

CMA Evaluation of CA98 cases

A DotEcon report

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[Non-confidential version]

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Executive summary

DotEcon was commissioned by the Competition and Markets Authority (“CMA”) to evaluate the impact of recent Competition Act 1998 (CA98) cases with regard to both ‘direct’ and ‘indirect’ effects. The direct effect of enforcement arises from the cessation of anticompetitive conduct amongst those firms subject to enforcement action. Indirect effects arise due to *other* firms becoming more aware of the requirements of competition law and changing their assessment of the likelihood of anticompetitive behaviour being detected or being subject to enforcement action, including possibly fines; in turn, this may lead to changes in those firms’ behaviour. The focus of this evaluation is to assess such deterrent effects.

We consider four CA98 cases. We use a combination of desk research, stakeholder interviews and a survey of businesses to assess:

- the direct impact of enforcement activity;
- the impact of these cases on improving awareness of UK competition law (both in the sector subject to the enforcement action and in adjacent sectors); and
- whether the enforcement activity has led to greater deterrence of anti-competitive conduct; and
- the possible scale of the indirect benefits arising from greater deterrence.

Whilst the CMA reports annually on the direct financial benefits of its work, these impact assessments do not take account of the wider benefits arising from indirect effects (such as greater deterrence). We find that the economic benefits arising from indirect effects can plausibly be much larger than those arising from direct effects due to the much larger number of firms potentially subject to indirect effects.

A better understanding of how indirect effects arise should help the CMA structure its activities to maximise these benefits, for example by targeting effects to raise awareness of firms’ obligations under competition law following CA98 enforcements.

Cases considered

In order to allow us to assess possible indirect effects, we chose four CA98 cases where there were suppliers in the sector beyond those directly involved with the case (this precluded cases such as cartels where all firms would have been involved in the initial investigation). We also choose cases with broadly similar infringement behaviours so that we could both compare differences and pool data. We also sought cases with different levels

of punitive action taken against the infringing firms to see if this affected deterrent effects.

Our assessment is focussed on the following four cases:

- *Estate agents*¹ - This case concerns a number of estate and letting agents, their trade association and their local newspaper. A group of estate and letting agents (individually and together as a trade association) agreed with a local newspaper not to allow members of the trade association or non-members to advertise their fees, commission rates, promotions, discounts, or other special offers in the property supplement of the local newspaper. The CMA found this to be an object infringement of competition law and issued penalties totalling over £735,000 to the parties found to be infringing. The CMA undertook follow-up work to raise awareness of the case.²
- *Light fittings*³ - The National Lighting Company (NLC) was fined just over £2.7 million for requiring resellers to sell at, or above, a minimum price when selling their products online. This is a form of resale price maintenance (RPM), which breaks competition law. The CMA also undertook follow-up compliance work and work to raise awareness of the case.
- *Bathroom fittings*⁴ - A manufacturer of bathroom fittings, Ultra, engaged in RPM in the online sales of its products between 2012 and 2014. Similar to the light fittings case, Ultra required resellers to sell at, or above, a minimum price when selling online. The CMA imposed a fine of just over £780,000 and following its decision, the CMA undertook follow-up compliance work and work to raise awareness of the case.
- *Mobility scooters*⁵ - The OFT issued two decisions in the mobility aids sector following a market study. These cases – conducted in the final days of the OFT - have some similarities with the

¹ CMA, "Property sales and lettings investigation" closed on 8 May 2015. Case details available at: <https://www.gov.uk/cma-cases/investigation-into-property-sales-and-lettings-and-their-advertising>

² We understand this work generated a lead that led to a separate price-fixing case involving estate agents in Somerset, for which the non-confidential decision was published in September 2017. See, CMA, "Residential estate agency services in the Burnham-on-Sea area" closed on 2 March 2018. Case details available at: <https://www.gov.uk/cma-cases/residential-estate-agency-services-suspected-anti-competitive-arrangement-s>

³ CMA, "Light fittings sector: anti-competitive practices", closed on 20 June 2017. Case details available at: <https://www.gov.uk/cma-cases/light-fittings-sector-anti-competitive-practices>

⁴ CMA, "Bathroom fittings sector: investigation into anti-competitive practices", close on 17 May 2016. Case details available at: <https://www.gov.uk/cma-cases/bathroom-fittings-sector-investigation-into-anti-competitive-practices>

⁵ OFT, "Mobility aids sector: investigation into anti-competitive agreements", closed on 30 October 2014. Case details available at: <https://www.gov.uk/cma-cases/investigation-into-agreements-in-the-mobility-aids-sector>

Estate Agents case and other RPM cases. They found that the parties had imposed restrictions on their resellers' ability to advertise the products online or to do so at a price below a minimum level instructed by the parties. The OFT undertook follow-up compliance work in the mobility aids sector following these cases. Unlike our other three case studies, there were no financial penalties imposed by either OFT decision, as the total of each manufacturer-retailer pair's combined turnover did not exceed £20 million.

These four cases are not representative of CA98 cases in general. There are no abuse of dominance cases or cartel cases within our selection. It is not the intention of this study to extrapolate the results widely to other cases and we would caution against doing so.

Rather, our aim is to try to measure the deterrent effect relating to specific interventions and develop reasonable methodologies for assessing indirect effects, which by their very nature are uncertain and difficult to measure. Therefore, our selection of CA98 cases has been made to aid this task. Nevertheless, the approach taken here could be used for further assessments the indirect impact of the CMA's work in other cases.

Direct impacts

For the estate agents case, we find limited evidence to suggest that estate and letting agents have now begun advertising fees or commission rates in all local newspaper adverts, but this is not to say that this is a result of explicit agreements between parties. We conservatively estimate the potential increase in commission rates customers paid above the competitive level during the infringement period as a result of the restriction on advertising prices (in particular the lack of promotions and discounts) to be around 5%.

For the both the bathroom fittings and light fittings cases, a comparison of prices from during and after the infringement period demonstrates that the infringing behaviour has ceased and that price competition in the market has increased significantly. In both cases we estimate a fall in prices of around 17%. However, we report concerns from some parties that the rise in online discounting has led to greater concerns about the provision of pre-sales support and advice, as online retailer 'free-ride' on the service provided in stores. We were told how bricks and mortar stores and showrooms are finding it increasingly difficult to compete with the significant discounts available online.

Based on comparisons of historic and present price data we find evidence to suggest that the prices of some mobility scooters have fallen since the case, particularly those that were subject to restrictions on the online price of mobility scooters. This is consistent with our estimates of the extent to which prices were artificially held above competitive prices during the infringement,

based on pricing data of retailers who broke from the restrictive pricing agreements, with a price difference of around 20%. However, we also find evidence of continued lack of online price transparency, such as asking potential purchasers to “call for best price” rather than listing a price suggesting that despite the enforcement action taken by the CMA consumers may not be reaping the fullest possible benefits of improved price transparency and availability online.

Assessing awareness and deterrent

The decision whether to engage (or stop engaging) in anti-competitive behaviour will likely be driven by three factors:

- awareness of illegality;
- the perceived risk of detection; and
- the anticipated intensity of punishment if detected.

We investigate the extent to which intervention by the CMA/OFT might have influenced each of these factors using a survey.

With regard to the first factor, we ask whether:

- businesses are aware of each of our specific cases;
- awareness of competition law differs significantly between those businesses in sectors where a CA98 case has occurred and those in other sectors;
- there are significant differences in awareness of competition law between those aware or not aware of the specific CA98 case in their sector.

We then consider whether CMA/OFT intervention has resulted in changes in the perception of illegal behaviour being detected or punished. Finally, we check whether any parties have subsequently changed their behaviour, and that this can be linked back to the specific CA98 case.

Survey methodology

The main source of evidence for this assessment was a survey of 600 businesses. Data was gathered in a single round of telephone surveys conducted by IFF Research (IFF).

IFF obtained businesses views on both awareness and deterrent impacts from 100 businesses in the specific sector to which each CA98 case relates (the core sample), resulting in a total of 400 businesses. We also sought to test awareness and deterrence impacts beyond the core sector, so IFF conducted a further 200 interviews with business from related sectors (i.e. 50 businesses from an adjacent sector for each CA98 case). The sectors used are shown in Table 1 below.

Table 1: Core and adjacent sectors

Core sector	Adjacent sector(s)
Estate Agents	Building surveyors; Surveyors and valuers
Light Fittings⁶	Electrical wholesalers
Bathroom fittings⁷	Kitchen furniture manufacturers Kitchenware
Mobility scooters	Disability equipment manufacturers and suppliers

There are many potential ways in which adjacency might be defined. The adjacent sectors were chosen based on two criteria:

- by considering the reach of the follow-up work by the CMA and the partner organisations to determine those sectors we think may have become aware of the case;
- that the market structure is similar enough that we might expect there to be at least the potential for similar infringement behaviour to that in the CA98 case within the core sector.

Information flows might well be broader than we have identified, but our priority was to see if we could even detect the effects of such information flows at all, rather than to characterise them fully.

For an assessment of whether awareness of competition law is significantly better in sectors where a CA98 case took place, relative to baseline levels, we compared the results of comparable questions on competition law included in a survey conducted by the CMA (but yet to be published) that sought responses from 1,200 interviews with private sector businesses from all sectors and across all regions of the UK (the baseline sample).

Case specific awareness

We find that around 40-50% of respondents in the core sample for each case reported being aware of a competition law infringement having taken place in their industry. For those that were aware, we find that in all sectors (other than estate agents) the majority of

⁶ Includes following sectors: Chandeliers Manufacture and Supply; Lampshade Manufacturers; Lighting Contractors; Lighting Equipment Manufacturers of Lighting Retailers; Lighting Wholesale and Supply

⁷ Includes following sectors: Bathroom Fixtures and Fittings; Bathroom Fixtures and Fittings – Manufacturers; Shower-Baths Manufacturers and Suppliers

respondents were able to describe the details or the anti-competitive conduct of our *specific* focal case.

However, the majority of estate agents described a *different* CA98 case that occurred in their sector more recently than our focal case. Whilst this does not necessarily mean awareness of the focal case is low in that sector, it does suggest that at the very least awareness of the other case is more prominent in people's minds.

Response to prompting

Unsurprisingly for all cases we find that after being told about the focal case in their sector, the number of respondents reporting being familiar with the case is greater than those that chose to describe the specific details of the case, particularly in the mobility scooters case (which is the oldest of our four chosen cases). Therefore, there appears to be some level of latent awareness of historic cases that can be reactivated with a prompt.

Transmission beyond core sectors

Some respondents in adjacent sectors do report familiarity with the details of the case, showing that there is evidence of some information transmission beyond the core sector. However, we find that in the bathroom fittings and estate agents cases the adjacent sectors are less aware of *any* competition law infringement having taken place in their adjacent industry ($p < 0.001$ and $p = 0.008$ respectively). For prompted awareness, with the exception of the light fittings case, we find that case awareness of the specific CA98 cases is significantly lower outside of the core sector (estate agents $p = 0.002$; bathroom fittings $p < 0.001$; mobility scooters $p < 0.001$).

This finding of lower levels of case awareness beyond the core sector is supported by our findings on cross-sector awareness. For example, the large majority of core respondents for each case (between 68% and 81%) were unaware of *any* CA98 case outside of their sector. In particular, we were surprised to find that when we asked a specific question to those in the light fittings sector about the bathroom fittings case (and vice versa),⁸ 87% of respondents in the light fittings sector stated they were not aware of the bathroom fittings case. Similarly, 87% of respondents in the bathroom fittings sector claimed they were not aware of the light fittings case. We understand that the CMA has reported these cases together when undertaking awareness raising related to these cases and RPM infringements in general. Therefore, we might have expected cross-sector awareness between these two sectors to have been stronger.

⁸ Question E.1: was asked to those businesses in the core light fittings sample and the core bathroom fittings sample. They were read a description of the case in the other sector and asked, "Are you aware that this occurred"?

(footnote continued)

Impact of intervention on awareness of competition law

We find that respondents in core sectors where a CA98 case has occurred are significantly more likely to report higher levels of familiarity⁹ with competition law compared with those in the baseline sample ($p < 0.001$). These self-reported levels of familiarity were validated by responses to a number of true or false statements chosen to test specific knowledge of competition law. We find that respondents who report knowing competition law at least fairly well are significantly more likely to answer these statements correctly compared with those who report not knowing it well or who have never heard of it ($p < 0.001$ for all statements).

Respondents in the core sectors are significantly more likely than the baseline sample to answer correctly to such statements. For some (but not all) statements, those in the adjacent sector were also significantly more likely to answer correctly relative to the baseline sample, providing evidence of some spill-over effects beyond the core sector to closely related sectors.

We find that core respondents for each case are more likely to answer correctly true or false statements directly relevant to the particular infringement behaviour that occurred in their sector relative to the core respondents in the other sectors. For example, for statements relating to pure resale price maintenance agreements, respondents from the light fittings and bathroom fittings sector were significantly more likely to provide correct answers than those from the mobility scooters sector ($p = 0.049$) and the estate agents sector ($p < 0.001$). Similarly, core respondents in the mobility scooters sector scored significantly better on a question related to agreements to restrict online advertising¹⁰ that is closely related to the infringement that took place in their sector relative to the other three sectors together ($p = 0.042$).

Furthermore, for the core sample in the light fittings, bathroom fittings and mobility scooters cases, there is also a significant difference between the proportion of respondents answering correctly to each statement about competition law for those that were aware of the case versus those not aware¹¹.

The greater awareness and understanding of competition law amongst our core respondents relative to the baseline and against between those aware and those not aware of the case shows a clear link between CMA/OFT intervention, awareness of the specific case

⁹ Respondents answering "very well" or "fairly well" to question B3: Overall, how familiar would you say you are personally with Competition Law? Would you say you know it...

¹⁰ It can be illegal if a supplier of yours doesn't allow you to sell or advertise their product online (TRUE)

¹¹ Based on the prompted awareness.

and a more general understanding of competition law. There is some evidence of this filtering out to adjacent sectors.

Deterrent impact

In addition to asking respondents about their awareness of the case and general awareness of UK competition law, we asked respondents questions about:

- whether the specific CA98 case had led to a change in their perception of the risk of being detected if they were to engage in anti-competitive practices;
- whether the specific CA98 case had led to a change in their perception of the risk of being prosecuted if they were to engage in anti-competitive practices;
- whether the specific CA98 case had led to a change the likelihood of companies in that industry breaking competition law; and
- whether they had seen certain agreements or commercial initiatives in their firm modified as a consequence of the case.

Impact on perception of risk of being discovered or investigated for infringing behaviour

We find that CMA/OFT intervention has had an impact on the perception of being discovered and investigated with the majority of firms in each of the core sectors considering that the likelihood of detection and/or prosecution has increased. In particular, the number of “*more likely*” answers was significantly greater than the number of “*less likely*” answers ($p < 0.001$) for each case.

We also find that adjacent sector respondents for the bathroom fittings and mobility scooters cases are less likely to respond that the probability of being *discovered* has increased than their core sector counterparts ($p = 0.044$ and $p = 0.043$ respectively). Similarly, for mobility scooters respondents in adjacent sectors are also less likely than core to believe that the probability of being *prosecuted* has increased ($p = 0.030$). This suggests that any potential indirect impacts are weaker for these adjacent sectors.

Evidence of changes in behaviour as a result of the case – the deterrent impact

For all four cases, the core respondents considered that the risk of a company in their industry breaking competition law was less likely following the CMA/OFT intervention, suggesting that again intervention does have some impact on the likelihood of infringement. Amongst those stating that there was no difference or it was more likely, it is interesting to note that the “*no fear of punishments*” response scored much more highly amongst respondents for the mobility scooters case (where no fine was imposed). The difference was significant relative to the responses of the other three sectors together ($p = 0.005$).

We also found direct evidence of a number of companies within both the core and adjacent sectors admitting to modifying (or an intention to modify) certain agreements or commercial initiatives as a consequence of the CA98 cases considered, demonstrating that

there is a tangible deterrent effect from the work of the CMA/OFT on these cases.

Quantifying the benefit of the deterrent effect

Of those that admitted to changing (or stated an intention to change) their behaviour as a direct result of the CMA/OFT intervention, we reviewed the changes they reported to have made (or intend to make). Filtering out those that responses related to promoting awareness or compliance training (rather than altering agreements or policies) and those reporting “don’t know”, we provide an estimate of the number of companies that were aware of the case and were deterred from infringing behaviour as a direct result of the case. We report the absolute number and as the proportion of our survey sample.

Assuming that our survey is representative, we then apply this proportion to the total number of businesses in the relevant industry category to provide an estimate of the total number of businesses deterred from infringing activity as a result of the specific CA98 case. Table 2 shows our estimates of the number of deterred businesses.

Table 2: Estimated total number of businesses deterred from infringing

Sector		Proportion of survey modifying behaviour	Total businesses in sector	Estimated total number of businesses deterred
Estate agents	Core	7%	9739	682
	Adjacent	2%	4019	80
Light fittings	Core	5%	1403	70
	Adjacent	2%	1402	28
Bathroom fittings	Core	7%	786	55
	Adjacent	2%	677	14
Mobility scooters	Core	4%	937	37
	Adjacent	2%	442	8

We then roughly estimate the avoided detriment as a result of deterring such behaviour. In simple terms, we first estimate the direct cost of the initial infringement to calculate excess profit of infringers and loss of consumer surplus per unit of revenue of the infringing parties. We then apply this ratio to an estimate the annual turnover associated with the population of deterred firms within each core and adjacent sector to give an estimate of the indirect impact. In effect, we are assuming that, proportionate to turnover, avoided competitive behaviour due to indirect effects would have had a similar impact, had it occurred, to that of the original infringement.

However, recognising that we cannot assume that the detriment avoided in the cases of changed behaviour are similar in scale to the direct benefit of the enforcement, we control for two factors:

- **Size effects:** There will be a distribution of firm sizes within the sector, with infringements by larger firms creating larger detriments;
- **Selection bias:** The CMA will have prioritised investigating infringements creating the greatest detriment to consumers.

Controlling for these factors we estimate the indirect benefits and present the indirect benefit to direct benefit ratio as shown in Table 3 below.

Table 3: Direct and indirect benefits

Case	Estimated proportion price increase of the original infringement	Indirect impact (total avoided detriment of core and adjacent) (£m PDV)	Indirect benefit to direct benefit ratio
Estate Agents	5%	5.6	12
Light fittings	17%	180	14
Bathroom fittings	17%	890	21
Mobility scooters	20%	54	2.7

Due to the small sample sizes involved and the large number of assumptions required, we would caution placing too much weight on the specific magnitudes of the estimated indirect effects. There are a number of potential sources of both positive and negative bias:

- It is possible that there could be some over-representation of larger firms within some of the sectors sampled, which

will tend to overestimate deterrence benefits. We have adjusted the revenue estimate for the electrical wholesalers given that we only had one deterred firm from our sample with an average revenue significantly higher than the industry mean firm revenue estimated from independent sources. However, a bias leading to overstatement of indirect effects might still be present;

- Our sample sizes were such that in each adjacent sector we found either one or no deterred firms (in part this is due to our tight criteria for identifying them). However, this means that estimates of the typical revenue of deterred firms in the population at large are highly uncertain;
- The results are sensitive to assumptions about the length of time for which infringing behaviour would have continued in the absence of the stimulus provided by the CMA taking a case in a related sector;
- Our methodology for correction of selection bias needs to make some assumptions about the CMA's selectivity in choosing to pursue cases with greater potential detriment. We conservatively assumed that the CMA is quite selective and therefore made a large downrating for selectivity bias;
- We have only taken into account the price impacts of the infringement, but there may be other sources of detriment – such as consumers having less information to make informed purchase decisions, or wider detriment from the enforcement, which we have not quantified (leading to understatement of both direct and indirect benefits);
- We consider only a small number of adjacent sectors, and although the evidence suggests the indirect effect might be weaker in adjacent sectors, it would be reasonable to expect that there are other businesses in further sectors beyond our identified adjacent sectors who might also have been deterred from infringing as a result of this case.

Given these significant uncertainties, we have not sought to undertake any formal confidence interval analysis for our estimates of indirect effects. Nevertheless, the exercise does both demonstrate the feasibility of estimating indirect effects. It also demonstrates the underlying logic for why indirect effects can be large: although the effect per firm is small, there is a significant benefit due to the larger number of businesses being deterred from engaging in anti-competitive behaviour compared with the number of firms against which the enforcement action was taken. Moreover, as the analysis above demonstrates, the ratio of indirect effects to direct effects is likely to vary significantly from case to case, as the size of the population of potential deterred firms depends on how far news of enforcement action spreads and how many firms are affected.

Conclusions and possible implications for CMA

Impact of CMA intervention on awareness of competition law and the indirect effect

We have found evidence of a clear link between CMA/OFT intervention and greater levels of awareness and understanding of competition law, specifically in relation to the illegality of the type of behaviour in our selected CA98 cases. This demonstrates the value of intervention and follow-on work in raising awareness of specific cases.

Furthermore, there is evidence to support the view that awareness of the case does lead to an indirect impact in the form of changes in the perception of being caught and prosecuted and in terms of firms changing their behaviour. Therefore, there is a demonstrable value associated with CMA intervention and associated awareness raising activities. The CMA should continue to engage in such activities and promote cases in a way that will increase awareness further both within the affected sector and more widely.

Our findings provide some indication of the areas of CMA work that have been particularly successful and those areas where the CMA may consider focussing more resources in future.

How can CMA improve awareness (and thus potential widening of indirect impact)?

For example, of those respondents who reported being aware of the specific case, "word of mouth" and "trade press/industry website" were the most reported ways in which they became aware, suggesting existing communication channels within the industry are an important addition to any direct transmission of information from the CMA. This is likely to be particularly true for those businesses that are well connected within their industry and/or engage in trade press or industry events may have larger and more integrated communication channels that allow for greater information transmission.

Whilst the CMA already uses such communication methods, leveraging contacts within industry organisations, we found that awareness of specific cases is lower in adjacent sectors suggesting weaker information transmission beyond the core sector. Therefore, there may be benefits for the CMA in increasingly engaging with bodies who are responsible for trade press across a wide range of industries so as to reach as many businesses across as many sectors as possible (where relevant). It may be worth identifying where analogous infringements might occur in other industries and engaging directly with those industries.

Although we did not find any significant evidence on the extent to which firm size influences case awareness, we consider that any direct communication efforts may be best targeted at those smaller companies who may have limited access to such communication channels or not be a member of a trade association through which they could get such information. This might include pushing material directly to those firms in addition to general industry-wide communications.

The survey demonstrated that the majority of respondents considered that the CMA could do more to draw attention to specific cases and their illegality (with the estate agents case having the largest proportion of respondents who thought so (63%)). The most popular responses (in all four cases, core and adjacent) for what the CMA could do better included:

- *"better promotion / advertising in general"*;
- *"better promotion / advertising to the trade body/representative"*; and
- *"notification via email/letter"*.

Furthermore, there is evidence that there is some latent familiarity with cases that are recalled given some prompt. This suggests that there is value in follow-up activities that might stimulate latent awareness. Furthermore, it implies that the optimum time in which to promote a case *within its sector* might be some time after the original case as corporate memory dulls, rather than directly after the case. Clearly this conclusion might not apply to promotion of a case to other sectors where knowledge of the case might be poor from the outset.

Impact of different sanctions

In terms of the impact of sanctions imposed upon a finding of anti-competitive behaviour, fines for the company appear to be an important factor in influencing indirect effects.

"Fines for the company" was the most commonly reported sanction listed by respondents when testing awareness of possible penalties. This was reported significantly more amongst core relative to baseline (where for three of our four cases fines were most significant).

We found significant differences in the mobility scooters case where fines were not imposed. Amongst those stating that they believed the likelihood of a company in the sector engaging in anti-competitive behaviour was unchanged or even more likely, the *"no fear of punishments"* response scored much more highly amongst respondents for the mobility scooters case. We also note that the mobility scooters case yields the lowest indirect to direct impact ratio.

1 Introduction

DotEcon have been commissioned by the Competition and Markets Authority (“CMA”) to evaluate the impact of recent Competition Act 1998 (CA98) cases with regard to both direct and indirect effects:

- The direct effect of enforcement arises from the cessation of anticompetitive conduct amongst those firms subject to enforcement action;
- Indirect effects arise due to other firms becoming more aware of the requirements of competition law and changing their assessment of the likelihood of anticompetitive behaviour being detected or being subject to enforcement action, including possibly fines; which in turn, may lead to changes in firms’ behaviour.

The primary focus of the evaluation is on assessing this latter deterrent effect.

This project follows a number of OFT/CMA projects conducted in recent years seeking to improve its understanding of the indirect impact of its work.¹² Whilst the CMA reports annually on the direct financial benefits of its work, these impact assessments do not take into account wider benefits such as indirect effects (including deterrent effects). Without understanding and/or accounting for these additional benefits, the CMA can only get a partial picture of the overall impact of its work.

The CMA has recognised the importance of considering the deterrence impacts, *“as it is likely to be an important outcome of our enforcement work, but one which is very difficult to measure. The findings [i.e. this study] will help us to better evidence and demonstrate the extent of the indirect benefits of our enforcement activity, through increased deterrence. It will also help increase our understanding about the effectiveness of our follow-up compliance work in increasing awareness and deterrence.”*¹³

¹² For example, see CMA, “Research and analysis – Deterrent effect of competition authorities’ work, Literature review of methodologies to measure the deterrent effect of competition authorities’ work”, 7 September 2017. Available at: <https://www.gov.uk/government/publications/deterrent-effect-of-competition-authorities-work>

¹³ Noted by the CMA in the Statement of Requirements for this project.

(footnote continued)

Previous studies on deterrence commissioned by the OFT (Deloitte, published in November 2007¹⁴; and London Economics, published in December 2011¹⁵) were commissioned to analyse competition compliance and deterrence resulting from the UK competition regime. In particular, these studies sought to estimate overall levels of deterrence (providing a 'deterrence ratio'¹⁶) based on surveys of businesses and competition law practitioners. However, these studies considered deterrent impacts more generally and the analysis was not tied to specific cases.

In contrast, the aim here is to try to measure empirically the deterrence effect relating to specific interventions. In this context the CMA asked us to consider four recent CA98 cases and to consider the following questions:

- a) *“what (if any) direct impacts our enforcement cases have had on the conduct of firms and outcomes (e.g. prices) in the relevant markets where we took enforcement action, to the extent that this is relevant to understanding the indirect effects of our cases;*
- b) *whether our enforcement activity led to increased awareness of a) the CMA, b) competition law, and c) specific enforcement cases and/or types of conduct which the CMA has found to be infringements of competition law, particularly in the sectors where we took enforcement action;*
- c) *whether our enforcement activity led to deterrence of anti-competitive conduct (either by leading firms to stop or significantly modify any agreements or commercial initiatives in order to comply with competition law, or by putting in place preventative/compliance measures), particularly in the sectors where we took enforcement action; and*
- d) *what features of CA98 cases and follow-up actions are associated with or lead to higher direct and indirect impact”.*

We consider four recent CA98 cases conducted by the CMA (or the Office of Fair Trading - OFT- the CMA's predecessor). For each case we provide a description of the Authority's decision and assess the direct impacts. This is based on market data from before, during and after the period the decisions was published.

¹⁴ Deloitte for OFT, “The deterrent effect of competition enforcement by the OFT”, November 2007.

¹⁵ London Economics for OFT, “The impact of competition on compliance and deterrence – Final Report”, December 2011.

¹⁶ The deterrence ratio is calculated as the estimated number of changes in behaviour by UK firms due to the risk of an OFT investigation (based on the survey responses), divided by the total number of investigations of that type undertaken by the OFT. For example, the London Economics study reported that *“The deterrence ratios indicate that for every cartel investigation, 28 cartel cases are deterred. In the case of other commercial agreements and abuse of dominance for every OFT investigation, 40 and 12 cases are deterred respectively.”*

Given that the primary focus of our study is on assessing awareness of both the specific cases and competition law more generally and the deterrent effect, we sought the views of businesses in sectors related to those covered in our particular cases with a survey. We also conducted desk research and a small number of slightly longer, free-form interviews with key stakeholders in each of the industries to supplement our survey findings.

In addition to evaluating the impact of past OFT/CMA work, through this study we seek to draw lessons to help the CMA improve its work in the future. Therefore, we consider what features might lead to increased deterrence and the steps the CMA might take to have the greatest impact from the cases it takes on.

For this assessment, we have chosen to focus on the following four cases:

- *Estate agents*¹⁷ - This case concerns a number of estate and letting agents, their trade association and their local newspaper. A group of estate and letting agents (individually and together as a trade association) agreed with a local newspaper not to allow members of the trade association or non-members from advertising their fees, commission rates, promotions, discounts, or other special offers in the property supplement of the local newspaper. The CMA found this to be an object infringement of competition law and issued penalties totalling over £735,000 to the infringing parties. The CMA also undertook awareness-raising work after this case, which generated a lead that led to a separate price-fixing case involving estate agents in Somerset, for which the non-confidential decision was published in September 2017¹⁸;
- *Light fittings*¹⁹ - The National Lighting Company (NLC) was fined for requiring resellers to sell at, or above, a minimum price when selling their products online. This is a form of Resale Price Maintenance (RPM), which expressly infringes competition law. The CMA also undertook a range of awareness raising follow-up work after this case.

¹⁷ CMA, "Property sales and lettings investigation" closed on 8 May 2015. Case details available at: <https://www.gov.uk/cma-cases/investigation-into-property-sales-and-lettings-and-their-advertising>

¹⁸ CMA, "Residential estate agency services in the Burnham-on-Sea area" closed on 2 March 2018. Case details available at: <https://www.gov.uk/cma-cases/residential-estate-agency-services-suspected-anti-competitive-arrangement-s>

¹⁹ CMA, "Light fittings sector: anti-competitive practices", closed on 20 June 2017. Case details available at: <https://www.gov.uk/cma-cases/light-fittings-sector-anti-competitive-practices>

(footnote continued)

- *Bathroom fittings*²⁰ - Ultra, a manufacturer of bathroom fittings equipment, engaged in RPM in the online sales of its products in 2012-2014 imposing a minimum price at which resellers could sell the products online. This case is very similar to the light fittings case. The CMA undertook follow-up awareness raising work after this case.
- *Mobility scooters*²¹ - The OFT issued two decisions in the mobility aids sector. Related to restrictions on advertising online and restrictions on price levels of products online. Therefore, these cases have some similarities with the Estate Agents case and other RPM cases. These cases followed an OFT market study in the mobility aids sector and were concluded in shortly before the OFT ceased to exist. The OFT undertook some awareness-raising work in the mobility aids sector following these cases. These cases are also notable because there were no penalties imposed, as the total of each manufacturer-retailer pair's combined turnover did not exceed £20 million.

The report is structured as follows:

- In **Section 2** we describe how we came to choose the four cases that form the basis of this assessment and set out our general methodology for each part of our assessment;
- In **Section 3** we provide an overview of each case covering the parties involved, the nature of the infringement, the reason for intervention, the form of intervention and any follow up work conducted by the CMA or other organisations. We also provide an indication of the direct impacts of the intervention in the relevant market, roughly estimating the proportionate price increase that may have occurred as a result of the infringement and calculate excess profit of infringers and loss of consumer surplus per unit of revenue of the infringing parties based on the relevant revenues of the infringers;
- In **Section 4** we present our findings in relation to the impacts of OFT/CMA intervention on awareness of the specific cases amongst those in the affected sector and closely related sectors, the extent to which intervention has led to an increased awareness of competition law and the number of businesses that may have been deterred from engaging in infringing behaviour as a direct result of becoming aware of the case;

²⁰ CMA, "Bathroom fittings sector: investigation into anti-competitive practices", close on 17 May 2016. Case details available at: <https://www.gov.uk/cma-cases/bathroom-fittings-sector-investigation-into-anti-competitive-practices>

²¹ OFT, "Mobility aids sector: investigation into anti-competitive agreements", closed on 30 October 2014. Case details available at: <https://www.gov.uk/cma-cases/investigation-into-agreements-in-the-mobility-aids-sector>

- In **Section 5** we estimate the benefits associated with the indirect impact in terms of the costs avoided by businesses changing their behaviour as a result of hearing about each case;
- In **Section 6** we present our conclusions, summarising the findings of the above sections, and consider the implications of these findings for the CMA and its future work in this area.

We also include a number of annexes:

- **Annex A** sets out in detail our methodology for assessing the indirect benefits arising from CA98 enforcement action in our four case study sectors provides more details about how we have estimated the direct and indirect benefits.
- **Annex B** provides a more detailed overview of the survey methodology and outcomes; and
- **Annex C** includes a full copy of the survey used.

2 Methodology

2.1 Case study selection

The scope of this evaluation was limited to just four previous cases. We worked closely with the CMA to choose suitable cases based on the following criteria:

- **the likely number of suppliers we can talk to in the sector beyond those directly involved in the case** – as we are primarily interested in the indirect effect, considering a small industry in which all of the players might have been involved in the original infringing behavior and CMA/OFT intervention (e.g. a cartel case) would be uninformative, as we are more interested in whether firms that were not involved in the original infringement are likely to be deterred. It was important to have a population of firms not involved in the original competition enquiry, yet sufficiently similar such that it would be reasonable to ask about awareness of the infringement and subsequent behavioural responses;
- **the ability to group similar infringement behaviours** – where possible, we sought to focus on multiple cases with similar types of infringement, as this would allow (i) general conclusions to be reached without compounding different circumstances in sectors with different types of infringement and (ii) provide some opportunity to compare the effect of different approaches adopted by the CMA (e.g. with regard to follow-up) holding constant the broad type of infringement behaviour; and
- **having a mix of cases with different levels of punitive action** – this would allow us to assess whether there are any clear differences between the impact of cases where punitive action was taken relative to those where there it was not, for example comparing across cases where fines were imposed and those where they were not.

In line with the above criteria and working together with IFF Research (IFF) to determine the likely feasible sample size for suppliers in each of the cases we selected the following four case studies (with the broad nature of the infringement also provided):

- Estate agents (an agreement not to advertise prices);²²
- Light fittings (resale price maintenance);²³
- Bathroom fittings (resale price maintenance);²⁴
- Mobility scooters (prohibiting online advertising of below-RRP prices online & prohibiting online sales and advertising).²⁵

The *estate agents* case took place in a particularly large and valuable sector and the infringement was very focussed in a particular region suggesting that we may be able to test for differences in impact and/or awareness of the case across regions. The fact that there has since been another CA98 case in the estate agents sector (this time in Somerset)²⁶ might also have an impact on awareness of competition law investigations in the sector. We understand that these infringements (the focal case and the Somerset case) were taking place in parallel and the CMA's awareness of the latter actually came following a leniency applicant notifying the CMA following its awareness raising campaign for our chosen case.²⁷ This itself shows the value of raising awareness of specific interventions to the indirect impact of enforcement activity.

