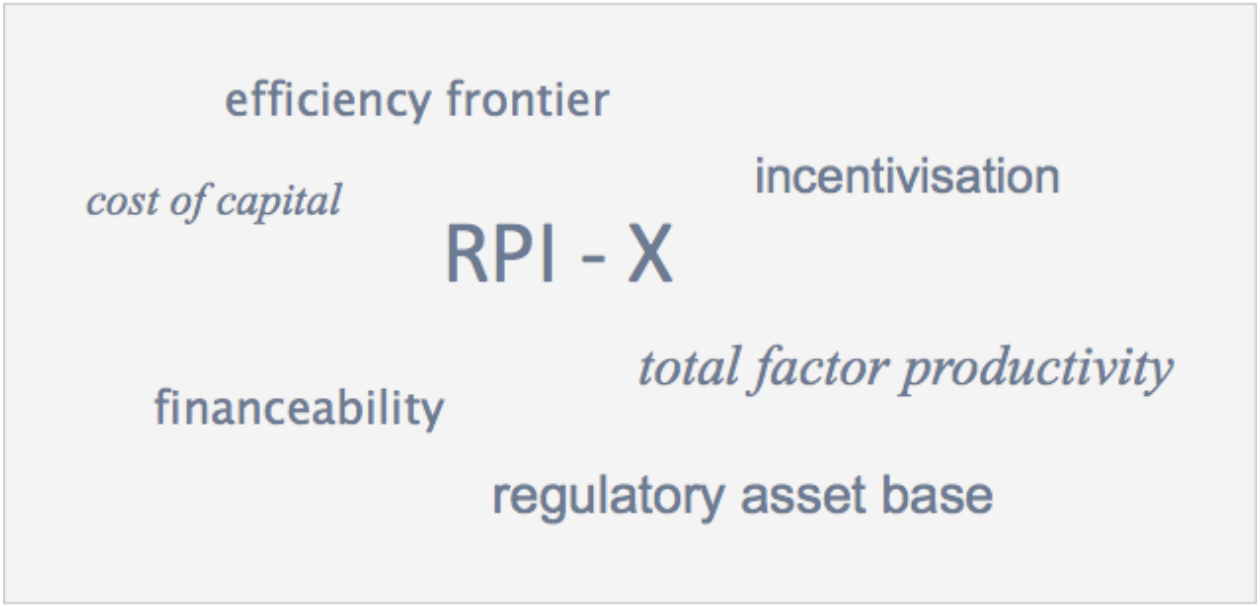
GUIDE TO ECONOMIC REGULATION



Part 6: Glossary

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Foreword

This is Part 6 in a series of booklets which aim to provide individuals working in the regulated aviation, communications, energy, rail and water sectors with an introductory guide to the principles and practices of economic regulation.

The last booklet in the series contains a final round-up of ideas and terminology that may be encountered when applying or dealing with economic regulation, focusing especially on aspects of the regulatory framework that we have not so far covered in Parts 1 to 5 of the Guide.

1. A Quick Recap

We saw in Part 1 how regulators typically regulate via **regulatory conditions** inserted into companies' **licences** or instruments of **appointment**.

Part 2 of the Guide introduced the 'building block' approach to the calculation of a company's **revenue cap** or **price cap**, in which a firm's gross revenue entitlement is calculated as the sum of an **opex** allowance, a **depreciation** allowance, an **allowed return** and a **tax** allowance. We also encountered the concepts of a **single till** and the **RAB** (sometimes labelled **RAV/RCV/TRV**), while subsequent sector-specific chapters layered on additional features like **totex** regulation, **fast/slow money**, **PAYG** and **run-off**.

Part 3 outlined the basic features of the incentives that firms face. We saw how a very simple regulatory design built around fixed **control periods** has been augmented by **cost sharing rates** and other somewhat more complex **uncertainty mechanisms**. There was also a discussion of the valuable role that **ODIs** and **reputational incentives** can play.

Part 4 then laid out the methodology that regulators use when setting allowed returns. We saw how separate allowances for the **cost of debt** and the **cost of equity** are weighted together in line with an estimate of **gearing** into an estimate of the **WACC**. Part 4 also outlined the component parts of **CAPM**: the **risk-free rate**, the **expected market return** and **beta**.

