

Anticipated acquisition by Reckitt Benckiser Group plc of the K-Y brand in the UK

Appendices and glossary

Appendix A: Terms of reference and conduct of the inquiry

Appendix B: Industry background

Appendix C: Company background

Appendix D: Consumer survey

Appendix E: Data analysis

Appendix F: The indicative price rise calculation

Glossary

Terms of reference and conduct of the inquiry

Terms of reference

1. On 7 January 2015, the CMA referred the anticipated acquisition by Reckitt Benckiser Group plc (RB) of the K-Y enterprise from McNeil-PPC, Inc., a subsidiary of Johnson & Johnson (J&J), for an in-depth (phase 2) merger investigation:
 1. In exercise of its duty under section 33(1) of the of the Enterprise Act 2002 (the Act) the Competition and Markets Authority (CMA) believes that it is or may be the case that:
 - (a) arrangements are in progress or in contemplation which, if carried into effect, will result in the creation of a relevant merger situation in that:
 - (i) enterprises carried on by Reckitt Benckiser Group plc will cease to be distinct from enterprises currently carried on by, or under the control of, McNeil-PPC, Inc.; and
 - (ii) section 23(2)(b) of the Act is satisfied with respect to the supply of personal lubricants to grocery retailers and national pharmacy chains in the United Kingdom (UK); and
 - (b) the creation of that situation may be expected to result in a substantial lessening of competition within a market or markets in the UK for goods or services, including the supply of personal lubricants to grocery retailers and national pharmacy chains.
 2. Therefore, in exercise of its duty under section 33(1) of the Act, the CMA hereby makes a reference to its chair for the constitution of a group under Schedule 4 of the Enterprise and Regulatory Reform Act 2013 in order that the group may investigate and report on the following questions in accordance with section 36(1) of the Act:
 - (a) whether arrangements are in progress or in contemplation which, if carried into effect, will result in the creation of a relevant merger situation; and
 - (b) if so, whether the creation of that situation may be expected to result in a substantial lessening of competition within any market or markets in the UK for goods or services.

Conduct of the inquiry

2. We published [biographies](#) of the members of the inquiry group conducting the inquiry on 12 January 2015, and the [administrative timetable](#) for the inquiry was published on the CMA's webpages on 20 January 2015.
3. We invited a wide range of interested parties to comment on the anticipated acquisition. These included customers and competitors of RB and J&J. Evidence was obtained from these third parties through hearings, through telephone contact and through written requests. [Summaries of hearings](#) can be found on our webpages. We obtained the views of consumers of personal lubricants through a survey.
4. We received written evidence from RB and J&J, and non-confidential versions of their [main submissions](#) are on our webpages. We also held a hearing with J&J on 9 April 2015 and a hearing with RB on 10 April 2015.
5. On 5 February 2015, we published an [issues statement](#) on our webpages, setting out the areas of concern on which the inquiry would focus. RB provided a [response to the issues statement](#).
6. On 9 February 2015, members of the inquiry group, accompanied by staff, visited the offices of RB's economic consultants, NERA, and also visited some shops that sell personal lubricants. On 12 February 2015, members of the inquiry group, accompanied by staff, visited the offices of J&J's legal representatives, Weil, Gotshal & Manges.
7. In the course of our inquiry, we sent to RB, J&J and other parties some working papers, and extracts from those papers, for comment.
8. On 22 May 2015, we [extended the period of the reference](#) to 18 August 2015 because of the provision of new information after the main party hearings which consequently delayed the publication of our provisional findings. A revised [administrative timetable](#) was published.
9. On 22 May 2015, we published on our website the [notice of provisional findings](#), a [summary of our provisional findings](#) and a [notice of possible remedies](#). Our full [provisional findings](#) were published on 27 May 2015.
10. On 17 June 2015, we accepted [interim undertakings](#) from RB and J&J to ensure that no action was taken pending final determination of the reference

which might prejudice the reference or impede the taking of action which might be justified by our decisions on the reference.

11. In response to our provisional findings and notice of possible remedies, we received submissions from RB, J&J, Combe, and 3 Peaks Group Ltd, non-confidential versions of which were published on our [webpages](#). In addition, response hearings were held with J&J on 19 June 2015, RB on 30 June 2015, and with third parties in June and July 2015. [Summaries of third party response hearings](#) can be found on our webpages.
12. A non-confidential version of the final report was placed on [CMA's webpages](#).
13. We would like to thank all those who have assisted in our inquiry.

Industry background

Introduction

1. The merger transaction comprises an Asset Purchase Agreement (APA) under which Reckitt Benckiser (RB) proposes globally to purchase from McNeil-PPC, Inc., a subsidiary of Johnson & Johnson, (J&J), the rights, liabilities, and assets relating to the K-Y brand (the K-Y business), for a consideration of \$[X]; \$[X] of which was allocated to the UK business (subject to adjustment at the time of closing for local inventories).
2. Global K-Y sales [X]. Five countries account for [50–80]% of K-Y's sales: USA, Brazil, Canada, Australia and UK. In the USA, K-Y is a leading competitor, and the USA accounted for [X]% of K-Y global sales in 2012. In the UK, J&J only supplies its basic K-Y Jelly product (K-Y). In 2013, UK sales of K-Y were around \$[X], [less than 5]% of global K-Y turnover. [X]
3. This appendix gives an overview of the personal lubricants market in the UK. It covers the following areas:
 - (a) Product description.
 - (b) Market structure.
 - (c) Current developments and market trends.

Product description

4. Personal lubricants are specialised lubricants used primarily during human sexual activity. Some are targeted more to address issues caused by vaginal dryness. The lubricants can reduce friction and ease movement.
5. Personal lubricants mainly fall within the wider sexual well-being (SWB) category of products, which includes condoms, personal lubricants, body and massage oils, sexual accessories and toys, pregnancy kits and pregnancy planning products. The SWB category is suggested to be growing significantly as consumer trends and society attitudes become more accepting of SWB products and their usage.
6. The parties submit there are three basic categories of personal lubricants:
 - (a) Vaginal moisturisers.
 - (b) Functional lubricants (problem-solving).

(c) Pleasure-enhancing lubricants.

7. Vaginal moisturisers are designed to provide relief from the discomfort of vaginal dryness as an ongoing problem (ie not just during sexual intercourse) and will typically have a normal pH level; close to the body's natural pH level.
8. Functional lubricants are described as 'problem-solving' products designed to relieve vaginal dryness during sex. They also tend to have a normal pH level. They are used during sexual activity. K-Y is also supplied in a sterilised form and must be sterilised when dispensed on prescriptions.
9. Pleasure-enhancing lubricants are products designed to add fun and to enhance the pleasure of sexual activity. RB describes its products as focusing on gliding factors. These products generally have a higher pH level than K-Y. They usually have colourful packaging and often have added features such as flavours and warming or tingling sensations and some can also be used for massage. They can either be water-based or silicon-based, which are longer-lasting and more expensive.
10. [REDACTED]:
 - (a) [REDACTED]
 - (b) [REDACTED]
 - (c) [REDACTED]
11. Other parties, including J&J, have suggested there is more of a spectrum across the product range, from 'functional/medical' at one end of the spectrum towards 'fun/pleasure' at the other.
12. In J&J's view, consumers that use lubricants to alleviate vaginal dryness are likely to prefer a water-based product, with a relatively gentle formula. Consumers using the product for sexual lubrication may consider that the gliding action and added features are more important.
13. J&J describes the wide variety of the personal lubrication products in the following terms:

Personal lubricants have become highly differentiated products. Products vary, eg by composition (water, oil, or silicon bases), viscosity (liquids, gels, waxes, etc), lubricity (slipperiness and duration of effect), sensation (scent, taste, tingling/warming sensations, etc), ease of use (removal from skin, staining of fabrics, etc), safety (usability with condoms), packaging (applicators, bottles, pessaries, pumps, sachets, tubes, etc), and

the underlying consumer proposition (functionality, romance/ nostalgia, sexual prowess, experimentation, etc) conveyed in a given brand's packaging/promotion.

14. RB suggests that lubricants are bought and used infrequently, perhaps being bought only once a year. Pleasure enhancement products are used less frequently than more functional products and tend to be used more often on special occasions. RB suggests that the purchase tends to be planned rather than being bought in impulse; this view is supported by a survey RB commissioned from [REDACTED].
15. J&J's K-Y is a water-based lubricant and the longest established brand of personal lubricant. In the UK, where J&J supplies only its basic K-Y product, namely the K-Y jelly, K-Y is positioned at the functional/medicinal end of the product range and is popular with relatively mature customers. It is used for the relief of vaginal dryness and was initially a prescription medication in the UK. Some 'Intimacy Enhancer' products are sold under the K-Y brand outside the UK. While these might be available from third party importers selling over the internet, the volume would be small.
16. Whereas Durex is positioned to appeal to a younger customer who is seeking to enhance sexual activity, a consumer survey for J&J suggested that K-Y users were typically older women who described the product as 'trusted', 'practical' and as a product with medical connotations. In contrast, Durex was described as 'sensual'. This difference is also reflected in the packaging of the product with brighter coloured packs, contrasting with the simpler white and light blue box and tube content for K-Y.
17. Only one RB product, Sensilube, described by RB as a vaginal moisturiser, is offered for relief of vaginal dryness. [REDACTED]
18. The range of products produced by the parties is summarised in the table below, using the categorisation chosen by the parties. This is reviewed in the Market Definition and Competitive Effects appendices.

Table 1: Overview of personal lubricants supplied by the parties in the UK*

<i>Personal lubricants</i>	<i>K-Y</i>	<i>Durex</i>
Moisturiser		Sensilube (40 ml)
Functional lubricant	K-Y Jelly (50ml, 75ml; medical use: 42g, 82g)	
Pleasure-enhancing lubricant		Play Feel (50ml and 100 ml) Play Aloe Vera (50ml) Play Warming (50ml) Play Tingle (50ml) Play Cheeky Cherry (50ml) Play Saucy Strawberry (50ml) Play Passion Fruit (60ml) Play Soothing Massage 2in1 – Aloe Vera (200ml) Play Sensual Massage 2in1 – Ylang Ylang (200ml) Play Stimulating Massage 2in1 – Guarana (200ml) Embrace Pleasure Gel (2x60ml) Play Real Feel (50 ml) Play Perfect Glide (50ml) Play O Orgasmic Gel (15ml) Play Sensations (selection sachets)

Source: Durex and K-Y.