The *light fittings* and *bathroom fittings* cases both involved resale price maintenance (RPM) agreements and there are many commonalities between the cases. However, there is a time difference between when the investigations were opened and the infringement decisions made allowing us to test whether there was any awareness amongst the light fittings sector of the earlier case

²² CMA, "Property sales and lettings investigation" closed on 8 May 2015. Case details available at: <https://www.gov.uk/cma-cases/investigation-into-property-sales-and-lettings-and-their-advertising>

²³ CMA, "Light fittings sector: anti-competitive practices", closed on 20 June 2017. Case details available at: <https://www.gov.uk/cma-cases/light-fittings-sector-anti-competitive-practices>

²⁴ CMA, "Bathroom fittings sector: investigation into anti-competitive practices", closed on 17 May 2016. Case details available at: <https://www.gov.uk/cma-cases/bathroom-fittings-sector-investigation-into-anti-competitive-practices>

²⁵ OFT, "Mobility aids sector: investigation into anti-competitive agreements", closed on 30 October 2014. Case details available at: <https://www.gov.uk/cma-cases/investigation-into-agreements-in-the-mobility-aids-sector>

²⁶ CMA, "Residential estate agency services in the Burnham-on-Sea area" closed on 2 March 2018. Case details available at: <https://www.gov.uk/cma-cases/residential-estate-agency-services-suspected-anti-competitive-arrangement-s>

²⁷ The CMA has acknowledged this: "It was this campaign [the Three Counties compliance campaign] that resulted in the current case being brought to the CMA's attention, and we encourage others with evidence of competition law being broken to report their concerns to the CMA." See: <https://www.gov.uk/government/news/somerset-estate-agents-admit-to-price-fixing>

(footnote continued)

(bathroom fittings) and whether this had any impact on the perception of risk of infringements being detected and prosecuted.²⁸

Following these two RPM cases the CMA provided educational material for businesses, which made reference to both cases.²⁹ Therefore, we might expect that this follow up work by the CMA should have helped raise awareness of these cases, relative to some others and helped raise cross sector awareness.

For the fourth case –the *mobility scooters* case – the infringing behaviour has commonalities with both the Estate agents case (non-transparent advertising) and the RPM cases (prohibiting online sales below-RRP prices). However, this case provides a potential interesting divergence from the other cases in that the CMA did not issue a fine to the infringing parties.

The four cases chosen are not necessarily representative of all CA98 cases and any assessment or quantification of the indirect benefits cannot necessarily be extrapolated to other types of cases. However, this is not the intention of the study. The aim here is to try to measure the deterrence effect relating to specific interventions. Nevertheless, the approach taken in this report could form the basis of an assessment framework that the CMA can use to assess the indirect impact of their work for other cases in future assessments.

2.2 Describing the Authority's decisions

For each case we provide an overview covering the state of the market at the time of intervention, the reason for intervention, the form of intervention and any follow up work conducted by the CMA or other organisations.

Our description is based on desk research using the original case documentation and any subsequent follow up work conducted by the CMA/OFT. In addition to the material presented in the non-confidential decision documents, we have drawn on additional material provided by the CMA including:

²⁸ For example, as described in the last bullet of paragraph 3.89 in the light fittings decision the Retail Sales Manager of an infringing light fitting company, Poole, forwarded to the Sales Director a news alert about the CMA's findings in the bathrooms case showing that a case in one industry may have an indirect impact on the behaviour in another industry.

²⁹ For example, "Resale price maintenance: advice for retailers" https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/529969/RPM_60SS.pdf; "Restricting online resale prices: CMA letter to suppliers and retailers" https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/620454/resale-price-maintenance-open-letter.pdf; and "Resale price maintenance case studies" <https://www.gov.uk/government/case-studies/resale-price-maintenance-case-studies>

- relevant extracts from the confidential versions of the case decisions;
- contacts gathered during the investigation;
- summaries of any follow-on work or awareness raising activity conducted by the CMA or OFT.

2.3 Direct impact assessment

The direct impact of CMA/OFT intervention ought to be felt through improvements in competition in the sector/market (most likely reflected in changes to the level or transparency of market prices), which ought to yield benefits for consumers.

Whilst the direct impact assessments were not the primary focus of the report, they are relevant to understanding the indirect effects of the cases. Therefore, for each case and based on the available data we seek to estimate the detriment associated with the infringing behaviour from an assessment of the pricing impact of the infringement alone, in terms of excess profits for the infringing parties and a deadweight loss of consumer surplus due to reduced purchase volumes.

In the case of RPM, this assumption is probably reasonable. However, we recognise that in some cases (for example those with restrictions on advertising), there may have been a pricing effect due to softening of competition, but also there may be detriment due to consumers making less informed purchase choices. However, for the purposes of our assessment we focus on pure price effects.

The methodology for assessing the detriment resulting from a particular price increase is set out in Annex A . We then use our estimate for the direct benefit as an input to our quantification of the indirect benefits.

To inform our assessment of the direct impacts we considered:

- relevant market data prior to the decision, which was part of the original case files and where relevant was provided to us by the CMA;
- any information on prices collected or received by the OFT/CMA at the time of the original case;
- desk-based research to determine price changes in the industry, and any other major changes since the OFT/CMA review;
- interviews with a small number of key stakeholders in each of the sectors to understand the main changes in the market and their views on the impact of the case; and
- a small number of questions on direct impact included in the survey work.

2.4 Assessing awareness and deterrent effect

The main source of information for our assessment of awareness and deterrent effect is a survey of businesses.

We surveyed businesses within each of the sectors associated with our chosen case studies (defined as the core sample). However, to test awareness and deterrence impact beyond the core sectors, we also surveyed a sample of businesses from other (adjacent) sectors.

There are many potential ways in which adjacency might be defined. However, our approach is based on looking for likely information flows and relevance of the case to the sector. Information flows might well be broader, but our priority was to see if we could detect any such information flows at all, rather than to characterise them.

We identified the 'adjacent sectors' using two criteria:

- by considering the reach of the follow-up work by the CMA and the partner organisations to determine those sectors we think may have become aware of the case; and
- within those sectors, those where the market structure is similar enough that we might expect there to be scope for similar infringement behaviour to that in the case.

As we describe in more detail in Annex B the adjacent sectors we chose are shown in Table 4 below:

Table 4: Core and adjacent sectors

Core sector	Adjacent sector(s)
Estate Agents	Building surveyors; Surveyors and valuers
Light Fittings³⁰	Electrical wholesalers
Bathroom fittings³¹	Kitchen furniture manufacturers Kitchenware
Mobility scooters	Disability equipment manufacturers and suppliers

For our assessment of whether awareness of competition law is significantly better in sectors where a CA98 case took place, relative

³⁰ Includes following sectors: Chandeliers Manufacture and Supply; Lampshade Manufacturers; Lighting Contractors; Lighting Equipment Manufacturers of Lighting Retailers; Lighting Wholesale and Supply

³¹ Includes following sectors: Bathroom Fixtures and Fittings; Bathroom Fixtures and Fittings – Manufacturers; Shower-Baths Manufacturers and Suppliers

to baseline levels, our survey also included questions that are directly comparable with questions asked as part of the wider research project by the CMA on awareness of UK competition law amongst UK businesses (not yet published). This allows for a comparison of awareness levels between the sectors related to our chosen cases (our core and adjacent samples) and UK businesses more generally (referred to as the baseline sample).

The data from our survey was gathered in a single round of telephone surveys lasting around 18 minutes per survey. The survey work was conducted by IFF Research (IFF). For each case, IFF conducted a telephone survey of 100 businesses in the specific sector to which the case relates (the core sample) resulting in a total of 400 businesses, and a further 200 interviews with business from other, related sectors i.e. 50 businesses from an 'adjacent' industry for each case. The survey achieved an overall response rate of 48 per cent.³² Further details of the survey methodology, survey outcomes, including survey questions are in Annex B and Annex C of this report.

We are aware of some limitations associated with relying on the responses to our survey, especially where responses may be subject to affirmation biases. However, we sought to minimise the extent to which this would affect the robustness of the conclusions made in this report.

For example, there is a risk that some respondents might not have been entirely honest in their responses to all questions especially where there is/was fear of identification and self-incrimination given that they were aware that the survey was being conducted on behalf of the CMA.³³ However, we sought to limit such risks by telling interviewees that all data would be reported anonymously and the answers provided would not be reported to the CMA or in the report in any way that would allow them to be identified.

Furthermore, we included a number of questions to validate any self-reported levels of awareness or familiarity. For example, when testing awareness of the cases, we asked respondents to describe the CA98 cases in their own words without being prompted and then reviewed the responses carefully to determine the extent to which the descriptions accurately matched the relevant case. Similarly, after respondents reported their level of 'familiarity with competition law', for which responses might be positively biased,

³² This is calculated by the number of completes (601) as a proportion of the total complete contacts (1,256).

³³ Respondents were told, "We're currently conducting an important study for the Competition and Markets Authority exploring how businesses understand and respond to competition law. The objective of the study is to evaluate the impact of recent Competition Act 1998 cases, with regard to direct and indirect effect."

(footnote continued)

we sought to validate these responses by asking respondents to correctly identify whether behaviour described in a number of statements was illegal or not.³⁴

When asking people if they have changed behaviour as a result of the case, we asked them to describe the changes made, allowing us to further clarify those that we believe to have genuinely changed their behaviour from something that may have been infringing.

By including such questions to test the responses can get a more accurate view of firms' awareness and behaviours in a way that should not be adversely affected by any biases. However, where we think some of the responses to questions may be affected by a degree of bias we recognise this in our assessment.

2.5 Quantifying the indirect benefits

We provide a quantitative estimate of the indirect impact of the CMA intervention in each case, specifically in relation to the costs avoided from firms changing their behaviour as a result of CMA/OFT intervention.

We estimate the number of deterred infringements and the associated revenues, based on responses to the following question within the survey

D9: "Some companies have modified certain agreements or commercial initiatives they have in place in response to this case. Has your firm made similar adjustments as a consequence of the case?"

Please note, everything you say today will remain confidential and CMA will not be able to identify you or your answers."

We then use these results to estimate the number of infringements deterred for each of the four cases, and calculate this as a proportion of our survey sample.

Scaling up in proportion to the total number of business in each relevant sector, we obtain an estimate for the total number of businesses in the sector who may have changed behaviour and been deterred from infringing.

We then calculate the indirect benefit by estimating the total annual turnover associated with these parties and assume a similar impact of infringements deterred per unit of revenue as estimated in our direct impact assessment, correcting for selection biases if CMA targets larger impact infringements.

³⁴ We find the responses to these two questions to be broadly consistent, providing confidence in our results. For example, we find significant evidence that those reporting to be at least fairly familiar with competition law are able to answer the true or false statements correctly in greater proportions than those reporting to not be familiar with competition law.

We then report the indirect benefit to direct benefit ratio, to demonstrate that the indirect benefits are a multiple of the direct benefit.

A detailed description of the methodology used for our benefits assessment is included in Annex A

3 Overview of the cases

In this section we provide an overview of each case covering the state of the market at the time of intervention, the reason for intervention, the form of intervention and any follow up work conducted by the CMA or other organisations. We also provide an indication of the direct impacts of the intervention in the relevant market.

3.1 Estate agents case

3.1.1 Overview of the case

The market for 'traditional' estate agents

The market for residential sales and lettings services is characterised by relatively low barriers to entry, with marketing and advertising representing the most significant sunk cost and a key dimension of competition. The relevant market in our chosen case (referred to as the Three Counties case) includes only traditional estate and letting agents³⁵ who have a high street presence (excluding online only agents, for example). The CMA identified this as a market that relies heavily on local newspapers to attract customers, with newspaper advertising a point of competition for existing players, an entry point for new agencies and also an enabler of price competition to the extent that agents' fees, charges and promotions are listed in adverts.

Details and impact of the infringement

The infringement involved a group of estate and letting agents (individually and together with the trade association known as 'Three Counties') operating in the Fleet, Hampshire area, as well as the local newspaper, the Star Courier³⁶.

The Three Counties trade association was established in late 2004 to serve as mechanism for the negotiation and enforcement of an agreement³⁷ to ensure:

- collective bargaining with regard buying advertising space in *Homes and Property* (the dedicated property supplement of the Star Courier);
- that no fees or commission rates should be advertised in the Star Courier; and

³⁵ Hereafter simply 'agents'

³⁶ Trinity Mirror Southern Limited (TMS), as publisher of the Surrey & Hants Star Courier (the Star Courier), and its parent company Trinity Mirror plc (Trinity Mirror).

³⁷ This agreement was set out in the Three Counties' Terms and Conditions of Membership (T&CM), developed by employees of selected member agencies and in practice from July 2005 to January 2014. All new members were obliged to sign these conditions.

- that no direct or indirect references to their fees, commission rates, promotions, discounts, or other special offers would be made in the Star Courier.

The Three Counties members enlisted the Star Courier to police the advertisement of fees. This initially took the form of putting pressure on the Star Courier to charge higher, 'non-association' advertising fees to non-compliant members or to actively prevent members from advertising their agency fees. It was later extended to prevent all agents, regardless of membership status, from advertising their fees and also generally specifying higher advertising rates for non-members. These demands were met with initial resistance from the Star Courier, but were ultimately implemented following increased pressure from certain individual members of the trade association, which included threats to withdraw all advertisements and issue an independent rival property publication.

In effect, this agreement meant the agents agreed not to use advertising to compete on price and prevented other agencies from doing so. Such practises make determining and comparing the best price for services complex and opaque. Furthermore, they create obstacles for new or expanding businesses as they are prevented from advertising any special offers, as well as blocking the emergence of innovative pricing structures.

The CMA's investigation and decision

The OFT began formal investigation into the matter in December 2013, in response to a complaint from a lettings agent. Although the investigation initially focused on all 19 individual members of the Three Counties association, the association itself and the Star Courier, it became evident that some members played a more active role in management and monitoring of the agreement. On the basis of administrative prioritisation, the investigation thus primarily targeted the most actively involved parties, the trade association and the newspaper.³⁸

The CMA considered the infringement to be a serious breach of the Chapter I prohibition³⁹, although it does not fall within the most serious category of such type of infringements (e.g. price-fixing cartels). The agreement was considered an 'object infringement' – coordination between undertakings that by their very nature prevent, restrict or distort competition, regardless of whether this effect is actually realised in the market. The CMA concluded that the

³⁸ The settling agency parties, considered to be those most actively involved, were: Waterfords (Estate Agents) Limited (Waterfords); Castles Property Services Limited (Castles); Hamptons Estates Limited, trading as Hamptons International (Hamptons International) and its parent companies Countrywide Group plc and Countrywide plc (Countrywide).

³⁹ Agreements preventing, restricting or distorting competition. See Competition Act 1998, Chapter I, Section 2. Available at: <http://www.legislation.gov.uk/ukpga/1998/41/section/2>

agreement potentially reduced price competition both between current competitors and from potential competitors.

It was noted that even undertakings who did not take an active role in maintaining the terms of Three Counties nonetheless agreed to the arrangements, and that even when parties deviated from those terms and conditions they were still members of the association, and therefore culpable. Moreover, despite some parties' claim that they believed the Three Counties' T&CM were not in breach of the Competition Act, the CMA considered that the parties must, at the very least, have known that the agreement could restrict competition. Therefore, the CMA found each party committed the infringement either intentionally or negligently.

Following the issue of a Statement of Objections and discussions with the CMA, each party voluntarily admitted to the allegations of infringement and the CMA confirmed that the case would be settled in March 2015. A decision was issued in May 2015, with penalties totalling over £735,000⁴⁰. A base line penalty was set at 17% of turnover to reflect the severity of the infringement, but this figure was adjusted individually for each undertaking, based on factors such as turnover⁴¹, length of time that the undertaking was party to the infringement, and role and responsibility in developing and enforcing the agreement. For example, the penalties to Hamptons and Trinity Mirror Southern Limited (owner of the *Star Courier*) were increased because Hamptons assumed a leadership role in the agreement, and the competitive restrictions would have been significantly less effective without *Star Courier's* involvement despite its otherwise generally passive role.

Follow-up work

The CMA began follow-up compliance and awareness-raising work in June 2015. This included:

- sending warning letters to several agents where there were reasonable grounds to suspect they had entered into similar agreements;

⁴⁰ The March 2015 total fine value was £775,000. The lower May 2015 fines reflect that two parties (Waterfords and Hamptons International) were granted a 5% discount in light of their introduction of company-wide competition law compliance programmes.

⁴¹ In the case of multi-branch estate agents, only the turnover of the offending branch.

(footnote continued)

- publishing open letters to the property⁴² and newspaper⁴³ industries, providing the details and consequences of this case as well as providing general guidance on regulation;
- publishing a case study that again described the infringement and its consequences, as well as lessons learned from the case⁴⁴;
- holding conversations with partners such as the Royal Institute of Chartered Surveyors (RICS) and the Property Ombudsman, who subsequently issued guidance to estate agents regarding competition law in October 2015⁴⁵. Similarly, a variety of associations also sent out open letters, links and updates to their members;⁴⁶ and
- holding a talk at the Negotiator conference.

The case was also widely covered in the press and on social media, including publications such as the Financial Times, specialist property press and online blogs of various accountancy and legal firms.

Subsequent cases

In addition to these activities there have been some related cases since the Three Counties infringement, namely:

- Six Somerset estate agents were found to have taken part in a price-fixing cartel from February 2014 – March 2015. Interestingly, the CMA opened the investigation in September 2015 in response to information that was received due to compliance work undertaken for the Three

⁴² CMA, “Letter from the CMA to estate and lettings agents on competition law”, 3 June 2015. Available at: <https://www.gov.uk/government/publications/letter-from-the-cma-to-estate-and-lettings-agents-on-competition-law>

⁴³ CMA, “Letter from the CMA to newspaper publishers on competition law”, 3 June 2015. Available at: <https://www.gov.uk/government/publications/letter-from-the-cma-to-newspaper-publishers-on-competition-law>

⁴⁴ CMA, “Case study – Advertising of estate agents’ fees: competition law lessons”, 3 June 2015. Available at: <https://www.gov.uk/government/case-studies/advertising-of-estate-agents-fees-competition-law-lessons>

⁴⁵ The Property Ombudsman press release, 13 October 2015. Available at: <https://www.tpos.co.uk/news-media-and-press-releases/press-releases/item/the-property-ombudsman-issues-guidance-note-to-agents-on-compliance-with-competition-law>

⁴⁶ Including National Association of Estate Agents, News Media Association, British Property Federation, Property Redress Scheme, Royal Institute of Chartered Surveyors, Negotiator Conference, Designs on Property and Independent Network of Estate Agents.

(footnote continued)

Counties case.⁴⁷ A decision was issued on the 31 May 2017, with fines totalling £370,084 imposed on five of the six estate agencies involved. The sixth was exempt on leniency grounds as it was the first to confess participation⁴⁸.

- In July 2017, the Competition Appeals Tribunal (CAT) ruled on a case involving the property portal OnTheMarket (OTM) and an estate agent, Gascoigne Halman, who did not comply with OTM's 'one-other-portal' rule. Although this rule was not found to be anticompetitive, the CMA published an open letter (before the CAT judgement) to remind agents that business decisions, such as their choice of property portal, should be made independently⁴⁹. We understand that the CAT ruling is currently under appeal.
- The CMA has recently opened a third case in the estate and lettings sector, but limited case information has been made public at the time of writing.⁵⁰

Some of the awareness and deterrent effects of these cases are likely to be entwined with those of the Three Counties case. However, the *nature* of the infringement (or potential infringement) in both cases differs substantially from the Three Counties case, and there should still be some distinct impact on awareness of prohibition of agreements around advertising.

3.1.2 Direct impact

Stakeholder interviews

From speaking with stakeholders in the industry, including The Property Ombudsman and the National Association of Estate Agents, we understand that the perception within the industry is

⁴⁷ The CMA has acknowledged this: "It was this campaign [the Three Counties compliance campaign] that resulted in the current case being brought to the CMA's attention, and we encourage others with evidence of competition law being broken to report their concerns to the CMA." CMA, "Somerset estate agents admit to price-fixing", 2 March 2017. Available at:

<https://www.gov.uk/government/news/somerset-estate-agents-admit-to-price-fixing>

⁴⁸ CMA, "Residential estate agency services in the Burnham-on-Sea area", 18 September 2017. Available at: <https://www.gov.uk/cma-cases/residential-estate-agency-services-suspected-anti-competitive-arrangement-s>

⁴⁹ CMA, "Letter from the CMA to estate agents on choosing online property portals", 21 April 2016. Available at: <https://www.gov.uk/government/publications/letter-from-the-cma-to-estate-agents-on-choosing-online-property-portals>

⁵⁰ CMA, "Provision of residential estate agency services", case opened 27 February 2018. Available at: <https://www.gov.uk/cma-cases/provision-of-residential-estate-agency-services>

(footnote continued)

that the case raised awareness of the anticompetitive behaviour to some extent, with the fine being a particularly important factor.

Stakeholder interviews also suggested that, despite the rise of online advertising methods (including through websites such as rightmove.com and onthemarket.com), advertising in local papers is still seen as a key medium for advertising and attracting customers with many local papers still offering property supplements. Interestingly, we heard that **[OFFICIAL SENSITIVE: X]** had stopped such advertising for a period, but has now returned to local papers. This supports the view that a local newspaper presence remains important for estate agents.⁵¹

Given that the infringement involved an agreement not to advertise fees, discounts or promotions a direct test of behaviour changes due to the case would be to ask whether property advertisements featured in the Star Courier now include fees. However, the newspaper ceased publication on 29th November 2017⁵²; we have been unable to access any archived material to assess whether such fees were displayed in the newspaper in recent times. We understand that the market continues to be served by the Aldershot News and Mail series of titles. We spoke with a member of the property advertising department at this newspaper and were informed that there is no information on fees included in adverts at present.

Similarly, interviews with those working in the advertising departments of other local newspapers suggest that estate agents' adverts in their property supplements contain little to no information on fees.

Although this does not necessarily mean that there are explicit agreements not to advertise, it shows that despite the enforcement action taken by the CMA, fees are still not transparent within newspaper adverts.⁵³ Therefore, the indirect effect seems to have been limited.

One explanation put forward during our stakeholder interviews was that, given the increasingly competitive market, agents are more

⁵¹ We also understand that the advertising agreement was set at a much wider than regional level through discussions between the estate agent head office and the owner of the local media brands.

⁵² Journalism Now, 'Weekly newspaper set to close as circulation jobs put at risk', 15 November 2017. Available at: <http://journalism-now.co.uk/weekly-newspaper-set-to-close-as-circulation-jobs-put-at-risk/>

⁵³ We understand that letting agents are obliged by law to publicise fees (inclusive of VAT) in accordance with Chapter 4 of the Consumer Rights Act 2015. This states it is the duty of letting agents to display a list of fees at each of the agents' premises (offices) and on their website, but does not refer to advertising in newspapers etc. The maximum penalty for failing to do so is £5,000.

(footnote continued)

open to negotiation on their fees and may choose not to advertise a fixed rate for fear of losing out without the chance to negotiate. However, this factor is not likely to fully explain the current absence of fees in advertisements. Advertising a fee does not preclude negotiating a discount for particular customers to match or better other offers in a competitive market. Moreover, even if fees are often individually negotiated, an agent keen to win new business might still want to advertise special offers.

Survey results

In terms of whether the CMA case had any direct impact on competition or prices, our survey⁵⁴ found that amongst core respondents in the estate agents case who reported being aware of the case (42 respondents), 17% thought that **competition** in the sector had increased as a result of the intervention by the CMA but 81% thought it had stayed the same (none thought competition had decreased). Of these same 42 respondents, 33% thought **prices** had decreased as a result of the intervention, 55% thought that prices had stayed the same and a small number (7%) thought that prices had increased.

Since the publication of the decision for this case, competition and the operating environment in the estate agency market has likely changed as a result of wider changes in the economy⁵⁵. Therefore, respondents may have found it difficult to isolate changes attributable directly to the case. Although we do not put significant weight on these views as direct evidence of what has actually occurred in the market due to the possibility of affirmation bias (respondents saying what they thought the CMA might want to hear), the proportion of respondents indicating that they felt competition had increased, or prices had fallen, as a direct consequence of the case is strongly significant ($p=0.023$ and $p=0.015$ respectively)⁵⁶.

⁵⁴ Q.D11: Have you noticed any changes in your industry as a result of the action that the competition authority took? Would you say the following [competition; price] have increased, decreased or stayed about the same?

⁵⁵ For example, as part of our stakeholder interviews, it was reported to us that the estate agents market has become increasingly competitive in recent years and fees are an element on which agents compete. There are also instances of some agents discounting or writing off fees completely when entering a new area. For example, we were given the example of one large estate agents group that offer a time-limited "no-fee" period when opening a branch in a new area in order to attract new customers. However, this increase in competition is deemed more likely to be as a result of the changing economic circumstances, uncertainty, the growth of the online market, and the reduction in sales/house prices in recent years (for example, see The Guardian, "One in five high-street estate agents risk going bust, study claims", 31 July 2017.

⁵⁶ Testing against the null hypothesis that the same proportions reported competition/prices had increased as reported had decreased.

(footnote continued)

Estimating the proportionate price increase

In order to quantify the direct impact of the CMA's intervention we must estimate the proportionate price increase that may have occurred as a result of the infringement. We have limited information on the specific fees that were in place in the market at the time; neither can we observe their counterfactual level under competition. We must therefore consider an alternative approach to estimating the proportionate price increase associated with the infringement.

The OFT guidance on impact estimation methods⁵⁷ suggests that in the absence of case specific information a default price rise of at 10 - 15 per cent should be used.⁵⁸ However, given our findings of a potentially limited impact from the case, we seek to calculate a more conservative estimate.

We take evidence from a thorough market study of home buying and selling, conducted by the OFT and published in February 2010,⁵⁹ a year that falls within the period over which the infringement was taking place. According to the findings of the OFT study (based on surveys with estate agents), the average non-negotiated commission rate (as a share of sales value) for property sales in the UK at the time was around 1.8%. Furthermore, sellers who successfully negotiated commissions were reported to pay, on average, 1.4%; overall, the fees actually paid by sellers averaged around 1.6%.

If we assume that commission rates were held at 1.8% by the infringing parties during the infringement (with the trade association restricting the advertising of special offers or discounts on fees)⁶⁰ and assume that in the absence of the infringement, customers would otherwise have been aware of such special offers and paid commission rates of 1.6% (the national average paid in the market at that time which should largely reflect the competitive situation and what customers would have paid on average in a well-functioning market), this represents a proportionate price increase of around **11%**.

However, attributing the entirety of this 11% price difference to the infringement assumes that absolutely no discounts below 1.8% would have been obtained in the market subject to restrictive practices. Although fewer people may have been aware of promotions, discounts or special offers that would otherwise be the

⁵⁷ Office of Fair Trading, "A guide to OFT's Impact Estimation methods", July 2010.

⁵⁸ It was suggested in an independent review by Professor Stephen Davies that this be raised from the standard of 10% to 15%. See Office of Fair Trading, "A review of OFT's Impact Estimation Methods, Professor Stephen Davies", January 2010.

⁵⁹ Office of Fair Trading, "Home buying and selling – a market study", February 2010.

⁶⁰ The agents agreed with one another not to include, in their respective advertisements in the Star Courier, details of their fees or commission rates, or make any direct or indirect references to their fees, commission rates, promotions, discounts or special offers, or any other value proposition

case, this does not mean that no customers were able to negotiate a discount. In the absence of data on what discounts (if any) were obtained in the market subject to restrictive practices, we assume that the average price actually paid was lower than 1.8%, but not quite as low as the competitive price of 1.6% where promotions, discounts and special offers might have been more transparent.

Therefore, on a conservative basis we lower our estimate of the proportionate price increase associated with the infringement to around **5%** and use this as our benchmark for the impact assessment.

Based on this rough estimate of the proportional price increase, we calculate excess profit of infringers and loss of consumer surplus per unit of revenue of the infringing parties. This is the direct benefit. Full details of this calculation are included in Annex A.

Based on the combined relevant revenue⁶¹ of the infringing parties in this case [**OFFICIAL SENSITIVE: X**], we estimate the direct impact of the 5% price increase to be [**OFFICIAL SENSITIVE: X**] per annum or **0.05 per unit of revenue**.

However, we recognise that the affected revenues might well have been larger than the relevant revenues of the parties actually fined by the CMA. For example, all Trade Association members were party to the agreement but only some were fined. Therefore, the figures above represent a conservative estimate.

We could instead base our direct impact estimate on estimates of the total revenues of all parties in the Trade Association provided to us by the CMA, which have been reviewed by DotEcon.

For revenue from property sales, the CMA looked at Land Registry data on all sales transactions in 2011/12 in the districts of Hart and Rushmoor, and the town of Farnham (all areas within a 5-mile radius of Fleet (the area in which most Trade Association members were based). The total value of property transactions in this area in 2011/12 (i.e. during the infringement) was around £982m. Assuming a 1.6% average commission rate (based on the results of the OFT study⁶²), estate agent revenues from property sales would be around £15.7m. We understand that the Trade Association

⁶¹ The "relevant turnover" is defined in the Penalties Guidance as the turnover of the undertaking in the relevant market affected by the infringement in the undertaking's last business year. The 'last business year' is the undertaking's financial year preceding the date when the infringement ended. Therefore, the "relevant turnover" figure accounts for that fact that potentially not all products and not all geographical markets have been affected by the infringements. Thus, it is usually smaller than the entire turnover of the business.

⁶² Office of Fair Trading, "Home buying and selling – a market study", February 2010.

(footnote continued)

members were responsible for around [OFFICIAL SENSITIVE: X]% of all sales in this area, which implies combined revenue of around [OFFICIAL SENSITIVE: X].

For lettings and management fees, based on information collected as part of the OFT's Lettings Market study in 2013,⁶³ the CMA estimated that letting agencies in England receive letting fees of £330m-375m per year, and management fees of £570m-980m per year, and assume that around £7.74m of this was raised in the area around Fleet.⁶⁴ If the Trade Association members were responsible for around [OFFICIAL SENSITIVE: X]% of all transactions in this area, this implies a combined lettings and management revenue of around [OFFICIAL SENSITIVE: X].

Therefore, based on total revenues of around [OFFICIAL SENSITIVE: X], we estimate the direct impact of the 5% price increase to be: [OFFICIAL SENSITIVE: X] per annum. However, this is still equivalent to **0.05 per unit of revenue**.

3.2 Bathroom fittings case

3.2.1 Overview of the case

This infringement involved a bathroom fittings supplier, Ultra Finishing Limited⁶⁵, engaging in resale price maintenance (RPM)⁶⁶ introduced via online "trading guidelines", which its reseller network had to adhere to.

The online trading guidelines were primarily related to the representation of Ultra's brands (specifically Hudson Reed and Ultra

⁶³ Office of Fair Trading, "The Lettings Market", February 2013. Available at: http://webarchive.nationalarchives.gov.uk/20140402234354/http://www.of.gov.uk/shared_of/markets-work/lettings/oft1479.pdf

⁶⁴ Using data from the Land Registry, the total value of transacted properties in England in 2011/12 was £114.2bn. The estimate of sales revenues of £982m in the area around Fleet equates to 0.86% of total properties sold in England. Assuming that a similar proportion of total lettings and management revenue was earned in the Fleet area, and taking the conservative estimates for lettings and management revenue this is (£330m+£570m)*0.86% = £7.74m.

⁶⁵ Ultra Finishing Limited was controlled by its parent company, Ultra Finishing Group Limited, throughout the relevant period. The CMA declared them a single economic unit for the purposes of the investigation and, similarly, whenever we refer to "Ultra" in this section we refer to either or both of the companies.

⁶⁶ Whilst the CMA noted that, in the bathroom fittings sector, there had been evidence of numerous companies engaging in RPM, this investigation was limited in scope and investigated only the practices of Ultra.

(footnote continued)

branded products) on resellers' websites, including images and logos. However, they also contained a "recommendation", which was stated not to be legally binding, that online prices should be no lower than 25% off in-store RRP for Hudson Reed or Ultra branded products. Despite being described as a "recommendation", the CMA found evidence to demonstrate that the key objective of Ultra's online trading guidelines was to prevent resellers from selling or advertising Hudson Reed or Ultra branded products online below the recommended price.

The UK bathroom fittings sector

The bathroom fittings and furniture sector was worth £960 million in 2016⁶⁷. Competition in the bathroom fittings market takes place both at the upstream and downstream level. There are a large number of manufacturers and retailers active in the sector. Some retailers offer their own brands or products that are unbranded, alongside the manufacturers' branded products.

The Internet as a sales channel is an important driver of price competition and played a notable role in the case. It allows consumers to compare prices of the fittings quickly every time they make a purchase decision. However, resellers of Ultra products had complained about customers seeing the products in person in showrooms and then buying them on the Internet where discounts were greater than those available in store. In some cases those parties explicitly encouraged Ultra to instigate an RPM policy.

Details of the infringement

Ultra first introduced a pricing policy in 2009, which involved enforcing a policy whereby re-sellers could not price below a maximum 20% discount off the Recommended Resale Price. It was established in response to reseller complaints about not being able to compete against low online prices. Ultra withdrew the 2009 policy after a short time, as many sellers were not adhering to it. However, in 2010 and 2011 Ultra received further complaints from its resellers that low online prices were increasing price competition between resellers and exerting downward pressure on the retail price of Ultra's products, whether sold online or offline. In response, Ultra introduced a new pricing policy in February 2012 (fixing a 25% maximum discount off RRP of its Hudson Reed and Ultra branded products through the introduction of online trading guidelines).

Ultra's employees had tried to avoid putting anything into the written trading guidelines and the pricing policy was masked as a recommendation. However, internal communication within Ultra and later testimonies, clearly proved that senior Ultra employees were aware of the real intention, including board-level awareness and approval of the intention behind the introduction of the online trading guidelines. Sales and marketing employees continuously monitored and enforced the pricing policy and exchanged emails about the policy and information about particular resellers' compliance status.

⁶⁷ Mintel, 2017, 'Bathrooms and Bathroom Accessories: UK, August 2017'

The company procedures included updating a spreadsheet tracking each reseller's adherence to the policy and sending communications to those resellers whose prices were not in line. Resellers also frequently engaged in monitoring the prices of other resellers and communicating any breaches of the pricing agreement to Ultra. The steps taken against disobedient resellers included restrictions on terms of supply (or its complete halt) and withdrawal of rights to use images of Ultra branded bathroom products online.

The CMA's investigation and decision

The pricing policy continued for several years and the CMA concluded that Ultra engaged in resale price maintenance for at least the period from February 2012 to August 2014.

A penalty was applied to Ultra in accordance with the relevant guidelines⁶⁸. The base for the fine was 18% of Ultra's turnover throughout the relevant period of the infringement, followed by a range of multiplicative adjustments, upward for involvement of senior management and downward for cooperation with the CMA in the course of the investigation and a follow-up compliance programme. The CMA decreased the penalty due to Ultra's financial position to avoid the penalty being disproportionate or excessive, as otherwise it would have been significantly in excess of Ultra's yearly profit after tax or net assets in the relevant period. After this discretionary reduction (and then a 20% discount for resolving the investigation via settlement discussions), the final penalty was £786,668 (which is about 0.1% of the yearly revenue in the bathroom fittings and furniture sector). The CMA did not fine the resellers in this case. The CMA concluded that it was "*reasonable and proportionate*" to impose the penalty just against Ultra, acknowledging that the anticompetitive policy was directed at all resellers alike.⁶⁹

Follow-up work

The CMA notes that in the aftermath of the investigation, "*Ultra has introduced a comprehensive competition law compliance programme, to which its Board has fully and publicly committed. [...] In addition,*

⁶⁸ Office of Fair Trading, 2012, 'OFT's guidance as to the appropriate amount of a penalty', available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/284393/oft423.pdf

⁶⁹ Page 205 of the decision. The CMA used the rule 10(2) of its procedural rules, which states: *where the CMA considers that an agreement infringes the Chapter I prohibition or the prohibition in Article 101(1) the CMA may address an infringement decision to fewer than all the persons who are or were party to that agreement or are or were engaged in that conduct.* Source: Office of Fair Trading, 'OFT's guidance as to the appropriate amount of a penalty', 2012. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/284393/oft423.pdf

(footnote continued)

*Ultra will submit a report to the CMA on its compliance activities every year, for the next three years*⁷⁰.