Part 5 detailed the way in which a regulator might approach the setting of a cost allowance. The key ideas here included the concepts of: **base costs**; **catch-up**; **frontier shift**; **real price effects**; **productivity growth/ongoing efficiency**; and **enhancement costs**.

If any reader at this point needs a repeat explanation of any of the terms highlighted in bold above, probably the best thing to do is to go back and run a text search in the relevant part of the Guide via the links below.

Part 1
Part 2
Part 3
Part 4
Part 5

The rest of this booklet adds to this body of work. The material is laid out in alphabetical order.

2. Other Terms/Ideas Used in Economic Regulation

Accelerated depreciation

In Part 1 of the Guide we established that it is standard practice in economic regulation for additions to a company's RAB to be depreciated over the typical life of a built asset. There can be exceptions, however, in which a regulator chooses to accelerate the payback of investment so that costs are covered by customers over a period that is shorter than the economic life of the assets.

There is currently a live debate on this topic in the gas industry in the context of the government's plans to decarbonise the UK's energy mix.

Aggregate sharing mechanism (ASM)

Part 3 of the Guide explained that the UK's system of regulation deliberately provides scope for regulated firms to make or lose profit depending on how they fare against their regulator's expenditure allowances and performance targets. A regulator may nevertheless take the view that there is a point at which profit gained or profit lost starts to become unduly burdensome on either customers or the regulated firm. Beyond this threshold, the regulator may wish to provide for a degree of sharing of incremental profits or losses.

An aggregate sharing mechanism formalises how this sharing is to take place. It will typically provide for a company to retain x% of returns in excess of £y m, and for the remaining 1 – x% share to pass back to customers via a lowering of charges. Conversely, if returns drop below £z m, an aggregate sharing mechanism might specify that the company will take x% of any incremental loss of profit beyond £z m but have an entitlement to increase bills to recoup a 1 – x% share of further losses.

An aggregate sharing mechanism may be targeted at specific types of out- or under-performance, and there may be more than one such mechanism. Ofwat, for example, has an aggregate sharing mechanism for totex and a separate aggregate sharing mechanism for ODI rewards and penalties.

See also: Return adjustment mechanism

Annual iteration process

Modern-day regulation now only very rarely sees regulators set fixed five-year price/revenue caps. It is commonplace instead for regulators to issue decisions which specify that companies' price controls will be adjusted up or down according to agreed rules and formulae. See, in particular, section 1.2.2 of Part 3 of this Guide for a list of the different types of cost sharing rules and 'uncertainty

mechanisms' that a regulator may choose to put in place.

Where changes to price controls are to take effect within a control period, there needs to be a process by which the sum total of any required adjustments to price/revenue caps can be agreed prior to the start of each new financial year. This once-a-year recalcuation is known as the annual iteration process or, in the water sector, an "interim determination of K" (IDoK).

See also: end-of-period true-up

Asset beta, equity beta, debt beta

Part 4 of the Guide introduced the concept of the equity beta as a measure of the riskiness of an individual firm. When a regulator wants to estimate the beta for a regulated company, particularly a company that does not have a share price, it can be useful to collect empirical estimates of the betas across a group of comparator firms. However, it is important that any such benchmarking is conducted on a like-for-like basis.

One factor that can interfere with comparisons between companies' observed betas is differences in firms' gearing levels. To see this, suppose that there are two companies in the same sector with RABs of £1 billion. Suppose also that the only significant difference between the firms is that company A has a 70% gearing ratio while company B has a 40% gearing ratio – i.e. company A has financed itself with £300m of equity while company B has an equity base of £600m.

Now imagine that both companies encounter a £10m cost shock. For company A, this shock, in isolation, has a financial impact equivalent to a - £10m / £300m = -3.33% return on shareholder equity. In the case of company B, the same set of circumstances results in a -£10m / £600m = -1.67% return on equity. The simple thought experiment shows that, all other things being equal, higher gearing – or, to be precise, the smaller size of a firm's equity base – means that a given event will have a more pronounced effect on percentage shareholder returns. And this greater sensitivity, in turn, can be expected to translate into higher perceived riskiness and a higher observed equity beta.

