

Ofwat: Costs and benefits of introducing competition to residential customers in England - emerging findings

Consultation response from the

Centre for Competition Policy

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This consultation response has been drafted by the named academic members of the Centre, who retain responsibility for its content.

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CCP Response to Ofwat's Emerging Findings regarding the Costs and Benefits of Residential Water Competition

CCP is pleased to comment on Ofwat's emerging findings regarding the benefits and costs of introducing competition to the residential water sector. CCP's substantial research into consumer engagement leads us to have significant concerns regarding whether effective competition can be sustained in the proposed residential water market. While the analysis performed by Ofwat is valuable, it inevitably results in many additional questions which a decision maker would need to consider carefully before choosing to introduce retail water competition. The purpose of this response is to highlight where additional thought may be most valuable. At present the case for introducing competition appears far from overwhelming.

Competition is an ongoing process rather than a static outcome and for it to work effectively consumers must have a reason to take the time and effort to engage with the market. CCP's research consistently shows that the size of monetary savings is a core, but not sole, driver of consumer switching behaviour. Plausible potential savings from switching between water retailers seem to be significantly lower than those available to 'Big-6' customers in the energy market suggesting a noticeably lower rate of consumer engagement in the water market than in the energy market. That many consumers have not recently engaged in the energy market makes this comparison even more telling.

While we question the strength of consumer engagement in the proposed water retail sector, reaching a clear conclusion is hampered by the way Ofwat has presented its findings. Emphasising a £6 average saving is potentially misleading; with the removal of regulation there is no guarantee that efficiency savings will be passed through to consumers. The pass through of efficiency savings is reliant on consumers engaging sufficiently to exert pricing pressure on firms. While we believe that total welfare will probably increase as a result of competition, the likely impact on consumer welfare is harder to predict. Since the standard to be used by government when making its decision on water competition is unclear, it is essential that Ofwat clearly distinguishes between total and consumer welfare.

The correct figures to emphasise for movements in total welfare are the Net Present Values (NPVs) for each scenario. Ofwat should make clear that movements in consumer welfare are likely to vary across consumer groups according to their level of engagement. Firstly, Ofwat should provide a clear estimate of the maximum saving that an engaged and metered consumer with an averaged sized bill could make compared to the counterfactual. Second, Ofwat should highlight that if some consumers do not engage and firms price discriminate, there is no guarantee that their water bills will fall for inactive consumers and there is a risk that their bills could rise. Thirdly, Ofwat should assess the likely difference in bills between an active and inactive consumer, i.e. the potential saving from switching¹. Since CCP research highlights the importance of monetary savings to switching behaviour, this gap will be critical to assess whether the engagement and switching rates assumed in the different scenarios are plausible.

When reporting its findings, Ofwat also should be clearer about which scenario it considers most likely and why this is the case. The government's decision must be informed by the likelihood of an outcome occurring. While calculating precise probabilities seems inappropriate, ranking the likelihood of

¹ While we have previously warned against the over-interpretation of potential savings figures (see page 8, Deller, Hviid and Waddams (2015)), we would expect the magnitude of such savings to help inform estimating broad levels of consumer engagement. Some guidance on how to calculate this difference is provided in section 5 of this response.

scenarios does seem feasible. Without more information about the assumed likelihood of different scenarios it is difficult to make informed comments about Ofwat's detailed assumptions.²

For the scenario considered most likely Ofwat should provide a clear description of the process and nature of competition that will deliver the expected outcomes. While it is understandable that Ofwat cannot evaluate all versions of competition to form a recommendation, it does need to describe the assumed competitive process so that stakeholders can comment on its feasibility. At present there is an intellectual inconsistency in that Ofwat reports the net gains from competition without detailing the process that achieves the gains. The odd implication is that the benefits of competition are independent of the nature of competition and market structure.³ Leading on from this we are concerned by the statement: "This analysis does not seek to model the competitive process, or customer behaviour, or company behaviour....With so many aspects of market design and policy unknown at this stage, doing such analysis would add unnecessary complexity without providing real added value." Firstly, in the absence of detailed modelling, Ofwat's results need to be treated with considerable caution. Secondly, providing detail on the market process assumed in the different scenarios does add value: it enables stakeholders to form intuitions about the potential benefits of competition when alternatives to Ofwat's assumptions are used.

Lastly, Ofwat should always emphasise that the gains from retail competition are inevitably limited by the water industry's inherent characteristics which mean that 90% of the average bill will remain regulated. Altering the modelling assumptions cannot radically increase the gains from competition.

The rest of the response involves the following sections: (i) estimated savings and consumer engagement, (ii) consumers' interest in choice, innovation and bundling, (iii) the scenarios considered, (iv) bad debt costs, and (v) how to consider distributional issues. Full references are provided at the end of the document.

1. Estimated savings and consumer engagement

Why Ofwat's quoted 'savings' are potentially misleading:

The most notable feature of Ofwat's findings are the apparently small average savings for consumers resulting from retail competition. In the most optimistic scenario (Scenario 1) the "average saving to customers' bills" is put at £6⁴, while in the worst case scenario (Scenario 4) retail competition is estimated to cost an average of £1 "per customer per year".⁵ When expressed in this way it is tempting (but wrong) to compare these savings to the 'savings available from switching' in the energy market. Since £6 is more than 25 times lower than the CMA's estimates⁶ of average savings from switching in the energy market one might conclude that effective competition in the residential water sector is a

² While Table 7 and Table 8 in Ofwat (18 July 2016 A) give 'Low', 'Central' and 'High' values for assumptions, the key information is the likelihood of an entire scenario occurring, not the likelihood of individual assumptions within it.

³ Pages 20 to 24 of Ofwat (18 July 2016 A) describe whether particular assumptions are set to 'Low', 'Medium' or 'High' rather than providing a detailed explanation of the competitive process leading to particular outcomes.

