RCV RUN-OFF AND THE "PAY AS YOU GO" RATIO

WHO NEEDS ASSET LIVES?

September 2025

Introduction

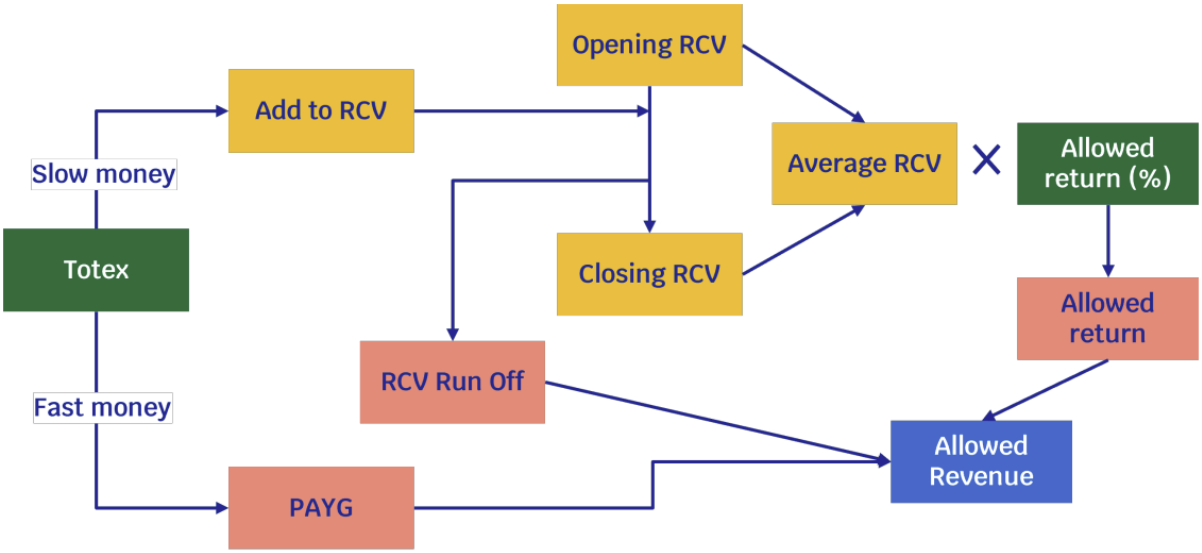
Recommendation 20 of the Cunliffe Review contains a modest proposal of great importance to the proper functioning of economic regulation. It could easily be skipped over by those with only a casual acquaintance with the increasing convolutions and complexities of economic regulation as developed over the last 15 years.

"Recommendation 20: Following the establishment of a new methodology for assessing asset condition and expected life, the regulator should consider the merits of linking RCV run-off more closely to the economic depreciation of assets. This applies to England and Wales."[1]

To explain the role RCV run-off plays and why the Cunliffe review has made this recommendation we need to step back. The graphic below, drawn from Ofwat's PR24 methodology, illustrates where RCV run-off fits into the mechanics of price-setting for water companies.

1 Independent Water Commission Final Report, 21 July 2025, pg. 208.

Figure 1 Ofwat's methodology for cost recovery



- PAYG represents totex expensed in the year
- Totex not expensed is added to the RCV
- Each control has a separate RCV
- The return on RCV compensates for the investment that is in the RCV
- RCV run-off represents the amortisation of RCV

Source: Ofwat, Creating tomorrow, together: Our final methodology for PR24, Figure 8.1

The flow chart above illustrates how far Ofwat has moved from the original conception of "building blocks" regulation, where allowed revenue was seen as being made up of (allowed) operating costs (opex), return on assets (allowed return multiplied by the regulatory asset value, RCV) and return of assets (depreciation), the latter two being driven by (allowed) capital expenditure (capex) and the expected lives of the different categories of assets used to deliver the service.

In practice it was never that simple and there were reasons why Ofwat departed from a straightforward cost-based approach, albeit with mixed degrees of success.

In this note we explore the significance of the run off rate for economic regulation, but will also draw in the issue of the "pay as you go" ratio (PAYG in the figure) , something that the Cunliffe review appears to have overlooked although it has as much relevance to addressing the problem the review perceives to exist as does the RCV run-off rate.

Why did the Cunliffe review make this recommendation?

The issue with which the Cunliffe review is grappling in this instance is how to translate decisions on what companies need to spend (an issue dealt with elsewhere in this series of papers) into prices paid by customers. In particular, when the money is being spent on long-

lived assets, how should the recovery of these costs be spread over time? In this context the accounting rules for how and when these costs are recovered become important.

