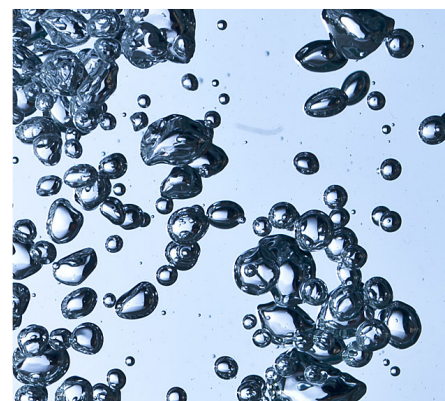
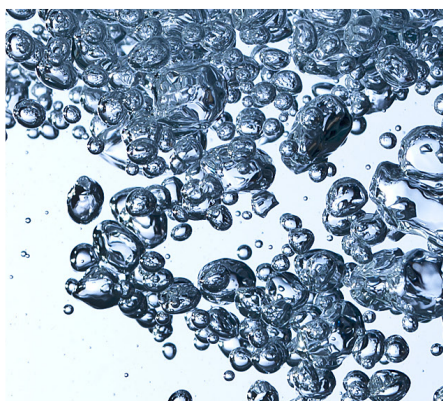
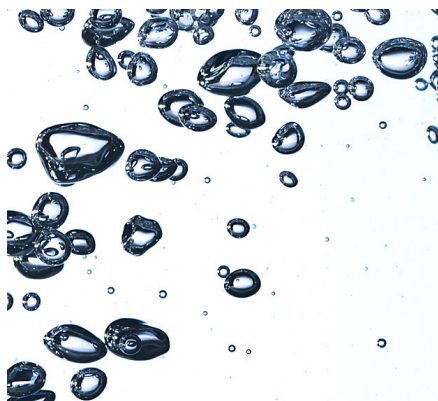


Public and private financing of water and sewerage infrastructure: Lessons and experiences from the UK



Providing effective water and sanitation costs money. The World Bank has estimated that meeting the W&S Sustainable Development Goal 6 (SDG6) will cost a considerable amount of money over a considerable period of time. Even within countries like the UK, where there is relatively advanced and universal provision, cost and other pressures are driving ever-greater scrutiny of financing and project models. Given the political significance, scale and long-term nature of investments required in this sector, anyone looking to raise the necessary cash will need to consider all options available to them.

We at Shepherd and Wedderburn have advised on successful infrastructure financing projects across utility industries. We have particular experience in how the regulatory and governance framework that sits around the financing can make or break these important projects. This article discusses some of our experiences and highlights four key questions for state governments, municipal authorities or water undertakings themselves who are looking to finance large or novel projects. Those considerations are summarised in a table at the end of the article.

Within the UK, many different financing models and corporate structures are used. In our experience, what is best for any particular system depends on the historical, political and technical context in which it is developed. At a practical level, the key questions when developing financing arrangements are not whether they should be public or private, debt or equity – it is what mix do the politics demand and how can multi-stakeholder projects be made to work?

Question 1

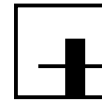
How much political control do you need?

Throughout the world, water and sanitation systems are almost universally publicly funded, i.e. the public that uses them pays for them one way or another. Success or failure of these systems is also, ultimately, a public

risk. It is therefore vital that customers (the public) and their governments have trust in the services that are being provided, the value for money they are getting and maintain the ability to step in and force corrections if things go wrong.

The regulatory and governance framework will make or break that trust and control. In the UK, different political contexts have driven different methods and levels of control. For example, whilst London had direct rule over Northern Ireland, Northern Ireland Water (NIW) was being developed for private ownership and private financing, with oversight by an independent economic regulator. That approach reflected the experiences and ideology of the English system. Arguably, however, it was a lack of political trust in such relatively indirect control, which has led to NIW being brought 'in house' and managed as a government department, albeit with an economic regulator working in parallel to help drive efficiency.

Similarly, the EU inspired fiscal constraints imposed by the Labour governments during the 90s and early 2000's led to the development of long-term private financing through Private Financing Initiatives (PFI) and Public Private Partnership (PPP) contract models. More recently, scepticism over the value for money that PFI/PPP ultimately provided, as well as recognition of a political need for continued public control of certain



assets has led to evolutions of that financing model, the Non-Profit Distribution Model (NPD), in Scotland and the Mutual Investment Model (MIM) in Wales.

In our experience, an honest assessment of how much control governments or sponsoring companies need and the specific areas or deliverables over which they need it is a key starting point for designing the regulatory model and securing finance.

Question 2

Where will the long-term revenue needed to service the financing come from?

Few regions or countries have the resources to finance, as well as fund, water and sewerage services exclusively from public resources. Even Scottish Water, which is publicly owned and largely financed from public charging and public loans, has historically made some use of private financing for specific waste treatment plants. It is therefore likely that any system or project will use, at least in part, some form of private financing.