*Durex products based on information supplied by RB, reflecting resizing of some products in 2015.

Production process

19. RB manufactures all its personal lubricants at a manufacturing plant in Bangplee in Thailand, used since RB acquired the Durex brand from SSL in 2010. [REDACTED]
20. [REDACTED]
21. To manufacture personal lubricants, the only equipment that is required for manufacture is a pre-mix vessel, a common homogeniser suite (for a process that combines liquids by converting one liquid into extremely small particles distributed uniformly throughout another liquid) and a bottle or tube filler to package them. This equipment can be used to manufacture different gels and [REDACTED]. Ingredients are supplied by international chemical suppliers.
22. K-Y is made with a few, very common inputs. The principal ingredients in the product itself are propylene glycol, sorbitol and water, to which are added small amounts of hydroxyl-ethylcellulose (to increase viscosity), benzoic acid (a preservative), polysorbate 60 (a surfactant), and tocopheryl acetate (an antioxidant). The inputs are mixed and heated in several steps on an automated flow line, then cooled and automatically injected into tubes. The tubes are automatically capped and labelled with a laser printer, during which process jellies that must be sterilised¹ are put on trays and run through an autoclave (a more specialised piece of equipment available at a cost of roughly £350,000–£400,000). The closed tubes are then pushed into

¹ Most personal lubricants do not need to be sterilised. J&J advised at a site meeting on 12 February that only K-Y used by the NHS is sterilised in the UK.

individual boxes which are automatically folded and sealed, and the boxes are placed into cases and cartons for shipment to the customer. Packaging inputs include standard tubes and caps, cardboard boxes, adhesive and ink. All of these inputs are suggested to be widely available from numerous suppliers worldwide.

23. J&J produces K-Y that is sold in the UK on two production lines at its plant in Val de Reuil in Normandy, France, which supplies customers throughout Europe. One of the two lines is used to make both lubricants and other skin care products (eg sun tan lotion), and production moves between these products throughout the year (eg on a quarterly basis). The other line is similar but includes an autoclave and related trays/handling equipment for the production of sterile jelly. Although utilisation for K-Y is relatively low, the lines can be switched to other products.
24. Finished products can be transported and stored in standard warehousing/ freight facilities, and do not require any specialised handling beyond the normal care required to ensure that the boxed products arrive in retail outlets in saleable condition, without excessive damage/wear to the packaging.
25. The parties suggest that there are no particular difficulties or complications in supplying personal lubricant products in the UK, as there are third party producers available if companies did not want to manufacture themselves. The production of K-Y requires only limited capital investment and little specialised knowledge, as the required equipment is standard to the production of a wide range of packaged gels and creams. Likewise, the product is made with ingredients that are stated to be very common in the healthcare sector and widely available.
26. In addition to other operational and support costs, it is suggested that only a small team of employees (perhaps one or two) could handle marketing in the UK. [✂]

Regulatory approval

27. Manufacturers of medical devices need to demonstrate that their devices comply with the provisions of the European Directive on Medical Devices 93/42/EEC (MDD) by carrying out a conformity assessment. This would need to be approved by a 'notified body'² which would assess the quality and documentation for the device and audit compliance every one or two years.

² UK notified bodies are: Amtac Certification Services Ltd, BSI Healthcare, Lloyd's Register Quality Assurance Ltd, SGS United Kingdom Ltd and UL International (UK) Ltd.

28. The manufacturer must maintain an adequate quality system, supported by relevant documentation. It is required to keep a technical file for the device, maintaining a declaration of conformity for the device, based on clinical investigation. Any deterioration in performance has to be recorded, but in Europe only serious problems have to be reported. Since July 1998, any medical device covered by the directive must carry a 'CE mark' (Conformité Européenne). This is a logo placed on medical devices that shows it conforms to the requirements in the directives, ie showing that the device is fit for its intended purpose and meets legislation related to safety. The product can then be freely marketed anywhere in the European Union without further control.³
29. The medical device is classified in one of four classes, based on rules using criteria that include invasiveness, duration of continuous contact, nature of tissue contact and whether the device is active or non-active. Most personal lubricants belong to class IIa. As well as declaring conformity to the MDD the manufacturer would need to apply to a notified body to carry out a conformity assessment.⁴
30. A new manufacturer of personal lubricants would need to get regulatory approval for the production of medical devices, if this was not already approved. An authorised manufacturer could use its existing authorisation to produce an approved product.

Product profitability

31. RB estimated that its variable profit margin based on 2013 wholesale sales for its 12 personal lubricant products with net revenue higher than £100k was between approximately [%]. This is not dissimilar to K-Y, which J&J suggested earns a gross profit margin of [%]%. Using the RB figures, this suggests that variable costs amount to between [%]% and [%]% of the wholesale price; ie the variable cost⁵ of a product sold for a wholesale price of £[%] would be between approximately £[%] and £[%]. However this would exclude the retailer's or wholesaler's profit margin. If, hypothetically the retailer's profit margin on sales was [%]%, this would imply a sale price of

³ [Medical devices: conformity assessment and the CE mark.](#)

⁴ See [Medical devices: conformity assessment and the CE mark.](#) Class IIa devices: A manufacturer is required to declare that its Class IIa device conforms to the requirements in the MDD as well as the Medical Devices Regulations 2002. It also needs to apply to a notified body to carry out a conformity assessment to approve its declaration. The type of assessment chosen can be: (a) an examination and testing of each product or homogenous batch of products (Annex IV of the MDD); (b) an audit of the production quality assurance system (Annex V of the MDD); (c) an audit of final inspection and testing (Annex VI of the MDD); or (d) an audit of the full quality assurance system (Annex II of the MDD).

⁵ Variable costs relate to costs that vary in relation to the volume of production which would exclude marketing cost.

[REDACTED]. While it is recognised that the companies would also expect to make a contribution towards other costs, the products appear to be highly profitable.

Market structure

32. Personal lubricants are available through grocery retailers and national pharmacy chains, online, independent pharmacies and through specialist (adult) shops.
33. RB and J&J supply directly to grocery retailers and national pharmacy chains and to a few major online suppliers⁶ such as Ocado. Their products are supplied to specialist (adult) shops and independent pharmacies by wholesalers. J&J does not supply its products directly to specialist (adult) stores. There are a number of other suppliers, including own-label; market shares differ considerably across the different channels.

Negotiations with customers

34. [REDACTED]
35. RB meets with major grocery retailers and large pharmacy chains to hold 'range reviews' including personal lubricants as well as other SWB products, which will cover price, level of sales, time to supply, retailer margins and any data relating to customer behaviour, possibly based on loyalty cards. Usually two reviews will be held, one major, [REDACTED]. RB does not specify any minimum purchase volumes to customers, though [REDACTED].
36. RB plans promotions with its most important customers through joint business plans, which will cover promotions, placement (in store), point of sale material and price. [REDACTED]. Termed 'trade investment', incentives can include price discounts, logistic discounts, placement/listing fees, promotional allowances and [REDACTED].
37. RB arranges for promotions for its products with retailers, with the exception of [REDACTED].
38. [REDACTED]

⁶ RB also has its own online sales site.

Current developments and market trends

39. J&J states that K-Y's sales in the UK have been flat or declining in recent years (2008 to 2012), in terms of sales and gross profit, though with a gross profit margin of [X]%.
[REDACTED]
40. Looking forward, RB anticipates significant market growth in the UK personal lubricants market between 2013 and 2017, with overall growth of [5–20]% a year, led by [5–20]% a year growth in the online channel. Mass market retailer sales are expected to grow more slowly at [1–10]% a year with significantly slower growth of [1–10]% a year in specialist (adult) stores.
[REDACTED]

Company background

Introduction

1. This appendix provides an overview of the companies involved in the merger transaction and details of the transaction structure.
2. The appendix is structured to briefly provide:
 - (a) a background for each company, including a description of the company's business;
 - (b) a summary of the transaction; and
 - (c) a summary of the commercial background leading to the transaction.

Johnson & Johnson – the vendor

3. Johnson & Johnson (J&J) is the ultimate parent company of a global group of companies with operations in more than 60 countries worldwide and more than 100 brands. The company and its subsidiaries have over 128,000 employees worldwide in more than 275 operating companies involved in research and development, manufacture and sales of an extensive range of products in the healthcare field. Total global sales revenue for the 2013 financial year was \$71 billion (roughly £45 billion).
4. J&J's activities are divided into three business segments: Consumer; Pharmaceutical; and Medical Devices and Diagnostics. The Consumer segment includes products used in baby care, skincare, oral care, wound care and women's health fields in addition to nutritional products, over-the-counter (OTC) pharmaceutical products and wellness. The Pharmaceutical segment includes products in cardiovascular, contraceptive, neurology, infectious diseases and other areas. The Medical Devices and Diagnostics segment provides products used primarily in professional fields by physicians, nurses, hospitals and clinics. New products introduced in the last five years accounted for roughly a quarter of 2013 sales.
5. From a global perspective, J&J is the seventh-largest pharmaceuticals business, the largest medical devices and diagnostics business and the sixth largest healthcare consumer business in the world. Of \$71.3 billion sales in 2013, the Medical Devices and Diagnostics (\$28.5 billion) and Pharmaceutical (\$28.1 billion) segments were larger than the Consumer segment (\$14.7 billion). The Pharmaceutical segment made the greatest pre-tax profit

contribution in 2013, \$9.2 billion (margin 32.6%), Medical Devices and Diagnostics contributed \$5.3 billion (margin 18.5%) and Consumer contributed \$2.0 billion (margin 13.4%).

