

ACCELERATING THE TRANSITION TO COMPETITION IN THE ENGLISH RETAIL NON-HOUSEHOLD WATER SECTOR

Dr Christopher Decker*

August 2022

Summary	1
1. Introduction	5
2. The transition to competition	6
2.1 Differences between monopolistic and competitive industry structures	6
2.2 What needs to happen to facilitate a transition to competition?	7
2.3 What does a competitive retail market look like for other utility services?.....	8
2.4 Insights for the transition to competition in the NHH water sector	9
3: The role of price regulation in the transition to competition	11
3.1 The different rationales for applying ex ante price regulation.....	11
3.2 The difference between price regulation for monopoly and in competitive markets.....	12
3.3 Insights for price regulation in the NHH water sector	14
4: The use of ‘default’ price regulation in competitive markets	18
4.1 When is default price regulation applied in competitive markets?.....	18
4.2 Why is default price regulation used?.....	19
4.3 Risks of default price regulation in markets transitioning to competition	20
4.4 Experience of default price regulation in other markets transitioning to competition.....	24
5: An alternative way forward	27
5.1 The need for a transition plan or strategy.....	27
5.2 Clear articulation of the rationale for default price regulation	27
5.3 Carefully consider the level of the default price cap and the incentives that this creates...	29
5.4 Reducing the risk that NHH customers become dependent on default tariff	29
5.5 Specific alternative, or complementary, measures that could accelerate the transition to competition.....	29
6: Conclusions	33
References	35
Annex 1: Brief biography of the author	38

* Research Fellow specialising in economic regulation and competition law and economics at the Centre for Socio-Legal Studies in the University of Oxford (see Annex 1 for a biography). Funding for this research came from Whitehouse Communications on behalf of their client the UK Water Retailer Council. All views in this paper are those of the author and should not be held as stating or reflecting those of organisations with which he is affiliated.

Summary

Competition for non-household (NHH) customers was introduced in England in 2017. Given its scale, policy-makers, regulators, academics and other commentators around the world are closely watching how competition *in* the market for NHH water customers in England is developing. Some five years on from its introduction the experience is not encouraging, with over 90% of customers still subject to some form of default price regulation and plans to extend this regulation for at least another 3 to 5 years.

The focus of this paper is on how the transition to competition in the NHH water sector might be accelerated recognising the collective interest for NHH customers, Ofwat, retail water companies, investors, and government in a planned transition process. The main conclusions are as follows:

- Market opening and the removal of price regulation in other utility industries has generally been associated with various customer benefits, particularly in terms of tariff innovation and improved quality of service as well as entry by new, non-traditional suppliers some of whom seek to differentiate their offerings in ways which support wider policy objectives such as conservation. However, the transition to competition in other utility markets has not always resulted in lower retail prices. Rather, prices in competitive markets tend to be more *responsive* to changes in underlying costs than they are in monopolistic markets.
- Default price regulation in the NHH water retail market appears to be based on various rationales, including: to protect non-household customers that have not switched from potential exploitation; as a response to a perception that NHH customers are disengaged and not active; and potentially as a response to political concerns that prices for NHH customers may increase if default price regulation was removed. Each of these rationales does not appear to be supported by the type of detailed analysis that typically accompanies on-going regulatory intervention. For example, there does not appear to be any assessment of whether retailers, individually or collectively, maintain a dominant position at the national level which might justify market wide *ex ante* price regulation. Similarly, to the extent to which ongoing default price regulation is justified on the basis that *businesses* (rather than individuals) display particular decision-making biases, it is not clear why it is assumed that price regulation is needed to protect businesses (NHH customers) from such biases when purchasing water services but not when purchasing other utility services (energy, communications) or other important business inputs. While Ofwat refers to the low levels of switching by smaller NHH customers as indicator of a lack of customer engagement, this indicator is endogenous and self-fulfilling: the more such NHH customers feel protected by a tight market-wide default tariff, the lower the incentives they have to search and switch, the more Ofwat will see a perceived need to maintain tight default price regulation, and so on.
- To the extent to which default price regulation is motivated by a concern that some retailers may have residual market power over NHH customers this suggests that any price regulation applied as the sector transitions to competition should be of a 'precautionary' or a 'safeguard' nature and not be so tight so as to distort supply side incentives. In other words, the default tariff should not be set as if all water retailers are monopolies, but rather be set at a level such that it simultaneously protects NHH customers from potential exploitation, but leaves sufficient 'headroom' for competition and entry to develop.
- There are a number of well recognised risks with the use of default price regulation in markets transitioning to competition, and some empirical surveys have concluded default regulated

prices cannot coexist with successful retail competition. Where default tariffs are set below market clearing levels this can damage supply-side incentives for entry and expansion, reduce incentives for suppliers to make investments that improve quality of service to customers, and limit the incentives to innovate or to introduce new business initiatives or models. In situations where default tariffs are set below cost, or do not allow for a normal return, this can lead to supplier exit which can bring both immediate and long-term harm to customers.¹ The risks of inadvertently setting default regulated prices at levels that do not support the transition to competition is supplemented by a risk that default regulated prices can be used to achieve political objectives such as a desire to keep prices inefficiently low.

- Although default price regulation is often motivated by a desire to protect customers there are several potential longer-term risks of applying default price regulation for customers as a market transitions to competition. In particular, customers may not invest the time or effort in becoming acquainted with the competitive market because they believe that they are 'protected' by the default price regulation, or that the default tariff represents a 'good deal' because it is regulated. In some sectors, such as energy and water, low default tariffs have sometimes encouraged greater consumption of such services contrary to policy objectives relating to conservation.
- There are various actions that could be taken to accelerate the transition to competition for NHH retail water services. At a minimum, Ofwat should consider developing a strategy for how it intends to facilitate the transition to competition including setting out the steps it intends to take over the short to medium term. This can reduce uncertainty and provide both current and prospective suppliers with a better understanding of when, and under what conditions, any default price regulation will be relaxed or removed. It will also send an important signal to NHH customers and investors that price regulation is not a permanent feature of the market. Ofwat should also be clearer in articulating the specific rationale for applying default price regulation in the NHH water retail market. This includes explaining why price regulation is seen as the most effective way to address any decision-making biases that businesses (NHH customers) may have when it comes to purchasing water services, even though it is not used for other utility services or key inputs where those biases might also affect business decision making.
- Among specific measures that Ofwat might usefully explore to accelerate the transition to competition in the NHH retail water market include: the introduction of a safeguard default tariff that provides for sufficient 'headroom' similar to what has been successfully used in other retail utility markets that have transitioned to competition; demand side initiatives and measures to encourage greater engagement by NHH customers; frequent assessments of the extent of any supplier market power and then using this as the basis to determine whether and how to apply default price regulation; and consideration of alternative remedies such as an intensive monitoring regime with the threat of the re-imposition of tighter price regulation should evidence emerge of suppliers abusing their market positions to the detriment of NHH customers.
- Looking back over the past five years, from an external viewpoint, it seems plausible that the assumption that each retailer (irrespective of size) is a monopoly has led to default price controls that are too tight and that this has adversely affected supply-side incentives to enter and expand (including from those outside the sector). It may have also severely limited the demand-side incentives for all NHH customers to be active and engaged, and reduced the incentives for suppliers to actively seek out and encourage customers to switch to them.

¹ As discussed below it has been suggested that among the factors contributing to the widespread exit of retail energy suppliers in Britain over the past 12 months was the use of a 'tough' price cap (which left suppliers with insufficient headroom and prevented retail tariffs from increasing) and the six-month delay in adjusting the retail price cap to cost changes which exposed suppliers to this funding gap for a significant period of time. See Oxera (2022).

Looking ahead, this situation does not seem inevitable, especially as there are a number of active suppliers and no single retailer water supplier is dominant at the national level. Moreover, the experience of loosening (or removing) default price regulation for larger NHH customers is encouraging and has resulted in more active and engaged customers who, as Ofwat acknowledges, are now reaping the benefits of competition. This suggests that a transition to competition *in* the market for NHH retail water services can work under the right conditions.

- In summary, given the limited success in facilitating the transition to NHH competition over the past 5 years, coupled with the prospect that default tight regulation could continue for at least another 5 years, there is clearly merit in considering alternative approaches.
- One such alternative might involve following a similar approach to that used by other UK regulators in energy, transport and telecommunications when transitioning to competition. This approach distinguished between situations of monopoly or super-dominance (i.e. situations where a supplier faced no or very limited competition) where relatively tight price caps were applied, and situations where competition was emerging where a ‘precautionary’ or ‘safeguard’ form of a cap with more headroom was used.² Price caps were not applied to suppliers that were not monopolists, or who did not hold substantial market power, on the assumption that competition would protect consumer interests.
- To implement this approach:
 - (i) Ofwat should reconsider its assumption that all water retailers are monopolies and regulating them as such (e.g. by applying a tight default tariff based on the costs of hypothetical efficient supplier). This assumption seems misplaced given that: (i) no individual supplier has an individual market share above 31% at the national level, and eight suppliers have a market share of less than 15%; and (ii) as Ofwat has recognised, the retail market is now more mature, and most retailers operate at a national level serving customers across England. The assumption that all water retailers are monopolies is also inconsistent with recent CMA merger investigations in this industry which have found that there is no risk of a substantial lessening of competition at the national level because there are competitors that will constrain the merged entity.³
 - (ii) Ofwat should undertake an assessment of the individual and collective market power of the retail water companies using the standard and established criteria applied by other regulators and competition authorities. This is important for two reasons. First, because it is widely acknowledged that dominance or substantial market power is a necessary, but not sufficient, condition for the use of *ex ante* price regulation. Second, as noted above, recent CMA assessments have found that retailers do effectively constrain the ability of one another in England, and thus limit their ability to exercise any market power they have to profitably raise prices or degrade quality.

² See CAA (2008) where safeguard caps are defined as regulated prices that ‘do not correspond to an estimate of efficiently incurred costs, but are set more loosely to guard against the possibility of major customer detriment. Their purpose is thus to avoid the market distortions and burden of detailed price regulation, while providing users with *ex ante* protection against excessive pricing.’ The term ‘precautionary price cap’ is described as ‘a precautionary measure, in the expectation that it would not, in practice, be required to constrain prices’ and ‘would not seek to reflect the short-term balance between supply and demand in such a way as to “second guess” what the maximum permitted market price should be at any one time. Rather, the PPC would be set for five years, based on a forward-looking assessment of the level above which prices might, if sustained over a period, be viewed as excessive under general competition law’.

³ See CMA (2021).

- (iii) For water retailers that are found to be dominant or to have substantial market power, Ofwat should seek to apply 'safeguard' default tariffs that are calibrated to i) provide adequate 'headroom' and do not distort supply side incentives to enter and expand or ii) provide demand side incentives to actively engage in the market. This could be accompanied by a threat to re-introduce 'tighter' controls if any supplier with substantial market power is found to have exploited its position. For retailers that are not assessed as being dominant or having substantial market power then *ex ante* regulation should be removed on the assumption that, as in other markets, competition will protect NHH customers by constraining the ability of these retailers to exercise market power, and over time should result in prices that reflect underlying costs.

- (iv) Ofwat should put considerable effort into developing initiatives and measures to promote greater demand side engagement which, studies suggest, are the most effective way to overcome customer inertia. These would only likely be effective after the lifting, or loosening, of a default price cap. Here Ofwat can usefully draw on the experience of other regulators in applying such approaches and wider insights from research in behavioural economics.

1. Introduction

The UK has been a global leader in water sector restructuring. Over the past three decades this has included privatising water suppliers, the establishment of the world's first independent economic regulator for water, the application of incentive regulation and the introduction of competition for some activities in the water supply chain.

The introduction of competition for non-household (NHH) customers is another area where the UK has led the world. Competition for NHH customers was first introduced in Scotland in 2008 and then in England in 2017. This initiative is being closely watched by policy makers, regulators and other commentators around the world. This is because it represents one of the first attempts to introduce 'competition *in* the market' for water services at a large market-wide scale and was expected to bring substantial benefits to NHH customers and to the wider economy.⁴ The introduction of competition for NHH customers in England was also seen as a potential 'test case' for the prospects of extending competition to household customers.

However, some five years since this policy was introduced, it is widely acknowledged that competition has not developed as expected for most NHH customers.⁵ The failure of competition to develop for water services is surprising as NHH (small business) customers are by now accustomed to the idea of competitive retail markets for other utility services – e.g.: electricity, gas, communications – where competition was introduced from the 1990s.

