

AP9A—Features of different regulatory schemes

May 2022

IASB Meeting
Project: Rate-regulated Activities
Contact(s): Mariela Isern

This paper has been prepared for discussion at a public meeting of the International Accounting Standards Board (IASB). This paper does not represent the views of the IASB or any individual IASB member. Any comments in the paper do not purport to set out what would be an acceptable or unacceptable application of IFRS® Accounting Standards. The IASB's technical decisions are made in public and are reported in the IASB® *Update*.

Overview

Purpose of the paper

Project background

Rate-setting process and types of regulatory schemes

How well do the proposals accommodate the different schemes?

Users' needs

Questions for the IASB

A grayscale world map is centered on the Atlantic Ocean, showing the continents of North America, South America, Europe, Africa, Asia, and Australia. Overlaid on the map are several thick, light gray curved lines that sweep across the frame from the bottom left towards the top right. A network of thin, dotted white lines is also visible, connecting various points across the map, suggesting a global network or data flow.

Purpose

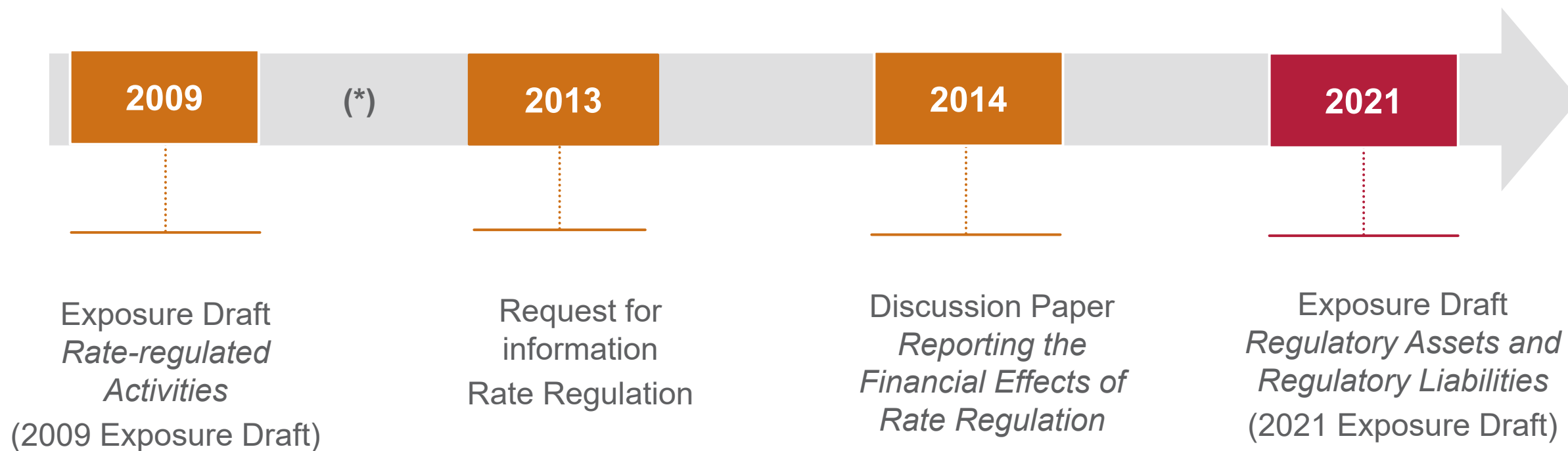
Purpose

- This paper provides information about the main features of different regulatory schemes. Slide 35 includes references to the sources used.
- Many respondents to the Exposure Draft *Regulatory Assets and Regulatory Liabilities* said the proposed guidance on total allowed compensation does not accommodate well incentive-based regulatory schemes. The purpose of this paper is to provide you with background information about the different regulatory schemes. This information will help you when we ask you at future meetings to make decisions about total allowed compensation.
- We are not asking the IASB to make decisions on this paper.
- Slide 33 includes questions for the IASB.



Project background

Published documents



(*): The IASB suspended the project in September 2010 and added it back to its standard-setting agenda in 2012.