How much needs to be spent is what is alluded to in the first part of recommendation 20: "Following the establishment of *a new methodology for assessing asset condition and expected life* …" [emphasis added]. This is a key recommendation. *How* it could be achieved is dealt with elsewhere in this series of notes. RCV run-off and the PAYG ratio (even if the review said nothing about that) then deal with how this spending translates into prices.

A bit of accounting, a bit of history

You will note that Ofwat's methodology as summarised by Figure 1 does not mention "depreciation", a key concept you would think in assessing the profitability, or financing needs of an asset-intensive business.

In accounts generally, and in utility regulation specifically, depreciation plays two roles. First, it measures the extent to which assets in operation have been "used up" during the accounting period.

The second role depreciation has in regulation is to provide the company with the cash flow required to pay for the replacement of assets. In the case of the isolated asset, the company can begin by borrowing the money to pay for the asset. Adding depreciation to allowable revenue gives the company cash to repay that loan over the asset's life.

Simple though this may seem, a problem arises if the two, repayment of past investment and paying for future investment impose different requirements, not just in the short run, but on an enduring basis. This issue is central to the problem of setting water charges.

Water and sewerage assets are typically long-lived, with lives in the case of parts of the network in excess of 100 years. That being the case the *historic* value of assets on the company's books bears no relation to what it would cost to replace those assets today. Furthermore, water company RCVs bear no relation to either the historic or forward-looking cost of the assets, being initially fixed retrospectively using the market value of water company shares immediately after flotation in a way that favoured immediate continuity of prices over the funding of future investment.

Because the RCV was effectively unrelated to specific physical assets, conventional depreciation of the historic RCV can't be expected to generate enough cash to meet future needs. The initial regulatory solution was to apply current cost accounting rules to the calculation of depreciation. Depreciation was estimated using typical asset lives, but charged on the Modern Equivalent Asset (MEA) value of the companies' assets. Because MEA values represent the cost of replacing assets at today's prices, in theory a company in approximately

'steady state' should see a broad equivalence between current cost depreciation and on-going capex spend. In this case, RCV will remain approximately constant[2].

But over time the problems of maintaining MEA asset values and the information asymmetry between Ofwat and the companies on asset condition lead Ofwat down a different route.

Enter RCV run off, then Totex

After PR09 Ofwat's regulatory approach has evolved away from detailed consideration of specific assets and fixed accounting rules, in favour of comparative regulation, using past spending behaviour to inform future allowances and metrics like RCV run-off and the PAYG ratio to deal with "recovery" of capital.

As far as capital charges were concerned, the first step at PR09 was to abandon the idea of using depreciation in allowable revenues in favour of the RCV run-off rate. From that point companies had to propose a run-off rate as a proportion of their RCV, in lieu of depreciation.

At PR14 matters were taken a step further with the abandonment of separate allowances for opex and capex (divided by base and enhancement) in favour of a total expenditure (totex) allowance. The idea was to give companies flexibility to choose the most efficient balance of operational and capital solutions to the challenge of maintenance and enhancement. But the use of totex also necessitated the introduction of a new lever, the PAYG ratio, to decide how much of the allowed totex would be capitalised and how much would be expensed.

What are the risks of this approach?

We note first that both factors, RCV run off and PAYG ratios can be viewed as pragmatic simplifications of the regulatory system consciously blurring the issue of accounting for specific assets and even the distinction between opex and capex (inputs) in favour of a supposed focus on delivery to the customer (outcomes).

However, we should also note that the approach is very much at odds with statutory accounting rules. The reason for these rules is to ensure that company accounts present a realistic picture of the current level of a company's profits and the value of its assets. Companies cannot capitalise expenditure that relates to current non-asset related expenditure because this would overstate company profits and potentially lead shareholders to distribute profits in dividends at an unsustainable rate. Depreciation and asset life need to bear a tangible relationship to the actual physical asset to ensure the balance sheet is acceptably accurate and avoid the situation where new owners or creditors believe the company is backed by assets shown on the balance sheet, but which do not exist in reality.

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2 In real terms: RCV is also indexed for inflation, with returns calculated using a real, not nominal cost of capital.

All this means that Ofwat is on shaky ground, from an accounting point of view, in divorcing the issues of capitalisation and depreciation from any sense of the actual assets employed by the companies.

None of this would matter greatly were the approach Ofwat has taken merely a simplified way of aligning regulated asset values and their consumption with the external reality. This, however is not how PAYG and RCV run-rate has been applied.

First, and this is noted in the review, Ofwat's totex approach has led to uncertainty and lack of clarity about how much can and should be spent on asset maintenance.

