Foundational Economy Research

What we need to know (and do) about water: *the business model of English and Welsh water*

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Foundational Economy Research is an action-research agency which works on the sectoral provision of basics and the politics of change in ordinary places in Wales, the UK and beyond.

This public interest briefing is the first in a series of briefings and reports which build on the analysis of English and Welsh water in our *Murky Water* book published in 2025.

The authorial team for this report and our ongoing work on water is Luca Calafati, Andrew Davies, Julie Froud, Colin Haslam, Sukhdev Johal, Kevin Morgan and Karel Williams.

Our website Foundational Economy Research archives our recent reports and briefings and includes a long essay on "foundational economy as grey skies thinking" which explains our distinctive, radical position.

What we need to know (and do) about water: the business model of English and Welsh water

Everybody agrees privatised water has failed. Andy Burnham as Prime Minister promises 'greater public control' of utilities, as long running negotiations between the government and Thames Water's hedge fund bond holders move towards a conclusion. This has ignited English public debate about public control versus public ownership. Across the border, the Plaid Cymru Welsh Government has limited powers to pursue its declared long-term objective of public ownership. Though it will gain more control as it implements the Cunliffe Commission's recommendation to create a Welsh economic regulator to replace Ofwat.

So, what to do about privatised water is a major public issue. This briefing provides what we need to know about water so that ordinary citizens, water activists and the political classes around government can make informed decisions. The big obstacle to understanding is all the confusions embedded in what we think we know about water. These confusions sustain a binary choice between public ownership and regulatory reform as one-and-done solutions. Our argument is that both options have to be taken up and combined with other complementary actions if we are to get onto the pathway to improvement with meaningful public control.

The novelty of this briefing is that it draws on the full range of financial evidence and frames the underlying problems of water in business model terms. This framing builds on the approach taken in our *Murky Water* book.[1] Regardless of ownership and funding, all the privatised water companies have an activity related business model problem when a voracious demand for physical investment meets revenue constraints established by a regressive charging system. The problem is that operating costs plus physical investment plus the costs of servicing finance capital then add up to more than 100% of revenue received from customers and the consequence is increasing debt combined with investment restriction that further undermines service provision.

The industry-wide business model problem is demonstrated by comparing Dŵr Cymru (Welsh Water) which serves most of Wales with its English counterparts including distressed Thames Water. This is relevant because Dŵr Cymru is 100%

[1] Luca Calafati, Julie Froud, Colin Haslam, Sukhdev Johal and Karel Williams, *Murky water. Challenging an unsustainable system*, 2025, Manchester University Press.

bond financed which blocks the extraction by owner shareholders that can and does occur when a water company is publicly quoted and/or owned by an investment fund. The evidence shows that business model similarities trump ownership and funding differences. On this basis, we produce a *what to do* argument which is relevant for two audiences. This briefing is directly relevant for a Welsh audience because Dŵr Cymru is a failing Welsh company with issues about management capture and underperformance The briefing is equally relevant for an English audience because it has larger what to do implications not just for Thames but for all the other English privatised water companies.

Orientation: ownership differences and confusions

This report is about whether and how ownership and funding make a difference to privatised water companies. Since its foundation in 2001, the group known as Dŵr Cymru[2] has provided drinking water and sewage treatment for most of Wales. Dŵr Cymru figures prominently in this briefing because the group's ownership and funding are different from the English privatised water companies.

- The English companies (whether public companies or investment fund owned) have shareholders. Glas Cymru, which is the parent company of Dŵr Cymru, has 50 or so appointed Members (with no financial interest in the firm) to ensure provision of high-quality services.
- The English companies distribute dividends to shareholders, but Glas Cymru is a private company limited by guarantee which reinvests all surpluses in the business. From its foundation, Glas Cymru has obtained outside funding by selling bonds which oblige it to pay a fixed interest rate.

Our analysis focuses on what we need to know about and what we need to do about Dŵr Cymru and its English peers. What we need to know and do is not straightforward because all the water companies have been misunderstood through what we think we know. Or more precisely, through three separate sets of misunderstandings:

What we think we know 1: Welsh claims and assertions about Dŵr Cymru as a better Welsh way for customers and the environment. The Dŵr Cymru website continues to assert that this is a 'not -or-profit company whose issuance of corporate bonds at a low cost' produces 'benefits passed on to our customers in the form of lower bills and improved services'.[3] These claims have generally

[2] The group combines a public facing Dŵr Cymru operating company and its Glas Cymru parent, they serve 1.33 million households in Wales and the borders, The Deeside and Wrexham area is served by Hafren Dyfrdwy which is a subsidiary of the English water company Severn Trent.

[3] Welsh Water, *Investors*, https://corporate.Dŵrcymru.com/en/about-us/investors. The same narrative is repeated for customers in the *Here For You Not For Profit* leaflet on the Dŵr Cymru website which can be accessed at https://corporate.dwrcymru.com/en/library/leaflets-and-publications/not-for-profit-metered-customers

been uncritically accepted by Welsh politicians, civil society and media with the company widely represented for the past twenty years as part of 'Team Wales'.[4]

- **What we need to know** is that accumulating evidence undermines the company claims. Environmental problems have been uncovered by the water regulators, noted by a Senedd Committee, and advertised by civil society activists. In response, the Dŵr Cymru CEO, Roch Cheroux, in a September 2026 *Financial Times* interview has now made a dramatic intervention which aims to deflect criticism by dumping the twenty-year-old 'better Welsh way' story that still appears on the company's website. The CEO now admits Dŵr Cymru's infrastructure is in a mess just like the other companies despite not-for-profit ownership. And then (like the industry's trade association Water UK) adroitly blames the regulator for blocking investment: "I don't think it's ownership, it's the regulatory model".[5] Our accounting research presented in this briefing discounts the importance of ownership and regulation. Instead, it highlights the activity-related business model problem of financial unsustainability, showing for the first time that bond finance in a not-for-profit does not deliver low cost finance.

What we think we know 2: English criticism of the other privatised companies as a worse English way. Bayliss and Hall[6] in 2017 originated a narrative about financial extraction via dividends to shareholding investors in the privatised water industry. This has been generally accepted and often repeated by politicians and activists amidst increasing public disgust about spills of untreated sewage into water courses. The extraction narrative is combined with the assumption that, if the extraction was blocked, the industry would have a financial surplus sufficient to fund adequate levels of physical investment in capacity and upgrading.

There is no evidence for this crucial assumption about financial surplus, but it is validated by the emotional appeal of a 'hiss the villain' narrative and regular repetition. As in Andy Burnham's speech to the 2026 Labour Party Conference when his vignette was of water as an industry where "shareholders never lose and the public never win, from which some have syphoned out easy money while the public picked up the bill for the sewage in our seas".[7]

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[4] Since a key speech by First Minister Rhodri Morgan in 2002, the Team Wales approach rests on the assertion that all the institutions and organisations in the Welsh polity share social values and (can) work together for the good of the nation.

[5] Gill Plimmer and Jim Pickard, *Non-profit model won't fix water industry, says boss of non-profit utility, Financial Times,* 29 September 2026, https://labour.org.uk/updates/stories/andy-burnhams-speech-to-labour-party-conference-2026/?utm_source=copilot.com

[6] Kate Bayliss and David Hall, *Bringing water into public ownership: costs and benefits*, 2017, https://gala.gre.ac.uk/id/eprint/17277/

[7] Andy Burnham, *Speech to the Labour Party conference 2026*, 29 September 2026, https://labour.org.uk/updates/stories/andy-burnhams-speech-to-labour-party-conference-2026/?utm_source=copilot.com

- **What we need to know** is that all companies, regardless of ownership and funding have a larger structural problem about an unsustainable business model driven by financial deficit. In this asset-heavy activity, each company (including the English shareholder-owned businesses and Dŵr Cymru) does not have enough revenue to cover the necessities of day-to-day operations (including wages and materials) plus adequate physical investment plus a market return on finance capital (whether as dividends paid on equity or interest paid on debt, private or public). There has been irresponsible extraction in shareholder-owned companies like Thames, but this behaviour only aggravates the underlying structural problem caused by revenue constraint. Revenue is constrained by a regressive charging system in two ways. First, high-income households who could easily pay more get off lightly and make a limited contribution to the revenue fund. Second, low-income households are burdened by water bills which take a larger share of their smaller incomes, and this inhibits the bill increases necessary to increase the revenue fund.

What we think we know 3: What to do about water's problems is generally represented as a binary choice between reforming regulation or public ownership. The Cunliffe Commission's 2025 final report backs tighter regulation for England and Wales.[8] In contrast, the think tank Common Wealth's 2024 briefing backs public ownership[9] and a follow up report in 2026 argues that Prime Minister Andy Burnham must nationalise water.[10] Each side claims its option will make the system manageable and can solve water's problems. The British public has reacted negatively to the perceived failure of privatisation so that public ownership is overwhelmingly supported in opinion polls.

- **What we need to know** is that there is no 'one and done' solution to water's embedded, wicked problems. Neither public ownership nor tighter environmental regulation will do much to reduce sewage spills without complementary policies of charging reform which get high-income households to pay their fair share and ease the burden of higher water bills on low-income households. More broadly, starting from the current mess, water policy is a matter of choices about priorities, trade-offs and second-best within all kinds of physical and financial constraints. Water does not present clearly defined engineering problems with first-best technical solutions that can be left to

[8] Independent Water Commission, *Final report*, 21 July 2025, https://assets.publishing.service.gov.uk/media/687dfcc4312ee8a5f0806be6/Independent_Water_Commission_-_Final_Report_-_21_July.pdf
[9] Eleanor Shearer and Ewan McGaughey, *Deep trouble: Fixing our broken water system,* 2024, https://www.common-wealth.org/publications/deep-trouble-fixing-our-broken-water-system
[10] Ewan McGaughey, *Crystal Clear: the Solutions for Clean Running Water*, 2026, https://www.common-wealth.org/publications/crystal-clear-the-solutions-for-clean-running-water

experts. In our view, the complex choices in water are political and should be made by informed citizens (advised by experts). Hence our Welsh proposals for a Citizens Assembly backed by a Water Observatory and a standing committee of Senedd. Whatever we do about ownership or regulation, Welsh Government needs to institute a new kind of public control which can put Welsh water on the first steps to improvement. The Westminster Government with much greater powers needs to reform the regressive charging systems which are socially unjust and create business model problems in water and other utilities. Westminster should also sponsor and learn from experiment in the nations and regions about how to put accounting expertise and public control guard rails around an increased revenue pot.

This report presents evidence and argument about what we need to know in the form of a series of clarifications which finally lead to our recommendations about what is to be done. The two companies which figure prominently are Dŵr Cymru as a bond-financed not-for-profit' and Thames Water as a distressed for-profit supposedly wrecked by extractive shareholder owners.

What we need to know

Need to know 1: All water companies have an activity related business model problem (as the primary cause of unsustainability which is aggravated by extractive shareholder owners).

Need to know 2: Bond finance in a financialised economy brings volatile finance costs in not-for-profits (it does not bring low cost finance).

Need to know 3: The business model of revenue constraint structurally drives increasing debt in all water companies (with or without extractive shareholders).