Private financing in particular will only be available where there is a stable and relatively predictable revenue stream to pay for it. That may come in the form of compulsory user charges, as in England, or through the commitment of tax revenue to pay service charges as is used in some continental concession models. Without the ability to demonstrate and make long-term commitments to such revenue streams, private financing is unlikely to be available and public financing will come under greater pressure. It is therefore important to recognise that the regulatory and governance system must be designed to provide assurance to both the investor that the revenue will be available, and to the public/government that their long-term commitments will deliver value for money.

Those private English water companies who are looking to meet Ofwat's challenge for upstream reform are grappling with a similar problem. Historically, a return on investments in upstream assets like sewerage treatment works has been protected through the price control mechanism. From 2020 not all new investments will be protected and yet the companies remain obliged to ensure they can provide the water and sewerage services which customers need. That change in risk profile, the uncertainty around the on-going returns or source of revenue, is forcing companies to look hard at how they deliver solutions. Whilst some may continue to make 'at risk' capital investments, others will look to find cheaper operational fixes, find new ways of securing revenue for use of the assets or look to collaborate with others to share the risk. Some of the lessons highlighted below about where collaboration has been effective could also be useful to that work.

Question 3

How can public/private collaboration lower the cost of finance?

Generally, it costs less to finance systems from public sources than private ones, even given recent economic turmoil and the effect that has had on national bond prices. However, as noted, few countries have the resources to finance water and sewerage systems entirely from public sources, particularly given competing demands for that limited public financing.

Most of the projects and systems that we have worked on blend public and private financing, or provide targeted public support, which reduces the cost of private financing where it is used. For example:

- Guaranteeing a return on capital, e.g. the price controls based on capital value (RCV) used in utilities such as water in many parts of the UK.
- Guaranteeing a certain level of revenue (in addition to ensuring stable revenue), e.g. the contracts for difference used in energy.
- Providing insurance for mega project risks, especially during construction phases, e.g. the state insurance provided to the Thames Tideway Project.
- Provision of tax incentives, e.g. tax relief on debt payments.

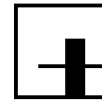
Many projects and systems also look carefully at the various life cycle risks and allocate them to the public or private participants depending on their ability to manage those risks. For example, many of the PFI/PPP projects allocated responsibility for on-going management of the assets to the private providers, as well as the design and build of them. However, responsibility for setting the initial specifications or ensuring the necessary planning and environmental consenting was left with the public sector participant. In our experience, where private finance is to be used, the diligence which private financiers will conduct before investing can also provide useful sense checks on the design of any project and so should be encouraged as early as is practical.

In practice, any system or project needs collaboration between all participants so their respective inputs are properly co-ordinated and they can each manage down their risks. At risk of stating the obvious, the people involved in any particular arrangement, their personalities, skills and the management of them are often as much a critical success factor as the overall design.

Question 4

Is your regulatory and governance framework strong and complete?

In our experience, successful regulatory and governance frameworks ensure that the public can trust their provider



and the value for money they are getting, as well as giving any private investor confidence in the security of their investments. It follows that regulation, specifically independent regulation, is not only useful where there is private investment.

In Scotland, for example, Ministers are still responsible for setting the overall policy objectives and specifying how much public borrowing they will make available to Scottish Water. However, an independent economic regulator oversees Scottish Water's financial performance and specifies what it can charge customers. This process, and the benchmarking with English water companies which it has historically used, is credited with helping to close the efficiency gap between those public and private companies – the publicly owned and largely publicly financed Scottish Water is now one of the best performing water companies in the UK.

The Scottish allocation of roles will not work in all contexts. The level of Ministerial trust needed to 'let go' of certain issues, such as charging, takes time to develop, if it develops at all. Some degree of regulatory and governance oversight can come in many different forms, from the customer membership of the mutualised Welsh Water, to the scrutiny of financial probity provided by National Audit Offices throughout the UK.

Whatever framework is used, we suggest it needs to allocate at least the following responsibilities and to equip the people exercising them with the skills, powers and resources necessary to do so effectively in the long term:

- **Policy and Standards:** Making decisions around the overall objectives and standards that a system needs to achieve, the trade-offs inherent in them and links to other policy areas such as energy for food. For example, deciding on the level of coverage or cross-subsidy in charging.
- **Monitoring and Enforcement:** Supervising the performance of each of those who participate in a system and taking steps to ensure each does what they are supposed to.
- **Scrutiny and Challenge:** of the costs, implementation and approach of participants in any system.
- **Co-ordination and Delivery:** of the water and sewerage system itself, i.e. making sure there is a single, clear point of responsibility that is able to control and direct all those who input to it.
- **Customer Communication:** Engaging with customers to ensure that their views are properly reflected in all the other areas, that they have a clear understanding of who does what, how the public funds are used and what they can do about system failings.

To help illustrate how some of these considerations have played out in the UK, the attached table gives a high-level overview of different financing models either currently or recently in use. All have been publicly funded, but as you can see, there are various reasons why different financing models have been used. In many cases, a system or project will use a combination of these models.