However, the major issue with the application of PAYG ratios and RCV run-rates is that they have not been used as we suggested, to short cut a way to a reasonable statement of asset values and forward looking investment needs. As Box 22 of the Cunliffe review states, companies "were not required to assess asset lives or condition, or submit MEAV estimates [at PR09 or subsequently]", rather Ofwat "assesses RCV run-off rates based on consideration of intertemporal fairness, affordability, financeability, and upper limits".

In other words, Ofwat has shown a decreasing interest in considering the actual asset base or its condition, relying increasingly on benchmarking and comparative expenditure data to set allowable revenue limits and has meanwhile used asset capitalisation and depreciation as instruments to sculpt the level of charges between periods, using the subjective factors of intertemporal fairness and affordability at one end of the scale and minimum levels of company financeability at the other. Given the focus since 2010, as noted by the Cunliffe review, of keeping bills low[3], sculpt has routinely come to mean reducing bills in the present.

In these circumstances it is not surprising that a significant part of the feedback to the review team focussed on the extent to which it is now unclear that Ofwat's latest determinations provide sufficient funds to pay for ongoing capital maintenance.

In Ofwat's evidence it states that "RCV run-off is not the same as depreciation the asset base; (sic) and noted that, where RCV run-off is lower than companies' capital maintenance needs, resilient companies should be able to fund this shortfall through debt and equity"[4]. This is clearly not an adequate response. By saying RCV run-off is not the same as depreciation, Ofwat is in danger of denying the need for a long run link between run-off and forward-looking capital maintenance needs[5]. That cannot be correct. Nor can a general appeal to the "resilient company" be used to justify a run off that does not cover future costs. By making the recommendation that it has, it seems clear that the Cunliffe review has not entirely accepted Ofwat's position. But also by phrasing recommendation 20 in this way it fails to provide

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3 Cunliffe report, Box 26

4 ibid, para 393.

5 We note that at PR24 Ofwat stated that historical accounting based measures should be the 'starting point' for a run-off rate assessment. This amounted to a rowing-back on a previous position, However, its response to the Cunliffe review remains concerning, for reasons we will expand upon below.

guidance to Ofwat's successor about how RCV run-rate, and the PAYG ratio, should be applied, if at all. This is a pity as it is a key question for the next price control.

Why RCV run-rate and PAYG should not be driven by issues of affordability and financeability

A key part of Ofwat's job has always been to encourage the companies (and consumers) to act in an efficient manner. Economic theory tells us that economic efficiency, both productive and dynamic, requires companies to face accurate cost signals relating to the consequences of their decisions and for price signals. Consumer behaviour should also reflect accurately the costs their consumption imposes on the company and, where necessary, on the wider environment (but we will not address this latter part here).

Recommendation 19 reflects the fact that Ofwat's decision to go down the totex path has made this harder not easier.

Cost, when you get away from the simplest textbook examples, is a complicated issue. In the case of an asset-intensive industry like water, accounting for the cost of assets that last a long time is an important, but not a unique issue. Accounting practices of capitalisation and depreciation have been developed to address these issues and should not be lightly set aside.

The issue of financeability is, of course also relevant. In the first instance it is an essential concept in managing the differences between accounting measures of profitability and cashflow, which is an essential concern of any real company having to bridge the difference between profit and cash-outlay in any given period, as well as being able to provide for the unforeseen.

But it should not be used to determine the level of prices. First and foremost, measures of cash flow, interest cover, etc., should not enter into the determination of economically efficient pricing, so to set prices with relation to minimum acceptable financial ratios risks distorting prices, especially in circumstances where the regulator is under external political pressure to bear down on prices. Moreover, setting allowable revenue on the basis of financeability ratios without reference to the real-world consequences will have real world consequences. If the regulator judges company financeability can accommodate lower cash flows it cannot be entirely surprising if the regulated company responds by reducing expenditure to an extent, in line with the revenue that has been allowed. Minimum financeability ratios cannot be the floor to this process. Rather, the floor has to be provided by the consequences for actual physical assets and their condition or serviceability.

But if financeability is not an acceptable basis, especially floor, on which to set prices, affordability is an equally unreliable basis for placing a cap on prices. In saying this we are not blind to the issues of poverty and inequality in the UK. But they are separate and distinct from issue of economic efficiency that it is the job of an economic regulator to promote.

Moreover, given access to water and sanitation is an essential need, it is one thing determining "social tariffs" which offer a discount for a small stratum of disadvantaged customers who will otherwise struggle to afford it. It is quite another bearing down on the whole level of charges for the population as a whole on the pretext of affordability, leading to prices below their economically justified level, over-consumption and a significant subsidy to the vast majority of customers for whom affordability is not an issue. Essentially, the concept of "affordability" at the general population level cannot be a reliable basis on which to set tariffs.