2009 Exposure Draft

- Focused on cost-of-service regulation.

- Defined cost-of-service regulation as:

A form of regulation for setting an entity's prices (rates) in which there is a cause-and-effect relationship between the entity's specific costs and its revenues.

- Most respondents raised concerns about the proposed scope. The focus on cost-of-service regulation created problems because there was a global trend to move away from 'pure' cost-of-service regulation by increasing the use of incentive-based mechanisms. Respondents said that many regulatory schemes used a combination of cost-of-service and incentive-based mechanisms, that is many regulatory schemes had a hybrid nature.

Request for Information (RFI) and Discussion Paper

- The RFI aimed to identify the range of rate-regulatory schemes that might give rise to assets or liabilities.
- Respondents to the RFI commenting on the scope of the project cautioned the IASB against developing rule-based guidance for only certain types of schemes and recommended the IASB identify broader principles that can be applied to a broad range of rate regulation.⁽¹⁾
- The Discussion Paper aimed to develop a scope that would include various types of rate regulation. It did so by grouping common features of various types of rate regulation that seemed most likely to give rise to rights and obligations that meet the definition of an asset and a liability in the *Conceptual Framework for Financial Reporting* under the term ‘defined rate regulation’.

(1): See [Agenda Paper 9](#) discussed at the July 2013 IASB meeting.

2021 Exposure Draft

- Focused on the features that are necessary for a regulatory asset or a regulatory liability to exist, which resulted in keeping only a sub-set of the features of defined rate regulation.⁽²⁾ A few respondents said that focus was an efficient approach to ensure different regulatory schemes are included without needing to identify and define them.
- Many respondents—mainly preparers in Europe and Asia-Oceania—raised concerns about the ability of the guidance on total allowed compensation to accommodate incentive-based regulatory schemes.
- The guidance in paragraphs B6–B8 and some of the illustrative examples accompanying the 2021 Exposure Draft were of particular concern for respondents subject to incentive-based schemes.⁽³⁾ According to these respondents, the proposals aim to link regulatory compensation (for example, compensation for regulatory depreciation) to expenses (depreciation expense) in cases when such linkage is either indirect or does not exist. See slides 22–25 and 27–28.

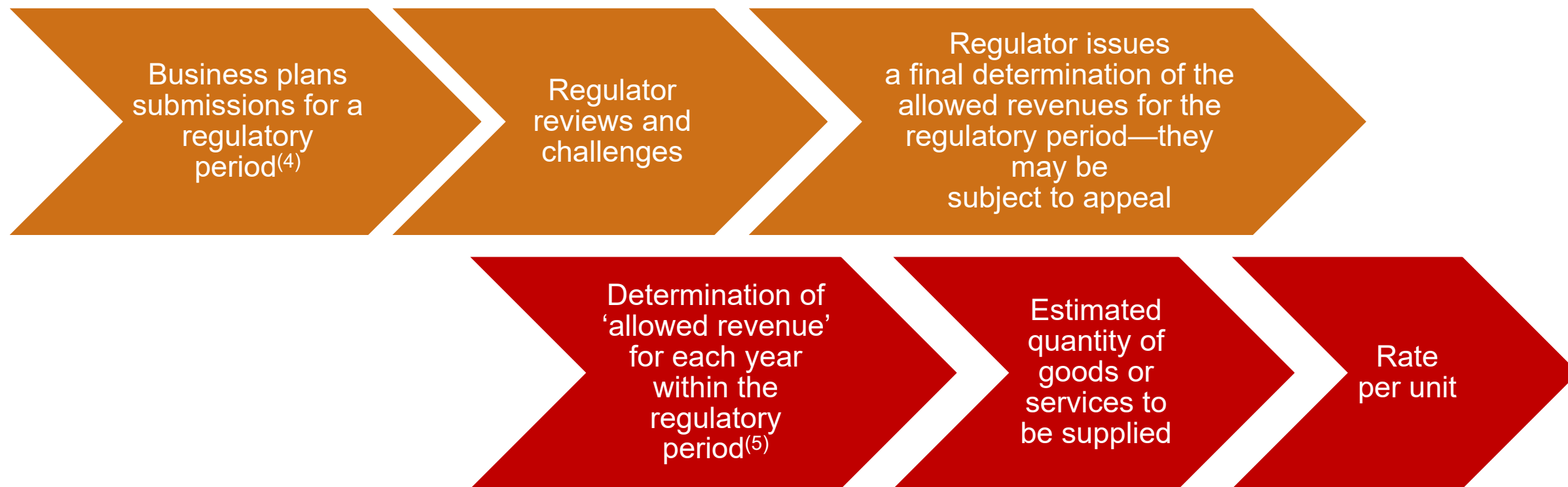
(2): See paragraphs BC78–BC84 of the Basis for Conclusions of the 2021 Exposure Draft.