Regulators control for differences in companies' gearing levels by converting observed equity betas into asset betas. An asset beta is the hypothetical beta that one would expect to observe if a particular firm had financed itself 100% by equity and, hence, had 0% gearing. A very simple first calculation of asset beta can be obtained by applying the following formula:

$$\beta_A = \beta_E \times (1 - g)$$

where β_A is the hypothetical asset beta, β_E is the measured equity beta and g is gearing.

The formula posits that an observed beta will be proportional to the size of a company's equity base. That is to say that If the equity base doubles in size, the equity beta will likely halve in value. Conversely, if the equity base halves in size, the equity beta will likely double, all other things being equal.

By stripping out the effect of gearing, and focusing on underlying asset betas across a set of comparator companies, a regulator will be able to gauge the intrinsic riskiness of the firm(s) in question. The regulator can then proceed to select an appropriate asset beta for the sector that they are regulating, convert to the requisite equity beta for a firm that matches the regulator's notionally efficient level of gearing (using the same formula given above), and then carry that equity beta across into the CAPM calculation of the allowed return on equity.

In practice, most regulators add one further small refinement by allowing for a debt beta during the asset beta / equity beta conversions, as follows:

$$\beta_A = \beta_E \times (1 - g) + \beta_D \times g$$

where β_D is debt beta.

The thinking behind the debt beta is that some of the systematic risk borne by equity investors will transfer over to lenders as a firm takes on more and more indebtedness. It follows that there won't, in practice, be a linear relationship between the size of the equity base and beta. Rather, a halving of the equity base will likely cause the equity beta to increase by just less than two times.

Assets in the course of construction

In most regulated sectors, expenditure is added to the RAB in the year when monies are spent. This means that customers can, in effect, be paying through regulated charges for assets that are in the course of construction and not yet capable of providing a service.

This can sometimes be controversial. In the regulation of airports, for example, there have been debates in the past about whether it is right that airlines should have to pay for terminals and other facilities that are yet to open. The alternative approach that is available to a regulator is to allow for depreciation and/or return to switch on only when an asset is commissioned into service.

Accelerated strategic transmission investment (ASTI) framework

Ofgem's most recent set of price controls for the GB electricity transmission networks

contain a bespoke set of regulatory arrangements for a list of large, strategic capital projects.

The distinguishing features of the ASTI framework include:

- setting of cost allowances, PCDs and ODIs in period, rather than at the time of the regulator's five-year price review;
- automatic funding of pre-construction costs (worth 2.5% of expected total project costs) and a streamlined cost assessment for early construction costs (worth up to 20% of expected total costs);
- translation of PCDs (see entry below) into licence obligations; and
- a focus when designing ODIs on setting penalties and rewards that relate to the achievement of specified completion dates.

We mention this framework here because Ofgem has indicated it will in future look to apply similar arrangements to other electricity industry investments.

Basis points

When economists are dealing with percentages, it is sometimes necessary to compare one percentage number with another percentage number (e.g. 3.2% to 3.7%). A basis point or 1 bp is 0.01 of a percentage point. 100 basis points or 100 bps is equivalent to 1 whole percentage point.

If, for example, a regulator states that they are increasing a firm's allowed return by 50 basis points, this means that the allow return is being increased by half a percentage point (e.g. an increase from, say, 3.2% to 3.7%).

Business plan incentive

One of the age-old problems that is encountered in the UK's system of incentive regulation is the apparent incentive that regulated firms have to talk their costs and revenue requirements up during a price review. In sectors with multiple companies, this arguably most afflicts the more efficient and potential benchmark-defining companies (see Part 5 of the Guide), who would seem to have very little to gain by revealing planned cost savings to the regulator in advance rather than holding new initiatives up their sleeve to deploy once the new control period gets under way (see Part 3).

A possible way for a regulator to obtain somewhat more frank and challenging forecasts from companies is for a regulator to reward firms that submit stretching business plans. A regulator may, in particular, choose to announce in advance that it will add a small amount of additional return into the revenue entitlements of firms that it considers have provided robust, challenging and/or sector-

leading costings. Conversely, the regulator may also wish to deduct a small amount of revenue when firms are viewed as having sent in unreliable or undemanding cost projections.

