EXECUTIVE SUMMARY

• Price differences between “rip off” Standard Variable Tariffs (SVTs) and cheaper fixed tariffs are not evidence of low levels of competition. In fact, large price differences between similar products are frequently observed in highly competitive markets.

• International evidence suggests that price caps reduce rates of customer engagement (measured by switching), lead to higher average costs, and result in inefficient pricing arrangements.

• Reduced customer engagement will reduce the prospects of innovation within the energy market in the medium-to-long term to the detriment of consumers.

• Price controls would threaten an environment of permissionless innovation where suppliers can offer new pricing models without asking for regulatory approval. Dynamic pricing models could accelerate the roll-out of low-carbon renewables and home batteries, but such models rely on peak-time surge pricing.

• There are a number of alternative measures that would cut costs for vulnerable customers without reducing customer engagement and stifling innovation. These include opt-out collective switches and allowing competitors to target disengaged customers with direct marketing.

PRICE DISCRIMINATION IS NOT EVIDENCE OF LOW LEVELS OF COMPETITION

High price differentials between Standard Variable Tariffs (SVTs) and cheaper fixed rate tariffs are often cited by politicians as evidence of low levels of competition. However, price discrimination (the practice of charging differential prices for identical or near-identical products) is frequently observed in highly competitive markets.

One example of price discrimination in a competitive market is the price differential between medium and large drinks in high-street coffee chains. Fixed costs such as rent, wages and machinery dwarf variable costs such as electricity, coffee beans
and water. As a result it costs essentially the same amount to produce a large coffee as it does to produce a medium coffee. Yet, in a Starbucks a Venti Caffe Latte is 65p more expensive than a Tall Caffe Latte.

Baumol points out that “Particularly in the presence of heavy sunk or fixed costs, it is clear that uniform prices set at any level (and, notably, if they are set equal to marginal costs) will not permit the enterprise to recoup its invested outlays”.

For instance, a cafe competing with Starbucks that set a uniform markup would underestimate price insensitive customers and overcharge price sensitive customers. As a result, they would attract fewer customers and have to charge higher markups to compensate for their high fixed costs. This is why in markets with high fixed costs (such as the UK’s retail energy market) differential pricing can increase total output raising societal welfare.

In their analysis of the US Airline Industry Borenstein and Rose find that price differentials increase as competition intensifies. As AirAsia bluntly puts it “Want cheap fares, book early. If you book your tickets late, chances are you are desperate to fly and therefore don’t mind paying a little more ”.

In the case of airfares and coffee, firms use quantity or convenience to screen a customers’ willingness to pay. The retail energy market differs by providing a significantly more homogenous product. The key exception being green tariffs (where consumers are able to express their preference for environmentally friendlier energy). However, as smart metering and half-hourly settlement becomes more common suppliers may vary pricing between peak and off-peak usage significantly more, creating a heterogenous service.

It is worth pointing out that the CMA’s figure of consumers being overcharged by £1.4bn a year is not referring to the cost savings consumers would see if they switched from SVTs to cheaper fixed rate tariffs. Rather they are referring to firms reducing costs to consumers through increased efficiency driven by market competition.

In a recent paper Professor Stephen Littlechild (Director General of Electricity Supply 1989-1998) states “In other words, the CMA is not claiming that the six large suppliers are overcharging in relation to their present costs. The CMA’s argument is that their costs should be lower”.

CMA concedes that “a large part of the detriment we have observed in the form of high prices is likely due to inefficiency rather than excess profits”.

In an analysis produced for Scottish Power, Oxera Consulting found that the CMA’s £1.4bn a year figure relied on multiple contested assumptions. Oxera argue that the CMA underestimated customer acquisition costs for their ‘benchmark’ companies, OVO Energy and First Utility, by underestimating customer churn. OVO Energy and First Utility have been able to expand rapidly by pricing aggressively, as a result it is likely that their customers are significantly more mobile than average. For instance, if customers from ‘benchmark’ companies change suppliers every two years rather than every six years the size of the annual customer detriment falls by more than half.