⁴ Highlighted bubble, page 3, Ofwat (July 2016)

⁵ Page 15, Ofwat (July 2016)

⁶ The CMA estimates the average saving from switching for dual fuel customers of the 'Big-6' when averaged from Q1 2012 to Q2 2015 is £164. See paragraph 128, page 31, Competition and Markets Authority (2016)

non-starter. Indeed, Ofwat itself appears to imply this meaning when reporting consumers' response to potential savings in the CC Water market research.⁷

However, in Ofwat (18 July 2016 A)⁸ it is made clear that the £6 figure is rather different to 'an average saving from switching' instead being the "average within-year impact (of competition) over the 30-year modelling period" per customer per year. Rather than quoting the £6 figure, when expressing the total welfare gains from competition Ofwat should focus on the NPVs for each scenario. The transfer of efficiency savings to reductions in bills is not automatic in plausible competitive processes (unlike under explicit price regulation). Instead the pass through of efficiencies is complex and probably uneven across consumer groups; hence, the impact of competition on total welfare may be different to that on consumer welfare.

Ofwat's assumption that an average impact figure is equivalent to an average bill saving is equivalent to an assuming 100% pass-through from wholesale efficiency savings to consumer bills. This assumption is only guaranteed to hold in perfect (Bertrand) competition, normally there will only be partial pass-through, although the relationship between competitive pressure and pass through is complex. It seems inevitable that residential water retailing will not involve perfect competition for all consumers. For statements of expected consumer savings Ofwat should apply a suitable pass-through factor to reduce the savings received.

Furthermore, the pass through of efficiency savings will probably vary between active and inactive consumers. For 'active' consumers, who switch for small price differences, the pass through would be expected to be higher than that for inactive consumers. In other words, if inactive consumers are unlikely to switch, why would a profit-maximising firm pass on efficiency savings as opposed to retaining them as increased profits?⁹ The starting point for assessing competition's distributional impact should be recognising that any reduction in bills is likely to be markedly different for active and inactive consumers.

For stakeholders to make informed comments on the likelihood of effective retail competition involving widespread engagement Ofwat should estimate: (i) the maximum saving that could be available to an active metered household with average consumption, and (ii) a plausible difference in the bill size between active and inactive households with average consumption. The £6 saving figure quoted by Ofwat cannot represent (ii) as the estimated net impact of competition in any given year involves the deduction of customer search costs. Using the £6 as a baseline the implied *gross* saving observed on bills must be somewhat higher.

Until Ofwat provides estimates of (ii) it is difficult to interpret the finding that, on average, consumers would require a 25% saving to "make it seem worthwhile switching".¹⁰ However, this statistic suggests that unless the saving *from switching* is significantly above the £6 (2%) average saving reported in Scenario 1 consumer engagement in a residential water market is likely to be low to very low. Indeed, Ofwat's consumer research finds that: "Less than 2% said that savings of 1-2% - equivalent to around £4-8 – is worth switching for."¹¹

⁷ "The CC Water research identified that whilst the majority of customers supported the principle of a competitive water market, potential bill savings of £4-£8... were far below what most customers expected", paragraph 2, page 13, Ofwat (18 July 2016 B).

⁸ Page 26

⁹ This is based on the assumption that households' water demand is inelastic so that a lower price does not significantly increase consumption.

¹⁰ Page 6, Ofwat (July 2016)

¹¹ Page 54, Accent (July 2016)

In our earlier consultation response¹² we assumed that annual consumer savings *from switching* might have an upper bound of around £40 per annum¹³. If Ofwat's predicted savings *from switching* are lower than £40 it would reinforce the scepticism in our earlier response regarding the likelihood of residential water competition being a 'success'.

Lastly, when managing expectations around the benefits of competition Ofwat should make it clearer that the gains are back loaded towards the later years in the 30 year modelling exercise (see Figures 1 to 4 in Ofwat (18 July 2016 A)). Even in Scenario 1 the net value of competition only turns positive in year ten, while in Scenario 3 it takes 20 years for the net value of competition to become positive. To put this in perspective, it seems unlikely that many (any) commercial entities would be willing to wait this long for an investment to provide a positive return. It would be useful to know how many years it takes until the average within-year impact of £6.4 per customer is achieved in Scenario 1.

Comparisons to other markets and CCP evidence:

To evaluate the likely extent of consumer engagement in a residential water market comparisons with other markets are valuable. However, the lessons for residential consumer engagement from the introduction of non-domestic water competition appear limited since: (i) the size of monetary savings¹⁴ will be much higher in the latter case, (ii) large firms may be considerably more sophisticated than individual householders, and (iii) firms with multiple sites in different water regions have a natural incentive to engage to consolidate their procurement with a single water firm.

The most obvious comparator to a domestic water market is probably the domestic energy market¹⁵ which CCP has studied over a lengthy time period. A summary of CCP's overall consumer research findings are provided in Deller and Hviid (2016)¹⁶, with the most relevant being: "The size of monetary savings is consistently a core driver of consumer switching, although, the presence of substantial monetary savings does not guarantee consumers will switch". This summary reflects the findings of Waddams Price and Zhu (2016a), Deller et al (2014), Flores and Waddams Price (2013) and Guilietti, Waddams Price and Waterson (2005).

Using survey data from across a range of UK utility markets Waddams Price and Zhu (2016a) estimate the probability of a consumer having searched or switched in the previous *three years*. Waddams Price and Zhu (2016a) report¹⁷ that an expected gain from switching of around £145 per year (the sample mean) resulted in a probability of searching of 37 percent, a probability of switching 40 percent and a probability of searching and switching of 24 percent.¹⁸ Reducing the expected gains to switching to zero, the model predicts a probability of searching of 16.5 percent, a probability of switching of 18

¹² See Deller and Hviid (2016).

