

# Agenda

Advancing economics in business

## Competition in the water sector: still or sparkling?

The introduction of competition in the water sector in England and Wales is currently the subject of a broad consultation process. In May 2008 Ofwat, the regulator, published a report setting out the range of reforms proposed. Will these reforms lead to entry and competition, and deliver significant benefits?

Competition is a means to an end. It can help to put pressure on prices, reduce costs and improve quality. In the water sector in England and Wales the regulatory regime seeks to indirectly mimic some of the pressures of direct market competition, largely through the system of comparative competition whereby Ofwat sets tougher price limits for less efficient companies than for more efficient companies. Furthermore, other forms of indirect competition, outlined in the box below, are also present in the sector. However, what Ofwat is keen to see is direct competition in the market, whereby individual customers can choose their suppliers, as they can, for example, in the electricity and gas sectors.

### Time for regime change?

Ofwat has had numerous attempts at kick-starting direct competition in the market over the past ten years. Promoting competition through the application of the Competition Act 1998 (CA98) turned out to be insufficient to liberalise the market in the water sector. The current regime, Water Supply Licensing (WSL), established in

#### Indirect competition in the water sector

- **Comparative competition:** incumbents compete for less-stringent efficiency targets set by the regulator in the periodic price reviews.
- **Capital market competition:** companies or individuals compete for corporate control.
- **Contracting out competition:** providers of the incumbents compete to deliver particular products or services.
- **Self-lay:** the incumbents compete with contractors to install water mains and service pipes in new developments.
- **Inset appointments:** incumbents compete for the market with entrants that can replace them in specific geographic areas.

December 2005, was intended to deliver competition where the CA98 could not, by assisting competition between incumbents and entrants that could use incumbents' networks (or purchase wholesale water from them) to supply eligible customers. However, WSL has also had limited success—indeed, paradoxically, it seems to have limited the scope for entry.

As Ofwat concedes, WSL has failed to encourage direct market competition:

No customers have yet switched supplier, few wholesale master agreements (WMAs) have been signed between licensees and appointed water companies, most WMA negotiations are taking too long to complete, and not even half of licensees appear to be actively engaging in WSL negotiations.<sup>1</sup>

Ofwat sees the lack of entry by competitors as stemming from problems regarding the rules within the WSL regime. The consultation process cites three principal causes, as follows.

- **Barriers to water abstraction rights trading.** The main barrier being that the Environment Agency has discretion to reduce the size of the abstraction rights at the point of the trade (and has used this discretion), which disincentivises trading.<sup>2</sup>
- **Restrictive eligibility threshold.** Eligible customers under WSL are non-domestic customers that are likely to be supplied more than 50 megalitres (MI) of water per year. These amount to around only 2,200 consumers.<sup>3</sup>
- **The application of a 'retail-minus' cost principle to calculate wholesale water charges.** This principle implies that the prices that incumbents charge to

entrants for wholesale water supply should be equal to the retail charge of the incumbent minus the costs that the incumbent avoids as a result of the entrant providing retail water services to the end-customer.<sup>4</sup>

Ofwat therefore wants to change the rules of WSL (eg, the cost principle and accounting separation) in order to improve the prospects of competition taking hold. This is not strictly a ‘pro-competition’ agenda—more one of ‘let competition prove itself’. Whether this will itself lead to entry is unclear: do the inherent economics and practicalities of retail competition, even with revised rules, stack up? Can common carriage take off if the markets are regional, and capital intensity is high?

Notwithstanding this, the rule changes are important. WSL currently has vertically integrated retail-minus pricing, which, in its current application, tends to leave little margin for entrants. What Ofwat is proposing to adopt is something more akin to cost-based access pricing; which, depending on the technique used to allocate the regulatory capital value (RCV), could result in a reduction in retail wholesale access charges. But, which technique will be used, and what are the implications of using the different techniques?

These types of key methodological questions, plus the ‘let competition prove itself’ approach, have put Ofwat in the difficult position of not yet being able to undertake robust cost–benefit analysis (CBA) of the reforms proposed. It is a difficult challenge for the regulator to measure the costs and benefits since, as it has claimed, ‘at this stage we cannot know precisely what is achievable and all the steps which should be taken’.<sup>5</sup> While recent experience of implementing competition in Scotland may provide some answers, the lessons to learn in terms of CBA could be limited since this case is too new and differs from that of England and Wales in some respects (see further below for discussion).

### Ofwat proposed reforms

Ofwat has proposed a broad range of reforms to the regulatory framework. These reforms, summarised in the box below, imply significant changes to the rules and market architecture across the complete value chain of water and sewerage services.