The amounts of revenue added into or subtracted from price controls may be termed a 'business plan incentive'.

See also: QAA

Correction factor

Regulators' price and revenue caps place a strict limit on the amount of income that regulated firms are entitled to receive in respect of any 12-month period. It may not be straight-forward, however, for the regulated firm to set its charges in such a way as to ensure that it collects exactly what it is entitled to. A regulated company can control how much it charges on a per unit basis for its different services, but it cannot control how many units it goes on to sell. This can give rise to situations in which the firm ends up inadvertently over- or under-recovering against its regulated limit.

Most regulators provide that a regulated firm can correct for these over- and under-recoveries two years in arrears by either handing monies back to customers or adding to charges to recoup a shortfall in revenues The price/revenue cap formulae often specify that the true-up amounts should be calculated with interest.

See also: Revenue forecasting incentive

CPI, CPIH, RPI

Parts 2 and 4 of the Guide highlighted that inflation indexation is a key feature of the UK system of economic regulation.

The Office of National Statistics publishes several different measures of the rate of price inflation in the economy.

The consumer prices index (CPI) is a measure that the ONS introduced in the 1990s that conforms to rules for reporting the inflation experienced by households in a consistent way across EU member states.

CPIH is a variant of CPI that includes owner-occupied housing costs. The ONS considers CPIH inflation to be the most comprehensive measure of the rate at which goods and services bought by households is rising or falling over time.

The retail prices index (RPI) is an older measure of inflation that has fallen out of favour in recent years due to concerns among statisticians about the formulae that are used to aggregate and track prices, but which can be still found in a handful of older-style regulatory arrangements.

Credit rating

A credit rating is a simple, at-a-glance measure of a company's creditworthiness. There are three main organisations that assign credit ratings to companies in the UK: Moody's Investor Services; S&P Global Ratings; and Fitch Ratings. The rating scales that these agencies use are as follows.

Moody's	S&P	Fitch
Aaa	AAA	AAA
Aa	AA	AA
A	A	A
Baa	BBB	BBB
Ba	BB	BB
B	B	B
Caa	CCC	CCC
		CC
Ca	CC	C
D	D	D

Ratings from Aaa/AAA down to Baa/BBB are commonly known as investment-grade ratings. Ratings from Ba/BB downwards are speculative ratings or junk ratings.

It is commonplace in UK regulation for a regulated company to have a licence obligation that requires the firm to maintain an investment-grade credit rating.

Delayed delivery cashflow mechanism

The 'building block' framework for setting price controls requires regulators to make forecasts of the efficient capex that a company will incur in each year of a new control period. It may be that the regulator's expectations as regards the timing of future expenditures turn out to be a little too optimistic if, for whatever reason, a firm begins projects later than the regulator anticipates. Absent any intervention from the regulator, the regulated firm will benefit from this delay insofar as it will be able to collect depreciation charges and return in advance of actually spending money on an agreed capital project.

A delayed delivery cashflow mechanism operates in situations where there have been very substantial delays to projects and provides for some of the benefit to be clawed back from the regulated firm and returned to customers.

Delivery mechanism

Ofwat's recently completed PR24 review included a bespoke set of regulatory arrangements for two companies that Ofwat judged might not be in a position to deliver their full business plans. Ofwat's decision document identified indicative cost allowances that it is willing to give these firms, on top of the amounts factored upfront into 2025-30 price controls, provided that the company is able to show that it is capable of proceeding with schemes.

The additional cost allowances will be added to the companies' revenue entitlements on an annual basis via an IDoK process.

Delivery obligation (DO)

The CAA's framework for setting Heathrow Airport's capex allowances requires that each new capital project has an agreed output, quality requirement and timing. The CAA's monitors performance against these delivery obligations and has said that it will make adjustments to the airport's allowed revenues in the event of non-delivery.

See also: Price control deliverable

Direct procurement for customers (DPC)

The system of regulation described in these booklets involves the regulator deciding how much revenue a monopoly firm should be entitled to collect from customers. In situations where a large, stand-alone capital project needs to be carried out, it may be, however, that the established licensee/appointee isn't the only entity that is capable of coming forward with the new infrastructure. It may be that there are any number of potential providers and that it is possible to put the role of infrastructure provider out to competitive tender.