6. The direct seller of K-Y is McNeil-PPC, Inc. (McNeil), a company that is ultimately owned by J&J and belongs to its Consumer Healthcare division. McNeil markets a broad range of OTC products for relief of pain and fever, cold, flu and allergy symptoms, digestive health and sleeplessness, including Tylenol, Sudafed and Benadryl products. McNeil manufactures (itself or through third parties) and supplies personal lubricants under the K-Y brand.
7. For J&J, a substantial company with pre-tax profit of over \$15 billion in 2013, and current market capitalisation of over \$280 billion, the transaction sales proceeds of \$[X] are numerically equivalent to less than [X]% of market capitalisation or global turnover or [X]% of profit before tax.

Table 1: Financial indicators – J&J

	\$ million				% growth		
	2011	2012	2013	2014	2011/12	2012/13	2013/14
Turnover	65,030	67,224	71,312	74,331	3	6	4
Gross profit	44,670	45,566	48,970	51,585	2	7	5
Profit before tax	12,361	13,775	15,471	20,563	11	12	33
Net assets (year-end)	57,080	64,826	74,053	69,752	14	14	-6

Source: Johnson & Johnson Annual Report 2013 and 2014 and CMA analysis.

Reckitt Benckiser Group plc – the acquirer

8. Reckitt Benckiser Group plc (RB) is an international group active in the manufacturing and supply of a range of health, hygiene, home, food and pharmaceutical products with operations in 66 countries and selling to around 200 countries. Global net revenues (turnover) for 2013 totalled £10 billion; RB employs approximately 36,000 people and has 40 manufacturing sites. In total RB has 106 brands.
9. RB has four core product areas, Health, Hygiene, Home and Portfolio Brands,¹ plus two non-core areas: RB Pharmaceuticals and Food. Health contributed 29% of core turnover in 2013 and includes major brands, eg Durex, Gaviscon, Mucinex, Nurofen, Scholl and Strepsils. Hygiene represented 43% of core turnover, and includes the brands Clearasil, Dettol, Finish and Harpic among others. Home accounts for 22% of core turnover with Airwick, Calgon and Vanish brands.

¹ RB has a number of local brands that are categorised as Portfolio brands. These are brands that do not fit within its Health, Hygiene and Home product areas.

10. RB's health and personal care division's products are designed to relieve or solve common personal and health problems, and include antiseptic liquids, depilatory products, acne treatments, footwear and comfort footwear products, and medicines such as cold/flu treatments, analgesics and gastrointestinal products. Within the range of sexual well-being products Durex's product range includes condoms, personal lubricants and other intimate enhancement products, such as pleasure toys.
11. RB is also a substantial company with pre-tax profit of over £2.3 billion in 2013 and current market capitalisation of over £40 billion. The transaction, with sales proceeds of \$[X]. No difficulties would be expected to arise in financing the transaction.

Table 2: Financial indicators – RB

	<i>£ million</i>				<i>% growth</i>		
	2011	2012	2013*	2014	2011/12	2012/13	2013/14†
Turnover	9,485	9,567	10,043	8,836	1	5	-
Gross profit	5,449	5,538	5,969	5,096	2	8	-
Profit before tax	2,376	2,408	2,314	2,126	1	-4	-
Net assets (year-end)	5,781	5,922	6,336	6,834	2	7	-

Source: Reckitt Benckiser Group plc Annual Report and Financial Statements 2012, 2013 and 2014 and CMA analysis

*Before restatement for demerger of RB Pharmaceuticals.

†Change 2013/14 not shown.

Table 3: The parties – comparative size 2013

	<i>£ million</i>	
	J&J*	RB
Turnover	45,567	10,043
Gross profit	31,291	5,969
Profit before tax	9,886	2,314
Net assets (year-end)	47,318	6,336

Source: J&J Annual Report 2013 and RB 2013 Annual Report and Financial Statements.

*Using a £/\$ exchange rate of 1.565.

Consumer survey

Introduction

1. The CMA commissioned the market research agency TNS to include a suite of questions in its face-to-face Omnibus Survey. The objectives of this research were to provide an understanding of:
 - (a) the closeness of competition of the parties' brands;
 - (b) the degree of substitution between online and in-store sales channels; and
 - (c) product differentiation from a consumer perspective.

Survey method

2. TNS's face-to-face Omnibus Survey is a continuous survey of the adult population of Great Britain. Interviews take place in people's homes, which are selected using a random location methodology stratified by Government Office Region and whether they are urban or rural.
3. Fieldwork is carried out during weekdays between 2pm and 8pm and at the weekend. Quotas are set by gender. For women, quotas are set for the presence of children and working status, and for men, quotas are set for working status.
4. The interviews that included the CMA's questions took place between 18 February and 22 March 2015. Laptops were passed to the respondent to enable them to self-complete the suite of questions about personal lubricants confidentially.
5. No questions about personal lubricants were asked of Omnibus survey respondents under the age of 18 or above the age of 65. This was on the advice of TNS who did not consider it to be appropriate. This under-coverage may have introduced some bias into the results.
6. A total of 9,957 adults between the ages of 18 and 65 were asked the first question about brands of personal lubricants they had purchased within the last 12 months. Only those who had made relevant purchases were asked subsequent questions.

7. A problem with the scripted questionnaire resulted in K-Y purchasers being asked an incomplete set of questions in the early stages of fieldwork. To make up the resulting shortfall in the sample of K-Y purchasers the fieldwork period was extended, but the full set of questions was only asked of this group. The result of this is that the base sizes for the different tables reported in this annex are inconsistent. It should be noted that the results under-represent those consumers who had purchased both K-Y and Durex personal lubricants in the last 12 months.

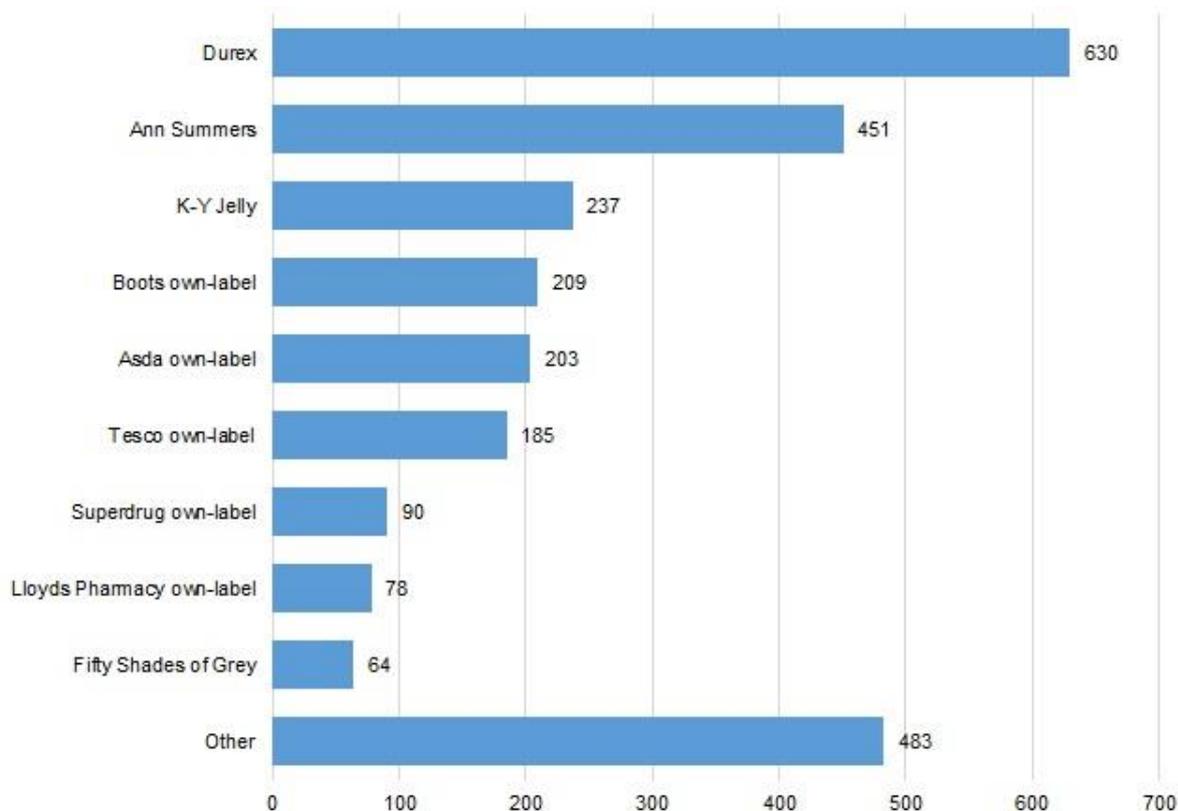
Survey results

Brands of lubricants purchased

8. Durex was the most common brand of personal lubricant purchased in the previous 12 months, with 630 respondents of the 9,957 respondents who were asked having purchased it. K-Y was the third most commonly purchased lubricant, with 237 of respondents having purchased it within the previous 12 months. Fifty-three respondents had purchased both Durex and K-Y personal lubricants in the past 12 months.

Figure 1: Brands of personal lubricants purchased in the last 12 months

Q1: Which of the following brands of personal lubricant (such as lubricating gels and intimate lubricants), if any, have you purchased in the last 12 months?