(3): In particular, [Illustrative Examples IE2B and IE2C](#) accompanying the Exposure Draft.



Rate-setting process and types of regulatory schemes

Rate-setting process



- Allowed revenue: amount of revenue that an entity is entitled to earn during a period of typically 12 months based on an estimated quantity of goods or services to be supplied in that period.

Regulatory period

Each year within the regulatory period

(4): The length of the regulatory periods (or price control periods) vary across industries and jurisdictions (typically between one and five years, although some are longer).

(5): Other possible terms are ‘revenue requirement’ or ‘authorised revenue’.

Differences in timing

- The **main challenge** of this project is to determine **a set of principles** that would require the recognition of regulatory assets and regulatory liabilities arising from a wide variety of regulatory schemes.
- To do so, we **focus on differences in timing**. This is because the existence of differences in timing is the **feature that is common** to the variety of regulatory schemes that will be in the scope of the final Standard.
- Many of the regulatory assets and regulatory liabilities in the Exposure Draft are actual adjustments to the future rates (cash differences in timing). For example, regulatory assets or regulatory liabilities relating to differences between estimated costs and actual costs that will be adjusted for in future rates. Those regulatory assets or regulatory liabilities arise from cash differences in timing because they give an entity a right to add an amount to (an obligation to deduct an amount from) future rates.
- Other regulatory assets or regulatory liabilities arise from non-cash differences in timing. See example in slide 13.

Differences in timing—*continued*

- Non-cash differences in timing may arise when the regulator allows an entity to include an item of expense in the rates charged using a method that is different from the method on which the expense is recognised in the financial statements.
- For example, assume a regulatory agreement allows the recovery of an item of expense at a different pace to the recognition of that expense in the financial statements:

Item of expense (in CU) ⁽⁶⁾	Year 1	Year 2	Year 3	TOTAL
Regulatory compensation included in rates charged <i>(recovery of an allowable expense)</i>	25	35	40	100
Accounting expense	33	33	34	100
Difference	(8)	2	6	-
Regulatory asset / (Regulatory liability)	8	6	-	-

- In this case, the regulatory agreement ‘explicitly’ gives the entity a right to recover the item of expense. However, when establishing the regulatory compensation to which the entity is entitled in Years 2 and 3, the regulatory agreement would *not* consider the accounting method for recognising this item of expense. Consequently, the regulatory agreement would *not* give the entity an ‘explicit’ right in Year 1 to increase rates charged in Year 2 and Year 3 by CU2 and CU6, respectively (ie a total amount of CU8). However, this right is ‘implicit’ as the regulatory agreement entitles the entity to recover the item of expense (ie CU100).
- The regulatory asset of CU8 in Year 1 would be an example of a non-cash difference in timing.
- Stakeholders subject to incentive-based schemes were particularly concerned about the accounting for regulatory assets or regulatory liabilities arising from differences between the recovery pace of the regulatory capital base (RCB) and the assets’ useful lives. These regulatory assets and regulatory liabilities would also be an example of non-cash flow differences in timing. See slides 28 and 31.

(6): Monetary amounts are denominated in ‘currency units’ (CU).