Finally, there is an essential time-inconsistency in the reliance on both affordability and financeability as the floor and ceiling for setting charges. While Ofwat has also cited "inter-generational fairness" as a factor it takes into account, what does this mean in reality? Our best estimate of economically efficient prices today should include an apportionment of inter-temporal costs (capital costs) following established rules for apportioning these costs over time. If - on the basis of affordability, financeability or "intergenerational fairness" - we choose to set prices below this level (the levers here would be a lower PAYG rate and a lower RCV run-off), what happens in the future? It follows at some point in the future prices must be set above the economically efficient level in order to make up for the shortfall in the present. But how at that future point could it be viewed fair that the generation of the future is paying more than the cost it is imposing on the system, indeed more than the reasonable costs that the water company is incurring? How will it be acceptable, to consumers or the regulator that "affordability" is now worse than it should be on a strict cost basis.

It also follows that future profits will be inflated. In an extreme case, such an approach could potentially even be a breach of Competition Law; the situation envisaged for the future looks very much like excessive pricing, and a regulated water company is subject to the restrictions of Competition Law regardless of the application of economic regulation. It seems quite obvious that this future "upside" for companies makes no sense, and so could not be expected to happen. In which case the downward adjustment in the present cannot be justified either.

Furthermore, this approach to affordability / inter-generational; fairness results in the storing up reserves of RCV for future generations to pay for later. If this behaviour were to become habitual for regulators it could plausibly change investors' appetite to risk in the industry (will this ever get repaid?) leading to increases to the return on capital required by investors.

What would a good application of the review's recommendation look like?

We have been pretty firm here that measures of capital accumulation and consumption are key elements in the determination of efficient costs measured over time, and as such should not be used as levers to manipulate the short-run level of current charges for wider policy objectives. Does a role remain for PAYG ratios and RCV run-offs under the Cunliffe review's "supervisory" approach?

First, even though the review calls for ring-fenced allowances between operating and capital cots in future determinations, we do not believe this requires a wholesale move back to a pre-PR09 approach, with capitalisation and capital charges relating to specific investments.

To see this we must recall that the initial derivation of RCV and the combination of this with current cost depreciation means that the RCV has never related to a specific set of assets. Indeed it is possible to replace all the assets in situ at the time RCV was first minted without the RCV changing in real terms and the discount of RCV to MEA value broadly maintained.

We cannot imagine the Cunliffe Review's intention is to return to a detailed regulatory approach requiring a full and regularly updated MEA valuation of all assets. Instead, regulatory accounting could reasonably continue to use a simple PAYG ratio. But the ratio should be directly related to the capital expenditure envisaged in each company's Business Plan. For the same reasons described above that RCV run-off should not be used as a factor to manipulate charges in the short-run, the idea of fast and slow money should be quietly shelved, with its implication of a false flexibility that we have seen leads to serious difficulties. Most particularly, any idea that customers should be specifically consulted on the PAYG ratio should be avoided, as distinct from the company's business plan, obviously[6].

As regards the RCV run-off rate, recommendation 20 is only clear up to a point. It calls on the rate to be "more closely" linked to "*economic* depreciation of assets" (emphasis added). The insertion of the work "economic" is key, even if it is not clearly explained. As we have outlined, depreciation performs both a backward-looking cost recovery and a forward looking cash-flow generating function. One feels the Cunliffe review is being careful not to link the RCV run-rate too closely to either to statutory depreciation charges or to future cash flows. But the new regulator will have to make this balance.

In performing this balance there can remain a role for RCV run-off for similar reasons as to retain the PAYG ratio: in lieu of depreciation charges where detailed asset registers are neither available or relevant. Given that RCVs still stand at a fraction of the value of the actual physical assets, clearly RCV run-off cannot be tied to depreciating the RCV based on typical asset lives, as this would under-fund the sector. This leaves the forward-looking measure as being key. But also this measure cannot simply be the forecast expense on capital maintenance over the forthcoming control period. That would wrongly favour the importance of cashflow over the economic logic of spreading the cost of assets over their useful life.

Real maintenance expenditure profiles can be lumpy and cyclical. The "new methodology for assessing asset condition and expected life" needs to extend to a picture not just of asset maintenance spend over the next five years, but extend much further into the future. We would argue that the appropriate run-off rate should be that rate estimated to maintain the level of the real RCV in a steady-state (absent any enhancement of services). In other words an average of estimated future maintenance, based on an ongoing, company-specific assessment of asset condition, calculated over a rolling time horizon of say twenty to twenty

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6 The Cunliffe review notes what difficulties companies have had consulting over the PAYG ratio, but does not make a recommendation on this.

five years. Long enough to even out the lumpiness of investment cycles, not so long as to disappear into the realms of conjecture.

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