Need to know 4: Environmental underperformance after management capture is the behavioural problem at Dŵr Cymru (where corporate governance has failed).

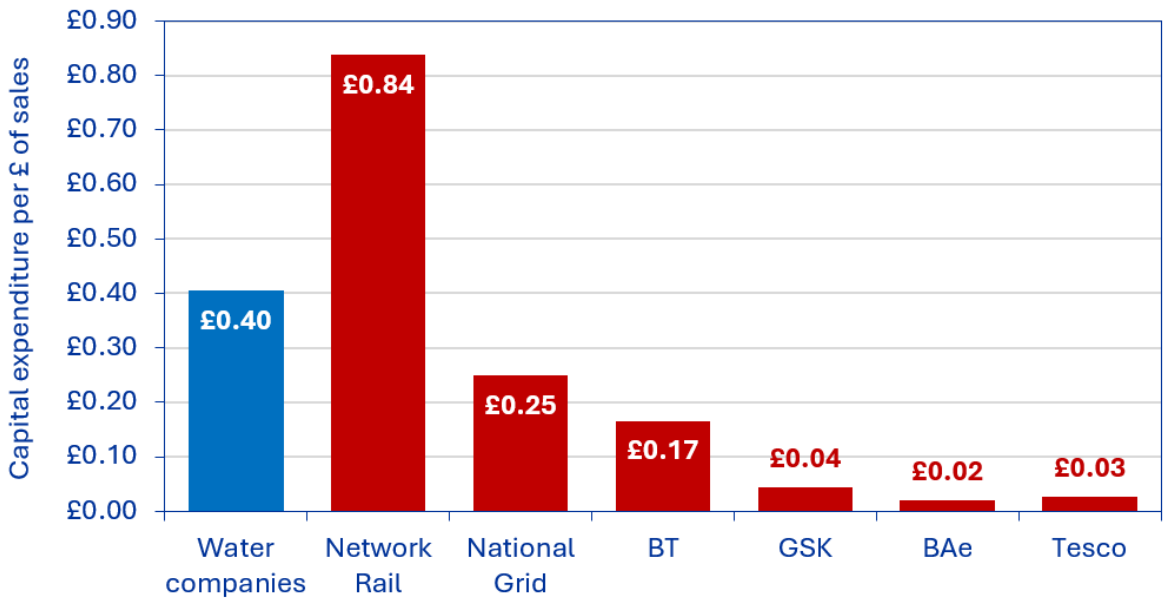
***Need to know 1**: All water companies including Dŵr Cymru have an activity related business model problem (as the primary cause of unsustainability which is aggravated by extractive shareholder owners)*

What we need to know is that all water companies have a business model problem which arises from the interaction of revenue limited by regressive charging and voracious demand for costly physical investment in an asset heavy activity:

- Revenue is limited by complicated systems of charging for water whose logic is simply regressive. Poor households pay too much for their water because of limited social tariff schemes; and rich households pay too little for their water by meter or rateable value. In 2023 when the average household water bill was over £500 in England and Wales, the bottom 10% of households spent £220 per person for water, while the top 10% of households spent £160 per person.[11] This has had a double effect. In the 2000s and 2010s, the heavy burden on the poor inhibited bill increases. In the second half of the 2020s, the low contribution of those with higher incomes is limiting the revenue gains from bill increases.
- The demand for physical investment is huge in water and sewerage which is (with railways and the electricity grid) one of three asset heavy utilities, making them highly unsuited to privatisation in business model terms.[12] After an initial bout of investment to meet EU Water Directives, the companies all responded after 2000 by restricting investment to 'patch and mend', which is why they have built no new reservoirs since 1992 and do not have enough sewage treatment capacity.[13] Nevertheless, as exhibit 1 shows, even without major upgrades of this kind, in the 2010s water company cash spend on physical investment on average still took 40p from every pound of revenue from customers. By way of contrast, in BT the comparable figure was 20p in the pound and in GSK, BAe and Tesco investment took 2 to 4p in the pound.

[11] Calafati et al., *Murky Water. Challenging an unsustainable system*, 2025, Manchester University Press, pp.150-156.
[12] For evidence and discussion of activity characteristics and asset intensity see Calafati et al., *Murky water. Challenging an unsustainable system*, 2025, Manchester University Press, pp.74-81.
[13] Theodoros Giacomas and Nikolaos Voulvoulis, *Combined sewer overflows: relating event duration monitoring data to wastewater systems*, 2023, DOI: 10.1039/d2ew00637e.
This important paper by Imperial College researchers establishes the link between sewage spills and inadequate capacity.

Exhibit 1: Annual capital expenditure on physical assets per £1 of sales revenues[14]



The interaction of limited revenue and voracious demand for productive investment produces the business model problem that revenue from customers does not cover the three necessities for firm sustainability in a utility: (1) operating expenses of labour and purchases of materials to allow service delivery plus (2) physical investment in the infrastructure plus (3) a market return on finance capital (whether this is equity and bonds, or only bonds).

We can demonstrate this point by comparing some basic financials for Thames Water and Dŵr Cymru which show that form of ownership and extraction make little difference to the basic business model problem. We take averages over the period 2001-25 which covers Dŵr Cymru's existence to date. Thames is the comparator because it is currently distressed and there was irresponsible extraction when it was owned by Macquarie, an investment fund which had an ownership stake from 2006-17 and made a 12-13% return on its equity holding.

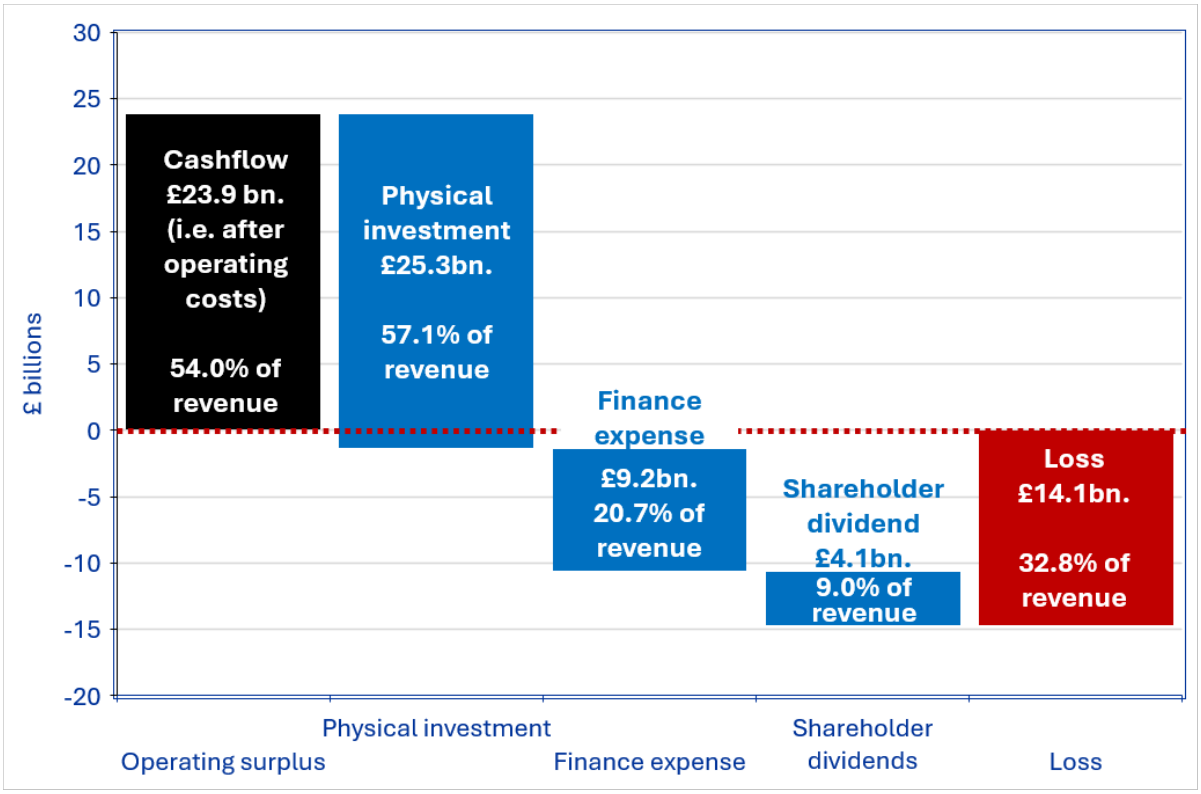
Exhibit 2 shows that Thames would have had problems about chronic deficit even without any dividend extraction by shareholding owners.

- Over the period 2001-25, Thames had cumulative revenue of £44.3 billion. Operating expenses (labour and purchases) for service delivery of £20.4 billion took just 46p in the pound. So, Thames had an operating surplus[15] of £23.9 billion which means that a very healthy 54p in every pound of revenue is converted into operating surplus.

[14] Calafati et al., *Murky Water. Challenging an unsustainable system*, 2025, Manchester University Press, pp.110-111.
The data employed is taken form company annual reports and accounts, various years, and Fame, BvDep. The annual spend is an average for the period 2012-2023. Physical assets are also known as tangible assets.
[15] The operating surplus can also be referred to as EBITDA (earnings before interest, tax, depreciation and amortization).

- However, the killer charge is physical investment which takes £25.3 billion or 57p per pound of revenue. This one charge is greater than the operating surplus of 54p.
- Thames then has literally less than nothing available from its operating surplus to cover the costs of finance capital. These come in the form of bond-related (cash and non-cash) finance expense equal to £9.2 billion (21p in every pound of revenue) and equity related (cash) dividends of £4.1 billion (9p in every pound of revenue).
- This is not a sustainable business model because operating expenses plus physical investment plus finance capital charges add up to more than 100p in the pound of revenue. Thames is chronically in deficit; and the result must be an ever-weaker balance sheet as liabilities accumulate, as extra borrowing is used to top up internal cash.
- Shareholder dividends at Thames were excessive at £4.1 billion over the 2001-2025 period, and these contributed to a cumulative loss of £14.1 billion. But, even if dividend payments had been at half (£2 billion) or quarter (£1 billion) of this level, it would have made no significant difference to outcomes because the cumulative loss would still be more than £10 billion.

