the entity would measure the regulatory asset at its present value using the minimum adequate rate to discount the estimated future cash flows. Thereafter, the entity would **recognise interest income at the minimum adequate rate**.
34. This approach can be illustrated with the following example:

Example 1

Fact pattern

A regulatory asset arises in X0 related to expenses of CU100 incurred by the entity which will be recovered through the rates charged to customers evenly over the 4 years X1-X4 (ie CU25 per year). However, the regulatory agreement provides no return or interest to the entity on the outstanding amount of the regulatory asset.

Application of the measurement principles

The entity determines that the return of zero inadequately compensates the entity for the time and risks. The entity therefore determines the minimum adequate rate to compensate it for the time and risks specific to this regulatory asset—this is determined to be 3.0%.

The entity has experienced a partial disallowance as the minimum adequate rate is higher than the rate of interest provided by the regulatory agreement. The entity

recognises the regulatory asset at its present value as measured using the minimum adequate rate in X0, as shown below:

DETERMINATION OF PRESENT VALUE	X0	X1	X2	X3	X4
CASH FLOWS	100.00	(25.00)	(25.00)	(25.00)	(25.00)
NPV @ 3%	<u>92.93</u>				
PARTIAL DISALLOWANCE:	(7.07)				

Thereafter, the entity records interest at the minimum adequate rate throughout the period of recovery:

ACCOUNTING OUTCOME	X0	X1	X2	X3	X4	Total
Regulatory asset						
Opening balance	-	92.93	70.72	47.84	24.27	(0.00)
Origination	92.93	-	-	-	-	92.93
Interest at 3%	-	2.79	2.12	1.44	0.73	7.07
Recovery through the rate(s)	-	(25.00)	(25.00)	(25.00)	(25.00)	(100.00)
Closing balance	92.93	70.72	47.84	24.27	(0.00)	(0.00)

This would result in the following summarised statement of financial performance:

Profit & Loss Account	X0	X1	X2	X3	X4	Total
Revenue	-	25.00	25.00	25.00	25.00	100.00
Regulatory income / (expense)	92.93	(22.21)	(22.88)	(23.56)	(24.27)	-
Expenses	(100.00)	-	-	-	-	(100.00)
Profit or loss	(7.07)	2.79	2.12	1.44	0.73	-

Question for the Board

35. In summary, the staff recommend that the model:
- (a) applies an indicator-based approach to assessing whether the regulatory interest rate or return rate is adequate and includes guidance on indicators to consider in making that assessment;
 - (b) specify that the minimum adequate rate is one that the entity would expect to receive for a stream of cash flows with the same timing and uncertainty as those of the regulatory asset (paragraphs 30-31); and
 - (c) requires initial and subsequent measurement using the minimum adequate rate when an entity concludes that the rate of interest or return provided by the regulatory agreement is inadequate.

Assessing the adequacy of the rate for regulatory assets

2. Does the Board agree with the staff's recommendations in paragraph 35 above?

Determining the rate of interest or return provided by the regulatory agreement

36. In most cases, the rate of interest or return being provided by the regulatory agreement will be readily apparent and explicitly stated; however, in some instances, the rate provided may be unclear. This will be the case for example, when there is a 'gap year' before the interest or return begins to accrue, or when the cash flows for the recovery of the regulatory asset are irregular or not based on a clearly stated rate of return.
37. In these cases, an entity may still conclude that the process employed by the regulatory agreement results in an adequate return that compensates it for the time and risks associated with the regulatory asset.
38. For instance, a regulatory agreement may always impose an uncompensated 'gap year' after an origination before allowing billings to commence for items in a particular time band; however, the return provided in the years after the gap year (and until the amounts are fully recovered) may be sufficiently high that on an aggregate basis it is apparent that the entity is being adequately compensated for the time and risks. In such a scenario, the entity would conclude there are no indicators that this process results in an inadequate return for the time and risks specific to regulatory assets recognised in this time band.
39. The entity would determine the **implicit rate of interest or return** being provided by the regulatory agreement in these situations. The entity does so by determining the rate which discounts the future cash flows back to the amount of the initial difference, at origination, between the total allowed compensation for goods or services supplied and the amount already included in the rate(s). It would then use this implicit rate of return to measure and account for the regulatory asset over the period from origination to reversal.
40. This concept can be illustrated via the following example:

