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Proposed Acquisition of K-Y Brand by Reckitt Benckiser

Response to Provisional Findings

Reckitt Benckiser (**RB**) has set out below its comments on the CMA's Provisional Findings, published on 22 May 2015. RB has already made a number of submissions in this investigation and it has not sought to repeat here each and every argument that has previously been made. There are a number of points on which the CMA has provisionally concluded which ignore evidence put to the CMA by RB in previous submissions and at RB's hearing. However, this response focusses on the key and fundamental flaws in the CMA's Provisional Findings. RB urges the CMA to consider these flaws very carefully and to re-assess its overall conclusion that this merger is likely to lead to a substantial lessening of competition. RB submits that there is very little evidence to substantiate such a finding and that, in fact, the weight of the evidence should lead the CMA to clear this anticipated merger.

1 Summary

- 1.1 The CMA's current provisional finding of an SLC in this case is hard to understand and suffers from some fundamental flaws. When properly assessed, the weight of the evidence available must lead the CMA to revise its provisional conclusions. In particular:
- (a) The CMA's current counterfactual is indefensible. The correct counterfactual must be what would happen to the K-Y business in the UK in the absence of this UK merger. The CMA accepts in the Remedies Notice that this would mean K-Y not being an effective competitive force in the future.
 - (b) The finding of an SLC rests on a conclusion that Durex and K-Y are to some extent substitutes yet there is no basis for such a conclusion on a balanced review of the internal documents of the parties and consideration of third party views and the available data.
 - (c) The CMA's survey is fundamentally flawed and the diversion ratios cannot be relied upon. Moreover, even if the survey and its findings were robust, there is no basis on which to extrapolate from retail level findings to conclude on questions of wholesale level competition.
 - (d) Even if one relies on the CMA's survey to find a loss of competition from the merger, the CMA cannot then dismiss the competitive threat from Ann Summers and, even more importantly, the constraint imposed by own-label. Own-label is, by some distance, the next best alternative to both brands, according to the CMA's own survey. It can be easily expanded and retailers have said that they would do so (or are doing so), according to the CMA's own findings. These facts regarding own-label products should lead the CMA to revise its SLC finding on this basis alone.
 - (e) The CMA's analysis of entry and expansion misses the point. The CMA admits that own-label can do this (as noted above). It is clear that Ansell's Skyn brand and Ann Summers would also be able to do so. The barriers that are noted by the CMA, to the extent they are barriers at all, only apply to smaller competitors with little known brands. Yet, it is not necessary for such brands to enter or expand into the grocery retailer/national pharmacy chain channel in order to defeat a post-merger price rise. Expansion by only one of the above-mentioned three competitors would be sufficient.
 - (f) The CMA's analysis of buyer power is hard to understand and runs counter to the available evidence. The suggestion that the retail price rise on Durex products in 2013 constitutes evidence that retailers would not exercise buyer power post-merger is entirely

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misplaced. There was no per ml cost price increase in 2013. What retailers chose to do with retail prices is of no relevance to assessing what they might do in response to a wholesale level price increase. [X]. This is all in addition to what retailers themselves are telling the CMA – that they have buyer power and would use it many different ways to defeat any attempt by RB to raise prices post-merger.

2 Counterfactual

- 2.1 In determining the most suitable counterfactual scenario, the CMA is required under its guidelines to consider “*the extent to which events or circumstances and their consequences are foreseeable...[or] likely on the basis of the facts available to it*”.¹ The CMA should only select “*the most likely scenario*” as the counterfactual, and should seek “*to avoid importing into its assessment any spurious claims to accurate prediction or foresight*”.² It is not sufficient to look only at the pre-merger situation, as the CMA must also consider any changes in the market, on the basis that “*[the] identification of a counterfactual does not mean that possible changes in the market cannot be considered in the assessment of the SLC*” and “*competitive conditions can and do change over time, and it is important to take into account the potential for change in the market in order to consider as fully as possible the level and intensity of competition without the merger*”.³
- 2.2 The jurisprudence of the Competition Appeal Tribunal (**CAT**) unequivocally upholds the CMA’s obligation to select only a realistic, foreseeable and likely counterfactual: see, for example, the CAT’s judgment in *Stagecoach*, which criticised the then Competition Commission (**CC**) for the “*serious flaw in [its] reasoning*”, on the basis that the CC’s choice of counterfactual was “*not one which was reasonably open to the Commission to make on the basis of the evidence [available]*”;⁴ and the judgment in *Racecourse Association*, where the CAT found that “*a hypothetical counterfactual which could, we consider, have no practical foundation in reality is no basis on which to found a conclusion*”.⁵
- 2.3 In the light of the foregoing, RB finds it difficult to understand how the CMA was able to reach the conclusion in the Provisional Findings that the relevant counterfactual is that the global K-Y business would have been sold to an alternative purchaser.⁶ This is a wholly fanciful and unrealistic scenario, given that RB has acquired the K-Y businesses in every country, other than in the UK and New Zealand. In its Merger Assessment Guidelines, the CMA considers that it might be appropriate to consider a counterfactual based on a sale to an alternative bidder but only in the context of competing bids that are all in progress for one target business. This is not the case here. There are no on-going competing bids for the K-Y businesses. All alternative bids were rejected by Johnson & Johnson (**J&J**) as soon as it agreed to sell the K-Y businesses to RB. The K-Y businesses have now been sold to RB in all countries except New Zealand and the UK.
- 2.4 The CMA actually admits the reality of the situation in its Remedies Notice, where it states that prohibition on its own may be insufficient to remedy the SLC because of a risk that J&J may have a reduced incentive to continue to support the UK K-Y business following the completion

¹ Paragraphs 4.3.2 and 4.3.6 of the merger assessment guidelines (CC2/OFT1254).

² Paragraph 4.3.6 of the merger assessment guidelines (CC2/OFT1254).

³ *British Sky Broadcasting & Ors v The Competition Commission & Ors* [2008] CAT 25 at paragraph 91, upheld by the Court of Appeal in *British Sky Broadcasting Group Plc & Ors v The Competition Commission & Ors* [2010] EWCA Civ 2 at paragraph 54.

⁴ *Stagecoach Group Plc v Competition Commission* [2010] CAT 14, paragraphs 131 and 132.

⁵ *Racecourse Association v OFT* [2005] CAT 29, paragraph 193.

⁶ Paragraph 7.31 of the Provisional Findings.

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of the transaction in most other jurisdictions⁷ – thereby entirely undermining the CMA’s conclusion that a sale to another purchaser globally is the “most likely” counterfactual.

2.5 In addition, RB notes that in reaching this counterfactual scenario the CMA has taken the unprecedented step of extending its jurisdiction from a review of competitive conditions in the UK to a global perspective, without any legal justification.

2.6 Section 36(1) of the Enterprise Act 2002 provides that the CMA must decide whether “arrangements are in progress or in contemplation which ... will result in the creation of a relevant merger situation [(RMS)]” and, then whether “the creation of that [RMS] may be expected to result in a substantial lessening of competition [(SLC)] within ... any markets in the United Kingdom for goods...”. The CMA considers that the global transaction constitutes arrangements which are in progress or in contemplation but:

(a) This is clearly wrong – RB has acquired all K-Y businesses globally (save in New Zealand – which has been prohibited – and the UK). This has been the case for over a year. The only arrangements which are in progress or contemplation are in relation to the UK; and

(b) In any case, it is clear that the analysis of any SLC is based solely on an assessment of the competitive impact of the RMS. The RMS is only created when “two or more enterprises have ceased to be distinct”⁸ and the CMA clearly states that, alongside RB, the other relevant “enterprise” in this case is “the business of supplying K-Y branded personal lubricants to retailers and wholesalers in the UK”.⁹ This is the UK K-Y business as opposed to any notional global K-Y business.¹⁰ The correct counterfactual is what would happen absent the RMS – i.e. absent the transfer of the UK K-Y business. Any other counterfactual would introduce a test that is *ultra vires*.

2.7 [✂]

2.8 [✂]

2.9 The CMA suggests, in paragraph 7.8 of the Provisional Findings, that RB has confused the correct counterfactual situation with that “brought about by the transaction that RB and J&J have entered into”. Earlier, the CMA notes that “the counterfactual cannot be conditioned by the particular transaction structure chosen by the parties”. Yet, it is the CMA’s view, not the parties, that has been influenced by the transaction structure. The CMA should only be concerned with assessing whether the RMS will result in an SLC in the UK.

2.10 That the CMA’s analysis has been influenced by the transaction structure is plain from looking at the effect on the CMA’s counterfactual of a simple change in the transaction structure. What if RB had acquired all of J&J’s K-Y businesses except those in the UK, due to potential competition issues, and then subsequently sought to conclude a UK deal (once the deals for other countries had been completed)? This is far from fanciful and, indeed, not far from the reality today, given the lengthy review in the UK. [✂] In this scenario, the UK counterfactual would presumably be J&J’s current strategic intention in the UK absent the UK merger, leading to a very different scenario to the one currently envisaged by the CMA. It is surely not a desirable outcome that the parties could re-structure a transaction and have such a significant impact on the CMA’s assessment, yet this is exactly what the CMA’s approach to the counterfactual encourages.

⁷ CMA Remedies Notice, paragraph 9.

⁸ Section 23 of the Enterprise Act 2002.

⁹ Paragraph 5.11 of the Provisional Findings.

¹⁰ [✂]

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- 2.11 The CMA must stop tying itself in knots by examining the particular structure of this transaction, which is irrelevant to its considerations. The question the CMA must ask itself is what is the likely competitive position absent the merger before it – i.e. the anticipated acquisition of the UK K-Y business by RB. The correct answer to that question – and the correct counterfactual – must therefore be what J&J is likely to do with the business in the UK and, on the basis of the CMA’s assessment in the Remedies Notice, this is that J&J would have a reduced incentive to continue to support and invest in the UK K-Y business such that it may not be an effective competitor in the UK.

3 Market definition and constraint from online and adult store retailers

- 3.1 RB notes that the CMA has altered its suggested market definition by now considering independent pharmacies to be a separate market. The CMA continues to assess supply to online and adult stores separately from supply to grocery retailers and national pharmacy chains. For all the reasons previously advanced, which will not be repeated here, RB continues to believe that this is an unduly narrow market definition.
- 3.2 However, of even more concern is the CMA’s conclusion that there is not even a constraint imposed on grocery and national pharmacy chain pricing by pricing in the online and adult store channels. The CMA’s approach here lacks an evidential foundation. The CMA seeks to rely on responses to a stated preference question in its survey, which asked respondents to consider what they would have done if their preferred brand had not been available in the store from which it was previously purchased. Amongst the options available was the option to choose to purchase the same brand in another grocery/pharmacy chain store. The question, therefore, provides no insight on what might happen if the brand is not available in any store (which must be the correct proxy for what would happen if the CMA’s theory of harm in this case came to pass – i.e. prices rose across all grocery retailer/national pharmacy chain stores).¹¹
- 3.3 Many of the respondents who selected “another store” may well have chosen to purchase online or from an adult store in these circumstances.¹² Certainly, the actual behaviour of respondents suggests that more than 1% of Durex users and 2% of K-Y users would purchase online,¹³ since 11% of Durex in-store purchasers and 9% of K-Y in-store purchasers have already also purchased online in the past 12 months. This suggests that there is a very real constraint on pricing in grocery retailers and national pharmacy chains, yet the CMA chooses to ignore it.
- 3.4 In addition to the inconsistent use of its survey, the CMA appears to dismiss all of the IPSOS survey findings submitted by RB on the grounds that the survey is biased because it was conducted online. RB does not agree that this significantly impacts the findings of the IPSOS

¹¹ The CMA’s attempt to deflect criticism of this aspect of the survey is unconvincing and internally inconsistent. In paragraph 52 of Appendix D, the CMA suggests that the survey did not have as its purpose to assess relevant market definition only the strength of the constraint from online channels. Aside from the fact that, as shown in paragraph 3.2 above, the survey failed to achieve this objective, it is also clear that the CMA has relied upon the survey when assessing the relevant market here. Paragraph 11 of the Provisional Findings states: “*We conducted a survey to examine, among other things, the extent to which consumers substitute between supply channels. Given the limited evidence of switching and the differing nature of competition within different supply channels evidenced by our survey....we provisionally concluded that it is appropriate to define four principal product markets of interest on a UK wide basis.....*”.