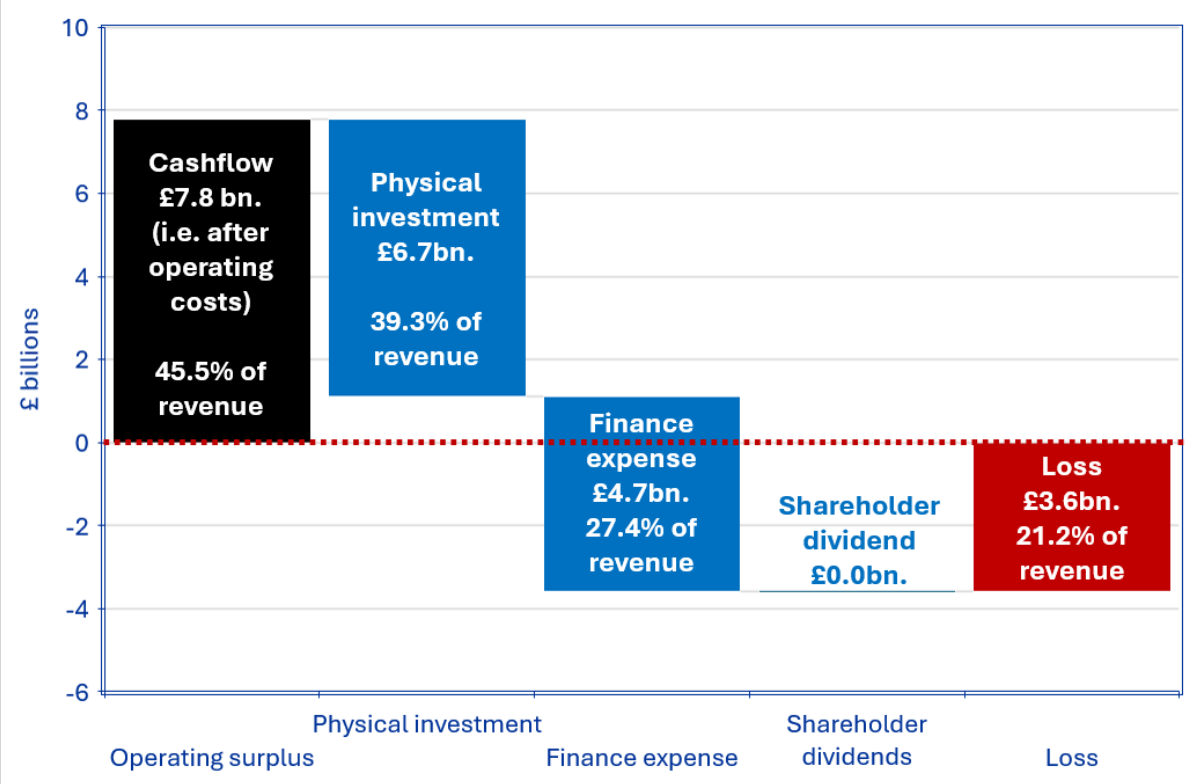
Exhibit 2: Thames Water claims on operating surplus 2001-2025[16]



[16] Source: Thames Water Utilities Limited annual report and accounts various years (Company number 02366661).
Note: Operating surplus is EBITDA (earnings before financing, tax, depreciation and amortisation). Physical investment is investment in asset renewal and tangible assets. Financing expenses are cash and non-cash interest. Dividends are those paid to shareholders. The financing expenses that we employ in the above chart are for bonds and term loans including private placements. These financing expenses are predominantly bond financing expenses and include cash element and non-cash elements such as index linked RPI interest accretion.

Dŵr Cymru with no shareholders has a different form of finance, which comes from issuing bonds. But, as exhibit 3 shows, even with no extractive owners, Dŵr Cymru has the same business model problem as Thames, that is, the operating surplus from revenue does not cover physical investment plus servicing finance capital. As a result, Dŵr Cymru also has a chronic financial deficit.

Exhibit 3: Dŵr Cymru claims on operating surplus[17]



- The two companies are different sizes and serve very different territories. However, their operating surpluses are within a range of 50+/-5% per pound of revenue with Dŵr Cymru at 46p and Thames at 55p.
- The expense of servicing finance capital is only fractionally lower in Dŵr Cymru without extractive shareholders. Bond related finance expense accounts for a sum equal to 27p in the pound of revenue at Dŵr Cymru while bond related finance expense plus shareholder dividends at Thames add up to 30p in the pound of revenue.
- The major difference between the two companies then is in productive commitment where Dŵr Cymru is inferior. Thames is, by water company standards, a high-investment company with physical investment claiming 57p in the pound of revenue

[17] Source: Dŵr Cymru Cyfyngedig regulated company report and accounts various years (Company Number 02366777).
Note: Operating surplus is EBITDA is earnings before financing, tax, depreciation and amortisation. Physical investment is investment in asset renewal and tangible assets. Financing expenses are cash and non-cash interest
The financing expenses that we employ in the above chart are for bonds and term loans and predominantly are bond financing expenses. These expenses include a cash element and non-cash elements such as retail price index linked components.

against 39p in the pound at Dŵr Cymru. Less productive commitment (not more financial extraction) explains Dŵr Cymru's smaller deficit as a percentage of revenue.

Group comparisons of publicly listed and fund owned companies are complicated by changes in the ownership of individual companies. But group comparisons in the *Murky Water* book show that the identity of the shareholder makes little difference and this supports the conclusion that business model trumps ownership.[18] For business model reasons, privatised water was destined to pile up debt while underinvesting in infrastructure, with inevitable growing problems about service delivery. Asset intensive privatised railways and the electricity grid were in related messes because they had the same business model problems where physical investment demands combined with revenue constraint means inadequate infrastructure plus growing debt. Network Rail like water has piled up more than £60 billion of debt. National Grid varies the outcome only by combining debt and rights issue of new equity so that it has debt rising towards £50 billion, with £10.2 billion of new equity issued in 2010 and 2024.

Need to know 2: *Bond finance brings volatile finance costs in not-for-profit corporations (in a financialised economy it does not bring low cost finance)*

What we think we know is that bond finance must deliver low cost finance, because a bond is a coupon whose holder is entitled to a fixed rate of interest; the debt is also secured on the assets of the company making it generally less risky than equity finance. In an earlier and more innocent age this was true of 19th century bonds issued by private water, gas, or railway companies. But this is not true of 21st century bonds issued by not-for-profit corporates because these bonds mix and mingle with other financial products in a financialised age, as we can illustrate in the case of Dŵr Cymru. It is also true that lower cost public borrowing by government (compared with a corporation) does not then offer a get out of jail card.

In a financialised economy, corporates like Dŵr Cymru will develop treasury operations and engage in financial engineering with the aim of reducing and controlling finance costs and risks. Issuing price index-linked corporate bonds immediately reduces cash interest costs in return for the issuer taking on inflation risk; and a large derivatives portfolio will be used to hedge against adverse movements in prices and interest rates. By default, the corporation becomes a financial trader, making year-on-year portfolio gains and losses.

These financial strategies and products are all wagers on/ or against future states of the world. When the wager goes wrong, unexpected outcomes (like inflation) will have the unintended consequence of increasing cash costs or finance expense. Accretion accounting rules oblige a corporate like Dŵr Cymru to record liabilities incurred as

[18] Calafati et al., *Murky Water. Challenging an unsustainable system*, 2025, Manchester University Press, pp.89-101.

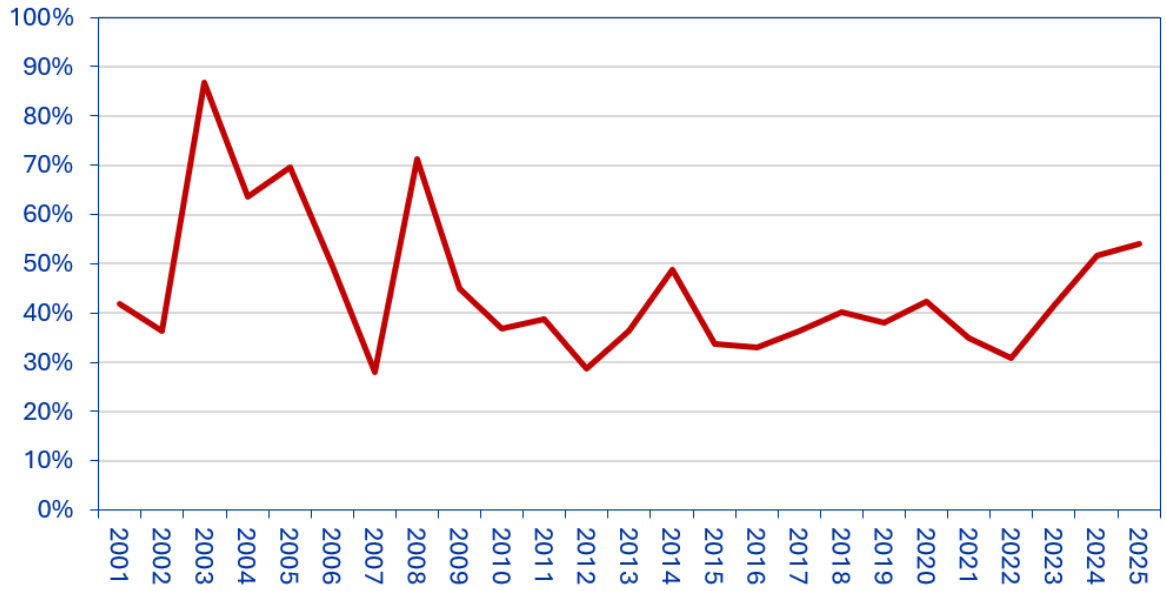
finance expenses year-by-year, but it can avoid cash payouts on many wagers gone wrong (as in the case of mark-to-market losses in the value of a derivatives portfolio).

The result is two interrelated measures of finance costs which give different readings. From 2001-25, Dŵr Cymru accumulated finance expenses (cash and non-cash) of £4.7 billion but on our calculations has paid out just £3.4 billion in cash. And in the annus horribilis of 2023 when finance expense surreally reached nearly 50% of revenue, Dŵr Cymru survived because its cash payouts were much smaller than finance expenses.

The acid measure of this cost is finance expense because non-cash liabilities are a real enough cost kicked down the road. The data for 2001-25 in exhibits 2 and 3 has already shown that, if we consider the long run average, bond finance does not bring significantly cheaper finance. Bond-related finance expense is 27p in the pound of revenue in Dŵr Cymru while bond-related finance expense plus dividend payments amount to 30p in the pound of revenue in Thames.

If then we disaggregate and look at either finance expense or cash cost year-by- year we see that the financial engineering around bond finance in Dŵr Cymru has had apparently perverse consequences which must complicate the implementation of any strategy. Most derivatives hedging aims to smooth and fix finance costs, but the observed outcome of financialisation at Dŵr Cymru is rollercoaster variation and hard to manage volatility.

Exhibit 4: Dŵr Cymru cash interest share of operating surplus 2001-25[19]



Together, exhibits 5a and 5b show that bond finance did deliver relatively stable, relatively cheap finance in the low inflation, cheap money 2010s. But then Dŵr Cymru was hit by the double whammy of higher interest rates and price inflation after the outbreak of the Ukraine War in 2022. As a 100% bond financed firm, Dŵr Cymru management in the 2010s had reduced short term borrowing costs by relying on index-linked new issues.

[19] Source: Dŵr Cymru Cyfyngedig regulated company report and accounts various years (Company number 02366777)
Note: Operating surplus is EBITDA is earnings before financing, tax, depreciation and amortisation. Interest paid is cash interest from the cash flow statements.

When the Ukraine War started, Dŵr Cymru had 85% of its borrowings index-linked whereas the English companies on average had 45% index-linked.[20] What we need to know is that, in a financialised economy, bond finance of not-for-profits is risky because its volatile cost is tied to all the happenstance in an uncontrollable outside world. If financialised bond finance has a motto, it must be *que sera sera*.