UK & INTERNATIONAL EVIDENCE SUGGESTS THAT CURBS ON DIFFERENTIAL PRICING REDUCES SWITCHING RATES

The Government’s proposed cap on energy prices aims to protect “customers until the conditions for effective competition in this market are in place”. The difficulty is that the remedy may undermine the conditions for effective competition in the future. Evidence from Australia and the UK suggests that reducing price differentials leads to lower rates of customer engagement.

EVIDENCE FROM THE UK:
OFGEM’S NON-Discrimination CONDITION

An analysis of consumer behaviour in the UK retail electricity market from the University of East Anglia’s Centre for Competition Policy found that “that the strongest driver of consumer activity is the anticipated gains from switching”. This is supported by earlier research by Waddams and Loomes which found an increase in potential savings of 1 percent of a customer’s energy bill increased the probability of a customer switching by 3 percent.

Further research analysed the effect of Ofgem’s non-discrimination condition - (SL25A). The non-discrimination condition restricted incumbents from charging ‘unjustified’ lower out-of-area rates. This effectively reduced the anticipated gains from switching from incumbents. They found a halving in the difference between the incumbent’s price and the best non-incumbent price, leading to reduced switching rates. This finding supports earlier research which concluded “the most likely net result of prohibiting geographical discrimination on prices is to raise them all,

6 Ibid.
7 Oxera (2017) “Economic appraisal of Ofgem’s domestic tariff proposals: An appropriate intervention to increase consumer engagement?”
as predicted by the theoretical literature summarised in Section 1. Although price differentials have fallen, the rising levels of both gross and net margins since the clauses were introduced provide evidence that this has occurred''.

Evidence from Australia: Prices to Beat

Paul Simshauser (Director General of Energy and Water Supply, Queensland) and Patrick Whish-Wilson compared two retail electricity markets in Australia. Southeast Queensland, which has a regulated price cap, and fully deregulated Victoria. In Southeast Queensland, there are two incumbents and eight rival retailers. Prices bunch around the cap with modest discounts creating price differentials of around 8%. By contrast, in Victoria there is a greater degree of competition (three incumbents, 17 rivals) and much wider price differentials (up to 30%).

Customer behaviour is significantly different in Queensland and Victoria. In Southeast Queensland, the area with regulated price caps, 46% of customers stay on the default more expensive standing offer with just 22% benefitting from medium-level discounts, and none benefitting from high-level discounts. Conversely, in deregulated Victoria just 11% of customers stick on high cost standing offers with 45% accessing high-level discounts, and pricing being set at marginal cost (zero mark-up) for many.

Furthermore, the researchers exploit a change in the strictness of Queensland’s regulated price cap. In 2012, when political pressure lead to Queensland’s price cap being lowered, just over 45% were on the standing offer, with just under 40% accessing medium-level discounts, and the remainder accessing low-level discounts. By 2015 the proportion accessing medium-level discounts had nearly halved, while the proportion on standing offers remained stable. In contrast, deregulated Victoria saw the proportion on standing offers almost halve over the same period as the proportion accessing high-level discounts increased rapidly.

Reduced Rates of Customer Engagement Will Lead to Slower Take-Up of Potential Energy Market Innovations

Over the next 10 to 15 years, there is the prospect of substantial innovation within the retail energy market. Changes such as smart grid-technologies, increasing solar PV efficiency, cheaper battery storage, heat-pumps and smart metering can significantly reduce costs for consumers and support emissions reductions. But, for the full benefit of such changes to be realised, we need high levels of customer engagement.