Against this background, the aim of this paper is to discuss how the transition to competition might be accelerated for all NHH retail customers, drawing on general principles and insights from the experience of similar transitions in other sectors. It begins from the position that there is a collective interest among various participants in a planned transition to competition in the NHH retail water sector. Specifically:

- **Non-Household customers** have an obvious interest in the potential benefits associated with competition, such as improved quality, greater choice, higher levels of innovation and the potential benefits attached to new and existing suppliers seeking to differentiate their offerings including through tariffs that better align with customer preferences.⁶ The longer the transition remains in its current stalled state, the greater the opportunity cost (in terms of foregone benefits) for NHH customers.
- **Ofwat** has an interest in ensuring that all NHH customers access the benefits of a competitive market as soon as possible. As the body responsible for implementing the policy it also has an interest in being seen to have done all it can to facilitate the transition to effective NHH competition.

⁴ Ofwat (2015) states that: "This new market will be the largest retail water market in the world and should deliver substantial benefits to customers and the wider economy. Being able to switch water and wastewater retailer will mean that eligible customers are free to negotiate for the best package that suits their needs, including: better and more focused customer service arrangements; enhanced levels of advice on water management and efficiency; and prices and other terms and conditions of service."

⁵ Ofwat (2021b) concludes: "[T]he business retail market is not yet functioning as efficiently or effectively as it could."

⁶ As Ofwat (2021b) observes: "Competition and markets – including the business retail market - can deliver benefits for the sector by bringing about cost efficiencies and encouraging higher service levels, while also incentivising innovation".

- **Retail water companies**, who have invested in the NHH water retail sector on the expectation of competition developing, have an interest in reaping the benefits of those investments and in the market being fully open such that they can compete with one another on merit and for a large pool of active NHH customers.
- **Investors** require a sectoral regulatory regime which is consistent, coherent and transparent and operates to the same principles as other UK sectoral regulatory regimes and where the basis for regulatory interventions are properly evidenced.
- **Defra and other government departments** have an interest in seeing that the policy objective of a fully competitive retail market for NHH customers is achieved.

This paper is organised into 5 remaining sections. Section 2 provides an overview of what a transition to competition involves, and the possible outcomes that might be expected drawing on the experience of other industries where the transition has been undertaken. Section 3 sets out various rationales for applying *ex ante* price regulation and discusses the difference between price regulation for monopoly and in competitive markets. Section 4 discusses the rationale for, and effects of, the use of default price regulation in competitive markets highlighting in particular the challenges and risks of applying tight default price regulation in markets transitioning to competition. Section 5 sets out some possible actions which might accelerate the transition to competition. Section 6 concludes.

2. The transition to competition

To begin, it is useful to revisit some foundational points about: the differences between monopolistic and competitive markets, and why competition is generally preferred to regulation; what a transition to competition involves; and what are the some of the possible outcomes that might be expected at the end of the transition drawing on the experience of other industries where the transition has been undertaken.

2.1 Differences between monopolistic and competitive industry structures

There are different political and ideological views on the desirability of introducing competition for utility services, but in economic terms ‘monopoly’ and ‘competition’ are generally seen as two different types of industry structure: each of which features different incentive mechanisms, and may be more or less suited to specific settings (demand, cost and information conditions).⁷

In general terms, it is widely acknowledged that where competition can be introduced and is effective it can bring various static and dynamic benefits including enhanced incentives for cost and productive efficiency, greater responsiveness to customer preferences and needs, and stronger incentives to innovate. This dynamic aspect to competition can be particularly important and can involve a process of discovery, which through trial and error, is said to lead to a tendency for services to be produced that consumers most value, utilising the best technologies and production methods. In addition, where competition is allowed to develop (for example in one activity in a production process) it can often lead to wider dynamic changes and benefits not anticipated at the time competition was introduced.⁸

⁷ Armstrong, Cowan and Vickers (1994) also make the important point that both competition and monopoly are also susceptible to various market and regulatory failures which can impact on welfare.

⁸ Kahn (2002) described this process in the context of US airline deregulation noting that the policy ‘took on a life of its own, like the proverbial snowball rolling down a hill – the mirror image of the tendency of regulation, once undertaken, to become increasingly pervasive and thoroughgoing’.

Competitive markets also generate better information than regulators who are typically faced with a substantial information asymmetry.

The two industry structures also entail different approaches to consumer protection. In competitive markets, consumers are generally assumed to 'vote with their feet'. This ability for consumers to switch (or threaten to switch) suppliers can encourage high quality of service and act to discipline and constrain suppliers from setting prices which deviate too much from underlying costs. In contrast, in monopolistic markets the regulator assumes the role of protecting consumers both in terms of setting prices and quality levels, but also in terms of approving expenditure for investments which can have long-term effects on innovation and the development of new and alternative business models and products and services.

2.2 What needs to happen to facilitate a transition to competition?

The transition from one industry structure (monopoly) to another (competition) cannot be achieved by legislative or structural change alone. Rather, the transition requires *behavioural* changes not only on both the supply and the demand side, but also on the part of the regulator.

On the supply side, the transition requires that new suppliers are incentivised to enter the newly opened competitive market, or that existing suppliers have incentives to expand their activities within that market. In practical terms, this means that suppliers need to form an expectation that in entering the market, or expanding their activities, they will be able to cover their operational costs and earn at least a normal return on any capital invested. Put differently, suppliers will not have incentives to enter or expand their activities in competitive markets if they are not confident that they will be able to cover their costs (including a return on invested capital), particularly if they are able to earn a higher return from investing funds elsewhere (i.e.: there is an opportunity cost to entry/expansion). Over time, if suppliers do enter the market and their expectations are not met, then this will lead to market exit. In the context of utility services, this often requires that another supplier be designated to act as a supplier of last resort and be funded accordingly.

On the demand side, the transition to competition requires that customers become engaged in the newly competitive market. In standard terms this involves customers being able to: *access* information about the new market opportunities; *assess* these opportunities; and *act* on opportunities where they offer the potential for a better deal either in terms of price, quality or other attributes of the service (e.g.: energy or water conservation). As discussed below, there is an important distinction between business/NHH demand side behaviour and individual consumer/HH behaviour: while it is generally assumed that businesses will act rationally in competitive markets, this assumption has been questioned for individual consumer decision-making in some settings. Future expectations are also an important influence on demand side behaviour. Customers need to be confident that any new supplier they switch too will remain financially viable and that they will not be exposed to default risk of supplier exit, or be transferred to another supplier on worse terms and conditions.

The regulator also needs to adjust its approach and behaviour to facilitate the transition to competition. In particular, there is a need for the regulator to be willing to shift between the *ex ante* preventative regulatory approach that is suitable for monopoly situations to a more flexible and ultimately *ex-post* harm-based approach suitable for overseeing and supervising the development of competitive markets. This includes a focus on identifying impediments or blockages to competition which may be restricting entry and expansion on the supply side or limiting the ability or incentives for customers to engage in the market. It also involves the regulator closely monitoring the market conditions to identify the appropriate time to relax, and ultimately withdraw, any *ex ante* price controls.

2.3 What does a competitive retail market look like for other utility services?

An appreciation of the possible ‘outcomes’ that we can expect to see as the NHH retail market transitions to competition is important in terms of setting expectations about what constitutes a functioning competitive market for utility services. The experience of the outcomes of market opening policies in other utility industries suggests the following insights.

An important insight, sometimes overlooked, is that the transition to competition does not always result in prices that are *lower* than those which prevailed in the context of monopoly. Indeed, it has sometimes been the case that prices went up after market opening where the prior prices had been set below the market clearing level. For example, studies suggest that the introduction of competition in retail electricity markets in the US and EU Member countries often did not lead to a reduction in the *level* of retail electricity tariffs.⁹ Rather, the key difference is that prices in competitive markets are more *responsive* to changes in underlying costs than they are in monopolistic markets.¹⁰

The number of active suppliers can also vary in retail utility markets, and it is not unusual to observe retail utility markets that are still reasonably concentrated in terms of suppliers even after decades of markets being open to competition. In the UK fixed line telecoms market, which has been open to competition for over three decades, four providers accounted for around 86% of the fixed line broadband market in the UK in 2020, with the former incumbent BT having a market share of 33%.¹¹ A similar picture emerges in Europe, where former incumbent telecoms operators remain the market leaders in almost all EU Member states, with an EU-wide average market share of 39% of fixed line services in 2020.¹² Similarly, notwithstanding the fact that retail choice in electricity and gas markets was introduced for all non-household customers in 2004 in EU Member States, and for all household customers from July 2007, a recent survey found that market concentration remains high in many EU Member States.¹³

A third insight is that while switching levels can act as one indicator of competition, these too can vary over time. Importantly, in some cases the threat of switching can be sufficient to discipline suppliers, even if actual switching levels are not high.¹⁴ In retail electricity and gas markets, for example, levels of switching vary significantly notwithstanding the fact that there are now a number of suppliers operating

⁹ In the USA, Su (2015) finds that; ‘[O]verall, retail competition does not seem to deliver lower electricity prices to retail customers across the board or over time.’ Similarly, Borenstein and Bushnell (2015) find that: ‘rates rose in both regulated and deregulated states, and more rapidly in the deregulated ones in the early years of reform.’ In Europe, recent analysis by ACER/CEER (2021) shows that electricity household prices have gradually risen since 2008 in the EU at levels higher than inflation, while industrial prices have fluctuated, but in 2020 were roughly similar to those in 2008.

¹⁰ In electricity markets for example retail prices now closely track changes in wholesale gas input prices, which can make retail electricity prices more volatile.

¹¹ Ofcom (2021).

¹² BEREC (2021).

¹³ In the gas markets, market concentration, particularly for the household market, is high in most European countries, with only three countries displaying low levels of concentration for household suppliers on standard measures. Similarly, in 16 out of 25 EU Member States market concentration for retail electricity supply also remains high. See ACER/CEER (2021) and European Commission (2021).

¹⁴ As Littlechild (2021b) argues ‘a low switching rate does not mean that competition is not effective’.

in many EU Member States.¹⁵ A similar situation can be observed in those US states where retail choice has been introduced. While switching for industrial electricity customers has been robust, there has generally been lower levels of switching for residential customers with many customers continuing to source their electricity from a default provider of last resort in their area.¹⁶

A fourth insight is that levels of customer engagement in some retail utility markets – such as energy markets – can be low notwithstanding the fact that competition has been in place for many years. There are various reasons for this, some of which are general in nature (e.g.: that levels of engagement and switching activity might be expected to be higher in the early period of market opening and taper off once customers believe they have secured a good deal) and others which are specific to each sector (e.g.: the role of intermediaries and brokers, specific contractual terms and dispute resolution arrangements). However, notwithstanding the low levels of engagement in some retail utility markets, regulators generally do not see retail price controls as a solution. For example, the policy goal at the European level is the removal of all retail price regulation for all energy consumers including vulnerable consumers by 2025.¹⁷ This reflects a perception that regulated prices can have highly distortive effects and in certain cases pre-empt the creation of liberalised markets. Similarly, as discussed below, although Ofgem has identified particular concerns about how some microbusiness engage in energy markets it has not sought to re-introduce price regulation. Rather, it has introduced a range of targeted information and dispute resolution measures to encourage microbusinesses to engage.

Finally, the experience of retail market opening in other utility industries suggests that there can be numerous benefits from transitioning to retail markets in terms of innovation and quality of service. This includes greater choice of tariffs which are better matched to customer preferences;¹⁸ enhanced customer engagement and service; and the changes associated with new entrants that pursue different business models and offer new services.¹⁹ In addition, the shift towards competitive markets can limit the potential for regulatory, or political, interference in final prices. This is seen as particularly important in utility industries because when wholesale prices are rising (because of rising or changing costs) there can be strong political and popular pressure to artificially keep retail prices low which is not sustainable over the long-term absent the provision of government subsidy.

2.4 Insights for the transition to competition in the NHH water sector

The insights from the introduction of retail market opening policies in other utility industries described above are useful when thinking about what to expect as the NHH retail water sector transition to competition, and what indicators or ‘milestones’ are realistic guides to aid in that transition. The following points seem particularly relevant:

¹⁵ In 2020, switching rates of less than 10% were observed for electricity in 14 countries and in 12 countries for gas. See ACER/CEER (2021).

¹⁶ Bushnell, Mansur and Novan (2017). A notable exception is Texas where it has been estimated that 92% of customers have exercised their right to choose a supplier. However, as discussed below, this is also the state without a default price regulation.

¹⁸ In the energy sector this has included ‘dual-fuel’ tariffs, ‘price guarantee tariffs’, online tariffs and ‘green’ tariffs’. There has also been entry by suppliers who seek to assist customers in better managing their energy consumption, including through adopting energy savings appliances and processes.

¹⁹ In telecommunications markets, numerous studies have found evidence of enduring improvements in quality as entrants continue to differentiate themselves from the incumbent by increasing the variety and differentiation of service offerings. See Nardotto, Valletti and Verboven (2015) and Baranes and Savage (2018).