¹³ This was based on an average bill of around £400 and roughly 10% of total costs being linked to water retailing. A £40 saving from switching is equivalent to assuming the full pass through of efficiency savings to active consumers, efficiencies are equivalent to a 10% reduction of total costs and inactive consumers face prices which are unchanged by competition. Ofwat is in a better position to determine whether these assumptions are reasonable.

¹⁴ in absolute terms

¹⁵ The current account market is another potential comparator, although, products in this market appear increasingly differentiated and complex. A key difference between insurance and water is that in insurance the process of annual renewals provide a natural prompt for consumers to engage albeit at the cost of greater 'hassle'/search costs for consumers.

¹⁶ Paragraph 2, page 7.

¹⁷ See page 124 of Waddams Price and Zhu (2016a).

¹⁸ It is not automatic that consumers will search the market before switching, they may switch in response to a piece of marketing by a single supplier.

percent and a probability of searching and switching of 8 percent.¹⁹ Predictions of positive switching when expected monetary savings are zero result from the non-monetary benefits of switching or consumer errors.

Looking at the energy market, Deller et al (2014) report that amongst a group of motivated consumers who faced a switching decision involving minimal additional effort²⁰ the switching rate did not exceed 43% even for those offered a saving of £300 per annum. Across the whole sample of over 140,000 participants the aggregate switching rate was 24 percent when the median saving on offer was £120 (or 10.8%).²¹ This highlights that even in a benign setting very substantial monetary savings do not automatically lead to switching. Additionally, among those participants shown a saving in the range £0-20 the raw switching rate was only 7.1%.²²

One difference between the energy and water sectors, as Ofwat notes²³, is that the upstream water supply chain does not have a direct link to volatile global commodity markets. While this means that a residential water market is unlikely to face the sharp price moves and resulting political pressures experienced in energy, it also means that the water market lacks perhaps the most obvious trigger for consumers to engage with the energy market.

The further value from considering the energy market is its ability to provide a plausible example of for the *process* of competition when regional incumbents are required to enter into regions controlled by other incumbents. The result of this process may be heightened awareness of regional price differences among consumers, which can bring its own challenges for the sector and the regulator. These issues, the potential for firms to set different prices in 'home' and 'non-home' regions and the dangers of non-discrimination clauses are discussed in Waddams and Zhu (2016b) and Hviid and Waddams (2012).

The costs of engagement for consumers:

We are pleased that Ofwat explicitly includes the costs of consumer engagement when estimating the costs of introducing competition. Considering these costs is not only important for calculating competition's NPV, it is essential for checking that householders will be incentivised to engage with the market. If consumers are rational²⁴, they will only engage with a market if the expected benefits of engagement (the expectation of gains from switching) exceed the expected costs. Ofwat correctly identifies that the main expected cost to a consumer is time.

Before discussing Ofwat's specific assumptions for estimating total consumer engagement costs, we emphasise that the costs of engagement are likely to vary across consumers. As Ofwat currently focuses on aggregate benefits and costs, it is difficult to assess whether the expected benefits of engagement exceed the expected costs for a convincing proportion of consumers. The smaller the size of expected savings from switching, the more important it is to check that the condition for market participation is met. The complication is that using the average benefits and costs of engagement may be of limited value. It may be that, as is probably occurring in the energy market, for a minority the expected benefits considerably outweigh the expected costs, while for the majority the reverse is true. That the value of engagement varies across consumers explains why Waddams Price and Zhu (2016a),

¹⁹ These estimates are for the 'average' person in the sample.

²⁰ This was due to design of 'The Big Switch' collective switch being studied.

²¹ See Table 1 on page 9.

²² See chart A1.2 on page 25 of Deller et al (2014).

²³ First paragraph, page 8, Ofwat (18 July 2016 A).

²⁴ If consumers are 'behavioural', it is usual to think they will be less active than a rational consumer or, if they are active, prone to making 'mistakes'.

Deller et al (2014), Flores and Waddams Price (2013) and the CMA's Energy Market Investigation find variations in switching rates across different demographic and socio-economic groups. It is valuable that Ofwat recognises only a certain percentage of consumers will choose to be active/engaged with a competitive water market. Splitting the market into active and non-active segments and then assuming an average cost of engagement for active consumers is probably a sensible first approach to modelling heterogeneous engagement costs.

Turning to the estimation methodology for customer engagement costs, the time Ofwat assumes for engagement appears to be too low. Ofwat justifies its central estimate of the time consumers require for engagement (15 minutes) on an earlier cost-benefit analysis performed by the FCA. Ofwat states: "The Financial Conduct Authority identified that in general insurance markets customers spend an average of around 15 minutes engaging with their insurance supplier at the end of a fixed-term contract".²⁵ However, the FCA's cost-benefit analysis makes it clear that 15 minutes refers to the "amount of time consumers spend cancelling their policies"²⁶ not the time spent searching and switching to a better deal. The FCA's cost benefit actually makes the assumption that "it takes one hour to do so (switch or negotiate)"²⁷. Indeed, the FCA reports that at one insurance firm 31% of consumers spent more than an hour shopping around and at another 57% of consumers spent more than an hour shopping around.²⁸ While insurance contracts may be more complex than water contracts²⁹, a correct reading of the FCA's analysis suggests that Ofwat's 'central' scenario should use an average consumer engagement time considerably above 15 minutes. Such an increase in expected engagement time could materially reduce the proportion of consumers who would rationally engage with a residential water market.

Also, Ofwat should consider more carefully how consumers may initiate a switch when evaluating the cost of this process. We welcome that Ofwat recognises in Table 8 of Ofwat (18 July 2016 A) that not all consumers who engage will switch, as a search may reveal that the deals on offer are not attractive enough to motivate switching. However, Ofwat does not seem to recognise that some consumers may switch without a search process, as they may switch in response to a marketing offer by a single supplier. More seriously, comparing the 'Cost of engaging and switching' and the 'Cost of engaging but not switching', the time implied for a consumer to complete the switching process appears remarkably low. Valuing time at £14 per hour³⁰ the implied time to complete the switching process is around 2 minutes in the 'Central' case and just over 1 minute in the 'Low' case. In the 'High' case the figures imply that less time is spent 'engaging and switching' than 'engaging and not switching', something that requires explanation.