Differences in timing—*continued*

- We think the Exposure Draft is not sufficiently clear that different regulatory agreements would give rise to different differences in timing. The final Standard could clarify that the type and number of regulatory assets and regulatory liabilities will vary depending on the differences in timing arising from the different regulatory agreements. Some considerations that an entity could take into account to identify regulatory assets and regulatory liabilities arising from its regulatory agreement are below.

Goal of the regulatory scheme: cost recovery or efficiency incentives?

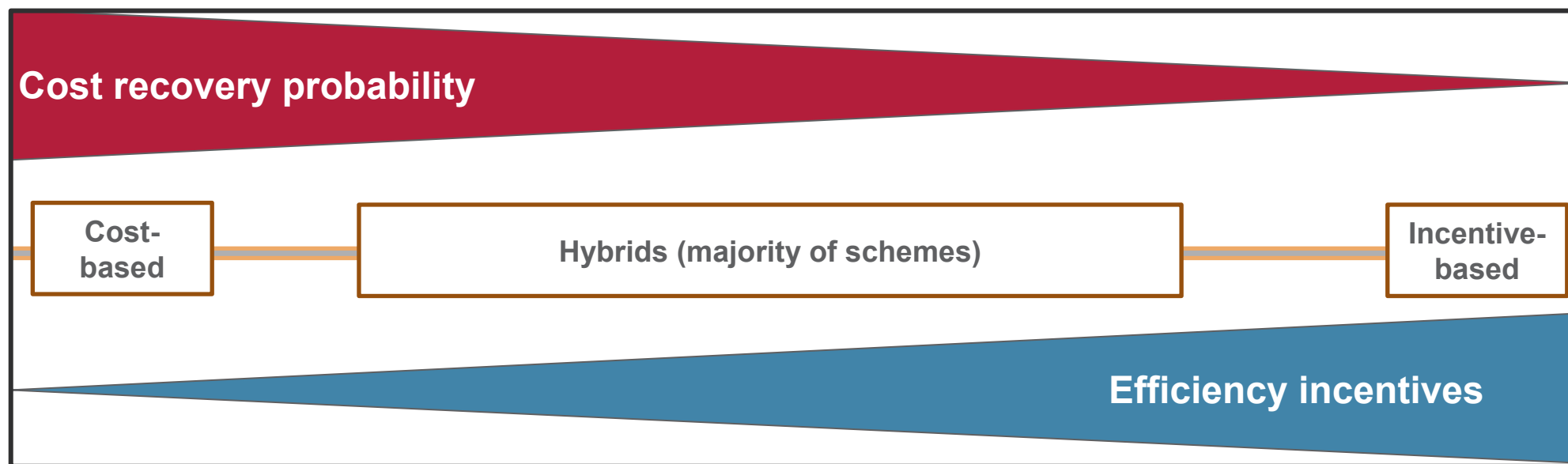
Understanding the regulatory formula to get ‘allowed revenue’ and the terms in the regulatory agreement

What are the adjustments to future rates? (to help identify cash differences in timing)

Assessing other terms in the regulatory agreements (to help identify non-cash differences in timing)

Types of regulatory schemes

- Respondents to the Request for Information highlighted two general types of regulatory schemes:
 - cost-based (commonly known as ‘cost-of-service’ or ‘return-on-base rate’)—slides 16–17; or
 - incentive-based (including revenue-cap or price-cap regulation)—slides 18–25.
- In cost-based schemes there is a high probability that the entity will recover its costs. In incentive-based schemes, the entity is incentivised to operate efficiently and as a result there is a risk that it may not recover its costs. Most regulatory schemes are a hybrid of both cost-based and incentive-based schemes.