¹² The only alternative would be to purchase another brand in a grocery retailer/national pharmacy chain store. However, this is less likely to be the choice of the respondents, given that they have indicated that they would prefer to incur additional search costs in order to secure their preferred brand.

¹³ These figures are also unlikely to represent the number of users that would switch to purchase online, since it excludes those who said they would purchase from websites of grocery retailers and national pharmacy chains – it is not clear why the CMA excludes these sales. If they are considered to be part of the grocery retail and national pharmacy chain channel, this raises difficult market definition issues (how can the CMA justify excluding online retailers generally but include online sites from such retailers?) and, in this particular case, because they are already active online, also suggests that these consumers would be very likely to purchase lubricants from another online retailer if prices rose on the grocery retailer/national pharmacy chain websites.

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survey in relation to the constraint from online retailers but, even if it did, there is no impact on the results of this survey as regards the constraint imposed by specialist stores. On this point, the IPSOS survey demonstrates that a significant proportion of consumers consider specialist stores to be an alternative.¹⁴

- 3.5 The CMA chooses to rely on what grocery retailers have said (in contrast to other points on which retailer views are ignored because the CMA considers that they haven't conducted much research into consumer behaviour when purchasing lubricants) but there may have been significant confusion about what constitutes an adult store in this case. The retailers may not have had Ann Summers in mind for example, on the basis that it is a very different proposition and a regular sight on the high street compared with some independent adult stores.
- 3.6 The suggestion that the CMA is wrong to exclude Ann Summers, at least, from the relevant market ([§]) is also given credence by the results of the CMA's own survey (results which the CMA incorrectly attempts to dismiss – see paragraphs 4.26 to 4.28 below).

4 Effects on competition

- 4.1 The CMA has provisionally concluded that there is competition between Durex and K-Y in the supply of personal lubricant brands to grocery retailers and national pharmacy chains and that the merger will remove this competitive constraint leaving own-label products as the main constraint on the parties.
- 4.2 RB fundamentally disagrees with the CMA's finding. In particular:
- (a) The evidence relied upon by the CMA to support its finding is ambiguous at best and often runs counter to the CMA's view – the finding is basically only supported by the CMA's own survey diversion ratios and the resulting IPR calculation.
 - (b) RB has serious issues with the survey results and methodology and with the way in which the CMA has ignored other findings from that survey that contradict or confound its finding. However, even if one were to accept the findings (and ignore some of the contradictory points arising from the survey, as the CMA has done), the assumptions that the CMA uses to extrapolate from the survey findings at retail level and apply them to an analysis of competitive effects at the wholesale level (where the parties are active) are incorrect and lack any sound evidentiary basis.

Using retail data to assess wholesale level competition

- 4.3 In paragraph 8.10 of the Provisional Findings, the CMA asserts that it is justified in relying on findings regarding competition at a retail level (where the parties are not active) to inform its assessment of wholesale level competition because consumer and retailer choices are closely linked and retail prices follow wholesale prices. However, these assertions are based on very little evidence or, in some cases, no evidence at all.

There is a far weaker link between consumer awareness of Durex and K-Y and retailer stocking decisions than the CMA suggests

- 4.4 In paragraph 8.11 of the Provisional Findings, the CMA notes that evidence from retailers suggests that consumer behaviour in this market and, in particular, consumer awareness of brands, strongly influences retailers' choices of the products they stock. Yet:

¹⁴ [§]

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- (a) this directly contradicts the CMA's later assertion that retailers do not know much about this market and don't spend much time trying to understand consumer behaviour (see paragraph 8.41); and
 - (b) it contradicts what retailers say about being able to influence consumer choice (for example, [REDACTED]). It also contradicts what retailers have actually said in their hearings [REDACTED].
- 4.5 The CMA's attempt to support its assertion is flimsy at best. The CMA cites some retailers that have suggested that these brands (or, more accurately, one or other brand and, in some cases, just one or two products within the brand range) are "must stock". This is patently not the case. Durex is not "must stock":
- (a) Lubricants are not products that a retailer must stock, [REDACTED]¹⁵
 - (b) There are other brands with a level of awareness that is just as good as that of Durex and/or K-Y – e.g. [REDACTED]. Moreover, the CMA's own survey suggests that consumers are far from loyal to Durex and K-Y (over 40% would switch to another brand in store and Durex and K-Y purchasers suggested that brand is not an important factor in their decision to purchase).¹⁶
- 4.6 The CMA incorrectly refers to a quote from Asda as evidence that Durex and K-Y are must-stock products.¹⁷ Yet, Asda seems to be suggesting nothing more than that they would want to stock a brand that is offered at a good cost price and with some marketing support behind it to appeal to their customers. It is perfectly normal that a supermarket wants to offer appealing products at good prices. This is very different from saying that only existing brands offered to consumers are appealing and that this is what drives stocking decisions.
- 4.7 The CMA also tries to suggest that RB has supported the CMA's view. Yet, paragraph 8.11 misquotes what RB has said. What RB actually said [REDACTED] is: [REDACTED] In other words, retailer decision-making is more complicated than just reflecting consumer demand. In fact, [REDACTED] RB stated: [REDACTED] Furthermore, the CMA's own survey finds that brand is not important to a lot of consumers.¹⁸
- 4.8 All in all, the CMA has very little basis for concluding that consumer awareness of brands is what drives retailer stocking decisions. It is far more complicated than that.

Retail prices do not follow wholesale prices

- 4.9 The CMA asserts in paragraph 8.12 that wholesale and retail prices are linked (this assertion is repeated in a number of places in the Provisional Findings, for example in paragraph 8.133 and, again, in paragraph 8.136 as well as throughout Appendix F). The CMA seeks to justify this assertion by relying on the example of retail price increases on Durex products in 2013. However, this is an example where there was no cost price increase on a per ml basis. The fact that retailers chose to increase prices at the retail level says nothing about whether cost price increases were (or would be) passed on.

¹⁵ [REDACTED]

¹⁶ Appendix D to the Provisional Findings, paragraphs 18, 25 and 26.

¹⁷ Paragraph 9.29 of the Provisional Findings.

¹⁸ Appendix D to the Provisional Findings, paragraph 18.

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- 4.10 In fact, the evidence directly contradicts the CMA’s assertion. [REDACTED]¹⁹ Further details are provided in the NERA Annex “Retail Prices, Wholesale Prices and Buyer Power”.

Internal documents

- 4.11 In this section of the Provisional Findings, the CMA purports to provide a summary of evidence from the parties’ “key relevant documents”,²⁰ yet it ignores [REDACTED]²¹. This sort of analysis is usually the strongest pointer to any view of competition between brands, yet the CMA continues to ignore it. [REDACTED]. This would seem to RB to be an important point to consider when assessing the parties’ internal documents “on balance”. However, no consideration is given to this in the CMA’s analysis.
- 4.12 Furthermore, even the review of those internal documents that are referred to by the CMA, which purports to be “balanced”, continues to draw conclusions based on misinterpretation or “cherry picking” of quotes. For example, the CMA suggests that: “Some surveys commissioned by the parties ... suggest that at least some consumers use these products interchangeably”. In fact, the reference to consumers using these brands “interchangeably” appears to be a reference to one survey – submitted by J&J – the Primus study from November 2013.²² Closer examination of this document shows that one slide suggests that K-Y and Durex are listed as being used by women across their 40s, 50s and 60s.²³ However, this slide also lists many other personal lubricants, including Ann Summers, Boots own label, Replens, Sylk, Wet Stuff and Asda own label, along with other non-lubricant products such as coconut oil, baby oil, heat gels and Vaseline. To the extent that this slide does show K-Y and Durex being used “interchangeably”, it clearly also shows a number of other products and brands being used interchangeably with K-Y and Durex.
- 4.13 In fact, the question that elicited these responses merely asked K-Y respondents to list any lubricating product they had used. A long list (including Durex) is unsurprising. It is grossly misleading for the CMA to pick out the reference to Durex and K-Y alone as this ascribes far greater relevance to that finding than is merited. In fact, a review of the presentation in the round shows that when women over 40 were asked to list which products (other than K-Y) played a key role for them in combatting vaginal dryness, there was no mention of Durex at all.²⁴ Similarly, women in their 50s and 60s described K-Y as “trusted” and “practical” and “the complete opposite” of Durex, which was described as “sexier” and “more sensual”.²⁵
- 4.14 There are lots of other examples of such “cherry picking”. Many of the RB documents referred to in the Provisional Findings have been commented on by RB previously, providing appropriate context and balance to the CMA’s ad hoc use of quotes here and there, yet such comments have been consistently ignored by the CMA.²⁶
- 4.15 Despite all the shortcomings of the CMA’s review outlined above, even the CMA’s own conclusion in paragraph 8.39 of the Provisional Findings, reached on the basis of a partial and unbalanced review of the documents, acknowledges that there is at least ambiguity in the internal documents of the parties regarding the extent to which Durex and K-Y are substitutes. The most the CMA seems to be able to conclude is that the parties recognise each other as

¹⁹ The term “Durex Play range” is given the same meaning as that ascribed to it by the CMA, in other words, covering the following products: Durex Play Feel, Aloe Vera, Passion Fruit, Sweet/Saucy Strawberry, Very/Cheeky Cherry, Tingle and Warming/Heat.

²⁰ Paragraph 8.18 of the Provisional Findings.

²¹ [REDACTED]

²² [REDACTED]

²³ See page 31 of the Primus survey findings.

²⁴ See page 16 of the Primus survey findings.

²⁵ See page 43 of the Primus survey findings.

²⁶ [REDACTED]

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fellow suppliers of lubricant. However, this tells you very little about the competitive interaction between the two brands. The rest of the evidence referred to by the CMA shows a picture of brands appealing to different groups of consumers for different purposes, with one brand being promoted and marketed and the other stagnant and largely left to sell itself. Such a conclusion, even without considering the shortcomings of the analysis, is hardly a basis for a finding of an SLC.

Retailer views

- 4.16 The CMA suggests retailer views on competition between the parties are mixed. The reality, however, is that all the major retailers ([REDACTED]) clearly state that they do not see the products as competing. This fact should be given more weight than comments that mostly emanate from competitors with a particular agenda and/or smaller retailers (e.g. the Co-op) that take very little interest in this category. In relation to [REDACTED], RB has already explained that [REDACTED]. Moreover, the evidence from [REDACTED].”²⁷
- 4.17 The retailer data referred to by the CMA²⁸ has not been made available for RB to review and so it is hard to comment on. However, the CMA itself acknowledges that many variables can explain movements in volumes of products, particularly just within one retailer. No analysis or testing appears to have been undertaken of the retailer data submitted and, as such, it cannot be accorded any weight in the CMA’s findings.
- 4.18 Moreover, the CMA has chosen to ignore [REDACTED] submitted by RB on 20 April 2015, which illustrates that only a very small number of consumers within [REDACTED] have purchased Durex and K-Y products in the course of a recent 12 month period. Specifically, the data showed that [REDACTED] during this 52 week period, Durex products were on promotion for [REDACTED]. One would have expected a significant number of K-Y users to switch to Durex products during this period if Durex exerted any form of pricing constraint on K-Y. [REDACTED]

Data analysis

- 4.19 The CMA’s new data analysis of the retail price rise of Durex lubricant products in 2013 attempts to re-establish a causal link between a fall in Durex lubricant sales and an increase in K-Y sales during this period. The previous analysis presented in the CMA’s Working Papers was shown to be fundamentally flawed by NERA. The new analysis attempts to draw the same conclusion but using a new form of data analysis. However, as with the previous attempt, the CMA’s analysis remains fundamentally flawed and provides no support for a finding of competition between Durex and K-Y. The accompanying NERA Annex “Critique of Analysis Regarding Price Increase of Durex Play Products” sets out in detail why this is the case.

Consumer surveys

- 4.20 As is clear from the comments above, from a review of the parties’ internal documents and views of third parties, the weight of evidence points to a finding that Durex and K-Y products are not substitutes in any meaningful sense. Nothing in the data reviewed by the CMA suggests otherwise. As a result, the CMA is left to rely heavily on the results from its consumer survey. It seems to acknowledge this when it states: “*We consider the TNS survey to be an important piece of evidence showing that the parties are competitors. This is based mainly on the diversion ratios, but is further supported by the overlap between the uses of the products...*”.²⁹

²⁷ [REDACTED]

²⁸ Paragraphs 8.43 and 8.49 of the Provisional Findings.

²⁹ Paragraph 8.77 of the Provisional Findings.