Exhibit 5a: Dŵr Cymru finance expense as a share of revenue, 2001-25[21]

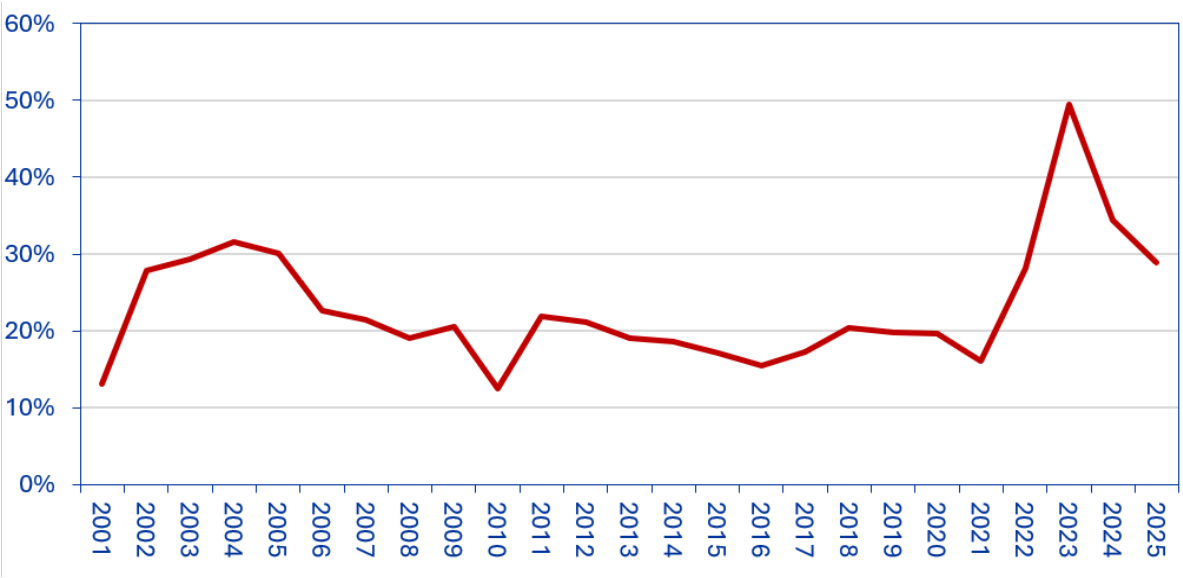
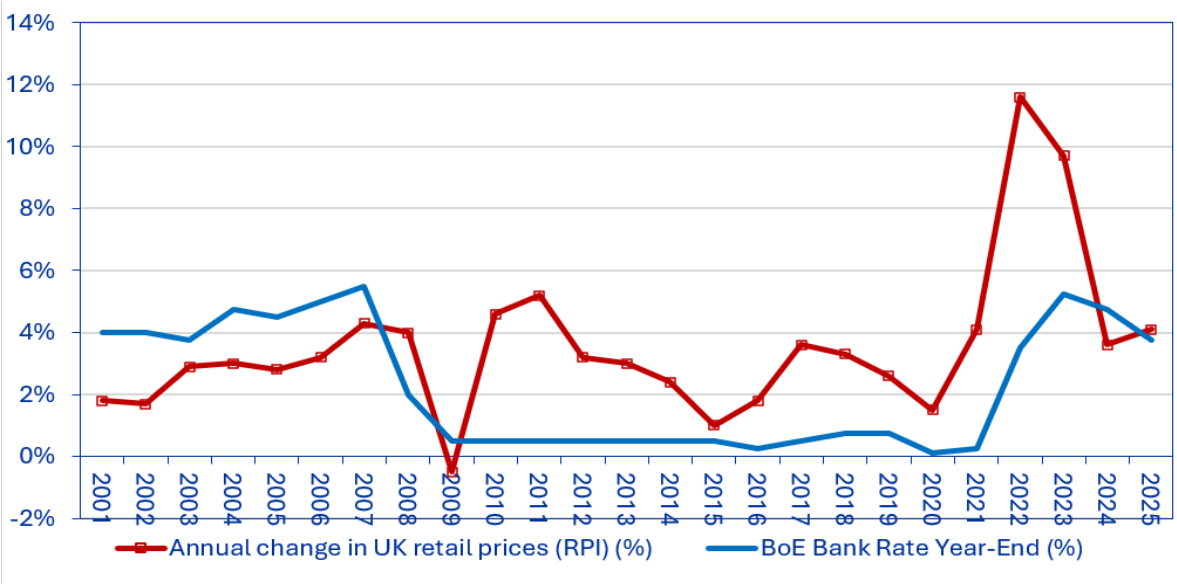


Exhibit 5b: Annual RPI price change and Bank of England base rate, 2001-25[22]



[20] On 31st March 2022, 83% of debt was RPI-linked, rising to 85% at 31st March 2023. See Ofwat, *Monitoring financial resilience report 2022-23*, 2023, https://www.ofwat.gov.uk/publication/monitoring-financial-resilience-report-2022-23-charts-and-underlying-data/

[21] Source: Dŵr Cymru Cyfyngedig regulated company report and accounts various years (Company number 02366777).
Note: The finance expense is loan interest as a share of total revenue.

[22] Sources: Office for National Statistics, *Annual change in Retail Price Index*, https://www.ons.gov.uk/economy/inflationandpriceindices/timeseries/czbh/mm23
Bank of England, *Official Bank Rate history database*, https://www.bankofengland.co.uk/boeapps/database/Bank-Rate.asp

Would cheaper public borrowing give a debt-financed nationalised public corporation a decisive cost of capital operating advantage over privatised utilities in water (ignoring the cost of buying out private owners)? The most sophisticated argument on this point is made by Matthew Lawrence and Alex Williams[23] who rest their case on two generalities: (a) a debt-financed public corporation would not have to meet the equity return requirement which is higher than for debt; and (b) a public corporation could borrow more cheaply than a private corporation.

We have already seen the limits of such generalities in the case of privatised water companies. Here, finance expense and cost over 25 years is not significantly lower in debt-financed Dŵr Cymru than in debt and equity financed English water companies. This is because the English companies have much less equity than debt and because (as in Dŵr Cymru) the interest rate on the debt coupon is not the only driver of finance expense and cost. If the proposal is to create a bond-financed public corporation in UK water (or regional corporations) we have three complications.

- *The UK government has to contrive an arm's length public corporation which is independent of government control so that its debt does not count as public debt. In which case the result could be much like Dŵr Cymru which has been captured by management that is (as we will argue) accountable to no one.* Government cannot add billions of public debt to fund buying back and running the water industry because, with government debt at 100% of GDP, nervous bond markets will ramp up the general cost of government borrowing. If an entity is government controlled, as in the case of Network Rail, its debt sits on the government's balance sheet. In 2015 the ONS proposed to reclassify housing associations' debt as government debt on the grounds that their regulatory regime amounted to public control; the government resisted successfully on the grounds that housing associations are private corporations with autonomy as builders and property developers. Any debt-financed public corporations in water would need to have at least as much autonomy as UK housing associations where public control is limited.

- *A public corporation could not eschew management of finance costs and risks by using a range of financial products and devices. This means that finance expense and cost is likely to be volatile, as in the case of Dŵr Cymru, rather than reliably low.* The UK government issues index-linked bonds and roughly one-quarter of outstanding UK gilts are currently index linked.[24] A public corporation would inevitably consider this option. Equally, the size and nature of the derivatives portfolio is a matter of judgement, but an arm's length public corporation could hardly be prevented from using derivatives to hedge on prices and interest rates. The justification that this is being done to fix costs and reduce risks can cover a variety of wagers on future states

[23] Mathew Lawrence and Alex Williams, *The productive state: A framework for Manchesterism*, 2026, https://www.mainstreamlabour.org/publications/the-productive-state
[24] UK Parliament, *Public sector debt. Question for Treasury. UIN HL3322*, 9 September 2026, https://www.parallelparliament.co.uk/question/HL3322/public-sector-debt

of the world, which can of course go wrong in costly ways. Here again, the interest rate on the bond will not be the only driver of volatile finance expense and cost.

- *At current and historically normal interest rates, the interest rate differentials between quasi-public and private borrowing are not large enough to make the water business model work. Sustained near zero base rates, as in the 2010s, would greatly ease the business model problem (under public or private ownership) but such rates are highly unlikely in the second half of the 2020s*. The UK Treasury in 2025-6 was borrowing at a rate slowly rising from 4.5% towards and beyond 5.5% on 10-year gilts and 6% on 30-year gilts. The parents of most for-profit water companies have in 2025-6 been borrowing at 6-8%[25]; and, in 2025, Dŵr Cymru, Southern and Yorkshire all made bond issues at less than 6.5%[26], maybe 2% over the then going rate for 10-year gilts. An arm's length public corporation with a clean balance sheet and working business model could borrow more cheaply. The relevant benchmark here is the creditworthy housing association where the premium over gilts could be more like 1%. A public corporation reduction of 2% or less in borrowing costs is not large enough to make the business model work at anything like historically normal interest rates. The Bank of England base rate in autumn 2026 stands at 3.75%, the historic average since 1975 is 6.12% and in the turbulent 1970s and 1980s base rate was routinely above 10%.[27] In the second half of the 2020s there is no prospect of cheap money which can make the water business model come good. And from a broad socio-economic point of view, we should be careful what we wish for here: cheap money in the 2010s produced a general inflation of asset values which greatly increased inequality.