Cost-based

- Theory—Regulator allows the entity to **recover its expenses** and earn a **‘fair’ return** on the investment. The approach is good for limiting the risks borne by the entities but provides no incentives for cost reduction.
- The ‘allowed revenue’ is closely linked to operating expenditure and depreciation included in the financial statements, although only prudently incurred capital expenditure can be recovered and earn a return.
- True-up mechanisms ensure that actual input costs are recovered. Consequently, in cost-based schemes, allowed revenues are based on costs recognised applying applicable accounting standards.
- In some cost-based schemes, allowed revenue is based on estimated costs. True-up mechanisms are used to adjust the allowed revenue for differences between estimated costs and actual costs.
- The depreciation of the regulatory capital base (RCB)⁽⁷⁾ and the returns on the RCB are important components of entities’ allowed revenues. Slide 17 describes the relationship between the RCB and an entity’s assets. Understanding this relationship will be relevant for assessing how the proposals accommodate different regulatory schemes (slides 27–28).

(7): Other terms commonly used are ‘regulatory asset base’ (RAB), ‘regulatory asset value’ (RAV) and ‘regulatory capital value’ (RCV).

Cost-based—Regulatory capital base (RCB) and an entity's assets

- Regulatory accounting and reporting requirements are aligned as much as possible to IFRS Accounting Standards. This means that the following are generally aligned with any differences separately tracked:
 - componentisation of assets recorded;
 - measurement basis;
 - capitalisation policies; and
 - depreciation rates.
- Regulatory rules generally require regulatory information to be reconciled to audited financial statements (reconciliation may be at a high-level only).
- The rate setting aims to create direct links between an entity's expenses with its revenue requirements and rates charged to customers.

Incentive-based

- Theory—Regulator sets *ex ante* a fixed rate for the service to be provided by the entity, who is then incentivised to optimise its processes since it will increase profits by reducing costs. Typically incentive-based regulation creates greater incentives for cost reduction and exposes entities to more risk than cost-based schemes.
- The calculation of the regulated rate tends to be more focused on targeted outputs (ie quantity/quality of the services) rather than on a set of inputs (ie output regulation rather than input regulation).
- Within incentive-based, we highlight a couple of approaches:
 - building-block approach (slide 19); and
 - total expenditure (totex) approach (slide 20).

Incentive-based—building-block approach

- This approach uses a ‘building-block’ methodology to determine ‘allowed revenue’. Each of the individual building blocks are separately assessed and determined *ex ante* based on forecasts.
- Main building blocks to determine the ‘allowed revenue’ are:
 - depreciation of the regulatory capital base (RCB)—the RCB may include construction-work-in progress;
 - returns on the RCB;
 - operating expenditures;
 - incentives (bonuses or penalties); and
 - other items (for example, tax) or adjustments.
- Differences between forecasts and actual amounts may give rise to ‘true-ups’ in regulated rates charged in the future. However, these ‘true-ups’ are expected to be less than is typically seen in cost-based regulation.

Incentive-based—totex approach

- The regulator determines ‘allowed revenue’ by considering estimates of total expenditures (totex: opex and capex), adjusting them for efficiency and productivity targets. Under the building-block approach the regulator carries out the efficiency assessment for opex and for capex separately.
- A percentage of totex is capitalised in the RCB (slow money), with the non-capitalised part of totex being recovered in the year in which it is allowed (fast money).
- The split between slow money and fast money is informed by the ratio of capex/totex and opex/totex and other considerations (eg companies’ business plans). As a result, this approach dilutes the link between the RCB and the actual assets of the entity.
- The ‘allowed revenue’ would include:
 - depreciation of RCB;
 - returns on RCB;
 - fast money;
 - performance incentives—included on a forecast basis;
 - pass-through costs (for example, licence fees); and
 - other items / adjustments.

Incentive-based—building-block and totex

- In both approaches (building-block and totex) regulators use techniques such as efficiency audits, efficiency factors, benchmark techniques etc to assess the operating/capital expenditures submitted by the entities for efficiency. The ultimate goal is that the determination of ‘allowed revenue’ amount includes operating/capital expenditures that have passed the efficiency test.
- When using benchmarking techniques, each entity can increase its profit if it is more efficient than the benchmarked level. This technique increases the risk for entities because their revenue is disconnected from their actual costs.
- Many incentive-based schemes include true-ups and other mechanisms that seek to:
 - share efficiency gains, determined by comparing actual costs with expected/budgeted costs. This regulatory mechanism seek to combine properties of cost-based with properties of incentive-based.
 - pass demand risk to customers by adjusting for differences between forecasted and actual consumption volumes in future rates.
 - enable an entity to recover non-controllable costs by adjusting for differences between forecasted and actual non-controllable costs in future rates.