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- 4.21 The CMA is aware that RB has major issues with this survey. Some of these issues are fundamental and are set out in more detail in NERA Annex “Critique of the CMA survey”. The issues are not new but NERA has elaborated on some of the points made previously at the Main Hearing (and in writing shortly thereafter).
- 4.22 The CMA has largely ignored the previous criticism but cannot continue to do so. For example, reliance on the results from the survey’s usage question is unjustifiable. Aside from the fact that the CMA itself admits in paragraph 46 of Appendix D that these results are likely to have a bias (given the exclusion of older consumers from the survey), the responses to this question say nothing about how consumers perceive Durex and K-Y. The survey may as well have asked “do you buy a lubricant to lubricate?”. This is particularly the case where the respondent has the ability to select more than one answer. It is not surprising that many selected “comfort” as one of the reasons they purchase a lubricant. The key point would have been to ask the primary reason why consumers purchase (or to rank responses in order of importance).
- 4.23 The CMA also continues to “cherry pick” which aspects of the survey to rely on (see Appendix D), ignoring evidence that runs counter to its findings. For example:
- (a) There is no analysis of the implications of the responses to Q1 of the survey, which suggest that own-label and Ann Summers are strong alternatives to the parties’ brands and purchased by more consumers than K-Y (a result which contradicts the later attempts by the CMA to discredit the findings in respect of Ann Summers).
 - (b) There is no consideration of the fact that Durex and K-Y purchasers suggested that brand is not an important factor in their decision to purchase, casting doubt on the CMA’s claims that there is high loyalty to these brands (for example, in paragraph 8.71 of the Provisional Findings).
 - (c) There is no mention of the fact that own-label (when aggregated) is the next best alternative by some distance to both Durex and K-Y for all marginal and infra-marginal Durex and K-Y consumers, which directly contradicts the CMA’s sceptical view of whether there is (or would be, in the event of a post-merger price rise) much switching from branded products to own-label (rather than vice versa)
- 4.24 Moreover, having itself acknowledged a number of shortcomings with the survey (and in light of the weight of evidence elsewhere), it is impossible to justify why the CMA still relies unquestioningly on the diversion ratios from the TNS Survey which (according to the CMA) show that Durex is the closest substitute to K-Y and K-Y is the second closest substitute to Durex (8.132 and 8.136). The results from the diversion ratios contradict even the CMA’s own views in paragraph 8.142 and the important list of caveats to the survey findings noted by the CMA in paragraph 51 of Appendix D. This is even more the case when one considers:
- (a) The diversion ratios – expressed with a confidence interval – take account of sampling error only but the CMA admits that there are many other shortcomings.³⁰ For example, the CMA admits that the diversion ratios are probably overstated because of the age limitations imposed by the survey organisers.³¹ The CMA also admits a weakness in allocating a large number of “don’t knows” in proportion to stated preferences of others.³² The weakness is acknowledged but no account is taken of its significant impact in

³⁰ Appendix D to the Provisional Findings, paragraph 34.

³¹ Appendix D to the Provisional Findings, paragraph 46.

³² Appendix D to the Provisional Findings, paragraph 58.

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circumstances where sample sizes are low³³ and where such an allocation introduces a significant potential for skewing results.

- (b) The CMA admits that diversion ratios are lower for products that are the most obvious substitutes for K-Y in the Durex range.³⁴ This curious result is merely noted but no inferences are drawn. Such a result casts significant doubts on the accuracy of the survey results and the resulting diversion ratio calculations. RB had previously cast significant doubts over a number of results arising from the survey, including over the reliability of at least half of the selections from marginal and infra-marginal consumers that indicated that they would switch from K-Y to Durex.³⁵ The CMA chooses to ignore this and instead launches a bizarre defence of the survey suggesting, for example, that switching between Durex Embrace (a pleasure enhancement pack containing two lubricants for couples, with a retail price in the region of £15) and K-Y (with a retail price in the region of £3) was perfectly possible in circumstances where no Durex products were available and the only alternative was K-Y or own-label.³⁶

It is curious that the CMA argues that, in a case where a consumer states that he or she would switch between Durex Embrace and K-Y, this should be accepted as reasonable, but when a consumer states that he or she would switch to Ann Summers (a product that is positioned far more closely to compete with Durex and which is priced closer to Durex on a per ml basis) this should be explained away.

Furthermore, the logic of the CMA's reasoning means that almost any two products might be found to be "in competition". Take, for example, a survey assessing closeness of competition between Coca Cola and milk. If a store only stocked Coca Cola and milk and a respondent was told that Coca Cola was no longer available, they might feel obliged to pick milk as a "next best alternative". However, this tells you very little about the extent to which, in reality, Coca Cola and milk are substitutes or the extent to which consumers are likely to purchase milk in the event of a price rise for Coca Cola. Incidentally, no doubt if you asked respondents to select whether Coca Cola and milk are used "to alleviate thirst", the survey would probably end up with a significant overlap in usage too.

- (c) There is no consideration of the fact that there has been significant new entry since the survey was completed. Skyn – a very well-known SWB brand sold in grocery retailers and national pharmacy chains – was not asked about in the survey but it is highly likely that repeating the survey with Skyn as an option would affect the diversion ratios.
- (d) The CMA seems to consider that it is acceptable to admit that consumers may not know which product they are buying (which it considers may account for the over-representation of Sensilube users in the survey) but assumes that consumer results and preferences based on brand are reliable.³⁷ However, in a market such as this, it is not good enough to say that brand is all that matters. Here, within the Durex brand, there are many different types of product, with different purposes and very different price points. Relying on consumers indicating preferences based on brand alone risks consumers just selecting brands that they happen to have heard of.

Elsewhere the CMA suggests that this risk discredits results (for example, in relation to Ann Summers). Yet, no account is taken of the fact that Durex and K-Y are also two well-known brands. In a market with low penetration in the general population and with many

³³ Again, the CMA admits this in Appendix D to the Provisional Findings, paragraph 51.

³⁴ Appendix D to the Provisional Findings, paragraph 36.

³⁵ [redacted]

³⁶ [redacted]

³⁷ Appendix D to the Provisional Findings, paragraph 43.

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purchasers buying a product for the first time, simply providing a choice of brand names is not going to produce meaningful results. The survey shows that consumers do plan their purchases. Even if one accepts that this does not result in price checking (which RB does not believe), at the very least it is likely to lead to consumers checking options available before purchasing an alternative (and, as a result, becoming aware of competitor products and brands that are not generally familiar to them). This would not be reflected in the survey results as they stand.

- 4.25 RB has set out above a number of ways in which the survey findings are unreliable and/or have been used selectively by the CMA. However, even leaving aside all of the criticism set out above, the use by the CMA of the diversion ratios in the survey to inform its view on likely incentives on RB to raise prices post-merger is fundamentally flawed. The CMA asserts that it can do so because retailer choice is informed by consumer choice and because retail prices follow wholesale prices.³⁸ Yet, for the reasons set out above in paragraphs 4.3 to 4.10, this is incorrect. [X] In previous cases, the CMA has accepted that retailers have an influence on diversion ratios.³⁹ In this case, retailers have an ability to [X] It is likely that wholesale diversion ratios would be significantly different from those calculated by the CMA at retail level. A further critique of the use of an IPR analysis in this case is set out in NERA Annex “Critique of Indicative Price Rise Calculation”.

Competitors

- 4.26 In a number of places, the CMA suggests that it disregards the competitive threat from Ann Summers. For example, despite its survey findings, the CMA notes that the diversion ratio from Durex to Ann Summers is likely to be overestimated.⁴⁰ The CMA notes that its view is given credence by the fact that very few respondents would have purchased from an adult store and yet, aside from Superdrug, Ann Summers lubricant is only available from Ann Summers stores.
- 4.27 RB considers that the CMA has been unduly dismissive of the threat posed by Ann Summers. The apparent contradiction noted by the CMA is most likely explained by respondents being confused by the survey. Ann Summers is not like other adult stores, it is a “normalised” high street presence. RB has submitted survey evidence on this. As such, many consumers may not consider themselves to be visiting an adult store when they purchase from Ann Summers stores.
- 4.28 The CMA also suggests that results relating to Ann Summers may be overestimated because it is a well-known brand⁴¹ but the same could be said (perhaps more so) of Durex and K-Y. The CMA’s view is also inconsistent with the responses given to Q1 of the survey which show that Ann Summers is a very popular choice for lubricant purchasers. This response is ignored by the CMA yet it is important. It is irreconcilable with the attempts to discredit the later diversion ratios unless one accepts that respondents, from the very start of the survey, were selecting brands at random (or on the basis of those they knew) regardless of actual purchasing behaviour. Either way, the CMA cannot continue to rely on the results from the survey as regards Durex and K-Y and yet discredit the results for Ann Summers. Even the CMA admits that the results of the survey show that Ann Summers is a closer competitor to the Durex range.⁴²

³⁸ This point is asserted time and again in Appendix F of the Provisional Findings to support the use of the IPR analysis, for example, in paragraphs 11 and 14.

³⁹ *AG Barr plc / Britvic plc*, Competition Commission’s final report of 9 July 2013, paragraph 6.26.

⁴⁰ Paragraph 8.74 of the Provisional Findings.

⁴¹ Appendix D to the Provisional Findings, paragraph 53.

⁴² Appendix D to the Provisional Findings, paragraph 53.

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- 4.29 The CMA further attempts to discredit Ann Summers as a competitive threat by suggesting that Ann Summers itself considers that it wouldn't be able to expand from Superdrug into other grocery or national pharmacy chain retailers. This is wrong. The transcript from the Ann Summers hearing makes clear that Ann Summers considers that in Superdrug it does not have a sufficient range of lubricants to compare well against Durex. However, it makes clear that it has not approached other retailers and nor have other retailers approached it. So no conclusions can be drawn about how successful Ann Summers might be [X]. Moreover, elsewhere in the published summary of its hearing, Ann Summers makes clear that it sees itself as a close competitor to Durex and that it would expect to attract consumers if RB were to increase the price of Durex products.⁴³

Own-label

- 4.30 The CMA has concluded that own-label products are substitutes to Durex and K-Y to some degree but has also expressed scepticism about the extent to which Durex and K-Y users might switch to own-label products (rather than vice versa).⁴⁴ This significantly underplays the competitive significance of own-label products even on the basis of the CMA's own evidence. For example, the CMA has ignored evidence from its own consumer survey which shows that, for both Durex and K-Y users, own-label products in aggregate are the next best alternatives for both marginal and infra-marginal consumers, and as such should be considered to impose the greatest constraint on each party's branded products. Moreover, the CMA acknowledges that retailers have the ability to re-position or expand own-label offerings in response to any changes in behaviour by RB.⁴⁵ However, no attempt is made by the CMA to quantify the extent of the existing constraint ([X]). This is a serious failing in the Provisional Findings. A balanced view of the evidence suggests that own-label, even by itself, would constitute a sufficient constraint on the actions of RB post-merger.
- 4.31 The CMA has noted that it has found no evidence of retailers referring to own-label products as a means of exerting competitive pressure on RB during negotiations. This ignores the fact that there have been no unjustified cost price increases where it was necessary to use such pressure. It is also worth noting that at least two retailers expressly mentioned that they would do so if faced with a suggested cost price increase by RB post-merger.

Conclusion

- 4.32 The CMA concludes that "on balance" the results of its assessment of competitive effects shows that there is some competition between the Durex and K-Y brands which would be lost as a result of the merger. The justification for this finding is in paragraph 8.142 of the Provisional Findings:
- "On balance, the evidence from the survey and from the parties' internal documents shows that K-Y and Durex lubricants are to some extent substitutes. Data analysis of the impact of the retail price change of Durex lubricants in 2013 is also consistent with this finding."*
- 4.33 In fact, as is clear from the analysis set out above, the evidence does not on balance support a finding that K-Y and Durex are substitutes to any meaningful extent:
- (a) Even without considering the partial and unbalanced review of the internal documents conducted by the CMA, those internal documents of the parties that have been considered contain no evidence of substitution between K-Y and Durex – the most that can be said is that the internal documents show that Durex and K-Y are both recognized

⁴³ See the Ann Summers hearing summary, paragraph 14.

⁴⁴ Paragraphs 8.109 and 8.112 of the Provisional Findings.

⁴⁵ Paragraph 9.36 of the Provisional Findings.