On the day of the publication of the press release accompanying the decision, the CMA sent warning letters to a number of other suppliers of bathroom fittings that it suspected engaged in similar practices in relation to internet sales.

Since the decision in the case was published, the CMA has published two more decisions regarding online resale price maintenance practices, one in the commercial catering equipment sector⁷¹, and one in the light fittings sector (one of the other cases included in this evaluation).

These three cases together have formed the basis for the CMA to inform businesses and the public about the law on RPM and about the CMA's work. The CMA has published several documents to explain the law in this area and help businesses to comply:

- *Resale Price Maintenance: Advice for Retailers*⁷² – a very short guide explaining what RPM is and how to tell what behaviour is unlawful;
- *Restricting Resale Prices: an Open Letter to Suppliers and Resellers*⁷³ – offering more detailed advice for businesses and describing the light fittings case study, illustrating what might be classified as RPM and mentioning the penalty that was imposed on the supplier of light fittings in that case; and
- *Suppliers Telling Retailers what to Charge*⁷⁴, an animated video with the most concise content out of these three pieces.

The CMA's bathroom fittings decision was also publicised by CMA presentations at various trade association meetings (such as the Bathroom Manufacturers Association), at other related business

⁷⁰ Page 146 of the bathroom fittings decision

⁷¹ CMA, "Commercial catering equipment sector: investigation into anti-competitive practices", 10 June 2016. Available at: <https://www.gov.uk/cma-cases/commercial-catering-sector-investigation-into-anti-competitive-practices>

⁷² Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/529969/RPM_60SS.pdf

⁷³ Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/620454/resale-price-maintenance-open-letter.pdf

⁷⁴ Available at: <https://www.youtube.com/watch?v=hObZs6m2jhw>

(footnote continued)

events (e.g. Giftware Association’s AGM, British Retail Consortium), as well as in the trade press (e.g. Kitchen & Bathroom Business⁷⁵).

3.2.2 Direct impact

To evaluate the direct impact of the CMA’s rulings, we used evidence from three sources: research into prices of bathroom fittings, stakeholder interviews, and the results from our survey.

Survey results

In response to our survey⁷⁶ we found that out of the 61 core respondents in the bathroom fittings sector who reported being aware of the case, 28% thought that **competition** in the sector had increased as a result of the intervention by the CMA, whilst 68% thought it had stayed the same (and none thought competition had decreased). Of these same 61 respondents, 31% thought **prices** had decreased, 48% thought that prices had stayed the same and 20% thought that prices had increased.

We do not put significant weight on these views as direct evidence of what has actually occurred in the market, given that respondents may have found it difficult to isolate changes attributable directly to the case and the impossibility of deriving quantitative values from these statements. However, we recognise that the proportion of respondents indicating that they felt competition had increased as a direct consequence of the case is significantly greater compared to those who thought competition had decreased ($p=0.004$), but we have not found such difference with regard to respondents’ views on price changes ($p=0.281$). There is no significant difference between the number of those who thought competition (or prices) were unchanged relative to those who thought it increased (decreased).

Whilst we take the responses to these questions as indicative of the direction of price movements or changes in competition as a result of the case, firmer conclusions need evidence on observed price changes in the market.

Pricing research

To assess the extent to which the restrictions on the level of price discounting online have been removed and what the impact on prices has been, we collected current and past prices of bathroom fittings supplied by the infringing party, Ultra, and assessed the evolution of these prices over time.

We have collected data from the websites of two retailers who sell Ultra products (under the brands of Ultra and Hudson Reed, which

⁷⁵ Kitchen & Bathroom Business, “We’ll Fine Bathroom Retailers Too,” Warns CMA’, 10 May 2016, available at: <http://www.kbbreview.com/news/well-fine-you-too-cma-warns-bathroom-dealers/>

⁷⁶ Q.D11: Have you noticed any changes in your industry as a result of the action that the competition authority took? Would you say the following [competition; price] have increased, decreased or stayed about the same?

were subject to the infringement) online – *taps4less.com* and *qssupplies.co.uk*. The choice of retailers has been restricted by the feasibility of obtaining present and historic data price snapshots from their websites.

We obtained present day data by running a web scraping tool to gather price, RRP and product information for all Ultra or Hudson Reed branded products listed on each website. For historic data, we followed a similar approach but accessing archived versions of the websites stored at *web.archive.org* from a time during the period of infringement.

Table 5 outlines the number of products we have been able to obtain from each website in each time period. Ultra branded products do not feature currently on *qssupplies.co.uk* and thus we have not included this below.

Table 5: Price and RRP data collected

	Qssupplies.co.uk	Taps4less.com	
	Hudson Reed branded	Ultra branded	Hudson Reed branded
1 Feb 2012 – 21 Aug 2014 (the infringement period)	599 products (April 2012)	266 products (October 2012 - February 2013)	388 products (October 2012 - February 2013)
Present day	558 products (April 2018)	270 products (February 2018)	834 products (February 2018)

First, we calculate the price to RRP ratios of the products in our historic data sets. We find that for both ranges at *taps4less.com* and the Hudson Reed range at *qssupplies.co.uk*, most prices are set at 75% of RRP⁷⁷. This is consistent with the infringing agreement that prices should be set no lower than 25% of RRP online. Looking at present day prices and RRPs we see that the price to RRP ratio has dropped and there is no evidence of the 25% maximum discount continuing to be imposed.

⁷⁷ Our prices and RRPs are consistent with respect to inclusion of VAT. Specifically, price and RRP data on both of the websites has been, at relevant points in time, inclusive of VAT, which has been held at 20% over the period. The original restriction was with respect to prices including VAT.

Table 6: Price to RRP ratios across our entire sample

	Qssupplies.co.uk		Taps4less.com	
	Hudson Reed branded	Ultra branded	Hudson Reed branded	
1 Feb 2012 – 21 Aug 2014 (the infringement period)	71.8% (599 products) (April 2012)	74.2% (249 products) (October 2012 - February 2013)	76.2% (344 products) (October 2012 - February 2013)	
Present day	44.5% (558 products) (April 2018)	65.5% (237 products) (February 2018)	64.9% (810 products) (February 2018)	

However, looking only at price to RRP ratios could hide movements in price, with the changes explained instead by increases in RRP. Therefore, in order to evaluate the impact of CMA's ruling on the prices actually paid by consumers, we must also calculate the change in nominal prices for comparable products over time.

For Hudson Reed products from *qssupplies.co.uk* we were able to identify 155 comparable products on sale both in 5 April 2012 and 4 April 2018.

For *taps4less.com* we were able to match 68 comparable Hudson Reed branded products and 55 comparable Ultra branded products that were sold at the time of the infringement and at present day.

Table 7 below shows the extent to which the nominal price of those products has, on average, decreased between the periods. We also show the price changes if we account for inflation throughout this period (using the overall UK CPI) and using the 'furniture, households equipment and maintenance' component of the CPI⁷⁸.

⁷⁸ Note: we use January 2018 CPI instead for February and April as this is the latest one returned by query to the relevant ONS database. Source: <https://beta.ons.gov.uk/filter-outputs/8e12fd42-b3e6-4533-8ed0-082bd326dcc1> Additionally, for the period from October 2013 to February 2014, we picked the highest monthly CPI as our measure of inflation, yielding the most conservative results.

Table 7: Price changes for Hudson Reed and Ultra branded products over time

Website	Brand	Time periods	Price change	Price change controlling for CPI	Price change controlling for division-specific CPI ⁷⁹	RRP change
Qssupplies.co.uk	Hudson Reed	2012 vs 2018	-43.1%	-47.8%	-53.0%	2.0%
Taps4less.com	Hudson Reed	2012/2013 vs 2018	-17.6%	-21.4%	-21.4%	5.3%
Taps4less.com	Ultra	2012/2013 vs 2018	-7.7%	-11.9%	-11.9%	21.5%

The evolution of prices suggests there has been a decrease in prices of between 11.9% and 47.8% relative to the infringement price (controlling for CPI). This shows there has been an increase in price competition in the market.

However, acknowledging that we have considered only a limited number of retailers we should be conservative when estimating the proportionate price increase associated with the infringement. If we disregard the large price changes from the *qssupplies.co.uk*, and take a weighted average of the smaller price changes observed across all comparable Ultra and Hudson Reed products from the *taps4less.com* data we estimate a proportional price change (controlling for CPI) of around 17%.

This is just slightly above the suggested default price rise of 15% in the OFT guidance on impact estimation methods, which should be used in the absence of case specific information.⁸⁰ Therefore, we consider it appropriate to use this figure of **17% as our benchmark for the impact assessment.**

Based on this rough estimate of the proportional price increase, we calculate excess profit of infringers and loss of consumer surplus per unit of revenue of the infringing parties. This is the direct benefit. Full details of this calculation are included in Annex A.

⁷⁹ Furniture, household equipment and maintenance

⁸⁰ Office of Fair Trading, "A guide to OFT's Impact Estimation methods", July 2010.

(footnote continued)

Taking the relevant revenue⁸¹ of the infringing party in this case **[OFFICIAL SENSITIVE: X]**, we estimate the direct impact of a **17%** price increase to be **[OFFICIAL SENSITIVE: X]** per annum or **0.21 per unit of revenue**.

Stakeholder interviews

Interviews with key stakeholders in the industry (including the Bathroom Manufacturers Association) also supports the view that price competition from online sources has been increasing in recent years, with a number of online only retailers offering discounts online. Their ability to do so is attributed to fewer overheads for online retailers, and a limited need to include a service element within the price.

Although such changes may be beneficial for the consumer in terms of greater price competition and choice, stakeholders indicated that this can put pressure on the margins of manufacturers and high-street retailers. For example, those with high-street stores or showrooms are concerned that the increased number of online retailers with lower overheads and greater price discounting is leading to an increase of online retailers free-riding on the services and advice given in stores: customers will go into store or showrooms to ask questions and see the products, therefore taking advantage of the service which is costly for physical retailers to provide. Customers will then either buy the product directly from an online retailer, or attempt to get the high-street retailer to price match the online retailers' lower price. This de-coupling of the service from the sale is seen as a major challenge for high-street retailers, and there is a concern that the number of showrooms will fall.

However, it may be that in the long run this shift to online retail is not entirely beneficial for consumers. One stakeholder noted that although online sales are more price competitive, customers often buy products that are not compatible with each other or with the plumbing system (for example, a high pressure shower that does not work in a low pressure home) as they are unaware of these requirements given the service element usually provided in a showroom is missing. As a result, manufacturers are using various incentives to encourage bricks-and-mortar stores to stock their products and raise brand awareness, such as offering training and fitting out showrooms to further encourage people to view the products and get the service they need. Although the offer of providing this training is also, in principle, open to online retailers,

⁸¹ The "relevant turnover" is defined in the Penalties Guidance as the turnover of the undertaking in the relevant market affected by the infringement in the undertaking's last business year. The 'last business year' is the undertaking's financial year preceding the date when the infringement ended. Therefore, the "relevant turnover" figure accounts for that fact that potentially not all products and not all geographical markets have been affected by the infringements. Thus, it is usually smaller than the entire turnover of the business.

the stakeholder felt that from their experience online retailers were less interested in increasing their knowledge of the products sold.

3.3 Light fittings case

3.3.1 Overview of the case

In 2017 the CMA fined the National Lighting Company (NLC), a supplier of domestic light fittings £2.7 million for breaking competition law by restricting resellers' freedom to set their own prices online – a form of resale price maintenance (RPM).⁸²

The CMA found that NLC broke competition law by dictating the minimum prices at which resellers could sell its products online. The supplier set a maximum discount off the recommended resale price (RRP) that resellers were allowed to offer. The supplier used an Internet Licence Agreement (ILA) as a way of enforcing the policy – resellers understood that an unwritten condition of the ILA was agreeing to the pricing restriction. In this case the supplier threatened resellers with penalties for not pricing at or above its specified price. Such threats included suspending resellers' accounts or revoking the ILA and the ability to use official images online.

The UK light fittings sector

The UK lighting sector, in which the infringement took place, primarily sells:

- lamps (i.e. sources of light);
- luminaires (i.e. light fittings which house lamps); and
- controls.

The sector is fragmented and competition takes place at both the upstream and downstream levels. As the CMA reports in their decision, "*domestic light fittings are supplied to end users via DIY multiples (39%), department stores/high street multiples (28%), lighting specialists and internet/mail order (22%) and grocery multiples (11%)*"⁸³.

The Internet is a significant channel of sales (and driver of price competition) in the supply of light fittings. Most of brick-and-mortar resellers also sell online.

⁸² As CMA's decision explains, *all of NLC's lighting business in the UK is conducted via Poole*, which is a company fully owned by NLC. Throughout the relevant period, Poole operated Saxby and Endon brands, which, even if managed separately, were part of one economic unit. For simplicity, in this section, when we refer to "NLC" we mean either Poole, Saxby, Endon, NLC itself or any combination of these.

⁸³ Delineations within the lighting sector and sales data from: AMA Research, 2016, 'Lighting Market Report – UK 2016-2020 Analysis'; cited by CMA (2017)

Details of the infringement

The infringement decision was addressed to Poole, Endon, Saxby, their parent company the National Lighting Company, and their various resellers, concerning two infringements:

- The Endon online pricing policy was introduced in early 2010. Endon's Sales Director created a formula for the online pricing policy based on the price list issued to resellers (i.e. RRP excluding VAT) and imposed a maximum 20% discount from that price for online sales of Endon products. The CMA found that the Endon online policy was imposed by NLC from 31 May 2013 (at the latest) to 15 June 2016.
- The Saxby online pricing policy was introduced in early 2012 when the Sales Director of Poole, together with senior Saxby ASMs, introduced a maximum 20% discount off the "trade price" for online sales of Saxby products. The "trade price" was issued to resellers as the suggested resale price excluding VAT. The CMA found that the Saxby online policy was imposed by NNLC from 31 October 2012 (at the latest) to 25 February 2013.

NLC sales employees monitored resellers' compliance with the pricing policy. Having identified any resellers who did not comply - either as a result of NLC's own monitoring or hearing other resellers' complaints - NLC threatened resellers with penalties for not pricing at or above its specified price. Such threats included suspending resellers' accounts or revoking the Internet License Agreement and the ability to use official images online.

In addition, the CMA determined from an interview with a Sales Director that NLC was aware of the illegality of their actions. The efforts to avoid detection were expressed, for example, in advising salespeople not to refer to the pricing policy in writing in contact with any of the resellers.

The relevant period was preceded by a warning letter sent in May 2012 by the OFT (the predecessor of CMA) to Endon regarding concerns that the company engaging in RPM. Endon temporarily reduced the intensity of RPM activities, but did not stop them. In May 2016, the CMA sent an advisory letter to NLC expressing concerns about evidence it had seen which gave grounds for suspecting Saxby was engaged in RPM activities. The investigation was opened in August 2016 and concerned Saxby and Endon branded products. After entering NLC's premises on a site visit to gather relevant evidence, the CMA considered the accumulated evidence sufficient to continue its investigation into NLC's pricing practices, and proceeded to issue a Statement of Objections. The NLC Group voluntarily, clearly and unequivocally admitted the facts and allegations of infringement as set out in the Statement of

Objections,⁸⁴ which are now reflected in the Decision, and agreed to co-operate in expediting the process for concluding the case.

Based on the Penalties Guidance⁸⁵, the CMA imposed a total fine of £2,763,000 on NLC. The base for the fine was 18% and 19% (for Saxby and Endon pricing policies respectively) of the relevant turnover throughout the relevant duration, followed by a range of multiplicative adjustments:

- upward adjustment resulting from the involvement of senior management in the infringement;
- downward adjustment for follow-up compliance efforts;
- a 25% uplift for ignoring the 2012 warning letter (in the penalty relating to the Endon brand);
- a leniency discount of 30% following the company's voluntary cooperation once the investigation was opened; and
- a 20% discount for resolving the case via settlement discussions, which involves admitting participation in the infringement.

While the size of the penalty is not significant in comparison to the size of the UK light fittings market (domestic fittings, which were the primary object of this case, represented 36% of the £1.22 billion lighting market in 2015), the CMA notes that before leniency and settlement adjustments the penalty constituted 73% of NLC's average yearly profit after tax in years 2013-2015 – which was not, in the CMA's judgement, *disproportionate or excessive*.

As permitted by the law⁸⁶, the CMA chose not to apply any penalty on any resellers. Even though at least one reseller was a party to the infringing agreements, NLC's policy was imposed on numerous resellers in a standardised form and the CMA considered it "*reasonable and proportionate*" to apply the penalty just to NLC.⁸⁷

Follow-up work

⁸⁴ Subject to limited submissions communicated to and agreed by the CMA.

⁸⁵ Office of Fair Trading, 'OFT's guidance as to the appropriate amount of a penalty', 2012, available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/284393/oft423.pdf

⁸⁶ Rule 10(2) of CMA's procedural rules states: *where the CMA considers that an agreement infringes the Chapter I prohibition or the prohibition in Article 101(1) the CMA may address an infringement decision to fewer than all the persons who are or were party to that agreement or are or were engaged in that conduct*. Source: Office of Fair Trading, 2012, 'OFT's guidance as to the appropriate amount of a penalty', at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/284393/oft423.pdf (accessed 17.11.2017)

⁸⁷ Page 53 of the light fittings decision

(footnote continued)

As the decision notes, “since the commencement of the CMA’s investigation on 16 August 2016, Poole has terminated its online pricing policies by informing resellers that there is no longer a pricing policy in place”. At the time of the decision, the company was “also developing compliance measures to ensure that employees are aware of the law relating to resale price maintenance”⁸⁸.

On publishing the light fittings decision, the CMA sent a number of warning letters to other suppliers in the light fittings sector where there were reasonable grounds to suspect they may also be engaging in RPM.

The CMA has not released any further decisions on RPM infringements since the one considered here, although previously there had already been decisions against a supplier of bathroom fittings (as described above) and against a supplier of catering equipment⁸⁹.

These three cases together have formed the basis for the CMA to inform businesses and the public about law regarding RPM and about the Authority’s work. As described in the bathroom fittings case above, the CMA has published several documents to explain the law and help businesses to comply, including advice for retailers, an open letter to suppliers and an information video

The light fittings decision was also publicised among members of various trade associations, including the British Home Enhancement Association, Retra and the Bicycle Association; at business events (Electrical Distributors Association’s business forum in Bristol) and in the trade press (Kitchen & Bathroom Business⁹⁰).

3.3.2 Direct impact

To evaluate the direct impact of CMA’s rulings, we have tried to investigate the current prices of light fittings supplied by the National Lighting Company and the evolution of these prices over time by collecting data from the websites of the suppliers and from websites of retailers who sell their products online. We also have survey results, and conducted stakeholder interviews.

Survey results

In response to our survey⁹¹ we found that out of the core respondents in the light fittings sector who reported being aware of

⁸⁸ Page 47 of the light fittings decision

⁸⁹ CMA, “Commercial catering equipment sector: investigation into anti-competitive practices”, 10 June 2016. Available at: <https://www.gov.uk/cma-cases/commercial-catering-sector-investigation-into-anti-competitive-practices>

⁹⁰ Kitchen & Bathroom Business, ‘CMA Fines Lighting Supplier £2.7m’, 20 June 2017, available at: <http://www.kbbreview.com/news/cma-fines-lighting-supplier-2-7m/>

⁹¹ Q.D11: Have you noticed any changes in your industry as a result of the action that the competition authority took? Would you say the following [competition; price] have increased, decreased or stayed about the same?

the case (58 respondents), 34% thought that competition in the sector had increased as a result of the intervention by the CMA 48% thought it had stayed the same and 10% thought competition had decreased. Of these same 58 respondents, 43% thought **prices** had decreased 43% thought that prices had stayed the same and 10% thought that prices had increased. Again, we do not put much weight on these responses as direct evidence of what has actually occurred in the market, given the relatively small sample and the difficulties of imposing a value judgement on such factors, especially where this would require disentangling impact of the case from other changes. Nevertheless, the proportion of respondents indicating that prices had fallen as a direct consequence of the case is strongly significant compared to those who thought prices had risen ($p=0.001$).

Again, we take the responses to these questions as indicative of the direction of price movements or changes in competition as a result of the case, firmer conclusions need evidence on observed in the market.

Pricing research

To assess the extent to which the restrictions on the level of price discounting online have been removed and what the impact on prices has been, we collected current and past prices of bathroom fittings supplied by the infringing party, NLC, and assessed the evolution of these prices over time.

Replicating previous research

We received some historic pricing data for NLC products from the CMA case team⁹² and used present day pricing information for these products to compare the evolution of prices between the two periods.

In particular, the CMA provided us with spreadsheets with prices for a range of Endon products (a brand of the NLC which were subject to the restrictive agreement⁹³) together with their prices at *lights4living.com* and *scotlightdirect.co.uk* at several points in time from the period of infringement (October 2012 – June 2016).

The data included prices and RRP for a selection of Endon products and presented price to RRP ratios. As shown in Table 8 below, particularly in 2014, the price (including VAT) to RRP ratios were set at 96% which is consistent with the restrictive agreement imposed on Endon products during the period of the infringement. For example, the online pricing policy was based on the price list issued

⁹² The data provided to us by the CMA provided relevant extracts of material NLC used to support the penalty determination.

⁹³ Whilst products in the Saxby brand of NLC were also subject to the restrictive behavior, the CMA found that the policy was not adhered to as strictly and this is reflected in the relatively small share of Saxby revenue in the relevant revenue calculation for the NLC fine.

(footnote continued)

to resellers (i.e. RRP excluding VAT) and imposed a maximum 20% discount from that price for online sales of Endon products. As VAT is at 20%, it adds 16 percentage points to the price set at 80% of RRP. Therefore the price (including VAT) to RRP discount would be 96%. For this reason, the policy was sometimes expressed as being RRP minus 4%.⁹⁴

Table 8: Price to RRP ratios

Year	Lights4living.com	Scotlightdirect.com
2013	85-96% (19 products) ⁹⁵	90-96% (20 products) ⁹⁶
2014	96% (20 products) ⁹⁷	96% (19 products) ⁹⁸

Where possible, we identified the same products on each of these websites and collected present day data and RRP.⁹⁹ We found 10 comparable products that were still available from **scotlightdirect.co.uk** and found that, on average, their prices were set at 65% of RRP. This suggests a significant increase in discount. We also found 10 comparable products still on sale at **lights4living.com** where the ratios of their prices to RRP were in the range of 67% to 79%, which is also a significant drop.

However, looking only at price to RRP ratios could hide movements in price, with the changes explained instead by increases in RRP. Therefore, in order to evaluate the impact of CMA's ruling on the prices actually paid by consumers, we must consider the change in nominal prices for comparable products over time.

For this purpose, we compared today's prices and historic prices for the comparable products from this sample. We have also compared these changes with inflation over the respective periods, both in the overall economy and in the "furniture, households equipment and maintenance" component of the CPI. Table 5 below shows the extent to which the nominal price of those products has, on average, decreased between the periods.

⁹⁴ As noted in paragraph 3.63 of the Light Fittings non-confidential decision, this policy was explained by an Endon Sales Director as: 'For example, if a product was on the price list as £100, the policy was that it should not be sold for less than £80 plus VAT which equals £96 (assuming VAT at 20%). For this reason, the policy was also sometimes expressed as being RRP minus 4%, i.e. £96.' The captured online include VAT.

⁹⁵ Data from 17 August 2013

⁹⁶ Data from 24 March 2013

⁹⁷ Data from 14 August 2014

⁹⁸ Data from 1 July 2014

⁹⁹ Data collected on 15 December 2017.

Table 9: Price changes for Endon branded products over time based on products in the 2010 sample provided to us by CMA

Website	Time periods	Price change	Price change controlling for CPI	Price change controlling for division-specific CPI ¹⁰⁰	RRP change
scotlightdirect.co.uk	July 2014	-15.2%	-19.6%	-20.0%	25.3%
	vs December 2017				
lightsforliving.com	August 2014	-11.3%	-15.6%	-15.6%	15.8%
	vs December 2017				

Although RRP's have increased substantially over the recent years, we do still observe significant decreases in the sale price because of the increased average discounts from RRP. This shows there has been an increase in price competition in the market, which could be a direct consequence of CMA's ruling.

However, a possible shortcoming of this exercise is that the comparisons only involve 10 products on each website. Therefore, we re-ran this analysis with a larger data set, running a web scraping tool to gather price, RRP and product information for all Endon branded products listed on *lightsforliving.com*. For historic data, we followed a similar approach but accessed archived versions of the website stored at *web.archive.org* from a time during the period of infringement.

Table 10 shows the number of products whose prices we obtained in each time period.

¹⁰⁰ Furniture, household equipment and maintenance

(footnote continued)

Table 10: Price data collected on Endon branded products

Lights4living.com	
The infringement period	1574 products (August 2013 – August 2014)
Present day	1297 products (December 2017) ¹⁰¹

Based on this data, for Endon products from *lightsforliving.com* we were able to compare a total of 337 products whose codes identified a unique product that was sold at both periods (2013-2014 and 2017).

Table 11 below shows the extent to which the nominal price of those product has, on average, decreased between the periods. We also show the price changes if we account for inflation throughout this period.¹⁰²

Table 11: Price changes for Endon branded products over time

Website	Time periods	Price change	Price change controlling for CPI	Price change controlling for division-specific CPI¹⁰³
<i>lightsforliving.com</i>	August 2013 – August 2014 vs 17 December 2017	-13.9%	-17.1%	-18.1%

The evolution of prices suggests there has been a decrease in prices of around 17% relative to the infringement price (when controlling for inflation), which is broadly consistent with the findings from our smaller sample based on the data provided by CMA, where price

¹⁰¹ Using scripted tools, we have extracted a list of 601 products available on *lights4living.com* whose product codes match exactly one product from Endon's online collection (we have discarded those products from *lights4living* which match more than one product from Endon's website as potentially incorrect records).

¹⁰² as in the case of bathroom fittings, we picked the highest relevant monthly CPI as our inflation measure for the period from August 2013 to August 2014, in order for the calculations to be as conservative as possible.

Nominal prices from both periods are consistent with respect to inclusion of VAT, Specifically, *lights4living.com* only advertises prices inclusive of VAT, which has been held at 20% at all relevant points in time.

¹⁰³ Furniture, household equipment and maintenance

(footnote continued)

changes were in the range of 15.6 – 19.6%.

This is just slightly above the suggested default price rise of 15% in the OFT guidance on impact estimation methods, which should be used in the absence of case specific information.¹⁰⁴ Therefore, we consider it appropriate to use this figure of **17%** as our benchmark for the impact assessment.

Based on this rough estimate of the proportional price increase, we calculate excess profit of infringers and loss of consumer surplus per unit of revenue of the infringing parties. This is the direct benefit. Full details of this calculation are included in Annex A .

Taking only the combined relevant revenue¹⁰⁵ of the infringing parties in this case [**OFFICIAL SENSITIVE: X**], we estimate the direct impact of a **17%** price increase to be [**OFFICIAL SENSITIVE: X**] per annum or **0.21 per unit of revenue**.

*Stakeholder
interviews*

Interviews with key stakeholders in the industry (including the Lighting Industry Association) support the view that price competition from online sources has been increasing in recent years, with a number of online-only retailers offering discounts online. We heard views expressed that this discounting has intensified following the CMA's RPM decision.

Whilst this is good news for customers who can get low prices, we heard views expressed by some in the lighting industry (particularly those with high-street stores or showrooms) concerned that this is leading to an increase in 'free riding', where online retailers get to benefit from the services and advice given in stores. Customers will go to a store or showroom, ask questions, see the products, take advantage of the service and then search for a cheap price online, either buying directly from online or trying to get the high-street retailer to price match. This de-coupling of the service from the sale is seen as a major challenge for high-street retailers, and there is a concern that the number of showrooms will (continue) to fall.

Based on anecdotal evidence gathered from conversations with suppliers of lighting products, the Lighting Industry Association told us that around half of all showrooms or high street shops had closed over the past 3 to 5 years as a result of the increasing pressure from discounted products being sold online.

As with the bathroom fittings market, it may be that in the long run this shift to online retail is not entirely beneficial for consumers. Although online sales may be cheaper and appear to offer a better

¹⁰⁴ Office of Fair Trading, "A guide to OFT's Impact Estimation methods", July 2010.

¹⁰⁵ The "relevant turnover" is defined in the Penalties Guidance as the turnover of the undertaking in the relevant market affected by the infringement in the undertaking's last business year. The 'last business year' is the undertaking's financial year preceding the date when the infringement ended. Therefore, the "relevant turnover" figure accounts for that fact that potentially not all products and not all geographical markets have been affected by the infringements. Thus, it is usually smaller than the entire turnover of the business.

deal, the service element usually provided in a showroom is missing and it is possible that consumers could make poor choices or purchase products that are incompatible with their requirements. Therefore, although these potential efficiency benefits of RPM were not a defence against the specific infringement in this case, they could become relevant in other contexts and might even be a partially offsetting benefit to weigh against the detriment resulting from raised prices. However, this is not a matter we have investigated further given that the organisations interviewed did not provide specific evidence that there could be efficiency benefits from RPM in improving incentives for pre-sales advice.

3.4 Mobility scooters case

3.4.1 Overview of the case

The market for mobility scooters

Following submissions of concerns from key industry stakeholders about how well the market for mobility aids was working for consumers in general, the OFT conducted a market study¹⁰⁶ which identified that:

- doorstep sales in particular were unfairly targeting elderly and vulnerable customers, using high-pressure and misleading sales tactics;
- many customers did not shop around due to restricted mobility, lack of access to internet, and time-pressure on account of urgency;
- prices varied substantially for identical scooters, by over £1,000 and in one case by £3,000;
- most consumers in the market were first-time buyers and basing their purchasing decisions on limited information;
- there was a lack of price advertising on the internet; and
- that the market was highly concentrated, although still subject to some competitive constraints.

Moreover, the OFT also found that prior to the end of 2010, the retail price of mobility scooters purchased through a government-assisted Motability¹⁰⁷ scheme was set at the RRP minus 20%. This led to RRP of mobility scooters being set at an arbitrarily high level to improve retailer's profit margins - but these prices did not decrease when the Motability scheme ended. Therefore, there was already a general tendency in the sector to set RRP too high.

Details and impact of the infringement

Following this market review, the OFT found reasonable grounds to open an investigation into two separate cases of CA98 infringement

¹⁰⁶ Office of Fair Trading, "Mobility aids – an OFT market study" OFT1374, 2011.

¹⁰⁷ The Motability Charity is a national charity that helps disabled people improve their personal mobility. See: <https://www.motability.org.uk/>

by mobility scooter producers and their online retailers; the first concerned Roma Medical Aids Limited, for which a decision was issued on 5 August 2013 and the second Pride Mobility Products Limited, with a decision issued on 27 March 2014. The OFT estimated that Pride was the largest mobility scooter supplier in the UK at the time¹⁰⁸, and that Roma was in the top three largest in terms of unit sales¹⁰⁹, implying that their activities had significant scope to impact the market. Although the infringements occurred independently, they shared common features - namely, the restriction of advertising of prices on retailers' website and that both hindered intra-brand competition by using quantitative and qualitative selection criteria for recruiting retailers¹¹⁰. In addition, there was significant overlap in which retailers were involved in both cases.

Negative effects on competition in the online mobility scooter market are deemed to be particularly detrimental as consumers are often first-time buyers and restricted in terms of mobility. This means that there is heavy reliance on purchasing methods other than brick-and-mortar stores, such as online shops, catalogues and doorstep sales. Limiting the ability to shop around further by restricting price advertising, and depressing price competition in general, particularly impacts the already vulnerable.

*The CMA's
investigation of
Roma Medical Aids
Limited*

Roma, the first supplier subject to an OFT decision, was found to have prohibited online sales of certain Roma-branded scooters and also to have forbidden online advertising of any prices between July 2011 and April 2012. When retailers failed to comply with this policy, Roma would instruct that retailer to remove the pricing, and/or stop selling that product online, with further non-compliance leading to cessation of supply of Roma-branded scooters.

Despite later maintaining that this policy was implemented for reasons of ensuring health and safety standards, contemporaneous communications within Roma and/or to its retailers focused largely on lessening the price difference between bricks and mortar retailers and online retailers and preventing retailers from being undercut on the internet. The OFT concluded that as Roma's subjective aim in defining these terms was to reduce competition, no actual impact on competition would have to be considered for their decision. Furthermore, it was found that regardless of intent, this would not have been an appropriate measure for achieving this aim.

Although not all retailers complied with the agreements at all times, and in some cases, retailers attempted to circumvent the 'rules' of

¹⁰⁸ Pride held approximately 26 – 31 percent of the market share in both 2010 and 2011.

¹⁰⁹ Roma held between 10-15 percent market share in 2011.

¹¹⁰ For example, limiting the number of retailers in a geographic area.

the agreements, the OFT concluded that, nevertheless, they had entered into the agreement and were therefore still in breach of Chapter I. The OFT found that this agreement was by its very nature detrimental to competition – an ‘object infringement’ – that led to restrictions on competition between retailers and consumer choice. In its decision, the OFT considered:

- the context of the mobility scooter market, such as the already restricted ability of consumers to shop around for mobility scooters;
- that Roma was already restricting competition by using selection criteria when appointing new retailers; and
- the coexistence of the prohibitions (both on sales and advertising), which disincentivised price competition among retailers.

*The CMA's
investigation of Pride
Mobility Products*

The second investigation conducted by the OFT, concerning Pride Mobility Products, was very similar to the Roma case: Pride selected retailers based on quantitative and qualitative criteria, and implemented a so-called ‘Below-RRP Online Price Advertising Prohibition’. Non-compliant retailers, referred to internally as ‘internet rogues’, would be instructed to remove the below-RRP price from their website, or increase the price advertised to the RRP. Continuously non-compliant retailers were threatened with an alternative, less favourable, price structure (the ‘T-list’). Again, although retailers occasionally circumvented the rules of the agreement they were nevertheless considered responsible.

The OFT found that the Pride had been worried about low internet retail prices from 2006, although actual Infringement only began in January 2010. Previously, Pride had only requested (but not enforced) that retailers did not price below, and did not advertise prices below, a specified ‘suggested retail price’.

During the investigation, Pride maintained that the infringement was motivated by the need to ensure consumers received an adequate level of post-purchase services. However, these intentions were not mentioned in contemporaneous exchanges around the topic and OFT concluded that (i) the subjective aim of the prohibition was to dampen price competition and (ii) that this would not have been the most effective mechanism to ensure adequate post-purchase service in any case. The OFT therefore deemed this an object infringement, but also considered the contextual factors set out in the Roma investigation, as well as the concern that RRP in the sector were somewhat arbitrarily set at levels higher than actual seller prices, in its decision. It was also concluded that end-consumers potentially paid higher prices as a result of the Below-RRP Online Price Advertising Prohibition.