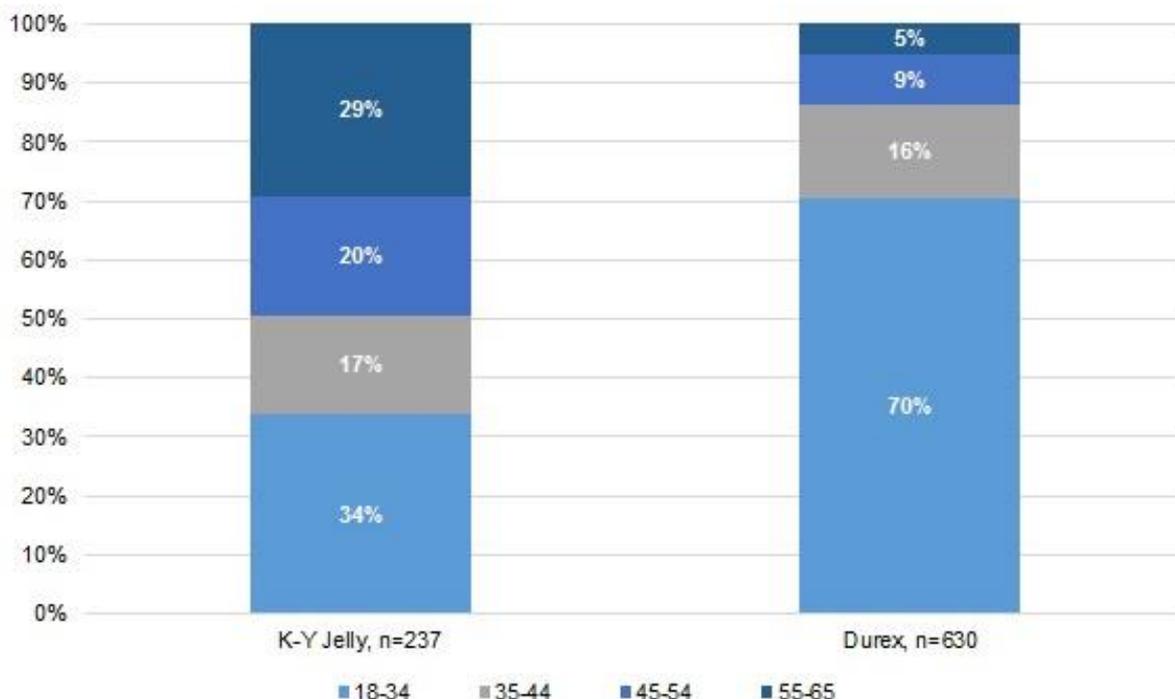


Base: 9,957 adults aged 18 to 65, purchases from all channels.

Lubricant purchase

9. There were differences in age between Durex and K-Y purchasers, with K-Y purchasers tending to be older than Durex purchasers. 49% of K-Y purchasers were aged over 45, while only 14% of Durex purchasers were aged over 45. 34% of K-Y respondents were aged 18 to 34 compared with 70% for Durex purchasers; although the proportions in the age range 35 to 44 are very similar (17% and 16%). Adults above the age of 65 are not included in our sample, but Kantar Worldpanel data suggests that as many as 30% of K-Y customers may fall into this category.

Figure 2: K-Y and Durex purchasers by age

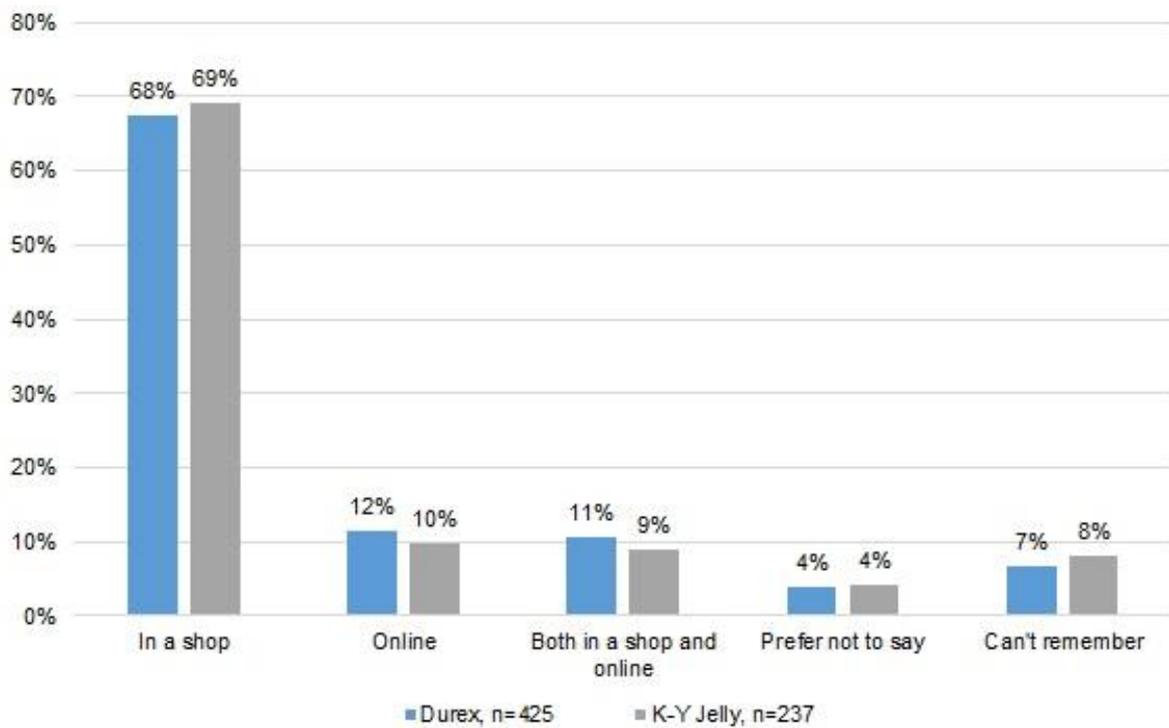


Base: Bought K-Y and/or Durex in the past 12 months.

10. Of both Durex and K-Y purchasers, over two-thirds of respondents purchased personal lubricants in a shop. A small proportion bought personal lubricants online. Around one in ten respondents had bought personal lubricants both in a shop and online over the previous 12 months.

Figure 3: Where people purchased personal lubricant in the last 12 months

Q2: Where have you bought [Durex/K-Y] personal lubricant in the last 12 months?

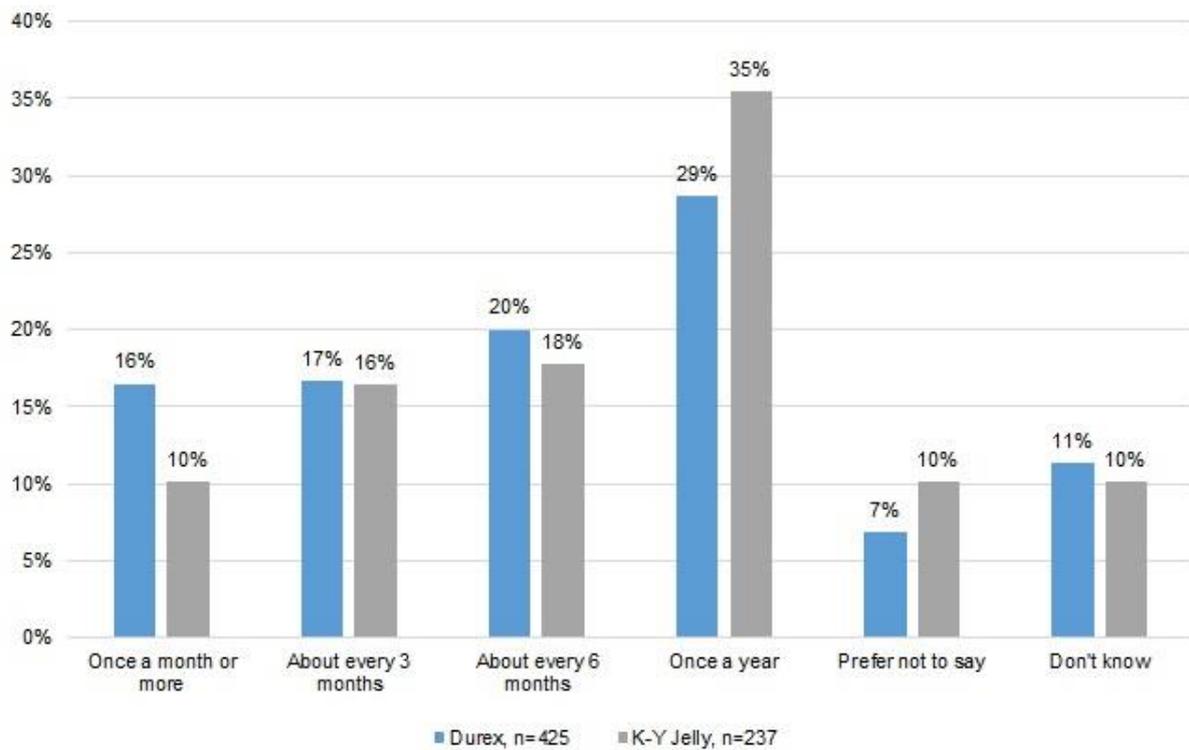


Base: Bought K-Y and/or Durex in the past 12 months.

11. Figure 4 shows purchase frequency for Durex and K-Y. Durex tends to be bought more often than K-Y, although these differences were small; 33% of Durex purchasers and 27% of K-Y purchasers said that they bought the brand of personal lubricant every three months or more.

Figure 4: Frequency of purchase

Q3: How often have you purchased [Durex/K-Y] personal lubricant in the last 12 months?