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as lubricants. However, this tells you very little about the competitive interaction between the two brands. The remaining evidence referred to by the CMA shows a picture of brands appealing to different groups of consumers for different purposes, with one brand being promoted and marketed and the other stagnant and largely left to sell itself. [REDACTED], the weight of the evidence from the internal documents clearly points to there being no meaningful competition between the brands.

- (b) Retailer views – and evidence from negotiations with the parties – are overwhelmingly supportive of a finding that there is no competition between the parties.
- (c) The data analysis of the 2013 retail price increase is flawed and cannot be relied upon to inform a conclusion on the competitive effects of this merger.
- (d) The CMA survey is fundamentally flawed. Moreover, there are serious issues with the diversion ratios that have been calculated and the “cherry picking” of evidence. However, leaving all that criticism to one side, the use of the survey in an IPR analysis does not meaningfully inform the CMA’s view of the likely incentives of RB post-merger in circumstances where the merger affects the wholesale level of supply not the retail level. The CMA has simply asserted that retail level conclusions can be applied to wholesale level competitive analysis. The evidence directly contradicts this.
- (e) The CMA too easily dismisses the competitive threat from brands such as Ann Summers and its failure to properly account for the existing constraint from own-label and [REDACTED] is a serious one, which, in and of itself, undermines the CMA’s conclusion that there is an SLC in this case.

4.34 In the light of all this, the CMA must reconsider its conclusion on the likely competitive effects of this merger. On balance, considering the internal documents of the parties, views of most retailers (particularly the most important retailers of personal lubricants), the influence of competitors and the strength and flexibility of own label, and the lack of any data contradicting this view, there are no grounds for concluding that there is a substantial lessening of competition in this case, without even considering the impact of possible entry/expansion and buyer power. For the sake of completeness, however, these issues are addressed below.

5 Entry

- 5.1 In relation to entry, or rather expansion of existing competitors in the grocery retail and national pharmacy channel, it is important to note that the CMA does not need to establish that any supplier, large or small, would be capable of entering the grocery retailer and national pharmacy chain channel (although RB submits that this is possible for all the reasons already presented in previous submissions).
- 5.2 To restore any competition that the CMA considers may be lost through the anticipated merger, it is only necessary for one competitor to enter or expand. Entry (or rather expansion) by either [REDACTED] would be more than sufficient to offset any loss of competition between Durex and K-Y (which RB does not consider exists in any case), particularly in circumstances where Durex and K-Y are not close competitors (and [REDACTED] are closer competitors).
- 5.3 The CMA attempts to dismiss [REDACTED].⁴⁶
- 5.4 The points raised by the CMA as “barriers to entry and expansion” almost exclusively relate to smaller suppliers with little known brands. However, there is no question that [REDACTED] would be

⁴⁶ Paragraph 9.36 of the Provisional Findings.

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very credible brands for any grocery retailer or national pharmacy chain to stock (indeed, [REDACTED]). These are not “niche” entries. [REDACTED].

- 5.5 There is also no question that financially they would be able to support any promotional activity required (particularly [REDACTED]⁴⁷). Any perceived threat of retaliation by RB on promotional activity is unlikely to affect players such as this (and, moreover, is unlikely to be considered credible in a category where promotional activity is limited because [REDACTED]).⁴⁸
- 5.6 The CMA notes a concern [REDACTED] that the merger might allow RB to expand the K-Y range and raise barriers to entry into the grocery retail channel. [REDACTED]
- 5.7 The CMA also refers to the fact that brands that enter sometimes get de-listed shortly afterwards. It is not clear to what the CMA is referring here:
- Swoon has had some products de-listed by Boots but, as far as RB is aware, these products were not lubricants. It has maintained its lubricant range (which includes two lubricant SKUs and a further two product bundles, which include lubricant).
 - There is also reference in the Ansell hearing summary to it introducing a lubricant in 2008-9, which was subsequently de-listed in a few retailers. RB is not aware of this but assumes that it was related to the Mates range, which at the time was in decline generally. The Skyn brand has reinvigorated Ansell’s business in the UK and is a growing brand. This is the brand that Ansell has chosen to use to launch its new lubricant range.
- 5.8 To the extent that it has happened to new entrants in the past, de-listing is not an issue for new entrants alone. [REDACTED]. This is just a symptom of buyer power in the market not a barrier to new entrants.
- 5.9 Finally, the CMA concludes that, there is no evidence of retailers sponsoring entry in the past and no firm is likely to sponsor entry to this channel in the future. Leaving aside the fact that [REDACTED] are unlikely to require “sponsorship”, as the CMA is quick to point out elsewhere, there has been no reason for retailers to sponsor entry so far because there have been no unjustified cost price increases attempted by RB or K-Y. Indeed, the CMA itself acknowledges, in paragraph 9.31 of the Provisional Findings, that incentives on retailers to sponsor entry could change if there were a post-merger price increase.
- 5.10 However, even leaving this point to one side, there is no evidence that sponsorship is unlikely in the future – indeed, [REDACTED] – yet this evidence is ignored by the CMA in favour of an unsubstantiated assertion.

6 Buyer power

- 6.1 The CMA’s conclusion that there is a lack of countervailing buyer power in this market is difficult to understand and runs counter to the available evidence.
- 6.2 The CMA suggests that there is little evidence of retailers using any available levers to exercise buyer power to constrain cost price increases. However, this is because there have been no

⁴⁷ [REDACTED]

⁴⁸ The example, in paragraph 8.92 of the Provisional Findings, of issues apparently experienced by Pasante is irrelevant since it seems to relate to condoms [REDACTED] and is, in any case, extremely old (certainly dating back well before RB owned the Durex brand).

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cost price increases other than [REDACTED].⁴⁹ RB submits that there is now plenty of evidence to show that retailers have exercised buyer power here [REDACTED].⁵⁰

(a) [REDACTED]⁵¹

(b) [REDACTED]⁵²

(c) [REDACTED]⁵³

(d) [REDACTED] Superdrug has been pricing the new SKUs at between £3.99 and £4.49 (and promoted at £2.99) Sainsbury's is pricing the new SKUs at £4.00 and Tesco was also pricing at this level until recently (and promoted at a £3.00 price point). Morrisons and Asda have chosen to price all new SKUs at £4.50 (and Morrisons is currently promoting them at a £4.00 price point). [REDACTED]

6.3 Retailers are likely to react far more strongly to any attempt to raise prices post-merger. Moreover, RB has presented evidence of levers being used even when retailers have not been faced with cost price increases.⁵⁴

6.4 The CMA suggests that a retail price increase in 2013 demonstrates that retailers would not exercise their buyer power to constrain any price increase post-merger. Respectfully, it is impossible to understand the logic of this position. First, it is clear that there was no per ml cost price increase on a per ml basis. This is acknowledged by the CMA (for example, in paragraph 10.9) but the CMA continues to categorise the retailer response as accepting of a price change. This is an untenable position. There was no price increase to accept. The CMA seems to consider that because retailers did not request a reduction in the price per ml that this is evidence that they would not push back against an attempt to increase the price per ml. RB submits that one does not follow from the other. What retailers subsequently did with their retail prices - when there is no change in the cost price - is of no consequence to an assessment of buyer power at the wholesale level.

6.5 Finally, the CMA notes that it has been told by retailers that they would exercise buyer power in the face of an attempt by RB to raise prices post-merger. Retailers have mentioned [REDACTED]. Why does the CMA choose not to believe what the retailers are telling it about their own ability and incentive to push back against any unjustified price increase? The CMA points to some comments made in phase I (which should not be accorded much weight versus more considered comments made in phase II) as if to justify its view. However, as was revealed by the CMA's working papers sent to RB, the overwhelming majority of comments made by retailers were supportive of a finding of buyer power. This is not reflected in the Provisional Findings but it should not be ignored by the CMA.

6.6 The CMA also notes that retailers appear to have limited alternatives to the parties' brands but this misses the point – a retailer only needs one alternative – whether that be [REDACTED]. There are enough credible alternatives. [REDACTED]

49 [REDACTED]
 50 [REDACTED]
 51 [REDACTED]
 52 [REDACTED]
 53 [REDACTED]
 54 [REDACTED]

MEMO

TO: Competition and Markets Authority
DATE: 16 June 2015
FROM: Frank Maier-Rigaud and Felix Forster
SUBJECT: Response to Provisional Findings – Critique of CMA Analysis of Retail Price Increase of Durex Play Products

This memorandum analyses the Competition and Markets Authority’s (“CMA”) assessment of the impact on K-Y Jelly and Durex Play lubricant sales volumes of the increase in the per-ml retail price of certain Durex lubricants in March 2013 that the CMA conducted as part of its Phase II merger investigation into Reckitt Benckiser’s (“RB”) acquisition of the K-Y brand from McNeil Inc. (“the transaction”), a subsidiary of Johnson and Johnson (“J&J”).¹

This memorandum critically reviews the CMA’s estimation of the impact of the Durex Play retail price increase on K-Y Jelly and Durex Play sales volumes, including the software package X-13ARIMA-SEATS (“X-13”) used by the CMA for this estimation.² This review shows that the analysis conducted by the CMA is flawed and that the CMA’s use of X-13 is unsatisfactory, so that the corresponding conclusions are inadequate in several respects:

- The CMA made several errors in its analysis that materially affect the estimation results and that seriously call into question the overall accuracy of the CMA’s analysis;
- The CMA’s estimation results are not robust to plausible changes in the regression specifications; and
- The CMA has not provided sufficient reasoning or evidence with respect to the estimation approach selected.

As such, the CMA’s analysis of the retail price increase of Durex Play products in March 2013 does not support the hypothesized competition between K-Y Jelly and Durex lubricant products

¹ The CMA refers to the Durex products whose bottle size changed from 50ml to 60ml as “Durex Play” products. These products comprise Durex Play Feel, Aloe Vera, Passion Fruit, Sweet/Saucy Strawberry, Very/Cheeky Cherry, Tingle and Warming. See, for example, Provisional Findings of the Competition and Markets Authority on 22 May 2015, *Anticipated acquisition by Reckitt Benckiser Group plc of the K-Y brand in the UK*, Appendices and Glossary, Appendix E, para. 15.

² See the US Census Bureau website at <http://www.census.gov/srd/www/x13as/> for detail.

and, therefore, does not provide evidence for any finding of competitive effects resulting from the proposed transaction.

1. CMA Analysis Overview

1.1. Price Increase of Durex Play Products

In the first quarter of 2013, RB changed the bottle size of several Durex lubricant products from 50ml to 60ml. These products are referred to as the Durex Play products by the CMA and include Durex Play Feel, Aloe Vera, Passion Fruit, Sweet/Saucy Strawberry, Very/Cheeky Cherry, Tingle and Warming. They will also collectively be referred to as “Durex Play” products throughout this memorandum. [REDACTED].³ Retailers used this change in the products, however, to implement a retail price increase on a per-ml basis (i.e., disproportionately to the bottle size change) and this per-ml retail price increase broadly remained in place until the end of 2014.

In order to assess the hypothesized competition between the K-Y Jelly and Durex Play products, the CMA uses this event to investigate a potential link between the Durex Play per-ml retail price increase and the K-Y Jelly and Durex Play sales volumes.⁴ Specifically, the CMA seeks to determine if the K-Y Jelly sales volumes and the Durex Play sales volumes changed sufficiently during and after the Durex Play retail price increase to conclude that substitution from Durex Play products to K-Y Jelly occurred due to the price increase.⁵

1.2. Estimation Using X-13ARIMA-SEATS

The CMA uses a statistical software package called X-13ARIMA-SEATS to estimate a seasonal autoregressive integrated moving average (“ARIMA”) model that is designed to accommodate data in which observations are related over time in various ways, so that so-called “time-series” estimation techniques are required. Similar to other statistical software packages, the X-13 program is capable of estimating various different types of model specifications, of which the appropriate ones for the present context have to be selected. However, instead of giving appropriate consideration to a particular model selection including the exact functional form of variables, out of

³ [REDACTED].

⁴ The sales volume data for the analysis are sourced from Nielsen and cover the period from the week ending 12 February 2011 through to the week ending 3 January 2015.