- Firstly, there should not be an expectation that retail prices will automatically decrease following the introduction of competition and/or the removal of default price regulation in the NHH water sector. Rather, the expectation should be that if the market is effective, then prices will over time come to better reflect the underlying costs of supply (including wholesale and supplier costs). In circumstances where the regulated NHH default tariffs are below the costs of supply then market clearing retail prices will, other things equal, be expected to increase following the removal of the regulated tariff. Conversely, in circumstances where regulated NHH default tariffs are above the costs of supply, then the market clearing retail prices should, other things equal, decrease as a result of competitive pressure.
- Second, the levels of supply-side concentration in the NHH water sector do not appear high on standard competition law measures or when compared to other retail utility industries. Indeed, current levels of individual supplier concentration are not inconsistent with, and in some cases lower, than what is observed in other utility industries where default price regulation has long been removed (e.g.: fixed line telecoms markets).
- Third, as described above switching and engagement levels can vary significantly across competitive retail markets in other utility industries. While the current levels of switching in the NHH retail water sector vary – with greater levels of switching for high use consumers – the low levels of switching observed for smaller NHH customers are not necessarily out of line with other retail markets where retail competition has been in place for over 15 years (e.g.: retail energy markets in the EU). An important insight, discussed below, is that higher levels of switching in other retail energy markets have sometimes been observed in jurisdictions where no default regulated tariff is in place (e.g: Texas).
- Fourth, one change observed where retail competition was introduced in other utility industries was entry by ‘non-traditional’ suppliers from outside the sector. This includes entry by companies from other utility industries that seek to take advantage of economies of scale based on joint billing, as well as entry by other large consumer facing retail companies (such as supermarkets) that seek to leverage their existing customer relationships and reputation. For example, almost all energy suppliers in the UK now offer dual gas and electricity services, while major supermarkets have entered retail energy markets (Co-op energy and Sainsbury’s energy) and retail telecoms markets (John Lewis Broadband and Co-op broadband). It is interesting to observe that no such large-scale entry from outside the water sector has occurred to date for NHH retail supply. Again, one reason for this lack of entry may be that potential investors and entrants from outside the water industry have formed the expectation that low default regulated prices make it unattractive to enter the market.
- A fifth insight is the need to be careful to not only focus on the short-term or immediate benefits of competition in terms of prices. As noted above, the experience of market opening in other utility industries suggests that it is often the case that introduction of competition can lead to other benefits not foreseen at the time competition was introduced. These include the emergence of new business models, expansion into new services and markets, and in some cases, different ways of configuring networks.²⁰

²⁰ The most prominent example of this is airline deregulation which typically led to the introduction of differentiated fare and service offerings; significant entry and expansion into new routes; the emergence of new low-cost operators with different business models and the shift in the airline network configuration from one based largely on direct point-to-point journeys to a hub and spoke system where passengers make indirect connections. More recent changes to electricity (distributed and behind the meter generation) and telecommunications networks (‘over the top’ services) have arguably also been facilitated, in part, through consumers exercising choice in competitive retail markets.

- A final insight is that allowing consumers greater choice in competitive markets can also be consistent with, and support, other policy objectives. In retail energy markets, for example, consumers can now purchase services from suppliers who offer only 100% renewable electricity, or which provide services that help consumers conserve and manage their energy consumption (including through automated management systems).²¹ The emergence of an effectively competitive retail NHH market might bring similar benefits if some suppliers focus on water conservation and demand side management. A focus on more active demand side conservation and management is consistent with the government's strategic policy focus on greater water system resilience,²² and wider concerns about future water scarcity in England.²³

3: The role of price regulation in the transition to competition

There are two general ways to regulate or control prices: prices can be regulated up-front (*ex ante*) using price controls, or prices can be controlled through the *ex post* application of competition law where a firm in a dominant position is found to have abused its position through charging excessive prices.²⁴

While it is common to see the application of *ex ante* price regulation in monopolistic settings, there is generally little to be said for applying price regulation in competitive markets. This is for the simple reason that such price regulation can distort supply side incentives and reduce the level of economic activity. For this reason, *ex ante* price regulation tends to be used only in selected industries and activities, typically those with natural monopoly characteristics.

3.1 The different rationales for applying *ex ante* price regulation

There are four broad rationales for introducing *ex ante* price regulation. First, as noted, price regulation is commonly applied in settings where the costs and demand conditions resemble that of a natural monopoly, such that there is a high level of fixed costs related to investments in durable and immovable infrastructure or equipment needed to provide the services. Examples include the pipes, wires, cables and tracks in the utility industries. Here the purpose of regulation is often said to 'mimic' the competitive market through setting efficient prices and establishing minimum quality standards.

Secondly, price regulation is sometimes applied in settings where there are multiple suppliers of a service, but where one firm has a very high market share (i.e.: it is 'super' dominant in competition law terms).²⁵ The rationale for *ex ante* price regulation here is based on the expectation that, given its market position, the dominant supplier will have a strong incentive and ability to abuse its market position. As such the role of *ex ante* price regulation is to prevent such exploitation before it occurs: to pre-empt such harm. Critically, *ex ante* price regulation is typically only applied to firms assessed as dominant, or holding a position of substantial and enduring market power, and not across all suppliers in the market.

²¹ Similarly, the introduction of competition in airline markets is generally seen to have improved overall safety as more people fly rather than rely on road transport, and through the harmonisation of safety standards across jurisdictions.

²² Defra (2022).

²³ See National Infrastructure Commission (2018).

²⁴ Black, Harman and Moselle (2009) provide a useful overview and assessment of the two approaches.

²⁵ In competition law, super dominance refers to very high market shares approximating 90% of the market.

Third, price regulation has been applied to multiple suppliers in very selective settings where there is a concern that *individual* consumer choice is adversely affected by certain behavioural characteristics which manifest in terms of a lack of engagement in the market. The most prominent example is the recent re-introduction of retail price controls for household customers in the British energy market.²⁶ Two points should be noted about the use of price regulation in these circumstances:

- First, price regulation is premised on the fact that *individuals* suffer from various behavioural and cognitive biases that adversely affect their decision making. It is typically not applied to *businesses*, who are assumed to be 'rational' and to have commercial incentives to exercise choice and manage costs.²⁷
- Second, where price regulation has been introduced to address individual or household behavioural biases, it is typically only applied on temporary or time-limited basis.²⁸ This is based on a recognition that if price regulation is maintained for too long, consumers will not have incentives to develop the skills they need to engage in the competitive market.

Finally, price regulation is sometimes introduced for political reasons, particularly with the aim of keeping prices low. There is a substantial body of literature which analyses the consequences of regulated prices being kept artificially low and often below the costs to serve in areas such as transport, energy and water across different jurisdictions.²⁹ This literature also finds that there can be adverse effects for consumers of such below-cost pricing regulation (particularly in terms of quality of service and access), and that it can also reduce the incentives for investors to enter or expand in a market.

3.2 The difference between price regulation for monopoly and in competitive markets

The different rationales for the use of *ex ante* price regulation just described have direct implications for how price regulation is applied in practice.

In monopolistic settings the aim of price regulation is, as noted, to 'mimic' the outcomes of a competitive market which means that prices are typically based on an assessment of the efficient costs of supplying

²⁶ On this point it is worth noting that the introduction of an *ex ante* market wide price cap for household retail energy in Britain was preceded by a detailed study of consumer behaviour by the CMA (2016), which recommended against the introduction of such a market wide cap.

²⁷ Armstrong and Huck (2010) set out various reasons why we might expect firms to be better decision makers than individual consumers. These include economies of scale in making good decisions, the ability to learn from doing the same thing repeatedly and because firms compete with one another and thus can prosper from the poor decision making of rivals. Heidhues and Kőszegi (2018) observe that firm profit maximization is assumed rather than empirically documented, noting that it could reflect an implicit judgment that profit-oriented firms have incentives to safeguard against profit-decreasing psychological tendencies by employees, and therefore many behavioural biases are likely to be less prevalent in the behavior of firms. While both studies explore the validity of this assumption about firm rationality, they do not advocate any policy measures to address any potential biases in firm behavior.

²⁸ Retail electricity price caps were introduced in 2019 and apply to *household* consumers who are on default energy tariffs. Ofgem (2022) notes that these tariffs are "due to end by 2023 at the latest. By then we expect other reforms to bring easier and fairer access to energy deals. These include faster switching times, smart meters and other industry changes."

²⁹ For a general review see World Bank (2020)

the monopolistic service.³⁰ In practical terms, where incentive regulation is applied, this involves taking the costs of the monopoly provider and then adjusting them to account for the potential inefficiencies associated with monopoly provision.

In settings where there are multiple suppliers, but one supplier maintains a dominant position, *ex ante* price regulation is motivated by a desire to protect consumers against excessive pricing arising from the exploitation of market power by the dominant firm. In other words, the purpose of *ex ante* price regulation here is not to mimic, or replace, the competitive outcome as in the monopolistic setting, but rather to act as backstop or safeguard against exploitation without interfering with the setting of the competitive market clearing price.

In practice, this means *ex ante* regulated prices set in markets transitioning to competition, but where a firm remains dominant in the market, are not typically set at the same level as those set-in monopoly settings.³¹ Rather, the price caps applied to the dominant firm must be 'looser' as the expectation is that competition will result in prices being set below that level (hence the fact they are sometimes referred to as 'safeguard' or 'precautionary' caps). The reasons for this are as follows:

- Firstly, even if a regulator was able to perfectly calibrate the regulated price applied to the dominant firm to the efficient costs of supply (including a normal return on invested capital), then to attract customers away from the regulated dominant firm, entrants offering a similar quality of service would need to either be *extra*-efficient (i.e.: their costs would need to be lower than the efficient costs used by the regulator in setting the price cap for the dominant firm), or be prepared to earn a lower than normal return.
- Second, if an *average* price cap is set for the dominant firm based on the efficient costs of supply, this needs to ensure that the regulated firm can recover its costs in 'bad' times. For example, where the per unit costs of supply increase because of a change in underlying (uncontrollable) costs, or in the situation where a considerable portion of its demand switches to new competitors. If the regulated firm is prevented from increasing prices at these times this can create a revenue shortfall, and over time potentially lead to market exit. Where such situations arise, this can also lead to calls for the regulator to 'reopen' the price control and involve the regulator undertaking additional work to assess whether the change in uncontrollable costs needs to be reflected in retail prices.
- Third, setting a looser 'safeguard' price cap for the dominant firm is consistent with the transition in terms of regulatory oversight from *ex ante* regulation to *ex post* competition law. In other words, it reflects the different standards used to assess whether prices are exploitative or not in competitive markets. Specifically, under competition law any assessment of whether or not a price is exploitative is not based on the (efficient) costs to serve, but rather on the 'economic value' of the service or product supplied.
- Finally, it should be noted that other regulators that have facilitated a transition from monopoly to competition have typically recognised the need to adopt looser forms of price control. For example, in the energy sector maximum price caps were set based on the costs of incumbent

³⁰ Insofar as it is assumed that producers in a (perfectly) competitive market cannot influence the market price, and the only way to increase profits is to reduce costs.

³¹ As the CAA (2008) observes, safeguard caps "do not correspond to an estimate of efficiently incurred costs, but are set more loosely to guard against the possibility of major customer detriment. Their purpose is thus to avoid the market distortions and burden of detailed price regulation, while providing users with *ex ante* protection against excessive pricing."

in its supply area but with sufficient 'headroom' to facilitate and incentivise entry and expansion. Describing the transition in the context of UK retail energy markets, Yarrow, Decker and Keyworth (2008) discuss how market opening was accompanied by a loosening of price caps, which was quickly followed by the removal of price caps. The report goes on to note that:

“A particular policy concern during the three-year transitional periods for gas and electricity was that price caps not be set so low as artificially to discourage new entry into the market or to hinder the subsequent expansion of new entry. ...The most important of these was the recognition that, given the brand recognition of incumbents and initial lack of consumer information about entrants, entrants would need to offer significant discounts on incumbents' prices in order to induce consumers to switch in large numbers. A price cap that was set too low would not allow sufficient margin for entrants to be able, profitably, to offer the required discounts. The regulatory documents of the time were, therefore, much concerned about the 'headroom' between the price caps and the estimated costs of entrants.”

Similarly, in a more recent analysis in the telecommunications industry, Vogelsang and Cave (2019) observe that:

“What happens in some jurisdictions... is for a regulator to tailor its price or revenue control approach in a market to the degree to which competition has or is expected to develop. In a control period when competition is non-existent or nascent, the control is set on a standard cost-based BBM [Building-Block Method], with no uplift. As competition takes hold and is prospectively competitive (ie. on the way to becoming 'effective') the control ceases to be cost-based and becomes a more generous 'safeguard cap'. This less demanding price control may promote competitors' interests if the price umbrella chosen by the incumbent – which competitors often have to beat – is raised. This approach to promoting entry also recognises the additional competitive risks which the regulated firm is running. The cap is removed when full deregulation occurs.