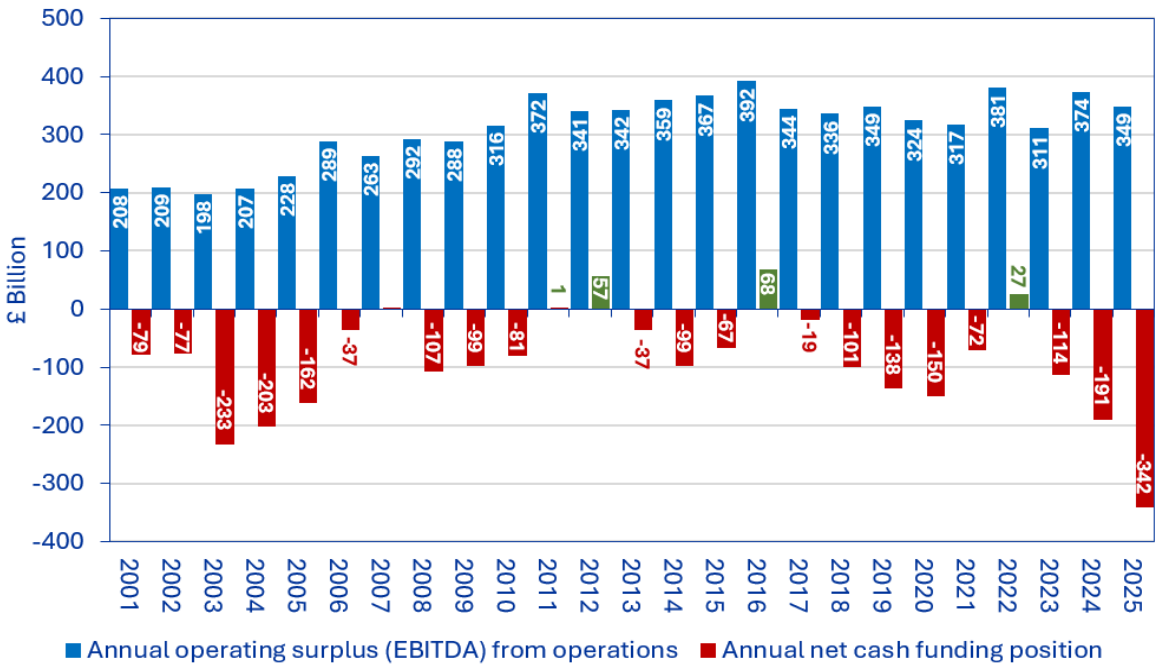
[25] The parent in a distressed water company will of course pay more. Thames parent Kemble in 2025 sold £190 million of senior secured debt at a coupon rate of 9.75%.
See Moodys rating at Cbonds, Thames Water, *9.75% 10oct2027, GBP (FIGI RegS BBG01T7KG4M3, XS3017974356, WKN A4D944),* https://cbonds.com/bonds/1829733/
The parent always pays more than the regulated operating company, sometimes 5% more. Parents borrow expensively because their cashflows are residual, volatile, and structurally subordinated. Regulated water companies borrow cheaply because their cashflows are stable, legally protected, and backed by a regulated asset base. It is not possible to load the group's debt onto the operating company. A simpler corporate structure would reduce the cost of finance but not below the floor of 5.5-6.5% at housing associations.
[26] For Dŵr Cymru, see Cbonds, *New issue: Dŵr Cymru (financing) issued international bonds (XS3172211347) with the coupon rate of 6.25% in the amount of GBP 450 mln maturing in 2027*, 2 September 2025, https://cbonds.com/news/3570603/;
for Yorkshire, see Gov.UK, *Yorkshire Water Finance PLC. Filing history*, https://find-and-update.company-information.service.gov.uk/company/11444372/filing-history;
for Southern Water, London Stock Exchange, *SW (finance) I plc*, https://www.londonstockexchange.com/stock/XA48/sw-finance-i-plc/company-page
[27] Eco3min, *UK bank rate: Bank of England official interest rate*, *monthly data since 1975*, https://eco3min.fr/en/uk-boe-bank-rate-dataset/

Need to know 3: *The business model structurally drives increasing debt in all water companies (with or without extractive shareholders)*

What we think we know about extraction in shareholder-owned English companies is both true and untrue. It is true because, if Macquarie had settled for a 6% return on equity (not 12%) Thames would have less debt. But it is also untrue because the Thames debt mountain of around £20 billion is mainly structurally driven by the business model. As we have noted, even if the £4.1 billion of dividends paid out to shareholders over 25 years had been halved, Thames would still have more than £17.5 billion of debt. The business model drives Thames' borrowing, which brings in cash which is required because the operating surplus cannot cover physical investment plus servicing finance capital.

Dŵr Cymru is caught in the same business model trap and has been for most of the past 25 years because increasing debt has structural drivers at Dŵr Cymru (without any extractive shareholders). Exhibit 6 on net funding position shows year-by-year whether the internally generated operating surplus covers the cash calls for physical investment and interest payments (without any dividends to shareholders). The blue bars indicate year-by-year the size of the operating surplus, and the red bars indicate year-by-year any cash deficit which has to be made good by borrowing or a transaction that turns reserves into cash. The red bars show that in 20 of the past 25 years Dŵr Cymru has a cash deficit.

Exhibit 6: Dŵr Cymru net funding position 2001-25[28]



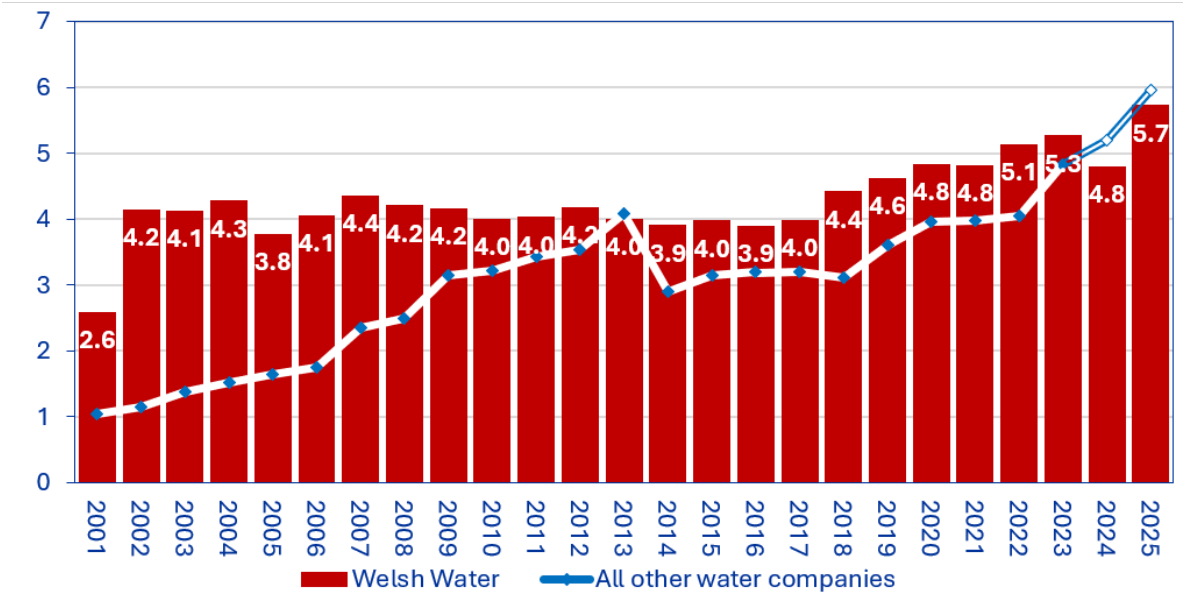
[28] Source: Dŵr Cymru Cyfyngedig regulated company report and accounts various years (Company number 02366777).
Note: The annual operating surplus (EBITDA is earnings before interest tax depreciation and amortisation. The net cash funding position deducts cash spend on physical investment and cash interest payments from operating earnings before interest tax depreciation and amortisation.

In terms of sources of funding and strength of balance sheet, bond-financed Dŵr Cymru starts in a different place from the initially equity-financed English water companies. But the structural nature of the business model problem ensures that all the water companies have ended up in the same, largely debt-financed, and over borrowed, predicament unable to pay down their debt which must be endlessly refinanced at whatever is the going market rate.

In the for-profits, financially literate senior managers and their shareholders entered into a Faustian contract. Company managers issued debt to cover their cash deficits because that was cheaper and cost less to service than equity. Shareholders thereby largely avoided the need for equity injection or rights issues which would have diluted their return as it did in National Grid. The issue of long-term sustainability did not figure in either set of calculations. Ofwat's regulatory mistake was partly failing to block dividend extraction and partly allowing shareholders to avoid putting in more capital with the consequence that shareholder returns were maintained as debt piled up. But no regulatory decision could have made the broken business model work; and the decisions taken only influenced the distribution and timing of costs and benefits.

Exhibit 7 shows that bond-financed Dŵr Cymru had a significant debt burden in the 2000s when the other largely equity-financed companies had relatively little debt. In 2002, Dŵr Cymru's debt equalled four times revenue, much larger than in the equity-financed companies with borrowing roughly equal to revenue. But, by the mid-2020s, all the companies (regardless of forms of ownership and finance) end up in the same over-borrowed place. By 2025 Dŵr Cymru, has a debt-to-sales revenue of 5.7 times when all the other English companies have debt equal to 6 times sales revenue.

Exhibit 7: Water company outstanding borrowings as a multiple of sales revenue[29]



[29] Source: Operating regulated water company annual reports and accounts, various years, from Companies House.
Note: For all companies we use total revenue from the income statement. Outstanding borrowings come from the notes and cover short-term borrowing, long-term borrowing and term loans. The multiple is annual outstanding borrowings divided by annual total revenue. "All other water companies" excludes Dŵr Cymru Cyfyngedig.

Dŵr Cymru and the other water companies are treated leniently by the ratings agencies which generally give lower level investment grade credit ratings to their senior debt because a water company (like a government) has a lien on household income. But over borrowing has unavoidable consequences, most obviously the ratings agencies will not accept companies adding many more billions of debt onto already weak balance sheets. Their response would be downgrading water company debt to junk (with the inevitable consequence of loss of operating licence).

Consequently, major new projects (like Dŵr Cymru's £667 million Cwm Taf treatment project) and more than 25 major English large infrastructure projects have to be done off the water company balance sheet. Under PFI, these facilities will not be financed, designed, built or operated by the water company.[30] This means that Dŵr Cymru, like the English for-profit companies, becomes increasingly an operator of legacy systems servicing a mountain of accumulated debt which has to be endlessly refinanced and will never be paid off. This is deeply ironic when the Thatcherite privatisers of water argued the new companies would bring private capital into the industry.

Need to know 4: *Environmental underperformance after management capture is the behavioural problem at Dŵr Cymru (where corporate governance has failed)*

If we exclude terminally distressed water companies (like Thames or Southern before its restructuring), it is increasingly difficult to see much difference between Dŵr Cymru and the average English for-profit water company's financial ratios. The implication is that, in terms of environmental performance, we could reasonably expect Dŵr Cymru to have mid-league table performance. Instead, on many indicators Dŵr Cymru's environmental performance is well below average.

This deficit in environmental performance can be attributed to management tolerating rather than rectifying underperformance. This has continued for many years because unaccountable management has effectively captured the firm. Dŵr Cymru's corporate governance system of non-executive directors and Members has completely failed to challenge management. The absence of effective corporate governance (and the failure of expert regulation to check management) in this not-for-profit private company is a warning about what could happen in an arms-length public company without new systems for public control (above and beyond expert regulation and corporate governance).

Dŵr Cymru is much like the other water companies when it spills raw sewage into waterways. From event monitor data on England and Wales, Dŵr Cymru is mid-table on frequency of sewage spills per overflow. Frequency is better than the worst like Yorkshire,

[30] Calafati et al., *Murky water. Challenging an unsustainable system*, 2025, Manchester University Press, pp. 244-51.

United Utilities and South West Water but worse than the best like Wessex and Anglia.[31] But if we broaden the incidents and criteria, then Dŵr Cymru's environmental record is well below average with little sign of improvement.

Major pollution incidents and such like are recorded in environmental performance data. In its 2026 incident reduction plan, Dŵr Cymru reported a reduction in 'waste water pollution incidents' in 2025 but admitted that came after year-on-year increases since 2020 in the number of such incidents. As for the 11 'serious pollution incidents' in 2025, this was 'our poorest result on record'.[32]

All privatised water companies are subject to expert regulation, and the official verdict of the three regulators on Dŵr Cymru is bleakly negative.

- Natural Resources Wales has adopted the Environment Agency's rating system of giving up to 4 stars for performance on seven environmental metrics. In 2023 NRW downgraded Dŵr Cymru to a 2-star rating and in 2024 confirmed this rating and complained about a 'disappointing' lack of improvement.[33]
- The economic regulator Ofwat in 2026 imposed a £45 million penalty after it found Dŵr Cymru had poor management monitoring and control systems in wastewater.[34] In 2024 it levied a £40 million penalty for 'indefensible' misreporting of leakages and consumption over 5 years.[35]
- The Drinking Water Inspectorate in 2025 put Dŵr Cymru into special measures[36] because the company's sampling facilities and treated water storage were both judged to be 'a potential danger to human health'.