⁵ It is important to note that such causal inference is generally impossible on the basis of the available data and the statistical techniques employed by the CMA. Nonetheless, it may be informative to consider regression analyses in this context, provided that any results are only interpreted as indicative.

the vast universe of possible specifications, and carefully testing the appropriateness of that selection, the CMA merely uses an automatic model selection procedure embedded in X-13 via the command AUTOMDL.⁶

While this automatic procedure performs an algorithm to determine the most appropriate model for the given data, the set of possible model specifications depends on a number of input parameters for the procedure and pre-defined options that may be altered by the user. The CMA, in its implementation only uses the default options for AUTOMDL. For clarity's sake, it should also be mentioned that none of the seasonal adjustment capabilities of X-13 were used for the analysis nor were the data adjusted for a trend, despite the fact that the CMA claims in its provisional findings that adjustment for seasonality and a trend was undertaken.⁷

In order to assess the effect of the Durex Play price rise in 2013, the CMA includes an intervention variable that is intended to estimate the extent to which K-Y Jelly and Durex Play sales volumes change following March 2013. Specifically, this is implemented via a “ramped” level shift variable (“Ramp”) that takes the value of negative three until April 2013, increases linearly to zero (one-unit increase per month) until July 2013 and remains zero thereafter. The CMA interprets the coefficient of this Ramp variable as the effect of the Durex Play price rise, even though this is inappropriate in at least some model specifications as will be detailed in Section 2 below.

Table 1 below shows the estimation results from the CMA's analysis as documented by the X-13 output files the CMA provided. The figures are taken directly from the CMA's output files for all products despite the fact that the analysis for some of the Durex Play products and thus the results reported in these output files are seriously flawed.⁸ This is described in more detail in the next section.

⁶ The AUTOMDL command implements an automatic model selection procedure based on Gomez, V. and A. Maravall (2001), “Automatic modeling methods for univariate series,” in: D. Pena, G. C. Tiao, and R. S. Tsay (Eds.), *A Course in Time Series Analysis*, New York, NY: J. Wiley and Sons. See U.S. Census Bureau (2015), *X-13ARIMA-SEATS reference manual*, page 65 for more detail.

⁷ Provisional Findings of the Competition and Markets Authority on 22 May 2015, *Anticipated acquisition by Reckitt Benckiser Group plc of the K-Y brand in the UK*, Appendices and Glossary, Appendix E, para. 12.

⁸ The model could not be estimated for Durex Play Aloe Vera, due to an estimation error in the AUTOMDL procedure. See the X-13 output for Durex Play Aloe Vera (file “durex_av.out”) included in the CMA backup materials received on 28 May 2015.

Table 1
Effect of Durex Play Price Rise on K-Y Jelly and Durex Play Sales
CMA Estimation



For each of the products shown in Table 1, the first row reports the seasonal ARIMA model specification as selected by the AUTOMDL procedure. These specifications notably differ for the various products despite the fact that the user-defined input parameters are identical, because the underlying data follow diverse patterns.

The second row in Table 1 contains the coefficient estimates for the Ramp variable – the variable of primary interest for this analysis. Standard errors are reported in parentheses below each coefficient and the level of statistical significance is indicated by asterisks next to the coefficient (***, ** and * for significance at the 1%, 5% and 10% level, respectively).⁹ On the basis of the estimated coefficients for the Ramp variable for the K-Y Jelly sales volume and the aggregated “Total” Durex Play sales volume, the CMA states in its Provisional Findings that “*there was a statistically significant increase in K-Y sales [...] and a statistically significant decrease in Durex Play sales [...] around and after the time of the Durex Play retail price increase.*”¹⁰ The CMA further concludes that “[*t*]his volume shift [...] is consistent with consumers switching from Durex to K-Y in response to a relative price change and with these two products competing.”¹¹

It is important to note already at this point that such causal inference is generally impossible on the basis of the available data and the statistical techniques employed by the CMA. Nonetheless, it may be informative to consider regression analyses in this context, provided that any results are only interpreted as indicative and not causal – e.g., in the sense of a “volume shift”. Beyond this general criticism, however, the CMA’s claims in its Provisional Findings report are based on incorrect data and the selected estimation approach has not been tested sufficiently to ensure that it is, in fact appropriate. As detailed in the following section, the CMA’s analysis therefore does not imply that the observed change in the K-Y Jelly sales volumes is due to substitution from Durex Play products and is thus not indicative of competition between the parties.

⁹ The X-13 output only reports statistics for the statistical significance of parameters for the Ramp variable and the constant, so that indicators for the level of statistical significance are also omitted for the other variables from the output tables included in this memo. Standard errors are included in parentheses for all parameter estimates.

¹⁰ See Provisional Findings of the Competition and Markets Authority on 22 May 2015, *Anticipated acquisition by Reckitt Benckiser Group plc of the K-Y brand in the UK*, Appendices and Glossary, Appendix E, para. 16.

¹¹ See Provisional Findings of the Competition and Markets Authority on 22 May 2015, *Anticipated acquisition by Reckitt Benckiser Group plc of the K-Y brand in the UK*, Appendices and Glossary, Appendix E, para. 16.

2. Critique of CMA Estimation

The CMA's analysis of the Durex Play products retail price increase suffers from several serious shortcomings that undermine its credibility as an important indicator for the postulated competition between the parties. First, the CMA's analysis contains numerous mistakes that materially affect the estimation results. Second, even small changes in the regression specification, for instance the introduction of a linear time trend, change the results in a meaningful fashion and the CMA provides no justification for its specification choice or the lack of consideration of alternative specifications. Therefore, the CMA's results are not correct and cannot be interpreted as evidence of competition between the parties.

2.1. CMA's Analysis Contains Numerous Mistakes that Materially Impact the Conclusions

The CMA made several errors in its analysis that materially affect the estimation results and render the CMA's conclusions about the competition between the parties on the basis of this analysis untenable. These mistakes include fundamental flaws such as using wrong data for the estimation concerning the aggregated Durex Play sales volumes and superficial errors such as stating the incorrect final model for the K-Y Jelly 50ml regression in the Provisional Findings report.

Several of these flaws in the CMA's analysis are related to the underlying data and were revealed through comparison of the various backup files with each other and with the statements made in the Provisional Findings report. The CMA provided three key sets of backup files for the analysis of the Durex Play retail price increase: X-13 output files for the estimations, on which its conclusions concerning the competition between the parties are based ("X-13 output files");¹² an Excel file that was described as containing the data series that were used for the analysis ("Excel backup");¹³ and Stata files used to generate the datasets for the analysis ("Stata backup").¹⁴ These backup files will be referred to in the below descriptions of the individual mistakes.

Excel Backup Does Not Contain Data Used for Analysis

¹² These were provided on 28 May 2015 in the zip-file "time series output files.zip" that contains 11 files for the application of the AUTOMDL command to the relevant data: K-Y Jelly 50ml (file "ky50.out"), 75ml (file "ky75.out") and 50ml and 75ml (file "ky50.75.out"); and Durex Play Feel (file "durex_play.out"), Aloe Vera (file "durex_av.out"), Passion Fruit (file "durex_pf.out"), Sweet/Saucy Strawberry (file "durex_st.out"), Very/Cheeky Cherry (file "durex_ch.out"), Tingle (file "durex_tin.out"), Warming (file "durex_wa.out") and the aggregated total for all Durex Play products (file "durex_tot.out").

¹³ This file titled "Durex and KY Price_ml Vol_ml for time series analysis.xlsx" was provided on 28 May 2015.

¹⁴ These files were provided on 28 May 2015 in the zip-file "Durex price rise_RB.zip".

In addition to the program code and corresponding output statistics, the X-13 output files report the underlying data that are used for the estimation. Surprisingly, the data contained in the X-13 output files do not correspond to the data as reported in the Excel backup for the Durex Play sales volumes. The fact that the corresponding data from the X-13 output files for K-Y Jelly do correspond to the data from the Excel backup suggests that the Durex Play sales included in the Excel backup are incorrect even from the CMA's perspective.

Incorrect Data for Aggregated Durex Play Sales

In addition to the inconsistency with the Excel backup that applies to all Durex Play sales, the data reported in the X-13 output file for the aggregated Durex Play sales also do not match the sum of the individual Durex Play sales from the respective product-specific X-13 output files. They also do not correspond to the Excel backup or to the data generated by the Stata backup. The latter discrepancy is much more fundamental, because it implies that the CMA's complete analysis of the aggregated Durex Play sales are based on wrong data and thus the conclusions drawn on this basis cannot be sustained. As will be shown in Table 2 below, using the correct data – generated simply by summing the Durex Play sales of the individual products from the CMA's Stata backup – materially changes the results and does not suggest substitution from Durex Play products to K-Y Jelly.

Incorrect Data for Durex Play Passion Fruit Sales

Similar to the aggregated Durex Play sales, the X-13 output file for Durex Play Passion Fruit contains data that do not correspond to the Stata backup. Comparison of these data to the other X-13 output files, however, revealed that the data in the Durex Play Passion Fruit X-13 output file are, in fact, the Durex Play Sweet/Saucy Strawberry sales. That is, the CMA has not presented any regression results for Durex Play Passion Fruit but included the Durex Play Sweet/Saucy Strawberry results twice, mistaking one of these duplicates for the Durex Play Passion Fruit output.

Inclusion of Incomplete Months in Analysis

Throughout its analysis, the CMA has generated monthly time series on the basis of the weekly retail sales data as reported by Nielsen, including all weeks available in the raw data. The Nielsen data, however, cover the period from the week ending 12 February 2011 through to the week ending 3 January 2015, so that February 2011 and January 2015 do not include full months and therefore cannot be relied upon for the analysis. This may be more obvious for January 2015, where only three days of the month are actually available. While the data underlying February 2011 cover a longer period of the month, however, these also include Valentine's Day – [☞] – so that

the average weekly sales will be overstated by omitting the week of lower sales at the beginning of the month.

Inaccurate Presentation of Results

Beyond these fundamental errors in the data, the CMA also misinterprets the results from the analysis. The specification for K-Y Jelly 50ml, for example, is not the one reported in the CMA's Provisional Findings. The CMA's Appendix E to the Provisional Findings report states that “[f]or the 50ml pack size series a log ARIMA (0 1 1)(0 1 0)12 model was fitted” when, in fact, the selected specification is a log ARIMA(1 0 0)(1 0 0)12 model.¹⁵ Furthermore, the CMA interprets the estimated coefficient for the Ramp variable of the stated ARIMA model – i.e., (0 1 1)(0 1 0) – as “a 10% change in the underlying level of sales volumes between April and July 2013.”¹⁶ In the context of the stated ARIMA model, this interpretation is factually incorrect, because the Ramp variable would only estimate the change in the sales growth rate between April and July 2013 due to differencing required for the first-order integrated model.¹⁷ These mistakes leave the impression that the results have not been treated with the required caution. It is therefore not possible to rely on the CMA's interpretation even if the underlying data and analysis were correct, which they are not.

The CMA further claims that in the analysis carried out for the aggregated Durex Play sales volumes “[t]he level shift in the fitted model is statistically significant and estimates an 11% fall in the underlying level of sales volumes between April and July 2013.”¹⁸ This claim is not only incorrect due to the use of the wrong data as detailed above, it also is highly misleading. Even the CMA's own X-13 output files show, at best, a mixed picture as can be seen in Table 1 above. The CMA only estimates negative coefficients for the Ramp variable that are statistically significantly different from zero for Durex Play Feel and Sweet/Saucy Strawberry. The Ramp variable coefficient estimates in the regressions for Durex Play Very/Cheeky Cherry, Tingle and Passion Fruit are not statistically different from zero, although the third of these findings would have been obscured by the CMA's confusion of the Durex Play Passion Fruit sales data with those for

¹⁵ The number 12 at the end of the specification is omitted in other parts of this memorandum for consistency with the X-13 reporting standards. It indicates the frequency of the seasonal ARIMA structure and is assumed to apply throughout. See Provisional Findings of the Competition and Markets Authority on 22 May 2015, *Anticipated acquisition by Reckitt Benckiser Group plc of the K-Y brand in the UK*, Appendices and Glossary, Appendix E, footnote 10.

¹⁶ Provisional Findings of the Competition and Markets Authority on 22 May 2015, *Anticipated acquisition by Reckitt Benckiser Group plc of the K-Y brand in the UK*, Appendices and Glossary, Appendix E, footnote 10.

¹⁷ See Section 2.3 for more detail.

¹⁸ Provisional Findings of the Competition and Markets Authority on 22 May 2015, *Anticipated acquisition by Reckitt Benckiser Group plc of the K-Y brand in the UK*, Appendices and Glossary, Appendix E, para. 15.