It has become common practice to name the gap between a cost-based control and the safeguard control as 'headroom'. The level of headroom is usually established judgementally and non-quantitatively by striking a balance between the goals of keeping prices down now for consumers and gaining the benefits of competition in the market in the longer term.”

3.3 Insights for price regulation in the NHH water sector

The above discussion suggests two insights about the use of price regulation in the NHH water sector.

(a) *The rationale for ex ante price regulation of NHH water services*

The first insight is that the reason for the maintaining price regulation in the NHH water retail market appears to combine at least two (and perhaps three) of the rationales identified above as well as an additional rationale based around 'market frictions'. In the documents I have seen, it has been suggested that price regulation is:

- Necessary to protect NHH customers that have not switched from being exploited if water retailers that have substantial market power abuse their power.³²
- As a response to a perception that NHH customers are disengaged and have weak incentives to engage in retail markets.³³
- Potentially as a response to concerns that prices for non-household customers may increase if default price caps were to be removed and this might not be politically or socially acceptable.³⁴
- A response to three types of 'market friction' which, in Ofwat's assessment, cause issues for retailers and ultimately customers.

However, each of these rationales does not appear to be supported by the detailed analysis that typically accompanies *ex ante* regulatory intervention. For example, there does not appear to have been an assessment of whether any retailer has substantial market power, or occupies a dominant position, which might justify the imposition of *ex ante* regulation. Indeed, Ofwat's 2021 State of the Market report records that no retail supplier has an individual market share above 31% at the national level, which is lower than the standard dominance threshold used in competition law assessments.³⁵ Similarly, in its recent assessment of a merger involving the supply of retail water and sewerage services to NHH customers, the CMA concluded that in each geographic market in England the parties would possess a low combined market share and that a number of remaining competitors will continue to constrain the merged entity.³⁶ In addition, there is no evidence or analysis to support the argument that all NHH retailers are collectively dominant, which might justify market wide price regulation, insofar as they have been shown to have similar incentives or ability to coordinate or align their behaviour across the market.³⁷

³² Ofwat (2015) notes that: "[E]xperience in other sectors suggests that in the transition to full competition there may be a need for continuing regulatory protections – to shield customers from potential abuse associated with remaining pockets of substantial market power and to provide confidence that the new market arrangements will not unnecessarily disadvantage groups of customers."

³³ Ofwat (2021b).

³⁴ Ofwat (2019) notes that: "[I]n the short term we do not believe that relaxing protections for the lowest usage customers would protect their interests ... We have concluded that it would risk harming their interests by leaving them worse off compared to their position absent retail market opening and we do not think it is appropriate that they should be liable to pay for the costs caused by the creation of the market where they are not currently well placed to benefit from".

³⁵ Ofwat (2021a). In addition, Ofwat (2021b) observes that retailers operate at the national level across England: "The retail market is now more mature, and most Retailers – both Retailers with a legacy customer book and new entrants who have grown their customer base more organically – operate at a national level serving customers across England."

³⁶ CMA (2021).

³⁷ That is, the standard tests for collective dominance in UK competition law have not been established. In *Airtours plc v Commission of the European Communities* [2002] ECR II-02585, the Court ruled that to show collective dominance: (1) the market structure must be conducive to tacit coordination, and (2) market participants must be both able, and likely to have incentives, to coordinate their behaviour which can be assumed to exist under three conditions. These conditions, which are cumulative, are that: (1) each member of the dominant oligopoly has the ability to know how the other members are behaving in order to monitor whether or not they are adopting the common policy. That is, there must be sufficient market transparency for all members of the dominant oligopoly to be aware, sufficiently precisely and quickly, of the way in which the other members' market conduct

Such an assessment of dominance or substantial market power is important because as Black, Harman and Moselle (2009) observe '*[M]arket power is a necessary but not sufficient condition to warrant the imposition of ex ante forms of regulation*' and '*ex ante regulation is typically applied in sectors where firms have persistent and significant market power*'. The fact there does not appear to be a single dominant firm in the NHH retail sector at the national level implies that if *ex ante* price regulation was removed, no individual supplier will have sufficient market power to raise prices above market clearing levels for a sustained period of time.

To the extent to which ongoing *ex ante* price regulation is justified on the basis that *businesses* (rather than individuals) display decision-making biases which makes them disengaged in the market, this too does not appear to be supported by any detailed analysis. In particular, it is not clear why it is assumed that price regulation is needed to protect businesses (NHH customers) from such biases when purchasing water services but not when purchasing other utility services (energy, communications) or other important business inputs.

To the extent to which *ex ante* price regulation is, in part, motivated by political considerations to keep water prices low, there is a need to consider and articulate the implications of this aim in the context of wider policy objectives for the sector such as system resilience and water conservation. There is also a need to ensure that artificially low regulated prices do not otherwise distort market outcomes and inadvertently harm consumers.³⁸ There is a substantial body of research has shown that regulated water prices that are kept below market clearing levels can lead to under-investment and supplier financial difficulties,³⁹ and can send the wrong economic signals to customers and, paradoxically, can be regressive in its outcomes.⁴⁰

A final rationale for the use of default price regulation for lowest usage NHH customers that Ofwat has referred to relates to so-called 'market frictions'. According to Ofwat these frictions are: (i) poor quality customer, asset and consumption data; (ii) inadequate Wholesaler performance; and (iii) cumbersome Wholesaler-Retailer interactions.⁴¹ Ofwat (2018b) suggests that these frictions are "*causing issues for retailers and ultimately customers, and are preventing the market from meeting its full potential*". Although I have not seen any detailed analysis supporting this rationale and how it affects retail competition such as to justify the use of *ex ante* price regulation in that market, based on general

is evolving; (2) There are adequate deterrents to ensure there is a long-term incentive in not departing from the common policy; and (3) The foreseeable reaction of current and future competitors, as well as consumers, does not jeopardise the results expected from the common policy.

³⁸ Yarrow, Decker and Keyworth (2007) refer to the often-cited example of ex-Soviet economies where many basic commodities, including energy and transport, were supplied at very low prices which, other things equal, resulted in some short-term benefits to consumers. However, as they note: "[t]he problems lay in the fact that other things were not equal: supply-side incentives were poor, and overall quality was often assessed as poor. In other words, the restrictive effects of low price were felt not just in terms of the volume of products and services traded, but also in terms of their quality."

³⁹ Mercadier and Brenner (2020) note that in Argentina the level and structure of tariffs reflect the national administrations' preferences about service cost allocation among stakeholders. This has resulted in revenues below operative expenditure, which has made it difficult for companies to remain financially sustainable

⁴⁰ Whittington (2003) finds that the use of increasing block tariffs in South Asia (where the first block, sometimes known as the subsistence block, is set below cost (often at zero or very low prices) to make water affordable) does not generate sufficient revenues to ensure that utilities can recover their financial costs; does not send the correct economic signals to households; and does not help the majority of the poor households.

⁴¹ Ofwat (2021b).

principles it is not obvious how these market frictions support the use of default retail price regulation in a vertically separated industry structure. Specifically:

- Firstly, the frictions identified by Ofwat appear to largely relate to *wholesale* activities over which retailers have no or limited control. If Ofwat is concerned that *wholesale* market inefficiencies (e.g.: inadequate Wholesaler performance or problems with metering) are raising wholesale costs which are then reflected in final NHH retail prices this suggests that *wholesale* price regulation (not retail price regulation) is the best tool to address these inefficiencies. Moreover, to the extent to which Ofwat is using default *retail* price regulation to protect NHH customers from these wholesale cost inefficiencies, this raises the real risk that retail margins are ‘squeezed’ if retailers are prevented from recovering the higher wholesale costs in retail prices.
- Secondly, the frictions appear to be *non-price* related rather than price-related in nature. In other words, it is not clear how constraining *retail prices* at the default level will improve the incentives for wholesalers to install, maintain or replace meters; improve wholesaler performance; or improve or change the interactions between wholesalers and retailers. These frictions are potentially better addressed through targeted non-price measures and remedies (particularly measures targeted at wholesaler behaviour rather than retailer behaviour).
- Finally, to the extent to which default price regulation is premised on the basis that the ‘market frictions’ create problems for customer switching,⁴² this too requires further explanation. Most obviously, there is a need to articulate how setting a default regulated retail price will overcome the switching problems identified. If Ofwat is implying that a lower default regulated tariff can overcome the switching problem and induce greater switching, this raises an immediate question of why is it the case that the use of the regulated default tariff over the past 5 years has not resulted in higher levels of switching. Articulation of the logic and evidence behind this rationale for regulation is particularly important because, as discussed below, the use of default price regulation in markets transitioning to competitive can often have the effect of *reducing* (rather than increasing) the incentives for customers to engage in the market and to switch.

(b) *The application of ex ante price regulation to NHH water services*

The specific rationale for regulating NHH water services has direct implications for how any *ex ante* price regulation is applied.

Although for the reasons set out above it is not obvious that any retailer supplier is individually or collectively dominant (let alone super dominant), to the extent to which *ex ante* price regulation is motivated by a concern that retailers may have some residual market power over NHH customers this suggests that any price regulation applied should be set in a way such that it acts as a safeguard against possible exploitation of NHH customers, but provides sufficient headroom so that it does not have the effect of distorting the development of competition.

This would differ from the approach adopted to date which, in my understanding, has not been based on the average costs incurred by retail suppliers, but rather has largely been set on the costs historically incurred by the retail activities of the former vertically integrated suppliers. There are obvious risks to an approach that detaches a regulated price from the actual costs of retail suppliers, particularly where

⁴² See Ofwat (2018b).

the regulated price is based on an industry structure that differs from the current structure and where there might be expected to be some joint and common costs.⁴³

Looking ahead the current proposal appears to be to set an *ex ante* price control for small customers (Group One) on the basis of estimates of the costs that a hypothetical efficient retailer might incur, including plausible and challenging cost efficiency improvements. According to the Ofwat consultation, the efficiently incurred, future-looking, retailer costs used to set the default tariff may be expected to differ from retailer reported costs.⁴⁴

While this will mean that default regulated prices for Group One customers will, in part, be based on the actual costs of retailers (rather than the costs of the formerly vertically integrated incumbent), the focus on the efficient costs of a hypothetical supplier and the setting of challenging cost efficiency improvements implies that a 'tight' control will be set. This raises a risk that there will be insufficient headroom for competition to develop. The adoption of a tight price control appears to be a conscious decision on the part of Ofwat, who in proposing this approach note that '*careful price regulation rather than competition can be best expected to achieve our objective*' of protecting NHH consumer interests.⁴⁵ However, this policy position to prefer regulation to competition for protecting NHH customers raises a wider question about the prospects for, and commitment to, competition developing for these NHH customers in the foreseeable future.

4: The use of 'default' price regulation in competitive markets

This section discusses the rationale for, and effects of, the use of default price regulation in competitive markets and for specific types of customers. Once again, the purpose is to identify insights that could be relevant when thinking about ways of accelerating the transition to competition in the NHH water sector.

4.1 When is default price regulation applied in competitive markets?

As noted, there are two general circumstances where *ex ante* default price regulation is typically applied in non-monopoly settings.

The first setting is where a former incumbent provider has been assessed as dominant and is required to offer a default tariff, but where other suppliers are not subject to that price constraint. In these settings the purpose of the default price regulation is to act as a 'precautionary cap' or 'safeguard tariff' to protect the customers of a former incumbent from exploitation as a market transitions to competition.

Critically, in these circumstances, default price regulation is typically not applied across the market as it currently is for certain NHH water retail services. Rather it is typically only applied after an assessment of the state of competition in a relevant market, which considers among other things whether a supplier is dominant in competition law terms, and as such price regulation is merited. A prominent example of this approach is its use in facilitating the transition to competition in UK/EU telecoms markets, where

⁴³ This is recognised by Ofwat (2021b): "One of the benefits of markets is that they reveal information about costs – including where the vertically integrated water companies may have previously been allocating costs to customers in a way that does not accurately reflect the true costs of serving those customers "

⁴⁴ Ofwat (2021b).

⁴⁵ Ofwat (2021b). In addition, Ofwat notes that: "Group One customers with annual consumption of 0-0.5MI – continue to require price cap protection that is closely referenced to the costs of service for such customers."

undertakings (suppliers) are subject to periodic assessments of market power.⁴⁶ In some industries, such as for airports, even where an undertaking is assessed as dominant, regulators have had to show that competition law would not be sufficient to address the potential exploitation of a dominant position before introducing *ex ante* price regulation.⁴⁷

The second setting where default price regulation is applied is where there are concerns that individual/household consumers have certain behavioural biases which is leading to market wide exploitation. Here default price regulation sometimes does apply across the market. However, it should be observed that the use of default price regulation on this basis is unusual and remains controversial.⁴⁸ The most prominent case is for residential/household energy in UK and it should again be emphasised that default price regulation only applies to *households* and has not been applied to small businesses or non-residential household customers.