It is possible that after a search via a Price Comparison Website (PCW), where considerable information has to be inputted for a search to be performed, the additional time to switch may be low. However, the energy market shows that a 'smooth' click through process is only available for offers by suppliers that pay commissions to PCWs. For suppliers who do not pay commission, consumers have to visit the relevant supplier's website and re-enter their information manually,

²⁵ Page 68, Ofwat (18 July 2016 A)

²⁶ Paragraph 44, page 27, Financial Conduct Authority (December 2015)

²⁷ Paragraph 46, page 28, Financial Conduct Authority (December 2015)

²⁸ Paragraph 45, page 28, Financial Conduct Authority (December 2015)

²⁹ Second paragraph, page 68, Ofwat (18 July 2016 A)

³⁰ See paragraph 3, page 68, Ofwat (18 July 2016 A)

considerably increasing the expected switching time.³¹ Whether water retailers could afford PCW commissions is explored below. If the value of a consumer to a water retailer is insufficient to pay a PCW's commission, the assumption that PCWs enable a quick switching process is invalid.

The costs of engagement for firms:

When considering the feasibility of residential water competition it is essential to check that the potential value of the market and individual consumers is sufficient to stimulate entry and effective competition. As Ofwat (July 2016) correctly highlights, unlike the energy market there is no national player (British Gas) to provide a natural competitor to the regional water incumbents.³² Effective competition in the residential water retailing is dependent on incumbents' entering rival regions and/or new entrants.³³ To understand firms' incentives it is necessary to understand the potential profit of an additional consumer and the costs of acquiring such a consumer.

Ofwat's logic for the upward bound on a firm's spending to acquire a consumer, the expected profit a consumer would generate, appears sound. However, the assumption that the profitability of an acquired consumer can be based on "the current 1% retail margin"³⁴ appears highly questionable. An assumed profit margin of 1% seems remarkably low³⁵; it seems unlikely to be the profit margin that would attract the new entrants that are probably required for vigorous competition.

We recommend that Ofwat checks how the upper bound on customer acquisition costs (£8-15 per customer) compares to the acquisition costs associated with alternative acquisition channels. If the average costs of a particular channel exceeds the acquisition costs assumed by Ofwat, it suggests that the acquisition channel would not be available to promote switching in the residential water market. The nature of acquisition channels that residential water firms can afford may have a material impact on the number and range of consumers motivated to switch. If Ofwat considers PCWs to be a powerful (or essential) enabler of effective competition it needs to ensure that a commission rate of £8-15 per customer is sufficiently large for PCWs to advertise water deals. On this issue Ofwat may find liaising with the CMA helpful regarding the level of commissions in the energy market.³⁶ The challenge for Ofwat's cost-benefit analysis is to identify a set of retail profit margin(s), customer acquisition costs, switching rates and customer retention periods which are both mutually consistent and plausible in the round.

³¹ If the CMA's recommendation to remove the 'whole of market' comparison requirement in energy is enacted, firms not paying commission could be excluded by PCW listings thereby increasing search times and/or decreasing search quality.

³² Highlighted box, page 18.

³³ A simple strategy for incumbents to implement (entirely legal) tacit collusion would be not to enter areas outside their home region or (probably more likely) make product offerings in non-home regions that represent little competitive threat.

³⁴ Footnote 73, page 64, Ofwat (18 July 2016 A)

³⁵ Ofwat itself discusses the net margin increasing from 1% to 2.5% in the non-residential water sector. Final paragraph, page 37, Ofwat (18 July 2016 A)

³⁶ The CMA is party to the commission rates for the Big-6 energy firms (see paragraph 12.421, page 786, 'Energy Market Investigation – Final Report', Competition and Markets Authority, 24 June 2016), however, the figures have been redacted. In oral evidence to the Energy and Climate Change Committee Luke Watson of the independent supplier GB Energy suggested that PCW commissions could be in the range of £60-80 per dual fuel customer. However, later in the session Simeon Thornton of the CMA stated "It (PCW commission) can be much less than that (£70-80)". See pages 17 and 39 of Energy and Climate Change Committee, 'Oral evidence: Competition and Markets Authority's Proposals, HC 315', Tuesday 5 July 2016, available at: <http://data.parliament.uk/writtenevidence/committeeevidence.svc/evidencedocument/energy-and-climate-change-committee/competition-and-market-authoritys-energy-market-investigation/oral/34875.pdf>

2. Choice, Innovation and Bundling

Apparently acknowledging that the monetary savings from switching may be very low, Ofwat emphasises that two important benefits of competition are: (i) innovation and (ii) bundling. While these could be genuine benefits of competition, Ofwat should think critically about the uncertainties which surround them. For bundling and innovation that reduces water consumption, Ofwat should make clear why the same outcomes cannot be achieved in regulated market.³⁷ For the claimed benefits to count towards the case for competition it must be either impossible to achieve them in a regulated market or their probability of occurring must be materially increased by competition.³⁸

Consumer response to innovation:

It remains an unsettled question in the academic literature whether increased competition increases or decreases innovation; less competition potentially means greater profits are available to support research while greater competition potentially incentivises innovation so that firms can remain competitive. An inverted U-shape relationship between product market competition and innovation is reported by Aghion et al (2005). Here we focus on the likelihood of water retailers providing services to increase water efficiency and the likelihood of consumers switching suppliers to obtain innovative products..