Example 2

Fact pattern

A regulatory asset originates in X0 in the amount of CU100. The regulatory agreement provides for the recovery of the amount evenly over the three years X2-X4. The agreement also provides a return on the outstanding balance as follows:

Year X1 – 0%

Years X2-X4 – 10%

This fact pattern results in the following:

REGULATORY ACCOUNTING

Year	X0	X1	X2	X3	X4	Total
Opening balance	-	100.00	100.00	66.67	33.33	(0.00)
Origination	100.00	-	-	-	-	100.00
Interest (0% - X1; 10% - X2-X4)	-	-	10.00	6.67	3.33	20.00
Recovery of balance	-	-	(33.33)	(33.33)	(33.33)	(100.00)
Recovery of interest	-	-	(10.00)	(6.67)	(3.33)	(20.00)
Closing balance	100.00	100.00	66.67	33.33	(0.00)	-

Application of the measurement principles

As there is a ‘gap year’, the cash flows are provided in an irregular manner and it is not immediately apparent what implicit rate of return is being provided to the entity. However, this can be worked out easily with a spreadsheet program:

DETERMINATION OF THE IMPLICIT RATE

		X0	X1	X2	X3	X4
IRR =	6.43%	100.00	-	(43.33)	(40.00)	(36.67)

The implicit rate is the rate that discounts the future cash flows back to the amount of the difference between the total allowed compensation for goods or services supplied and the amount already included in the rates (CU100)—in this case the rate is determined to be 6.43%.

Assume that it is normal under the regulatory agreement for there to be such a ‘gap year’ before billing commences and there are no indicators that this results in an inadequate return for the time and risks specific to regulatory assets in this time band. As a result, no further analysis is required as to whether the rate is adequate.

To reflect the economic reality of the return being provided by the regulatory agreement, in applying the model the entity would recognise interest at the implicit rate of return being provided (in this case is 6.43%) as follows:

ACCOUNTING OUTCOME

Regulatory asset	X0	X1	X2	X3	X4	Total
Opening balance	-	100.00	106.43	69.95	34.45	(0.00)
Origination	100.00	-	-	-	-	100.00
Interest at the implicit rate	-	6.43	6.85	4.50	2.22	20.00
Recovery through the rate(s)	-	-	(43.33)	(40.00)	(36.67)	(120.00)
Closing balance	100.00	106.43	69.95	34.45	(0.00)	(0.00)

This would result in the following summarised statement of financial performance:

Profit & Loss Account	X0	X1	X2	X3	X4	Total
Revenue	-	-	43.33	40.00	36.67	120.00
Regulatory income / (expense)	100.00	6.43	(36.49)	(35.50)	(34.45)	(0.00)
Expenses	(100.00)	-	-	-	-	(100.00)
Profit or loss	-	6.43	6.85	4.50	2.22	20.00

Identifiable event or transaction

41. In performing the indicator assessment referred to in paragraphs 26-33 above, an entity would also consider whether the rate of interest or return provided by the regulatory agreement contains an explicit *additional* return relating to an **identifiable transaction or event**.
42. For instance, it is possible that the regulatory agreement could provide the entity with an explicit ‘bonus’ return, by increasing the rate of interest or return provided for a particular base / time band for a given period. We have not encountered this situation but expect this would be more common than receiving a bonus return at the individual regulatory asset level.
43. If an entity determines that the rate of interest or return provided by the regulatory agreement contains an explicit additional return relating to an identifiable transaction or event, it would **make an estimate of the amount related to that transaction or event and recognise it separately**.
44. For example, an entity may ordinarily be entitled to a rate of return of 6% for a particular time band, but, as a reward for achieving a performance target, it is instead entitled to a rate of 8% on all items within the time band for 12 months. In that case,