4.2 Why is default price regulation used?

As noted above, one rationale for default price regulation is to protect consumers against potential exploitation of residual market power by dominant firms as competition develops in the market. The retention of *ex ante* price regulation therefore amounts to the use of a second policy instrument, over and above the enforcement of competition law and policy, to what may be termed a 'belt and braces' approach. However, in general, at least if public policy is to be consistent and coherent, this will tend to be justifiable only in circumstances in which there exist potential market power problems that are perceived to be beyond the effective reach of competition policy.

Another rationale that is sometimes used to justify default price regulation is that such price caps provide customers with relatively simple and clear information that they can use when evaluating alternative tariff offers and thus make them more engaged. In this way, so the argument goes, consumers are less likely to get confused by the plethora of different tariffs available, and therefore less likely to be over-charged. To some extent this concern about customer confusion has been mitigated through the emergence of third-party intermediaries, including price-comparison websites, which allow consumers to quickly compare different offers and suppliers. More generally, it is also worth noting that past attempts by some regulators to simplify and reduce the number of tariff offerings to avoid customer confusion have backfired in practice and made some consumers worse off.⁴⁹

⁴⁶ In brief, the approach requires National Regulatory Agencies (NRA) in each European Member State to analyse a set of markets for electronic communications that may need *ex-ante* regulation. This process involves three steps: (1) the definition of the relevant geographic and product market; (2) a 'significant market power' (SMP) assessment; and (3) a decision on 'remedies'. Firms assessed as holding a position of SMP in a relevant market may be subject to various 'remedies' including the possibility of *ex ante* price controls, while those assessed as not holding SMP will only be subject to the provisions of general competition law. This assessment now applies only to wholesale markets, as all retail markets were removed from such an assessment in 2014.

⁴⁷ See Airports Act 1986, which required that Airports designated for the purpose of price control only if any of the following criteria apply: (1) the airport, either alone or together with any other airport(s) in common ownership or control, has or is likely to acquire, substantial market power; and (2) domestic and EC competition law may not be sufficient to address the risk that, absent regulation, the airport would increase and sustain prices profitably above the competitive level or restrict output or quality below the competitive level; and (3) designation would, taking account of the magnitude of the risk identified in (2) and its detrimental effects were it to materialise, deliver additional benefits (i.e. over and above competition law) which exceed the costs and potential adverse effects of such designation (i.e. the incremental benefits are positive).

⁴⁸ As noted in footnote 26 the CMA (2016) recommended against the introduction of such a market wide cap.

⁴⁹ A prominent example was the policy introduced in British retail energy markets to limit the number of tariffs that could be offered to consumers to just four, and banning price discrimination to protect vulnerable consumers.

4.3 Risks of default price regulation in markets transitioning to competition

In broad terms, the principal risks associated with the use of default price regulation stems from the fact that the regulation of prices is itself a necessarily monopolistic activity – prices are imposed across the market by a single economic agent (in this case a government department or regulatory agency, rather than say a single private monopoly, or in the case of a cartel a group of companies coordinating their behaviour). In one sense, therefore, a market can never be fully competitive whilst this monopolistic influence remains. Thus, even if the motivations for such intervention are wholly benign, it is necessary to recognise all the risks and limitations associated with the intervention of a monopolistic entity setting a market wide price.

Alongside this general risk, there are a number of well recognised specific risks associated with the use of default price regulation in markets characterised by multiple suppliers that are transitioning to competition. These risks are well recognised by regulators and policy makers, for example:

- Ofwat itself has at various times acknowledged the risks of default tariffs, noting in 2017 that: *'we recognise that default tariffs can affect competition – available margins may influence incentives for entry and competition, and the presence of default tariffs may also limit some customers' incentives to look for better deals.'*⁵⁰ In its recent consultation, Ofwat again recognises the risk that 'tight' default price regulation can *'distort the market'* when justifying its decision to apply a looser form of price regulation to Group Two customers.⁵¹
- In the energy sector, the European Commission has noted that: *"Regulated retail tariffs can have highly distortive effects and in certain cases pre-empt the creation of liberalised markets. It is of crucial importance to assess the impact of remaining regulated supply tariffs on the development of competition, and remove distortions."*⁵² The body representing EU energy regulators has voiced similar concerns noting that in some Member States *'regulated prices are set below cost levels, which hampers the development of a competitive retail market'*.⁵³ In Australia, the Australian Energy Market Commission has noted that: *"regulated prices will always be an imperfect substitute for prices determined by the competitive process of a market, and are likely to impose costs and distortions that would not otherwise be present. Specifically, since regulated businesses have better cost and market information than regulators, there is a risk that regulated prices will either be set: too low, deterring investment and innovation; or too high, to the detriment of customers. Regulated pricing arrangements also lack the flexibility and timeliness of market prices."*⁵⁴

In its review of the energy markets, the CMA (2016) noted that there were few, if any, signs of consumer engagement improving from these interventions, and that those consumers who disengaged prior to the interventions continued to do so.

⁵⁰ Ofwat (2018a).

⁵¹ Ofwat (2021b) states that: "For this group of customers, we decided to relax the regulatory protections in respect of 0.5MI to 5MI customers, as they have a greater incentive and ability to engage in the market, and there was therefore less need for tighter regulation which could distort the market".

⁵² European Commission (2007).

⁵³ ACER/CEER (2014)

⁵⁴ AEMC (2013).

- In aviation, the CAA has noted that “*The risks of setting a price control too low, on the other hand, might be expected to pose a greater risk in that unduly low-price controls can reduce prospects for the regulated airport – or, potentially as important, its competitors – to expand or enter the market.*”⁵⁵
- Ofcom (2006) has noted that: “*retail price regulation can have an impact on the wider market (e.g. possibly restricting tariff innovation).*”⁵⁶

As these statements indicate the key challenge for a regulator is setting the *level* of any default tariff. As noted above, in the transitional context this tariff must be set at a level such that it simultaneously protects consumers from potential exploitation associated with any residual market power of a dominant firm, but at the same time is not too low such that it leaves insufficient ‘headroom’ for entry or expansion. This challenge of setting a tariff that fulfils both aims has been recognised by Ofwat (2015) in the past: “*We need to make sure that the price controls do not create undue barriers to entry or expansion, or restrict the ability of customers to secure deals with retailers that best meet their needs. At the same time, we need to ensure that basic protections are in place to promote trust and confidence in the delivery of vital water and wastewater services.*”⁵⁷

The importance of setting an *appropriate* default tariff level in markets transitioning to competition cannot be over-emphasised. Among the ways in which the default tariffs can shape and affect the transition to a competitive market include the following.

(a) *Incentives for entry or expansion*

An obvious risk is that where default tariffs are set too low this can discourage new entry into the market, or hinder the expansion of existing suppliers. A general concern identified in other utility sectors, but that is equally applicable to the NHH retail water sector, is that if supply side incentives for entry are unduly squeezed, the prospects for competitive entry and expansion would be limited, the transition to competition would be protracted, and that policy would be stranded in a no-man’s land – between regulation of monopoly and supervision of competitive markets – for an extended period.⁵⁸

Moreover, while the risks of default tariffs that are too high can, in principle, be addressed via competition law (e.g.: that the regulated price is excessive),⁵⁹ it is not possible to challenge low regulated default tariffs in the same way meaning that there is no real way to redress this problem. In other words, the risks of getting the level of default tariff wrong are asymmetric: a high default regulated tariff set under a loose price control can be challenged using competition law, but a low default tariff cannot be challenged in the same way notwithstanding the potential adverse effects it can have on entry, the development of competition and long-term consumer welfare.

⁵⁵ CAA (2007).

⁵⁶ Ofcom (2006).

⁵⁷ Similarly, other regulators such as the CAA (2007) openly acknowledge this challenge noting that: “[w]hilst price caps clearly prevent prices rising above a particular level, there are substantial challenges in setting the level of prices, and risks that price controls are set too low, or too high”

⁵⁸ See Yarrow, Decker and Keyworth (2008).

⁵⁹ As CAA (2007) notes: “The risk that a price control is set too high is – to some extent – mitigated by the existence of competition law. In other words, competition law could still bite to prevent excessive prices under a loose cap.”

(b) *Incentives to innovate and invest in improving quality*

Similarly, where a default tariff is set below market clearing levels this can be expected to damage supply-side incentives in ways which are liable to accumulate over time. The most obvious immediate effect is that it can reduce incentives for suppliers to make investments that improve quality of service to customers.

Over the longer term to the extent to which suppliers subject to default tariffs are unable to recover the costs associated with any investments in innovation, this can limit the incentives to innovate or to introduce new business initiatives. This problem of price regulation reducing the incentives to innovate is a general one that is widely recognised by regulators, and has led to the introduction of innovation funds to incentivise innovation for traditional regulated monopolies (including by Ofgem and Ofwat).

Where low default tariffs act to disincentive entry this can have knock-on implications on the incentives for entry by those pursuing completely new business models or from outside the sector. As noted above, unlike in other retail utility industries, there has not to date been significant entry by suppliers from outside the traditional water industry who might bring with them different innovations, including in terms of approaches to customer engagement and service.

(c) *Risk of low tariffs leading to market exit*

In situations where default tariffs are set too low and below cost this can lead to exit of suppliers and result in immediate and long-term harm to customers. The immediate harm arises through the potential stranding of customers who may no longer have a supplier, or who incur costs in switching (either voluntarily or mandated) to another supplier. It can also raise costs that need to be recovered from all customers. More generally, where exit is induced by poorly designed or implemented regulation, this may have wider repercussions for the willingness of investors to allocate funding to regulated sectors in the UK. The longer-term harm arises from any systemic loss of confidence in the market that follows supplier exit. Simply put, customers may choose to 'stay put' with their existing supplier and be less willing (or more reluctant) to switch supplier if they believe that there is a risk of future supplier exit.

The risks of market exit associated with a retail price cap that is too tight and inflexible is highlighted by recent experience of widespread market exit in retail energy markets, which is estimated to have added up to £2.4 billion to all consumer bills. A report commissioned by Ofgem on this issue concluded that a combination of both the tight level of the price cap and a delay in adjusting the retail prices to wholesale prices contributed to market exit:

"It was Ofgem's explicit intent in calibrating the price cap that it should be 'a tough cap that ensures loyal consumers pay a fair price that reflects efficient costs'. To the extent that the price cap was calibrated to deliver stretching levels of cost efficiency, it may have left suppliers with insufficient headroom to deal with shocks.

In the event that wholesale prices rise above the wholesale cost allowance provided for in the Default Tariff Cap, the cap effectively acts as a ceiling, preventing tariffs from increasing and preventing suppliers from being able to fully recover wholesale costs for new or unhedged customers until the price cap is reset. The periodicity of the price cap, which is revised every six months, exposes suppliers to this gap between spot energy prices and the fixed remuneration for wholesale costs within the fixed cap, for a significant period of time."⁶⁰

(d) *High default tariffs can act as focal point*

⁶⁰ Oxera (2022).

While the discussion thus far has focussed on the potential risks to the development of competition of low default regulated tariffs, there are also competitive risks if default tariffs for a dominant firm are set too high and at a level substantially in excess of costs. This is because a high default tariff could, in some circumstances, act as a focal point and facilitate collusion among suppliers in the market. Put simply, all suppliers might collectively decide to 'price up' to the default tariff level. However, as noted above, whether or not such collusion can be sustained in a market with multiple suppliers depends on a range of factors and should not be automatically assumed.⁶¹ In addition, this risk of collusion can, in principle, be mitigated through the application of competition law.

Nevertheless, it highlights the more general point about the potential distortive effects of default price regulation in settings where there are multiple suppliers, and the importance of a planned transition away from default price regulation towards prices being set through competition.

(e) Incentives for customers to be engaged

Although default price regulation is often motivated by a desire to protect customers from short-term exploitation where a dominant supplier exercises market power, there are several potential longer-term risks for customers of default price regulation.

First, and most obviously, there is a risk that customers do not invest the time or effort in becoming acquainted with the competitive market. This can arise where customers believe that they are 'protected' by the default price regulation, and don't need to develop the necessary skills to be active and engaged in competitive markets. In this way, default price regulation can actually increase (rather than reduce) customer inertia.