Firms will only invest if it is profitable to do so. If the main form of innovation that Ofwat expects is improved water efficiency, Ofwat should consider whether suitable incentives exist for profit-maximising water retailers to encourage water efficiency among metered consumers. As metered consumers are charged a per unit price, it seems more likely that a firm would manage high water resource costs by increasing its retail price and letting the price mechanism ration consumption. A higher water price may encourage individual households to pursue measures to increase water efficiency but there is no particular reason why a household would (should) obtain these water efficiency services from their water retailer as opposed to any other provider. Arguably, this incentive for householders to increase water efficiency reflects the benefits of *effective water pricing* rather than competition per se.

Where firms have a more obvious incentive to invest in efforts to reduce demand is when there is cap on the retail price they can charge consumers. This incentive for firms to reduce demand seems more plausible in relation to unmetered consumers where water firms can only charge a fixed fee.³⁹ It would be useful for Ofwat to explain further why it expects that metered consumers are those who benefit from water efficiency savings.

Ofwat emphasises that even if price savings were unavailable, 45% of consumers would be likely to switch if a retailer offered additional services such as water efficiency.⁴⁰ While stated intention to switch may be useful supporting evidence, it seems risky to use at the centre of the evidence base for introducing competition. Firstly, as consumers do not face any costs from stating their intention to switch, one might fear that the proportion of consumers who would actually switch solely for

³⁷ The discussion of innovation on pages 11 and 12 of Ofwat (18 July 2016 A) does not seem to recognise that some innovations are effectively exogenous of the competitive/regulatory environment in water.

³⁸ In the latter case it would be appropriate to reduce the value of the benefits by a factor reflecting the probability of the benefits occurring in the absence of competition.

³⁹ There remains the question of why higher water resource costs would not simply be reflected in a higher fixed charge.

⁴⁰ Page 6, Ofwat (July 2016)

additional services could be substantially lower.⁴¹ Second, when answering the question some consumers may have had inflated expectations of the additional services that could emerge. Fundamentally, stated intention to switch statistics may only contain ordinal rather than cardinal information; in other words, the statistics are only meaningful when compared to equivalent statistics from other markets.

The difficulty of interpreting willingness to switch questions is highlighted by the Venn diagram in Ofwat (18 July 2016 B)⁴². This diagram seems to report that 12% of survey respondents are “Likely to switch if new services offered but no price difference” while simultaneously being *not* “Interested in switching if there was a choice”. It seems that 12% of respondents gave answers that were mutually inconsistent; the presence of variations in service implies that choice exists, but the respondents stated that they would not be interested in switching if choice existed.

The effectiveness of innovation also enters the analysis in terms of the value of reduced water consumption by active consumers with water meters. In Scenarios 2 and 3 it assumed these consumers reduce their consumption by 10% and in Scenario 1 water consumption is cut by 20%. When valuing these consumption savings Ofwat should ensure the investment costs to realise these consumption reductions are included in the analysis. Secondly, it is unrealistic to assume that all active metered consumers achieve a common level of consumption reduction. Many interventions, such as dual flush toilets, require a particular behavioural response to realise the theoretical savings; it seems unlikely that all households will behave in the desired fashion. Indeed, it is not automatic that all households will accept an intervention⁴³; lessons from energy efficiency programmes may be relevant.

The Potential Value of Bundling:

In its arguments for competition Ofwat highlights the potential for multi-utility bundling and how this could increase competition in the water sector. One attraction of multi-utility bundling for a pro-competition case is it could increase the number of entrants to water retailing, however, the benefits of bundling to consumers, and their dependency on introducing competition, is less clear.

For bundling to be a benefit of competition, it must be that bundling cannot take place in the current regulated environment. It is not obvious that a regulated water market precludes bundling. What is stopping an energy or telecoms supplier from establishing contractual relationship with the existing regional monopolists to provide a multi-utility package?⁴⁴ If there are regulatory restrictions barring this type of relationship, Ofwat should consider whether these restrictions can be removed independently of residential water competition. Similarly, if significant supply side cost savings from multi-utility bundling exist, say in terms of merging customer databases and call centres, why are conglomerates combining energy, telecoms and water subsidiaries not more common (unless

⁴¹ To understand the extent of this problem, Ofwat might investigate the correlation between the proportion of consumers stating ex-ante that they would be willing to switch and the actual switching rates then observed in other markets that have been opened to retail competition.

⁴² See page 14.

⁴³ Considering the uptake of water efficiency interventions should highlight that for some households the reduction in utility from a less powerful shower head etc. may not be offset by the financial saving of using less water.

⁴⁴ Rather than an energy or telecoms firm purchasing water at a new ‘wholesale’ price the contractual relationship would simply cover water being supplied to consumers at existing regulated prices within each region. It is possible that these firms might be deterred by having to establish multiple contractual relationships with all the regional water firms, but if this is sufficient to deter bundling it suggest the benefits from bundling are small.

regulations specifically forbid this)? The absence of such conglomerates suggests that supply side cost savings are small.⁴⁵

Absent radical innovations involving complementarities across utilities, the main benefit to consumers from bundling is a potential reduction in switching costs, as they no longer will have to incur a switching cost in each individual market. For certain consumers this reduction in switching costs will prompt them to switch where they previously did not and in the water market this effect may be particularly significant given the small expected size of savings available. However, while bundling may reduce switching costs⁴⁶, i.e. fewer forms to fill in etc., its impact on search costs may be negative. Comparing bundles involving multiple products with multiple attributes intuitively seems a harder task than comparing single products separately. Since bundling potentially has differing impacts on search and switching costs, the overall impact on the switching rate is hard to predict. While bundling within the telecoms sector appears to be a clear trend, the appetite for bundling across utility sectors is not immediately clear with Utility Warehouse and SSE currently being two of the few firms offering bundled energy and telecoms services.

Overall while water retail competition may be reliant on multi-utility bundling to generate entry and effective pricing pressure, the inherent benefits of multi-utility bundling to individual consumers seem uncertain.