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As Littlechild points out, the UK retail electricity markets was not created simply to impose market discipline on bloated nationalised enterprises, but rather to allow the market to function as discovery process. He notes innovations in contract length, tariffs with no standing charge and tariffs designed for elderly customers such as E.ON’s now withdrawn StayWarm tariff.\(^\text{14}\)

The evidence I set out in Section 2 identified that price caps designed to decrease price differentials reduce rates of customer switching. This may deter entry from independent suppliers who offer innovative tariffs or are able to significantly reduce distribution costs.\(^\text{15}\)

In her Adam Smith Institute report Power Up: The framework for a new era of UK energy distribution (2015) Professor Lynne Kiesling described the potential of digital technology to promote more efficient energy usage.

“Digital technology enables the customer to automate appliance use to vary electricity use depending on output, thereby reducing the use of energy overall and reducing the use of fossil-fuel-generated power. If an open retail market existed, the customer could sell excess generation from the rooftop panels to willing buyers. Transactive technologies like digital meters and programmable communicating thermostats and device controllers enable consumers to automate decisions about whether or when to offer excess generation for sale. Digital technologies make such an open, decentralized, interconnected retail market possible at the edge of the distribution network where it was not possible before”.

For example, Ovo Energy recently announced a partnership with electric vehicle manufacturer Nissan. Owners of the Nissan Leaf will be able to install a special charger in their homes that allows Ovo Energy to take control of the car’s battery. After informing Ovo of the minimum amount of charge they need for the next day, Ovo will charge the car in off-peak times and feed energy back into the grid at peak times when energy is significantly more expensive. Ovo estimates customers would save around £350-£400 a year, covering the Leaf’s annual charging costs.

However, for this technology to become widespread we need customers to engage to a much greater extent with their bills. It is a mistake to assume that smart metering and distributed energy will simply increase competition and create the conditions for the cap to be removed. If customer engagement falls substantially, as it did after Ofgem implemented the non-discrimination condition, then take-up of these new technologies could slow significantly and entrepreneurs could be deterred from taking such products to market.
Regulators should promote a climate of permissionless innovation where experimentation with new technologies and business models is permitted by default.\textsuperscript{16} If the proposed price caps apply to all tariffs and not simply Standard Variable or Default tariffs, then there is a risk that suppliers launching dynamic pricing plans may have to seek regulatory exemptions. The increase in regulatory risk may reduce access to finance for innovative suppliers.

**CAUSES OF REDUCED SWITCHING RATES**

In his submission to the Competition and Markets Authority’s energy market investigation, Stephen Littlechild described how poorly designed regulation set by Ofgem caused a substantial deterioration in switching rates.\textsuperscript{17} Prior to 2008 switching rates were rising at a rate of 1 percentage point per year. We would have expected that trend to have continued, and even have increased, as online price comparison sites spent significantly on advertising, and senior politicians highlighted the benefits of switching. But in 2008 switching rates fell from around 20% to 10% in 2014 (they recently rose to 15%, still below their 2008 high). He attributes the cause of the decline to three key policy decisions: the non-discrimination condition, the end of doorstep selling after additional regulatory scrutiny, and the policy of tariff simplification.

**NON-DISCRIMINATION CONDITION**

Until 1996, residential customers were served by British Gas and one of fourteen regional electricity suppliers. In 1996, the market was liberalised and incumbent suppliers were able to compete in new regions. While switching rates gradually increased up until 2008, a mark-up of around 10% persisted in regions where the supplier was previously an incumbent. In order to protect customers that had not switched Ofgem introduced license condition 25A (hereafter the non-discrimination condition) in 2008, which banned suppliers from charging higher markups in their home regions (where they were incumbent pre-1996) than in other areas.