*CMA decisions in
both cases*

In both cases, the OFT directed parties to cease their infringement, refrain from entering into similar agreements and/or concerted practices, and that the suppliers should notify retailers that their agreements were no longer in practice.

As in each instance the combined turnover of all offending undertakings was less than £20 million, the activities were considered 'small agreements', which are immune from financial penalties for infringement of the Chapter I prohibition.¹¹¹ Therefore, unlike the other case studies considered in this report, no fees were imposed on any party.

Follow-up work

As mentioned earlier, and in contrast to our other examined cases, the investigations into Roma and Pride's activities did not come about as a result of a direct complaint, but rather as a consequence of a more general market review. This review found several areas of concern in the mobility aids industry separate from Roma and Pride's infringements. Therefore, the OFT's compliance work around the topic was more general rather than targeted to the specific cases. **[OFFICIAL SENSITIVE: X]**

The follow-on work included:

- publishing briefing notes regarding the study findings and enforcement targeted at manufacturers and retailers, consumers, and carers;
- working closely with another mobility aids company, Acorn Mobility Services Limited, to update its terms and conditions in line with unfair contract terms legislation, and internal process to improve customer care¹¹²;
- working with Trading Standards Services (TSS) to share expertise, the OFT secured court orders against Optimum Care Mobility Limited to prevent the company and former directors from using "unfair and misleading sales practices"¹¹³ in the future, after it was found that the company engaged in excessively aggressive and untruthful in its doorstep sales

¹¹¹ Agreements preventing, restricting or distorting competition. See Competition Act 1998, Chapter I, Section 2. Available at: <http://www.legislation.gov.uk/ukpga/1998/41/section/2>

¹¹² OFT, "Investigations into unfair practices in the mobility aids sector", February 2012. Available at: <http://webarchive.nationalarchives.gov.uk/20140402155507/http://oft.gov.uk/OFTwork/consumer-enforcement/consumer-enforcement-completed/mobility-aids-market/>

¹¹³ OFT, "OFT secures court orders against mobility aids company and directors", 12 July 2012. Available at: <http://webarchive.nationalarchives.gov.uk/20140402171133/http://oft.gov.uk/news-and-updates/press/2012/61-12>

(footnote continued)

tactics. The company entered voluntary liquidation in February 2012¹¹⁴;

- revoking the consumer credit licences of certain mobility aids traders who engaged in high pressure sales techniques¹¹⁵;
- started a doorstep selling campaign to improve consumers' awareness of inappropriate selling practices and provide practical advice to buyers¹¹⁶; and
- in March 2013, sent out a warning letter to several companies in the sector to warn of the unlawfulness of restricting advertising¹¹⁷.

Subsequent cases

In April 2017, the CMA began investigating TGA Mobility Limited and 2DS & TGA Holdings Limited (TGA), a mobility scooter supplier, for preventing its retailers from advertising prices online. This company had been one of those sent the aforementioned March 2013 warning letter.

The investigation examined TGA's agreements with three online retailers and found that the agreements restricted retailers from advertising prices. Although the case was closed on administrative priority grounds following TGA's actions to bring the restrictions to an end, the CMA did opt to remove the immunity to fines that the TGA would have likely previously enjoyed under the 'small agreement' clause. Therefore, if TGA is found to engage in anticompetitive activities in the future it will be subject to penalty.¹¹⁸

[OFFICIAL SENSITIVE: ✕]

3.4.2 Direct impact

Following the CMA's decisions and follow-on activity, we would expect to observe the direct impacts of the intervention arising from increased transparency of products and prices for mobility

¹¹⁴ OFT, "Investigation into Optimum Care Mobility Limited under Part 8 of the Enterprise Act 2002", July 2012. Available at: <http://webarchive.nationalarchives.gov.uk/20140402211649/http://www.offt.gov.uk/OFTwork/consumer-enforcement/consumer-enforcement-completed/mobility-aids/>

¹¹⁵ OFT, "OFT takes action in mobility aids sector", 3 February 2012. Available at: <http://webarchive.nationalarchives.gov.uk/20140402170545/http://oft.gov.uk/news-and-updates/press/2012/05-12>

¹¹⁶ OFT, "OFT takes action in mobility aids sector", 3 February 2012

¹¹⁷ CMA, "CMA removes immunity from fines for mobility scooter supplier", 23 August 2017. Available at: <https://www.gov.uk/government/news/cma-removes-immunity-from-fines-for-mobility-scooter-supplier>

¹¹⁸ See the CMA's decision to withdraw immunity from penalty and the case closure statement available at: <https://www.gov.uk/cma-cases/medical-equipment-anti-competitive-practices>

scooters online and, in the case of Pride, lower prices for mobility scooters online as well.

Price research

To assess the direct impact, we suppose that the detriment occurring from the infringement can be roughly estimated from its pricing impact alone. To assess possible price changes, we conducted desk research into current pricing patterns, and compared these with the pre-intervention pricing data gathered by the OFT for their 2010 mobility aids sector market review. Our research looked at whether the products that had previously been restricted under the agreements were now being advertised online, and compared the present-day prices of those models relative to 2010 prices. We focused primarily on pricing, rather than wider consumer protection concerns (e.g. level of information provided about the product). Therefore, we have focused mainly on the Pride case, where Pride prohibited below-RRP online price advertising.

Our sample comprised of the retailers that were found to have been party to the infringement (that were identified in the 2010 OFT mobility aids market review). They represent a mix of regional and national retailers. In all cases we only focused on retailers and models selling *new* products (as second-hand products' characteristics can vary more substantially to justify price differentials).

The CMA provided us with the exact model and retailers included in a mystery shopping exercise conducted in 2010 by the OFT at the time of the market review. This provides the benchmark for 2010 pricing against which to compare current pricing.

However, our ability to compare the market at present with the 2010 situation based on the same sample of retailers and scooters as those looked at in the 2010 OFT review was hindered by a variety of factors:

- several – 5 of the 11 – retailers named in the decision have since dissolved or gone into administration;¹¹⁹
- 2010 prices were not available for all of the infringing retailers (given that some were not advertising or selling these models online at all); and
- some models affected by the agreements have since become redundant, which provides a legitimate reason for their lack of online presence.

For these reasons, for most models of scooter our sample of prices is relatively small. In order to increase the number of data points for

¹¹⁹ That many infringing retailers are no longer in business is interesting in itself. 5 of the 11 is a substantial proportion of the sample. This may indicate that these firms were at least partially reliant on the benefits afforded by being part of the anti-competitive agreement.

(footnote continued)

our present-day sample, we also looked at online prices for the named models of mobility scooters sold by other retailers, which we identified through search engines.¹²⁰

Direct comparison to 2010 findings

A comparison of 2010 to 2017 nominal mean prices suggests that the prices of Pride models for which we had comparable data has fallen. In particular:

- a 17% reduction in the mean price for Pride COLT EXECUTIVE model (based on direct comparison with OFT sample);
- a 15% reduction in the mean price for Pride COLT EXECUTIVE (taking 2017 data from a wider sample and compared with the 2010 OFT sample);
- a 39% reduction in price of Pride COLT DELUXE model (OFT sample); and
- a 39% reduction in price of Pride COLT DELUXE model (from wider sample).

Between 2010 and 2017,¹²¹ inflation based on CPI was around 14.4%.¹²² Although there is no sub-category of CPI which is closely related to mobility scooters, the “Purchase of Vehicles” category of CPI was only 1% for the same period and the “Medical products, appliances and equipment” category of CPI was around 10.8% for the period.¹²³ In any case, controlling for inflation over the period we would expect the price discounts to be even larger.

Given that nominal prices have fallen between 15-39% this could suggest that prices at the time were held artificially high and the intervention of the OFT has led to a price reduction. However, we recognise the limitations of the assessment given the very small sample of comparable data and recognising that as models become more out-of-date their price may also decrease. Therefore, it is difficult to gauge exactly the extent to which these price changes can be attributed to the CA98 case.

Estimating the proportionate price increase

Alternatively, we could estimate the proportionate price increase that may have occurred as a result of the infringement at that time by looking at the prices set by those retailers who deviated from the agreement. This information is obtained from the “Rogue

¹²⁰ Data was collected from desk research conducted in December 2017.

¹²¹ Based on monthly figures from December 2010 to December 2017.

¹²² Based on ONS data.

<https://www.ons.gov.uk/economy/inflationandpriceindices/timeseries/d7bt/mm23>

¹²³ Based on ONS filtered data: <https://beta.ons.gov.uk/filter-outputs/c7098dc9-0015-4889-a14b-7f4c46965ffe>

(footnote continued)

Reports"¹²⁴ kept by Pride, which recorded those parties that set prices below the levels established in the restrictive online pricing agreements and the prices they set. Some of the emails exchanged between Pride and the parties identified in the Rogue Reports referred to phrases such as "open market policy" or "free market" to describe pricing approaches that were an alternative to abiding by the restrictive pricing agreement.¹²⁵

Therefore, these deviation prices could be taken as a proxy for the prices that would have been imposed absent the restrictive agreement. We compare these deviation prices with the level of the prices set by the restrictive agreements, which in some cases were the Recommended Retail Price and in some cases were a "suggested lowest resale price" that was described by Pride as the lowest price below RRP that the re-sellers could sell/advertise online.¹²⁶

Based on information provided to us by the case team, which was compiled using the Rogue Reports, we have data for each of these price levels for the full range of Pride mobility scooters subject to the infringement. Calculating the discount on the RRP and the discount on the suggested lowest resale price for each model and then taking a weighted mean of the discounts across the models (using annual sales volumes for each model also provided to us as the weights), we find that:

- the deviation price was, on average, around 64% lower than RRP; and
- the deviation price was, on average, around 23% lower than the suggested lowest resale price.

Based on this information, and taking a conservative approach, we hypothesise that absent the restrictive agreement, prices could, on average, have been at least **23% lower** across the full range of Pride mobility scooters.

Comparing this with the range of 15-39% from our actual price range and considering that prices may, in some cases, have fallen to

¹²⁴ The OFT saw a series of internal 'reports' produced by Pride in the period from June 2010 to January 2012, which monitored compliance with the Below-RRP Online Price Advertising Prohibition and which were commonly described within Pride as 'Rogue Reports'.

¹²⁵ For example, see paragraph 3.48 and 3.73 of the Mobility Scooters non-confidential decision.

¹²⁶ As stated at paragraph 2.67 of the Mobility Scooters non-confidential decision, "The contemporaneous evidence in the OFT's possession [...] confirms that Pride requested and/or instructed its retailers not to advertise prices below a certain price point online. In the period 12 September 2007 (at the latest) to 8 May 2009 (at the earliest) that price point was Pride's 'Suggested Lowest Resale Price'. Further, from at 28 January 2010 (at the latest) onwards, the price point had shifted to Pride's RRP."

(footnote continued)

64% below the prices set by the restrictive agreement, we consider that an estimated proportionate price increase of around **20%** during the period of the infringement would represent a conservative estimate.

Based on this rough estimate of the proportional price increase, we calculate excess profit of infringers and loss of consumer surplus per unit of revenue of the infringing parties. This is the direct benefit. Full details of this calculation are included in Annex A.

Taking only the relevant revenue¹²⁷ of Pride in this case (who restricted online prices) - which we estimate to be around £9 million¹²⁸ - we estimate the direct impact of a 20% price increase to be **[OFFICIAL SENSITIVE: ✕] per annum or 0.29 per unit of revenue.**

Our sample of prices for comparable models of Roma scooters from the initial OFT mystery shopping report and our 2017 desk research is very small, limiting our ability to conduct a comparison of prices of specific Roma models over time. Whilst it is more difficult to determine the exact impact of the Roma case on prices, where retailers were explicitly prohibited from advertising and selling certain Roma models online, it is possible that this lack of price transparency, and the associated difficulties consumers may then have had comparing prices of scooters across retailers, led to reduced price competition and increased prices for these scooters across all retailers.

If we assume that a similar proportional price increase was seen on Roma models as with Pride models, taking the relevant revenue of Pride *and* Roma (£9m + £5m = £14m), the direct impact of a 20% price increase would be **[OFFICIAL SENSITIVE: ✕] per annum or 0.29 per unit of revenue.**

Other non-price impacts

In addition to price changes as a result of the Pride and Roma decision, we might also expect to see more transparent information about prices and all models available for sale on the internet as a result of the intervention on the Roma case.

Despite observing average price decreases for Pride models, our desk research found that there remains significant variation in RRP's and list prices across different online retailers for the full range of mobility scooters. However, for those models that were part of

¹²⁷ The "relevant turnover" is defined in the Penalties Guidance as the turnover of the undertaking in the relevant market affected by the infringement in the undertaking's last business year. The 'last business year' is the undertaking's financial year preceding the date when the infringement ended. Therefore, the "relevant turnover" figure accounts for that fact that potentially not all products and not all geographical markets have been affected by the infringements. Thus, it is usually smaller than the entire turnover of the business.

¹²⁸ Based on taking the mid-point of the range of £7-11 million estimated by the OFT at paragraph 3.223 of the mobility scooters non-confidential decision.

Roma and Pride's restrictive policies, the range of prices for each model within our 2017 sample (the difference between the maximum and minimum online price across retailers for each model) has decreased when compared to OFT's 2010 sample.

Non-transparent pricing practices

Although this indicates some improvement, it appears that poor (although not necessarily illegal) advertising and pricing practices persist in this industry. For example, we found that in some cases non-transparent pricing practices persist; several retailers stated 'call for best price' on their model information sites, or did not mention pricing in their advertisements at all. Interestingly, only some retailers applied 'call for best price' advertisement to *all* models listed; some were selective in the models and brands that were listed in this way, although it is unclear on what basis these models were chosen. Although the original OFT study found a much larger proportion of call for best price quotes, it is difficult to tell how much of this difference is attributable to the increasing popularity of online shopping.

In terms of availability, the models listed on websites differed across retailers. We did not find any clear evidence to suggest that retailers are withholding models. However, there were a few instances of models being listed as 'only available in store'. This differs from what would have been set out in Roma's no-advertising policy as those models *are advertised*, albeit not sold.

Whilst we cannot necessarily ascribe this poor transparency to infringing agreements between parties, this does demonstrate that despite the enforcement action taken by the CMA consumers may not be reaping the fullest possible benefits of improved price transparency and availability online.

Survey results

Further evidence comes from our survey, where we asked respondents about their views on the direct impact of the case.¹²⁹ The responses revealed that:

- Out of the core respondents in the mobility scooter sector who reported being aware of the case (72 respondents), 26% thought that **competition** had increased whilst 64% thought it had stayed the same (and 4% thought competition had decreased).
- Of these same 72 respondents, 18% thought that **prices** had increased, 24% thought prices had decreased and 54% thought that prices had stayed the same.

We do not put much weight on the responses to these questions given the relatively small sample and the difficulties of imposing a value judgement on such factors. Nevertheless, the proportion of respondents indicating that they felt competition had increased as a direct consequence of the case is significantly greater than those

¹²⁹ Q.D11: Have you noticed any changes in your industry as a result of the action that the competition authority took? Would you say the following [competition; price] have increased, decreased or stayed about the same?

who thought competition had decreased ($p=0.01$ and $p<0.05$). However, respondents were significantly more likely to consider competition or prices were unchanged relative to those who thought it increased or decreased respectively ($p=0.001$ and $p=0.005$ respectively). Therefore, the results from the survey give a mixed picture, which is consistent with our own market research.¹³⁰

¹³⁰ We note that we contacted a number of mobility scooter retailers and charities operating in the mobility aids sector asking for a telephone interview to get the views of key industry stakeholders, as we did for the other sectors in this study. However, the response rate was poor and we were unable to secure any such interviews for this case.

4 Assessing awareness and deterrence

The decision whether to engage in anti-competitive behaviour (or stop infringing) will likely be driven by three factors:

- awareness of illegality;
- the perceived risk of detection; and
- the anticipated intensity of punishment if detected.

We are interested in the extent to which intervention by the CMA/OFT can deter competition law infringements by influencing each of these factors.

For example, we might expect that raising awareness of relevant cases and the action taken by CMA/OFT could influence awareness of illegality of certain behaviours and understanding of competition law. Furthermore, being aware of CMA/OFT intervention might demonstrate the real risk of being caught and punished. In this regard, there may be a distinction between those who are aware their behaviour is illegal, but think they are unlikely to be caught, and those not even aware of their behaviour being illegal.

Based on evidence collected through our survey, we test the extent to which businesses are aware or not aware of each of our specific CA98 cases. We assess whether awareness of general competition law differs significantly between those in sectors where a CA98 case has occurred and UK businesses generally. In particular, we consider whether there are significant differences in awareness of competition law between those who are aware and those who are not aware of the specific CA98 case in each sector.

We then assess whether CMA/OFT intervention has resulted in changes in the perception of being detected or punished for illegal behaviour. We investigate whether any parties have subsequently changed their behaviour and whether this can be linked back to the relevant CA98 case.

4.1 Awareness

4.1.1 Case specific awareness

It is impossible to attribute any change in behaviour to an intervention if nobody is aware that there has been anti-competitive practice in the sector, or that the CMA/OFT discovered, investigated and (in some cases) took punitive action against the infringing companies. Raising awareness of investigations and punishments is therefore one mechanism through which infringing activity might be discouraged, as it might highlight the illegality of

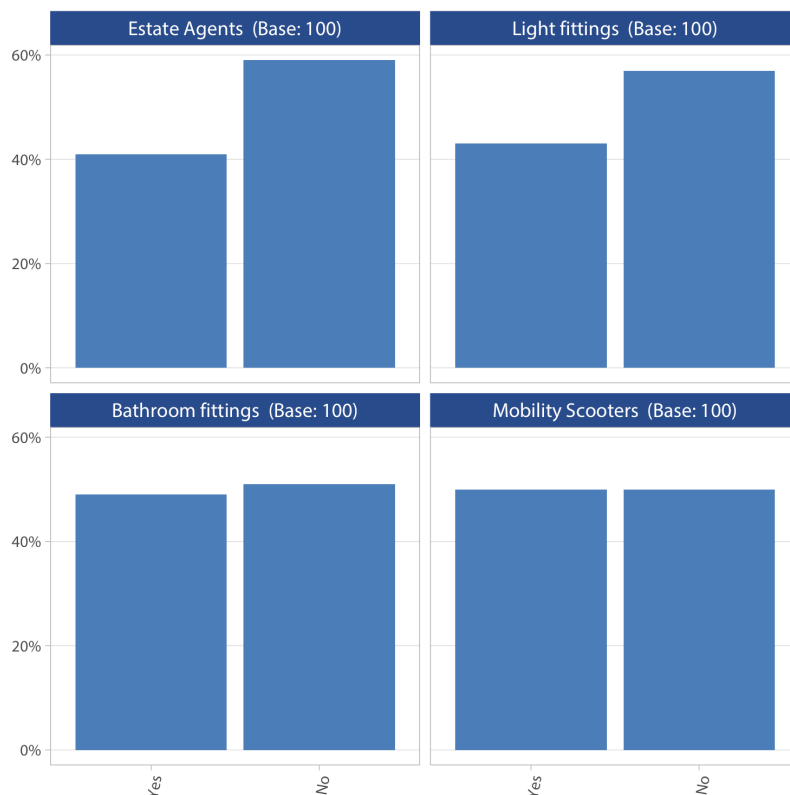
certain behaviour and demonstrate the consequences of infringing competition law.

We first review the awareness of each of the CA98 cases amongst our survey respondents. As outlined in Section 2.4, we surveyed businesses in the core sector for each case and in its associated adjacent sectors. The adjacent sectors were chosen based on likely information flows and potential relevance of the focal case to the adjacent sector. Information flows might well be broader, but our priority was to see if we could even detect such information flows at all, rather than to characterise them.

Awareness of any CA98 case in relevant sector

In our survey, around 40-50% of respondents in the core sample for each case reported being aware of *any* competition law infringement having taken place in their industry (i.e. any case, not just our focal CA98 case within that particular sector).

Figure 1: Are you aware of any competition law infringement that has taken place in [CASE] industry? Base: All businesses

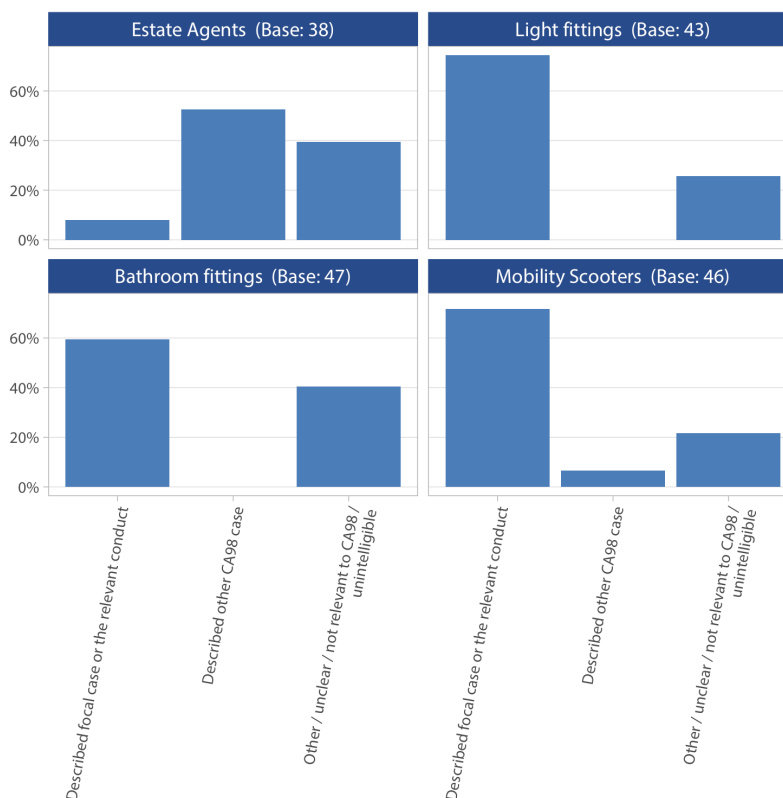


We asked those that said they were aware of a case in the industry to describe the case they were thinking of to check if this corresponded with the relevant focal CA98 case. The responses were coded into the following categories:

- **Described focal CA98 case** - if the respondent describes the anticompetitive conduct in the case and/or includes details about the case that strongly signalled awareness (such as the names of the parties, details about the unique enforcement mechanisms used, dates, level of the fine, etc.);
- **Described anticompetitive conduct of focal CA98 case** - this is where the respondent describes the anticompetitive conduct in the case suggesting they were aware, but did not provide details that confirmed that they were fully aware of the exact details of the specific focal case;
- **Described facts/conduct relevant to another CA98 case** - this includes all the respondents that talked about CA98 cases that have occurred in their market, but which are not the focal CA98 case of our investigation. For example, this includes references to other cases such as the Somerset estate agent cartel case, the OnTheMarket website case, or the TGI mobility scooter case;
- **Other / unclear / not relevant to CA98 / unintelligible** – this includes responses that were insufficiently detailed (for instance, general allegations of ‘price fixing’ without any support detail from the case). It also includes responses highlighting a wide variety of other problems that were not relevant to CA98 (e.g. trademark infringement, misleading advertising, aggressive sales practices, etc.).

Figure 2 shows the responses, where we have grouped the categories “*described focal CA98 case*” and “*described anticompetitive conduct of focal case*” together. We consider the merged category as the best available proxy for unprompted awareness of the focal case.

Figure 2: Whether infringement case described matches the focal case. Base: if aware of competition law infringement took place in their industry.



In three out of four cases, the large majority of respondents described a case that matches the focal case for the sector. In the estate agents sector, the majority described another CA98 case. Specifically, most of these answers closely matched to a different case, (the Somerset case¹³¹), which occurred more recently than our focal case.

Describing a different case does not necessarily mean lack of awareness of the focal case. It might be that a case in their sector that took place more recently is fresher in a respondent's memory and is the first case to come to mind when responding to the survey question. Therefore, all respondents to our survey were read a description of the focal CA98 case in their industry and then asked how familiar they were with it after this prompt, choosing from the following options:

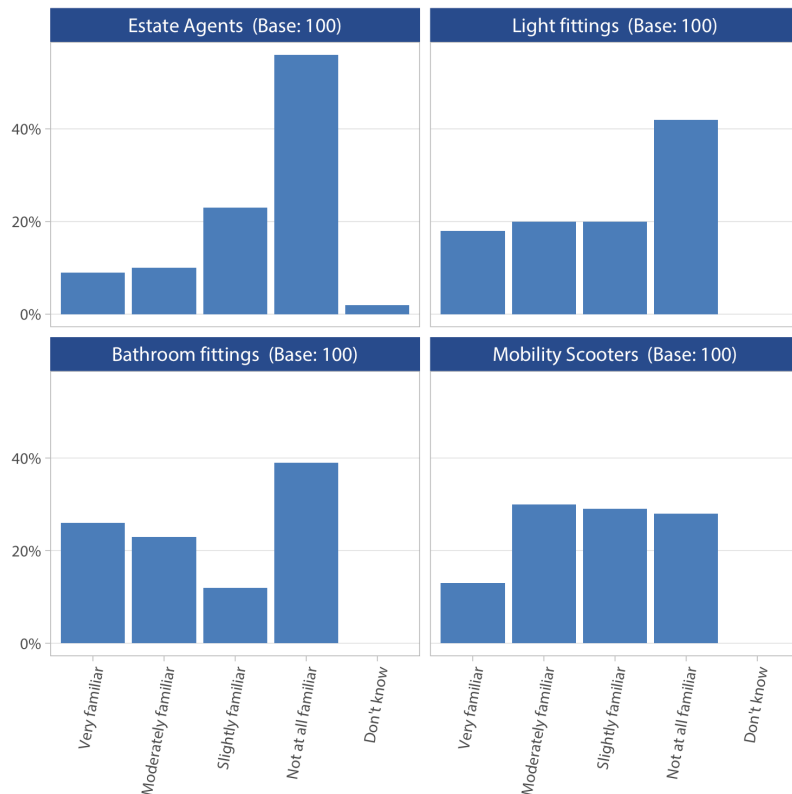
- *very familiar* – you are aware of most of the details of the case;
- *moderately familiar* – you are aware of some details;

¹³¹ CMA, "Residential estate agency services in the Burnham-on-Sea area", Case closed 2 March 2018. Available at: <https://www.gov.uk/cma-cases/residential-estate-agency-services-suspected-anti-competitive-arrangement-s>

- *slightly familiar* – you have some recollection of the case but don't know much about it;
- *not at all familiar* – you have never heard of the case;
- *don't know*.

Figure 3 below shows the responses to this prompted awareness question for each case.

Figure 3: How familiar are you with this particular case? Base: All businesses (core)



Grouping those reporting “very familiar”, “moderately familiar” or “slightly familiar” and taking this as a proxy for being aware of the focal case after prompting, with those answering “not at all familiar” or “don't know” being defined as unaware, the levels of (prompted) awareness for the core respondents are shown in Table 12 below.

Table 12: Prompted awareness of the case (Base: all core respondents = 100 for each case)

	Estate Agents	Light fittings	Bathroom fittings	Mobility scooters
Aware	42%	58%	61%	72%
Unaware	58%	42%	39%	28%

There were no significant differences in the levels of prompted awareness between estate agents in the South East (the region in which the original case was based) and all other estate agents in our sample. In Table 13 below we show how many respondents in each case:

- had not described the focal case in the earlier question but reported being at least slightly familiar with the details of the case when reminded (and so were categorised as aware only after being prompted); and
- how many were always aware of the specific CA98 from the outset (i.e. both described the case correctly without prompt and reported being familiar with the case after being read a description).

Table 13: Changes in awareness (Base: prompted aware core)

	Estate Agents	Light fittings	Bathroom fittings	Mobility scooters
Aware only after prompt	39	26	32	40
Always aware	3	32	28	32

For all sectors, but more so for estate agents and mobility scooters, there are a number of respondents categorised as being aware of the specific CA98 case only after prompting. This could suggest that there is some latent awareness that is stimulated after prompting. However, there may be different reasons for this across the four cases.

In the estate agents sector, only three of those reporting to be aware of the case after prompting had described the details of the case in the original question, with 20 describing another later CA98 case in that sector. However, 70% of those respondents who described another case in the previous question were familiar with our focal case upon prompting. This suggests that the low numbers of those describing the focal case in the original question is not entirely reflective of a lack of awareness of our (earlier) focal case, but rather that a more recent CA98 case that took place in their sector tended to be fresher in a respondents' memories and was the first case to come to mind when asked.

In the mobility scooters sector, of those becoming aware after being prompted, only 3 respondents described a different CA98 case in the original question, with the remainder not being able to accurately describe any case. However, a large number of respondents in the mobility scooter sector reporting being familiar

with the case after being prompted. Again, this suggests some latent level of awareness that is reactivated with a prompt. Given that the mobility scooters case is the oldest of our four chosen cases, this finding could indicate that the ability of individuals to recall details of a case falls over time, yet there is a latent awareness that can be recalled with an appropriate stimulus.

We consider that the responses given after being prompted are more indicative of true awareness of the specific CA98 case for the reasons outlined above. However, it is possible that there is an element of affirmation bias in the prompted awareness responses, where some respondents overstate their level of awareness to please the interviewer. We must take this possibility into account when comparing the responses of those aware and those unaware of the focal case to other questions in our survey.

Case awareness levels beyond the core sectors

Considering the extent to which awareness of CA98 cases extends beyond the core sectors, we find that in the bathroom fittings and estate agents cases the adjacent sectors are less aware of *any* competition law infringement having taken place in their adjacent industry ($p < 0.001$ and $p = 0.008$ respectively).

In terms of prompted awareness, we find that some respondents in adjacent sectors do report familiarity with the details of the focal case showing that there is evidence of some information transmission. However, prompted awareness amongst businesses in the adjacent sectors is typically lower than those in the core sector (ranging from around 16-25% of respondents in the adjacent sectors compared with 42-72% in the core). With the exception of the light fittings case ($p = 0.45$), the levels of awareness of the focal case in the adjacent sectors are significantly lower than those of respondents in the core sector (estate agents $p = 0.002$; bathroom fittings $p < 0.001$; mobility scooters $p < 0.001$). This implies that any indirect impacts of CMA/OFT intervention arising from awareness about the case may be weaker beyond the core sector due to lower awareness levels.

Furthermore, we tested 'cross-sector' awareness by asking respondents if they were aware of any enforcement action taken in response to anti-competitive behaviour that has occurred in *any* other industry.¹³² As shown in Table 14 below, the majority of respondents from our core sample were unaware of any case outside of their sector with between 68% and 81% answering "no" to this question.

¹³² Question E.3: Are you aware of any enforcement action taken by the competition authority in response to anti-competitive behaviour that has occurred in other industries?

Table 14: Are you aware of any enforcement action taken by the competition authority in response to anti-competitive behaviour that has occurred in other industries? Base: all businesses (core)

Core Base: 100	Estate Agents	Light fittings	Bathroom fittings	Mobility scooters
Yes	27%	19%	17%	20%
No	68%	81%	80%	79%
Don't know	5%	0%	3%	1%

We found that even between the light fittings and bathroom fittings cases (for which the CMA undertook joint awareness-raising work as described in the case descriptions above) the cross-sector awareness is very low. In particular, when we asked a specific question to those in the light fittings sector about the bathroom fittings case (and vice versa),¹³³ 87% of respondents in the light fittings sector stated they were not aware of the bathroom fittings case. Similarly, 87% of respondents in the bathroom fittings sector claimed they were not aware of the light fittings case. This is surprising, as we might have expected cross-sector awareness between these two sectors to be stronger.

Our evidence from the adjacent and cross-sector awareness, suggests that wider awareness of cases outside of the affected sector tends to be much lower.

4.1.2 Impact of intervention on awareness of competition law

As described in Section 2.4 above, our survey included questions that are directly comparable with questions asked as part of the wider research project by the CMA on awareness of UK competition law amongst UK businesses. This allows for a comparison of awareness levels between the sectors related to our chosen cases (our core and adjacent samples) and UK businesses more generally (referred to as the baseline sample).

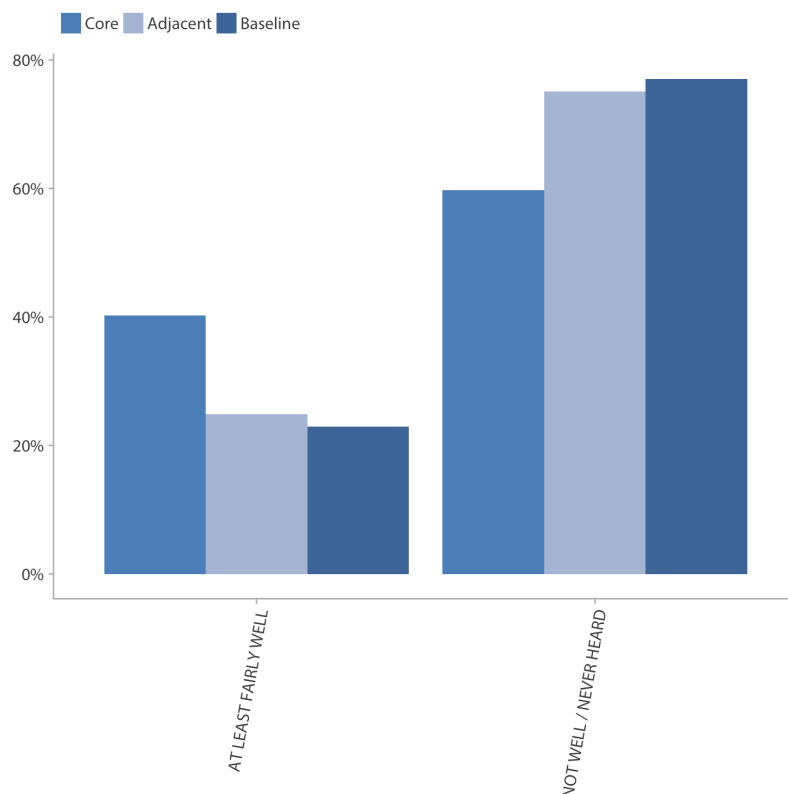
We found that awareness and understanding of UK competition law tends to be higher amongst those industries within (or adjacent to) sectors where the CMA/OFT have taken enforcement actions relative to the baseline sample.

¹³³ Question E.1 was asked to those businesses in the core light fittings sample and the core bathroom fittings sample. They were read a description of the case in the other sector and asked, "Are you aware that this occurred"?

Familiarity with competition law

We found that respondents in industries where a CA98 case has occurred are more familiar with competition law than the baseline average. Specifically, the core respondents to our survey are more likely to report their familiarity with competition law as “very well” or “fairly well” compared with those in the baseline sample ($p < 0.001$). Those in an adjacent sector are less familiar with competition law (i.e. a smaller proportion report knowing competition law “very well” or “fairly well”) than the core sample ($p < 0.001$). This is shown in Figure 4 (where we group “very well” and “fairly well” responses as “at least fairly well” and group “not very well”, “not at all well” and “never heard of it / don’t know” as “not well / never heard”).