DPC is the name that Ofwat uses for a framework in which regulated water companies either volunteer or are required to hand responsibility for a particular large capital project out to a third party via a contract. The third party (the "competitively appointed provider" or CAP) will typically build, operate and finance a new asset, and its revenue requirement will be fixed via competitive bidding rather than via regulatory determination.

End-of-period true-up

See also: Annual iteration process

An alternative to in-period adjustment to give effect to cost sharing and uncertainty mechanisms is for a regulator to store adjustments up until the next scheduled price review. Any logged up or logged down amounts can at this point be reflected in the

allowed revenues during the next control period and/or the RAB.

Financebility

We identified in Part 1 of the Guide that most of the UK's regulators have a duty to ensure that regulated firms are able to finance their activities. A regulator will usually want to test at the end of each price review that their proposed price controls are compatible with this obligation.

This entails, first of all, that the regulator factors an adequate rate of return into companies' revenue entitlements (see Part 4 of the Guide). But regulators have also in recent price reviews been concerned that the profile of hard cashflows* that a regulated firm is capable of generating in each year of a five-year period is likely to be sufficient to enable the firm to obtain any debt or equity finance that it requires on reasonable terms from lenders and shareholders.

(*Recall that we saw in section 6 of Part 4 of the Guide one important reason why the allowed return will not necessarily translate into actual cash.)

One way in which regulators can test a company's ability to access the debt markets is to ascertain what credit rating the firm is capable of achieving. This entails working through the rating agencies' rating methodologies, looking especially at the thresholds that rating agencies often put on named interest cover and other financial ratios.

Where a company's projected financial ratios look like they are going to be consistent with the thresholds that are needed for a solid investment-grade credit rating, a regulator may be reasonably confident that the firm will maintain ongoing access to a wide group of lenders at a reasonable price. Such a company can be said to have passed a regulator's debt financeability test.

It may also be worthwhile examining the profile of cashflows that shareholders will see in terms of dividend payments, earnings growth and other metrics that are considered by shareholders. This additional test of equity financeability may give the regulator added confidence about the regulated firm's ability to maintain and add to its pool of equity capital.

See also: Investability

Gated allowance

The capex allowances that a regulator factors into a regulated firm's projected RAB are normally 'hard-wired' into the regulated revenue entitlement. There can be occasions, however, when a regulator states that a firm has to pass certain conditions before it is entitled to a specific part of its capex

allowance. The money is said to be gated, in the sense that a regulator will give an approval at a later date it considers that its conditions have been met.

IDoK

See: Annual Iteration process

Innovation allowance

One of the criticisms that is sometimes levelled at economic regulation is that it prioritises short-term cost minimisation (see Part 3 of this Guide) over genuine long-term innovation.

Some regulators have responded to this critique by inserting an explicit innovation allowance as an additional building block in the calculation of regulated firms' revenue entitlements. The allowance has to be spent on regulator-approved research and development projects. In sectors with multiple companies, regulators may also provide for monies to be passed from the regulated firms into a pooled industry fund, to be allocated by competitive bids, including from outside third parties.

Investability

See also: Financeabilty

This is a new word which regulators and regulated companies have coined in recent years during analysis of regulated companies' financeability (see entry above).

'Investability' refers to the requirements that shareholders have in order for them to want to keep or put equity in a regulated firm. As such, the concept of investability is interchangeable with the notion that a regulator's assessment should include explicit consideration of equity financeability.

Market-to-asset ratio (MAR)

We explained in Part 2 of the Guide that a regulatory asset base can be read as a measure of the financial capital that investors have put into a particular regulated firm.

Regulators find it informative to track share prices and/or the value at which regulated firms change hands during merger and acquisition activity. In particular, if what is essentially an I.O.U. changes hands at well above RAB value, this may indicate that the regulator was too generous to the regulated company when it set the firm's revenue entitlement (because people are willing to pay more than £1 to acquire £1 of RAB). Conversely, if shares are bought and sold at a value that sits below RAB, this could indicate that the regulator has been too demanding and underestimated the firm's revenue requirement.