In its PR24 negotiations (which set customer price increases and investment for 2025-2030), Ofwat extracted promises from Dŵr Cymru to do better on several key environmental issues over the 2025-30 period. There is certainly plenty of room for improvement when Dŵr Cymru is promising to reduce its water leakage of 171 litres per property per day which is worse than in any English company.[37] However, it should be

[31] Environment Agency, *Event duration monitoring - Storm overflows - Annual returns*, 18 September 2026, https://www.data.gov.uk/dataset/19f6064d-7356-466f-844e-d20ea10ae9fd/event-duration-monitoring-storm-overflows-annual-returns
[32] Welsh Water, *Pollution incident reduction plan 2026*, March 2026, https://corporate.Dŵrcymru.com/en/community/environment/pollution-incident-reduction-plans
[33] Natural Resources Wales, *Annual environmental performance report for Dŵr Cymru Welsh Water 2024*, 23 October 2025, https://naturalresources.wales/evidence-and-data/research-and-reports/water-reports/annual-performance-report-for-Dŵr-cymru-welsh-water/?lang=en
[34] Water Magazine, *Ofwat proposes £44.7 million enforcement package for Dŵr Cymru Welsh Water for wastewater failures*, 12 March 2026, https://www.watermagazine.co.uk/2026/03/12/ofwat-proposes-44-7-million-enforcement-package-for-Dŵr-cymru-welsh-water-for-wastewater-failures/
[35] Water Magazine, *Welsh Water to pay £40 million following Ofwat investigation*, 14 March 2024, https://www.watermagazine.co.uk/2024/03/14/welsh-water-to-pay-40-million-following-ofwat-investigation/
[36] DWI, *Dŵr Cymru Cyfyngedig – Sampling facility upgrade*, 2025, https://www.dwi.gov.uk/water-companies/improvement-programmes/Dŵr-cymru-welsh-water-improvement-programmes/Dŵr-2025-00003/ This regulation 28 /4 intervention is only used when assets pose a serious risk.
[37] Nation Cymru, *Welsh water companies slammed as stats reveal 251 million litres of water wasted every day due to leaky pipes*, 22 April 2025, https://nation.cymru/news/welsh-water-companies-slammed-as-stats-reveal-251-million-litres-of-water-wasted-every-day-due-to-leaky-pipes/

noted that the company did not deliver on promises for the 2020-2025 period (PR19) when Dŵr Cymru did not reach Ofwat agreed targets on 7 of 8 metrics and underperformed all other companies on 5 of these 8 metrics.[38]

None of this environmental underperformance is because Dŵr Cymru is undercharging the Welsh customer. After flatlining for many years in the 2000s and 2010s, the water bills of all the privatised water companies are now increasing sharply in real terms, and here Dŵr Cymru is a leader because by 2029-30 Dŵr Cymru will have the highest average water bill of any water company in England and Wales.[39]

The Welsh political classes, civil society and media have been slow to take the accumulating evidence of environmental underperformance on board because the bond-financed, 'not-for-profit' descriptor created a halo effect around Dŵr Cymru. But we could reasonably expect the non-executive directors and the 50 or so Members of the Glas Cymru parent company to challenge the senior management team about their failure to secure any improvement on many environmental indicators. Instead, corporate governance at Dŵr Cymru in the 2020s is the story of 'the dog that did not bark' because we cannot find any instance of effective, collective challenge to incumbent management.

- As in other 'not-for-profits' (like public universities), Glas Cymru's non-executive directors have been incorporated into management. This is unsurprising when they are typically second tier business persons seeking relatively undemanding paid work. In the case of Dŵr Cymru group, the work is certainly well paid. The part-time non-executive chair of the Glas Cymru board was paid a fee of £255,855 in 2025,[40] which is more than the pay of the full-time chief executives of Welsh local authorities who typically earn just under £200,000.
- As recently as 2025, the chief finance officer of Glas Cymru repeated the claim that "our 60 Members perform the same role as shareholders in a PLC".[41] On the contrary, they operate collectively as an advisory committee which defers to the board with at most occasional protest by individual Members. The Members are selected by a company-appointed committee and do not set their own agendas or preside over their own AGM. Their criticism is inhibited because they are typically part of the small, networked Welsh establishment whose members know they will meet again on different sides of another table.

Corporate governance will never be the answer on its own, but it could deliver more if Glas Cymru's enclosed governance system was opened up. The Members could usefully ask whether and when the company (currently a private company limited by guarantee) could be turned into a mutual where all customers were members and some independent voices could be heard.

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[38] Ofwat, *Water Company Performance Report 2024-25*, 2025, https://www.ofwat.gov.uk/publication/water-company-performance-report-2024-25/
[39] LBC, *Full list of changes to average water bills by 2029/30, by company*, 19 December 2024, https://www.lbc.co.uk/article/92d83fa1530a4e54a63db1d4d2f33ed2-5Hjcx5Q_2/
[40] Welsh Water, *Glas Cymru Annual Report Accounts 2025-2026*, p.139, https://corporate.Dŵrcymru.com/en/library/group-annual-report-and-accounts
[41] UK Parliament, *Reforming the water sector - Oral evidence*, 11 March 2025, https://committees.parliament.uk/event/22337

What we need to do

Step 1: *recognise public ownership would be a trap and not a solution if the business model problem is not addressed through charging reform*.

Step 2*: accept reliance on regulation is ill suited to deciding on the priorities and trade-offs around water's wicked problems*.

Step 3*: develop social governance of water through new institutions which could get us onto a pathway to improvement*.

Step 1: recognise public ownership would be a trap and not a solution if the business model problem is not addressed through charging reform

Public ownership of water is supported by 80% of the British public through a kind of inversion which simplifies choice: if the existing form of ownership is discredited by apparent failure, it makes sense to support the opposite form. In this case, the immediate question becomes how much it would cost to buy out the existing private owners where available estimates range confusingly from Defra's £100 billion to Ewan McGaughey and Common Wealth's £0. We can and will clarify these costings but first of all want to turn to the neglected issue of what happens after nationalisation which is crucially important from a business model point of view.

The extraction narrative covers up this issue because it assumes that if private extraction is blocked then there would be a financial surplus, and the new public owners would from revenue have the funding for adequate physical investment. The evidence on Thames and Dŵr Cymru decisively contradicts this assumption. The business model problem (under the current charging system) is of financial deficit which requires continuous borrowing even with physical investment restricted to patch and mend. As we have argued, private or public bond finance would not conjure away the underlying problem of deficit and make the business model work.

Hence public ownership could appear to offer a solution on day one while over the subsequent ten years it would become a trap whose political consequences could be a discrediting of the idea of public ownership. Because, under the current charging system, inevitable deficits will have to be covered in one of two ways:

(1) *An arm's length public corporation issues bonds to cover its deficits*. The discouraging precedent here is Network Rail in a system where there was not enough revenue in the fare box. By 2025 Network Rail has outstanding debt of nearly £60 billion after an inadequate investment programme with 60% of the network still to be electrified. This option would most likely be further complicated by dispute about how this kind of corporate debt should be classified. Network Rail's debt was re-classified as government debt in 2014.

    With the existing system of charging, the Network Rail option in water offers more of the same under new ownership. If the UK Treasury absorbed the costs of buying out private owners, the new public water corporation would (just like the privatised water companies in 1989) start with a clean balance sheet and then move along the same trajectory towards overborrowed, unsustainability, If the demand is for rapid improvement from high physical investment, the new public corporation would within 5-10 years reach the point where it could not finance major projects.

(2) *The UK Treasury becomes responsible each year for covering chronic revenue deficiency through grants* to cover physical investment from tax revenues or borrowing. The discouraging precedent here is British Rail in the 1970s and 1980s facing the same old railways problem of not enough revenue in the fare box. Treasury

parsimony then starved British Rail of investment in infrastructure and rolling stock. The cheese paring result was epitomised by the Pacer commuter trains of the 1980s where cost was reduced by using a Leyland single deck bus body and other bus parts.

In water the Treasury severely limited post 1973 funding for, and borrowing by, the nationalized Regional Water Authorities. It was underinvestment in infrastructure by the RWAs which led to the crisis of the late 1980s when large scale catch up investment was required to meet EC directives. This became one of the Conservative justifications for water privatisation in 1989. Ministers like Michael Howard argued that privatisation would bring in private capital without recognising that such capital would require a return and inquiring whether there was the financial head room to pay that return.

Treasury parsimony under the Conservatives in the 1980s was a matter of political animus. In the second half of the 2020s, Treasury parsimony would be more like political necessity. Neither the UK nor Welsh Governments have the power to tax or borrow so as to continuously fund 'build now, pay later' catch-up investment in water. With public debt running around 100% of GDP, UK government borrowing is constrained by nervous financial markets and there are calls on limited tax revenues for the NHS, defence and much else. Under the present devolution settlement, Welsh Government has limited tax powers and borrowing powers for capital spend of less than £200 million a year.

Our warning is that public ownership could easily become a trap, but this is NOT an argument against public ownership. From our business model point of view, public ownership could be made to work financially if the revenue constraint is lifted. Public ownership would have to be accompanied by the corollary action of reform of the socially unjust regressive systems of charging according to metered consumption and rateable value. This is technically and politically possible because, as our *Murky Water* modelling shows, charging for water according to household income could raise twice as much revenue with 70% of customers paying no more and half paying less.[42]

The practical problem is then twofold: first, those who advocate public ownership are not focused on lifting the revenue constraint; and, second, charging reform is not straightforward when the UK government does not currently have comprehensive data on household income. But there are short-term work arounds. Existing social tariff schemes could be extended when, for example in Wales, less than half the households on Universal Credit are claiming water bill rebates. Existing bill rebates are mainly financed by levies on full bill payers, and these can be increased with the possibility of further surcharges on households in homes in the upper council tax bands.

The issue of making public ownership work financially needs to be sorted before the private owners are bought out. The buyout process is then complicated by the Special Administration Regime (SAR) which a House of Commons committee has recommended

[42] Calafati et al., *Murky Water. Challenging an unsustainable system*, 2025, Manchester University Press, pp.164-77.

as a form of 'temporary nationalisation'.[43] This is a distraction because SAR in water or other utilities is something like private sector liquidation with an obligation to maintain service. By default, the liquidator would clean up the failed company (by imposing a haircut on creditors) and sell a newly created going concern to the highest bidder which could well be a private consortium.

Our question is about the cost of permanent nationalisation which transfers water from private to public ownership. This buy out does not have a fixed, single figure cost because this cost can be high or low depending on whether nationalisation is undertaken by a (1) timid centrist government or (2) a radical socialist or populist government or (3) a centre-left or social democratic government. The act of nationalisation performs a political choice about the relation of government to finance capital and financial markets and the cost varies accordingly.