Incentive-based—Regulatory capital base (RCB) and an entity's assets

- In incentive-based schemes, the relationship between the RCB and an entity's assets is less direct than in cost-based schemes. However, the Exposure Draft assumed there is always a close relationship between the RCB and an entity's assets. Consequently, some of the proposals in the Exposure Draft have raised concerns amongst stakeholders subject to incentive-based schemes. In particular, the proposals for accounting for regulatory assets and regulatory liabilities arising from differences between the recovery pace of the RCB and the assets' useful lives.
- Understanding the relationship between RCB and entities' assets is important for assessing how the proposals accommodate different regulatory schemes (slides 27–28). Slides 23–25 analyse the following aspects of this relationship:
 - componentisation, including differences between building-block and totex approach (slides 23–24);
 - measurement (slide 24); and
 - depreciation pace (slide 25).

Incentive-based—Regulatory capital base (RCB) and an entity's assets—*continued*

Componentisation

- The RCB may include operating and capital expenditures and other items such as working capital movements or performance incentives.

Building-block approach—the RCB may be split into asset classes that are different from those used for accounting purposes. Generally the RCB is not maintained at an asset level as the RCB is not tracked at individual assets but rather spend on maintaining and upgrading the network as a whole. RCB and entities' assets may differ due to the following:

- initial value of the RCB—in some cases, entities subject to incentive-based schemes went through a privatisation process. When these entities were privatised the initial values of their RCB was established based on average market values, which represented in some cases a discount to the entities' fixed asset values.
- regulators may assess capex efficiency and decide to exclude capex from the RCB;
- the RCB may include items that would not qualify for capitalisation under IAS 16 *Property, Plant and Equipment*;
- costs capitalised for accounting purposes may not have been included in the RCB (eg, contributed assets);
- different starting date for depreciation. For example, regulatory capex may be depreciated as spent, not when placed in service; and
- different treatment of disposals. Disposals may be deducted from RCB using the sales proceeds, not based on the assets' net book values written down.

Incentive-based—Regulatory capital base (RCB) and an entity's assets—*continued*

Componentisation (continued)

Totex—the RCB (slow money) is a percentage of totex.

- The percentage of totex allocated to slow money may not exactly equate to capex / totex ratio. In many cases, the regulators decide to provide entities more fast money than that represented by the opex / totex ratio. In addition, regulators may change the percentage of totex that is included in the RCB for different reasons (for example, an entity's financing needs).
- Under the totex approach, there is no direct or meaningful linkage between the RCB and an entity's fixed assets.

Measurement

- In some cases, the RCB may be measured using historical cost, however, in some other cases the RCB is adjusted for inflation. For revenue determinations, regulators generally forecast inflation. Differences between forecasted and actual inflation rates used are typically adjusted for in future rates.

It would be complex to isolate the inflation adjustment on an individual asset basis.

Incentive-based—Regulatory capital base (RCB) and an entity's assets—*continued*

Depreciation

- As a starting point, regulators may consider the economic lives of the primary network assets when determining the regulatory depreciation periods. For example, when the RCB is split in asset classes, each class may have its own depreciation profile based on the average of the economic lives of the assets included in that class. As a result, the regulatory recovery pace is a blended rate, which can differ from the accounting useful lives.
- However, when determining the regulatory recovery pace of the RCB or the recovery pace of the asset classes within the RCB, regulators may also consider a variety of factors such as:
 - the financing of the entity—regulators would consider both an entity's financing needs and the financing available to the entity, for example, via bonds with specific durations;
 - uncertainty about the future role of some industries (for example, gas) or technological changes (for example, the introduction of smart meters) may trigger an accelerated regulatory depreciation of the assets; and
 - intergenerational equity considerations.
- Changes in the factors above may cause changes in the basis on which the regulatory depreciation of the RCB (or of the asset classes within the RCB) is determined from one regulatory period to another regulatory period.