Figure 4: Overall, how familiar would you say you are personally with Competition Law? Would you say you know it...?



It is possible that those in our sample might have responded more positively to this question relative to those in the baseline case because they were aware the survey was being conducted by the CMA. The parallel survey is introduced as “for a government agency exploring how businesses operate and remain competitive”. In contrast, our survey was introduced with: “we are currently conducting an important study for the Competition and Markets Authority exploring how businesses understand and respond to competition law.” This might be one source of the difference between reported awareness in the two surveys.

However, in order to improve comparability with the parallel survey, we included a number of questions that form a sub-set of the statements asked within the wider baseline survey. For example, we tested respondents' knowledge of competition law by including a number of statements that related to anti-competitive behaviour and asking respondents to report whether they thought the statement was true or false. The responses of the baseline sample provide us with a measure of the base level of awareness testing actual knowledge of competition law, rather than relying on self-reports of respondents' levels of familiarity with competition law.

Testing knowledge of competition law

We selected the statements that were most closely related to the types of infringement behaviour seen in the four CA98 cases we are focusing on. The five statements were as follows (with the correct answer denoted alongside):

Under UK competition law rules, do you think it is true, false or are you unsure that:

- **Statement 1:** *It is unlawful to set the price at which others can resell your products (TRUE)¹³⁴;*
- **Statement 2:** *If you supply products to other businesses to sell on to their own customers, it's OK to stop them from advertising online at prices you think are too low (FALSE)¹³⁵;*
- **Statement 3:** *It can be illegal to agree with your competitors to restrict how and where you advertise your prices (TRUE);¹³⁶*
- **Statement 4:** *It can be illegal if a supplier of yours doesn't allow you to sell or advertise their product online (TRUE);¹³⁷*
- **Statement 5:** *It is okay to let a supplier control the price at which you re-sell their product (FALSE).¹³⁸*

We find that respondents who reported knowing competition law at least fairly well are significantly more likely to answer these statements correctly compared with those who report to not know it well or have never heard of it ($p < 0.001$ for all statements).

Furthermore, as illustrated in Figure 5 below, we see that the correct answer is more likely to be given by respondents in a sector where such infringement behaviour has occurred. In all cases, those in the core sample were more likely to get the answer right than those in the baseline sample. The difference between the proportion of

¹³⁴ RPM type infringement, most relevant to the infringement activity in the bathroom fittings and light fittings cases

¹³⁵ Most relevant to the infringement activity in the bathroom fittings and light fittings cases, with elements of the infringement activity in the mobility scooters case.

¹³⁶ Most relevant to the infringement activity in the estate agents case

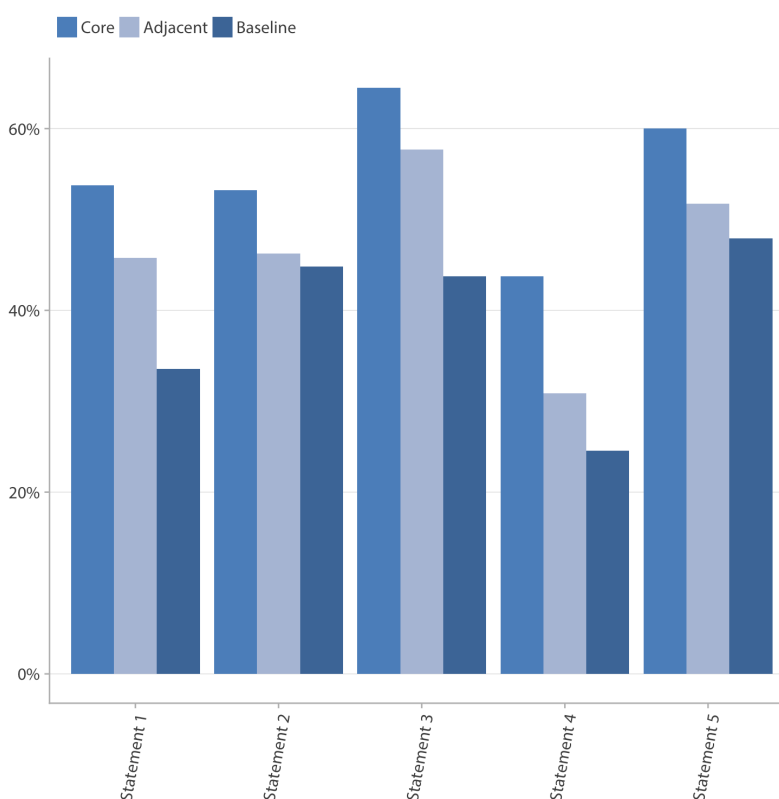
¹³⁷ Most relevant to the infringement activity in the mobility scooters case.

¹³⁸ Most relevant to the infringement activity in the bathroom fittings and light fittings cases, with elements of the infringement activity in the mobility scooters case.

correct responses from the core sample and those from the baseline sample is significant for all five statements. Therefore, these findings suggest that the finding of a significant difference in self-reported familiarity with competition law can be relied upon and the finding of a difference between the core and baseline samples in the previous question is also robust.

In some cases, those in the adjacent sector were also significantly more likely to answer correctly relative to the baseline sample, providing evidence of information transmission beyond the core sector to closely related sectors.

Figure 5: Correct responses to true/false statements 1 – 5



For statement 1 (*It is unlawful to set the price at which others can resell your products - TRUE*):

- both the core and adjacent sample answer correctly significantly more than those in the baseline sample ($p < 0.001$ and $p = 0.001$ respectively);
- the difference in the proportion of correct answers of those in the core and those in the adjacent sector is not significant ($p = 0.078$).

For statement 2 (*If you supply products to other businesses to sell on to their own customers, it's OK to stop them from advertising online at prices you think are too low - FALSE*):

- the core sample answer correctly significantly more than those in the baseline sample ($p < 0.004$);
- the difference in the proportion of correct answers of those in the core and those in the adjacent sector, and those in adjacent compared to the baseline sample are not significant ($p = 0.13$ and $p = 0.76$ respectively).

For statement 3 (*It can be illegal to agree with your competitors to restrict how and where you advertise your prices - TRUE*):

- both the core and adjacent sample answer correctly significantly more than those in the baseline sample ($p < 0.001$ and $p < 0.001$ respectively);
- the difference between core and adjacent is not significant ($p = 0.126$).

For statement 4 (*It can be illegal if a supplier of yours doesn't allow you to sell or advertise their product online - TRUE*):

- the core sample answer correctly significantly more than those in the baseline sample ($p < 0.001$);
- those in the core are also significantly more likely than those in adjacent to answer correctly ($p = 0.003$);
- the difference between those in the adjacent sample and those in the baseline sample is not significant ($p = 0.072$).

For statement 5 (*It is okay to let a supplier control the price at which you re-sell their product - FALSE*):

- the core sample answers correctly significantly more than those in the baseline sample ($p < 0.001$);
- the differences between the core and adjacent and then the adjacent and baseline sample are not significant ($p = 0.065$ and $p = 0.353$ respectively).

There are some interesting differences between the four core samples, as shown in Table 15 below.

Table 15: Proportion of core sample for each case answering correctly to the true/false statements

Core sample	Estate Agents	Light Fittings	Bathroom fittings	Mobility scooters
Statement 1	31%	65%	66%	53%
Statement 2	38%	54%	62%	59%
Statement 3	72%	65%	63%	58%
Statement 4	36%	36%	50%	53%
Statement 5	38%	64%	65%	73%

For the statements which are directly relevant to RPM (statement 1 and statement 5), which was the infringing activity in the bathroom fittings and light fittings cases, we find that:

- For statement 1,¹³⁹ respondents from the light fittings and bathroom fittings sector (taken together) provided correct answers more often than those from the mobility scooters sector ($p=0.049$) and especially the estate agents sector ($p<0.001$).
- Similarly, in response to statement 5,¹⁴⁰ estate agents scored significantly worse ($p<0.001$). However, this might be expected given that the concepts of supplier and retailer and of re-selling of products are not directly relevant for the estate agent sector.
- We also find that core respondents in the mobility scooters sector scored significantly better on statement 4¹⁴¹ (which is closely related to the infringement that took place in their sector) relative to the other three sectors taken together ($p=0.042$).

Although core respondents in the estate agents sector scored best on statement 3¹⁴² which is closely related to the infringement that took place in that sector (*"it can be illegal to agree with your competitors to restrict how or where you advertise your prices"*), the results were only weakly significantly different from the other three sectors taken together ($p=0.091$).

Table 16 below shows that for the light fittings, bathroom fittings and mobility scooters cases, there is a significant difference between the proportion of respondents answering the large majority of the true/false statements about competition law correctly depending on whether or not they were aware of the case.¹⁴³

¹³⁹ It is unlawful to set the price at which others can resell your products (TRUE)

¹⁴⁰ It is okay to let a supplier control the price at which you re-sell their product (FALSE)

¹⁴¹ It can be illegal is a supplier of yours doesn't allow you to sell or advertise their product online (TRUE)

¹⁴² It can be illegal to agree with your competitors to restrict how and where you advertise your prices (TRUE).

¹⁴³ Based on the prompted awareness reported in response to question C4.

Table 16: Proportion of core sample for each case answering correctly to the true/false statements depending on their recall of the CA98 case in their sector (aware vs unaware)

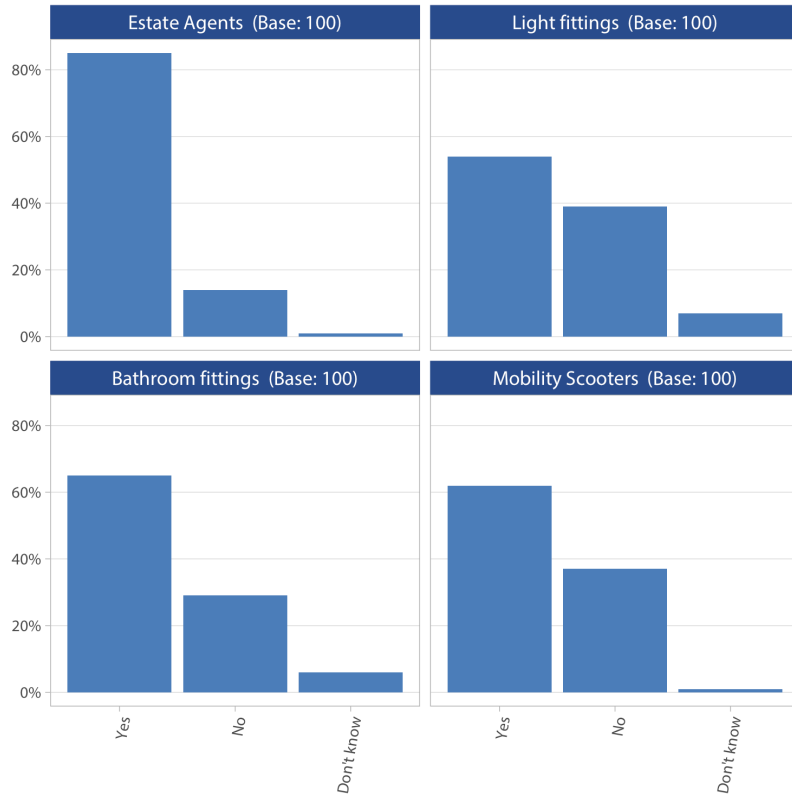
CASE		Base	Statement 1	Statement 2	Statement 3	Statement 4	Statement 5
Estate Agents	Aware	42	38%	45%	71%	45%	45%
	Unaware	58	26%	33%	72%	29%	33%
Light fittings	Aware	58	79%*	67%*	74%*	45%	81%*
	Unaware	42	45%	36%	52%	24%	40%
Bathroom fittings	Aware	61	80%*	70%*	72%*	64%*	75%*
	Unaware	39	44%	49%	49%	28%	49%
Mobility scooters	Aware	72	63%*	64%	58%	61%*	82%*
	Unaware	28	29%	46%	57%	32%	50%

* denotes that the results of two-sided tests show a statistically significance difference at the 5% level. Here we are testing against the hypothesis that the number of respondents who answer correctly to the statement would be the same between those aware and those unaware of the case.

This provides strong evidence supporting the conclusion that CA98 cases and enforcement action taken by OFT/CMA raises awareness and understanding of competition law in those sectors closely related to the original case. This link is particularly strong amongst those who are aware of the details of the case.

Furthermore, Figure 6 shows that there were a number of respondents from each core sample who admitted to not realising that such behaviour was illegal before hearing about the specific focal case. This provides explicit evidence to support the link between case awareness and raising awareness of what constitutes illegal behaviour.

Figure 6: Before you heard about this case, were you aware that such behaviour was illegal? Base: All businesses.



Have you discussed compliance with competition law and/or has your company run compliance training in the last twelve months?

The greater awareness and understanding of competition law amongst our core respondents relative to the baseline and between those aware and those not aware of the case shows a clear link between CMA/OFT intervention, awareness of the case and an understanding of competition law. For example, we find that those in a core sector are significantly more likely to have discussed compliance with competition law in the last twelve months and run competition law training in the last twelve months compared with those in the baseline sample ($p < 0.001$ for both statements). There is no significant evidence of a difference between the adjacent and baseline sample in this regard ($p = 0.57$ and $p = 0.89$ respectively for proportions discussing and running compliance training). This is shown in Figure 7 and Figure 8 below.

Figure 7: In the last 12 months, which of the following areas, if any, have you discussed your company's compliance with legal requirements? Base: All businesses

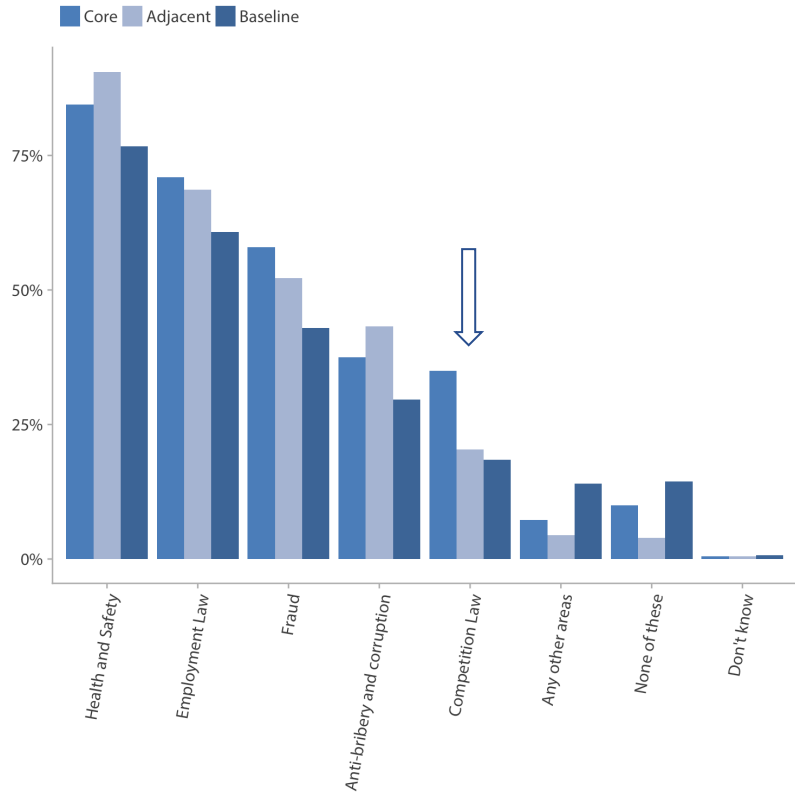
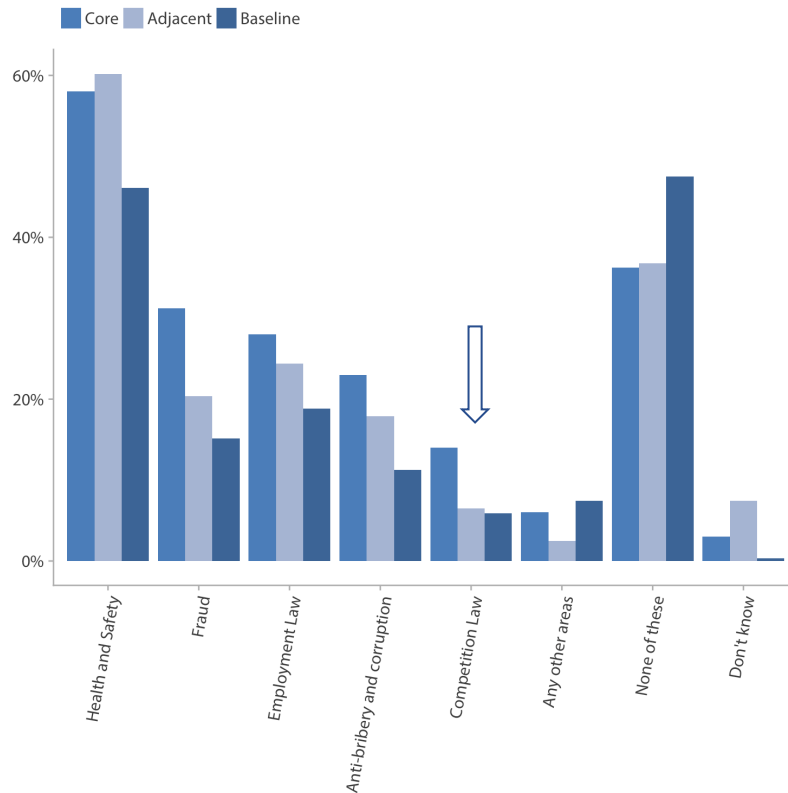


Figure 8: Over the last 12 months, has your company run any training sessions about how to comply with any of the following legislation?



Our core and adjacent samples also have an above average proportion of businesses discussing and running training in all areas of compliance (e.g. health and safety, employment law, fraud etc). This raises the question of whether respondents who have undertaken general compliance activities (across all areas, not just competition law) could *as a consequence* be more familiar with CA98 cases in their sector. A correlation between case awareness and compliance activities might not indicate causation (i.e. awareness of the CA98 case leading to compliance activities). However, equally high levels of other types of compliance activity amongst those aware of the CA98 case might arise because becoming aware of competition law findings prompts a general increase in compliance activities. We note that parties providing compliance training might well cross-sell different services, so various forms of compliance activity might tend to be undertaken together.

However, amongst those core respondents to our survey who reported introducing competition law training in the last 12 months and were aware of the case, many reported the reason as being a direct result of the CA98 case in that industry (nearly 60% of respondents in the lighting fittings case and around 50% of

respondents in the bathroom fittings case).¹⁴⁴ Therefore, despite the possibly ambiguous interpretation of generally higher levels of all compliance activities amongst those aware of the case, we have specific evidence of causation.

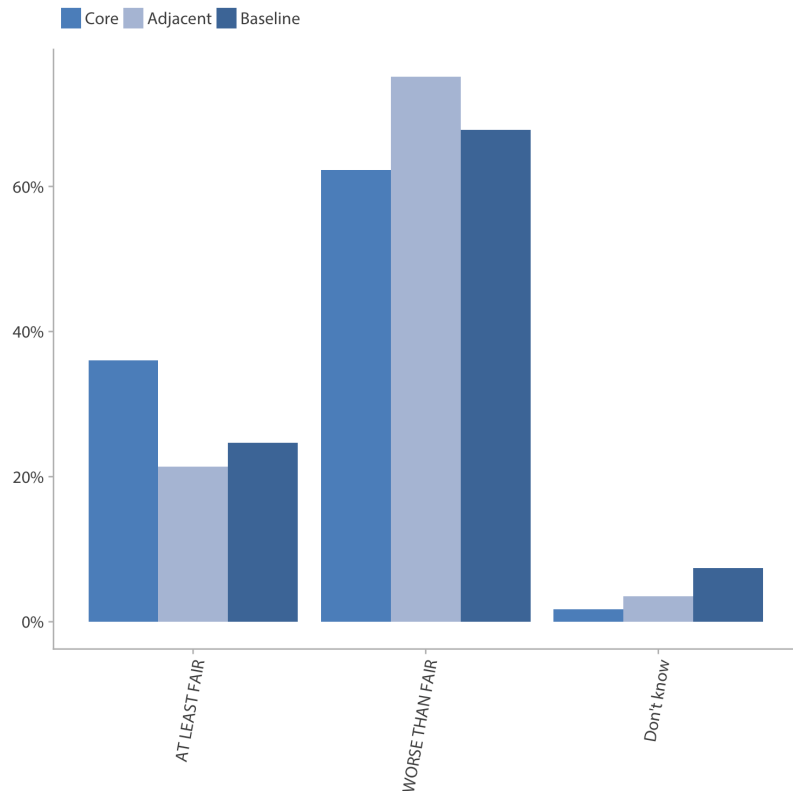
Self-reported awareness of penalties for non-compliance

Self-reported awareness of penalties for non-compliance with competition law seems to be relatively poor across the board for respondents in both our survey and the baseline survey, as shown in Figure 9 below. However, a larger proportion of the core sample reported awareness of “*very good*”, “*good*” or “*fair*” relative to the baseline sample. With the proportions of the baseline sample reporting awareness as “*poor*”, “*very poor*” or “*don’t know*” in larger proportions than the core sample.

If we combine “*very good*”, “*good*” and “*fair*” responses into a single “*at least fair*” category, with “*poor*”, “*very poor*” or “*don’t know*” being categorised as ‘worse than fair’, we find that respondents in the core and significantly more aware than those in the baseline sample ($p < 0.001$) and also significantly more aware than the adjacent sample ($p < 0.001$). There is no significant difference between the adjacent sectors and the baseline sample ($p = 0.36$).

¹⁴⁴ Question D14: Was this training introduced as a result of the case we have been discussing? Base: If offered training on compliance in the last 12 months and aware of specific CA98 case.

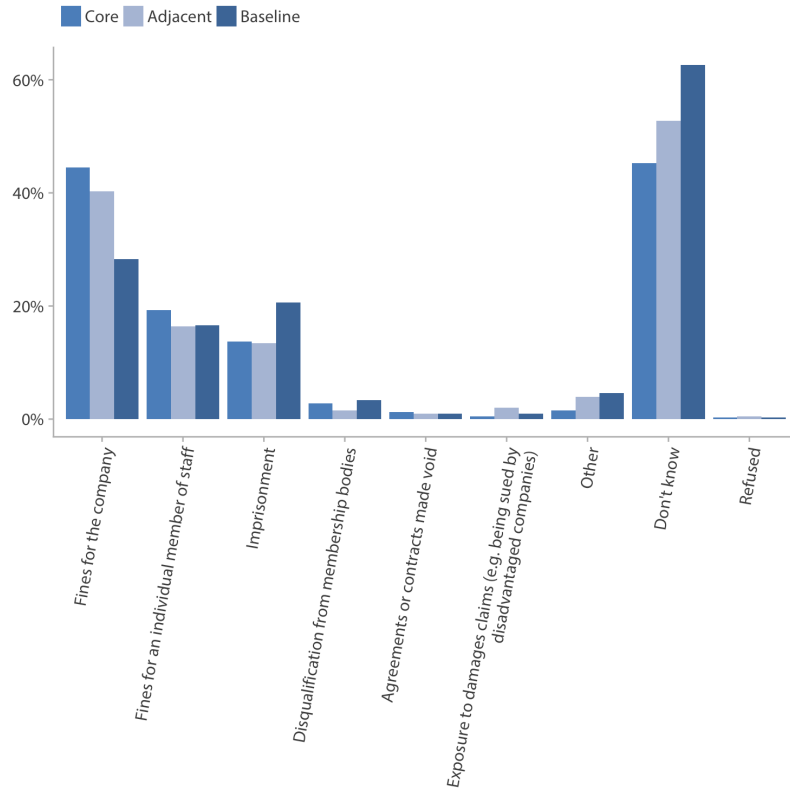
Figure 9: How would you describe your own awareness of the penalties for non-compliance with Competition Law?



When asking respondents to outline the possible sanctions for non-compliance with competition law we found that “*finest for the company*” was the most highly reported response in all three samples (other than those answering “*don't know*”). We found that a greater proportion of respondents in the core sample reported “*finest for the company*” as a penalty compared to those in the baseline sample ($p < 0.001$). Those in the adjacent sector also reported this in greater proportions than the baseline sample ($p < 0.001$).¹⁴⁵

¹⁴⁵ The difference in the responses of core and adjacent were not significant ($p = 0.371$)

Figure 10: Could you briefly outline what the sanctions for non-compliance with Competition Law are?



For three of our four cases, fines for the infringing companies were the main sanctions applied, with mobility scooters being the only case where no fine was imposed. Comparing the responses to this question across the core sample for each case (as shown in Table 17), we see that the proportion of the core sample stating “fines for the company” was significantly lower for mobility scooters relative to the three other cases taken together (p=0.020).

Table 17: Proportion of those in the core sample for each case reporting “fines for the company” as one of the sanctions for non-compliance with Competition Law:

Core sample	Estate Agents	Light Fittings	Bathroom fittings	Mobility scooters
Reported “fines for the company”	48%	49%	47%	34%*

4.1.3 Summary of findings on awareness

Awareness of specific CA98 case

Around 40-50% of respondents in the core sample for each case reported being aware of *any* competition law infringement having taken place in their industry. For those that were aware of a case, we find that in all sectors (other than estate agents) the majority of respondents were able to describe the details or the anti-competitive conduct of the focal case. However, the majority of estate agents described a different case within their sector: one that occurred more recently than the focal case. Whilst this does not necessarily mean awareness of the focal case is low, it does suggest that at the very least awareness of the other case is fresher in peoples' minds.

After being told about the focal case in their sector the number of respondents reporting being familiar with the case is greater than those that chose to describe the specific details of the case.

There are some respondents in adjacent sectors who reported familiarity with the details of the case, providing evidence of some information transmission beyond the core sector. However, with the exception of the light fittings case, we find that case awareness of the specific CA98 cases is significantly lower in the adjacent sector than in the core sector.

This relatively weak transmission of information to adjacent sectors is supported by our findings on cross-sector awareness. For example, the large majority of core respondents for each case (between 68% and 81%) were unaware of *any* CA98 case outside of their sector. In particular, we were surprised to find that when we asked those in the light fittings sector a specific question about the bathroom fittings case (and vice versa),¹⁴⁶ 87% of respondents in the light fittings sector stated they were not aware of the bathroom fittings case. Similarly, 87% of respondents in the bathroom fittings sector claimed they were not aware of the light fittings case. We understand that the CMA has reported both cases together when undertaking awareness raising related to these cases and RPM infringements in general; therefore, we might have expected cross-sector awareness between these two sectors to be stronger.

Link between CA98 intervention and awareness of general competition law

We find evidence that awareness of competition law is significantly greater amongst those in sectors where a CA98 case has taken place, and particularly amongst those aware of the details of the specific case. Respondents in industries where a CA98 case has occurred are significantly more familiar with competition law than the baseline average.

Respondents in the core and adjacent sectors were also typically more likely to answer correctly to a number of true or false

¹⁴⁶ Question E.1: was asked to those businesses in the core light fittings sample and the core bathroom fittings sample. They were read a description of the case in the other sector and asked, "Are you aware that this occurred"?

statements chosen to test knowledge on competition law relative to the baseline sample. In particular, the difference between the proportion of correct responses from the core sample and those from the baseline sample is significant for all these statements.

Being aware of the specific case has a significant impact on answering correctly to each of the statements. The core respondents were also more likely to answer correctly to statements directly relevant to the specific nature of the infringement that occurred in their sector.

We also found that those in a core sector are more likely to have discussed compliance with competition law in the last 12 months and run competition law training in the last 12 months compared with those in the baseline sample. Given that both our core and adjacent samples appear to have an above average proportion of businesses discussing and running training in all areas of compliance, we do not place any significant weight on this finding due to the difficulty of identifying the direction of causation. Nevertheless, where those in the core reported having introduced competition law training in the last 12 months and were aware of the case, a number of respondents reported the reason for introduction to be a direct result of the CA98 case in that industry (nearly 60% of respondents in the lighting fittings case and around 50% of respondents in the bathroom fittings case).¹⁴⁷

4.2 Changes in the perception of risk

Does intervention by the CMA/OFT have an impact on perception of risk of being caught and/or punished? We included some specific questions in our survey to investigate this:

- **as a result of becoming aware of the case, the extent to which businesses/individuals have a changed perception of the risk of being detected if they engage in anti-competitive practices** – this is likely to be one influencing factor behind whether a company engaging in infringing behaviour is likely to change its behaviour after becoming aware of the case. If they perceive the probability of being detected has increased, then they may be more likely to stop any infringing behaviour;
- **as a result of becoming aware of the case, the extent to which businesses/individuals have a changed perception of the risk of being prosecuted if they engage in anti-competitive practices** – this is likely to be a

¹⁴⁷ Question D14: Was this training introduced as a result of the case we have been discussing? Base: If offered training on compliance in the last 12 months and aware of specific CA98 case.

further influencing factor behind whether a company engaging in infringing behaviour is likely to change its behaviour.

By comparing the differences between those respondents who were aware of the specific CA98 case and those who were not, we can assess the impact of CMA intervention on these two factors.

4.2.1 Changes in perceived risk of being discovered or prosecuted for anti-competitive behaviour

We asked respondents whether they believed that, as a result of the specific case in their industry, companies in their industry that engage in anti-competitive behaviour would be more likely or less likely to be discovered and subsequently prosecuted.

As shown in Table 18 below, amongst the respondents in the core sector for each case, between 48% and 57% considered that it was more likely that an infringing firm would be discovered. Similarly, between 44% and 58% of core respondents considered that it was more likely that an infringing firm would be prosecuted. For both questions from all of the options available, "*more likely*" was the most heavily reported response for all cases. The majority of the remainder considered there was "*no difference*" and very few considered that it was less likely.

Despite the relatively large proportion of respondents stating 'no difference' to each of these questions, there is clear evidence that CMA/OFT intervention does have *some* impact on perception of the risk of being detected and/or prosecuted in the core sector, which could act as a deterrent to engaging in infringing behaviour. For both questions, the proportion of "*more likely*" answers was significantly greater than the number of "*less likely*" answers ($p < 0.001$) in all cases.

Table 18: Has this case made you think companies in your industry that engage in anti-competitive behaviour would be more likely to be discovered, less likely, or has it made no difference? / Has this case made you think prosecution for engaging in anti-competitive behaviour is more likely, less likely or has it made no difference? Base: All businesses (**core sample**).

Core sector sample	DETECTED			PROSECUTED		
	More likely	No difference	Less likely	More likely	No difference	Less likely
Estate Agents Base: 100	48%	39%	9%	47%	40%	10%
Light Fittings Base: 100	52%	38%	4%	44%	41%	9%
Bathroom Fittings Base: 100	58%	26%	6%	56%	32%	8%
Mobility scooters Base: 100	57%	32%	6%	48%	37%	9%

Distinguishing between respondents who were aware of the relevant case and those who were not,¹⁴⁸ we find significant differences in responses rates in only a few cases. Overall, the lack of significant differences is perhaps unsurprising, as the existence of a CA98 case within the sector was implicit in the question being asked; therefore, by this stage of the survey, even those respondents in core sectors who might have initially been unaware of the CMA/OFT's intervention would have been made aware of the intervention. Therefore, there are no obvious implications to be drawn from this lack of differences.

For changes in the perceived risk of detection or prosecution, we also found for the bathroom fittings and mobility scooters cases that respondents in the relevant adjacent sectors are less likely to consider that the probability of being discovered has increased following intervention than their core sector counterparts ($p=0.044$ and $p=0.043$ respectively). Similarly, for mobility scooters, respondents in adjacent sectors are also less likely than respondents in the core sector to believe that the probability of being prosecuted has increased ($p=0.030$). This suggests that any potential indirect impacts are weaker for these adjacent sectors.

¹⁴⁸ Based on responses to question C4.

4.3 Changes in behaviour as a result of the case

In addition to assessing the awareness levels and changes in the perceived risk of being detected and/or prosecuted, the survey also asked about:

- views on changes in the risk of companies breaking competition law now that anti-competitive behaviour has been identified and action taken; and
- whether any company has (or intends to) modify agreements or commercial initiatives as a result of the case.

4.3.1 Changes in the perceived likelihood of engaging in infringing behaviour

As shown in Table 19 below, for all cases the core respondents considered that the risk of a company in their industry breaking competition law was “*less likely*” following the CMA/OFT intervention, suggesting that again intervention does have some impact on the likelihood of infringement. Again, there is some risk of affirmation bias, but the broad structure of responses across cases and sectors, described below, does appear as one might expect.

Table 19: Now that anti-competitive behaviour has been identified and action taken, how do you think the risk of companies breaking competition law in your industry has changed? Base: All businesses (Core sample)

Core sector sample	More likely	Less Likely	No difference
Estate Agents Base: 100	2%	57%	40%
Light Fittings Base: 100	4%	62%	28%
Bathroom Fittings Base: 100	7%	71%	19%
Mobility scooters Base: 100	10%	55%	27%

Very few considered the risk was “*more likely*”¹⁴⁹ and the modal response for all cases was “*less likely*”. However, a relatively large proportion considered there was “no difference” (as much as 40% in the case of estate agents¹⁵⁰).

For those stating that there was no difference or it was more likely, the main reason given was typically “*carrying on as before/some will always do it*”. However, it is interesting to note that the “*no fear of punishments*” response scored much more highly amongst respondents for the mobility scooters case (where no fine was imposed). The difference was significant relative to the responses of the other three sectors together ($p=0.005$).

For the bathroom fittings case, respondents in the adjacent sectors were less likely to answer that the probability of companies breaking competition law has decreased than their core sector counterparts ($p<0.001$). For the other cases there were no significant differences in the responses of the core and adjacent sectors.

Comparing core respondents within each sector that are aware (after prompting) and are not aware of the case, we find that in the bathroom fittings and light fittings cases, those aware of the case are significantly more likely to consider the risk of breaking competition law to be “*less likely*” after the CMA/OFT action.

However, for the estate agents case, the difference is reversed (and still significant, yet smaller in magnitude). We do not have a satisfactory explanation of this, but one possibility is that the “*unaware*” category contains respondents who are aware of the more recent CA98 case (which is comparatively recent and may affect perceptions of the likelihood of anti-competitive behaviour) yet could not recall our older focal case. This situation does not arise with the three other cases.

¹⁴⁹ Note that proportion of respondents from the core sample for mobility scooters reporting “more likely” was higher (but not significantly so) compared to the response rates of the other three sectors together ($p=0.063$)

¹⁵⁰ Note that proportion of respondents from the core sample for estate agents reporting “no difference” was higher compared to the response rates of the other three sectors together ($p=0.005$)

Table 20: Now that anti-competitive behaviour has been identified and action taken, how do you think the risk of companies breaking competition law in your industry has changed?

Core sector sample	More likely	Less likely	No difference
Estate Agents AWARE Base: 42	2%	43%*	55%*
Estate Agents UNAWARE Base: 58	2%	67%	29%
Light Fittings AWARE Base: 58	3%	72%*	17%*
Light Fittings UNAWARE Base: 42	5%	48%	43%
Bathroom Fittings AWARE Base: 61	3%	84%*	11%*
Bathroom Fittings UNAWARE Base: 39	13%	51%	31%
Mobility scooters AWARE Base: 72	8%	60%	25%
Mobility scooters UNAWARE Base: 28	14%	43%	32%

4.3.2 Deterrent impact of the specific cases

We are also interested in determining whether or not CMA/OFT intervention in these areas has actually deterred any anti-competitive behaviour by other parties.