A simple market-to-asset ratio can be calculated as:

book value of debt + market value of equity

divided by

RAB

A neutral value for MAR might sit somewhere around 1.0.

Measures, Targets and Incentives (MTI) Scheme

See: Outcome based regulation

Network Asset Risk Metric (NARM)

Part 3 of the Guide explained how regulators set outcome delivery incentives (ODIs) to balance the incentive that firms otherwise have to cut costs. One of the outcomes that the ODI framework may target is good asset condition/resilience. The NARM is an Ofgem measure of overall risks at any point in time to asset performance. It is calculated in such a way as to capture both the likelihood of a failure occurring and the consequences of asset failure.

Within Ofgem's regulatory framework, companies will incur financial penalties in the event that the NARM falls below a specified threshold.

Notified item

A notified item is a term used by Ofwat to mark out a specific category of cost that the regulator has consciously not allowed for during one of its price control reviews. Notified items tend to be used when it is unclear to the regulator whether a company will or will not encounter a particular type of expense. The consequence of notifying a known omission is that the regulated firm is afforded an opportunity to obtain additional costs allowances at a later date if the relevant costs do, in fact, materialise.

Outcome-based regulation (OBR)

Around 10-15 years ago there was a shift in UK regulation from regulators monitoring and incentivising the delivery of specific expenditures towards a focus on firms delivering the broader end outcomes that matter to customers (see Part 3 of this Guide).

In the CAA's regulation of Heathrow Airport, OBR is a specific new label that the CAA has begun applying to what was previously known as a service quality rebates and bonuses (SQRB) scheme. OBR provides for Heathrow to earn financial rewards or pay financial penalties in accordance with licence-defined measures, targets and incentives.

ODI-F

An ODI-F is an outcome delivery incentive (ODI) that comes with automatic financial rewards and financial penalties.

See Part 3 of the Guide for a detailed overview of ODIs.

ODI-R

An ODI-R is an ODI that operates on a reputational basis only – i.e. it seeks to drive good behaviours through transparency of reporting. It does not come with any financial rewards or penalties.

Outperformance, underperformance

The UK's fixed-period, fixed price/revenue cap framework provides a regulated company with an opportunity to earn additional profit if it beats the assumptions that the regulator makes when it fixes the firm's price control. A firm can also lose profit if it fails to live up to the regulator's expectations.

We say that a firm outperforms when it earns an overall return that sits above the allowed cost of capital. Conversely a firm underperforms if its outturn return comes in below the allowed cost of capital.

Outperformance may comprise:

- cost outperformance – i.e. underspending against regulatory allowances;
- financing outperformance – i.e. paying less interest than was provided for in the allowed cost of debt;
- tax performance – i.e. incurring lower tax payments than the regulator forecast;
- volume performance – i.e. in industries with a price cap, seeing outturn volumes come in above the forecast level; and/or
- ODI outperformance – i.e. achieving net ODI bonuses.

and vice versa for underperformance.

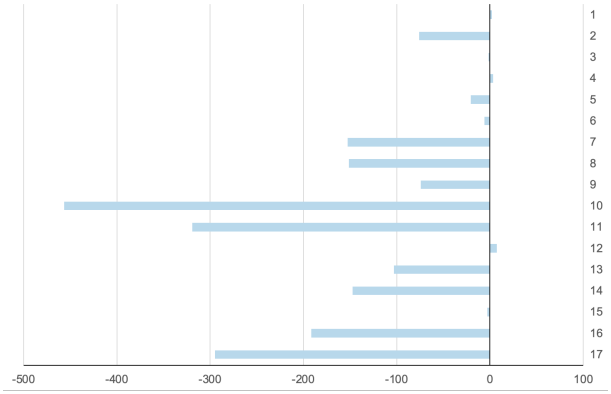
Out and underperformance are always computed after the application of the regulator's sharing and uncertainty mechanisms.

Outturn adjustment mechanism (OAM)

Ofwat's recent PR24 price control decision for water and sewerage companies contains a novel approach to rebasing all companies' ODI rewards/penalties in the event that the median firms in the sector earn an annual net ODI reward or penalty worth more than +/- 50 basis points of RORE.