- *The cost is around £100 billion if you accept the norms of financialised capitalism and the established governmental principle that public private transactions should consistently favour finance capital.* Defra in 2025 produced a figure of £100 billion[44] which was formally based on 'regulatory capital value.' This is a technical measure which would, for example, offer near full market value for equity plus debt in the public companies. Such public compensation is exceedingly generous if we make the comparison with private sector practice. If we were considering the restructuring of an indebted private company with a broken business model, then shareholder risk capital would be wiped out and secured debtors could expect some kind of haircut. But the generosity of government in offering much more by way of compensation would be in line with UK past practice. In the Private Finance Initiative or outsourcing, the terms of the public/ private contract routinely favour private finance and private operators.

- *The cost is zero if you accept that it is politically possible to run a siege economy in the face of the costs imposed by hostile markets.* McGaughey and Common Wealth monetise the previous misconduct of the private owners and argue the 'fair value' compensation is nothing for equity and debt including the secured debtors (mainly the senior bond holders who account for more than 80% of water industry debt). The issue here is not the merits of this argument but the reaction of the financial markets. These markets would regard no compensation for secured debtors as norm breaking expropriation by government and their fierce hostility would then produce a sharp increase in government borrowing costs, possibly accompanied by currency depreciation or a run on the pound. The question then is whether there is a political majority (within government and across the UK electorate) for facing down the financial markets by accepting the large costs which hostile markets would impose.

- *The cost is over £50 billion on the basis that (as in the current Thames case) equity and junior debtors can be wiped out but the secured debtors have to be offered more*

[43] House of Commons – EFRA Committee, *Priorities for water sector reform, second report of session 2024–25*, 2025, https://committees.parliament.uk/publications/48361/documents/253043/default/
[44] Defra, *Nationalising the water sector: how we assessed the cost*, 2025, https://www.gov.uk/government/publications/nationalising-the-water-sector-how-we-assessed-the-cost/nationalising-the-water-sector-how-we-assessed-the-cost

than 50p in the pound as part of a muddling through social democratic compromise. The secured debtors have a claim on water assets which would routinely be upheld in the courts. Regardless of the broken business model, the assets of the water companies have value because their provision of essential services gives them a lien on household incomes. On this basis, the cost of public ownership then runs into tens of billions. Because a small company like Dŵr Cymru has around £4billion of class A and B, guaranteed and secured debt[45] while Thames has £16billion of class A (senior, secured debt) plus £3billion of secured emergency borrowing plus secured bank loans. Any compensation offered would be disputed through the courts by the bond holders who would be litigious hedge funds who had pre nationalisation bought senior bonds at a discount as a profit opportunity. The issue here with Thames or the whole industry is whether a centre-left government will prioritise the multibillion costs of nationalising the industry or individual companies when it has many other claims for expenditure on health, defence and welfare with limited tax revenues and borrowing power.

On the choices, the £100 billion cost is so large that it rules out this unnecessarily generous offer. As for the rest we are in politics not economics. The current Labour government will find it difficult to prioritise the tens of billions necessary to nationalise the whole industry and shift to public ownership. So, the question of what public control means and can do becomes very important.

Step 2: accept reliance on regulation is ill suited to deciding on priorities and trade-offs around water's wicked problems

Unfettered private ownership and control of monopoly supply in any activity is likely to benefit providers more than consumers. The Thatcherite architects of water privatisation understood monopoly power in these terms but would not countenance any form of public control which could empower their political opponents. By default, they favoured not public control of privatised utilities but rather control in the public interest by expert central regulators (which incidentally avoided ministerial responsibility and parliamentary accountability). Thus, privatised water was set up with Ofwat as an economic regulator for England and Wales and with an environmental regulator which in due course became the Environment Agency for England and Natural Resources Wales (NRW) across the Border.

Regulation is best suited to managing engineering problems which have a bounded definition and a simple, technically first-best solution. Regulation is ill suited to dealing with wicked problems which have no clear definition, complex connections with other

[45] Figure extracted from S&P Global Ratings, *Research update: Ratings on UK water utility Dŵr Cymru (Financing)*, 29 August 2026, https://www.spglobal.com/ratings/en/regulatory/article/-/view/sourceId/101641634

problems and multiple action options with uncertain and unintended consequences[46]. Reliance on regulation in water was fundamentally misplaced because water's problems were wicked and the inevitable outcome was disappointment as the environmental regulator was defeated by unbounded problems and the economic regulator was diverted into attempting to solve an oversimplified problem.

The unbounded nature of environmental problems can be illustrated by considering the issue of river and coastal water quality. Water quality is the result of a mix of known knowns, known unknowns, and unknown unknowns. Apart from existing sewage treatment standards and raw sewage spills, the drivers of quality include agricultural and road run-off plus many others including pollution from abandoned heavy metal mines and industrial waste which is partly being dumped into sewerage treatment plants. Action requires an evidence base in real time monitoring of water quality but neither the Environment Agency nor NRW have had the technology or the funding for this kind of monitoring.

The Environment Agency is not a functioning environmental regulator. As we argued in the *Murky Water* book, the Agency's main role is to provide political cover for English ministers at Defra, because it is the agency (not the government department) which is responsible for investigating and acting on pollution incidents.[47] The Agency has never had any clear political direction to police sewage discharges and agricultural runoff. Like the Environment Agency, NRW is underfunded and has multiple responsibilities in addition to water. As Welsh environmental regulator it was formed in 2013 from a merger of three organisations with very different missions and cultures: the Welsh branch of the Environment Agency was merged with the Countryside Council for Wales and the Forestry Commission Wales.

Ofwat as economic regulator of England and Wales was given a narrow brief which over simplified the choices in water.[48] As in all the other privatised monopoly utilities, Ofwat was given a generic regulatory task of addressing market power, which did not recognise the importance of activity specifics and business model.

- Through the lens of economic theory of firms with market power, Ofwat was tasked with ensuring that water companies with monopolies did not ramp up household bills. This was a soluble technical problem of financial engineering calculation about the lowest bill for households compatible with returns acceptable to the financial markets. Thus, Ofwat started from calculations of the capital base in regulated companies and the Weighted Average Cost of Capital (on equity and debt) which is the return (currently around 3.7%) allowed on a company's regulated capital base. Working forward from this key calculation it is then possible to set the bills which

[46] Horst Rittel and Melvin Webber, *Dilemmas in a General Theory of Planning*, 1973, DOI: 10.1007/BF01405730
[47] Calafati et al., *Murky Water. Challenging an unsustainable system*, 2025, Manchester University Press, pp. 203-12.
[48] Calafati et al., *Murky Water. Challenging an unsustainable system*, 2025, Manchester University Press, pp.191-203.

generate the revenue to cover operating costs, physical investment, and the regulated return.

- Through the business model lens, Ofwat's brief mis-specified the socio-political choices in water. Given revenue constraint, Ofwat has always faced a trilemma about the need to sacrifice one out of three positive outcomes on low household bills, adequate physical investment, and acceptable market returns. In the 2000s and 2010s, Ofwat kept bills low and investors happy while sacrificing investment, thereby producing the 2020s current crisis of underinvestment. Now in 2025-30 bills are allowed to rise without the resulting revenue generating enough investment to deal with sewage spills and all the rest. There is no neat solution to the trilemma within the current revenue constraint where it is altogether a question of difficult choices about priorities, trade-offs and second-bests.

The problem here is not regulation per se because technical experts are necessary in any kind of control regime for a complex activity like water. Though it would have been more sensible to demote economists preoccupied with WACC in the regulated company and promote forensic accountants who could understand how investors like Macquarie were using inter-company group transactions to enrich themselves. The underlying problem is that the reliance on regulation to the exclusion of all other forms of control is a category mistake in an activity which presents wicked problems with no clear solution. This is compounded by the sustained refusal of centrist parties and politicians to face up to this problem. Centrists think of the policy choice in water as a binary one between regulation and public ownership and their clear preference is for rearranging regulation in the hope that variations on doing the same thing will produce different results or at least buy time.

Thus, the terms of reference for the Cunliffe Commission explicitly excluded consideration of public ownership and the review was officially charged with proposing a reset of the 'private regulated model'. On this basis, Cunliffe's final report in 2025[49] was concerned with buying time without too much disruptive change for regulators or companies.

- Cunliffe bought time by proposing reorganisation of the regulatory apparatus which would take several years to implement and many years before outcomes could be judged. In England, on the model of the multi-agency merger that created Ofcom twenty years previously, Cunliffe proposed a merger of Ofwat and the Drinking Water Inspectorate with the relevant water functions of the Environment Agency and Natural England. At the same time as Cunliffe was rationalising the regulatory structure, his final report was complicating regulation in England by proposing nine regional water planning agencies which would coordinate water demand and supply, drought resilience, and environmental restoration. As for Wales, that got devolved

[49] Independent Water Commission, *Final report*, 21 July 2025, https://assets.publishing.service.gov.uk/media/687dfcc4312ee8a5f0806be6/Independent_Water_Commission_-_Final_Report_-_21_July.pdf

rationalisation as Wales was to have its own Ofwat either stand-alone or integrated into NRW.

- Cunliffe kept the privatised companies going in a limping way by endorsing the existing Ofwat investment settlement which runs to 2030, and by supporting projectification for large new infrastructure projects. Together these measures ensure the companies will not face large demands for increased physical investment which would tip them into the Thames predicament of financial distress. Thus, Cunliffe decided there was to be no change in the PR24 company investment plans for 2025-30 which had been negotiated and agreed with Ofwat. This was reinforced by a final report chapter which reported and sanctioned existing projectification plans whereby all major projects would be financed off water company balance sheets by private finance projects with costs recovered by surcharges on customer bills. The chapter did not disclose that private finance is life support for over-borrowed companies, which incidentally delivers poor value for consumers and has a bias against green solutions because it is much easier to package steel and concrete constructions into such projects.

What Cunliffe ignored was the need for, and possibility of, different kinds of fixes outside the centrist binary choice of revamped regulation versus ownership change. This is most obviously the case in environmental matters where the Environment Agency and NRW will never be given the budgets to do the real-time water quality monitoring necessary both for making policy and for identifying polluters. But NRW can cooperate with others in providing trustworthy data which is accessible to all. The Freshwater Gateway Project (sponsored by Cardiff University, Welsh Government, NRW, Dŵr Cymru and Afonydd Cymru) has demonstrated the feasibility of a unified open-source data-sharing gateway, for a range of datasets from various providers, including citizens.[50]

But the big outstanding issue is that water is in a revenue constrained mess after 25 years of underinvestment in a period of climate change which poses new challenges and creates new opportunities for water management with green interventions. If the revenue constrained business model cannot be substantially and quickly addressed, choices are heavily constrained, prioritisation is acutely difficult and anything like a solution is hard to achieve. In this case, we doubt whether regulators or expert planning agencies should make these decisions or could legitimate those decisions. The Thatcherite settlement defaulted onto regulation as a way of taking politics out of decision making on privatised utilities. The difficult choices of the second half of the 2020s are inherently political and they need a new form of social governance to guide regulation.