There is strong evidence that the non-discrimination condition reduced competitive pressures within the energy market. Profit margins rose from close to zero in 2008 to just over £100 per customer in 2013 (when the condition was withdrawn due to evidence it reduced competition). In a paper on the impact of the non-discrimination condition, competition experts Catherine Waddams-Price and Minyan Zhu found that “the nature of competition in the industry has changed, with less effective rivalry between the regional incumbents and large regional competitors following the intervention; companies seem to have ‘retreated’ to their home regions, leaving a market where pricing behaviour resembles more closely a duopoly between British Gas and the regional incumbent.”\textsuperscript{18}


\textsuperscript{17} Littlechild, S. (2014) “Trends in domestic energy switching rates”

Annual switching rates fell substantially after reaching a record 20% in 2008. By 2011 they had fallen to 16% and then fell further to 10% in 2013 when the non-discrimination condition was withdrawn. However, it is not possible to attribute the fall solely to the non-discrimination condition, as the condition coincided with another reform that likely increased customer inertia.

**END OF DOORSTEP SELLING**

After public outcry over doorstep sellers misleading customers to pressure them into switching Ofgem imposed stricter conditions on doorstep selling. They fined SSE £10.5m, EDF £4.5m and British Gas £5.6m. In this context between 2011 and 2012 all major suppliers ended doorstep selling. This restriction may have on-net benefitted consumers by preventing misleading sales practices, but it may also have reduced the level of engagement with customers in lower socio-economic groups and those who are less ‘web-savvy’. As mentioned already, the switching rate fell from 16% in 2011 to 10% in 2013.

**SIMPLER TARIFFS**

Littlechild notes that Ofgem blamed falling switching rates on a proliferation of tariffs available and complex pricing structures. Growing public concern over complexity in the retail energy market led Ofgem to introduce the license condition 22b (hereafter simpler tariff rules). This restricted energy suppliers to offering at most four tariffs for each fuel type and prohibited various discounts and bundles. One result of the measure was that popular tariffs were withdrawn from the market. For instance, E.ON’s StayWarm tariff, which fixed a constant price per month regardless of the amount of energy used (though the bill could be adjusted on a forward-looking basis), was withdrawn as it was not compliant with new rules on discounting. This was ironic as in 2001 Ofgem highlighted the tariff for addressing the needs of the fuel poor.

Ofgem’s simpler tariff rules forced suppliers to offer a single unit rate, this meant that declining block tariffs where unit rates fell with greater usage were no longer allowed. This effectively banned tariffs without standing charges as they were no longer viable if they could not vary unit rates with usage.

The simpler tariff rules also had a deterring effect on innovation. As the number of tariffs on offer was restricted, introducing a new tariff would mean withdrawing tried and tested tariffs increasing the riskiness involved in innovation.

Following the recommendations of the Competition and Market Authority’s 2016 Energy Market Investigation, Ofgem withdrew the simpler tariff rules in November 2016.

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ASSESSING FURTHER REFORMS

RELATIVE PRICE CAPS

An alternative proposal, advocated prominently by Conservative MP John Penrose, is for a relative rather than an absolute price cap. A relative price cap would cap the price differential between the cheapest and most expensive deal. This would address the key public concern that ‘loyal’ customers are being overcharged relative to web-savvy millennials. It also reduces the risk that an absolute price cap set too low will deter investment in greater capacity.

As Penrose argues in an article for ConservativeHome: “A cap which creates a maximum mark-up deals directly with the market’s underlying problem – the rip-off. The bill’s current proposal for an all-knowing committee of Ofgem regulators to fix the price every six months will do nothing to end the rip-off, will take longer to reform the market and will make it harder to get rid of the cap in the end”.

However, relative price caps have significant drawbacks that may outweigh any potential benefit from eliminating the risk that regulators will deter investment by setting price caps too low. The UEA’s Centre for Competition Policy states in a submission to the Commons Business, Energy and Industrial Strategy Select Committee: “We want to make clear that the notion that a basic relative cap represents “less intervention” is false”.

First, it is not clear that a relative price cap would fully address the public’s key concern that loyal customers being overcharged. While some Big 6 customers can save significantly by switching from a SVT to fixed tariff, this isn’t the case for all suppliers. For instance, the price differential between British Gas’ Safeguard Tariff (SVT equivalent) and their cheapest fixed tariff is low. British Gas customers’ then will still be charged more than customers that actively switch. As a result, this may increase political pressure and lead to a stricter cap in the future.