Sweet/Saucy Strawberry. Finally, the parameter estimate in the Durex Play Warming regression is statistically different from zero but positive. These diverse results among the products in the Durex Play range, all of which underwent the above mentioned bottle size change, suggest that the CMA's analysis is not a suitable basis for concluding that there exists meaningful competition between the parties.

Corrected Analysis

Table 2 below reports the estimation results for regressions that employ the same automatic model selection process as used by the CMA but correct for the above mentioned mistakes. That is, these regressions rely on the data generated by the Stata backup for complete months based on the underlying weekly Nielsen data (i.e., eliminating February 2011 and January 2015). As is evident from a comparison to Table 1 above, these results differ substantially from the results the CMA based its conclusions on.

Table 2
Effect of Durex Play Price Rise on K-Y Jelly and Durex Play Sales
Corrected CMA Estimation

[✂]

Most importantly, the estimation results for the aggregated Durex Play sales do not support any meaningful change in the total Durex Play sales in conjunction with the bottle size change and corresponding retail level price increase. Specifically, the parameter estimate for the Ramp variable is not statistically significantly different from zero and these results, in stark contrast to the erroneous results from the CMA's analysis, therefore do not support the notion of substitution between Durex Play products and K-Y Jelly as a result of the Durex Play price increase.

Furthermore, there are several other noteworthy results on the basis of the corrected data. First, Table 2 includes the results for Durex Play Passion Fruit that were previously confused with those for Durex Play Sweet/Saucy Strawberry. These results, similar to those for the aggregated Durex Play series, do not support the CMA's conclusion of competition between the parties' lubricant products. Second, the corrections also prevented the estimation error that previously occurred in the context of the Durex Play Aloe Vera series. The estimated coefficients for the Ramp variable for this product and for Durex Play Very/Cheeky Cherry are negative and statistically significantly different from zero. The Ramp variable coefficient estimates in the regression for Durex Play Tingle is not statistically different from zero (similar to the regression for Durex Play Passion Fruit) and the parameter estimate in the Durex Play Warming regression is still positive and statistically different from zero. Overall, these results based on the CMA's methodology and the corrected data do not support the CMA's conclusion of competition between the parties. The

results for the individual products are, at best, mixed and the regressions based on the aggregate Durex Play sales do not provide evidence of substitution between Durex Play products and K-Y Jelly.

2.2. Analysis Not Robust to Small Changes in the Inputs for the Model Selection Procedure

The CMA's analysis employs an automatic model selection procedure via the command AUTOMDL in the X-13 software as detailed in Section 1 above.¹⁹ Among other parameters this procedure takes the variables included by the user in the model as given and any changes to those variables, of course, have an impact on the model selection.²⁰ As will be described below, even relatively small adjustments in these fixed variables yield changes in the model selection and the corresponding results that have a meaningful impact on the findings. In particular, some of the robustness checks conducted in this context render the coefficient on the intervention variable not significantly different from zero and thereby show that the impact of the Durex Play retail price increase as presented by the CMA cannot be relied upon.

Linear Time Trend

The choice whether or not to include a linear time trend in the regression specification is a fixed component of the AUTOMDL command used by the CMA. That is, the automatic model selection procedure takes the inclusion of a linear time trend as given – similar to the treatment of other fixed variables – and performs the model selection on that basis. The inclusion of the linear time trend obviously affects the model fit and thereby the information criteria used for the model selection. It therefore is no surprise that in the present context the inclusion of a linear time trend changes the specifications selected by the AUTOMDL command and leads to meaningfully different results for some lubricant products.

Table 3 below shows the results for the model specifications selected by AUTOMDL with and without including a time trend.²¹ It focuses on those specifications, where adding the linear time trend variable led to substantially different findings, even though changes in the selected model occurred more broadly.

¹⁹ See U.S. Census Bureau (2015), *X-13ARIMA-SEATS Reference Manual*, page 65.

²⁰ These variables will be referred to as “fixed” for the remainder of this memorandum.

²¹ The time trend was implemented by including the predefined variable CONST in the REGRESSION statement.

Table 3
Robustness Check for Inclusion of Linear Time Trend in CMA Estimation



As is evident from Table 3, adding a linear time trend as a fixed variable has implications for the selection of the models for Durex Play Sweet/Saucy Strawberry and Durex Play Very/Cheeky Cherry sales. The selected ARIMA model for Durex Play Sweet/Saucy Strawberry changes from (1 0 0) to (0 1 0) – i.e., from first-order autoregressive (non-seasonal) to first-order integrated (non-seasonal) – and the selected ARIMA model for Durex Play Very/Cheeky Cherry changes from (1 0 1) to (0 1 1) – i.e., from first-order autoregressive, first-order moving average (non-seasonal) to first-order integrated, first-order moving average (non-seasonal). Notably, the model specifications with the linear time trends have Akaike Information Criteria (AIC) and corrected AIC (AICC) that are lower than the corresponding measures from the specification excluding the linear time trend. The smaller AIC/AICC indicates the preferred model, so that the specification with the linear time trend is preferred in this context. Importantly, in connection with this model change, the estimated coefficient of the Ramp variable ceases to be statistically significantly different from zero (it was significantly different from zero in the original CMA estimations). These results imply that, contrary to the CMA’s conclusions, the Durex Play retail price increase did not coincide with a statistically significant reduction in Durex Play Sweet/Saucy Strawberry or Very/Cheeky Cherry sales. It follows that any supposed increase in K-Y Jelly sales around the time of the Durex Play price increase could not be interpreted as the result of substitution away from Durex Play Sweet/Saucy Strawberry or Very/Cheeky Cherry on the basis of these estimations.

2.3. Appropriateness of the Analysis Not Sufficiently Considered

The CMA’s analysis of the Durex Play price increase in 2013 relies on a number of assumptions, especially concerning the model specification, that it neither discusses nor justifies in any way. In fact, the CMA appears to rely on the automatic model selection via X-13 without having confirmed that the underlying assumptions are appropriate in the present context. Given the changes in the findings that can result from relatively simple adjustments in the user-defined inputs, e.g., as presented in Section 2.1 above, this approach is not tenable.

Maximum Orders of Differencing and ARMA Terms

In its analysis of the Durex Play price increase, the CMA relies on a number of default options for parameters that affect the automatic model selection via the AUTOMDL command. These notably include the maximum order of integration that is tested and that can be accommodated via differencing as well as the maximum order of the AR and MA terms. The default for all these is

second order for regular integration and first order for seasonal integration.²² Given that only a limited number of models will be compared in the selection procedure as a result, the ultimate model choice is restricted considerably.

This lack of consideration for non-default parameter choices seems especially surprising in the context of the regular AR and MA orders. A natural choice for monthly data with potentially seasonal effects would be terms of maximum twelfth or at least third order, representing annual or quarterly effects, respectively. The default value of second-order terms is therefore likely to be inappropriate. Even if the most appropriate model should have such a low AR and MA order, comparing a larger number of models would result in a more robust finding.

Ramp Variable

In addition to default parameters for the AUTOMDL command, the CMA also relies on the standard ramp intervention variable included in X-13 to measure the impact of the Durex Play price increase on the K-Y Jelly and Durex Play sales volumes. While the CMA does provide a superficial justification for the length of the “ramped” period of the intervention variable, it is clear that it has given no meaningful consideration to the exact definition of the variable.²³ The CMA does not provide any evidence in favour of the selected model, e.g., in the form of different specification tests, and simply relies on the default variable definition as included in the X-13 software.

The importance of considering the exact variable definition becomes especially obvious when comparing the interpretation of its coefficients in a non-integrated and an integrated model. Both of these model types are relevant in this context as the AUTOMDL command automatically selects the appropriate order of integration (e.g., no integration for K-Y Jelly 50ml and first-order integration for Durex Play Feel in the CMA’s analysis). In the non-integrated case, the coefficient estimate can be interpreted as the percentage change of sales volume between the period until April 2013 and from July 2013 onwards.²⁴ In the integrated case, however, the Ramp variable roughly estimates the percentage growth in sales volume between April 2013 and July 2013. This is the

²² See U.S. Census Bureau (2015), *X-13ARIMA-SEATS reference manual*, page 66.

²³ The CMA mentions that “time span of the ramped intervention variable is intended to reflect the lagged change in stock and implied prices as the bigger Durex personal lubricant pack sizes are introduced by retailers.” Provisional Findings of the Competition and Markets Authority on 22 May 2015, *Anticipated acquisition by Reckitt Benckiser Group plc of the K-Y brand in the UK*, Appendices and Glossary, Appendix E, footnote 10.

²⁴ The parameter estimate would need to be multiplied by three for this interpretation to account for the fact that the Ramp variable changes by three units, from negative three to zero, between the two periods.

case, because AUTOMDL estimates a differenced model for integrated time series, so that the Ramp variables “flat” portions until April 2013 and from July 2013 onwards are zero (they are “differenced away”).

Misspecification Tests

The CMA employs standard significance tests to establish that their null hypothesis cannot be rejected. Given the limited maximum lag order mentioned above, it is doubtful whether the final model is correctly specified. Any interpretation of parameter estimates and related tests based on a regression analysis are only valid when the underlying assumptions are fulfilled. It should therefore be established that the coefficient estimates are unbiased and distributed as stationary white noise, so that the standard errors are appropriate.

In the context of the discussed “black box” procedure with a maximum of two regular MA and two regular AR terms, it would be especially important to test for any omitted variables, as the limited lag order could result in an underspecified model excluding variables with significant explanatory power. If this is the case, coefficient estimates from the regression are biased and further explanatory variables, such as a deterministic term, further AR or MA terms or additional non-deterministic fixed variables would need be considered for inclusion in the model.

A crucial assumption of the performed regressions is that the residuals are a stationary white noise process. While it is not necessary for them to be Gaussian, testing this stronger hypothesis would provide evidence that the weaker hypothesis is satisfied. For this hypothesis, a Jarque-Bera test may be performed.²⁵ Testing the hypothesis that the residuals are white noise stationary may be done via a Ljung-Box test.²⁶ Should this test fail, one would have to re-specify the model by, for example, including additional variables or choosing a more appropriate functional form.

Ignoring potential violations of other assumptions of the regression, such as residual autocorrelation or heteroskedasticity would result in a non-normal distribution of the coefficient estimates. This issue may be dealt with by including further explanatory variables, for example additional AR terms when evidence in favour of residual autocorrelation is found, or by adjusting

²⁵ See Jarque, C. M. and A. K. Bera (1981), *Efficient tests for normality, homoscedasticity and serial independence of regression residuals: Monte Carlo evidence*, in *Economics Letters*, Vol. 7(4), pp. 313-318.

²⁶ See Ljung, G. M. and G. E. P. Box (1978), *On a measure of lack of fit in time series models*, in *Biometrika*, Vol. 65, pp. 297-304.

the standard errors of the significance test, like those proposed by Newey and West (1987) for residual autocorrelation or White (1980) for residual heteroskedasticity.²⁷

3. Conclusion

In conclusion, the CMA's analysis of the effect on KY Jelly and Durex Play sales volumes of the Durex Play price increase in 2013 cannot be used as the basis for its view on the closeness of competition between the parties. The CMA's analysis and presentation of the results is flawed in a number of aspects and does not show the decrease in Durex Play sales volumes that is described in Appendix E of the CMA's Provisional Findings. Furthermore, the CMA's analysis relies on an automatic model selection procedure that has been insufficiently tested for appropriateness in the present context. Robustness tests involving only minor adjustments, for example to the fixed variables included in the regressions, yield substantial differences in some results. For these reasons, the CMA's conclusions of the effect of the Durex Play retail price increase on K-Y Jelly and Durex Play sales are not tenable and must be rejected as evidence for any hypothesized competition between the parties.

²⁷ See, for instance, Newey, W. K and K. D. West (1987), *A simple, positive semi-definite, heteroskedasticity and autocorrelation consistent covariance matrix*, in *Econometrica*, Vol. 55(3), pp. 703-708 and White, H. (1980), *A heteroskedasticity-consistent covariance matrix estimator and a direct test for heteroskedasticity*, in *Econometrica*, Vol. 48(4), pp. 817–838.

MEMO

TO: Competition and Markets Authority
DATE: 16 June 2015
FROM: Frank Maier-Rigaud and Felix Forster
SUBJECT: Response to Provisional Findings – Critique of the Indicative Price Rise Calculation

This memorandum analyses the Competition and Markets Authority’s (“CMA”) use of the indicative price rise (“IPR”) measure as part of its Phase II merger investigation into Reckitt Benckiser’s (“RB”) acquisition of the K-Y brand from McNeil Inc. (“the transaction”), a subsidiary of Johnson and Johnson (“J&J”).