3. Ofwat's Scenarios

When Ofwat delivers its final findings an assessment of the likelihood of the different scenarios should be provided with the scenario considered most likely being clearly marked. Regarding the likelihood of the different scenarios we comment only on the likelihood of the consumer activity assumed in each scenario. In the emerging findings Ofwat gives most prominence to the £6 average savings figure⁴⁷ from Scenario 1, however, we believe Scenario 1 involves a level of consumer engagement which seems highly unlikely.

The plausibility of the assumed switching rates:

Forming a view on consumer engagement is difficult without a clear expected saving from switching figure, however, a comparison with the energy market suggests that the annual switching rate of 30% assumed in Scenario 1⁴⁸ has a very low likelihood of occurring. Ofgem reports that the annual switching rate for energy and gas was only around 11% in 2014⁴⁹. Crucially for the plausibility of

⁴⁵ We accept that the size of supply side efficiencies might depend on the number of water customers a conglomerate could serve and, hence, the absence of conglomerates might relate to historical restrictions on the ownership of multiple regional water incumbents.

⁴⁶ Note that Ofcom has raised concerns about the ease with which consumers can 'dis-assemble' bundles and seek better deals for specific elements, it seems sensible for Ofwat to liaise with Ofcom regarding the latter's consultation Ofcom (2016). It seems likely that once a consumer has switched to a multi-utility bundle they will subsequently only consider multi-utility bundles rather than offers for the single constituent components of a bundle.

⁴⁷ See highlighted 'bubble' on page 3 of Ofwat (July 2016). Also, on the Ofwat webpage reporting the emerging findings bullet point 3 states: "Our analysis shows that competition could drive efficiencies in retailing that on their own would suggest a price saving for customers in the order of £6 – or 2% - off the average bill", see: <http://www.ofwat.gov.uk/regulated-companies/improving-regulation/extending-retail-competition-to-households/>

⁴⁸ There is a drafting error in Ofwat (18 July 2016 A) which means that the labelling of Scenarios 1 and 4 appears to be reversed between Table 1 and Table 5 (this discrepancy also exists in the final paragraph on page 64). References to particular scenarios are based on the numbering in Table 1.

⁴⁹ See paragraph 3.40, page 29, Ofgem (2015)

Scenario 1, the CMA⁵⁰ estimates the average gain from switching for dual fuel energy customers over the period 2012 to 2015 was £164, a figure which is much higher than any plausible saving in the water market. Combining these two pieces of evidence, observing a higher switching rate in the water market than the energy market, when monetary savings are probably considerably lower, seems implausible.

Based on the evidence above, the most plausible switching rate assumed by Ofwat is the 5% used in Scenario 4. A switching rate this low would suggest minimal pricing pressure from the vast majority of householders and that the effectiveness of competition would be in doubt. Independent water retailers could still encourage upstream efficiencies, but the gains would be probably expressed as increased profits for water retailers.

If Ofwat relies on radical innovation to justify switching rates higher than those in the energy market, it must recognise that innovation is a highly uncertain process: the likelihood of a scenario reliant on radical innovation is also subject to greater uncertainty.

The market/industry structure underpinning the scenarios:

We welcome Ofwat providing a clear statement of the constant assumptions regarding the market and industry structure that underpin the analysis.⁵¹ However, Ofwat should provide a greater explanation of how main assumptions influence the outcomes of the scenarios. While we agree that evaluating all alternative forms of competition cannot be performed in the time available, it seems reasonable for Ofwat to provide a greater discussion of the expected competitive process supporting each scenario. Producing this description should help Ofwat ensure that interrelationships between assumptions in each scenario are fully explored.

Regarding the assumptions that remain constant, Ofwat firstly assumes that current metering policies remain in place. While assuming current policies continue is reasonable, Ofwat should spell out in precise terms how competition for unmetered consumers is expected to function. For unmetered consumers will competition be over a fixed 'retail charge'? Will this fixed charge be the entire water bill or communicated as just an element of a consumer's total bill? If water retailing involves two submarkets with very different charging structures, can we be sure that the both submarkets will experience the same competitive pressure? Answering this last question may have important distributional implications as one would expect high consumption households to be less likely to have a meter. Also, if the water efficiency savings for metered consumers assumed in the scenarios encourage additional consumers to install meters, should the cost of these additional installations be included in the analysis? As noted above, there would seem to be a stronger argument for firms having an incentive to improve water efficiency among unmetered, rather than metered, consumers.

A second constant assumption by Ofwat is that legal separation between retail and wholesale functions occurs, yet Ofwat also states, "The costs incurred by an incumbent to legally separate its wholesale and retail functions are assumed to be voluntary in our model"⁵². If separation is to remain voluntary, why does Ofwat assume that separation will occur? The significant upfront and ongoing separation costs for firms predicted by Ofwat⁵³ suggest that separation might go against firms' commercial interests.. If Ofwat believes separation is a pre-condition for *effective* competition this should be clearly stated.

⁵⁰ See paragraph 128, page 31, Competition and Markets Authority (2016)

⁵¹ See bullet points on page 5, Ofwat (18 July 2016 A).

⁵² Paragraph 2, page 65, Ofwat (18 July 2016 A)

⁵³ See Table 4, Ofwat (18 July 2016 A).

4. Bad debt costs

We would encourage Ofwat to describe the expected process by which competition reduces bad debt costs in greater detail. This explanation is important given: (i) the high sensitivity of the NPVs to the assumed bad debt reductions, and (ii) the distributional implications of bad debts being concentrated among a small proportion of householders. Table 4 of Ofwat (18 July 2016 A) highlights that bad debt cost assumptions are the number one driver of NPV differences between the four scenarios. Ofwat reports that switching from the 'Low' to 'High' bad debt reduction assumption results in the NPV for introducing competition increasing by £846m. Since the highest NPV for competition is £2.3bn, bad debt reduction is central to the case for introducing competition.