Second, it is likely that a relative price cap will increase supplier profit margins and reduce overall competition. As the Big 6 have a significantly higher proportion of customers on more profitable SVTs than on lower margin fixed tariffs and because they know that SVT customers are less engaged, they have an incentive to raise the price of fixed tariffs rather than reduce the price of their SVTs. Even if a Big 6 firm lost all of their fixed tariff customers to small suppliers, it would still be a relatively small loss compared to a significant reduction in the markup on standard variable tariffs.

As all Big 6 suppliers would have simultaneously have an incentive to raise fixed rate tariffs, this would reduce competitive pressures in fixed tariff market segment.

20 Penrose, J. (2017) “Energy bills. We need a relative price cap – to boost choice, cut prices and stick it to the Big Six.” ConservativeHome

This weakening of competition may lead to smaller suppliers raising prices on fixed tariffs and consequently Big 6 suppliers feeling they have greater capacity to raise prices on SVT customers. This outcome would be similar to the results of the non-discrimination condition which reduced competitive pressures, reduced switching rates, and increased profit margins.

**IMPROVED INFORMATION**

There is evidence that targeted communications can increase customer engagement. In a small-scale trial to test the Competition and Markets Authority’s ‘Database Remedy’ which would create a database of low-engagement customers (on a Standard Variable Tariff for 3+ years) and allow rival suppliers to contact them directly, Ofgem studied 2,400 customers who had been on a SVT for over three years. Each customer was randomly assigned to receive one of the three following correspondences:

1. One ‘Best Offers’ letter from Ofgem (Best Offers Group)
2. Up to six marketing letters from other suppliers (CMA Group)
3. No letter (Control group)

Ofgem found a substantial increase in switching rates in both the ‘Best Offers’ and ‘CMA’ group of 12.1% and 13.4% respectively. The average customer that switched suppliers saved £138 per year. Interestingly, in follow-up interviews Ofgem found that most customers who switched did not switch directly to one of the suppliers they were contacted about, but instead the letters either prompted them to use price comparison websites or to ring up their supplier to switch to a cheaper tariff.

However, this study may be an outlier. The switching rate of customers in the control group was higher than expected. Ofgem attributed this to a controversial and well-publicised price rise during the trial and a programme by Martin Lewis (of MoneySavingExpert).

Ofgem carried out a further larger trial of targeted communications. Using customer data provided by two large energy suppliers, Ofgem studied 138,000 customers who had been on a SVT for over a year. Most customers received “a single, standalone letter detailing three cheaper tariffs from across the market that the customer could switch to (excluding tariffs from their own supplier). The tariffs were based on customers’ historic consumption, and were personalised to reflect how customers already pay and manage their Account.” Each customer was randomly assigned to receive either:

1. One letter detailing three cheaper tariffs sent by Ofgem (Ofgem group)
2. One letter detailing three cheaper tariffs sent by their own supplier (Supplier group)
3. No letter (Control group)

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22 Ibid.
The letter was effective in increasing switching rates compared to the control group with customers switching increase from a baseline of 1% (Control group) to 2.4% (Ofgem Group) and 3.4% (Supplier Group). Ofgem noted that switching rates varied significantly by supplier (4.5% for Supplier A and 2.3% for Supplier B) and that customers were more likely to switch given larger potential savings. The letter also had stronger effects on customers who had been on SVTs for longer. Customers who received letters were also more likely to switch externally rather than internally. Customers who received letters and switched saved an average of £214.50, while customers in the Control group who switched only saved £165.

Providing customers with information about the potential gains from switching appears to be effective in boosting switching rates. Further studies should be carried out testing different letter formats. One potential area for investigation is the letters customers receive when their fixed rate tariff expires. Ofgem should investigate whether renaming SVTs as “Out of Contract Tariffs” will prompt greater customer engagement.