The use of IPR in merger cases is an accepted measurement to gain an initial assessment of the incentives of the merging parties to raise prices. As the abbreviation suggests, the measure is merely “indicative” and not a substitute for the more comprehensive analysis required for gauging the potential effects of a transaction. In addition, the fact that the IPR relies on results from a highly questionable survey conducted at retail level taints the use of IPR in this case. Furthermore the CMA has not presented the IPR calculations in the context of a full assessment of countervailing buyer power, the potential for new entrants to enter the grocery retailer and national pharmacy chains, all analyses that are needed to properly interpret the IPR.

1. IPR Calculation Relies on Unreliable Diversion Ratios at Retail Level

The IPR is only as reliable as the inputs used for its calculation. This is particularly problematic in the present case, as the IPR calculation relies on diversion ratios at retail level that have been derived from a highly questionable consumer survey. The survey is subject to a variety of flaws that were highlighted in the NERA Annex to RB’s 20 April 2015 submission to the CMA: “2015.04.20 Critique of the CMA Survey”, as well as in the NERA Annex - “2015.06.16 Critique of the CMA Survey”.

These documents outline, in particular, the fact that the CMA’s consumer survey is unlikely to be representative of the population of interest for the diversion ratios, namely the K-Y and Durex lubricant purchases. The documents also list a variety of other serious concerns with the survey (in addition to those set out in RB’s main response to the Provisional Findings) that cast further doubt on its reliability and the resulting findings.

In addition, the survey was conducted at retail level. The CMA attempts to defend the use of data from the retail level to inform an analysis of competition at the wholesale level by repeatedly asserting throughout Appendix F of the Provisional Findings that this is acceptable due to the strong link between retail and wholesale level pricing. As demonstrated in the NERA Annex - “2015.06.16 Retail prices, Wholesale prices and Buyer Power”, however, there is no such strong link. This fact alone severely undermines the utility of any IPR analysis conducted by the CMA based on data from the consumer survey.

2. IPR as A Static Measure with Little Account for Other Factors

In addition to the fact that the IPR calculation relies on questionable input, the IPR itself has to be used with caution. The IPR assesses the incentive for two merging parties to increase prices post-merger owing to the removal of a competitive constraint in the market. The CMA and its predecessors have correctly used IPR analysis as a way to screen transactions that warrant a more detailed investigation. It is surprising, however, that the CMA resorts to an IPR analysis as an element of proof in a Phase II investigation, given that IPR analysis was never intended nor designed to be an adequate substitute for a full analysis of the market, not least because it fails to account for other important features such as countervailing buyer power and entry. Instead it is typically used at the beginning of an investigation to indicate if there is a need for further analysis.

The OECD, has stated that pricing pressure indices “[o]mit important competitive constraints, such as the threat of entry, repositioning, non-price responses and so on. Note that the UPP and GUPPI do not claim to predict post-merger price increases and so this is not a criticism of these measures, but more a reminder of the relatively limited claim that can be made using them. They provide a useful measure of the incentive for the merging parties to raise prices in a static sense i.e. ignoring the longer term reactions of competitors. But this is a criticism of the IPR approach, which does claim to provide an estimate, albeit an “illustrative” one, of the post-merger price rise.”¹ Furthermore, the CMA’s own official position as taken by its predecessors the Office of Fair Trading (“OFT”) and the Competition Commission (“CC”) states that “[...]the UK authorities recognise the IPR methodology has significant limitations and a limited scope of interpretation.”² In light of this, it seems problematic to place more than limited weight on the IPR calculations especially at the end of the second phase of the merger investigation.

3. [✂]

¹ OECD (2011), *Economic evidence in merger analysis*, page 41.

² OECD (2011), *Economic evidence in merger analysis*, page 224.

MEMO

TO: Competition and Markets Authority
DATE: 16 June 2015
FROM: Frank Maier-Rigaud and Felix Forster
SUBJECT: Response to Provisional Findings – Critique of the CMA Survey

This memorandum analyses the Competition and Markets Authority’s (“CMA”) reliance on the findings from the TNS survey conducted as part of its Phase II merger investigation into Reckitt Benckiser’s (“RB”) acquisition of the K-Y brand from McNeil Inc. (“the transaction”), a subsidiary of Johnson and Johnson (“J&J”).

Surveys can be a useful tool to assess consumer behaviour in merger investigations. When not carefully devised and implemented, however, surveys can severely distort the competitive assessment of a merger and lead to the wrong conclusions being drawn. While it is understood that the CMA needed to make certain compromises regarding the quality of the survey put in place, in light of the short time frame available, the TNS survey exhibits several fundamental flaws that cast severe doubt on the reliability of its findings and therefore also on the conclusions that the CMA draws on the basis of these findings. Given these flaws, the survey is unfit to serve as a reliable source of empirical evidence for the purpose of assessing consumer behaviour and, therefore, ultimately cannot be used to inform the CMA’s view of the competitive impact of the proposed transaction.

This memorandum focusses in particular on the lack of representativeness of the survey. This issue was highlighted in RB’s initial response to the CMA’s survey and subsequently commented on by the CMA in Appendix D of the Provisional Findings. The memorandum also sets out some of the inconsistencies in the CMA’s approach when drawing inferences from stated preferences survey data.

1. General Remarks

1.1. Introduction

In its Provisional Findings, the CMA has defended the sampling methodology used in the TNS Survey. The CMA states that a representative sample of Durex and K-Y purchasers was taken from a representative sample (representative with respect to certain characteristics chosen by TNS) of the UK population. However, this approach contradicts the CMA’s own survey guidelines given

that this sample is not representative of the population of Durex and K-Y users, the population of interest in this case. This necessarily follows from the fact that the characteristics according to which the original sample is supposedly representative are not the characteristics that are relevant in choosing a representative sample of Durex and K-Y users. The sampling methodology employed by TNS, and presumably sanctioned by the CMA, almost certainly leads to unreliable results that contradict the market knowledge of all market participants and are also in stark contrast to all other evidence presented to the CMA as part of the merger investigation.

1.2. The Need to Draw a Representative Sample From the Correct Population of Interest

A sample can be called representative for the population of interest (or target population) if it is drawn without bias from the population of interest and, thus, if it reflects the relevant characteristics of the population of interest. The concept of representativeness always refers to an underlying target population and has no meaning in itself.¹ In the CMA’s own guidelines, the CMA correctly states that

“if the behaviours and attitudes of interest in the population are expected to vary systematically with certain characteristics, then the sample selected should have broadly the same composition by these characteristics as does the population.”²

This statement points to the major challenge that needs to be overcome in order to ensure the representativeness of any survey. Since, in practice, the composition of the target population in terms of certain relevant characteristics is commonly unknown, these features cannot serve as an indicator for the representativeness of the sample. If this were not the case and the relevant characteristics were already completely known, there would be no more reason to conduct a survey. As a result, surveys are conducted to first shed light on specific characteristics of a target population.

That is also the reason why the term ‘representativeness’ is often used hesitatingly in the statistical literature.³ In practice, survey companies and professionals deal with this somewhat tautological

¹ Even in so-called exhaustive samples (samples which cover the entire population) statisticians refer to some kind of super population interpreting the finite observable population as a sample of an infinite superpopulation. (See among others Hartley A. and Sielken, R. L. Jr. (1975), *A "super-population viewpoint" for finite population sampling*, in: *Biometrics*, Vol. 31, No. 2, pp. 411-422. For a brief history of the notion of an exact sampling population and how it relates to representativeness and social institutions refer to Hacking, I (2008), *The taming of chance*, Cambridge University Press.

² Office of Fair Trading and Competition Commission (March 2011), *Good practice in the design and presentation of consumer survey evidence in merger inquiries*, para. 2.7. Para. 2.8 further specifies that the CMA also has a duty to “document how the sample matches the population with regard to these characteristics” for the survey to be considered reliable.

relationship between ‘representative’ samples (that are required to be able to learn about the characteristics of the target population) and the target population (the characteristics of which we need to learn in order to assess the representativeness of any sample) by focussing on the sampling mechanism to ensure representativeness of a sample. Only if this sampling mechanism guarantees that every single observation of the target population has exactly the same probability to be drawn in the sample, can a truly representative sample of the target population without any prior (and potentially wrong) knowledge of certain population characteristics be generated.

Therefore, in statistics, the representativeness of a sample is mostly discussed in the context of the underlying sampling mechanism and, for each specific target population, a tailored sampling mechanism is required. This is precisely because the information about the theoretical definition of the underlying target population is the only reliable source of knowledge in this kind of statistical analysis. Devising an appropriate sampling mechanism without first properly identifying the target population or population of interest is therefore impossible.

1.3. The Failure of the CMA to Correctly Sample the Target Population

In the present case the target population consists of all customers who have purchased Durex or K-Y products in the UK, not, as the CMA assumes, all customers who have purchased Durex and K-Y products within a representative sample of the UK population. Against the background discussed in the previous paragraphs, the CMA states that in “*many merger cases a sampling frame is constructed directly from a comprehensive customer list of the target population.*”⁴

In the present context, the CMA could have, for example, surveyed purchasers of personal lubricants at grocery and national pharmacy stores to obtain a sample of the CMA’s population of interest.⁵ Instead, however, the CMA concedes that in “*this case a list was not available and an alternative approach was used,*”⁶ thereby implying that a sampling mechanism designed for the entire UK population automatically generates, quasi as a by-product, a representative sample for the population of interest in the present case. This, however, is an extremely bold assumption that

³ Schouten, B., Cobben, F., Bethlehem, J. (2009), *Indicators for the representativeness of survey response*, in: *Survey Methodology*, Vol. 35, No. 1, pp. 101-113.

⁴ Provisional Findings of the Competition and Markets Authority on 22 May 2015, *Anticipated acquisition by Reckitt Benckiser Group plc of the K-Y brand in the UK*, Appendices and Glossary, Appendix D, para. 40.

⁵ This was for example the approach used in the Sports Direct/ JJB Inquiry (Decision of the Competition Commission from 16 March 2010, *A report on the acquisition by Sports Direct International plc of 31 stores from JJB Sports plc*, para 6.4.) or in the ASDA/Netto inquiry (Decision of the Office of Fair Trading from 20 October 2010, *Anticipated acquisition by Asda Stores Limited of Netto Stores*, Annex A.12), where customers were interviewed as they exited the relevant stores.

⁶ Provisional Findings of the Competition and Markets Authority on 22 May 2015, *Anticipated acquisition by Reckitt Benckiser Group plc of the K-Y brand in the UK*, Appendices and Glossary, Appendix D, para. 41.

only holds if the sample mechanism for the UK population ensures representativeness with respect to all relevant characteristics in the present case.⁷ This is extremely unlikely and, as all other evidence contradicts the results of the survey, it seems close to certain that this assumption is not met. Furthermore, in order for the survey evidence to be characterized as reliable, based on the CMA's own guidelines, the CMA should "*document how the sample matches the population with regard to these characteristics*" not simply assume implicitly that it does.⁸

It follows that the results of the survey presented by the CMA cannot be considered representative of the behaviour of Durex and K-Y customers in the UK and therefore cannot provide the basis for any analysis or, as in this case, constitute the most important evidence on which the CMA's decision is based. There is no avoiding the fact that a comprehensive list of purchasers, as mentioned by the CMA itself, is necessary to draw reliable conclusions about the population. Only a random sample from this comprehensive list (representing the target population) guarantees a representative survey and, hence, allows characteristics of the whole population of Durex and K-Y purchasers to be properly estimated.

As will be set out below, the sample mechanism put forward by the CMA does not allow any conclusions about the population of interest to be drawn. In addition, the memorandum highlights shortcomings associated with stated preferences and sensitive questions, two well-known survey problems, and illustrates how these shortcomings further weaken the validity of the empirical results presented by the CMA.

2. Representativeness of the TNS Survey

In the previous section the relationship between the concept of representativeness and the sampling mechanism was discussed. It was clarified that only a random sample from the target population guarantees a representative survey and avoids relying on prior (potentially wrong) assumptions about the population of interest with regards to certain characteristics that, in turn, will impact the calculation of diversion ratios. In this section, we briefly contrast the sampling mechanism

⁷ The logical mistake is easily demonstrated if one considers a sample X ensuring representativeness with respect to feature x and then assumes that all individuals with feature y are taken from this sample population. The fact that the population from which all individuals with feature y are extracted (here sample X) is also representative of the total population of individuals with feature y can only be assumed if feature x is a perfect proxy for feature y, i.e. if the sampling methodology used to draw the sample X is representative with respect to feature x and at the same time also with respect to feature y. The CMA has neither provided evidence that this is the case, nor shown any sign that it understands that this would need to be the case in order for the sampling method used to be appropriate.