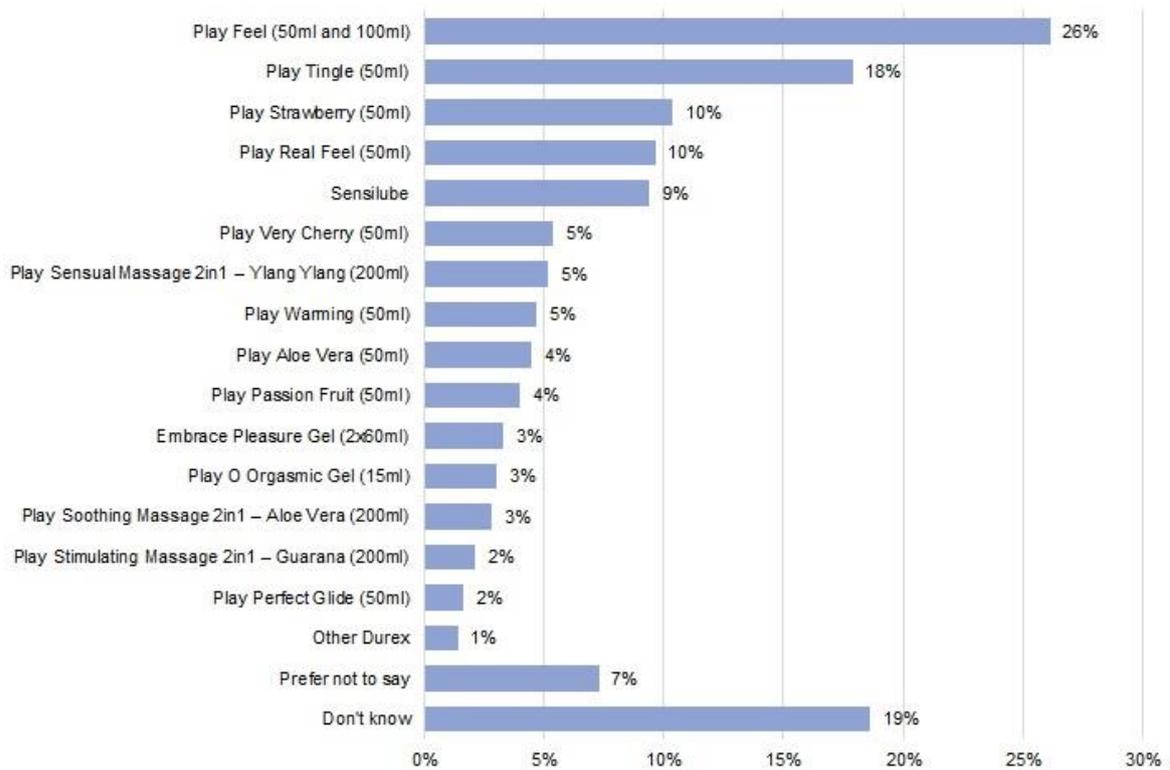
Base: Bought K-Y and/or Durex in the past 12 months.

Durex product bought

12. Durex Play Feel was the most frequently bought Durex product, followed by Durex Play Tingle. Play Strawberry, Play Real Feel and Sensilube were also popular choices, accounting for approximately 10% of purchases each. It should be noted that 19% of Durex purchasers were unsure of what product they had bought, suggesting that respondents were aware of brand but less aware of the individual products.

Figure 5: Which Durex product people bought most recently

Q4: Thinking about the last time you bought Durex [in-store/online], which of these products did you buy?



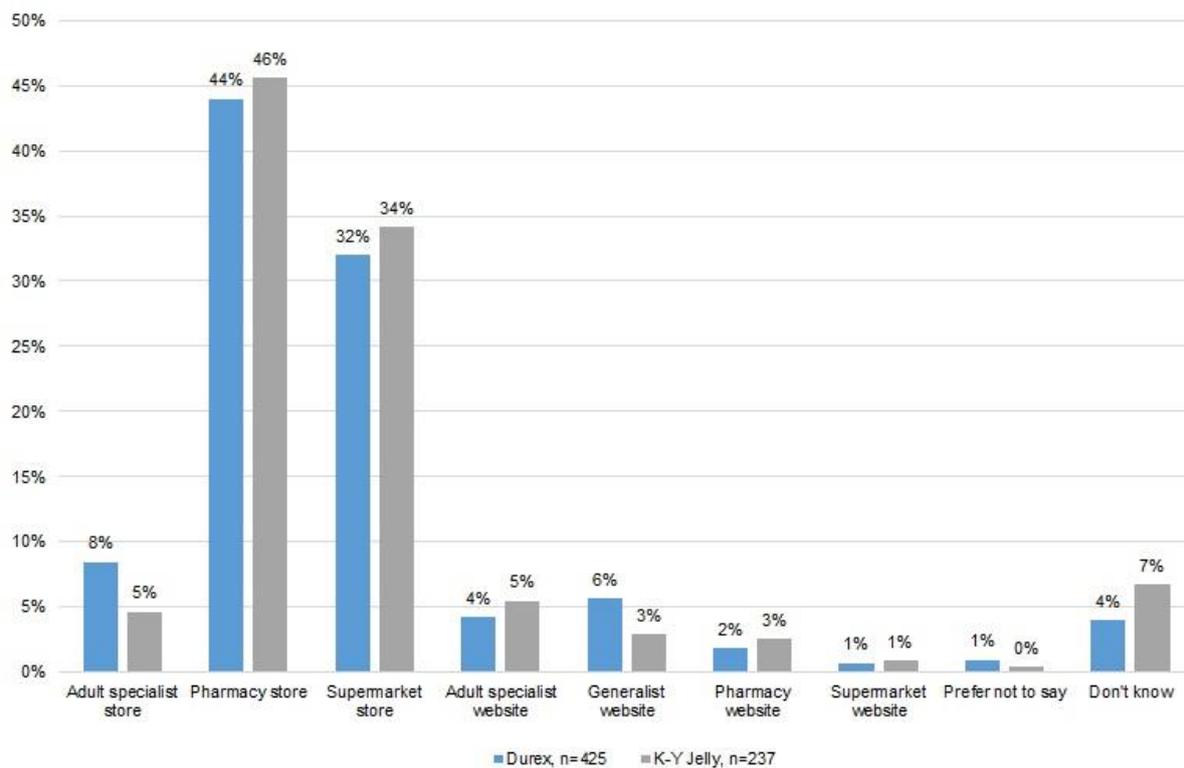
Base: Bought Durex in the past 12 months (n=425).

Where people bought personal lubricant

- The majority of respondents had bought either K-Y or Durex in a bricks-and-mortar pharmacy store, or a bricks-and-mortar supermarket store. These store types accounted for approximately two thirds of purchases in the past 12 months.

Figure 6: Where people have bought personal lubricant in the last 12 months

Q5: Which [shop or pharmacy/website] did you buy it from?

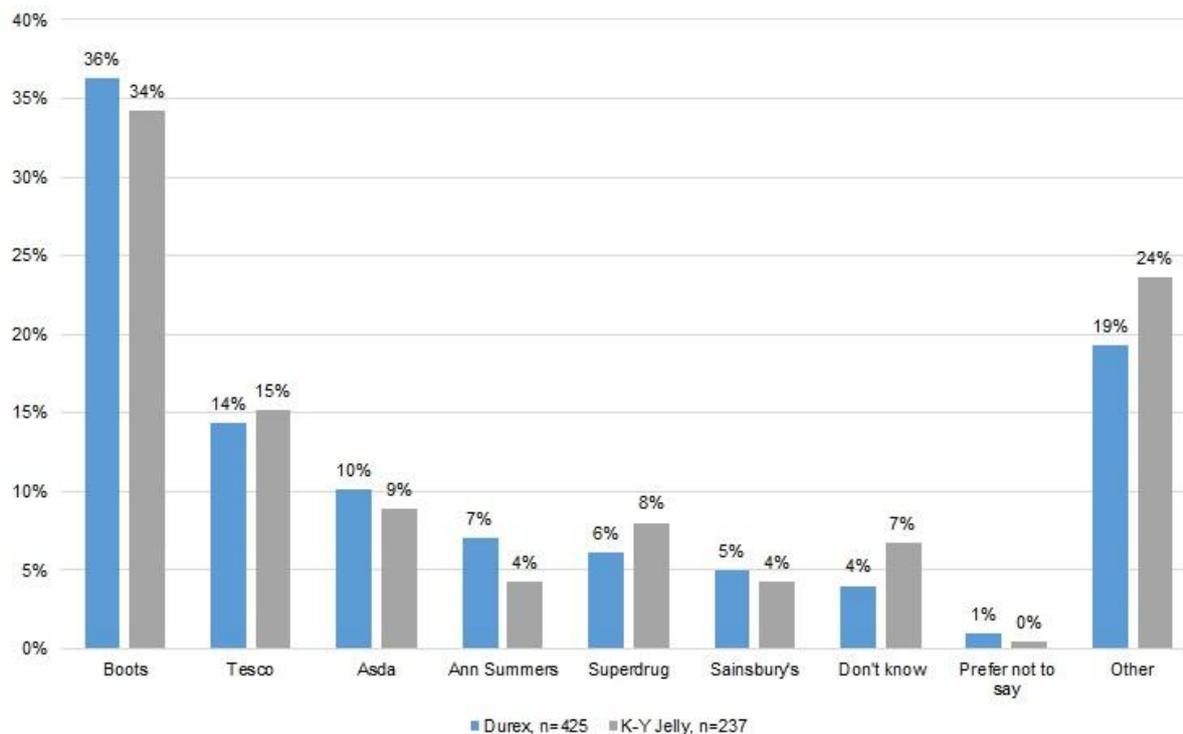


Base: Bought K-Y and/or Durex in the past 12 months.

14. Figure 7 shows the stores where Durex and K-Y are most commonly bought. Named stores are the bricks-and-mortar versions of the stores; online stores are included in 'Other'.
15. The distribution of purchases by store was broadly the same for both Durex and K-Y. Boots was the most popular store, with over a third of Durex and K-Y purchasers having bought personal lubricants in Boots over the past year. Tesco and Asda were the second and third most popular stores respectively.

Figure 7: Most popular stores for buying Durex and K-Y

Q5: Which [shop or pharmacy/website] did you buy it from?



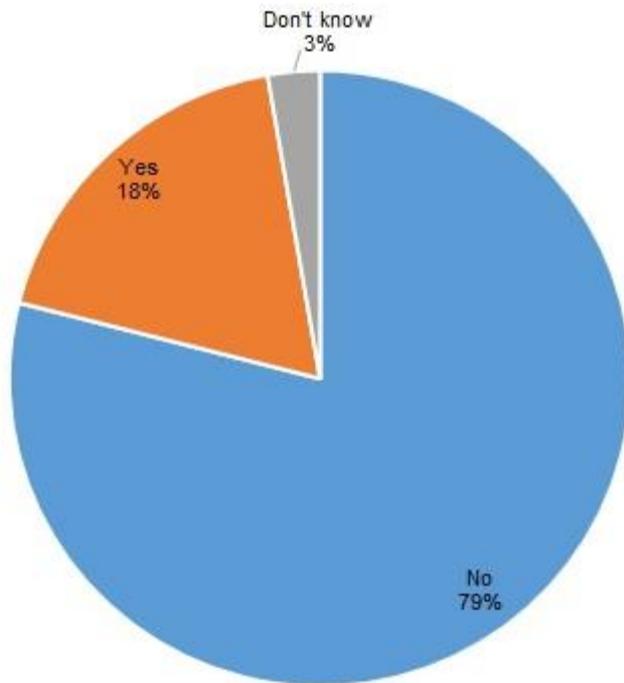
Base: Bought K-Y and/or Durex in the past 12 months.