We would be happy to discuss our experiences and latest thinking in these areas.

For more information, please contact:



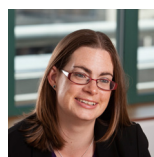
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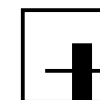
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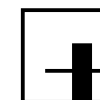
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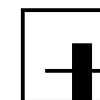
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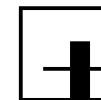
Financing model	Key characteristics	Key benefits	Key risks	Key success factor	Example	Why was it used here?
Public financing sources						
Public grant	Direct public financing of water and sewerage costs, often on an annual basis.	Relatively low transaction costs.	Short-term nature can hamper effective network and corporate management and planning.	Certainty and predictability of grant funding.	Northern Ireland Water	Political resistance to domestic user charging or private financing.
User charging	Users of the service pay charges that can be directly proportionate to their use and/or reflect their ability to pay.	Can create support incentives to reduce use when resources are constrained. Can increase sense of 'ownership' in the service.	Often politically very controversial, carries affordability challenges and financial incentives to reduce use may have limited impact. Frequently lack meaningful penalty for household failure to pay.	Public confidence in the quality and legitimacy of the services.	Scottish Water	Need to 'top up' other available public financing and desire for a social cross-subsidy mechanism.
Public loan	Public funds are made available for a certain period and interest is paid back to the public on those funds.	Usually public cost of debt is lower than private cost of debt and so cheaper overall.	Ties up public funds and so reduces amounts available for other public projects, e.g. schools/hospitals.	Ability to demonstrate value for money, commit to long term loans and meet interest payments.	Scottish Water	Political resistance to private debt or equity finance and need to 'top up' user charging, so keeping those charges within politically acceptable limits.



Financing model	Key characteristics	Key benefits	Key risks	Key success factor	Example	Why was it used here?
Public equity	Direct investments are made in the service provider and a dividend on that investment may or may not be paid back.	Provides clear sense of public ownership and may generate direct public return from cost saving or other efficiency increase.	Requires public funds to be available to be committed and carries risk of non-return to the public.	Public confidence in the performance of the services.	None known in UK water sector, although possible for public dividend to be taken from Scottish Water. Public equity stakes used in NPD and MIM models described below.	See NPD and MIM models below.
Private financing sources						
Private equity	One off private investments are made in the service provider and a dividend may or may not be paid back.	When used with private service delivery, can help align performance and ownership risks.	Clearly moves ownership into private hands and allows profit to be 'taken out' of the system, potentially increasing overall cost.	Stable, strong and predictable regulatory framework that ensures fair risk allocation and no asset stripping.	English water and sewerage companies.	Desire for greater private influence/ stake and for cash receipts from public sale of assets.
Private debt	Private funds are made available for a certain period and interest is paid back to the private provider on those funds.	Cost of securing this form of finance is currently generally lower than private equity.	Essential that a stable and consistent level of revenue is available to meet the debt re-payments.	Stability of revenue and public confidence in the fairness of returns/ value for money being delivered.	Welsh Water. Also used extensively by English water and sewerage companies.	Corporate financial distress and need for re-structuring/ re-financing of water business.



Financing model	Key characteristics	Key benefits	Key risks	Key success factor	Example	Why was it used here?
Private Finance Initiatives (PFI) or Public/Private Partnership (PPP)	Private debt or equity finance is deployed in relation to a specific asset or service, with public service charges and possibility of public ownership of the asset at end of contract period.	Little or no impact on public borrowing/ balance sheets so allows investment that might not otherwise be available. Can help align performance and ownership risks when used in design, build and/or maintain context. Particularly useful for specific, large, scale, projects.	Long-term contracts may not provide good value for money overall.	Suitability of initial specifications and pricing/risk transfer negotiated at contract award.	Various wastewater treatment plants contracted by Scottish Water.	Other forms of financing constrained/ unavailable at the time investment needed.
Non-profit distribution (NPD)	Form of PFI with fixed return and no dividend distribution. Often also uses special 'public interest' controls. NB: Fixed return element may result in use of this model being classified as public sector borrowing.	Certainty of return for private investor with confidence for the public that no additional money is being 'taken out the system'.	As for PFI but with some greater certainty in overall value for money.	As for PFI	None yet known in water context, although various examples in Scottish accommodation sector.	Lack of availability of public financing but desire to re-balance public/ private benefits from traditional PFI.



Financing model	Key characteristics	Key benefits	Key risks	Key success factor	Example	Why was it used here?
Mutual Investment Model (MIM)	Form of PFI with public equity stake included in project vehicle.	As for PFI with potential for public share in financial gains from contract. Avoids potential for public sector classification present in NPD.	As for PFI but with some greater certainty in overall value for money.	As for PFI.	None yet known in water, though various schemes planned in Welsh health, schools and transport sectors.	As for NPD