Figure 1 shows how the vertical separation proposal segregates the different elements of the value chain. Ofwat proposes to introduce competition in the contestable parts of the value chain, which it considers to be the elements to the left of the purple line (water: abstraction and treatment; sewerage: disposal and treatment) and to the right of the red line (retail services). As regards the network elements (water: distribution;

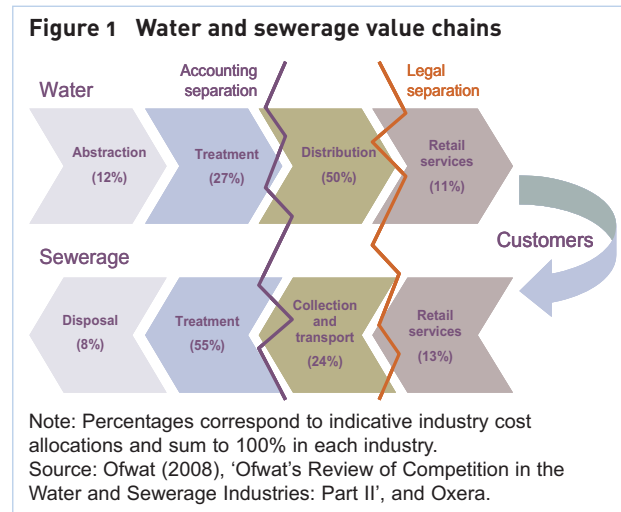
#### Ofwat proposed reforms

- Vertical separation of contestable elements of the value chain from natural monopoly elements—ie, water distribution and sewerage (collection and transport)—including legal separation of incumbents’ retail water and sewerage businesses (see Figure 1).
- Implementation of separated price controls across the different parts of the value chain.
- Replacement of the retail-minus cost principle with a set of general criteria for access pricing.
- New retail market arrangements for water, including a gradual reduction of the eligibility threshold to zero and the subsequent introduction of households in the retail market.
- New retail market arrangements for sewerage.
- New water abstraction and treatment market architecture, including an effective water abstraction rights trading market.
- New sewerage (treatment and disposal) market architecture.

sewerage: collection and transport), Ofwat proposes to apply the traditional regulatory tools used for the regulation of natural monopolies.

Although the market model has not yet been defined, Ofwat appears to favour a common carrier model, whereby the various market participants can purchase access to the network by paying a regulated network tariff.

Ofwat has proposed to start by securing competition in water and sewerage retail markets, and to then move to water abstraction and treatment, and sewerage (treatment and disposal). In particular, it has proposed to start by reducing the non-household customers’ eligibility threshold to 5Ml per annum within less than one year. Retail competition could be a low-risk kick-off point to



start changing the mindset of the industry. Although, as Figure 1 shows, in terms of costs, water retail represents only 11% of the water business, and sewerage retail only 13% of the sewerage business, which implies that the initial effect on bills would be small.

In line with the timing proposed, the analysis presented by Ofwat in its latest report concentrates on the implementation of retail competition, leaving part of the discussion—in particular that related to sewerage (treatment and disposal)—to be held at a later stage of the consultation process. The remainder of this article discusses some of the methodological issues relating to Ofwat's report, which warrant further consideration before the implementation of the proposed reforms.

## Allocating the RCV

One key implementation issue is the allocation of the RCV to the different parts of the business. The RCV is the value of the assets that companies have invested to provide the regulated service, which under the current regulatory system is remunerated at the cost of capital. Ofwat has to allocate the RCV of the incumbents in order to achieve separate price controls for different parts of the value chain (ie, remunerate each part of the value chain with a different price cap).

There are two basic approaches to allocating the RCV: unfocused and focused. The unfocused approach allocates the RCV in the same proportions as those found in the book values. The focused approach, in one of its variations, allocates the values of the contestable parts of the business using market values, with the network part allocated residually.

Given the way in which the water sector has been privatised, the total RCV for the water and sewerage industry (£44 billion) is much less than the cost of rebuilding the assets (£239 billion), which could create a barrier to entry if the £44 billion were allocated following an 'unfocused approach'.<sup>6</sup> This is because the lower the value allocated to the contestable part of the value chain, the lower the price cap for this part of the value chain, and therefore the more difficult entry would be for companies that have to build their own assets in order to compete in the market. Ofwat has suggested that this problem could be solved by 'allocating proportionally more of the RCV to contestable activities (a focused approach)'.<sup>7</sup> However, although this might provide price caps for the contestable parts of the business that could promote entry, it could result in low network access price caps, which might be challenged by incumbents.

## Will competitors enter the market?

Ofwat's proposed reforms are aimed at setting a level playing field for new companies to enter the market. Once competitors enter and competitive pressure starts

delivering sufficient protection to customers, the regulator expects to withdraw price regulation. In other words, it is creating the rules to ensure that competition has a chance. What if competition is not triggered, even though the rules are in place?

One reason why competition might fail to be triggered could be because some parts of the value chain that Ofwat has defined as contestable might still have natural monopoly characteristics. In other words, it might be cheaper to provide the service with one company than with more than one in other parts of the value chain besides the network part. This implies that, even under perfect rules, competition would never emerge in these parts of the value chain, or even if it emerges in the short term, the longer-term equilibrium would be to have only one company with 100% market share.