The deterrent effect involves an authority's enforcement decision causing a reduction in violations by other firms. There are limitations to the extent to which we can accurately measure the deterrent impact, as it is difficult to measure the reduction in violations with certainty and to isolate the causal effect from confounding factors. Furthermore, as the CMA itself has stated: *"estimating deterrence means trying to make a statement about behaviour that never occurred by observing behaviour that was detected, which is a non-random sample of the behaviour that did occur or would have occurred"*.¹⁵¹

We can roughly assess the possible deterrent impact of the CMA/OFT's involvement in each of the cases by using our survey to estimate the scale and prevalence of infringing agreements or practices that have been ceased as a result of such intervention, as described in the remainder of this subsection.

Companies modifying agreements as a result of the case

To those aware of the specific CA98 case we asked whether the respondent had modified certain agreements or commercial initiatives as a consequence of the case (question D9).¹⁵² Table 21 below shows the results, which demonstrate there are several respondents (both in the core and adjacent sectors) who were aware of the case and report to have modified agreements as a consequence.

¹⁵¹ Paragraph 3.20 of CMA, "The deterrent effect of competition authorities' work – literature review", 7 September 2017.

¹⁵² Question D9: *"Some companies have modified certain agreements or commercial initiatives they have in place in response to this case. Has your firm made similar adjustments as a consequence of the case? Please note, everything you say today will remain confidential and CMA will not be able to identify you or your answers."* Base: if aware of competition law infringement that took place in their industry

Table 21: Firms that report to have modified certain agreements or commercial initiatives as a consequence of the case (Base: If aware of specific CA98 case)

Sector	Core	Adjacent
Base: core; adjacent		
Estate Agents	12	1
Base: 42; 8		
Light Fittings	6	2
Base: 58; 25		
Bathroom Fittings	8	1
Base: 61; 9		
Mobility scooters	6	2
Base: 72; 21		

Responses to question D9 might be considered as a lower bound for the number of infringing agreements that have been deterred as a direct result of the CMA/OFT intervention (given that this only includes those firms changing behaviour that we spoke to as part of our survey). We also implicitly assume here that any company reporting to have changed (or intend to change) their agreements as a consequence of the case must have been engaging in some illegal behaviour previously; this might not be true in all cases. Therefore, in order to validate responses, we asked a further question of any of those who said they had (or intend to) change their behaviour, asking them what changes they have made or intend to make.¹⁵³

We reviewed the verbatim responses and found that, of the total of 37 respondents that stated that they had modified (or intend to modify) agreements, 4 reported “*don’t know*” to what they had changed. Therefore, we removed those 4 companies from our sample of deterred parties.

One respondent refused to answer this question. This may be because they did not want to reveal what infringing behaviour they might have been conducting before the change, so we still include this respondent as a case where it is likely that infringing behaviour ceased.

Taking a conservative approach, we also filtered out some responses that implied (to varying degrees) that the company may not have been previously infringing, but rather the behavioural change was merely that they are now more aware of possible illegal

¹⁵³ Question D10: Can you briefly talk me through what in particular your firm [D9=1: changed; D9=2: intends to change]?

behaviour and/or do more to make sure employees are more aware of competition law. For example, those giving responses such as:

- “nothing, but just making sure we have everything in place to show that everything is being done correctly”;
- “keeping people up to date with competition law”;
- “more awareness generally”.

Once we exclude these respondents, we assume that, for the remaining respondents with changed behaviour, this indicated some risk of prior non-compliance with competition law.

The responses to D9 are broadly consistent with other questions setting out changes in perceived probability of prosecution and engaging in infringing behaviour. For example, comparing the different response rates of those who changed behaviour and those who did not:

- respondents who reported changed behaviour are more likely to consider that the chance of being prosecuted for engaging in anti-competitive behaviour has increased (weakly significant at $p=0.098$);
- respondents who reported changed behaviour are more likely to report that the risk of companies in the industry breaking competition law has decreased (weakly significant at $p=0.067$).

Therefore, we take the number of businesses who are aware of the CA98 case and report having adjusted business practices or agreements as a result of the CMA/OFT action as a proxy for the number of infringing activities that have been deterred due to each of the four cases. This number is given in Table 22 below (also displayed as a proportion of the total number of respondents surveyed in that sub-sector).

Table 22: Firms that modified certain agreements or commercial initiatives as a consequence of the case ADJUSTED

Have or intend to modify agreement	Core	Adjacent
Estate Agents	7 (7%)	1 (2%)
Light Fittings	5 (5%)	1 (2%)
Bathroom Fittings	7 (7%)	1 (2%)
Mobility scooters	4 (4%)	1 (2%)

These results only show the companies from the sample we actually spoke to that became aware of the case and changed their behaviour. Therefore, in order to get an estimate for the total number of companies within the core/adjacent sectors that may have changed their behaviour we must scale these up for the population of businesses in that sector. Clearly, these proportions are small and, as estimates of the true proportion of infringing firms in the underlying population, subject to a very high degree of uncertainty. Therefore, our eventual results must be treated as only indicative.

We apply the proportions presented in parenthesis above to the total number of businesses in each of our sectors based on the number of businesses for each sector-category in the Market Location¹⁵⁴ business database. This gives us the estimates of the total number of businesses in the general population that might have changed behaviour as a result of the focal case (shown in Table 23 below).

¹⁵⁴ Market Location is the largest commercially available database of UK businesses containing over 98% of all trading companies in the UK. While there is no neat fit between standard industrial classifications and the requirements of each case, Market Location also use a 'Market Sector' breakdown which allows us to reach a more granular level of classification that we used to determine the sector used for the survey in each case. We use the same 'Market Sector' for each case as we used for the survey sample.

Table 23: Estimated total number of businesses deterred from infringing

Sector		Proportion of survey modifying behaviour	Total businesses in sector	Estimated total number of businesses deterred
Estate agents	Core	7%	9739	682
	Adjacent	2%	4019	80
Light fittings	Core	5%	1403	70
	Adjacent	2%	1402	28
Bathroom fittings	Core	7%	786	55
	Adjacent	2%	677	14
Mobility scooters	Core	4%	937	37
	Adjacent	2%	442	8

Based on these estimates, we can go on to estimate an order of magnitude benefit associated with the work of CMA/OFT for each of these cases in terms of the value associated with deterring such behaviour. Section 5 describes the calculations and presents our results.

4.4 Summary of findings on potential deterrent effect

Impact on perception of risk of being discovered or prosecuted for infringing behaviour

We find evidence that CMA/OFT intervention has had an impact on the perception of being discovered and prosecuted, with roughly half of respondents in each of the core sectors considering that the likelihood of detection and/or prosecution had increased as a result of the case (see Table 18 above).

For the bathroom fittings and mobility scooters cases, respondents in adjacent sectors are less likely to respond that the probability of being *discovered* has increased than their core sector counterparts ($p=0.044$ and $p=0.043$ respectively). Similarly, for mobility scooters

respondents in adjacent sectors are also less likely than respondents in the core sector to believe that the probability of being *prosecuted* has increased ($p=0.030$). This suggests that indirect impacts are weaker for these adjacent sectors.

In all four cases, the core respondents considered that the risk of a company in their industry breaking competition law was "*less likely*" following the CMA/OFT intervention (see Table 19), again suggesting that intervention does have some impact on the likelihood of infringement. Amongst those stating that there was no difference or that infringement was more likely, it is interesting to note that the "*no fear of punishments*" response was significantly higher amongst respondents for the mobility scooters case, where no fine was imposed.

Evidence of changes in behaviour as a result of the case – the deterrent impact

We also found direct evidence of a number of companies within both the core and adjacent sectors admitting to modifying (or stating an intention to modify) certain agreements or commercial initiatives as a consequence of the CA98 cases considered, demonstrating that there is a tangible deterrent effect from the work of the CMA/OFT on these cases.

5 Quantifying the benefit of the deterrent effect

5.1 Methodology

In order to estimate the benefits associated with the indirect impact (the deterrent effect) we work through a number of distinct steps, with a more detailed description of the methodology and mathematics described in Annex A. The steps are set out below.

Step 1: Assess the (rough) direct benefit of the enforcement in each case

To assess the direct impact, we suppose that the detriment can be roughly estimated from the pricing impact of the infringement alone. We estimate the proportional price increase in each case and calculate excess profit of infringers and loss of consumer surplus per unit of revenue of the infringing parties based on the relevant revenues of the infringers. This is the direct benefit and we take this as our starting point.

We then consider the length of time for which the infringement would have continued to occur in the absence of enforcement. We need to take into account the revenue growth rate, a discount rate and account for the probability of the infringement collapse and pricing reverting back to competitive levels. This last factor is the most important.

We suppose that the collapse of infringing prices back to competitive prices occurs at a rate of α per unit time period, so that on average the infringement would last for a (exponentially distributed) length of time $1/\alpha$ in the absence of any intervention to end it. We use an assumption of an average length of an infringement of 6 years, which has been used in other analysis undertaken by the OFT.¹⁵⁵ Under these assumptions we calculate the present discounted value of the future detriment if the infringement is not stopped.

Step 2: Assess the prevalence of changes in behaviour by those aware of the case

Next, we consider the indirect impact in terms of the detriment avoided if businesses change their behaviour as a result of hearing about the case. We take the estimate for the total number of businesses deterred from infringing for each case from Section 4.

¹⁵⁵ Paragraph 3.14 of Office of Fair Trading, "A guide to OFT's Impact Estimation methods", July 2010. Available at: http://webarchive.nationalarchives.gov.uk/20131101192556/http://oft.gov.uk/shared_oft/reports/Evaluating-OFTs-work/oft1250.pdf

(footnote continued)

Given our assumptions, our model of detriment is approximately linear in the revenues of the firms involved. Therefore, we use the survey to estimate the revenue R_i of those firms in sector i with aware of the specific case and with changed behaviour.

We estimate the total revenue of deterred firms in two steps:

- a) estimating the revenue of the deterred firms within the sample from categorical data¹⁵⁶;
- b) scaling up from the sample to an estimate of the total revenue of deterred firms in the sector as a whole (i.e. the population, rather than the sample).

Further details of this process and the calculations conducted are described in Annex A.

Running a cross check of our estimates of average firm revenue from the survey against those from with independent data sources, we find that there is some correspondence for the core sectors but that in some cases, there is possible evidence that larger firms might be over-represented in our sample. However, as discussed in Annex A, given the high degree of uncertainty about the independent estimates of average firm size and the various reasons why discrepancies could arise, we do not make any adjustment for possible over-representation of larger firms within our core samples, but we note this possible source of bias.

Although we found multiple deterred firms within each core sector, for each case there is only one deterred firm in each of the adjacent sectors. Therefore, we must consider our estimates of the impact in adjacent sectors as being highly uncertain. In two cases (building surveyors and kitchenware) the reported revenue of the deterred respondent was broadly in line with evidence on overall mean firm turnover for the sector; for disability equipment, we found a deterred firm much smaller than average turnover, whereas for electrical wholesale, the deterred firm was much larger than average. Given a general concern about whether our electrical wholesale sample is representative of the sector at large, we have been conservative and, rather than taking this single large deterred firm as representative, we have supposed instead that the deterred firm were of mean size according to our independently sourced

¹⁵⁶ Based on responses to question F5: And what was the approximate total annual turnover of your company in your last financial year?

(footnote continued)

estimate (i.e. £3.57m¹⁵⁷ rather than £15.7m). This lowers the average revenue estimate for that sector considerably and amounts to taking a conservative approach.

Following this approach, we present our estimates for deterred parties within core and adjacent sectors as shown in the Table 24 below.

Table 24: Estimate of total revenues of deterred parties by sectors

Total revenue of deterred firms (£m per annum)	Core sector	Corresponding adjacent sectors
Bathroom fittings	282	19.2
Light fittings	97.6	100*
Mobility scooters	12.9	11.4
Estate agents	365	113

Figures rounded to 3.s.f.

Applying our estimate of excess profit of infringers and loss of consumer surplus per unit of revenue of the infringing parties to this revenue figure gives us an estimate for the indirect impact.

Step 3: Adjust for the likely smaller detriment associated with avoided infringements

As we cannot assume that the detriment avoided in the cases of changed behaviour are similar in scale to the direct benefit of the enforcement found in step 1, we control for possible selection bias that might result if the CMA/OFT has prioritised infringements creating the greatest detriment to consumers.

Notice that size effects (i.e. larger firms might cause greater detriment from infringement) are already taken into account in Step 2, where detriments are scaled by turnover of the firms involved.

We describe in Annex A the adjustments we make to control for this by making certain assumptions about the likely probability distribution of the size of detriments (conditional on turnover) and the OFT/CMA's possible approach to prioritisation of investigation targets. We down rate estimates of indirect effects by approximately

¹⁵⁷ A report by MTW Research on the Electrical Wholesale Market, estimates a market size in 2016 of around £5 billion. Furthermore, a presentation from the Electrical Distributors Association reports that around 75-80% of the electrical wholesale distributors in the UK are its members, representing a turnover of over £4 billion in January 2016, which would also suggest a total market size of around £5 billion. Our estimate of firm revenue is based on £5 billion divided by the Market Location count for this adjacent sector, 1402. See:

<https://www.researchandmarkets.com/research/kgg4jz/electrical> and <http://www.eda.org.uk/clientUpload/downloadDocument/document/EDA%20Forum%20Presentation%2023rd%20September%202016%20-%20LuxLive.pdf>

30% to take account of this selection effect. This represents a conservative approach.

5.2 Results

Calculating the direct and indirect benefits in this way we calculate the indirect to direct benefit ratio. A summary of our results is shown in Table 25 below.

Table 25: Indirect benefit to direct benefit ratio

Case	Estimated proportion price increase due to infringement	Indirect impact (total avoided detriment of core and adjacent) (£m PDV)	Indirect benefit to direct benefit ratio
Estate Agents	5%	5.6	12
Light fittings	17%	180	14
Bathroom fittings	17%	890	21
Mobility scooters	20%	54	2.7

This demonstrates that the indirect effect is plausibly a multiple of the direct effect. Although the effect per firm is small, there is a significant benefit due to the large number of businesses being deterred from engaging in anti-competitive behaviour.

However, we would strongly underline that this exercise is only indicative due to the small sample sizes, especially for the adjacent sectors.¹⁵⁸ We can have little confidence that we have correctly estimated the likely revenue associated with infringing firms in the population for the adjacent sectors.

There are a variety of potential uncertainties that need to be considered and potential sources of both positive and negative bias:

- It is possible that there could be some over-representation of larger firms within some of the sectors sampled, which

¹⁵⁸ Given the small number of respondents within adjacent sectors who changed behaviour, there is a high degree of uncertainty about these estimates of the revenue of deterred firms. Therefore, our ultimate estimate of indirect effects in the adjacent sectors should be taken as indicative only. We have not sought to estimate formal error bounds due to the large number of assumptions that we are making in this exercise.

will tend to overestimate deterrence benefits. We have adjusted the revenue estimate for the electrical wholesalers given that we only had one deterred firm from our sample with an average revenue significantly higher than the industry mean firm revenue estimated from independent sources. However, a bias leading to overstatement of indirect effects might be still be present;

- Our sample sizes were such that in each adjacent sector we found either one or no deterred firms (in part this is due to our tight criteria for identifying them). However, this means that estimates of the typical revenue of deterred firms in the population at large are highly uncertain;
- The results are sensitive to assumptions about the length of time for which infringing behaviour would have continued in the absence of the stimulus provided by the CMA taking a case in a related sector;
- Our methodology for correction of selection bias needs to make some assumptions about the CMA's selectivity in choosing to pursue cases with greater potential detriment. We conservatively assumed that the CMA is quite selective and therefore made a large downrating for selectivity bias;
- We have only taken into account the price impacts of the infringement, but there may be other sources of detriment – such as consumers having less information to make informed purchase decisions, or wider detriment from the enforcement, which we have not quantified (leading to understatement of both direct and indirect benefits);
- We consider only a small number of adjacent sectors, and although the evidence suggests the indirect effect might be weaker in adjacent sectors, it would be reasonable to expect that there are other businesses in further sectors beyond our identified adjacent sectors who might also have been deterred from infringing as a result of this case.

Nevertheless, the exercise is still useful to demonstrate the plausible size of indirect effects.

6 Conclusions and possible implications for CMA

Impact of CMA intervention on awareness of competition law and the indirect effect

We have found evidence of a clear link between CMA/OFT intervention and greater levels of awareness and understanding of competition law, specifically in relation to the illegality of the type of behaviour in our selected CA98 cases. This demonstrates the value of intervention and follow-on work in raising awareness of specific cases.

Furthermore, there is evidence to support the view that awareness of the case does lead to an indirect impact in the form of changes in the perception of being caught and prosecuted and in terms of firms changing their behaviour. Therefore, there is a demonstrable value associated with CMA intervention and associated awareness raising activities. The CMA should continue to engage in such activities and promote cases in a way that will increase awareness further both within the affected sector and more widely.

Our findings provide some indication of the areas of CMA work that have been particularly successful and those areas where the CMA may consider focussing more resources in future.

How can CMA improve awareness (and thus potential widening of indirect impact)?

For example, of those respondents who reported being aware of the specific case, "word of mouth" and "trade press/industry website" were the most reported ways in which they became aware, suggesting existing communication channels within the industry are an important addition to any direct transmission of information from the CMA. This is likely to be particularly true for those businesses that are well connected within their industry and/or engage in trade press or industry events may have larger and more integrated communication channels that allow for greater information transmission.

Whilst the CMA already uses such communication methods, leveraging contacts within industry organisations, we found that awareness of specific cases is lower in adjacent sectors suggesting weaker information transmission beyond the core sector. Therefore, there may be benefits for the CMA in engaging with bodies who are responsible for trade press across a wide range of industries so as to reach as many businesses across as many sectors as possible (where relevant). It may be worth identifying where analogous infringements might occur in other industries and engaging directly with those industries.

Although we did not find any significant evidence on the extent to which size influences case awareness, we consider that any direct communication efforts may be best targeted at those smaller companies who may have limited access to such communication channels or not be a member of a trade association through which they could get such information. This might include pushing

material directly to those firms in addition to general industry-wide communications.

The survey demonstrated that the majority of respondents considered that the CMA could do more to draw attention to specific cases and their illegality (with the estate agents case having the largest proportion of respondents who thought so (63%)). The most popular responses (in all four cases, core and adjacent) for what the CMA could do better included:

- “better promotion / advertising in general”;
- “better promotion / advertising to the trade body/representative”; and
- “notification via email/letter”.

Furthermore, there is evidence that there is some latent familiarity with cases that is recalled given some prompt. This suggests that there is value in follow-up activities might stimulate latent awareness. Furthermore, it implies that the optimum time in which to promote a case *within its sector* might be some time after the original case as corporate memory dulls, rather than directly after the case. Clearly this conclusion might not apply to promotion of a case to other sectors where knowledge of the case might be poor from the outset.

Impact of different sanctions

In terms of the impact of sanctions imposed upon a finding of anti-competitive behaviour, fines for the company appear to be an important factor in influencing indirect effects.

“Fines for the company” were the most commonly reported sanction listed by respondents when testing awareness of possible penalties. This was reported significantly more amongst core relative to baseline (where for three of our four cases fines were most significant).

We found significant differences in the mobility scooters case where fines were not imposed. Amongst those stating that they believed the likelihood of a company in the sector engaging in anti-competitive behaviour was unchanged or even more likely, the “no fear of punishments” response scored much more highly amongst respondents for the mobility scooters case. We also note that the mobility scooters case yields the lowest indirect to direct impact ratio.

The indirect impact of CMA’s work is a multiple of the direct impacts

In any case, our findings show a clear benefit of the OFT and CMA intervention in CA98 cases in terms of the indirect effects through deterring infringing behaviour amongst other firms.

Although the effect per firm is small, there is a significant benefit due to the larger number of businesses being deterred from engaging in anti-competitive behaviour compared with the number of firms against which the enforcement action was taken. Moreover, as the analysis demonstrates, the ratio of indirect effects to direct effects is likely to vary significantly from case to case, as the size of

the population of potential deterred firms depends on how far news of enforcement action spreads and how many firms are affected.

Due to the small sample sizes involved and the large number of assumptions required, we would caution placing too much weight on the specific magnitudes of the estimated indirect effects.

Nevertheless, the exercise does both demonstrate the feasibility of estimating indirect effects and that indirect effects are likely to be large relative to direct effects, showing that the impact of the CMA's work on CA98 cases is far greater than the direct benefit alone.

Annex A Benefits assessment

This annex sets out our methodology for assessing the indirect benefits arising from CA98 enforcement action in our four case study sectors. Enforcement action may lead to better awareness of the implications of competition law both within the 'core' sector itself and in adjacent sectors. In turn, this may encourage greater compliance by other firms, not just those subject to the enforcement action.

Notice that we are trying to estimate the benefits from improved compliance due to this *general* awareness of competition law, rather than assessing the impact of any particular measure that CMA might take to *enhance* this awareness. Nevertheless, the scale of indirect benefits from general awareness is a useful indicator of the potential benefits that might come from enhancing awareness.

A.1 Methodology

We describe the procedure used for estimation of these indirect benefits through three steps.

Step 1: Direct benefit of enforcement in the core sector

We suppose that the detriment occurring from the infringement considered in each of our case studies can be roughly estimated from its pricing impact alone. There are two components to the detriment: the deadweight loss to consumers from prices higher than the competitive level and the excess profits earned by infringers.

Consumer surplus loss

In the case of RPM, this assumption is reasonable. However, with restrictions on advertising, there may be both a pricing effect due to softening of competition and also detriment arising from consumers making less informed purchase choices; we do not attempt to model the later.

Let p_1 be the price during the infringement and p_2 be the counterfactual price. Let q_1 and q_2 be the corresponding quantities. Assume that the price change is reasonably small, so that the loss of consumer surplus $C > 0$ can be estimated by linear approximation:

$$C = -\frac{1}{2}(p_1 - p_2)(q_1 - q_2)$$

Then

$$\frac{q_1 - q_2}{q_1} \cong -\varepsilon \frac{p_1 - p_2}{p_1}$$

where $\varepsilon > 0$ is the joint price elasticity for the group of infringing firms at the higher, infringing price. (This is the elasticity faced if all infringers jointly increase their price.) Therefore,

$$C = \frac{1}{2} \varepsilon \left(\frac{p_1 - p_2}{p_1} \right)^2 R_1$$

where R_1 is the total revenue of the infringers at the infringing price.

If we assume that the infringers are able to set a jointly profit maximising price (within a differentiated Bertrand competition model) then the standard Lerner condition applies

$$\frac{p_1 - c}{p_1} = -\frac{1}{\varepsilon}$$

where c is the (common) marginal cost. For small margins of price over cost

$$\frac{p_1 - c}{p_1} \cong \frac{p_1 - c}{c} = m$$

where m is the gross margin (at the infringing prices). Putting this altogether, the consumer surplus loss (per unit of time) is given by

$$C \cong \frac{1}{2} \frac{R}{m} \Delta^2$$

where $\Delta = (p_1 - p_2)/p_1$ is the proportionate increase in price due to the infringement and $R = p_1 q_1$ is the total revenue of the infringers. We can roughly estimate the price increase from the context of each case.

Where we do not have information on margins, we take the gross margin m to be at the higher end of typical values to reflect that it is the margins earned by the infringers (say 35%). However, in the case of mobility scooters we were provided material by the OFT case team, which included estimates for the margins made on each model of mobility scooter together with sales volumes. Taking an average of the estimated margins (weighted by sales volumes) we estimate an average gross margin of [OFFICIAL SENSITIVE: ✕] in this case.

Given these assumptions, the detriment is (approximately) linear in the total revenue of the infringing firms. This does not take into account that larger firms might collectively have greater market power and be more able to increase price. (This would mean that the gross margin would be larger for such firms.)

Box 1 below gives a summary of price-cost margin estimates from recent literature.

Box 1: Price-cost margin estimates

Academic literature estimating price-cost margins report a wide range of estimates, which vary over time, by sector and by country.

Görg and Warzynski (2006)¹⁵⁹ estimates price cost margins in UK manufacturing over the period 1989-1997 and estimate average price cost margin across all industries of 10.8% (across all years) or 14.1% (1989) – 11.1% (1997), with an upper bound around 16%. The price cost margin findings in this paper were considered to be lower than other papers and the authors put this down to the nature of the dataset. *“Previous studies used mostly subsets of large firms, with established market presence, while this dataset has many characteristics of a population dataset.”* This suggests the dataset used in this study are more likely to reflect a competitive market rather than showing companies that benefit from market power.

Deutsche Bundesbank (2017)¹⁶⁰ use the same methodology as Görg and Warzynski (2006) to estimate price cost margins in 27 sectors dominated by private firms in seven European countries (Austria, Belgium, Finland, France, Germany, Italy and Denmark Austria, Belgium, Finland, France, Germany, Italy and Denmark) between 1996 to 2014 and find a range across all sectors and countries of 27% - 54%, and for “electrical equipment” across all countries a range of 7% - 23%.

Using the same methodology as above two papers for 10 countries (Austria, Belgium, Finland, France, Western Germany, Italy, Netherlands, Spain, Sweden, and United Kingdom) for 1981 to 1999, Badinger (2007)¹⁶¹ estimates an average price cost margin across countries as, 46.6% for manufacturing, 46.3% for “Electrical and optical equipment” and 34.78% for “real estate renting and business activities”.

Bassanetti et al (2010)¹⁶² use a panel dataset mostly taken from EU KLEMS March 2008 database, covering 10 European countries (Austria, Belgium, Denmark, Finland, France, Germany, Italy, Netherlands, United Kingdom, Spain), 15 sectors and 3 main groups of activities for the sample period 1982-2005 and find the average price cost margin across the entire dataset is 30%.

Excess profits

It is often assumed that excess profits should not receive full, or indeed, any weight in antitrust welfare calculations. Excess profits

¹⁵⁹ Görg Holger, Warzynski Frédéric, “The Dynamics of Price Cost Margins: Evidence from UK Manufacturing”, *Revue de l'OFCE*, 2006/5 (no 97 bis), p. 303-318. DOI : 10.3917/reof.073.0303. <https://www.cairn.info/revue-de-l-ofce-2006-5-page-303.htm>

¹⁶⁰ Deutsche Bundesbank, “Mark-ups of firms in selected European countries”, December 2017, Monthly report p 53, https://www.bundesbank.de/Redaktion/EN/Downloads/Publications/Monthly_Report_Articles/2017/2017_12_markups.pdf?__blob=publicationFile

¹⁶¹ Badinger Harald, 2007. “Has the EU’s Single Market Programme Fostered Competition? Testing for a Decrease in Markup Ratios in EU Industries,” Working Papers 135, Oesterreichische Nationalbank (Austrian Central Bank). https://www.oenb.at/dam/jcr:67fda6c8-a0d6-4fef-a9a1-47feac9602a9/wp135_tcm16-56844.pdf

¹⁶² Bassanetti Antonio, Torrini Roberto and Zollino Francesco, “Changing Institutions in the European Market: the Impact on Mark-ups and Rents Allocation”, *Temidi discussione (Economic working papers) 781*, Bank of Italy, Economic Research and International Relations Area. http://www.bancaditalia.it/pubblicazioni/temidi-discussione/2010/2010-0781/en_tema_781.pdf

might be dissipated in inefficiency or rent-seeking behaviour, in which case at least some of those excess profits should be included in our estimate of detriment.

The excess profit is approximately ΔR , so if we include this as well as the deadweight loss of consumer surplus, the overall detriment $C + \Delta R$ is given by

$$L = R\Delta \left(1 + \frac{\Delta}{2m}\right)$$

Vertical chains

This approach does not take into account any vertical relationships between retailers and wholesalers. If the infringers include both retail and wholesale in the same chain, we may double count some aspects of the detriment.

We have not tried to make any correction for this issue. This point is discussed below in more depth when we consider the relevant survey evidence.

Length of infringement phase

We now need to allow for the length of time for which the infringement would have continued to occur in the absence of enforcement. Suppose that:

- Revenue grows at a rate g in real terms (which we set at zero in line with our generally conservative assumptions);
- There is a discount rate r (the Treasury green book rate of 3.5% as we are summing future social benefits);
- There is a probability of the infringement collapsing, with pricing reverting back to competitive levels, at a rate of α per unit time period (i.e. the ending of the infringement is governed by a Poisson arrival process). This means that, in the absence of any intervention to end it, the length of the infringement would have an exponential distribution with a mean of $1/\alpha$.

Under these assumptions, the expected present discounted value of the future detriment if the infringement is not actively stopped (but rather just ceases naturally according to the assumptions above) is

$$\frac{L}{r - g + \alpha}$$

Choice of the parameter α is by far the most important factor, with the choice of g and r having relatively little effect (within reasonable ranges for these parameters).

We can estimate α from data on observed lengths of infringements. In particular, if we observe n infringement lengths ℓ_1, \dots, ℓ_n then the (maximum likelihood) estimate of α given the assumption of a Poisson arrival process is given by

$$\hat{\alpha} = \frac{n}{\sum_i \ell_i}$$

which is the harmonic mean of any observed lengths.

The observed infringement lengths from the four case studies are roughly 2, 3.5, 2.5 and 8.5 years. Therefore, the harmonic mean is just over 3 years, giving an estimate of $\alpha = 1/3$ roughly.

Ultimately, we are interested in estimating how long possible infringements by *other* firms in the core or adjacent sectors might have lasted if those firms' behaviour had not been changed by their awareness of the enforcement action in the core sector; this is a different question to that of how long the infringement *actually* occurred for within the case studies before enforcement action was taken by CMA.

What triggers might lead the infringement to cease (in the absence of any knowledge of the specific enforcement action taken in the core sector)? This might be enforcement action, fear of enforcement, breakdown of cooperation amongst infringers or possibly changing circumstances within the sector. It may be that taking observed lengths of infringement in sectors where the CMA *has* intervened might underestimate the length of infringements in those cases where CMA *has not* intervened (at least so far), as this might indicate that the chances of enforcement action are less. Therefore, it is likely that taking $\alpha = 1/3$ might be an overestimate of the rate at which infringement might breakdown.

The OFT published a guide for conducting impact assessments¹⁶³ which advises that a standard default duration of six years should be adopted where this information is not available as part of the investigation documents. The decision to adopt this approach was based on the suggestion in an independent review conducted by Professor Stephen Davies of UEA.¹⁶⁴ In line with this suggested approach, we also take six years as our base assumption and so take $\alpha = 1/6$.

Step 2: Assess the prevalence of changes in behaviour

Question D9 in our survey tests whether respondents changed their behaviour as a result of awareness of the particular case.

¹⁶³ Office of Fair Trading, "A guide to OFT's Impact Estimation Methods", July 2010.

¹⁶⁴ Office of Fair Trading, "A Review of OFT's Impact Estimation Methods Professor Stephen Davies", January 2010.

D9: "Some companies have modified certain agreements or commercial initiatives they have in place in response to this case. Has your firm made similar adjustments as a consequence of the case?"

Please note, everything you say today will remain confidential and CMA will not be able to identify you or your answers."

Base: if aware of competition law infringement that took place in their industry

This question is only asked of respondents in either the core or relevant adjacent sectors that were aware of the specific CA98 case within the core sector. Therefore, positive responses to D9 are from firms who both (i) were aware of the specific CA98 case in the core sector and (ii) had modified their behaviour.

We also reviewed the responses to a follow up question asking those who reported changing (or intending to change) their behaviour what changes they made,¹⁶⁵ removing from our list of deterred firms, any respondents who said "don't know" or gave more general responses to this question that did not imply they had actually been infringing, only that they are now more aware. Once we have excluded these respondents, we reasonably assume that behaviour would only be changed in firms that would have been at some risk of non-compliance with competition law. Therefore, this question tells us about possible background rates of infringement and how these might be changed by awareness (both in core sectors and adjacent sectors).

Furthermore, for these parties we see that there is typically polarisation of the sample into either wholesale or retail level firms. Therefore, our concerns about double-counting due to vertical relationships are limited. This is because those firms who have been identified by our survey as having changed behaviour due to awareness of the relevant CA98 case are, within each sector, most either selling to retail customer or to other businesses. This is shown in Table 26 below. Whilst the split within "bathroom fittings" respondents is a mix of selling to businesses and consumers, the deterred respondents are unlikely to be within a vertical relationship (as they are few amongst many in the sector), so we do not make any corrections for this issue.

¹⁶⁵ Question D10: Can you briefly talk me through what in particular your firm [D9=1: changed; D9=2: intends to change]?

Table 26: Responses to question A3: Do you primarily sell your goods or services to businesses or consumers, or both?

	Total number of deterred companies	Selling to customers	Selling to other businesses	A bit of both
Estate Agents	8	5	1	2
Light fittings	6	0	3	3
Bathroom fittings	8	2	2	4
Mobility scooters	5	3	0	2

Therefore, we take the (adjusted) responses to D9 as being reliable and use these results as a proxy for identifying the possible prevalence of infringements deterred for each of the four cases.

Step 1 above is based on a model of detriments that assumes the magnitude of any detriment is (approximately) proportional to the revenue of the infringing firms. To reapply this approach to the deterred firms identified by question D9 in the survey, we determine the total revenue of the deterred firms in each sector and assume that the detriment per unit of revenue is the same as that for the infringing firms in the relevant core sector.

Estimating the total revenue of deterred firms involves:

- estimating the revenue of the deterred firms within the sample from categorical data;
- scaling up from the sample to an estimate of the total revenue of deterred firms in the sector as a whole (i.e. the population, rather than the sample).

Reported revenues for each survey respondent¹⁶⁶ fall into categories (e.g. £0.5m – £1m, £10m-25m etc). As these categories are quite broad (especially at the upper end), we cannot assume that firms' actual revenues will be uniformly spread across the relevant range. In particular, as the distribution of firm sizes is typically single-peaked, categories above (respectively, below) the mode will tend to have firms more heavily distributed towards the bottom (respectively, top) of the category. Therefore, the midpoints of the categories may provide poor estimates of firms' expected revenues.

To overcome this issue, for each sector we took the counts of firms by revenue category and fitted a lognormal distribution (by maximum likelihood estimation). Given this fitted distribution, we then calculated the expected revenue of a firm conditional on falling into each category. We then used these conditional expectations, rather

¹⁶⁶ Based on responses to question F5: And what was the approximate total annual turnover of your company in your last financial year?

than the category midpoints, to estimate the total revenue of firms providing a positive response to question D9.

We then need to scale up the total revenue of deterred firms in the sample to reflect that we only have a sample of the population of firms within the sector. To do this, we took the total number of businesses in each of our sectors, based on the number of businesses for each sector-category in the Market Location¹⁶⁷ business database. This implicitly assumes that our sample is representative in terms of average firm size. For example, if we had under-sampled smaller firms, then this approach might overestimate the revenue of deterred firms within the population.

As a cross-check, we sought to estimate average revenues of *all* firms in each core sector by taking reported estimates of the total sector size at or close to the time of the infringement from independent sources and then dividing by the total number of firms in that sector using our Market Location data. Table 27 below shows the estimated average revenues (for all firms) for each of the sectors.