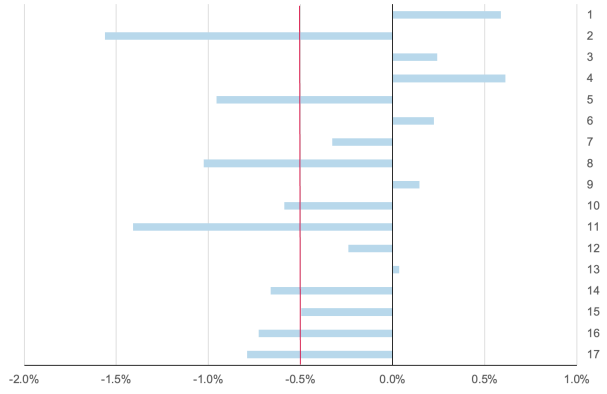
Suppose that the spread of ODI payments in the sector comes out as shown in figure 1 below. The median companies in this case are earning returns below the -50 basis points threshold.

Figure 1



The OAM rebases all companies' ROREs by an equal amount such that the median companies' net ODI penalty shifts upwards to exactly -50 basis points.

Figure 2



Note that the mechanism works in a symmetrical way if it is necessary to rebase median companies' down to +50 basis points of RORE reward.

See: Return on regulatory equity (RORE)

Pass-through item

Cost pass-through can occur when a regulator provides in advance for the full outturn cost that a company incurs on a particular item of expenditure to be passed in full to customers, regardless of the amount.

Regulators tend to provide for pass-through only for exceptional items where the cost lies wholly outside of the regulated company's control (e.g. if the firm is essentially passing on a charge from another person).

Price control deliverable (PCD)

Notwithstanding the comments that we made in the earlier entry for outcome-based regulation, recent price reviews have seen regulators more and more often make the award of cost allowances conditional upon a regulated company actually delivering the projects and volumes of work identified in its business plan.

A PCD specifies the physical output that the regulator is expecting to see. The regulator may then put in place rules which provide for a specific sum of money to be clawed back from the regulated company at a later date in

the event that the PCD is not achieved, not achieved to the required standard or is achieved late.

Price control financial model (PCFM)

All of the regulator's calculations of allowed revenues are laid out transparently in a published spreadsheet model.

In Ofgem's price control framework, the PCFM formally constitutes part of each energy network's licence.

Quality and Ambition Assessment (QAA)

The QAA was the labelling that Ofwat used in its recently completed PR24 review when it was assessing companies' business plans.

See: Business plan incentive

Return adjustment mechanism (RAM)

See: Aggregate sharing mechanism

A RAM is Ofgem's label for an aggregate sharing mechanism.

Retail margin

Most of the regulated companies in the UK are asset-heavy infrastructure companies. When a regulator is setting a price control for an asset-light retail business, it may choose to depart from the standard 'building block' methodology and tailor its calculation of allowed revenues more directly to the specific circumstances of such firms.

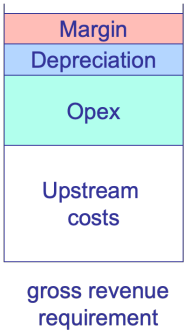
One such modification affects the way in which the regulator will calibrate a retail business's allowed profit. Rather than think in terms of an appropriate return on capital, it may be more instructive to provide a retail firm with a profit entitlement set as a % margin on forecast turnover. This formulation recognises that retail business may not have a sizeable physical asset base, but may nonetheless require substantial sums of financial capital from their investor backers, in either actual or contingent form, with attendant cost.

The allowed retail margin is sometimes calibrated by reference to the margins earned by retailers in similar-looking competitive retail markets rather than as an explicit RAB x cost of capital calculation.

The building blocks in a retail price control might then take the form:

> Pass-through of non-retail costs + retail opex + depreciation + allowed profit margin

Figure 3



Return on regulatory equity (RORE)

Part 2 of the Guide explained that the UK's system of regulation deliberately provides scope for regulated firms to make or lose profit depending on how they fare against their regulator's expenditure allowances and performance targets.