A grayscale world map is the background. Overlaid on the left side are several concentric, semi-circular lines. Some are solid gray, while others are dotted. The text is positioned on the right side of the map.

How well do the proposals
accommodate the different
schemes?

How well do the proposals accommodate the different schemes?

Proposals	Cost-based schemes	Incentive-based schemes
<p>The Exposure Draft proposes that total allowed compensation comprises:</p> <ul style="list-style-type: none"> • amounts that recover allowable expenses minus chargeable income; • target profit; and • regulatory interest income and regulatory interest expense 	<p>This articulation of total allowed compensation works well with cost-based schemes as the regulated rate is determined to allow entities to recover their expenses and obtain a return on the investment. ✓</p>	<p>In incentive-based schemes, the recoverability of costs plays a less important role than in cost-based schemes. Consequently, any direct link between regulatory compensation and allowable expenses may be limited to some pass-through costs. Some stakeholders think total allowed compensation for a period should comprise allowed revenue plus a limited number of differences in timing. 🔍</p>
<p>Allowable expense is defined as ‘an expense, as defined in IFRS Standards, that a regulatory agreement entitles an entity to recover by adding an amount in determining a regulated rate.’</p>	<p>‘Allowed revenue’ is closely linked to operating expenditure and depreciation included in the financial statements. There is a mapping between the regulatory compensation and the related costs. ✓</p>	<p>The components of allowed revenue may not always have a direct link with accounting expenses (see slide 28) or allowed costs for regulatory purposes may be measured using a different basis than that used for accounting purposes. 🔍</p>

(✓): The proposals accommodate cost-based schemes fairly well.

(🔍): The redeliberations may need to consider how the final Standard can accommodate incentive-based schemes better.

How well do the proposals accommodate the different schemes?

Proposals	Cost-based schemes	Incentive-based schemes
<p>The Illustrative Examples assume the following simplifications:⁽⁸⁾</p> <ul style="list-style-type: none"> • there is a one-to-one relationship between regulatory compensation and accounting expense (for example, regulatory depreciation can be traced back to accounting depreciation); • the RCB consists of a single asset, which implies the RCB can be reconciled to an entity's fixed asset register; and • the measurement basis of the RCB is the same as that used to measure property, plant and equipment in accordance with IAS 16 <i>Property, Plant and Equipment</i> (ie cost). 	<p>These assumptions work fairly well with cost-based schemes because there is a close relationship between the RCB and an entity's assets in terms of:</p> <ul style="list-style-type: none"> ○ componentisation of assets recorded; ○ measurement basis; ○ capitalisation policies; and ○ depreciation rates. <p>This close alignment allows the RCB to be reconciled to an entity's assets.</p> <p>The proposals in the Exposure Draft for accounting for regulatory assets or regulatory liabilities arising when the recovery period of the RCB is different from the assets' useful lives could be operationalised by entities subject to these schemes. ✓</p>	<p>The components of the allowed revenue may not always have a direct link with accounting expenses. In incentive-based schemes the rate is not designed to provide compensation for depreciation expense as the RCB and entities' fixed assets are not comparable (slides 23–25).</p> <p>Stakeholders have said that the proposals in the Exposure Draft for accounting for regulatory assets or regulatory liabilities arising when the recovery period of the RCB is different from the assets' useful lives would be operationally complex, costly and would not result in useful information. ⚠</p>

(8): [Illustrative Examples 2B and 2C](#) accompanying the Exposure Draft illustrate the case when the regulatory recovery period of the regulatory capital base (RCB) is longer or shorter than an asset's useful life. A regulatory asset would arise when the recovery period of the RCB is longer than an asset's useful life. A regulatory liability would arise when the recovery period of the RCB is shorter than an asset's useful life. These would be non-cash differences in timing.

(✓): The proposals accommodate cost-based schemes fairly well.

(⚠): The redeliberations may need to consider how the final Standard can accommodate incentive-based schemes better.