⁸ Office of Fair Trading and Competition Commission (March 2011), *Good practice in the design and presentation of consumer survey evidence in merger inquiries*, para. 2.8.

employed in the TNS survey with the correct sampling mechanism suggested above and referred to by the CMA itself.

The TNS sampling methodology is designed to draw a random sample from the UK population.⁹ The sampling therefore reflects available and reliable prior knowledge about the target population, such as geographic distribution of settlement areas, male/female quotas, urban-rural distribution, working status and presence of children. That is, interviewers ensure that the resulting sample reflects these already known features of the UK population, defined as the population of interest.

However, even if the population of interest were the UK population, this sampling mechanism, cannot guarantee the representativeness with respect to education level, income and health status not to mention the representativeness with respect to religious feelings, sexual preferences and migrant background, factors that potentially affect the usage of lubricants. The fact alone that interviews were conducted between 2pm and 8pm in the afternoon might induce a bias towards the underrepresentation of high income, more mobile, single households working longer hours.

Other subgroups could easily be added to this list. The CMA itself, for example, mentions the problem that under-aged consumers and people above 65 years of age are systematically excluded from the survey. Both groups, however, are sexually active and account for a non-negligible share of overall spending in the UK and, thus, are relevant for the calculation of diversion ratios in the lubricant market.¹⁰ The conclusion drawn by the CMA that this induces only a small coverage bias is scientifically untenable and lacks any empirical foundation.¹¹ The potential impact of these examples on lubricant purchase patterns is obvious and so are the likely repercussions on the representativeness of the survey for the specific group of lubricant purchasers, the population of interest in the present case.

Once again, since the representativeness of a survey is difficult to prove empirically without reliable prior knowledge about the target population, meaningful survey evidence has to rely on a well-designed sampling mechanism to ensure the representativeness of the resulting sample. As

⁹ The ideal starting point for this purpose would be a comprehensive list of all UK residents and a random sample from this list. Obviously, even this list would be hard to generate and a random sample would induce immense travel time between the interviews.

¹⁰ This aspect is the more important as both groups might represent the extremes of a continuum between fun oriented and medically induced lubricant usage associated with different brands such as Durex and K-Y, respectively.

¹¹ The CMA argues that “We have also taken the view that the 18 to 65 age group captures a sufficiently large proportion of the target consumer base for this under-coverage bias not to undermine the validity of the survey results” Provisional Findings of the Competition and Markets Authority on 22 May 2015, *Anticipated acquisition by Reckitt Benckiser Group plc of the K-Y brand in the UK*, Appendices and Glossary, Appendix D, para. 45. This assertion, however, itself has to rely on a representative sample of the population of interest.

mentioned earlier, this could have been achieved by questioning lubricant purchasers following completion of a lubricant purchase. Given that the TNS sampling methodology described above is targeted at the wrong population of interest, however, it necessarily fails to generate representative results.¹² To ensure the representativeness of the survey for the population of interest in the present case, the CMA should have followed its own guidelines. According to the CMA, “*reliable consumer survey evidence should therefore:*

- *draw upon existing research evidence to demonstrate the characteristics of consumers with regard to which a sample should be representative; and*
- *document how the sample matches the population with regard to these characteristics.”¹³*

In summary, the CMA neither properly identifies the population of interest, nor employs a suitable sampling mechanism, nor provides any evidence for the reliability of the resulting sample according to its own guidelines. Hence, the “evidence” generated by the survey is extremely unlikely to shed meaningful light on the present transaction and is certainly unsuited to form one of the most important sources of evidence for the CMA’s conclusions.¹⁴

3. Stated Preferences and Sensitive Questions in Surveys

As pointed out in the previous section, a representative survey has to rely on a sampling mechanism guaranteeing that every single observation of the target population has exactly the same probability to be included in the sample. In the present case this means that the target population is defined as a comprehensive list of all K-Y or Durex purchasers. Yet, even if the TNS Omnibus survey were representative in the sense defined above, another severe problem would further weaken the conclusions that can be drawn from the survey data presented by the CMA. The CMA’s survey relies on stated preferences (reported behaviour) instead of revealed preferences (actual behaviour), more specifically, on stated preferences about a sensitive issue, the purchase of lubricants.

The usage of lubricants is more or less associated with sexual activity or medical issues, depending on age cohorts and social background. That is why people might avoid reporting usage of such

¹² This is of course not changed by restricting the sample to all Durex and K-Y users.

¹³ Office of Fair Trading and Competition Commission (March 2011), *Good practice in the design and presentation of consumer survey evidence in merger inquiries*, para. 2.8.

¹⁴ The CMA states that: “*We consider the TNS survey to be an important piece of evidence showing that the parties are competitors.*” Provisional Findings of the Competition and Markets Authority on 22 May 2015, *Anticipated acquisition by Reckitt Benckiser Group plc of the K-Y brand in the UK*, page 49, para. 8.77.

products. The CMA itself acknowledges this problem and stresses the use of laptops passed to the respondent to ensure the confidential treatment of such sensitive information.¹⁵ In the present case, however, this issue is relevant in at least two respects:

First, regarding past purchases people might misreport the frequency of purchases and gravitate towards well-known brands. The CMA itself mentions the fact that the number of respondents selecting Ann Summers may have been ‘*overstated*’ for this reason.¹⁶

Second, and more importantly in the present case, regarding prospective purchases, respondents might tend to underestimate the impact of social control in buying lubricants in grocery or national pharmacy stores while the anonymous interview situation heightens self-presentation or self-assessment. For example, a respondent might claim to purchase a particular lubricant product in the survey that he/she would not be willing to buy in a supermarket due to embarrassment over overt packaging. This aspect is of particular importance in the present case as the CMA did not show images of the products.

In summary, besides the sampling issues discussed above, the sensitive nature of the questions asked in the survey may introduce severe misreporting problems that might add a second bias due to the data collection method employed by the CMA.

4. Conclusion

In relying so heavily on the findings from the TNS survey, the CMA has merely assumed that a sampling methodology targeting the UK population as the population of interest would automatically also generate a representative sample of K-Y and Durex users. However, as demonstrated above, this is an unjustifiable assumption to make. As a result, the CMA generated survey results are almost certainly unable to contribute to an understanding of behaviour of K-Y and Durex customers, let alone shed light on the competitive effects of the transaction.

The concerns with respect to the sampling methodology are further accentuated by the overwhelming body of evidence calling the survey results into question.¹⁷

¹⁵ Provisional Findings of the Competition and Markets Authority on 22 May 2015, *Anticipated acquisition by Reckitt Benckiser Group plc of the K-Y brand in the UK*, Appendices and Glossary, Appendix D, page 1, para. 4.

¹⁶ Provisional Findings of the Competition and Markets Authority on 22 May 2015, *Anticipated acquisition by Reckitt Benckiser Group plc of the K-Y brand in the UK*, Appendices and Glossary, Appendix D, page 25, para. 53.

¹⁷ The survey results are in contradiction with the evidence collected during the third party hearings and RB’s internal documents assessing competition in the lubricants market that were generated in the normal course of business.

The CMA should have based itself on its own survey guidelines and critically reflected on its sampling methodology and survey design instead of treading a tortuous path, trying to justify reliance on some findings but discounting the credibility of others. It is often not the ignorance of respondents or necessarily the defects of a stated preference framework that explain obvious inconsistencies in results. The CMA should have known that it may very well be the survey design and in particular the sampling methodology itself that is at the heart of the problems with its survey.

In light of the overwhelming body of evidence in the CMA's file directly contradicting the findings of the survey, the serious flaws in the sampling method, and the compounding effect of the particular data collection method, the CMA should discard the survey in its entirety.

MEMO

TO: Competition and Markets Authority
DATE: 16 June 2015
FROM: Frank Maier-Rigaud and Felix Forster
SUBJECT: Response to Provisional Findings – Retail Prices, Wholesale Prices and Buyer Power

This memorandum analyses the Competition and Markets Authority’s (“CMA”) assumptions regarding the link between retail and wholesale level prices and its related finding that there is no likelihood of buyer power being exercised to defeat a post-merger price rise.

This memorandum considers retail level price data from [REDACTED] as well as wholesale level price data from Reckitt Benckiser’s (“RB”) [REDACTED] to assess how retail and wholesale prices have moved over time and specifically in the context of the [REDACTED].¹ The results suggest that [REDACTED]. Furthermore the data suggest that [REDACTED].

1. Data: [REDACTED] for Wholesale Prices and [REDACTED] for Retail Prices

- [REDACTED] wholesale prices

[REDACTED]

- [REDACTED] data used for retail prices

The [REDACTED] data provide information on the duration and nature of promotions run by suppliers across channels/retailers, as well as records of pricing of each SKU per retailer [REDACTED]. The [REDACTED] database only stores data for two years.

- [REDACTED] data used for retail prices

The [REDACTED] data cover lubricant products sold in major grocery retailers and pharmacy chains (with some products potentially being omitted for masking purposes). Value and unit sales are provided until May 2015 (the latest available data).

¹ [REDACTED]: Play Feel, Play Aloe Vera, Play Strawberry, Play Cherry, Play Tingle and Play Warming. The CMA refers to these products as Durex Play products.

2. Analysis & Results: Comparison of Retail and Wholesale Prices

2.1. Analysis: Prices [X] Play Products for Key Retailers

We compare [X] wholesale prices with retail prices for selected Durex products in the Play range:

- for which data is available through either [X]; and
- for which [X].

These products are Play Aloe Vera, Play Feel, Play Cherry (Very and Cheeky), Play Strawberry (Sweet and Saucy), Play Passion Fruit, Play Tingle, Play Warming (and Heat). [X]

The analysis focusses on grocery retailers and pharmacy chains, thereby following the CMA's proposed market definition, despite the fact that this market definition is considered incorrect. Where available, the prices for the mentioned products are considered for ASDA, Boots, Morrison's, Sainsbury's, Superdrug, Tesco and Waitrose. These are key [X] for which there is data available in the [X].² For the [X], volume information is available and thus averages are provided weighted by volume. On the basis of the [X] data, which contain no volume information, prices are provided as simple averages.

2.2. Results: No Link between Retail / Wholesale Prices [X]

Figure 1 below shows the results of the analysis for all considered retailers and products. Specifically, the graphs show [X]

Figure 1
Wholesale and Retail Prices for Durex Play Range in Selected Retailers
Jan 2013 - May 2015
[X]

Source: [X] Durex Play Range contains the following products: Play Feel, Play Cherry (Very and Cheeky), Play Strawberry (Sweet and Saucy), Play Passion Fruit, Play Tingle, and Play Warming /Heat. Only sizes of 50ml and 60ml are considered.

- **The data show no link between retail and wholesale level prices**

² Not all products are available in all retailers for the whole time period. There are also differences in the availability by data source. [X]

The CMA’s notion that retail prices are closely linked to wholesale prices is not supported by the data. [✂]

Table 1
Correlations of Monthly Retail and Wholesale Prices from January 2013 to April 2015

[✂]

[✂]

This evidence stands in contrast to the findings of the CMA who state that “[i]n 2013, many retailers actually increased retail prices by a greater margin than the increase in wholesale prices introduced by RB to reflect the increase in the size of its bottles. Durex personal lubricant cost prices were increased again in March 2015, and these cost price increases appear to have been accepted by retailers”.³ It is not clear on what basis the CMA arrives at these assertions as they are not borne out by [✂].

- [✂]

The CMA states that “while retailers told [the CMA] that they do have buyer power [, the CMA has] provisionally concluded that there is insufficient evidence that retailers would use any buyer power that they have to defeat price increases post-merger.”⁴ [✂]

³ Provisional Findings of the Competition and Markets Authority on 22 May 2015, *Anticipated acquisition by Reckitt Benckiser Group plc of the K-Y brand in the UK*, para. 18.

⁴ Provisional Findings of the Competition and Markets Authority on 22 May 2015, *Anticipated acquisition by Reckitt Benckiser Group plc of the K-Y brand in the UK*, para. 10.17.