the entity recognises a separate regulatory asset resulting from the achievement of the performance target. Measurement of the regulatory asset is based on the entity's estimate of the incremental cash flows arising from this right—that is, the incremental amounts it is able to include in the rate(s) charged to customers as a result of earning the bonus 2% on items in the time band for 12 months. The recognition and measurement of this regulatory asset for the identifiable event or transaction (ie the bonus) is separate and distinct from the measurement of any other regulatory assets or regulatory liabilities which may otherwise exist within the same time band.

45. The situation described above is expected to be encountered infrequently. It would be much more common for a regulatory agreement to provide an entity with an explicit bonus amount to be included in future rates charged to customers as a reward for performance in a current or past period, than it would be to provide such a bonus by way of an increase in the rate of interest or return provided for a given period.
46. For instance, the regulatory agreement may give an entity the right to increase rates in year X+2 by CU100 as a result of meeting a performance incentive target in the current period. The entity would treat this right as it would any other regulatory asset and accordingly:
 - (a) if the amount attracts a rate of interest or return, then the entity would consider its assessment as to whether the regulatory agreement provides adequate compensation for the time and risks associated with the estimated cash flows; or
 - (b) if the amount does not attract a stated rate of interest or return, then the entity would infer an implicit regulatory rate of return of 0%, and recognise the regulatory asset at its present value, discounting using the minimum adequate rate, as illustrated in Example 1 above.
47. We see paragraphs 36-46 as illustrating the application of the requirements of the model rather than specifying further requirements. We expect to draft guidance based on this material for inclusion in an Exposure Draft.

Question for the Board

Determining the rate of interest or return provided by the regulatory agreement and identifiable events or transactions

3. Does the Board have any comments on the discussion in paragraphs 36-47?

Measurement of regulatory liabilities

48. In July 2018, the Board tentatively decided that the model should apply the same measurement requirements for regulatory liabilities as for regulatory assets.³ However, Board members asked staff to consider whether any further analysis and development of the measurement technique would necessitate different requirements for regulatory liabilities.
49. We see no reason to apply different requirements to the estimation of future cash flows arising from regulatory liabilities than for regulatory assets. Regarding the discount rate to be applied between the origination and fulfilment of a regulatory liability, we have prepared the following analysis.
50. In some cases, the regulatory interest rate or return rate applied to a regulatory liability may be higher than the interest rate or return rate that the entity might have to pay if it obtained funding elsewhere in the form of a financial liability for the same amount and duration. However, we do not consider that this automatically makes a regulatory liability onerous.
51. As discussed in paragraph 13 of Agenda Paper 9C, the regulatory agreement typically applies the same blended interest rate or return rate to all regulatory liabilities and all regulatory assets within the same time band, rather than identifying an interest rate or return rate for each individual item within the time band. Consequently, an interest rate or return rate applied to a regulatory liability within a time band may merely reduce the excess interest or return related to a regulatory asset within the same time

³ [Agenda Paper 9B](#) and [Agenda Paper 9D](#) discussed at the July 2018 Board meeting.

band. The result would likely be the entity concluding that the interest rate or return rate applied to that time band is adequate to compensate the entity for an overall net regulatory asset position (consistent with the suggestion in paragraph 24 that an entity should generally only need to make an assessment once for each time band within the regulatory agreement and then apply that assessment to all regulatory assets or liabilities recognised that relate to that time band).

52. Applying the principles of the model, the entity would consequently recognise the interest or return charged on the regulatory liability **over time**, using the regulatory rate, as illustrated by the following example.

