

Retail HH Input Price Pressure and Benchmarking Analysis



As part of the regulatory framework for PR14, Ofwat removed the automatic link between prices and inflation for the retail price controls. In their Business Plans for PR14, water companies were required to provide evidence relating to cost adjustment claims regarding retail inflation. Several companies commissioned Economic Insight to take forward a range of analysis and benchmarking to support their claims in their final Business Plans.

This Insight sets out our analytical framework used in the assessment of each company's case for allowing input price pressure within their Retail Business Plans.

Background

Within the scope of the retail control for PR14 Ofwat's approach was to set allowed revenues on the basis of companies being able to recover:

- The lower of the calculated industry average cost to serve (ACTS) and companies' actual projected cost to serve (CTS); and
- An allowed net operating margin – set on an EBIT basis.

The framework Ofwat has adopted also includes adjustments to allowed costs to reflect: (i) economies of scope; and (ii) differing levels metering.

Unlike the wholesale controls, however, the approach did not explicitly or automatically allow companies to recover the impact of general inflation on their retail cost base. Rather, Ofwat's position was to place the onus on the companies themselves to make a case as to whether they face uncontrollable input price pressures, which would be appropriate to pass onto consumers.

Ofwat set out a '3 gate' process for allowing company specific adjustments to the ACTS, which is that the relevant issue:

- » Has a material impact on costs (which is defined as costs being at least 2.25% of total AMP6 retail expenditure).
- » Is beyond management control (having taken all possible steps to control it).
- » Impacts the company in a materially different way to other companies.¹

A number of water companies made cost adjustment claims relating to retail inflation as part of their initial submission of Business Plans, however, Ofwat rejected these claims generally citing insufficient evidence. While the grounds for rejecting claims varied amongst the water companies, the common message stated: (i) insufficient evidence that costs are outside of management control; and (ii) that they are affected in a materially different way to other companies.

Additional to the above, Ofwat provided supplementary feedback to the industry which highlighted what 'further' evidence would include:

¹ See slides from 'Ofwat retail workshop.' (April 2014)

- » Quantitative benchmarking relative to other industries beyond the water sector; and
- » Evidence that companies are efficient across the main cost domains (such as labour) – again compared to cross sectorial benchmarks within and beyond the water sector.

Several water companies commissioned Economic Insight to take forward a range of analyses to support their claims for an adjustment in their ACTS for input price pressure.

Our approach and methodology

In order to advise what the appropriate level of input price pressure allowed for is, we developed a range of highly detailed quantitative (including econometric analysis) and qualitative evidence, which informed both:

- the size of the gross input price pressure faced by the companies; and
- the efficiency savings it could make.

Our approach also included benchmarking, both within the water industry, but also more widely.

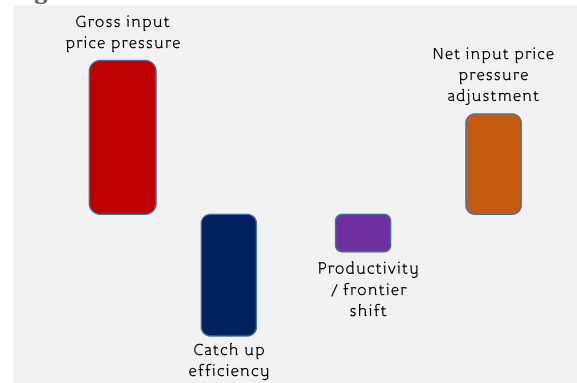
In taking forward our analysis, we developed an analytical framework that we considered to be: (i) robust from an economics best practice perspective; and (ii) consistent with Ofwat's three step test for allowing ACTS adjustments. Our underlying rationale for our approach is that – as is well established in the economics literature – in competitive markets, efficient firms that experience cost pressures would generally pass these on to end customers.

In our view, the question of 'how much' inflationary pressure water companies should be allowed for in relation to retail HH depends on the question of how efficient it is compared to a relevant benchmark. We suggest that this represents the most appropriate interpretation of Ofwat's criteria for allowing retail cost adjustments.

Put simply, if a company is relatively efficient compared to a relevant benchmark then, by definition, input price pressure would be less within management control and would impact it more materially than would be the case for a less efficient company (as the insufficient company would have greater scope to absorb this pressure)

Therefore, we developed a framework that sort to quantify each company's claim for input price pressure by 'netting off' any efficiency savings it could make (either by catching up to the frontier, or as a result of general productivity gains) against any 'gross' input price pressures. This framework is summarised as below.

Figure 1: Illustration of our framework



Source: Economic Insight

The above framework is conceptually consistent with Ofwat's three step test. However, in order to meet the regulator's requirements 'in practice', this framework needed to be supported by detailed qualitative and quantitative evidence. We therefore developed a practical methodology that achieves this – of which there are two core parts:

- » **Within industry benchmarking**, where we have undertaken aggregate level retail unit cost comparisons, disaggregated retail unit cost comparisons, and econometric analysis.
- » **Wider industry benchmarking**, where we have: compared the specific company's retail HH cost to serve with those for energy retailers and mobile virtual network operators; undertaken staff cost benchmarking; and qualitatively reviewed the company's cost management practices.

In relation to the above, it is critical to understand that there is no single robust way to calculate an appropriate level of catch up efficiency. Here our objective, therefore, was to use a range of evidence to ensure that collectively, there was a robust basis for quantifying the company's net input price pressure.