Second, customers may mistakenly believe that the default tariff represents a 'good deal' because it is regulated. This perception can reduce customers' willingness to search the market and switch to alternative, but unfamiliar, suppliers that offer new or different tariffs and supply arrangements. More generally, because price caps restrict equilibrium price dispersion, this can reduce the consumers' incentive to be informed, which in turn can reduce price competition and increase the average price consumers pay.⁶² Perhaps for this reason, in some settings, suppliers themselves may favour the continuation of default price regulation if it limits the incentives for customers to become educated and more active.⁶³

Third, there is a risk that default price regulation crowds out information provision services offered by other bodies which could benefit customers. This includes price comparison web-sites, or so-called concierge or automated-switching services.

(f) Default price regulation can be used to pursue wider political objectives

The risks of inadvertently setting default regulated prices at low levels which do not support the transition to competition is supplemented by the risk that default regulated prices are used to achieve wider political objectives, and are not simply directed at providing backstop protection for customers against the exercise of market power by a dominant provider.

⁶¹ See the discussion of the tests for collective dominance at footnote 37 above.

⁶² See Armstrong, Vickers and Zhou (2009).

⁶³ As Armstrong (2015) notes 'Because profit falls when more consumers are savvy, sellers have an incentive to try to confuse consumers in the way they present their offers, and sellers may welcome regulation which reduces the incentive for consumers to become savvy. – i.e.: simple price caps'.

In other words, political imperatives to keep prices low, or to ensure that prices do not rise in response to changes in costs, can sometimes come to dominate regulator decisions about the level of default retail prices. To the extent to which participants form expectations that future prices will be set at low levels to satisfy political objectives this can affect supplier decisions to enter the market, and customer decisions about the need to become engaged in the market.

Studies suggest that where default tariffs are set at low levels this has made it difficult for competitor retailers to attract customers, and can lead to ever greater political interference.⁶⁴ In a recent survey, Littlechild (2021a) argues that such interference may have distorted retail competition in some US state electricity markets noting that: *'US regulators seem to have under-priced and crosssubsidized the default supply tariffs, thereby distorting the market against competing suppliers. They have also opened themselves up to continuing political pressures and consumer group complaints, leading in turn to further regulatory intervention'*.⁶⁵

(g) *Default price regulation can be inimical to the achievement of environmental policy goals*

In some sectors, such as energy and water, low default regulated tariffs can be contrary to environmental goals. This is because low default tariffs can, other things equal, encourage greater consumption of such services which is contrary to public policy objectives relating to conservation and greater demand side management.⁶⁶ According to Ofwat, there is some anecdotal evidence of this occurring in the retail NHH water market, and that the current price caps result in lower revenue for suppliers when customers conserve water.⁶⁷

In addition, to the extent to which low default tariffs shifts competition towards a focus on price, rather than wider aspects of a service offering, this can limit the scope for entry/expansion by innovative suppliers who seek to differentiate themselves through offering improved energy or water conservation or efficiency services.

4.4 Experience of default price regulation in other markets transitioning to competition

As noted in section 4.1 above default price regulation has been used in other utility sectors in the early days of a transition when a single former incumbent operator occupies a super dominant position, or more recently to protect *household* customers which display certain decision-making biases from being exploited.

While for the reasons given above neither of these rationales appear to directly apply to the NHH retail water market (there is no single dominant incumbent at the national level, and default tariffs are used to protect *non-household* customers), it is nevertheless instructive to draw on the experience of the use of default price regulation for households when considering the transition to competition in the NHH retail water sector. Four insights about the use of default price regulation in other retail markets seem particularly pertinent.

⁶⁴ See Joskow (2008).

⁶⁵ Littlechild (2021a)

⁶⁶ Brown, Eckert and Eckert (2017) show how sub-optimal regulated default retail tariffs in electricity markets can be in conflict with energy conservation policies if they result in inefficiently high levels of electricity consumption.

⁶⁷ Ofwat (2021b) notes that: "Some Retailers have noted that where customers are subject to the REC price caps, a Retailer is financially incentivised to sell those customers as much water as possible, which could act as a disincentive for Retailers to pursue water efficiency."

First, there is some evidence that the use of default price regulation can be inconsistent with the development of retail competition. A comprehensive international survey of the use of regulated (default) tariffs in energy markets for the Australian Competition and Consumer Commission in 2018 concluded that: “*We are not aware of any clear example where widely-available regulated prices coexist with successful retail competition.*”⁶⁸ This conclusion is supported by anecdotal evidence that the development of retail competition in energy markets appears to have been most successful in those jurisdictions which do not have a regulated default tariff. For example, the introduction of retail competition in the Nordic countries in the late 1990s placed no restrictions or regulatory controls on retail prices and has been described as a relative success.⁶⁹ Similarly, in Texas, a US state that does not have a regulated default tariff, high levels of switching have consistently been observed (above 90%) and the state is often cited as having the most successful retail competition.

Second, academic commentators and studies have emphasised the risks of keeping price regulation in place for too long as competition is emerging. These studies note that while the application of price regulation in circumstances of partial competition is not necessarily incompatible with the emergence of competition, there is a risk that once the transition to competition reaches a particular point, the standard forms of price control may be inappropriate and may, in fact, act to shield an incumbent supplier from the effects of competition, or limit its incentives to reduce its costs.⁷⁰ In addition, it is argued that conventional price cap regulation can make entry more difficult, and deter competition, and that removing price controls, where appropriate, can stimulate competition.⁷¹

Third, although they were withdrawn at different times across the utility sectors, and for non-household and residential customers, some policymakers and regulators appear to acknowledge that maintaining retail price regulation longer than necessary can be inimical to the development of competition. For example, the European Commission has stated that continuation of retail price regulation in energy markets in EU member states is ‘*the main obstacle to more active consumers*’, as it locks consumers out of important market information and limits opportunities for savings.⁷² Even in settings where default tariffs have been re-introduced – such as in the British household energy sector – these policies are only for very limited and specific time periods.⁷³ This appears in part to be in recognition of the distortive effects of applying default price caps on a continuing basis in competitive market settings.

Finally, the practice of setting default price regulation in market transitioning to competition is not a trivial exercise and for the reasons set out above, the task differs from that used to set prices for monopoly companies. In particular, as noted, there is a need for regulators to ensure that default price caps provide sufficient margin or headroom to allow competition to develop. In other sectors, such as energy, regulators have in the past been particularly focussed on the available ‘headroom’ between price caps and the costs of entrants.⁷⁴ As the recent problems with the retail price controls for

⁶⁸ Brattle (2018)

⁶⁹ See Le Coq and Schwenen (2021). An earlier assessment is presented in Littlechild (2006).

⁷⁰ See Yarrow, Decker and Keyworth (2008). Weisman (2019a, 2019b) discusses the disincentives it can create for cost efficiency.

⁷¹ Littlechild (2008).

⁷² European Commission (2016).

⁷³ See Ofgem (2022a).

⁷⁴ See for example, Ofgem (2001).

households in energy illustrate, there is also a need to ensure that retail default tariffs are flexible and frequently adjusted to reflect changing supply costs.⁷⁵

⁷⁵ See Oxera (2022). Ofgem has recently announced that the retail energy price cap will now be adjusted every 3 months rather than 6 months in recognition that there needs to be a closer alignment between the price cap and changes in supplier costs.

5: An alternative way forward

As set out in the introduction, the purpose of this paper is to draw on general principles and the experience of the transition to competition in other utility markets to stimulate a discussion about how to facilitate the transition to competition in the NHH retail water market. Drawing on the points made above, this section sets out some possible actions which might accelerate such a planned transition to competition.

5.1 The need for a transition plan or strategy

As described above, NHH customers, government, Ofwat and retail water companies have a collective interest in facilitating a planned transition to competition in the NHH water sector. Most importantly, to the extent to which this transition is stalled or protracted, this limits the scope for all NHH customers to benefit from the static and dynamic benefits of competition.

As it stands, the experience of the introduction of competition for NHH water supply already appears to contrast with other UK utility sectors, where in some cases price regulation for NHH (business) customers was removed within a year of market opening. Should Ofwat proceed with its proposed approach of introducing new default price caps for a period of up to 5 years this could mean that price regulation for NHH customers could be in place for a period of up to 10 years after market opening. This may give rise to questions about whether Ofwat has done all it can to facilitate the development of NHH competition.

There is also a risk that unless something fundamental changes the current cycle of low customer engagement and limited entry and expansion will continue. In other words, small NHH customers will continue to have limited incentives to engage because they believe they are protected by default price regulation or are getting a good deal, and at the same time, supply side incentives for entry and expansion will continue to be limited, or unduly squeezed, by the existence of tight default price regulation and low levels of customer willingness to engage and switch. As noted above, this type of concern – where the transition becomes stranded in a no-man’s land between regulation and competition for an extended period – was identified in other utility sectors and appears to have motivated policies to ensure a swift transition away from the formal regulatory setting of prices.

To avoid this risk, Ofwat should consider developing and publicising a strategy or plan for how it intends to manage and accelerate the transition to competition (including what steps it intends to take) over the short to medium term. This can reduce uncertainty and provide both current and prospective suppliers and their investors with a better understanding of when, and under what conditions, any default price regulation will be reviewed or removed. It will also send a signal to NHH customers that price regulation is not a permanent feature of the market and that they should prepare for the removal of any default price caps at some point in the future.

Any such strategy or plan should be based on realistic milestones and indicators taking account of the points made in section 2 about the experience of retail opening in other utility industries. Specifically, as described, notwithstanding the fact that retail utility markets in other sectors have been open to competition and not subject to price regulation for at least a decade (and in some cases two decades) it is not unusual to observe high levels of supplier concentration in some markets (indeed higher than in the NHH retail market); relatively low levels of switching (less than 10% in some cases); and low levels of customer engagement in some segments.

5.2 Clear articulation of the rationale for default price regulation

The discussion above identified three main rationales for the use of default price regulation in settings where there are multiple suppliers: to protect customers that have not switched from exploitation by

dominant suppliers (usually former incumbents with very high market shares); as a response to a perception that customers are disengaged and not active in retail markets; or because of concerns that if default price regulation was removed this might not be politically acceptable.

Given that each of these rationales has different implications for the type (and duration) of any default price regulation applied, it is important for Ofwat to be clear about the specific rationale for continuing default price regulation of the NHH water retail market.

To the extent to which the use of a default price regulation is a response to a perception that NHH customers suffer from various decision-making biases which makes them disengaged, there is arguably an additional requirement for Ofwat to explain why price regulation is seen as the most effective way to address any such decision-making biases that NHH customers may have when it comes to purchasing water services, even though prices regulation is not used in other utility services (or for key inputs) where such biases might also affect business decision making. It would also be useful for Ofwat to set out why it considers that more targeted information-based mechanisms, such as promotion of accredited price comparison websites like other regulators provide,⁷⁶ would not be effective in making NHH customers engaged.

Similarly, as discussed below, if the rationale for default price regulation is based on the view that water retailers are either individually, or collectively, 'dominant' in a market then this should be subject to assessment and periodic review. Such assessment will allow for the application of more targeted default price regulation to only those suppliers that maintain a dominant position, or to specific services where the potential harm from the exercise of market power by a dominant supplier is assessed as highly likely such as to merit *ex ante* price regulation. Default price regulation can then be removed from non-dominant suppliers.

To the extent to which default price regulation is motivated by a political desire to ensure that prices don't rise, or to keep prices low, then this should also be clearly articulated as it will have impacts on the incentives of suppliers to enter or expand and for customers to invest time and resources in becoming engaged in the market. As described above, there are substantial risks attached to this rationale for default price regulation, including the risk that it results in artificially low prices that change suppliers incentives to provide quality services and to invest which can be ultimately harmful to consumers.

Finally, although Ofwat has suggested that default price regulation is needed as a response to three types of 'market frictions' it is not obvious how this reasoning supports the on-going use of default retail price regulation in a vertically separated industry structure. This is because: (i) the frictions identified by Ofwat appear to largely relate to wholesale activities over which retailers have no or limited control; (ii) the frictions appear to be non-price related rather than price-related in nature and are potentially better addressed through targeted non-price measures and remedies; and (iii) it is unclear how setting a default regulated price will overcome the switching problems identified, especially as the use of default price regulation can sometimes have the opposite effect of reducing (rather than increasing) the incentives for customers to switch.

⁷⁶ For example, Ofcom and Ofgem both provides a website listing accredited digital comparison tools: <<https://www.ofcom.org.uk/phones-telecoms-and-internet/advice-for-consumers/costs-and-billing/price-comparison>> and <<https://www.ofgem.gov.uk/information-consumers/energy-advice-households/switching-energy-tariff-or-supplier>>

5.3 Carefully consider the *level* of the default price cap and the incentives that this creates

In section 4, it was noted that setting the level of the default cap is a complicated task in settings that are transitioning to competition and where it applies to all suppliers in a market. In part this reflects the fact that unlike situations of monopoly there are generally no well-established principles for regulators to apply in such circumstances.⁷⁷ Rather in setting a market-wide default price cap the regulator must estimate what an appropriate normal return is for a specific competitive market, a task characterised by substantial judgement and uncertainty.