Ofwat identified this problem when outlining the potential barriers to market development, but further analysis of these barriers has yet to be undertaken.<sup>8</sup> The two barriers that, combined, could imply natural monopoly characteristics are:

- high entry capital costs;
- small geographic markets.

It should be noted that these two barriers are present in water treatment and in sewerage (treatment), which, after the network element, are the parts of the value chain with most weight, 27% and 55% respectively (see Figure 1). This highlights the importance of undertaking further analysis in order to be able to assess the likelihood of competitors entering the market, particularly in both water and sewerage (treatment).

## What can be learned from the Scottish experience?

The introduction of competition in Scotland is certainly a relevant case study to provide context for the reforms in England and Wales. However, competition in Scotland began only in April this year, which means that it is still too early to accurately assess the results achieved. Furthermore, there are certain issues that should be taken into account when analysing the Scottish experience, such as the following.

- **History of regulation.** The incumbent, Scottish Water, has been regulated for a much shorter period of time than companies in England and Wales. This could imply that there might still be more potential for efficiency gains to be driven by competitive pressures in Scotland than in England and Wales.
- **Industry composition.** One company in Scotland versus 21 companies in England and Wales might imply different costs when setting up competition

arrangements. For example, the one-off costs of setting the information systems to produce separate accounts will be incurred by 21 companies rather than by just one.

- **Scope.** The Scottish competition framework is limited to water and sewerage retail services for business customers. This is narrow compared with the competition framework proposed by Ofwat (see Figure 1).

## What are the costs and benefits?

CBA is a methodology to quantify, in monetary terms, the costs and benefits of projects. Governments use this methodology to decide on the implementation of policy proposals. If expected benefits exceed the expected costs, the proposed policy should go ahead on the basis that it increases social welfare. The implementation of competition is a significant policy proposal; as such, it is expected to be assessed using CBA.

To date, neither Ofwat nor the government have provided a clear quantification of the costs and benefits of introducing competition in the water sector. In its May 2008 report, Ofwat attempted a CBA of the implementation of competition. However, although some sources of costs and benefits have been identified, a monetary value of the net expected costs and benefits has not been achieved. For its part, the government is expected to undertake CBA of introducing competition within the current government review, to be published in spring 2009 (ie, the Cave Review<sup>9</sup>).

The problem seems to be the ‘learning by doing’ approach underpinning the reforms proposed. While a

cautious approach seems sensible, it does make CBA difficult. Ofwat has stated that:

Our strategy is to take some key steps to open markets and set rules where we reasonably believe they will deliver benefits, and to enable competition to prove itself. New steps can be taken as our knowledge increases.<sup>10</sup>

This creates a great deal of uncertainty about the final outcome of the reforms, which might make it difficult for Ofwat to calculate the expected costs and benefits. However, the fact that there might be uncertainty does not mean that expected values cannot be calculated. Expected values could be calculated if the likelihood of the different scenarios can be estimated, which again highlights the importance of understanding the prospects of competitors entering the market.

## Concluding thoughts

There are a number of challenges in implementing competition in the water sector, including a lack of success in past attempts; a lack of directly relevant case studies; and, most importantly, a need to understand how the inherent economic characteristics of the water sector—as well as the regulatory rules—might affect entry.

Addressing these challenges will be central to achieving an optimal decision on the reforms required. It is unlikely to be a straightforward task, but the consultation is still ongoing, and government, regulators, companies and consumers will have the opportunity to understand the expected costs and benefits of the reforms in order to guarantee that the implementation of competition is for the benefit of the society.

<sup>1</sup> Ofwat (2007), ‘Outcomes of Ofwat’s Internal Review of Market Competition in the Water Sector’, April, p. 14.

<sup>2</sup> Ofwat (2008), ‘Ofwat’s Review of Competition in the Water and Sewerage Industries: Part II’, May, pp. 76–80.

<sup>3</sup> Ofwat (2007), op. cit., pp. 3 and 40.

<sup>4</sup> Ofwat (2007), ‘Consultation on Market Competition in the Water and Sewerage Industries in England and Wales’, July, pp. 17 and 18.

<sup>5</sup> Ofwat (2008), op. cit., p. 4.

<sup>6</sup> Ofwat (2008), op. cit., p. 45.

<sup>7</sup> Ofwat (2008), op. cit., pp. 45 and 46.

<sup>8</sup> Ofwat (2008), ‘Ofwat’s Review of Competition in the Water and Sewerage Industries: Part II—Supporting Information’, May, Appendix 1.

<sup>9</sup> See Defra, ‘Cave Review of Water Markets’, at <http://www.defra.gov.uk/environment/water/industry/cavereview/tor.htm>.

<sup>10</sup> Ofwat (2008), ‘Ofwat’s Review of Competition in the Water and Sewerage Industries: Part II’, May, p. 4.

If you have any questions regarding the issues raised in this article, please contact the editor, Derek Holt: tel +44 (0) 1865 253 000 or email [d\\_holt@oxera.com](mailto:d_holt@oxera.com)

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