Comparison of prices

- When asked if they had compared the price of personal lubricants, almost four-fifths of respondents had not compared the price anywhere else. Of those who had compared prices somewhere else, three-quarters had compared them at a grocery retailer or major pharmacy.

Figure 8: Comparison of prices

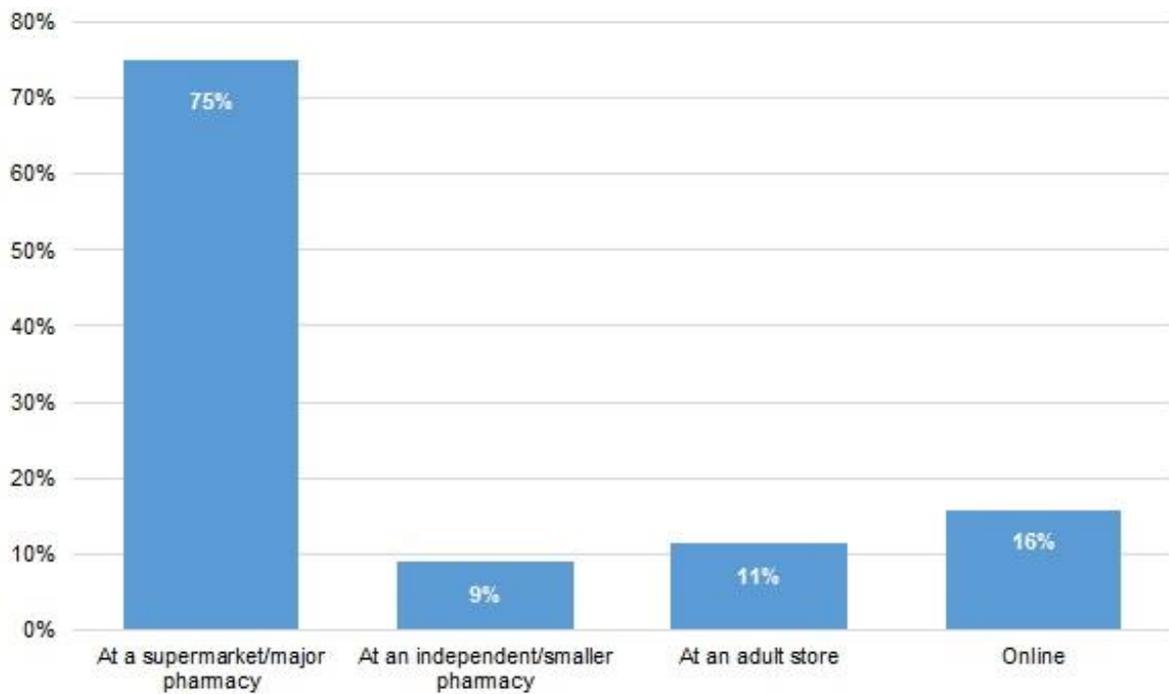
Q6B: Had you compared prices of the [product] or other similar lubricant products anywhere else?



Base: Bought K-Y and/or Durex in the past 12 months (n=480).

Figure 9: Where people compare prices

Q6B: Which did you check?



Base: Those that had compared prices (n=88).

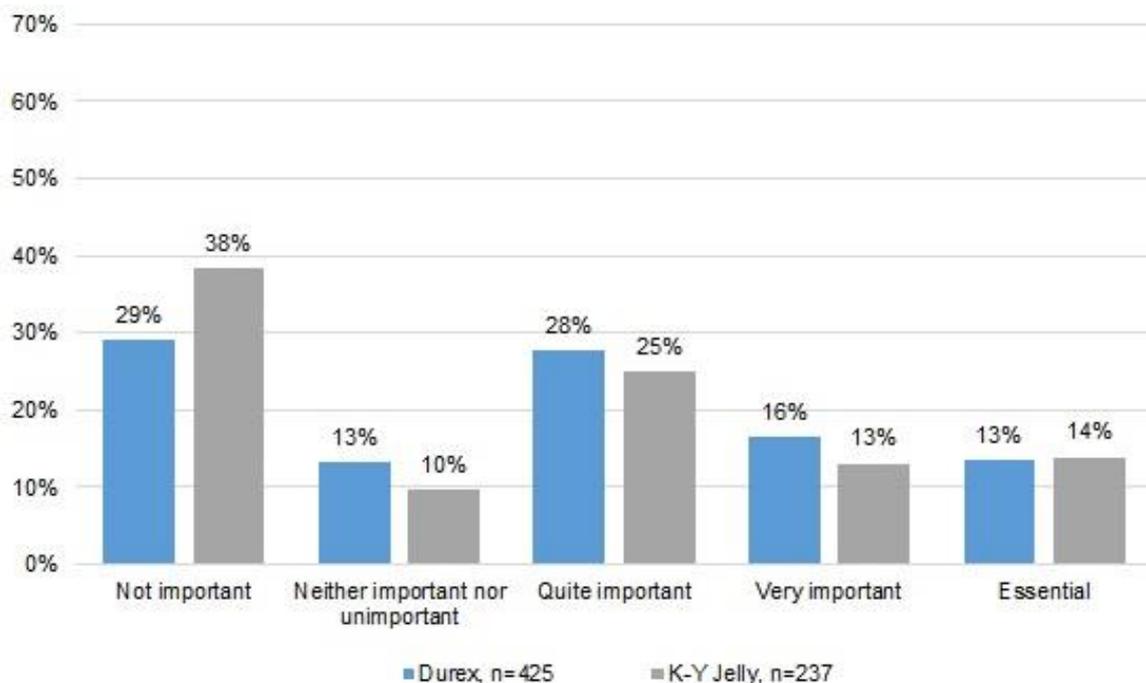
Product features

Q7: How important was price in choosing the product you bought?

17. Price does not appear to be a very important factor for the majority of purchasers of Durex and K-Y; it was a very important or essential factor for 30% and 27% of Durex and K-Y buyers respectively.

Figure 10: How important was price in choosing the product you bought?

Q7: How important was price in choosing the product you bought?

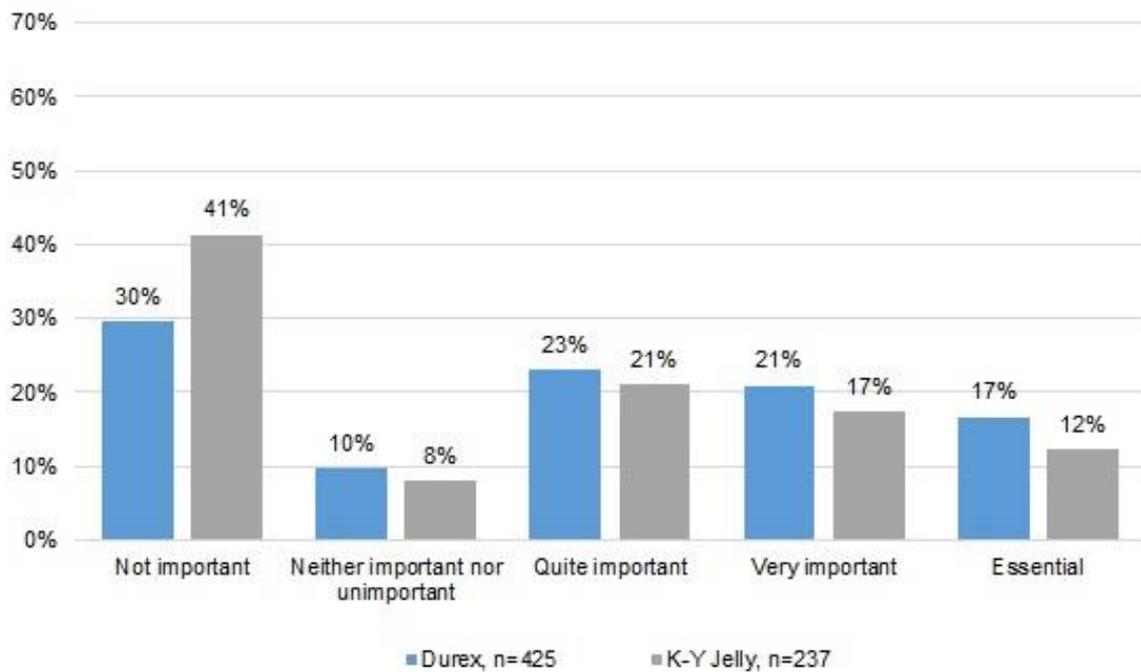


Base: Bought K-Y and/or Durex in the past 12 months.

18. Brand also did not appear to be an important factor for some buyers of Durex and K-Y, with 39% and 49% of Durex and K-Y buyers respectively saying that brand was 'not important' or 'neither important nor unimportant'. It was 'very important' or 'essential' for 38% and 29% of Durex and K-Y purchasers respectively, and 'quite important' for a further 23% of Durex and 21% of K-Y purchasers.

Figure 11: The importance of brand in choosing a product

Q7: How important was brand in choosing the product you bought?