Gross input price pressure

In order to estimate the 'gross' input price pressure faced by each company (that commissioned us to do so) in retail HH, our start point was to identify the most relevant historical inflation metrics and then map them to key retail cost categories. For our purposes, we ultimately needed to project input price pressure for the relevant water company for the period 2014/15 to 2019/20 – this was done using various economic techniques depending on the associated retail cost category. The data showed that a vast majority of retail HH costs relate to either staff or bad debt, but also includes for example: postage, materials, IT and other.

For staff related costs, our mapping to historical price pressure data was particularly detailed. We mapped each individual function / role to occupational level wage inflation data from the Annual Survey of Hours and Earnings and then used this to construct a weighted average wage index. For the other key retail HH cost categories, we similarly sought to

identify the most relevant inflationary driver (all sourced from the ONS). We then forecasted our individual historical data forward based on the relationship between our individual price pressure measures and aggregate inflation measures to derive projected input price pressure.

In relation to bad debt, we undertook econometric modelling that links projected gross bad debt cost pressure for the specific company to its underlying drivers (bill size and key macroeconomic parameters); and used this as the basis for our forecasts. The rationale for this was to take into account the countervailing downward cost pressure arising from an expected improvement in the macroeconomic environment.

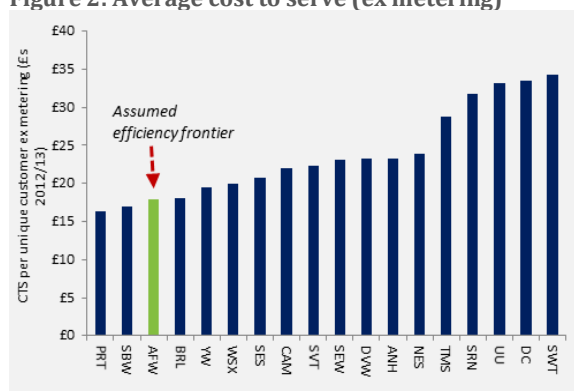
The key benefits of our overall approach to estimating gross input price pressure are that: (i) it reflects, at a very detailed level, the actual mix of input price pressures the company's will face; and (ii) links projections for those to publically available, credible, wider inflationary metrics.

Benchmarking to determine catch up factors

Under Ofwat's revised regulatory framework for PR14, no 'efficiency frontier' for retail was publically identified by the regulator. Therefore, in order to determine an appropriate assumption for each company's scope to make catch up efficiency savings in the retail HH space, we undertook both within and wider industry benchmarking. In all cases, the precise selection of the frontier / benchmark is somewhat subjective, for this reason our within industry benchmarking includes two alternative methodologies:

- » **Unit cost benchmarking.** Where we considered each water company relative efficiency by comparing its retail costs on a simple unit cost (i.e. CTS) basis with those of other companies (see figure 2 below). We did this at both the aggregate (i.e. total retail HH) and detailed (individual retail line) level.
- » **Econometric benchmarking.** To address the limitations with the above method – where there are reasons to suppose that differences in unit costs alone do not accurately reflect relative efficiency across the companies – given this, we developed an econometric benchmarking model.

Figure 2: Average cost to serve (ex metering)



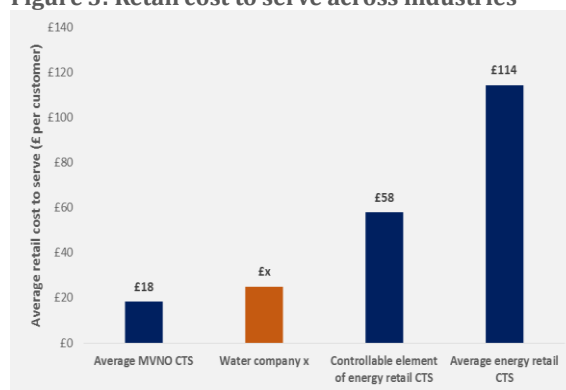
Source: Economic Insight analysis of regulatory accounting data

Having calculated the efficiency gap following the above analysis, the implied catch up efficiency factors were then calculated in order to determine the overall efficiency gap for the water company in question.

To further inform our assessment, we set out evidence that compares retail HH costs with wider industries. In any case across industry comparisons are difficult, in particular, differences in the precise services being provided drive differences in activities, and therefore, the efficient costs that need to be incurred. Therefore care must be taken in the interpretation of any such cross industry comparison. Our wider industry benchmarking involved two separate approaches: (i) CTS comparisons; and (ii) a qualitative assessment of cost management practices.

We were able to derive comparable cost to serve measures, particularly in relation to mobile virtual network operators (MVNO) and energy retailers where, as shown below, we compared each company to determine their relative position across these industries.

Figure 3: Retail cost to serve across industries



Source: Economic Insight analysis

Conclusion

We considered the overall approach – and range of underlying evidence – to represent an appropriate and robust methodology for quantifying the relevant water companies (that commissioned us) net input price pressure and appropriate level of efficiency catch up claims.

Only Yorkshire Water was successful in Ofwat's Draft Determination phase. Further to this, Economic Insight secured additional revenues for the water industry, following the Final Price Determination for water and sewerage companies in England and Wales, where Ofwat also accepted claims for retail cost inflation for three companies: Bristol, Portsmouth, and Wessex. The four successful companies' claims totalled to £36.4m, making it a significant win for the industry. Companies who had claims rejected lost out because of Ofwat's policy of only allowing for retail inflation in instances where it deemed firms to be 'upper quartile efficient'.

Economic Insight advises water companies on all aspects of regulation and commercial strategy in retail.

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