In most cases, our estimates of average firm revenue from the survey broadly correspond with independent data sources. However, there are significant differences for three core categories (estate agents, light fittings and bathroom fittings). Therefore, there is possible evidence that larger firms might be over-represented in our sample. However, there are other possible explanations of these differences:

- independent estimates of total sector revenue may not have been as comprehensive as our data from Market Location on the number of firms within the sector;
- total sector revenue estimates are drawn from OFT and CMA reports, where the “sector” would have been defined by the boundaries of the relevant market, rather than a primarily statistical classification of firm types (as in the Market Location data);
- the stated revenue of respondents might include activities other than those falling within the definition of their sector (i.e. firms are multiproduct).

Given the high degree of uncertainty about the independent estimates of average firm size and the various reasons why discrepancies could arise, we do not make any adjustment for possible over-representation of larger firms within our sample, but we note this possible source of bias.

¹⁶⁷ Market Location is the largest commercially available database of UK businesses containing over 98% of all trading companies in the UK. While there is no neat fit between standard industrial classifications and the requirements of each case, Market Location also use a ‘Market Sector’ breakdown which allows us to reach a more granular level of classification that we used to determine the sector used for the survey in each case. We use the same ‘Market Sector’ for each case here as we used for the survey sample.

Table 27: Estimates of average revenue per firm for all firms in sector and for deterred firms only

Average revenue per firm (£m per annum)	All sample (fitted category means) £m	All sample (categories mid points) £m	Population - independently sourced estimate	Sample - deterred firms only (fitted category means)
Estate Agents (CORE)	0.728	0.828	0.349 ¹⁶⁸	0.54
Building Surveyors	1.08	1.18	1.46 ¹⁶⁹	1.41
Surveyors and Valuers	2.70	2.95		
Light fittings (CORE)	3.07	3.25	0.870 ¹⁷⁰	0.99
Electrical Wholesalers	12.6	9.21	3.57 ¹⁷¹	15.7
Bathroom fittings (CORE)	4.81	4.66	1.41 ¹⁷²	5.12
Kitchen Furniture Manufacturers	2.20	2.51		
Kitchenware	1.35	1.47	1.03 ¹⁷³	1.41
Mobility equipment (CORE)	0.47	0.515	0.544 ¹⁷⁴	0.20
Electric Vehicles (CORE)	0.63	0.738		
Disability Equipment (Manufacturers and Suppliers)	4.58	4.72	5.45 ¹⁷⁵	1.35

¹⁶⁸ The OFT Home Buying and Selling Market Study (2010), reported that "[t]he traditional estate agency market, excluding fees for ancillary services, was worth approximately £4.2 billion in 2007, falling to £2.1 billion in 2008". Updating these estimates using similar methodology and based on a total value of property transactions of £248 billion in the year to June 2017, the estimated size of market for UK estate agents is around £3.4 billion in 2016/17. Our estimate of firm revenue is based on £3.4 billion divided by the Market Location count for this sector, 9739. See: <http://www.hip-consultant.co.uk/assets/OFT-Home-buying-and-selling-a-market-study.pdf>

¹⁶⁹ A Survey of UK Construction Professional Services 2005/06 conducted by the Construction Industry Council. The total market value for 2005/06 financial year for professional services firms in the construction industry was £13.9 billion. Out of this, surveying services accounted for around 17% (£2.3 billion). In the absence of more recent figures, we base our estimate on £2.3 billion divided by the Market Location count for this adjacent sector, 1581. See: <http://cic.org.uk/download.php?f=cicsurvey.pdf>

(footnote continued)

¹⁷⁰ The CMA Light Fittings Decision (2017) reported, "*The market research company, AMA Research Limited (AMA Research), estimates the size of the UK light fittings sector to be £1.22 billion in 2015 based on manufacturers' selling prices.*" Our estimate of firm revenue is based on £1.22 billion divided by the Market Location count for this sector, 1403. See:

<https://assets.publishing.service.gov.uk/media/5948dc48e5274a5e4e00028c/light-fittings-non-confidential-decision.pdf>

¹⁷¹ A report by MTW Research on the Electrical Wholesale Market, estimates a market size in 2016 of around £5 billion. Furthermore, a presentation from the Electrical Distributors Association reports that around 75-80% of the electrical wholesale distributors in the UK are its members, representing a turnover of over £4 billion in January 2016, which would also suggest a total market size of around £5 billion. Our estimate of firm revenue is based on £5 billion divided by the Market Location count for this adjacent sector, 1402. See:

<https://www.researchandmarkets.com/research/kgq4jz/electrical> and <http://www.eda.org.uk/clientUpload/downloadDocument/document/EDA%20Forum%20Presentation%2023rd%20September%202016%20-%20LuxLive.pdf>

¹⁷² The CMA Bathroom Fittings Decision (2016) reported, "*Market reports estimate the size of the UK market for bathroom fittings to be £1.11 billion in 2013 based on manufacturers' selling prices.*" Our estimate of firm revenue is based on £1.11 billion divided by the Market Locations count for this sector, 786. See:

<https://assets.publishing.service.gov.uk/media/573b150740f0b6155b00000a/bathroom-fittings-sector-non-conf-decision.pdf>

¹⁷³ AMA Research, Kitchen and Bathroom Products in the Housebuilding Market Report – UK 2016-2020, shows that in 2015 the market for kitchen and bathroom products increased was around £700 million of which 40% relates to kitchen appliances (broadly applicable to our kitchenware category with the exclusion of a few products such as cutlery). This gives an estimate of around £280 million. Our estimate of firm revenue is based on this figure divided by the Market Location count for this sector, 273. See: <http://www.kbbreview.com/news/kitchen-bathroom-product-market-growth-driven-new-builds/>

¹⁷⁴ The OFT Market Study into Mobility Aids (2011) reported, "*We estimate that the current value of the UK sector for mobility aids is between £430m and £510m.*" We acknowledge that Mobility Scooters are a sub-category of mobility aids sector. Therefore, in the absence of more granular data, we base our estimate of revenue based on the conservative estimate of £430m (not updating for sector growth since 2011 to ensure a conservative approach) divided by the Market Locations count for our core sector for this case (937). This might give us a slight overestimate, but this explains why our revenue estimates of deterred firms might be slightly lower. See: http://webarchive.nationalarchives.gov.uk/20130301185841/http://www.of.gov.uk/shared_of/market-studies/of1374

¹⁷⁵ The OFT Market Study into Mobility Aids (2011) reported, "*We estimate that the current value of the UK sector for mobility aids is between £430m and £510m.*" Based on estimates from a number of reports, growth rates in the sector range between 5 – 10%. Taking the conservative approach (£430 million in 2011 and 5% growth rate) this implies a 2018 market size of around £605 million. Our estimate of firm revenue is based on £605 million divided by the Market Location count for this adjacent sector, 422. See:

http://webarchive.nationalarchives.gov.uk/20130301185841/http://www.of.gov.uk/shared_of/market-studies/of1374

Although we found multiple deterred firms within each core sector, each case there is only one deterred firm in each of the adjacent sectors. Therefore, we must consider our estimates of the impact in adjacent sectors as being highly uncertain. In two cases (building surveyors and kitchenware) the reported revenue of the deterred respondent was broadly in line with evidence on overall mean firm turnover for the sector; for disability equipment, we found a deterred firm much smaller than average turnover. However, for electrical wholesale, the deterred firm was larger than average. In particular, the largest absolute difference in average turnover estimates in all core and adjacent sectors presented in Table 27 is for electrical wholesalers. The modal firm revenue in our sample was broadly in line with an independent estimates of average firm size from a market researcher. However, about 6% of our respondents fell into the “greater than £25m” size category, pushing up the mean size significantly. This is suggestive that some of respondents may have included multiproduct firms of which electrical wholesale was just one activity.

Given our general concerns about whether our electrical wholesale sample is representative of the sector at large, we have been conservative and, rather than taking this single large deterred firm as representative, we have supposed instead that the deterred firm were of mean size according to our independently sourced estimate (i.e. £3.57m rather than £15.7m).

Based on the estimated average revenues per firm we then scale back up to the population of firms at large within each sector, using estimates of the total number of firms in that sector from Market Location. On this basis, Table 28 shows estimates of the total revenues of firms deterred in each core sector and the corresponding adjacent sectors.

Table 28: Total revenues of deterred firms by core sector

Total revenue of deterred firms (£m per annum)	Core sector	Corresponding adjacent sectors
Bathroom fittings	282	19.2
Light fittings	97.6	100*
Mobility scooters	12.9	11.4
Estate agents	365	113

*See main text for explanation

Applying our estimate of excess profit of infringers and loss of consumer surplus per unit of revenue of the infringing parties to this revenue figure gives us an estimate for the indirect impact.

We would strongly underline that this exercise is only indicative due to the small sample sizes, especially for the adjacent sectors. We can have little confidence that we have correctly estimated the likely revenue associated with infringing firms in the population for the adjacent sectors. Nevertheless, the exercise is still useful to demonstrate the plausible size of indirect effects.

Step 3: Adjust for selection biases

We cannot assume that the detriment avoided in the cases of changed behaviour found in step 2 are similar in scale to the direct benefit of the enforcement found in step 1. There are two issues:

- **Selection bias:** The CMA will have prioritised infringements creating the greatest detriment to consumers;
- **Size effects:** There will be a distribution of firm sizes within the sector, with infringements by larger firms creating larger detriments, both because of their greater output and because of less competitive constraint from other firms within the sector.

If, for a moment, we ignore the selection bias effect, our harm model assumes that detriment is approximately linear in the revenue of the infringers. Therefore, we take into account size effects (subject to earlier caveats that this could well underestimate harm from infringing firms with greater market share). Given this, we can estimate the benefit of the deterrence effect as:

$$\Delta_i \left(\rho + \frac{\Delta_i}{2m_i} \right) \frac{1}{r - g_i + \alpha_i} R_i$$

where:

- Δ_i is the proportionate price increase due to the infringement in that sector (for core sectors) or the corresponding core (for adjacent sectors, so we are assuming adjacent sectors are similar to their corresponding core);
- g_i is the revenue growth rate for that sector (assumed to be zero in the absence of evidence to the contrary);
- α_i is the rate at which infringements are assumed to collapse even without the effect of awareness of the CA98 case;
- m_i is the gross margin of infringers in that sector;
- s ranges over the turnover categories, so we are summing total turnover of the firms who changed behaviour. (This should be turnover within the relevant sector, which may raise measurement issues for multi-product firms.)
- ρ is the weight given to excess profits in our detriment estimate (we report the cases of $\rho = 0, 1$).

Notice that because we are assuming that detriment is linear in turnover, we do not need to make any particular assumptions about how infringement might work within the sector (i.e. whether there is

one group of infringers who can set a coordinated price or some other arrangement).

Correcting for selection bias

This approach does not correct for selection bias arising from the CMA choosing which CA98 cases to pursue. To the extent that size effects are relevant – i.e. larger firms that infringe create greater detriment – then we have already corrected for this. However, we have not so far accounted for selection effects conditional on size (i.e. that worse infringements will tend to be selected for enquiry, even at a given turnover level).

Making a correction for the selection effect requires some assumptions about how the size of detriment from infringements might be distributed. In the absence of any specific information, assume that detriments (conditional on size) are log-normally distributed. (This corresponds to there being many independent multiplicative factors involved in determining the size of the detriment, with these factors being averaged and the law of large numbers applying.)

Suppose that the underlying normal distribution has mean 0 (we can assume this as a unit normalisation with no loss of generality) and variance σ^2 . Then a log-normal random variable X has:

- Mean given by $E[X] = \exp\left(\frac{\sigma^2}{2}\right)$;
- Conditional mean, conditional on being above some level $\exp(a)$ given by

$$E[X | X \geq \exp(a)] = \exp\left(\frac{\sigma^2}{2}\right) \frac{\Phi\left(\frac{\sigma^2 - a}{\sigma}\right)}{\Phi\left(-\frac{a}{\sigma}\right)}$$

where Φ is the cumulative distribution function of a standard Normal distribution.

Assume that the CMA only pursued CA98 cases where the detriment is above the unconditional mean. The mean of the *observed* detriments (conditional on size) would be censored and be equal to

$$E\left[X | X \geq \exp\left(\frac{\sigma^2}{2}\right)\right] = \exp\left(\frac{\sigma^2}{2}\right) \frac{\Phi\left(\frac{\sigma}{2}\right)}{\Phi\left(-\frac{\sigma}{2}\right)}$$

Therefore, to correct for censorship under these assumptions, we need to multiple the observed mean of the sampled detriments by a factor

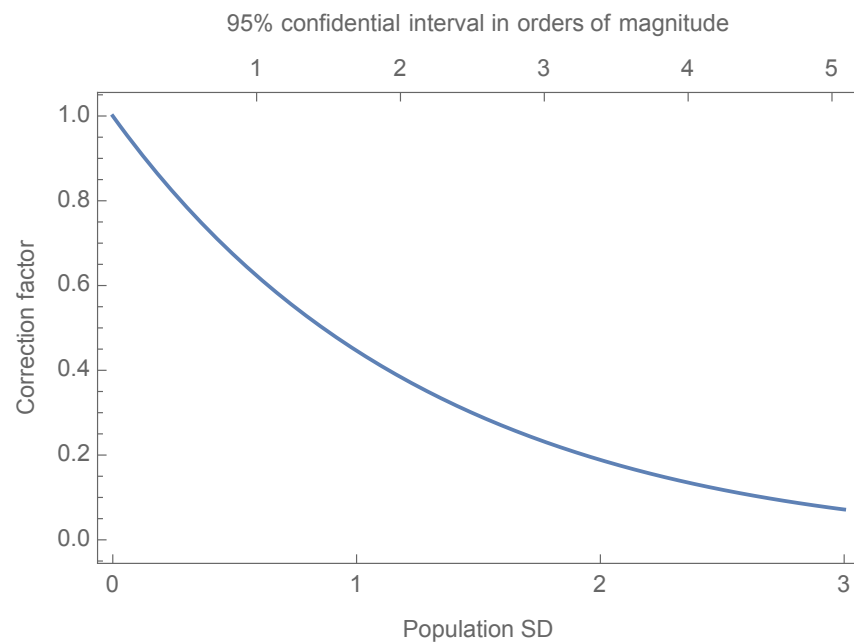
$$F = \frac{\Phi\left(-\frac{\sigma}{2}\right)}{\Phi\left(\frac{\sigma}{2}\right)} < 1$$

We will come back to the question of what the impact might be of the CMA being more or less selective in intervening below, where we investigate the impact of alternative assumptions.

In order to provide some better intuition about the scale of this selection effect, we can interpret the population standard deviation σ in the following way. Conditional on turnover, we are assuming that, after normalising, detriments are distributed as $\exp(X)$ where $X \sim N(0, \sigma^2)$. Therefore, a 95% confidence interval is $[\exp(-1.96\sigma), \exp(1.96\sigma)]$, which covers $\frac{2 \times 1.96\sigma}{\log(10)} \cong 1.7\sigma$ orders of magnitude. Turning this around, for a 95% confidence interval for detriments to span n orders of magnitude, the population standard deviation is $\sigma \cong 0.59n$.

Figure 11 below shows the relationship between the population standard deviation σ (or equivalently the number of orders of magnitude spanned by the 95% confidence interval for the detriments) and the correction factor F . By way of example, if 95% of detriments are spread over 2 orders of magnitude, then the estimated population mean is 38.6% of the sample mean.

Figure 11: Correction factor given standard deviation of detriments



We can roughly estimate the parameter σ from our estimated detriments from the case studies relative to the turnover of the infringers. However, this is a very small sample, so our approach to correcting this selection bias – notwithstanding the assumptions made above – is not particularly robust. However, it suffices to demonstrate that there is reasonable methodology available to develop such estimates.

If we assume that the calculation of detriment in each case study makes the same assumptions about revenue growth (g) and the rate

at which infringements are assumed to collapse (α), when we have that differences in the scale of detriment relative to revenue of the infringers is given by

$$\frac{L_i}{R_i} = \Delta_i \left(\rho + \frac{\Delta_i}{2m_i} \right)$$

Let \hat{s}^2 be sample variance of $\log\left(\frac{L_i}{R_i}\right)$ across the sampled cases. We assume that the logarithms of the detriments are normally distributed with population variance σ^2 and mean μ , but values below $\mu + \sigma^2/2$ are censored due to the (assumed) sampling process. We cannot use \hat{s}^2 as an estimate of σ^2 due to censorship, but given the stated assumptions we can create an estimator by calculating the bias created by the censorship.

For a normally distributed variable Z with mean μ and variance σ^2 , it can be shown that

$$\text{var}[Z \mid Z \geq \sigma a + \mu] = \sigma^2 \left[1 + \frac{a\phi(a)}{1 - \Phi(a)} - \left(\frac{\phi(a)}{1 - \Phi(a)} \right)^2 \right]$$

where ϕ is the standard Normal density function. Our cut-off point for censoring (i.e. the detriment conditional on size is above the mean value) corresponds to taking $a = \sigma/2$. This is because the mean of the lognormally distributed variable $\exp(Z)$ is $\exp(\mu + \frac{\sigma^2}{2})$.

Therefore, if we have a censored sample variance \hat{s}^2 , this can be used to reconstruct an estimate of the population variance σ^2 using the relationship

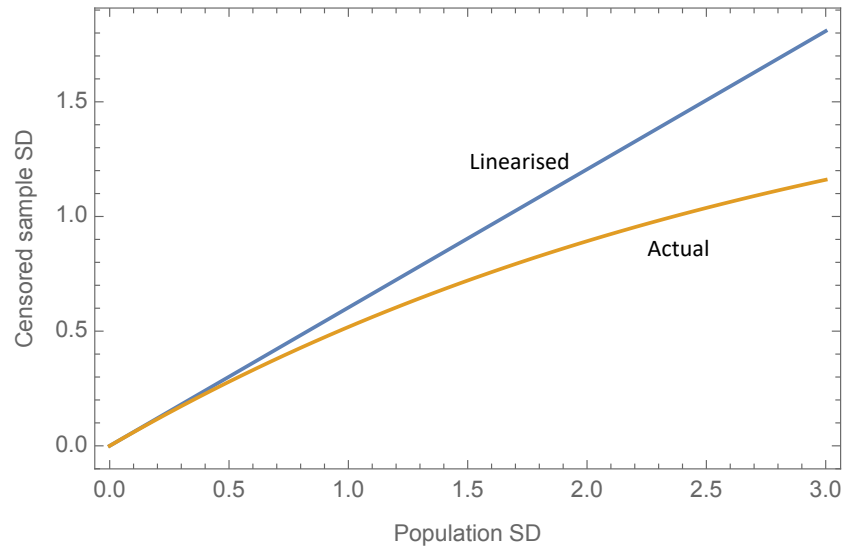
$$\hat{s}^2 = \sigma^2 \left[1 + \frac{\frac{\sigma}{2}\phi\left(\frac{\sigma}{2}\right)}{1 - \Phi\left(\frac{\sigma}{2}\right)} - \left(\frac{\phi\left(\frac{\sigma}{2}\right)}{1 - \Phi\left(\frac{\sigma}{2}\right)} \right)^2 \right]$$

There is no closed form expression for σ in terms of the sample variance \hat{s}^2 , but for small variances we can approximate this relationship by linearising it

$$\hat{s}^2 = \sigma^2 \left(1 - \frac{2}{\pi} \right)$$

This is a reasonable approximation for small σ , but tends to underestimate the population variance for larger σ , as shown below. From the detriments estimated for our four case studies, we have that $\hat{s}^2 = 0.56$, which implies $\sigma^2 \cong 1.55$. This implies a correction factor of $F = 0.36$. Therefore, we need to downrate our impacts to roughly one-third to account for censorship effects.

Figure 12: Relationship between censored and sample standard deviations



What if the CMA were more or less selective in pursuing cases according to the scale of detriment? We can generalise the approach and by supposing that the CMA pursues cases where the detriment is λ times the mean detriment (conditional on the size of the firm). The analysis above corresponds to the particular case of $\lambda = 1$.

In the more general case, the correction factor used to downrate the observed mean of the sampled detriments becomes

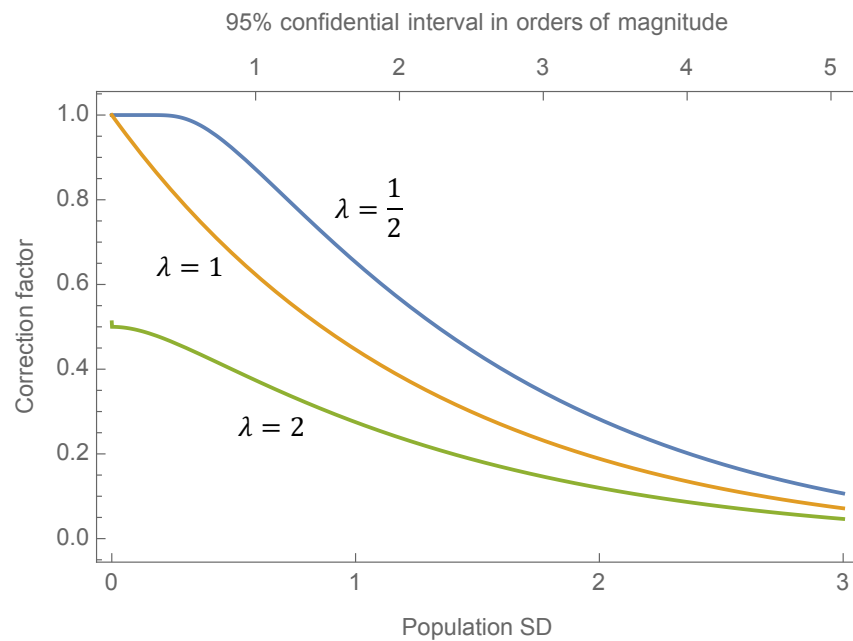
$$F = \frac{\Phi\left(-\frac{\sigma}{2} - \frac{\log \lambda}{\sigma}\right)}{\Phi\left(\frac{\sigma}{2} - \frac{\log \lambda}{\sigma}\right)}$$

and the relationship between the observed sample variance \hat{s}^2 of the detriment (per unit of revenue) and its population variance σ^2

$$\hat{s}^2 = \sigma^2 \left[1 + \frac{\left(\frac{\sigma}{2} + \frac{\log \lambda}{\sigma}\right) \phi\left(\frac{\sigma}{2} + \frac{\log \lambda}{\sigma}\right)}{1 - \Phi\left(\frac{\sigma}{2} + \frac{\log \lambda}{\sigma}\right)} - \left(\frac{\phi\left(\frac{\sigma}{2} + \frac{\log \lambda}{\sigma}\right)}{1 - \Phi\left(\frac{\sigma}{2} + \frac{\log \lambda}{\sigma}\right)}\right)^2 \right]$$

The correction factor F is shown in Figure 13 below for three widely different assumptions about the selectivity of the CMA in pursuing cases. The central assumption ($\lambda = 1$) corresponds to our analysis above, where we assume that only cases with detriments above the mean are pursued. Alternative cases involve the CMA being less selective ($\lambda = \frac{1}{2}$, pursuing cases with detriments above 50% of the mean) or more selective ($\lambda = 2$, pursuing cases with detriments above 200% of the mean). As expected, a less selective approach reduces the censorship effect and so the correction factor is closer to 1 (i.e. the sample mean needs to be downrated less).

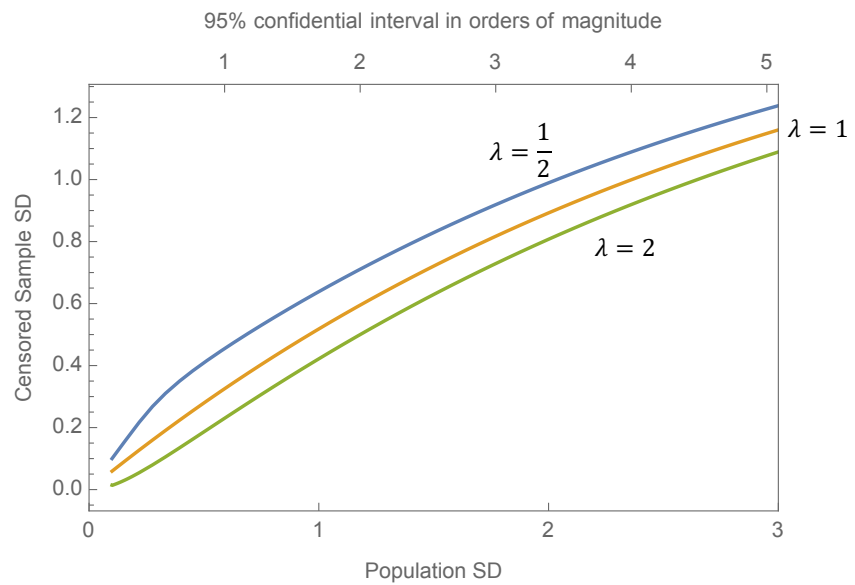
Figure 13: Correction factor for different selectivity assumptions



Assumptions about selectivity have a strong effect on the correction factor if the detriments have low variability. However, as the detriments become more variable across cases, the correction factor becomes much less sensitive to assumptions about degree of selectivity in picking cases. It can be seen that a correction factor of around one-half to one-third is plausible for a wide range of plausible scenarios.

Alternative selectivity assumptions also affect the relationship between observed sample standard deviation of detriments and the population standard deviation, as shown in Figure 14 below. If the CMA is more selective, the sample standard deviation tends to be lower due to censorship effects.

Figure 14: Sample standard deviation for different selectivity assumptions



Taking our estimated detriments from the four case studies, if we assumed that the CMA were less selective in choosing which cases to pursue, say taking any case that (conditional on turnover) had a detriment of at least 50% of the mean, then the correction factor for censorship biases would increase to around one-half, as compared with around one-third under our original assumptions.

Annex B Survey methodology

IFF Research obtained businesses views on both awareness and deterrent impacts from 100 businesses in the specific sector to which each case relates (the core sample), resulting in a total of 400 businesses. IFF also conducted a further 200 interviews with business from other, related sectors i.e. 50 businesses from an adjacent sector for each case (the adjacent sample).

The reason for including adjacent sectors in addition to the core sample, is because looking at the deterrent effect only in the particular sector/market of the original case may miss the full deterrence effect. It is entirely possible (if not expected) that a major competition act case would have a deterrent effect across a wider range of industries.

We emphasise that these broader interviews were not intended to pre-empt any future comprehensive research by the CMA about deterrent effects at large. Rather, we would be looking for evidence of spill over impacts from those sectors selected for case studies into other sectors. We focussed on stakeholders in related sectors such as those closely linked to the original sector, with more detail on the selection of adjacent sectors chosen for each provided below.

B.1 Sampling

IFF used the Market Location¹⁷⁶ business database to source relevant businesses for this research. While there was not always a perfect match between standard industrial classifications and the requirements of each case, Market Location also use a 'Market Sector' breakdown which allowed us to reach a more granular level of classification to get relevant samples for our survey and reduce the amount of screening necessary at the start of the survey.

To ensure a sufficient sample to achieve the interview allocation, a random sample was drawn from the Market Location database with the aim of achieve a 15:1 ratio, to ensure a suitable spread by business size, and region. Therefore, with a view to achieving 100 interviews within each case, and a further 200 interviews among businesses outside of the chosen sectors, IFF sought to sample a total of 7,500 businesses (1,500 in each of three cases, and 3,000 among additional businesses).

For each contact IFF obtained the following information from the Market Location database:

- Name of organisation;

¹⁷⁶ Market Location is the largest commercially available database of UK businesses containing over 98% of all trading companies in the UK.

- Address;
- Telephone number;
- Number of employees;
- Market Sector;
- SIC code; and
- Region.

B.2 Selection of adjacent sectors

There are many potential ways in which adjacency might be defined. However, our approach is based on looking for likely information flows and relevance of the core case to the sector.

The adjacent sectors were chosen based on two criteria:

- by considering the reach of the follow-up work by the CMA and the partner organisations to determine those sectors we think may have become aware of the case;
- within those sectors, those where the market structure is similar enough that we might expect there to be scope for similar infringement behaviour to that in the case.

Information flows might well be broader, but our priority was to see if we could even detect the effects of such information flows at all, rather than to characterise them fully. The sectors used are shown in Table 1 with our reasoning provided below.

Table 29: Core and adjacent sectors

Core sector	Adjacent sector(s)
Estate Agents	Building surveyors; Surveyors and valuers
Light Fittings ¹⁷⁷	Electrical wholesalers
Bathroom fittings ¹⁷⁸	Kitchen furniture manufacturers Kitchenware
Mobility scooters	Disability equipment manufacturers and suppliers

¹⁷⁷ Includes following sectors: Chandeliers Manufacture and Supply; Lampshade Manufacturers; Lighting Contractors; Lighting Equipment Manufacturers of Lighting Retailers; Lighting Wholesale and Supply

¹⁷⁸ Includes following sectors: Bathroom Fixtures and Fittings; Bathroom Fixtures and Fittings – Manufacturers; Shower-Baths Manufacturers and Suppliers

Estate agents

For the Estate agents case the CMA began follow-up compliance work in June 2015. This included:

- sending warning letters to several agents where there were reasonable grounds to suspect they had entered into similar agreements;
- publishing open letters to the property¹⁷⁹ and newspaper¹⁸⁰ industries, providing the details and consequences of this case as well as providing general guidance on regulation;
- publishing a case study that again described the infringement and its consequences, as well as lessons learned from the case¹⁸¹; and
- holding conversations with partners such as the Property Ombudsman, who subsequently issued guidance to estate agents regarding competition law in October 2015¹⁸².
- a variety of associations also sent out open letters, links and updates to their members¹⁸³.

The case was also widely covered in the press and on social media, including large publications such as the Financial Times, specialist property press and online blogs of various accountancy and legal firms.

Furthermore, we considered the following characteristics of the market that might have facilitated the infringement behaviour at the source of this case we consider the following:

- two-sided market;
- business to customer relationship;
- fee based services;
- advertising in local newspapers;
- relatively low barriers to entry;
- some asymmetry of information regarding the quality of service customers will actually get;

¹⁷⁹ CMA, "Letter from the CMA to estate and lettings agents on competition law", 3 June 2015. Available at: <https://www.gov.uk/government/publications/letter-from-the-cma-to-estate-and-lettings-agents-on-competition-law>

¹⁸⁰ CMA, "Letter from the CMA to newspaper publishers on competition law", 3 June 2015. Available at: <https://www.gov.uk/government/publications/letter-from-the-cma-to-newspaper-publishers-on-competition-law>

¹⁸¹ CMA, "Case study - Advertising of estate agents' fees: competition law lessons", 3 June 2015. Available at: <https://www.gov.uk/government/case-studies/advertising-of-estate-agents-fees-competition-law-lessons>

¹⁸² The Property Ombudsman press release, 12 October 2015. Available at: <https://www.tpos.co.uk/news-media-and-press-releases/press-releases/item/the-property-ombudsman-issues-guidance-note-to-agents-on-compliance-with-competition-law>

¹⁸³ Including National Association of Estate Agents, News Media Association, British Property Federation, Property Redress Scheme, Royal Institute of Chartered Surveyors, Negotiator Conference, Designs on Property and Independent Network of Estate Agents.

- relatively low scope for continuous, repeated use.

Given these market characteristics and that most of the follow-on work and partner activity was focussed on the property sector, we considered that **property surveyors** would be a suitable adjacent sector, as they deal closely with issues that are relevant to estate agents, and also because the Royal Institution of Chartered Surveyors (RICS) covered the CMA's decision in this case in one of its news updates and therefore there is an easily identifiable transmission mechanism present.

This category was made up of "**building surveyors**" and "**surveyors and valuers**" from the Market Location business database.

Mobility Scooters

The investigations into Roma and Pride's activities did not come about as a result of a direct complaint, but rather as a consequence of a more general market review. This review found several areas of concern in the mobility aids industry separate from Roma and Pride's infringements. Therefore, the OFT's compliance work around the topic was more general rather than targeted to the specific cases. The follow-on work included:

- publishing briefing notes regarding the study findings and enforcement targeted at manufacturers and retailers, consumers, and carers;
- working closely with another mobility aids company, Acorn Mobility Services Limited, to update its terms and conditions in line with unfair contract terms legislation, and internal process to improve customer care¹⁸⁴;
- working with Trading Standards Services (TSS) to share expertise, the OFT secured court orders against Optimum Care Mobility Limited to prevent the company and former directors from using "*unfair and misleading sales practices*"¹⁸⁵ in the future, after it was found that the company engaged in excessively aggressive and untruthful in its doorstep sales

¹⁸⁴ OFT, "Investigations into unfair practices in the mobility aids sector", February 2012. Available at: <http://webarchive.nationalarchives.gov.uk/20140402155507/http://oft.gov.uk/OFTwork/consumer-enforcement/consumer-enforcement-completed/mobility-aids-market/>

¹⁸⁵ OFT, "OFT secures court orders against mobility aids company and directors", 12 July 2012. Available at: <http://webarchive.nationalarchives.gov.uk/20140402171133/http://oft.gov.uk/news-and-updates/press/2012/61-12>

(footnote continued)

tactics. The company entered voluntary liquidation in February 2012¹⁸⁶;

- revoking the consumer credit licences of certain mobility aids traders who engaged in high pressure sales techniques¹⁸⁷;
- started a doorstep selling campaign to improve consumers' awareness of inappropriate selling practices and provide practical advice to buyers¹⁸⁸; and
- in March 2013, sent out a warning letter to several companies in the sector to warn of the unlawfulness of restricting advertising¹⁸⁹.

In thinking about the characteristics of the market that facilitated the infringement behaviour at the source of this case we considered the following:

- products are sold and advertised both online and bricks-and-mortar retail;
- suppliers sell items to customers via multiple resellers;
- buyers tend to be first-time buyers so may have limited information about price points and quality;
- items are large, costly and made infrequently;
- customers may require some specialist advice when choosing their product.

Based on the above, and the business counts from Market Location we selected the category "**Disability Equipment (Manufacturers and Suppliers)**" for our adjacent sector for this case, as there are similarities in the nature of the market and it is likely that the follow-up awareness activity of the CMA would have reached players in this sector.

Bathroom fittings and light fittings

In addition to the bathroom fittings and light fittings case, the CMA also published a decision regarding online resale price maintenance practices in the commercial catering equipment sector. These three cases together have formed the basis for the CMA to inform businesses and the public about law regarding RPM and about the

¹⁸⁶ OFT, "Investigation into Optimum Care Mobility Limited under Part 8 of the Enterprise Act 2002", July 2012. Available at: <http://webarchive.nationalarchives.gov.uk/20140402211649/http://www.of.gov.uk/OFTwork/consumer-enforcement/consumer-enforcement-completed/mobility-aids/>

¹⁸⁷ OFT, "OFT takes action in mobility aids sector", 3 February 2012. Available at: <http://webarchive.nationalarchives.gov.uk/20140402170545/http://oft.gov.uk/news-and-updates/press/2012/05-12>

¹⁸⁸ OFT, "OFT takes action in mobility aids sector", 3 February 2012

¹⁸⁹ CMA, "CMA removes immunity from fines for mobility scooter supplier", 23 August 2017. Available at: <https://www.gov.uk/government/news/cma-removes-immunity-from-fines-for-mobility-scooter-supplier>

(footnote continued)

Authority's work. The CMA has published several documents for informational purposes:

- *Resale Price Maintenance: Advice for Retailers*¹⁹⁰ – a very short guide explaining what RPM is and how to tell what behaviours are unlawful;
- *Restricting Resale Prices: an Open Letter to Suppliers and Resellers*¹⁹¹ – offering more detailed advice for businesses and describing the light fittings case study, illustrating what might be classified as RPM and mentioning the applied penalty; and
- *Suppliers Telling Retailers what to Charge*¹⁹², an animated video with the most concise content out of these three pieces.