Ofwat (18 July 2016 A) also highlights that outstanding revenue (bad debt) in the water sector was £2.2bn in 2014, more than double the figure for energy⁵⁴. To assess Ofwat's assumptions regarding bad debt reduction, Ofwat should explain whether it expects competition to reduce the existing 'stock' of bad debt or whether competition simply affects the 'flow' of new bad debt. Ofwat noting that no quantitative estimates for the impact of competition on bad debt costs have been found⁵⁵ highlights that high level of uncertainty around the bad debt reduction estimates. For the assumption that bad debts can be reduced towards the level in energy to be valid there must be evidence that the processes to handle bad debt in energy are substantially better than those in water. Ofwat should provide substantive evidence to this effect. It seems plausible that improved processes will be more effective at reducing the flow, rather than stock, of bad debt, particularly if the stock accumulated over a lengthy time period.

The one specific competitive process that Ofwat does identify as reducing bad debt seems worthy of comment. Ofwat explains that relative to energy: "the level of bad debt is explained by water companies' poor information on individual customers, because they bill properties. Competition would require that companies obtain information identifying their customers, so that switching can occur." This statement raises several concerns. Firstly, if water companies' existing information is so poor, can it be guaranteed that the switching experience of consumers without debt will be satisfactory once competition is introduced? Poor existing data would suggest substantial risks from failed switches and debts being wrongly allocated at the point of switching. The risk is for a competitive residential water sector to receive a bad reputation which deters consumer engagement. If the integrity of customer data needs to be improved to enable smooth switching, this perhaps should be included as a cost of competition. Equally, if obtaining better customer data simply requires suitable investment and can occur independently of competition, it is not clear that bad debt reduction should be counted as a benefit of competition and there may be other, better, ways for firms to improve their customer data than the introduction of competition.

The distinction between stock and flow probably will be important for the consumers who experience the 'bad debt reduction' process; the experiences of these households may have significant salience among political decision makers. If the focus is the flow of bad debt, it is possible that the reduction results in a positive process for indebted consumers with water firms helping with budgeting issues. If competition is expected to reduce the existing stock of bad debt, it is difficult to see how this can avoid tougher enforcement action to recover bad debt. While not making a normative judgement

⁵⁴ See page 16. Some of this difference in debt levels will probably reflect differences in disconnection rules between water and energy. If regulatory restrictions (for entirely legitimate social reasons) mean that water is the service with the lowest probability of disconnection, a rational consumer would only pay their water bill after they have paid the bills for their other utility services.

⁵⁵ Paragraph 3, page 56, Ofwat (18 July 2016 A).

about tougher enforcement, it seems important for Ofwat to be open about what bad debt reduction implies for indebted consumers as it will probably increase seizures of assets from households in weak economic positions. This has obvious distributional implications and could imply increased demand for services outside the water sector, such as Citizens Advice. More generally, the distributional impact of reducing bad debt involves the unwinding of a cross subsidy from those who pay their bills on time to those who do not.

Also, Ofwat implicitly acknowledges that, unless the existing stock of bad debt is treated carefully, it could create imbalances between incumbents and new entrants⁵⁶ with presumably negative consequences for competition.

5. Assessing the Distributional Impacts of Competition

As discussed above, the treatment of bad debt costs has clear distributional implications. To obtain a more quantified understanding of this issue Ofwat might liaise with water companies to understand the demographic, geographic and socio-economic characteristics of existing indebted customers.⁵⁷ Alternatively, a more basic exercise would be to investigate the proportion of indebted customers receiving a social tariff and compare this to the proportion of non-indebted customers. Also, Ofwat should be aware that the rules governing debt assignment will alter the proportion of indebted customers who can switch suppliers⁵⁸. If an indebted customer faces restrictions on their ability to switch, there is the risk that they will pay higher water prices than other consumers

The rest of this section considers the potential for bill savings to be distributed unevenly across consumer groups. It is important that distributional analysis is viewed more widely than simply assessing the impact on groups officially identified as 'vulnerable'. Differences in outcome between much larger groups, such as active and inactive consumers, are probably of interest to a political decision maker.

The bounds on savings for active and inactive consumers:

While we recognise that resource constraints limit the amount of modelling that can be performed, it appears relatively straightforward to produce estimates of the potential upper bound on savings for active consumers and comment on possible lower bounds for inactive consumers. The starting point for estimating these bounds is the assumption that, after some initial experimentation, a likely outcome of water retail competition is price discrimination between active and inactive consumers.⁵⁹

⁵⁶ See paragraph 1, page 5, Ofwat (18 July 2016 B): "If legacy debt is treated in a different fashion such that liabilities did not sit with retailers, then the market would open as a level playing field for incumbent retailers and new entrants."

⁵⁷ Water UK's information on the cross subsidies to indebted consumers summarised in paragraph 3, page 30 of Ofwat (18 July 2016 B) appears useful in this regard.

⁵⁸ The CMA's Energy Market Investigation explicitly highlights "restrictions arising from the Debt Assignment Protocol hindering indebted prepayment customers' ability to switch supplier", paragraph 147(b)(ii), page 36, Competition and Markets Authority (2016).

⁵⁹ While it is not automatic that price discrimination will emerge in water, if Ofwat wants to assume it does not occur, Ofwat must provide a clear argument for why this is the case given the substantial price differences between Standard Variable and fixed tariffs observed in energy. Also, price discrimination does not imply that active consumers are receiving a subsidy from inactive consumers. Indeed, it would seem odd for a profit-maximising company to subsidise active consumers: it would imply that they could increase their profits by ending their provision of services to active consumers. While active consumers may not be loss making, it is possible (probable) that a price discriminating firm would rely on the block of inactive consumers to provide a greater contribution to fixed costs than the block of active consumers.