The scope that there is to make or lose money can be expressed in £m terms. However, this does not lend itself easily to comparisons between companies of different sizes – an incremental profit of, say, £10m may be very significant for a firm with small annual revenues, but relatively trivial for a firm with a large RAB managing very high amounts of expenditure.

To help everyone get a better sense of the stakes that a firm is facing, it is perhaps more logical to think how the £m sums involved look as a fraction of the regulated firm's RAB. In Part 2 of the Guide we explained that the RAB is a measure of the financial capital that investors have put into a regulated firm. It follows that it is instructive to know what percentage of that capital is at risk depending on how the company performs against its price controls.

RORE takes that idea one step further forward by focusing even more tightly on the portion of the RAB that has been financed by shareholders in the form of equity. The percentage split of debt and equity financing will be set in line with the regulator's overarching gearing assumption (see Part 4 of this guide), hence the labelling "regulatory equity".

RORE measures can be used to calibrate incentives. For example, a regulator may say that a particular ODI will confer a maximum reward or penalty worth n basis points of RORE. RORE may also be used in the calibration of an aggregate sharing mechanism, a return adjustment mechanism or an outturn adjustment mechanism.

Revenue forecasting incentive

See: Correction factor

In an earlier entry we outlined how regulators provide for any inadvertent over- or under-

recovery against a price/revenue cap to be corrected with a lag of two years. A revenue forecasting incentive is a scheme hands companies a small financial penalty or reward depending on the scale of the over- and under-recoveries. Its purpose is to incentivise the regulated firm to minimise the miscalibration of charges to the greatest extent possible.

RIIO

RIIO stands for Revenue = Incentive + Innovation + Outputs.

It is a branding that Ofgem has been applying to its network price control since 2013.

Totex incentive mechanism (TIM)

The TIM is Ofgem's label for the cost sharing arrangement that we described in section 1.2.1 of Part 3 of the Guide.

Traffic risk-sharing mechanism (TRS)

Part 2 of the Guide explained that companies with a price cap make higher profits when volumes turn out to be higher than the regulator anticipates but can lose profits, or even make losses, when volumes come in lower than forecast.

A regulator may choose to dampen the resulting swings in profit by overlaying a claw-back / top-up mechanism. In high volume years, such a mechanism will provide for a proportion of revenues to be returned to customers via a reduction in future year prices. In low volume years, the mechanism will provide for future year's charges to increase as a way of making up for low revenues.

Such mechanisms are most commonly encountered in the aviation sector, hence the labelling: traffic risk-sharing.

Use-it-or-lose-it (UIOLI) allowance

In circumstances where a need for work has been identified but the cost is uncertain, a regulator may provide for a cost allowance to be given to the regulated company on a use-it-or-lose it basis. Any allowance that is unspent can then be clawed back and returned to customers at a later date.

Vanilla WACC, pre-tax WACC

In Part 2 and Part 4 of the Guide we saw that a company's allowed revenues must be sized in such a way as to (i) cover the interest costs that a regulated firm will pay, and (ii) provide for a return on shareholder's equity that is comparable to the returns that investors can earn on their money elsewhere.

These two costs, when combined together into an overall rate of return, are sometimes

called the vanilla WACC. The ‘vanilla’ here reflects the sense that this measure of the WACC is the purest possible of the percentage return that is to be paid each year out to investors. Note, in particular, that the vanilla WACC includes no allowance for any sort of tax payment or tax adjustment.

A pre-tax WACC, by contrast, bundles the returns that investors will ultimately receive with any monies paid to/from HMRC into a composite percentage rate of return. The pre-tax WACC will therefore normally be a grossed up version of the vanilla WACC, such that the return provides a sufficient return for investors after allowing for tax.

Volume driver

In situations where a regulator cannot be sure how much physical work a regulated firm will need to carry out, it can put in place a cost allowance that automatically adjusts up or down in accordance with the volume of activity that is ultimately undertaken.

The regulator’s cost allowance in this case, to all intents and purposes, takes the form of a unit cost allowance (e.g. a fixed £ per km of work), which will be scaled into a final £m cost allowance by a specified volume driver.

If you have any questions about the content of this booklet, please get in contact at:

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