Example 3

Fact pattern

At the end of X0, an entity purchases an item of property, plant and equipment (PPE) for CU300. The item has a useful economic life of three years; however, the regulatory agreement entitles the entity to recover the cost evenly over two years (X1 and X2).

The regulatory agreement compensates the entity with an 8% return on the opening balance for X1 and X2 as follows:

Figure 1

Regulatory capital base	X0	X1	X2	X3	Total
Opening balance	-	300.00	150.00	-	-
Addition	300.00	-	-	-	300.00
Return at 8%	-	24.00	12.00	-	36.00
Recovery through the rate(s)	-	(174.00)	(162.00)	-	(336.00)
Closing balance	300.00	150.00	-	-	-

The entity fully recovers the cost of its investment in the item of PPE (CU300), but because the recovery is accelerated (relative to the item’s useful life) the entity receives a lower overall return because the balance is reduced at a faster rate and outstanding for a shorter period of time. The table below illustrates the return which the entity would have earned, had the regulatory agreement required recovery over the same three year period as the asset’s useful life:

Figure 2

Hypothetical regulatory capital base	X0	X1	X2	X3	Total
Opening balance	-	300.00	200.00	100.00	-
Addition	300.00	-	-	-	300.00
Return at 8%	-	24.00	16.00	8.00	48.00
Recovery through the rate(s)	-	(124.00)	(116.00)	(108.00)	(348.00)
Closing balance	300.00	200.00	100.00	-	-

Application of the measurement principles

A regulatory liability arises in years X1 and X2 because the amount included in the rates charged to customers is higher than the total allowed compensation for those periods in respect of this item of PPE.

The regulatory liability is fulfilled in X3 when the entity supplies goods or services but does not include the related amount of total allowed compensation in the rates.

Given its nature, the regulatory liability is in the same time band as the item of PPE and, as a result, is also subject to the regulatory return rate of 8%. This rate is higher than the rate that the entity might have to pay if it obtained funding elsewhere in the form of a financial liability for the same amount and duration.

The tables below illustrate the resulting profit or loss and financial position impact of the application of the model to this fact pattern:

Figure 3

Profit or loss	X0	X1	X2	X3	Total
Revenue	-	174.00	162.00	-	336.00
Regulatory income/(expense)	-	(50.00)	(50.00)	100.00	-
Amortisation expense	-	(100.00)	(100.00)	(100.00)	(300.00)
Profit/(loss)	-	24.00	12.00	-	36.00
Regulatory liability	X0	X1	X2	X3	Total
Opening balance	-	-	50.00	100.00	-
Originations	-	50.00	50.00	-	100.00
Interest @ 8%	-	-	4.00	8.00	12.00
Fulfilment	-	-	(4.00)	(108.00)	(112.00)
Closing balance	-	50.00	100.00	-	-

53. We do not consider the rate of return of 8% applied to the regulatory liability balance in this example to be onerous because:

- (a) 8% is the rate that the regulatory agreement applies to all items within the same time band. The entity's understanding of the process the regulatory

agreement follows for setting the regulatory return rate provides it with comfort that 8% is an adequate rate of return for the time band and consequently, for each of the regulatory assets and regulatory liabilities within that band. In this example, applying the same return rate effectively reflects the ‘cost’ to the entity of recovering its investment in the item of PPE at a faster pace than its useful economic life (as illustrated in the above example, this ‘cost’ is CU12). Rather than implying the liability is onerous, this can instead be understood as the entity being effectively compensated at a lower overall rate of return on its investment in the item of PPE (ie CU36 instead of CU48), however, this lower rate of return would still be an adequate rate.

- (b) there were no identifiable events or transactions that would explain the difference in the return rate applied to the regulatory liability of 8% and the rate that the entity might have paid if it had obtained similar financing elsewhere.