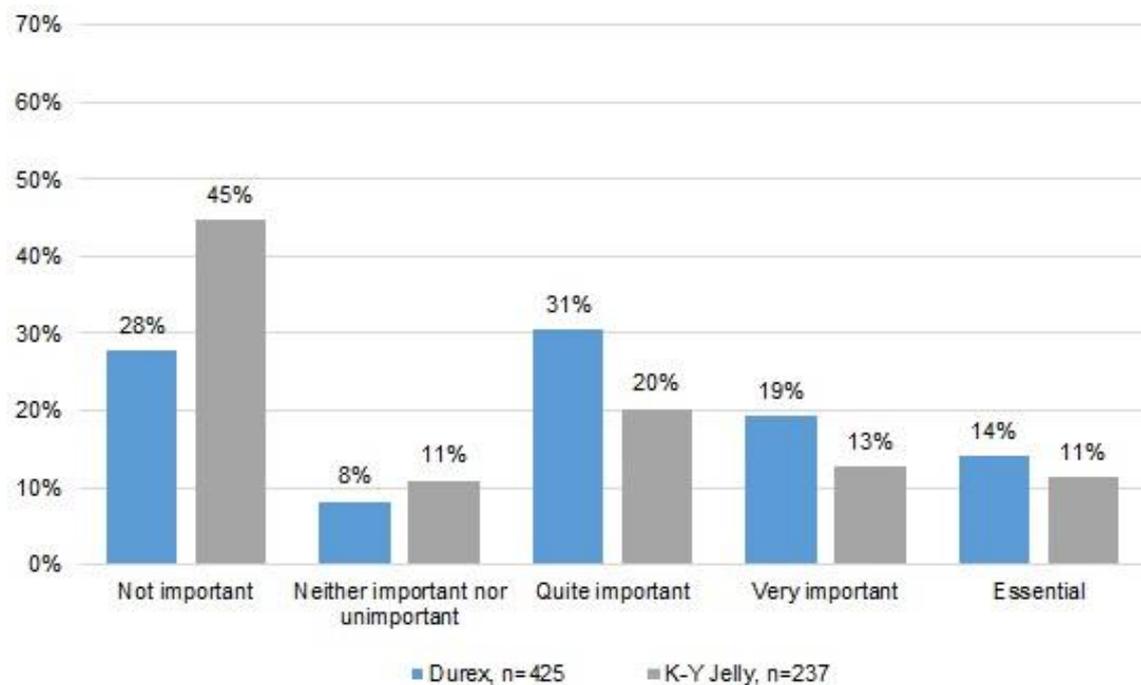


Base: Bought K-Y and/or Durex in the past 12 months.

- 19. 36% of buyers of Durex and 56% of buyers of K-Y said that extra features were not important or neither important nor unimportant when purchasing personal lubricants.

Figure 12: The importance of extra features in choosing a product

Q7: How important were extra features in choosing the product you bought?

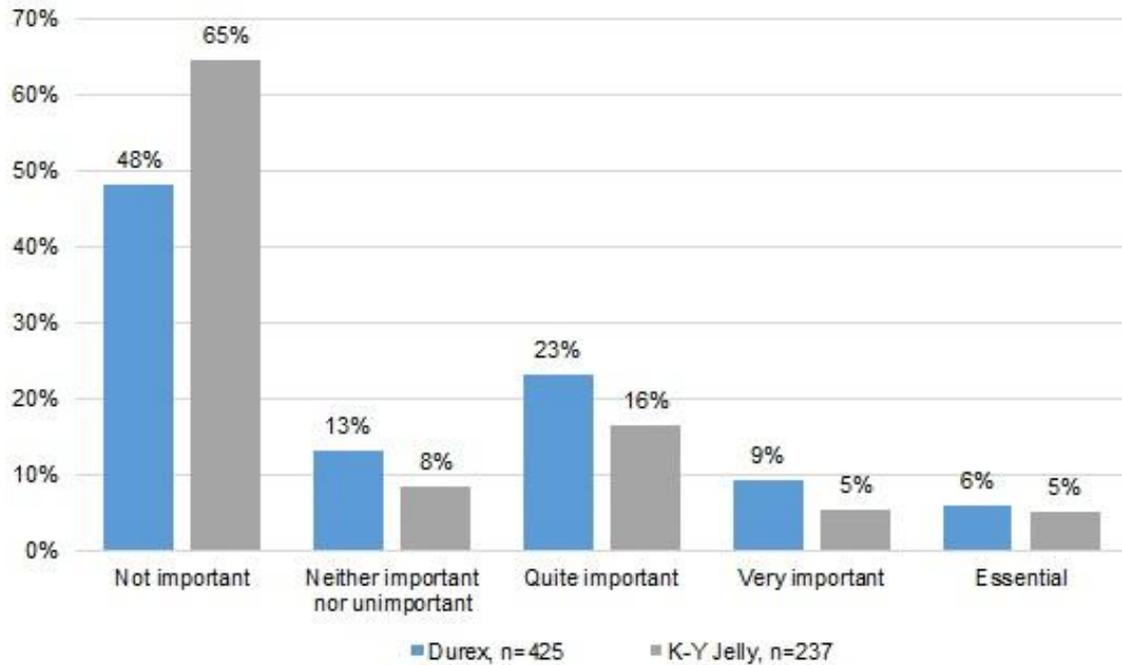


Base: Bought K-Y and/or Durex in the past 12 months.

20. Packaging appears to be unimportant to Durex and K-Y purchasers. Almost two in three K-Y purchasers said that packaging was not important, while nearly half of Durex purchasers said that it was not important.

Figure 13: The importance of packaging in choosing a product

Q7: How important was packaging in choosing the product you bought?

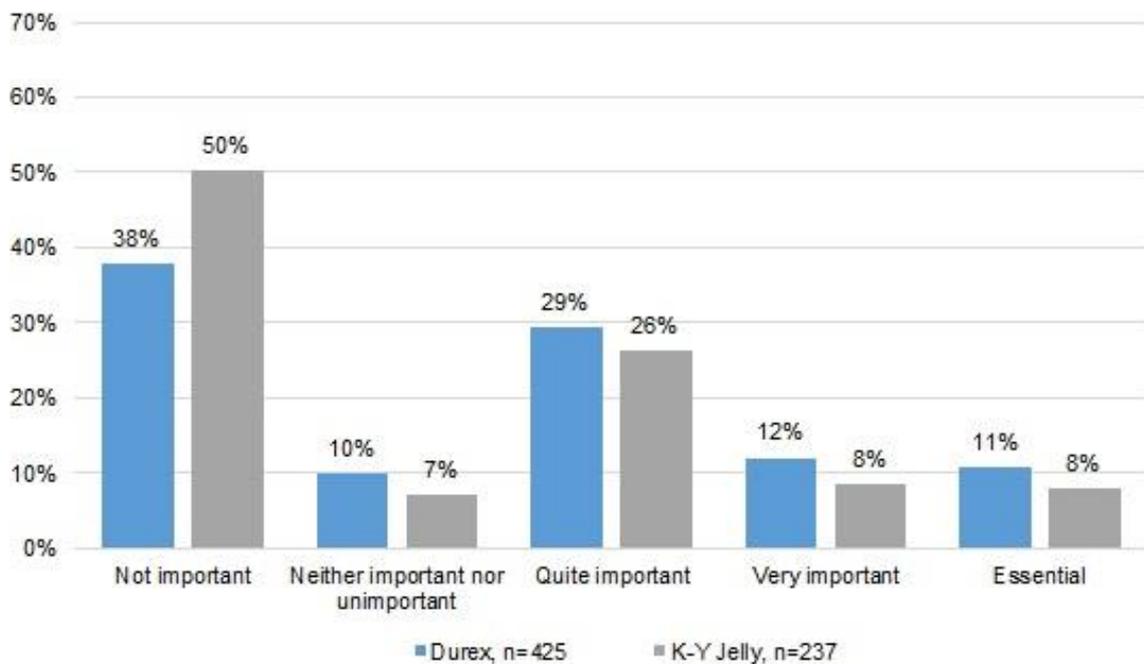


Base: Bought K-Y and/or Durex in the past 12 months.

21. Few buyers of Durex and K-Y personal lubricants said that pack size was very important or essential. More K-Y purchasers said that it was not important.

Figure 14: The importance of pack size in choosing a product

Q7: How important was pack size in choosing the product you bought?

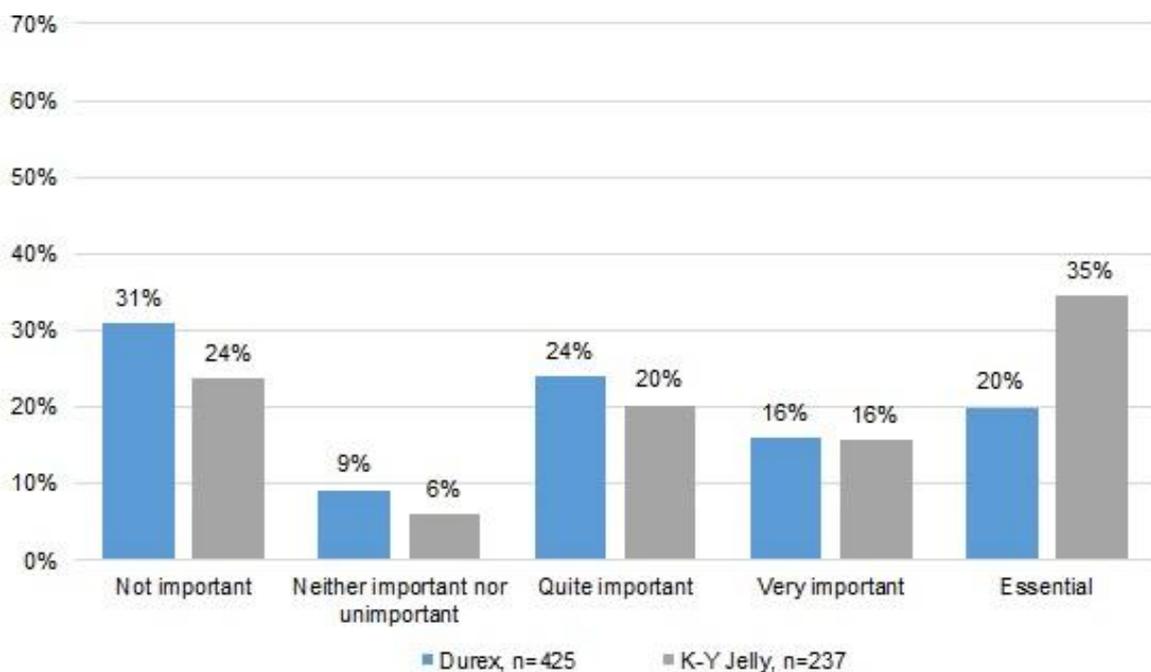


Base: Bought K-Y and/or Durex in the past 12 months.