[50] Cardiff University Water Research Institute, *Freshwater gateway for Wales project*, 2024, https://www.cardiff.ac.uk/__data/assets/pdf_file/0007/2920165/Gateway-final-report.pdf

Step 3: develop social governance through new institutions to get us on a pathway to improvement

Since Andy Burnham backed off recommending public ownership for Thames, the debate has been about 'public control', which of course can mean many different things. In our view, with or without public ownership, the aim should be social governance guided by two principles:

- There is no simple solution to nested, embedded wicked problems. Sewage treatment and water supply are in a mess not only due to years of under-investment but because climate change brings new, complex challenges that need to be addressed outside of the water supply and sewage disposal functions that our privatised companies inherited from their municipal forbears. The task of reform is to address problems by finding pathways to improvement that will involve many steps, after difficult choices about priorities and trade-offs.

- The guiding principle of control should be democratisation for social governance. Experts should advise but not decide on the steps to improvement, which require informed public consent. Politicians and public are presently completely confused about financial constraints and practical choices in water. So, sensible steps on the improvement pathway depend on creating and sustaining a new kind of deliberative democracy as the operating principle of a social governance of water.

These principles open up a prospect of reforms which go well beyond those sketched in Andy Burnham's 2026 Labour Party Conference speech that promised to 'start a 10-year journey to a very different water system'.[51] But on closer inspection the Burnham programme is much less radical than it appears at first sight.

- Burnham promised a bill which would end "Margaret Thatcher's ideological ban on public ownership of water companies." But this means very little if his government cannot find the billions necessary to buy out the companies with compensation for senior debt holders.

- In terms of regulation, Burnham defaults onto the old trope of regulating high pay and closing loopholes used to pay 'excessive bonuses'. This is performative action which in water as in the finance sector has never worked to restrain senior management pay. Chancellor Healey is at the same time moving in the opposite business friendly direction on executive pay in public companies by ending reporting of CEO to typical employee differentials and abolishing annual shareholder votes on board pay.[52]

[51] Andy Burnham, *Speech to the Labour Party conference 2026*, 29 September 2026, https://labour.org.uk/updates/stories/andy-burnhams-speech-to-labour-party-conference-2026
[52] Gold Digger, *Pay dirt*, 25 September- 6 October 2026, Private Eye, https://pocketmags.com/ca/private-eye-magazine/1684/articles/pay-dirt

- The novelty is Burnham's insistence (as an ex-mayor) that "mayors will have new powers to hold water companies to account". But such powers are meaningless when the combined authority mayors do not have the staff and expertise to judge the performance of a regional water company or frame alternative choices.

If we remember the principles that should guide reform, the problem with current proposals for reform of water, with or without public ownership, is that they fail to recognise sufficiently that democracy requires informed participation:

- Burnham's empowering of mayors is less about participation and more about delegation of central policy objectives and instruments from one group of elected politicians in Westminster to another group of elected politicians in the regions who will supposedly deliver more effectively on shared objectives. The result is likely to be diversity informed by the political calculation of leaders in the nations and regions who take the initiative in various ways. As already is the case in extending the congestion and clean air charging pioneered in London. It was Burnham as mayor (not the citizens) who decided in 2022-3 to drop Manchester plans for a clean air zone with charging for high-emissions vehicles.

- Common Wealth's insistence on 'voice' does emphasise participation in new public water companies through "workers on boards, communities in planning processes and consumers with real power".[53] This is welcome but raises questions about the gap between sectional interest and collective social interest which is much less clear; about mechanisms for reconciling contradictory claims all presented as in the public interest; and about giving citizens agency (as well as voice) if managers of public or private corporations are working within frameworks set by regulators or government departments. As Common Wealth would no doubt concede, UK water needs more than a reinvention of the 1940s public corporation with some stakeholder representation. As the 2018 Labour nationalisation plan recognised when it proposed a European- tyle water observatory.[54]

We need new institutions which could channel democratic participation in constructive and affective ways. We do not claim to have thought through these issues about institution building for participation which cannot be resolved by report writers because they require real-world experiment and learning. The aim of this report is to lay out the hard business model evidence while encouraging others to think with us about the new and difficult questions around social governance on a pathway to improvement. And to encourage political and social actors who can experiment to start out on that pathway. Our Welsh perspective becomes important at this point. After the Cunliffe Commission report, Welsh Government is formally charged with rearranging the apparatus of expert regulation and creating a Welsh Ofwat. Welsh Government could at the same time be

[53] Mathew Lawrence and Alex Williams, *The productive state: A framework for Manchesterism*, 2026, https://www.mainstreamlabour.org/publications/the-productive-state
[54] Labour Party, *Clear water. Labour's vision for a modern and transparent publicly-owned water system*, 2018, https://www.labour.org.uk/wp-content/uploads/2018/09/Conference-2018-Water-pamphlet-FINAL.pdf

more creative by doing something for social governance and addressing some basic issues in the short-term through doable measures.

Welsh Government could start out on the road to social governance of Welsh water by creating the space for informed citizen political deliberation (with expert advice). Hence our initial asks are: (a) for a bill of works providing expertise-based, costed knowledge of investment options and outcomes where these do not exist; and (b) participatory engagement, such as with a Citizens' Assembly, to add the element of broad-based deliberation.

- The bill of works should be not a costing for a single project but rather a consideration of different improvement scenarios, with expert specification of the investment cost of delivering different sets of outcomes by various means. This would make the technical trade-offs, as well as costs and timelines for step-change improvement, visible. For example, if we want to swim in rivers free of faecal coliform then we need ultraviolet treatment of sewage discharges or if we want less urban flooding, we need a range of interventions to absorb water in the uplands and urban areas. What is the price tag and the organisational challenges in such interventions?
- The follow through is a Citizens' Assembly that provides space for deliberation informed by a range of expertise, including on the bill of works. Deliberation can explore citizens' choice around (a) what is short term attainable and practical given the expense and revenue constraints and objective trade-offs plus the organisational challenges of water management; and (b) what is medium and long term desirable, not just in terms of outcomes but in terms of shifted business model constraints with increased revenue. This recommendation comes with a caution. There is a serious literature on the difficulty of sortition to secure representative mini-publics[55] and a long literature on the difficulty of translating citizen assembly recommendations into action when that depends on existing political institutions.[56]

But regardless of immediate impact on policy, the bill of works would serve to clarify the gross general confusion about what is practical within specific revenue limits. And the bill of works in combination with the Citizens Assembly would begin to change the political, civil society and media conversations around Welsh water. If finance is part of the discussion, the discussion would begin to highlight revenue constraint and business model issues in ways that put charging onto the political agenda. Welsh Government and Senedd does not have the powers or knowledge to institute progressive charging but it could create institutions inside and outside government which empower social actors who are positioned, motivated and resourced to apply continuous pressure for improvement.

[55] Micha Germann, *Mini-publics, (lack of) representativeness, and legitimacy beliefs',* 2025, DOI: 10.1017/S0007123424000322.
[56] Irene Lorenzoni, Andrew James Jordan, Chantal Sullivan-Thomsett and Lucas Geese, *A review of national citizens' climate assemblies: Learning from deliberative events*. DOI: 10.1080/14693062.2024.2449416

- Senedd could take the initiative in moving towards more effective political oversight by creating a standing committee of Senedd on water with: (a) a clear remit including oversight, policy development and strategic guidance, starting from the citizens' assembly priorities; and (b) a budget for buying in financial, engineering and climate change expertise. Although the Climate Change and Environment Committee's 2024 report did effectively highlight many of the environmental performance problems at Dŵr Cymru, this committee completely failed to engage with financial issues.[57] These will need to be considered.

  Welsh Government could establish, alongside the new Welsh economic regulator, a Welsh water observatory with members representing civil society activism, independent expertise, and stakeholders like trade unions. Founding this kind of water observatory would only be the start of a process of putting participatory democracy to work with ensuing political struggle over agendas and roles. We know from European cases where a water observatory has had a significant institutionalised role, as in Paris, that politicians and in-house experts have worked to reduce its influence.[58]

It is not our intention to be prescriptive about one correct institutional path. The above suggestions are no more than a sketch which shows how it is practical to move towards social governance of Welsh Water on a deliberative foundation. Other suggestions from civil society and government are welcome. As are suggestions for more immediate changes at the Dŵr Cymru corporate level. Because Wales is in the middle of a cost-of-living crisis with the full price water bill typically around £12 per week. A near £300 increase in the energy price cap is coming in January 2027[59] and public spending constraints limit the assistance that Westminster government can provide.

Dŵr Cymru should be pressed (to cooperate with DWP) to secure wider take-up of a more generous social tariff scheme, for example offering a more than 50% bill rebate to all on Universal Credit. The existing Dŵr Cymru scheme reduces water bills by up to £250 per annum for around 150,000 households in 2026[60] who meet criteria about benefits and low-income.[61] Less than half the 369,000 Welsh households (29.6%) on Universal Credit (UC) in January 2026 appear to be claiming social tariff rebates under the Dŵr Cymru scheme. The maximum rebate is also less generous than in many English water companies. A more generous social tariff scheme is eminently doable for the company

[57] Senedd Cymru - Climate Change, Environment and Infrastructure Committee, *Report on performance of Dŵr Cymru,* February 2024, https://senedd.wales/media/lijnmtov/cr-ld16328-e.pdf
[58] Gemma Gasseau, *Negotiating the public: re-municipalization, water politics and social reproduction*, 2024, DOI: 10.1080/14747731.2024.2313807;
Vanessa Mascia Turri and Tommaso Vitale, *The politics of participatory rollback in urban water remunicipalization: Paris and Naples*, 2026, DOI: 10.1177/10780874261441878.
[59] Cornwall Insight, *Default tariff cap (price cap). Predictions & insights, September 2026,* https://www.cornwall-insight.com/predictions-and-insights-into-the-default-tariff-cap/
[60] In June 2026 on X Dŵr Cym claimed '150,000 customers already receiving financial support', https://x.com/DwrCymru/status/2068967428172681410
[61] Welsh Water, *HelpU tariff*, https://www.dwrcymru.com/en/help-with-your-bills/extra-help/helpu-tariff?utm_source=copilot.com

because nearly two-thirds of the cost of the existing Dŵr Cymru scheme is recovered by a surcharge of less than £20 on full bill payers.

All the English water companies operate different social tariff schemes. The Westminster government should this winter require a national social tariff scheme in England and Wales, as advocated by the Consumer Council for Water and recommended by Cunliffe. It could then go further and prioritise tackling the issue of regressive charging. This is not just a water poverty issue about the burden of water charges on low-income households; it is a water justice issue about revenue constraint arising from high-income households not paying enough. The point is equally relevant to the energy utilities of gas and electricity where charging by unit consumption is regressive, and revenue constraint explains why infrastructure capacity and renewal is inadequate. For example, Britain has too few days of gas storage and a grid which offers connections with delays of years and months.

Utility charging reform is the key medium-term enabling condition in water because without charging reform, the revenue-constrained business model survives. This then constrains the social governance changes outlined by restricting citizen assembly recommendations and reducing water observatory and Senedd committee to a kind of Greek chorus lamenting slow progress. The message of this report is that progress in the utilities starts with reform of regressive charging but does not end there. Because if the revenue constraint is eased under private ownership, then regulation of financially engineered extraction from a larger pot becomes increasingly necessary. If under public ownership, the UK needs more than a reinvention of the 1940s public corporation with some stakeholder representation plus regional authorities. In water and the other utilities, the time is right to start rewiring democracy with participation and deliberation.