For active consumers the best outcome is that they receive deals close to those available from perfect competition. An upper bound on savings for active consumers therefore would involve a retail profit margin of 0% and wholesale efficiency savings being passed through fully. For active metered consumers it seems desirable to provide figures inclusive and exclusive of the reductions assumed to result from water efficiency innovations. The assumed cuts in water consumption of 10 or 20% are probably larger than the monetary savings on offer from other efficiencies.

Once price discrimination is assumed the obvious question to address is why would a profit-maximising firm not set the monopoly price for inactive consumers? Immediately after the introduction of competition firms will be uncertain about which consumers are active and which are inactive. This uncertainty may mean firms initially charge somewhat below the monopoly price to manage the risk of customer switching, however, over time one would expect firms to identify inactive consumers with increasing confidence. As a result, one might expect the price gap between active and inactive consumers to grow over time. The energy experience suggests that the ultimate constraint on pricing for inactive customers may be pressure from the media and politicians. A sensible starting point for the lower bound on savings for inactive consumers is zero, although, in the absence of regulation and effective pricing pressure, price increases for inactive consumers could not be ruled out.

That consumers need to be active to obtain a 'good' deal may also alter the interpretation of the statistic quoted by Ofwat that "56% think choice in the water market would be a good thing"⁶⁰. The framing of 'choice' is likely to be important for the interpretation of any statistics. Consumers may think differently about 'choice' when it is framed as an 'option' to choose exciting new products⁶¹ as opposed to be an ongoing requirement to engage with the market if they want to obtain a low price.

Mapping engagement to particular household groups:

Once savings are estimated for active vs inactive and metered vs non-metered, the more challenging task is mapping these differences to recognisable household groups such as pensioners, those on low incomes and single parents etc.

That non-metered households do not experience the substantial reductions in water consumption of metered households means the characteristics of metered and non-metered households should be compared. One assumes that Ofwat either already possesses this information or is able to obtain it relatively easily. Similarly, one expects that Ofwat can identify the characteristics of households associated with different sizes of bill. A first attempt at distributional analysis could recognise that different household types have differing rates of metering and/or levels of consumption and then adjust the size of bill savings to reflect these differences.

A harder task is to estimate the distributional impact of different household groups having different rates of engagement. There is a range of evidence indicating that market engagement varies across groups. For example, the CMA Energy Market Investigation reports that those on low incomes, those with low qualifications, those who rent and those aged over 65 are less likely to engage with the energy market. Specifically the CMA's consumer survey found that 35% of those with a household income above £36,000 had switched in the past three years compared to 20% of those with an income

⁶⁰ Page 6, Ofwat (July 2016)

⁶¹ Alternatively, consumers may like the 'option' of changing supplier when they receive a poor customer service. However, it is probably difficult to place a true value on this 'option to switch'.

below £18,000. Similarly 32% of those with degrees had switched energy supplier in the previous three years compared to only 18% of those with no qualifications.⁶²

The issue with the descriptive statistics above is identifying the extent to which the differences in switching rates can be directly attributed to being a particular household type, rather than other factors that vary across household types, such as differences in savings available. However, the CMA found that renters and those on low incomes had lower switching rates and higher than average gains from switching.⁶³ More robust estimates for variations in switching attributable to particular household groups after controlling for a wide range of variables are provided in Waddams Price and Zhu (2016a), Deller et al (2014) and Flores and Waddams Price (2013). For example, Deller et al (2014) report⁶⁴ that males are more likely to switch, while Flores and Waddams Price (2013) report⁶⁵ that households with Internet access are more likely to search. Waddams Price and Zhu (2016a) provide a comprehensive set of results⁶⁶ for the influence of age, gender, income and education on the probabilities of searching and switching. In particular, Waddams Price and Zhu identify a U-shaped relationship between age and the probability of switching.⁶⁷ Even if Ofwat cannot quantify the distributional impacts of competition in water, Ofwat should provide a detailed discussion in its final findings of the existing evidence regarding how engagement with utility markets varies across groups.

Lastly, Ofwat would benefit from providing a clearer statement regarding the form of social protection being assumed in all the scenarios. While it is reasonable for Ofwat not to recommend a particular social support mechanism, Ofwat should explain that any voluntary assistance to those in weak socio-economic positions by firms may not withstand the increasing pressure on costs which competition could deliver. Competition is likely to increase the importance of explicit regulations, or other government interventions, which provide protections to certain consumer groups. While it is not stated one presumes that Ofwat provides an NPV for competition without specifying the form of social protection assumed as it views any social protection scheme as simply a transfer between different groups?⁶⁸ If this is Ofwat's logic, a clear statement would be helpful. While the NPV for competition may be independent of the form of social protection, the distribution of any benefits from competition would be altered by the form of social protection chosen. A simple solution for Ofwat would be to add the caveat that any distributional analysis excludes the impact of any social protections.

Benefits unevenly distributed through time:

The final distributional issue that Ofwat should expand upon is to report how the estimated savings to consumers vary through time. While Figures 1 to 4 in Ofwat (18 July 2016 A) provide detail on the evolution of the NPV through time, it would be helpful to have a charts reporting how the average annual savings (compared to the counterfactual) for inactive vs active and metered vs non-metered consumers evolve through time. These figures should help a decision maker understand when particular consumer groups may start to see the benefits of competition. It will also highlight that

⁶² Paragraph 135, page 33, Competition and Markets Authority (2016).

⁶³ Paragraph 136, page 33, Competition and Markets Authority (2016).

⁶⁴ See Table 7, page 19.

⁶⁵ See page 15.

⁶⁶ See Table 3, page 127.

⁶⁷ See Figure 2, page 126.

⁶⁸ Currently Ofwat simply states: "we have assumed that some form of social protection would be in place for customers in vulnerable circumstances. We have not taken any view of whether this protection would take the form of existing support schemes or some other form.", page 6, Ofwat (18 July 2016 B).

future households will involve bill payers who are not present today and draw out the extent to which the NPV figures are affected by future changes to the number of households.

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