54. We would expect an excess charge on a net regulatory liability position to be rare because regulatory interest rates and return rates are set with the aim of achieving the regulatory objective of making it financially viable for the entity to fulfil its requirements for the supply of the goods or services (see paragraph 8 of Agenda Paper 9A *Principles of the model: a summary*). Furthermore, net regulatory asset positions are observed to be more common than net regulatory liability positions.⁴
55. Net regulatory liability positions are expected to be encountered primarily in respect of short-term items – for instance input cost variances recovered in a subsequent period – which could flip from net regulatory asset to net regulatory liability positions with some frequency. However, such short-term items will typically attract a lower rate of interest or return, and therefore we expect it to be unlikely that an excess charge could result.⁵

⁴ A research paper titled *Rate-regulated Activities: Exploring the decision-usefulness of financial information that reflects the economics of rate-regulated activities*, published in November 2018 by the Accounting Standards Board of Canada, highlights that for a sample of Canadian electric utilities over 2011-2015, credit balances totalled less than 10% of debit balances arising from rate regulation.

⁵ Example 3 illustrates an individual regulatory liability balance. This is an item of PPE in the RCB and therefore attracts a relatively higher (8%) rate of return (however, a relatively short timeframe of three years has

56. An excess interest or return charged on a regulatory liability or net regulatory liability position could be an indication that the regulator is imposing a penalty on the entity. The imposition of such a penalty would represent an identifiable transaction or event and would result in an entity immediately recognising the penalty charge as an expense, rather than recognising the whole of the regulatory interest or return over time (refer to discussion in paragraphs 41-47).

Question for the Board

57. In summary, the staff recommend that the model should apply the same measurement requirements for regulatory liabilities as for regulatory assets, ie requiring measurement of regulatory liabilities to employ a discount rate equal to the rate of interest or return provided by the regulatory agreement, except in the limited circumstance where that rate reflects the impact of an identifiable event or transaction, the impact of which should be recognised separately.

Measurement of regulatory liabilities
<p>4. Does the Board agree with the staff recommendation in paragraph 57?</p>

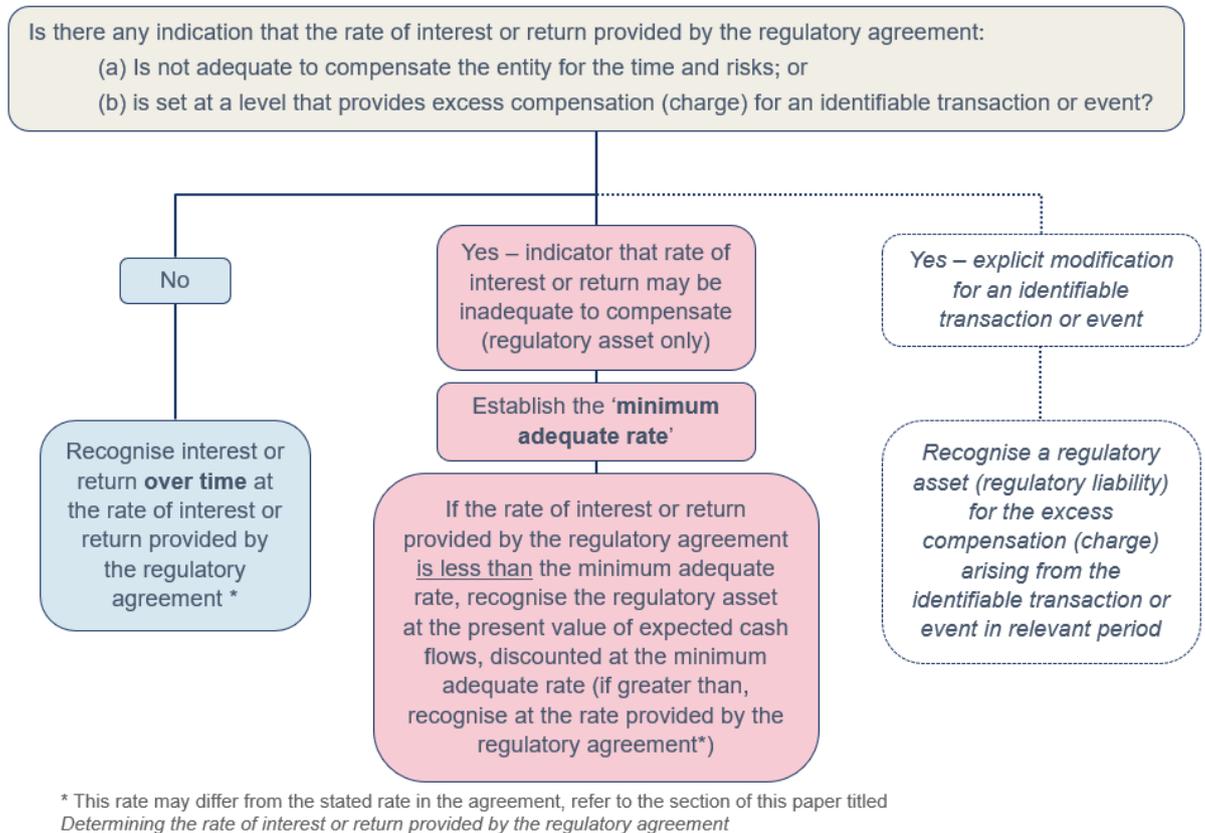
Illustrative summary of discount rate selection guidance