**OPT-OUT SWITCH AUCTIONS**

A further proposal discussed by UEA’s Centre for Competition is opt-out collective switches. The proposal would take the form of a reverse auction. Disengaged customers (on SVT for over 3 years) at Big 6 suppliers would be split into tranches of 10,000 and firms (including the Big 6) would compete to supply energy to them at the lowest cost. The auction would start at a high price and firms would list the number of tranches they would supply. With high cost firms gradually reducing the tranches they would be willing to supply as the price falls until the number of tranches offered equals the number of tranches available. Disengaged customers would then be notified by letter from their supplier (or Ofgem) that they are to be switched onto a new cheaper tariff, they would be free to opt-out at any time but if they did not they would be automatically switched onto the new tariff. As suppliers would compete directly for disengaged customers, it is to be expected that prices for the new tariffs would be closer to competitive fixed tariffs than existing standard variable tariffs. It is likely that few customers would opt-out as they would be informed of potential savings.

There are a few risks to this proposal. First, the idea of being switched against one’s will (even if they were given the opportunity to opt-out) may be objectionable to customers. To reassure consumers, OfGem should guarantee that there will be no change in service quality. Second, if Fixed Rate customers see disengaged customers getting a better deal then they may be less willing to switch in the future. Third, a reduction in the price paid by non-engaged customers may be detrimental for customers on fixed tariffs.

The proposal would likely have a weaker impact on customer engagement than either an absolute or relative price caps. It could also lead to greater future engage-

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ment as it may reduce fears around the perceived riskiness of switching. If there are significant fears around the impact upon competition, opt-out switches should be limited to vulnerable disengaged customers. For instance, only customers that qualify for the Warm Home Discount could be included in auctions.

Prof Stephen Littlechild proposes an alternative remedy along similar lines. When there was insufficient competition within the power generation market, National Power and Powergen accepted a regulatory invitation to sell off 10pc of their total capacity to new entrants. Littlechild highlights that the plants sold off “had to be existing mid-merit plant, where competition was least effective.” This led to the development of a highly competitive market for power generation.

Littlechild argues that the Big Six be invited to transfer 10pc of their existing total customer base to a subsidiary and then sell-off that subsidiary (at market prices) to a new entrant. To promote competition, the customers sold off should “have been with the company for at least three years, preferably since the market opened”. Customers would still be given an opt-out and OfGem would monitor the situation closely. Littlechild calculates this would make 4m new customers available for new suppliers. Unlike price caps, this measure would stimulate competition and allow new suppliers to prove their ability to offer lower prices and better service.

**CONCLUSION**

High price differentials between SVTs and fixed tariffs are not evidence of low levels of competition. In fact, the economic consensus is that increased competition leads to wider price differentials. Economic theory and international evidence predicts that imposing a price cap on the retail energy market will lead to less customer engagement, the withdrawal of the biggest discounts and higher average prices. Reduced rates of customer engagement will lessen the uptake of cost-saving innovations, such as smart metering and decentralised energy distribution, harming consumers and increasing carbon emissions.

Relative price caps will also likely lead to reduced customer engagement, lesser competition in the fixed rate market and higher mark-ups on SVTs. Access to information will likely increase customer engagement and the CMA’s recommendation of the creation of disengaged customer database should be implemented alongside further trials of other information interventions. Collective opt-out switches or sell-offs are a more promising alternative to price caps with less threat to competition, especially if limited to vulnerable customers only.

The Government should tread carefully. Recent intervention in the retail energy market led to reduced choice, increased profit margins and lower rates of switching. Switching rates have yet to recover from their pre-intervention high in 2008, further intervention risks undermining recent progress and weakening public support for the retail energy market.

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26 Littlechild, S (2018) “A viable alternative to any damaging energy price cap” The Daily Telegraph