A grayscale world map is centered in the background. Overlaid on the map are several thick, light gray curved lines that sweep across the continents. A network of thin, dotted white lines is also visible, connecting various points across the map, suggesting a global network or data flow.

Users' needs

Users' needs

- We have gathered feedback from users both during and after the comment period of the 2021 Exposure Draft.⁽⁹⁾ These users said their analyses mostly focused on the expected growth of the RCB and entities' ability to generate cash flows and meet covenants.
- Some of these users said that they give very little attention to the statement of financial performance and that their main source of information are the regulatory reports. Having said that, all users we spoke to welcomed a model that would require entities to account for regulatory assets or regulatory liabilities arising from:
 - performance incentives;
 - quantity variances; and
 - mechanisms for sharing efficiency gains.

This would enhance the information users currently have on these items and would also reduce the need to provide non-IFRS reconciliations between the regulated revenues earned and the statement of financial performance.

(9): Users we spoke to during the comment period were mainly equity or credit analysts covering the power, utilities and infrastructure sectors in Asia-Oceania, Europe and North America. Users we spoke to after the comment period were mainly rating agencies and buy-side investors in Asia-Oceania and Europe.

Users' needs—continued

- All users we spoke to said that accounting for regulatory assets and regulatory liabilities that do not represent adjustments to future rates (non-cash differences in timing) such as those arising from differences between the regulatory recovery pace and the assets' useful lives would:
 - make the understanding of financial performance more difficult;
 - not result in useful information. Users would not consider these regulatory assets and regulatory liabilities in their analyses⁽¹⁰⁾; and
 - affect entities' earnings before interest, tax, depreciation and amortisation (EBITDA), which is a measure considered in many covenants. This may cause entities to renegotiate covenants with their creditors.

(10): This is consistent with the messages given by members of the Consultative Group for Rate Regulation that are users of financial statements (see Agenda Paper 9B discussed at this IASB meeting).

A grayscale world map is the background for the slide. Overlaid on the map are several thick, curved, light-gray lines that sweep across the continents. Additionally, there are several dotted lines that form a grid-like pattern across the map, intersecting the curved lines.

Questions for the IASB

Questions for the IASB

- Does the IASB have any questions or comments about the features of the different types of rate regulation described in this paper?

At a future meeting, we plan to ask the IASB whether and if so how to amend the Exposure Draft proposals to better accommodate incentive-based schemes.

- Are there any additional matters that the staff need to consider when exploring whether and if so how to amend the Exposure Draft proposals in this area?
- Are there any points you would like the staff to research further?

A grayscale world map is centered in the background. Overlaid on the map are several thick, light gray curved lines that sweep across the frame from the bottom left towards the top right. Additionally, there are several dotted lines that form a grid-like pattern across the map, intersecting the curved lines.

References

References

- Response summary from the Request for Information ([AP9 July 2013](#)).
- Outreach meetings with stakeholders (regulators, preparers, users) of various industries (electricity, gas, water and air traffic control) in various jurisdictions (Australia, France and United Kingdom).
- Glachant J.M., Sagan M., Rious V. and Douguet V. (2013). *Incentives for investments: Comparing EU electricity TSO regulatory schemes*. Florence School of Regulation. Available at: https://cadmus.eui.eu/bitstream/handle/1814/29677/2013_Glachant_et-al_IncentivesForInvestments_dig.pdf
- Economic Consulting Associates. September 2018. Methodologies and parameters used to determine the allowed or target revenue of gas transmission system operators (TSOs). Available at: https://documents.acer.europa.eu/Official_documents/Acts_of_the_Agency/Publication/Consultant%20Report.pdf
- Oxera (2010). Meeting the financeability challenge in energy networks. Available at: https://www.oxera.com/wp-content/uploads/2018/03/Meeting-the-financeability-challenge-in-energy-networks_1.pdf

Find us online



ifrs.org



@IFRSFoundation



IFRS Foundation



IFRS Foundation



International Accounting Standards Board



International Sustainability Standards Board