As discussed above, in other utility industries that have transitioned to competition it is often the case that price caps are less tight than those applied to monopoly firms, in recognition of the fact that there needs to be sufficient headroom for efficient entrants to compete in the market.

5.4 Reducing the risk that NHH customers become dependent on default tariff

As described above, a major risk of default price regulation is that it can reduce the incentives for NHH customers to be active, and over time make NHH customers dependent on the default tariff. This can give rise to a vicious cycle where the more customers become dependent on the default tariff the less engaged they become, which in turn makes it harder for new entrants and competitors to attract new customers away from their current supplier. For the reasons set above, where market wide default price regulation is too tight this reduces the ability of suppliers to differentiate themselves from competitors by investing in quality enhancements or to innovate in other ways. It will also reduce the incentives for suppliers to actively seek out and encourage customers to switch to them.

There are various ways to address this risk including by making clear to NHH customers that default price regulation will only be in place for a specific and limited amount of time (e.g.: it will not apply indefinitely). More generally, there is a large and growing body of behavioural economics inspired research that could be drawn upon when thinking about possible measures to encourage NHH customers to be engaged. Overall, this work suggests that regulatory measures that seek to educate consumers and make them more equipped to deal with the complexity of the market are most effective in making consumers more active and engaged.⁷⁸

Finally, there may be a need to focus NHH customers' attention on the wider potential benefits of competition. This includes benefits in terms of water management and conservation, and more broadly in terms of innovation and new products and services that can accompany the development of effectively competitive markets.

5.5 Specific alternative, or complementary, measures that could accelerate the transition to competition

While Ofwat appears to assume that the risks to NHH customers being exploited by potentially higher prices are so great and systematic across the market that the continued use of default price regulation is merited in the short-term, given the slow development of competition to date, it is nevertheless worth considering various specific initiatives or measures that could either complement default price regulation, or be used as alternatives to default price regulation in the medium term. A non-exhaustive list of possibilities that might usefully be explored by Ofwat include the following.

⁷⁷ In contrast to say monopoly regulation where there are well-established principles about setting efficient regulated prices (based on marginal cost pricing) and optimal deviations from marginal cost pricing such as Ramsey pricing, peak-load pricing or multi-part tariffs.

⁷⁸ See Spiegler (2011, 2012) who notes that these types of regulatory measures do seem to address some failures associated with consumer's bounded rationality

(a) *Introduce a 'safeguard' tariff*

One measure that could simultaneously address the risk of inactive NHH customers being exploited while at the same time providing appropriate incentives for supplier entry and expansion and NHH customers to become actively engaged is the introduction of a looser form of default tariff such as a safeguard tariff. As described above, this approach which provides for sufficient 'headroom' has been used in other retail markets that have transitioned to competition. A variant of this approach is also used by Ofwat for the regulation of Group 2 NHH customers.⁷⁹

Expanding the use of a safeguard tariff to small NHH customers seems appropriate for the following reasons. First, as noted earlier, there is no evidence that any single supplier is individually dominant at the national level, nor that a group of suppliers are collectively dominant. Second, small NHH customers are already familiar with competitive retail markets for other utility services, such as energy and communications, where no default price regulation is in place. Third, for the reasons set out above, the risks of setting the wrong level for a default tariff are asymmetric: a 'loose' default tariff that is perceived to be too high can be challenged under competition law, but a 'tight' default tariff that is too low cannot be challenged in the same way notwithstanding the adverse effects it can have on the development of competition and ultimately customers.

(b) *Focus on demand side initiatives to encourage greater engagement*

In addition to the supply side initiatives, Ofwat should actively focus on demand side measures to encourage greater engagement by NHH customers and to address perceptions of demand side inertia. As noted above, these measures are widely used by regulators in other retail utility markets in the UK and elsewhere to encourage greater customer engagement. Note that as a matter of sequencing, these measures would only likely be effective if consumers have an incentive to be engaged in the market and do not feel that the default price cap represents a 'good deal' or where the default tariff is set at a level below the market clearing price.

There are a range of possibilities for encouraging greater demand side engagement including: information and trigger reminders to encourage customers to consider switching; mandatory and standardised supplier information disclosures; and requirements about customer bills allowing them to make 'apple for apple' comparisons. Other proposals that have also been considered by other regulators such as the deeming of supply contracts to end after a certain date with no possibility of auto-renewal.

Two current examples highlight the approaches adopted by other regulators to encourage greater customer engagement by small or micro businesses. In the payments industry, the Payment Systems Regulator is currently consulting on remedies to encourage smaller merchants (i.e.: businesses) to be more active in the card acquiring market. This is in light of its market review finding that many existing small and medium-sized merchants don't regularly (if ever) search for providers and rarely consider switching their provider. Among the proposals it is consulting on are:⁸⁰

- Summary boxes containing bespoke key price and non-price information to be sent individually to each merchant and shown prominently in their online account which can be used alongside new online quotation tools to help merchants compare prices and other service features more efficiently.

⁷⁹ Ofwat (2021b).

⁸⁰ Payment Systems Regulator (2022).

- Trigger messages to prompt merchants to shop around and/or switch to be sent by providers of card-acquiring services to their merchant customers and shown prominently in their online account.
- A maximum duration of 18 months for Point of Sale (POS) terminal lease and rental contracts, and maximum 30 days' notice after any renewal.

A second example comes from the energy sector, where Ofgem has recently introduced measures to address concerns that the market is not working well for some microbusinesses.⁸¹ Among the specific concerns identified by Ofgem include: a lack of transparent pricing; that a significant proportion of microbusinesses surveyed are not engaging with the market and accessing the best deals; and concerns relates to how brokers operate in the market. To address these concerns, Ofgem is introducing measures to improve information provision and establishing new dispute resolution arrangements on the expectation that this will better equip microbusiness to navigate the energy market. Specifically, the measures involve:

- Strengthening supply licence conditions around the provision of principal contractual terms to ensure consumers receive this key information, including about Third Party Costs, both pre- and post-contract entrance, in all cases.
- Introducing a requirement for suppliers to only work with brokers signed up to a qualifying alternative dispute resolution scheme.
- Prohibiting suppliers from requiring microbusinesses to provide notice of their intent to switch, except for Evergreen contracts.
- Creating new and updated information materials (with Citizens Advice) so that microbusiness can access up-to-date guidance and advice to help boost awareness of how the market operates and their rights as consumers.

It should be noted that in both of these current examples, neither regulator is proposing to introduce price regulation as a means of addressing concerns about low business customer engagement.

(c) *Frequent assessments of market power*

A common characteristic of the transition to competition in other industries has involved the regulator undertaking relatively frequent assessments of market power and then using this as the basis to determine whether to apply default price regulation or to introduce alternative remedies and supervision arrangements (see point below). As already noted, a finding of substantial market power is considered to be a necessary, but not sufficient, condition for the imposition of *ex ante* forms of regulation.⁸²

Frequent assessments of which suppliers hold a dominant position, or have substantial market power, has been a major part of the framework for the transition to competition in the UK and EU telecommunications sector, where *ex ante* remedies are only applied to suppliers that are found to be in such a position. A similar approach has been adopted for airports in the UK, where only two airports out of twelve major airports are now considered to have substantial market power and subject to regulation. However, as discussed below, even when an airport is found to hold a position of substantial

⁸¹ Ofgem (2022b)

⁸² See Black, Harman and Moselle (2009).

market power/dominance, the form of regulatory oversight can differ reflecting the perceived competitive constraints facing different airports.

As far as I am aware there has not been any similar type of detailed assessment of the market power of NHH water retailers by Ofwat. Rather, Ofwat appears to automatically assume that a lack of switching means that each water retailer has a monopoly in the supply to its own smaller NHH customers. In other words, Ofwat appears to be assuming that, in the absence of default regulation, each water retailer would not be constrained in its ability to exploit its smaller NHH customers by raising prices significantly above costs. This conclusion however rests on two fundamental assumptions that do not appear to have been tested:

- First, that a sufficient number of NHH customers will 'do nothing' if their supplier significantly raises the price of water services (i.e.: they are simply too dis-engaged or inert to take action in response to a significant price increase).
- Second, that other NHH retailers will not seek to attract business away from a dominant retail supplier that is seeking to exploit its position by raising prices to its own customer base. As noted above, this implicitly makes the unsupported assumption that all water retailers are collectively dominant and will naturally align their behaviour in the market in the absence of price regulation. Similarly, there is no evidence or analysis to support the argument that all NHH retailers are collectively dominant, which might justify market wide price regulation, insofar as they have been shown to have similar incentives or ability to coordinate or align their behaviour across the market.⁸³

Both of these assumptions also appear inconsistent with the CMA's recent assessment of a merger where it concluded that competitors will continue to constrain the merged entity at the national level.⁸⁴

(d) *Consider alternatives to default price regulation*

Finally, given the risks associated with maintaining default price regulation for too long in markets transitioning to competition, consideration might also be given to alternative forms of regulatory oversight and control. Here too the experience of other sectors is potentially instructive.

As noted, in telecommunications markets, suppliers assessed as holding a position of substantial market power can be subject to a range of remedies. This can range from: obligations in relation to transparency, non-discrimination obligations, cost orientation obligations (which do not involve formal price controls but place the onus on the operator to show that prices are cost-oriented) or *ex ante* price regulation. Similarly, different remedies are applied to airports that are assessed as having substantial market power in the UK. Heathrow is subject to a five-year *ex ante* price control, while London Gatwick's airport charges are subject to a cap on the maximum level of airport charges.

Other alternative approaches involve the removal of default price regulation or the introduction of a looser default price cap, but to subject suppliers to an intensive monitoring regime with the threat of the re-imposition of tighter price regulation should evidence emerge of suppliers abusing their market positions to the detriment of customers.

⁸³ That is, the standard tests for collective dominance in UK competition law as set out in paragraph 37 have not been established.

⁸⁴ CMA (2021).

6: Conclusions

Given its scale, policy-makers, regulators, academics and other commentators in the UK and around the world are closely watching how the introduction of competition in the market for NHH water customers in England develops. Some five years on from its introduction the experience is not encouraging, with over 90% of customers still subject to some form of default price regulation and plans to extend this regulation for at least another 3 to 5 years.

There are several possible explanations for the slow development of competition. One is that there is something intrinsic about water services that means that businesses (NHH customers) cannot engage in the market in the same way they do for other utility services. However, at first sight, this explanation seems implausible, especially given that water services are highly homogenous and commoditised and arguably less complex than other utility services that NHH customers purchase in competitive markets (without the protection of default tariffs) such as communications, transport, gas or electricity services.

Another possible explanation is that there are aspects of the design and approach to regulation that are impeding the development of competition in the market. While Ofwat's view is that default price regulation is needed because engagement and activity levels are low, and the motivations for switching and renegotiating are reduced because of small available savings relative to default tariffs, there are various pieces of evidence that Ofwat itself has collected which challenge this view. For example, in its recent consultation, Ofwat (2021b) noted the following:

- That customers that have switched or re-negotiated have been able to achieve savings against default (regulated) prices. This suggests that there are savings to be made from being active.
- That NHH customers subject to a looser default price cap, or no price cap, are '*more aware and engaged*' and '*tend to reap more benefits from and have much stronger incentives to engage in the market*' than NHH customers subject to a tighter price cap. While this might in part be explained by the greater savings available to these larger NHH customers, it also appears to support the more general point that looser caps (or no default caps at all) can provide greater incentives for supply side entry and expansion and for customers to become engaged in the market, and thus aid the transition to a competitive market.
- Building on this last point, Ofwat appears to recognise a link between the incentives to engage in the market and the relative 'tightness' of the price control. For example, in explaining its decision to apply a looser price control to Group Two customers Ofwat notes that there was "*less need for tighter regulation which could distort the market*" because these consumers "*have a greater incentive and ability to engage in the market.*"

Looking back over the past five years, from an external viewpoint, it seems plausible that Ofwat's assumption that each retailer (irrespective of size) is a monopoly has led to default price controls that are too tight. This may have adversely affected supply-side incentives to enter and expand (including from those outside the sector) and severely limited the demand-side incentives for all NHH customers to be active and engaged, and reduced the incentives for suppliers to actively seek out and encourage customers to switch to them. Looking ahead, this situation does not seem inevitable, especially as there are a number of active suppliers and no single retailer is dominant at the national level. Moreover, the experience of loosening (or removing) default price regulation for larger NHH customers is encouraging and has resulted in more active and engaged customers who, as Ofwat acknowledges, are now reaping the benefits of competition. This suggests that a transition to competition *in* the market for NHH retail water services can work under the right conditions.