58. As noted in paragraph 12, Board members had asked staff to consider whether the principles could be simplified and clarified. We think that the above analysis and recommendations have led to principles which will be easier for entities to understand and apply.
59. There is now a clearly articulated core measurement principle that a regulatory asset or regulatory liability is measured at its present value using the regulatory interest or return rate as the discount rate, except in limited circumstances (ie where an

been used to keep the example concise). This item is merely one regulatory liability balance within the time band; there are likely to be other regulatory assets and regulatory liabilities in the same time band, attracting the same rate of return and our expectation is that it would be more likely for the overall net position of this longer-term time band to be a net regulatory asset.

inadequate return is provided or the rate reflects a modification for an identifiable event or transaction).

60. This revised principle can be illustrated via the following simplified decision tree:



Accounting for changes in estimate

- 61. As noted in paragraph 28 of Agenda Paper 9C, the model requires an entity to update the estimated cash flows at each reporting date and to account for changes in estimates of future cash flows in accordance with IAS 8 *Accounting Policies, Changes in Accounting Estimates and Errors*.
- 62. Typically, an entity applying the model will not adjust the discount rate determined upon initial recognition when it updates the estimated cash flows. However, if the regulatory agreement changes the rate of interest or return, then an entity would also update the discount rate it uses to measure the regulatory asset or liability.

63. For instance, if a regulatory asset attracts a stated return of 8%, and this rate is determined to be adequate to compensate the entity for the time and risks, then the entity would have initially measured the regulatory asset by estimating a stream of cash flows including an 8% rate of return and employing a discount rate of 8%. If the regulatory agreement alters the 'stated rate' to 10%, then the entity updates both:
- (a) its estimate of the cash flows arising from the regulatory asset to reflect the higher 10% return for the remaining period until maturity; and
 - (b) the discount rate used to measure the regulatory asset to 10%.
64. In this example, such a change would *not* result in a change to the carrying amount of the regulatory asset (ie because both the cash flows and discount rate have been updated to the same extent).
65. However, if the change to the stated rate causes the return for a regulatory asset to no longer be adequate, then an entity would be required to recognise a partial disallowance in the manner set out in paragraphs 30-34 above.
66. The description in this section is consistent with previous tentative decisions made by the Board regarding changes in estimates and we do not recommend any changes to these decisions.

Question for the Board

Accounting for changes in estimate

5. Does the Board have any comments on the discussion in paragraphs 61-66?