In addition, in the bathroom fittings case there was partner activity with organisations such as the Forum of Private Business, British Independent Retailers Association, The Federation of Small Businesses, and some catering businesses (through the link with the commercial catering equipment case) such as Catering Equipment Distributors Association. There was also material in the press (again, slightly more biased towards the catering and kitchen market, with some joint publications such as Kitchen & Bathroom Business¹⁹³).

The light fittings case also involved partner activity with a number of the same trade associations (such as the Forum of Private Business, Federation of small businesses etc) and on some catering equipment suppliers associations. In addition to business events (such as the Electrical Distributors Association's business forum in Bristol), other industry events or partner activity included publications or newsletter updates from "The Cosmetic, Toiletry and Perfumery Association", the "British Watch and Clock Maker's Guild", "The Bicycle Association" and in press (e.g. Kitchen & Bathroom Business¹⁹⁴).

Although there are a few different sectors that might have heard about these cases (e.g. those in the bicycle association or Watch and Clock Makers Guild) we sought to focus on household products including those who might be both aware and susceptible to such infringement might involve other "home ware" style wholesalers who

¹⁹⁰ Available at:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/529969/RPM_60SS.pdf

¹⁹¹ Available at:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/620454/resale-price-maintenance-open-letter.pdf

¹⁹² Available at: <https://www.youtube.com/watch?v=hObZs6m2jhw>

¹⁹³ Kitchen & Bathroom Business, "We'll Fine Bathroom Retailers Too," Warns CMA', 10 May 2016, available at: <http://www.kbbreview.com/news/well-fine-you-too-cma-warns-bathroom-dealers/>

¹⁹⁴ Kitchen & Bathroom Business, "CMA Fines Lighting Supplier £2.7m", 20 June 2017, available at: <http://www.kbbreview.com/news/cma-fines-lighting-supplier-2-7m/>

might have multiple retailers selling their product and who might have heard about the case through the above information channels.

Specifically, we chose “**Electrical wholesalers**” for the light fittings case and “**Kitchen furniture manufacturing**” and “**Kitchenware**” the bathroom fittings case”

B.3 Survey design

Following screening and firmographics questions, the survey was split into four main sections:

- awareness of competition law;
- awareness of specific case;
- deterrent impact; and
- awareness of other case;

Awareness of competition law

For awareness of competition law, we included a sub-set of questions from a wider survey conducted by the CMA (but yet to be published) that sought responses from 1,200 interviews with private sector businesses from all sectors and across all regions of the UK (the baseline sample). Both the core sample and the adjacent sample were asked these questions in our survey. This allowed for an assessment of whether awareness of competition law is significantly better in sectors where a CA98 case took place, relative to baseline levels (by comparing our findings with the results from the parallel survey).

Awareness of the specific case

We asked all respondents (core and adjacent) questions about their awareness of the specific case that took place in their sector (or closely related sector, in the case of the adjacent sample). We also sought to gather information on how people became aware.

Deterrent impact

The questions around deterrent impacts were put to both core and adjacent samples and were designed to assess whether following the intervention:

- there has been any change to the perception of the risk of being caught for a CA98 infringement;
- firms have stopped or significantly modified any agreements or commercial initiatives in order to comply with competition law; and
- firms have put preventative/compliance measures in place.

We also sought to understand the reasoning behind any changes (or lack of changes) to behaviour.

Awareness of other cases

We asked all respondents if they were aware of any enforcement action taken by the competition authority in response to anti-competitive behaviour that has occurred in *any* other industries. Furthermore, the light-fittings and bathroom-fittings cases, where there is a similar type of infringement behaviour and where the CMA did joint awareness raising work, we include a small number of

questions for core respondents in each of these two cases to test cross-sector awareness of the other case.

The full survey is included in Annex C

B.4 Survey Outcomes

The fieldwork for the survey was undertaken between 8th January and 5th February 2018, involving 601 telephone interviews using computer-assisted telephone interviewing (CATI) software.

The survey was piloted at the start of fieldwork among 26 businesses, to test respondents' engagement with and understanding of the survey questions. Only a handful of minor amends were made to the questionnaire as a result.

The average interview length was 18 minutes 27 seconds.

Table 30 below shows the breakdown of respondents by industry.

Table 30: Achieved interviews by industry

Industry	Achieved	Target
Estate Agents	100	100
Building Surveyors	27	50
Surveyors and Valuers	23	
Light fittings	100	100
Electrical Wholesalers	50	50
Bathroom fittings	100	100
Kitchen Furniture Manufacturers	31	50
Kitchenware	20	
Mobility equipment	90	100
Electric Vehicles	10	
Disability Equipment (Manufacturers and Suppliers)	50	50
TOTAL	601	600

The survey achieved an overall response rate of 48 per cent¹⁹⁵. Table 31 breaks down the fieldwork outcomes and response rates by case.

¹⁹⁵ This is calculated by the number of completes (601) as a proportion of the total complete contacts (1,256).

The response rate was calculated as the number of achieved interviews as a proportion of 'total complete contacts', where a final outcome was reached with the establishment (this includes those respondents who completed the interview, refused to take part or quit during the interview).

Table 31: Fieldwork outcomes by case

	Estate Agents	Light fittings	Bathroom fittings	Mobility scooters	Total
Starting sample	2,221	2,115	1,439	1,321	7,096
Unobtainable / invalid numbers	110	88	96	106	400
Ineligible (e.g. sole trader, incorrect industry)	26	18	23	67	134
Unavailable during fieldwork / ongoing contact	1,666	1,579	704	778	4,727
Quota full	134	122	275	48	579
Total complete contacts	285	308	341	322	1,256
Refused	108	129	153	138	528
Company policy refusal	27	29	37	34	127
Complete	150	150	151	150	601
% Complete of total complete contacts¹⁹⁶	53%	49%	44%	47%	48%

Overall respondents were easy to recruit and seemed engaged with the research topic. Interviews were conducted with the person in the company with responsibility for sales. Commonly this was the sales or commercial director in larger businesses and the managing director or equivalent for smaller businesses.

The quality of answers was generally positive, with some good levels of verbatim captured across a number of open-ended questions. The level of 'Don't know' responses rarely reached above 10%, however, there was a relatively high number at B4, B6, C3 and D12, which is inevitable given the nature of the questions (please see Table 1.3).

¹⁹⁶ The number of completes as a proportion of total complete contacts. Total complete contacts is the starting sample minus any that screened out due to being unobtainable, ineligible, unavailable during fieldwork, or where the quota was full.

This demonstrates that respondents were willing to admit they were unsure, rather than trying to guess the correct answer.

Table 32: Level of 'Don't Know' responses

Question	Proportion of 'Don't know' responses
B4_1. Under UK Competition Law rules, do you think it is true, false or are you unsure that: It is unlawful to set the price at which others can resell your products	24%
B4_2. Under UK Competition Law rules, do you think it is true, false or are you unsure that: If you supply products to other businesses to sell on to their own customers, it's OK to stop them	30%
B4_3. Under UK Competition Law rules, do you think it is true, false or are you unsure that: It can be illegal to agree with your competitors to restrict how or where you advertise your prices	17%
B4_4. Under UK Competition Law rules, do you think it is true, false or are you unsure that: It can be illegal if a supplier of yours doesn't allow you to sell or advertise their product online	34%
B4_5. Under UK Competition Law rules, do you think it is true, false or are you unsure that: It is ok to let a supplier control the price at which you resell their product	20%
B6. Could you briefly outline what the sanctions for non-compliance with Competition Law are?	48%
C3. Where might you expect to find information about enforcement action taken against anti-competitive behaviour?	19%
D12. Other changes in your industry that have occurred as a result of the enforcement action	28%

Annex C Survey questions

The full survey is included below.

Evaluation of Recent CA98 Competition Cases Questionnaire

J5874

Telephone

Quota category	Number of interviews to achieve
Estate agents (INDUSTRY=1)	100
Surveyors (INDUSTRY=2/3)	50
Light fittings (INDUSTRY=4)	100
Electrical Wholesalers (INDUSTRY=5)	50
Bathroom fittings (INDUSTRY=6)	100
Kitchen manufacturers (INDUSTRY=7/8)	50
Mobility scooters (INDUSTRY=9/10)	100
Disability Equipment (INDUSTRY=11)	50

SAMPLE VARIABLES USED IN SURVEY

- Samtype
 - 1: Core sector
 - 2: Adjacent sector
- Case (incls. Both samtypes):
 - 1: Estate Agents
 - 2: Light fittings
 - 3: Bathroom fittings
 - 4: Mobility scooters
- Industry:
 - 1: Estate Agents
 - 2: Building Surveyors
 - 3: Surveyors and Valuers
 - 4: Light fittings
 - 5: Electrical Wholesalers
 - 6: Bathroom fittings
 - 7: Kitchen Furniture Manufacturers
 - 8: Kitchenware
 - 9: Mobility equipment
 - 10: Electric Vehicles
 - 11: Disability Equipment (Manufacturers and Suppliers)
- Business Size
- Year of infringement case
- Company name

S Screener

ASK ALL

- S1 **Good morning / afternoon. My name is NAME and I'm calling from IFF Research. Can I just check, is this [COMPANY NAME FROM SAMPLE]?**

SINGLE CODE.

Yes – correct	1	CONTINUE
No – company name wrong	2	TAKE CORRECT COMPANY NAME AND CONTINUE
Hard appointment	3	MAKE APPOINTMENT
Soft appointment	4	
Engaged	5	CLOSE
Fax Line	6	
No reply / Answer phone	7	
Residential Number	8	
Dead line	9	
Refusal	10	
Refusal – company policy	11	
Refusal – taken part in recent survey	12	
Company closed	13	

ASK ALL

S2 **We are currently conducting an important study for the Competition and Markets Authority exploring how businesses understand and respond to competition law.**

IF MICRO OR SMALL COMPANY (SIZE=1/2): **Please can I speak to the most senior person with overall responsibility for sales within your business?**

IF MEDIUM OR LARGE COMPANY (SIZE=3/4): **Please can I speak to a senior person in the business with responsibility for sales?**

ADD IF NECESSARY: **This may be the Owner, Managing Director, Commercial or Sales Director**

ADD IF NECESSARY: **The Competition and Markets Authority (otherwise known as the CMA) is the UK's primary competition and consumer authority, and is responsible for making sure that markets work well for consumers, businesses and the economy.**

SINGLE CODE.

Transferred	1	CONTINUE
Hard appointment	2	MAKE APPOINTMENT
Soft Appointment	3	
Refusal	4	CLOSE
Refusal – company policy	5	
Refusal – Taken part in recent survey	6	
Nobody at site able to answer questions	7	
Not available in deadline	8	
Show reassurances	9	GO TO REASSURANCE PAGE

ASK ALL

S3 **Good morning / afternoon, my name is NAME, calling from IFF Research, an independent market research company. We're currently conducting an important study for the Competition and Markets Authority exploring how businesses understand and respond to competition law. The objective of the study is to evaluate the impact of recent Competition Act 1998 cases, with regard to direct and indirect effect.**

The interview will take up to 15 minutes to complete, but we can always begin now, see how far we get, and if you need to go at any point, we can easily set an appointment to call back.

ADD IF NECESSARY: The Competition and Markets Authority (otherwise known as the CMA) is the UK's primary competition and consumer authority, and is responsible for making sure that markets work well for consumers, businesses and the economy.

ALL:

Please note that all data will be reported anonymously and your answers will not be reported to our client in any way that would allow you to be identified.

Would it be OK to continue with this now?

Continue	1	CONTINUE
Referred to someone else at establishment NAME_____	2	TRANSFER AND RE-INTRODUCE
JOB TITLE_____		
Hard appointment	3	MAKE APPOINTMENT
Soft appointment	4	
Refusal	5	THANK AND CLOSE
Refusal – company policy	6	
Refusal – taken part in recent survey	7	
Not available in deadline	8	
Show reassurances	9	GO TO REASSURANCE PAGE
Wants reassurance email	10	Collect email address and arrange appointment DS: Send automatic email

ASK ALL

REASSURANCES TO USE IF NECESSARY

The interview will take around 15 minutes to complete.

Please note that all data will be reported in aggregate form and your answers will not be reported to our client in any way that would allow you to be identified.

If respondent wishes to confirm validity of survey or get more information about aims and objectives, they can call:

- **MRS: Market Research Society on 0800 975 9596**
- **IFF: Sam Whittaker on 0207 250 3035**
- **CMA: General Enquiries team on 020 3738 6000**
- **CMA: Gordon Wai on 020 3738 6549**

S4 This call may be recorded for quality and training purposes only.

A Firmographics (I)

ASK ALL

- A1 **According to the classification we have for you, we understand that your company**
 [IF INDUSTRY=1 (ESTATE AGENTS): **is an estate agent.**]
 [IF INDUSTRY=2/3 (SURVEYORS): **is involved in surveying.**]
 [IF INDUSTRY=4 (LIGHT FITTINGS): **sells or manufactures light fittings.**]
 [IF INDUSTRY=5 (ELECTRICAL WHOLESALERS): **could be described as an Electrical Wholesaler.**]
 [IF INDUSTRY=6 (BATHROOM FITTINGS): **sells or manufactures bathroom fittings.**]
 [IF INDUSTRY=7 (KITCHEN FURNITURE MANUFACTURERS): **manufactures kitchen furniture.**]
 [IF INDUSTRY=8 (KITCHENWARE): **is involved in the manufacture, supply and/or retail of kitchenware such as cooking and catering equipment.**]
 [IF INDUSTRY=9/10 (MOBILITY SCOOTERS): **sells mobility scooters.**]
 [IF INDUSTRY=11 (DISABILITY EQUIPMENT): **manufactures disability equipment.**]

Is this correct?

SINGLE CODE.

Yes	1	CONTINUE
No	2	THANK AND CLOSE

ASK ALL

- A2 **How many employees does your company currently employ across all sites in the UK, excluding owners and partners?**
- PLEASE DO NOT INCLUDE TEMPORARIES/CASUALS OR AGENCY STAFF
 - INCLUDE FULL AND PART TIME EMPLOYEES
 - EXCLUDE SELF-EMPLOYED
 - EXCLUDE OWNERS/PARTNERS, BUT OTHER DIRECTORS COUNT AS EMPLOYEES

WRITE IN [DS AUTOMATICALLY FORCE TO A2RAN RANGE]		
Don't know	1	PROMPT WITH RANGES AT A2RAN
Refused	2	THANK AND CLOSE
None - Sole Trader	3	

IF DON'T KNOW EXACT NUMBER AT A2 PROMPT WITH RANGES. OTHERWISE INTERVIEWER TO CODE TO RANGE

A2RAN **Is it approximately...?**

1	1	Micro (1-9)
2-4	2	

5-9	3	
10-24	4	Small (10-49)
25-49	5	
50-99	6	Medium (50-249)
100-249	7	
250+	8	Large (250+)
Don't know	9	
Refused	10	THANK AND CLOSE
None – Sole Trader	11	

ASK ALL

- A3 **Do you primarily sell your goods or services to businesses or consumers, or both?**
SINGLE CODE.

Other businesses	1
Consumers	2
A bit of both	3
Don't know	4

IF INDUSTRY = MOBILITY SCOOTERS, LIGHT FITTING OR BATHROOM FITTINGS
(INDUSTRY=4-11)

- A4 **Do you sell your products...?**

READ OUT. MULTI CODE.

Online on your own website	1
In store	2
By phone	3
Mail order	4
Directly to people's homes	5
Through other retailers	6
Other (Please specify)	7

DNRO SINGLE CODE: Don't know	8
------------------------------	---

ASK ALL

A5 **And does your company predominantly trade at a local level, a regional level, nationally or internationally?**

DO NOT READ OUT. SINGLE CODE

Local	1
Regional	2
National	3
International	4

B Awareness of Competition Law

ASK ALL

- B1 **Now I'd like you to think back to senior level discussions you have had within your company in the last 12 months. In which of the following areas, if any, have you discussed your company's compliance with legal requirements?**

READ OUT. MULTI CODE. DS: RANDOMISE.

ASK ALL

- B2 **And over the last 12 months, has your company run any training sessions about how to comply with any of the following legislation?**

READ OUT. MULTI CODE. DS: RANDOMISE.

	B1	B2
Health and Safety	1	1
Fraud	2	2
Competition Law	3	3
Anti-bribery and corruption	4	4
Employment Law	5	5
Any other areas (PLEASE SPECIFY)	6	6
SINGLE CODE: None of these	7	7
DO NOT READ OUT: Don't know	8	8

ASK ALL

- B3 **Overall, how familiar would you say you are personally with Competition Law? Would you say you know it...?**

READ OUT. SINGLE CODE.

Very well	1
Fairly well	2
Not very well	3
Not at all well	4
Never heard of it / Don't know	5

ASK ALL

B4 **We would now like to ask a few questions about Competition Law. Please tell me for each one whether you think the statement is true, false or whether you are unsure either way.**

ADD IF NECESSARY: Don't worry if you can't answer, as some of the questions may not be relevant to you and your business.

So, under UK Competition Law rules, do you think it is true, false or are you unsure that...
READ OUT. SINGLE CODE FOR EACH STATEMENT. DS: RANDOMISE ORDER

	TRUE	FALSE	DK	REF
It is unlawful to set the price at which others can resell your products.	1	2	3	4
If you supply products to other businesses to sell on to their own customers, it's OK to stop them from advertising online at prices you think are too low	1	2	3	4
It can be illegal to agree with your competitors to restrict how or where you advertise your prices	1	2	3	4
It can be illegal if a supplier of yours doesn't allow you to sell or advertise their product online	1	2	3	4
It is ok to let a supplier control the price at which you resell their product	1	2	3	4

ASK ALL

B5 **And how would you describe your own awareness of the penalties for non-compliance with Competition Law? Would you say your awareness was...?**

READ OUT. SINGLE CODE

Very good	1
Good	2
Fair	3
Poor	4
Very poor	5
DO NOT READ OUT: Don't know	6

ASK ALL

B6 **From your knowledge, could you briefly outline for me what the sanctions for non-compliance with Competition Law are?**

DO NOT READ OUT. MULTICODE

Fines for the company	1
Fines for an individual member of staff	2
Imprisonment	3
Disqualification from membership bodies	4
Agreements or contracts made void	5
Exposure to damages claims (e.g. being sued by disadvantaged companies)	6
Other (Please specify)	7
SINGLE CODE: Don't know	8
SINGLE CODE: Refused	9

C Awareness of specific case

ASK ALL

- C1 [SAMTYPE=1: I'd now like to focus on your specific industry. Firstly, are you aware of any competition law infringement that has taken place in your own industry?]

[SAMTYPE=2: I'd now like to ask you a few questions about some anti-competitive behaviour that recently occurred in an industry close to yours, namely [CASE=1: among estate agents; CASE=2: within the light fitting industry; CASE=3: within the bathroom fitting industry; CASE=4: among businesses selling mobility scooters.] Firstly, are you aware of any competition law infringement that has taken place in this industry?]

SINGLE CODE

Yes	1
No	2

IF AWARE OF COMPETITION LAW INFRINGEMENT THAT TOOK PLACE IN THEIR INDUSTRY (C1=1)

- C2 Can you briefly talk me through what happened?

WRITE IN	
Don't know	1

ASK ALL

- C3 Where might you expect to find information about enforcement action taken against anti-competitive behaviour? Please consider any organisations' websites you might visit in your answer.

DO NOT READ OUT. MULTI CODE.

OFT (Office of Fair Trading)	1
CC (Competition Commission)	2
CMA (Competition and Markets Authority)	3
SFO (Serious Fraud Office)	4
Our own trade association	5
Ofcom	6
Trading Standards	7

Trade publications	8
Local newspapers	9
General / business news	10
Online search engine (e.g. 'Googling')	11
Word of mouth	12
Other (PLEASE SPECIFY)	13
Don't know	14

ASK ALL

C4 I would like to talk about one case in particular that happened recently within [SAMTYPE=1: your; SAMTYPE=2: this] industry.

INTERVIEWER NOTE: PLEASE TAKE CARE READING OUT THE DESCRIPTION.

IF ESTATE AGENT OR RELATED INDUSTRY (CASE=1): In May 2015, the CMA found that an association of Hampshire estate and lettings agents and a local newspaper publisher broke competition law between July 2005 and January 2014. Members of the association agreed not to mention fees or discounts in their advertisements in the newspaper, and also agreed with the newspaper to block advertisement of fees or discounts by non-member agencies.

These agreements had reduced competitive pressure on fees in the local area and limited consumers' choice. The CMA issued fines of £735,000.

IF LIGHT FITTING OR RELATED INDUSTRY (CASE=2): In May 2017, the CMA fined The National Lighting Company and its subsidiaries Saxby Lighting, Endon Lighting and Poole Lighting for breaking competition law by enforcing a minimum price for its products for its online resellers and often refused to take orders from those resellers who sold goods below that price.

This kind of illegal practice, known as resale price maintenance, or RPM, means customers miss out on the best possible prices. The CMA issued fines of over £2.7m.

IF BATHROOM FITTING OR RELATED INDUSTRY (CASE=3): In May 2016, the CMA found that Ultra Finishing Limited – a bathroom fittings company - broke competition law by enforcing a minimum price for its products for its online resellers.

This kind of illegal practice, known as resale price maintenance, or RPM, means customers miss out on the best possible prices. The CMA issued fines of over £750,000.

IF MOBILITY SCOOTER OR RELATED INDUSTRY (CASE=4): In August 2013 and March 2014, Roma Medical Aids Limited and Pride Mobility Products Limited (two suppliers of mobility scooters), and some of their retailers broke competition law.

These companies had agreements that prevented online advertising below recommended retail prices or of certain products. This limited consumers' ability to compare prices.

ALL: How familiar are you with this particular case? Would you say you are...?

SINGLE CODE. READ OUT

Very familiar – you are aware of most of the details of the case	1	
Moderately familiar – you are aware of some details	2	
Slightly familiar – you have some recollection of the case but don't know much about it	3	
Not at all familiar – you have never heard of the case	4	
Don't know	5	

IF AWARE OF COMPETITION LAW INFRINGEMENT THAT TOOK PLACE IN THEIR INDUSTRY (C4=1-3)

C5 How did you become aware of this case?

MULTI CODE. PROMPT IF NECESSARY.

Word of mouth	1
Letter sent to your company	2
Open letter or other guidance from CMA	3
Industry event/conference	4
Trade press/industry news website	5
General/business news	6
As part of internal compliance training	7
Awareness video from the competition authority	8
Other (Please specify)	9
Don't know	10

ASK ALL

C6 Is there anything more you believe the CMA could do to draw more attention to specific cases and the illegality of those activities?

Yes	1
No	2
Don't know	3

IF THINKS THE CMA COULD DO MORE TO DRAW ATTENTION TO SPECIFIC CASES AND THE ILLEGALITY OF THOSE ACTIVITIES (C6=1)

C7 **What could the CMA do?**

WRITE IN	
Don't know	1
Refused	2

D Impact of deterrent

ASK ALL

D1 **Before you heard about this case, were you aware that such behaviour was illegal?**

SINGLE CODE

Yes	1
No	2
Don't know	3

ASK ALL

D2 **How likely do you think it is that an individual or company in your [SAMTYPE=2: own] industry would be discovered for engaging in the behaviour described in the case earlier?**

SINGLE CODE. READ OUT.

Very likely	1
Fairly likely	2
Not very likely	3
Not at all likely	4
Don't know	5

ASK ALL

D3 **And did finding out about this case make you think this was more likely, less likely, or has it made no difference?**

SINGLE CODE

More likely	1
Less likely	2
No difference	3
Don't know	4

- ASK ALL
 D4 **How likely do you think it is that an individual or company in your [SAMTYPE=2: own] industry would be prosecuted for engaging in anti-competitive behaviour?**

SINGLE CODE. READ OUT.

Very likely	1
Fairly likely	2
Not very likely	3
Not at all likely	4
Don't know	5

- ASK ALL
 D5 **And did finding out about this case make you think this was more likely, less likely, or has it made no difference?**

SINGLE CODE

More likely	1
Less likely	2
No difference	3
Don't know	4

- ASK ALL
 D6 **Thinking of all the businesses in your sector, to what extent do you think their current commercial activities place them at risk of breaching Competition Law? Would you say the risk of breaching it is very high, fairly high, medium, fairly low, or very low?**

SINGLE CODE.

Very high	1
Fairly high	2
Medium	3
Fairly low	4
Very low	5
Don't know	6

ASK ALL

- D7 **Now that the anti-competitive behaviour has been identified and action taken, how do you think the risk of companies breaking competition law in your own industry has changed? Is it more likely to happen, less likely, or has it made no difference?**

SINGLE CODE

More likely	1
Less likely	2
No difference	3
Don't know	4

IF MORE LIKELY OR NO DIFFERENT (D7=1/3)

- D8 **Why do you say that?**

WRITE IN	
Don't know	1
Refused	2

IF AWARE OF COMPETITION LAW INFRINGEMENT THAT TOOK PLACE IN THEIR INDUSTRY (C4=1-3)

- D9 **Some companies have modified certain agreements or commercial initiatives they have in place in response to this case. Has your firm made similar adjustments as a consequence of the case?**

Please note, everything you say today will remain confidential and CMA will not be able to identify you or your answers.

SINGLE CODE

Yes	1
No – but we intend to	2
No – we do not intend to	3
Don't know	4
Refused	5

IF MODIFIED AGREEMENTS, OR PLAN TO, AS RESULT OF CASE (D9=1/2)

D10 **Can you briefly talk me through what in particular your firm [D9=1: changed; D9=2: intends to change]?**

WRITE IN	
Don't know	1
Refused	2

IF AWARE OF COMPETITION LAW INFRINGEMENT THAT TOOK PLACE IN THEIR INDUSTRY (C4=1-3)

D11 **Have you noticed any changes in your industry as a result of the action that the competition authority took? Would you say the following have increased, decreased or stayed about the same?**

SINGLE CODE. READ OUT.

	Increased	Decreased	Stayed the same	Don't know
Competition	1	2	3	4
Price	1	2	3	4

IF AWARE OF COMPETITION LAW INFRINGEMENT THAT TOOK PLACE IN THEIR INDUSTRY (C4=1-3)

D12 **Can you talk me through any other changes in your industry that have occurred as a result of the enforcement action?**

WRITE IN	
There have not been any	1
Don't know	2
Refused	3

IF NOT OFFERED TRAINING ON COMPLIANCE IN LAST 12 MONTHS AND AWARE OF CASE (B2=NOT 3 AND C4=1-3)

D13 **You mentioned earlier that you had not provided training to your staff on complying with competition law in the last 12 months. Have you provided any since <YEAR>, when the enforcement action we have been discussing occurred?**

IF OFFERED TRAINING ON COMPLIANCE SINCE CASE AND AWARE OF CASE ((B2=3 AND C4=1-3) OR (D13=1))

D14 [IF B2=3: **You mentioned earlier that you have provided training in complying with competition law in the last 12 months.**] **Was this training introduced as a result of the case we have been discussing?**

IF OFFERED TRAINING ON COMPLIANCE SINCE CASE BUT NOT INTRODUCED AS A RESULT OF CASE (D14=2/3)

D15 **And has your training on complying with competition law been modified at all as a result of the case we have been discussing?**

	D13	D14	D15
Yes	1	1	1
No	2	2	2
Don't know	3	3	3

IF MODIFICATIONS MADE TO TRAINING AS A RESULT OF CASE (D15=1)

D16 **Have any of the following changes occurred as a result of the case?**
SINGLE CODE. READ OUT.

	YES	NO	Don't Know
1 The training occurs more frequently	1	2	3
2 The training is aimed at a wider audience	1	2	3
3 The content of the training has been revised	1	2	3
4 The length of the training has increased to cover subject in greater detail	1	2	3
5 Attendance at the training has become compulsory	1	2	3
6 External experts now provide the training	1	2	3

IF COMPANY HAS NOT PROVIDED COMPETITION LAW COMPLIANCE TRAINING SINCE CASE,
OR UNCERTAIN (D13=2/3)

D17 **Is training in complying with competition law something that you think would be valuable for your company?**

SINGLE CODE

Yes	1
No	2
Don't know	3

IF DO NOT THINK TRAINING IS VALUABLE (D17=2)

D18 **Why do you say that?**

WRITE IN		
Don't know	1	

E Awareness of other cases

IF IN CORE LIGHT FITTING OR BATHROOM FITTING SECTORS (INDUSTRY=4/6)
E1 **We are also seeking to understand your awareness of anti-competitive behaviour in other industries.**

IF LIGHT FITTING INDUSTRY (CASE=2): **In May 2016, the CMA found that Ultra Finishing Limited – a bathroom fittings company - broke competition law by preventing retailers of its products from discounting their online prices.**

This kind of illegal practice, known as resale price maintenance, or RPM, means customers miss out on the best possible prices. The CMA issued fines of over £750,000.

IF BATHROOM FITTING INDUSTRY (CASE=3): **In May 2017, the CMA fined The National Lighting Company and its subsidiaries Saxby Lighting, Endon Lighting and Poole Lighting for breaking competition law by enforcing a minimum price for its products for its online resellers and often refused to take orders from those resellers who sold goods below that price.**

This kind of illegal practice, known as resale price maintenance, or RPM, means customers miss out on the best possible prices. The CMA issued fines of over £2.7m.

ALL: **Are you aware that this occurred?**

SINGLE CODE

Yes	1
No	2
Don't know	3

IF AWARE OF INFRINGEMENT IN OTHER SECTOR (E1=1)

E2 **How did you become aware of this?**

MULTI CODE. PROMPT IF NECESSARY.

Word of mouth	1
Letter sent to your company	2
Open letter from CMA	3
Industry event/conference	4
Trade press/industry news website	5
General/business news	6
As part of internal compliance training	7
Awareness video from the competition authority	8
Other (Please specify)	9
Don't know	10

ASK ALL

E3 **Are you aware of any enforcement action taken by the competition authority in response to anti-competitive behaviour that has occurred in [IF INDUSTRY=4/6: any] other industries?**

SINGLE CODE

Yes	1
No	2
Don't know	3

IF AWARE OF OTHER INFRINGEMENT BEHAVIOUR (E3=1)

E4 **Can you briefly talk me through an example of a case that you are familiar with?**

INTERVIEWER NOTE: IF RESPONDENT FAMILIAR WITH A NUMBER OF INFRINGEMENTS, ASK THEM TO FOCUS ON THE ONE WITH WHICH THEY ARE MOST FAMILIAR.

ADD IF NECESSARY: Please consider:

- **what businesses, or types of businesses, were involved in the anti-competitive behaviour that led to enforcement action**
- **what they were doing that could be considered anti-competitive behaviour**
- **what the competition authority did in response**

WRITE IN	
Don't know	1

IF AWARE OF OTHER INFRINGEMENT BEHAVIOUR (E3=1)

E5 **How did you become aware of this?**

DO NOT READ OUT. MULTI CODE.

OFT (Office of Fair Trading)	1
CC (Competition Commission)	2
CMA (Competition and Markets Authority)	3
SFO (Serious Fraud Office)	4
Our own trade association	5
Ofcom	6
Trading Standards	7
Trade publications	8
Local newspapers	9
General / business news	10
Online search engine (e.g. 'Googling')	11
Word of mouth	12
Other (PLEASE SPECIFY)	13
Don't know	14

F Firmographics (II)

ASK ALL

F1 **Before we finish, I'd just like to ask a few more general questions about you and your company.**

How many years has your company been operating?

WRITE IN DS: ALLOW 0-999 [DS AUTOMATICALLY FORCE TO F1RAN RANGE]		
Don't know	1	PROMPT WITH RANGES AT F1RAN

IF DON'T KNOW EXACT NUMBER AT F1 PROMPT WITH RANGES. OTHERWISE INTERVIEWER TO CODE TO RANGE

F1RAN **Is it approximately...?**

PROBE FOR BEST ESTIMATE. SINGLE CODE

Under 1 year	1	
1-3 years	2	
Over 3 years up to and including 5 years	3	
Over 5 years up to and including 10 years	4	
Over 10 years up to and including 20 years	5	
Over 20 years	6	
Don't know	7	

ASK ALL

F2 **Roughly how many years have you worked for this company?**

ASK ALL

F3 **And how many years have you worked in your particular industry?**

	WRITE IN	Don't know
F2 – Years worked for this company	DS: ALLOW 0-99; MAX LIMIT OF F1 OR HIGHEST VALUE IN F1RAN BAND	1
F3 – Years worked in industry	DS: ALLOW 0-99; MIN LIMIT OF F2	1

ASK ALL

- F4 **Which of the following advisors do you have working for you within the company? By this we mean a permanent member of your staff who has a professional qualification to act in this capacity for your company.**

READ OUT. MULTICODE.

INTERVIEWER NOTE: WE ARE ONLY LOOKING TO CAPTURE INFORMATION ON THOSE WITH PROFESSIONAL QUALIFICATIONS IN THESE ROLES.

Legal advisor	1	
Auditor	2	
Accountant	3	
Risk Manager	4	
Company secretary	5	
None of the above	6	
DO NOT READ OUT: Don't know	7	

ASK ALL

- F5 **And what was the approximate total annual turnover of your company in your last financial year?**

READ OUT AND CODE TO SINGLE RANGE.

Up to £50,000	1
£50,001 to £100,000	2
£100,001 to £250,000	3
£250,001 to £500,000	4
£500,001 to £1,000,000	5
£1,000,001 to £2,000,000	6
£2,000,001 to £5,000,000	7
£5,000,001 to £10,000,000	8
£10,000,001 to £25,000,000	9
Over £25,000,000	10
DO NOT READ OUT: Don't know	11
DO NOT READ OUT: Refused	12

G Re-contacting and closing interview

ASK ALL

- G1 **Thank you very much for taking the time to speak to us today. We may be conducting further research relating to this topic. Would you be willing to be re-contacted by any of the following about this research if it were necessary?**

READ OUT. MULTICODE

The CMA	1
IFF Research, on behalf of the CMA	2
Another market research agency on behalf of the CMA	3
(SINGLE CODE) DO NOT READ OUT: None of these	4

IF CONSENT TO RE-CONTACT (G1=1/2/3)

- G2 **And could I just check the best contact details to reach you on?**

Name:	
RECORD DETAILS OF RESPONDENT WHO COMPLETED INTERVIEW	
Job title:	
<p>Finally I would just like to confirm that this survey has been carried out under IFF instructions and within the rules of the MRS Code of Conduct.</p> <ul style="list-style-type: none"> • MRS: Market Research Society on 0800 975 9596 • IFF: Sam Whittaker on 0207 250 3035 • CMA: General Enquiries team on 020 3738 6000 • CMA: Gordon Wai on 020 3738 6549 <p>ASK S K Thank you very much for your help today.</p>	

ALL

THANK RESPONDENT AND CLOSE INTERVIEW