In summary, given the limited success in facilitating the transition NHH competition over the past 5 years, coupled with the prospect that default tight regulation will continue for at least another 3 to 5, there is clearly merit in considering alternative approaches. One such alternative might involve the following approach:

- (i) Ofwat should reconsider its assumption that all water retailers are monopolies and regulating them as such (e.g. by applying a tight default tariff based on the costs of hypothetical efficient supplier). This assumption seems misplaced given that: (i) no individual supplier has an individual market share above 31% at the national level, and eight suppliers have a market share of less than 15%; and (ii) as Ofwat has recognised, the retail market is now more mature, and most retailers operate at a national level serving customers across England. The assumption that all water retailers are monopolies is also inconsistent with recent CMA merger investigations in this industry which have found that there is no risk of a substantial lessening of competition at the national level because there are competitors that will constrain the merged entity.⁸⁵
- (ii) Ofwat should undertake an assessment of the individual and collective market power of the retail water companies using the standard and established criteria applied by other regulators and competition authorities. This is important for two reasons. First, because it is widely acknowledged that dominance or substantial market power is a necessary, but not sufficient, condition for the use of *ex ante* price regulation. Second, as noted above, recent CMA assessments have found that retailers do effectively constrain the ability of one another in England, and thus limit their ability to exercise any market power they have to profitably raise prices or degrade quality.
- (iii) For suppliers that are found to be dominant or to have substantial market power, Ofwat should seek to apply 'safeguard' default tariffs that are calibrated to provide adequate 'headroom' and do not distort supply side incentives to enter and expand or demand side incentives to actively engage in the market. This could be accompanied by a threat to re-introduce 'tighter' controls if any supplier with substantial market power is found to have exploited its position. For retailers that are not assessed as being dominant or having substantial market power then *ex ante* regulation should be removed on the assumption that, as in other markets, competition will protect consumers by constraining the ability of these retailers to exercise market power, and over time should result in prices that reflect underlying costs.
- (iv) Ofwat should put considerable effort into developing initiatives and measures to promote greater demand side engagement which, studies suggest, are the most effective way to overcome customer inertia. These would only likely be effective after the lifting, or loosening, of a default price cap. Here Ofwat can usefully draw on the experience of other regulators in applying such approaches and wider insights from research in behavioural economics.

⁸⁵ CMA (2021).

References

- ACER/CEER, 2014. 'Annual Report on the Results of Monitoring the Internal Electricity and Natural Gas Markets in 2013'. October 2014.
- ACER/CEER, 2021. 'Annual Report on the Results of Monitoring the Internal Electricity and Natural Gas Markets in 2020 Energy Retail Markets and Consumer Protection Volume'. November 2021.
- AEMC, 2013. 'Advice on best practice retail price methodology' 27 September 2013.
- Armstrong, M. 2015. 'Search and Ripoff Externalities', *Review of Industrial Organization* 47(3), 273.
- Armstrong, M., S. Cowan and J. Vickers, 1994. *Regulatory Reform: Economic Analysis and British Experience*. Cambridge, MA: MIT Press
- Armstrong, M. and S. Huck, 2010. 'Behavioral economics as applied to firms: A primer' (No. 2937). CESifo Working Paper.
- Armstrong, M, Vickers, J, Zhou, J, 2009. Consumer protection and the incentive to become informed. *Journal of the European Economic Association* 7 (2–3), 399–410.
- Baranes, E. and S.J. Savage, 2018. 'Access prices, unbundling and product variety in European Internet markets,' *Applied Economics* 50(60), 6576–87.
- BEREC, 2021. 'BEREC Annual Reports for 2020'. 10 June 2021.
- Black, D., Harman G, and B Moselle, 2009. 'The case for ex post regulation of energy networks'. Final Report for Ofgem. 7 October 2009.
- Borenstein, S. and J. Bushnell, 2015. 'The US electricity industry after 20 years of restructuring'. *Annu. Rev. Econ.*, 7(1), pp.437-463.
- Brattle, 2018. 'International Experiences in Retail Electricity Markets'. Report for the ACCC. June 2018.
- Brown, D.P., A. Eckert and H. Eckert, 2017. 'Electricity markets in transition: Market distortions associated with retail price controls', *The Electricity Journal* 30(5), 32–37
- Bushnell, J., E.T. Mansur and K. Novan, 2017. Review of the Economics Literature on US Electricity Restructuring. Working Paper.
- CAA, 2007. 'De-designation of Stansted and Manchester airports for price control regulation: the CAA's advice to the Secretary of State', London: CAA, July 2007.
- CAA, 2008. 'Price control review – consultation on the framework and options for the economic regulation of Stansted Airport'. January 2008.
- CEER, 2021. 'CEER Report on Innovative Business Models and Consumer Protection Challenges'. Ref: C20-CRM-DS-03-03 20 September 2021
- CMA, 2016. 'Energy Market Investigation'. Final Report.
- CMA, 2021. 'Completed acquisition by Pennon Group plc of Bristol Water Holdings UK Limited' 5 November 2021.
- Defra, 2022. 'The Government's strategic priorities for Ofwat.' February 2022.
- European Commission, 2007. 'Inquiry pursuant to Article 17 of Regulation (EC) No 1/2003 into the European gas and electricity sectors'. COM (2006) 851. Final Report. 10 January 2007.
- European Commission, 2016. 'New electricity market design: a fair deal for consumers'.
- European Commission, 2021. 'Quarterly Report on European Electricity Markets'. V(13). Quarter 4.

- Heidhues, P. and Koszegi, B., 2018. 'Behavioral Industrial Organization', in *Handbook of Behavioral Economics: Applications and Foundations 1*. : Elsevier, 517–612.
- Joskow, P, 2008. 'Lessons Learned from Electricity Market Liberalization.' *Energy Journal*. 9–42
- Kahn, A. E., 2002. 'The Deregulatory Tar Baby: The Precarious Balance Between Regulation and Deregulation, 1997–2000 and Henceforward.' *Journal of Regulatory Economics*.21:35–56
- Le Coq, C. and Schwenen, S., 2021. Strengths and weaknesses of the Nordic market model. In *Handbook on Electricity Markets*. Edward Elgar Publishing.
- Littlechild, S. C., 2006. 'Competition and Contracts in the Nordic Residential Electricity Markets.' *Utilities Policy*. 14:135–147
- Littlechild, S. C., 2008. 'Regulation, Over-Regulation and Deregulation.' CRI Occasional Lecture 22. November 2008
- Littlechild, S. C., 2021a. The evolution of competitive retail electricity markets. In *Handbook on Electricity Markets*. Edward Elgar Publishing.
- Littlechild, S. C., 2021b. 'The challenge of removing a mistaken price cap'. *Economic Affairs*, 41(3), pp.391-415.
- Mercadier, A.C. and F.S. Brenner, 2020. 'Tariff (un)sustainability in contexts of price (in)stability: The case of the Buenos Aires water and sanitation concession', *Utilities Policy* 63, 101005.
- Nardotto, M., T. Valletti and F. Verboven, 2015. 'Unbundling the incumbent: evidence from UK Broadband', *Journal of the European Economic Association* 13(2), 330–62.
- National Infrastructure Commission, 2018. 'Preparing for a drier future England's water infrastructure needs'. April 2018.
- Ofcom, 2006. 'Retail Price Controls: Explanatory Statement'. 19 July 2006.
- Ofcom, 2021. 'The Communications Market 2021'. 22 July 2021.
- Ofgem, 2001. 'Ofgem's analysis of possible 'headroom' in domestic gas and electricity retail supply - 2001.' December 2001.
- Ofgem, 2022. 'Check if the energy price cap affects you'.< <https://www.ofgem.gov.uk/information-consumers/energy-advice-households/check-if-energy-price-cap-affects-you>> [Accessed 3 August 2022]
- Ofgem, 2022b. 'Decision: Microbusiness Strategic Review', 28 March 2022.
- Ofwat, 2015. 'Consultation on the review of non-household retail price controls.' November 2015.
- Ofwat, 2018a. 'Open for business: reviewing the first year of the business retail water market'. July 2018.
- Ofwat, 2018b. 'Retail Exit Code: Proposals for price protections beyond March 2020' December 2018.
- Ofwat, 2019. 'Future protections for business retail customers: Decision on Retail Exit Code – price protections' July 2019.
- Ofwat, 2021a. 'State of the market 2020-21. Review of the fourth year of the business retail water market'. December 2021.
- Ofwat, 2021b. 'Business retail market: 2021-22 review of the Retail Exit Code – a consultation.' December 2021.
- Oxera, 2022. 'Review of Ofgem's regulation of the energy supply market'. Report for Ofgem. 3 May 2022.

- Payment Systems Regulator, 2022. 'Card acquiring market review remedies provisional decision'. June 2022.
- Spiegler, R., 2011. *Bounded rationality and industrial organization*. Oxford University Press.
- Spiegler, R., 2012. 'Monopoly pricing when consumers are antagonized by unexpected price increases: a "cover version" of the Heidhues–Kőszegi–Rabin model', *Economic Theory* 51(3), 695–711
- Su, X., 2015. 'Have customers benefited from electricity retail competition?', *Journal of Regulatory Economics* 47(2), 146–82.
- Vogelsang, I and Cave, M., 2019. 'Financial capital maintenance and its role in fibre regulation in New Zealand'. May 2019.
- Weisman, D. L. 2019a. 'Why the efficiency gains from PBR may turn on Hope', *The Electricity Journal* 32(1), 13–17.
- Weisman, D. L. 2019b. The power of regulatory regimes reexamined, *Journal of Regulatory Economics* 56(2–3), 125–48.
- Whittington, D., 2003. 'Municipal Water Pricing and Tariff Design: A Reform Agenda for South Asia.' *Water Policy*. 5:61–76
- World Bank, 2020. 'Price controls – Good intentions, bad outcomes'. Policy Research Working Paper 9212.
- Yarrow, G. K., C. Decker and T. Keyworth, 2008. 'Report on the Impact of Maintaining Price Regulation.' Report to the Australian Energy Market Commission. January 2008

Annex 1: Brief biography of the author

Dr Christopher Decker is a Research Fellow specialising in economic regulation and competition law and economics in the University of Oxford. He is the author of two books, including the textbook, *Modern Economic Regulation: An Introduction to Theory and Practice* (Cambridge University Press, 2014 – second edition forthcoming in 2022) and numerous academic articles, technical papers and research reports. He is the current editor of *New Economic Papers on Regulation* which provides a weekly update to subscribers around the world on the latest research on economic regulation.

Dr Decker has been a member of numerous academic advisory panels including: the UK Competition and Markets Authority academic panel; the UK Better Regulation Executive Network of Experts; the Commission for Energy Regulation (Ireland); the International Water Association academic panel; and an Expert Group of the United Nations Global Water Programme. He has also been a member of the Advisory Services panels for the UK energy regulator (Ofgem), the Civil Aviation Authority, the Financial Conduct Authority, the Competition and Markets Authority, the Australian Competition and Consumer Commission and the Australian Energy Market Commission.

Over the course of his career, Dr Decker has prepared over 50 reports and research studies include reports and studies for international organizations (such as the World Bank, OECD, European Commission and the European Parliament); UK regulators and government departments (Cabinet Office, Civil Aviation Authority, BIS, DEFRA, BEIS, National Infrastructure Commission, Ofgem, Ofcom, the Competition Commission, Office of Fair Trading, Competition and Markets Authority, the Legal Services Board, the Medicines and Healthcare Products Regulatory Agency, the Payment Systems Regulator and the Financial Conduct Authority) and government departments and regulators in many parts of the world. He has also provided expert economic evidence in proceedings before the European Court of Justice, General Court of the European Union, the International Centre for Settlement of Investment Disputes, the International Chamber of Commerce, the UK Supreme Court, the Irish High Court.

Dr Decker has extensive experience of regulatory policy issues in the water industry. He advised on various aspects of water sector economics and regulation, including in relation to: the development of markets for competition, pricing principles for water charging, approaches to access pricing and various other aspects relating to the economic regulatory framework. In 2018, he was commissioned by the National Infrastructure Commission to provide an independent assessment of the estimated costs, and associated water resource benefits, of different infrastructure and demand management options to enhance water resources management and resilience in England and Wales. This analysis was used to develop policy recommendations around the UK's infrastructure needs over the next 30 years as part of the National Infrastructure Assessment. He was also a member of the Global Water Partnership's Expert Group on the Benefits of Action/ Cost of Inaction for Drought Preparedness and the International Water Association's Working Group on public policy and regulation. Between 2014 to 2018 he was a Co-Investigator and lead economist on two large projects at Oxford jointly funded by the UK Economic and Social Research Council and Natural Environmental Research Council examining the potential economic, environmental and social impacts of future water scarcity associated with climate change.