22. Suitability for medical use tended to be more important for buyers of K-Y than buyers of Durex, with 50% of K-Y buyers saying suitability for medical use was very important or essential compared to 36% of Durex buyers. However, 30% of K-Y buyers also said that suitability for medical use was 'not important' or 'neither important nor unimportant'.

Figure 15: The importance of suitability for medical use in choosing a product

Q7: How important was suitability for medical use in choosing the product you bought?

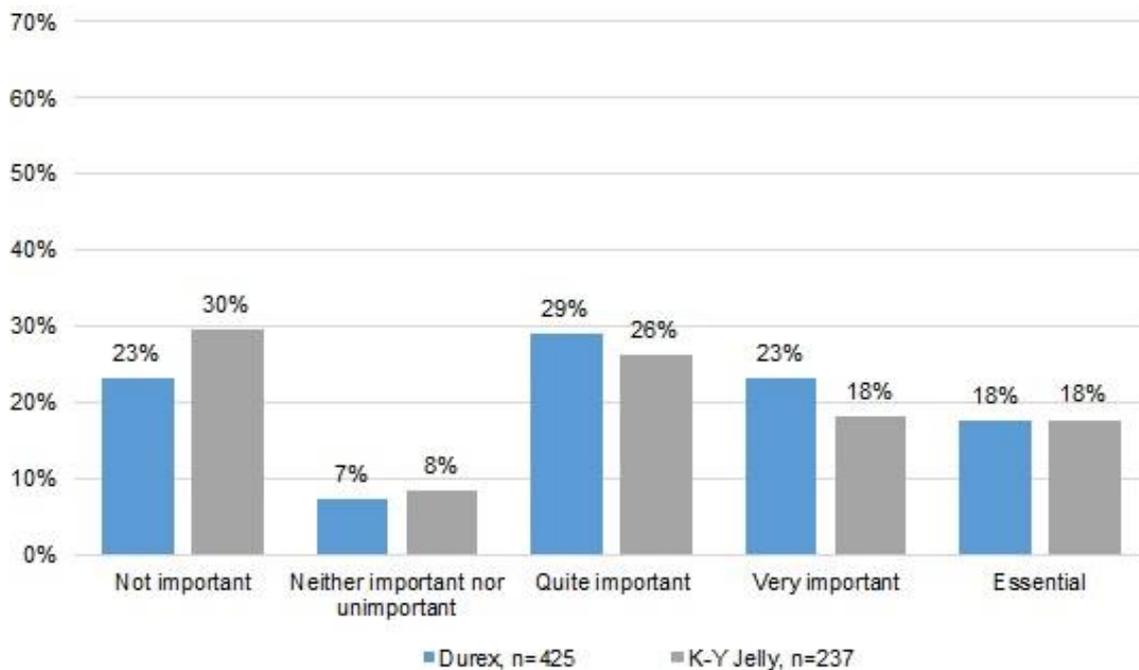


Base: Bought K-Y and/or Durex in the past 12 months.

23. A long-lasting effect was very important or essential for 41% and 36% of Durex and K-Y buyers respectively.

Figure 16: The importance of a long-lasting effect in choosing a product

Q7: How important was long-lasting effect in choosing the product you bought?

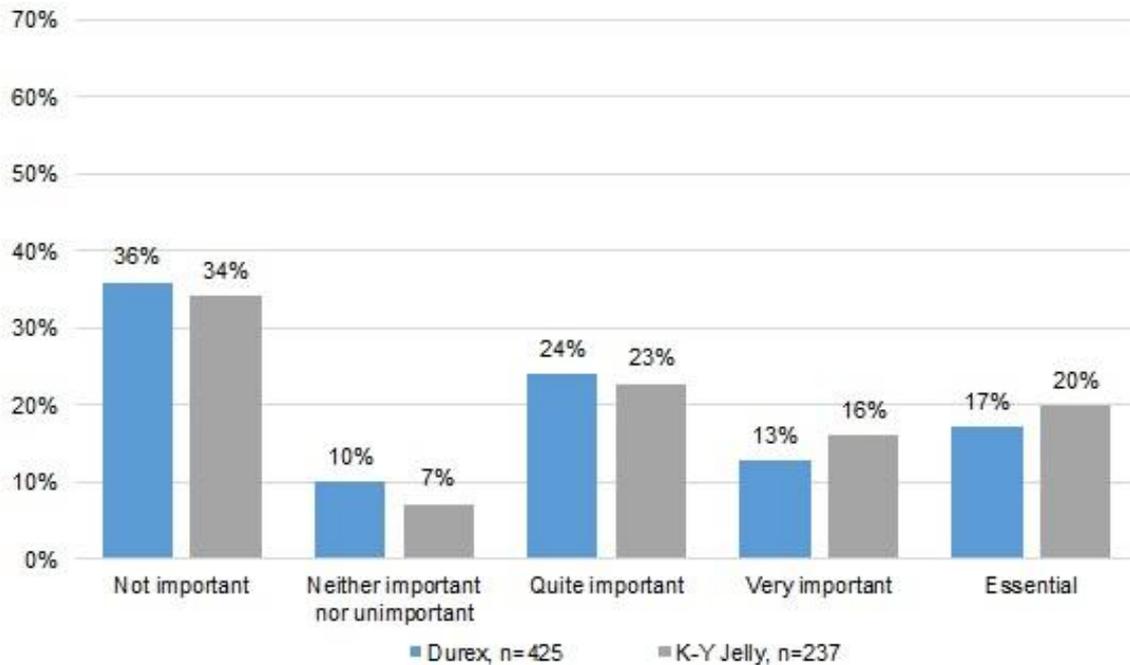


Base: Bought K-Y and/or Durex in the past 12 months.

24. About a third of both K-Y and Durex purchasers said that it was not important whether the personal lubricant was water-based or silicone-based, while similar proportions said that it was either very important or essential.

Figure 17: The importance of whether the personal lubricant is water-based or silicone-based in choosing a product

Q7: How important was whether the personal lubricant is water-based or silicone-based in choosing the product you bought?



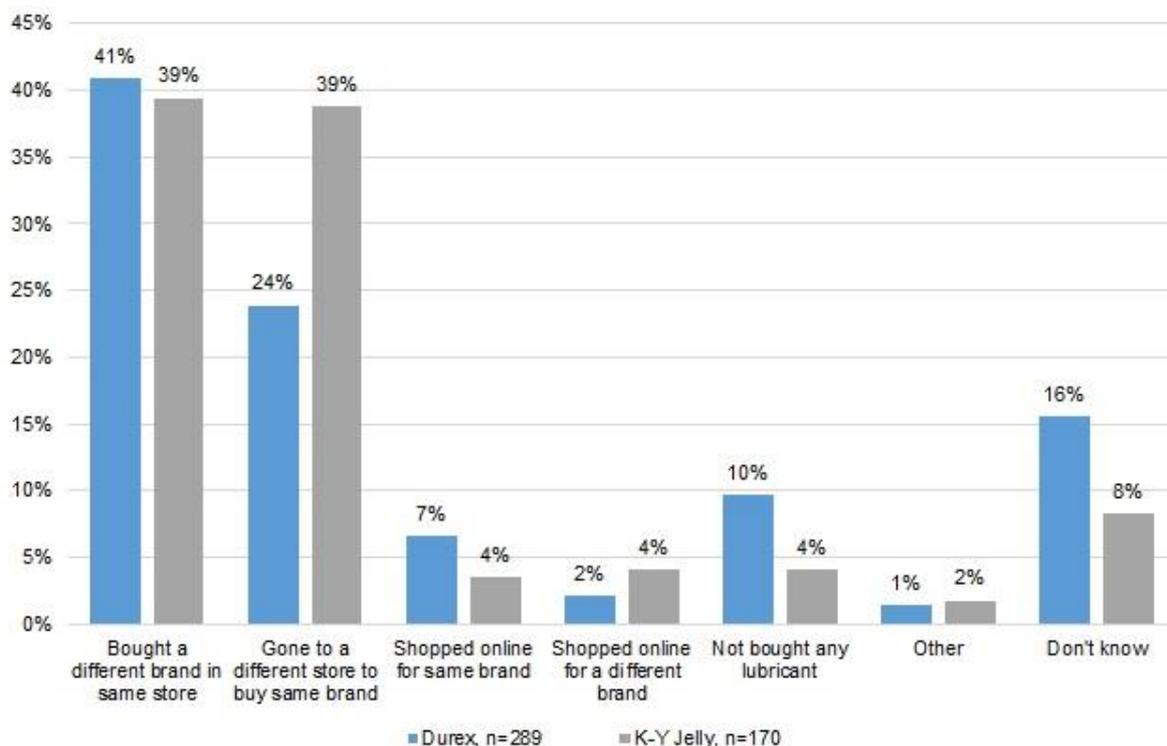
Base: Bought K-Y and/or Durex in the past 12 months.

Switching behaviour

25. Of those who had purchased Durex in a grocery retailer or pharmacy and knew which store or pharmacy, when asked what they would have done if Durex was no longer available at that store, the most common response was to buy a different brand in the same store (41%), followed by 'gone to a different store to buy same brand' (24%).
26. For K-Y purchasers, a similar proportion would have 'bought a different brand in the same store' (39%) and a further 39% said that they would have 'gone to a different store to buy same brand' (39%). Very few Durex and K-Y purchasers would have shopped online for either the same brand or a different brand; 9% and 8% respectively. From detailed analysis not shown in Figure 18, only 1% of Durex consumers and 2% of K-Y consumers said that they would buy the same or another product online (excluding the websites of national grocery and pharmacy stores which have been removed from the percentages shown in Figure 18), 4% and 2% of purchasers of Durex and K-Y respectively said they would buy from adult stores, and 1% and 4% respectively said that they would buy from independent pharmacies.

Figure 18: Switching behaviour

Q8: If the last time you went to [shop where purchased] to purchase [Durex/K-Y] you had found it was no longer available from there, what would you have done instead?

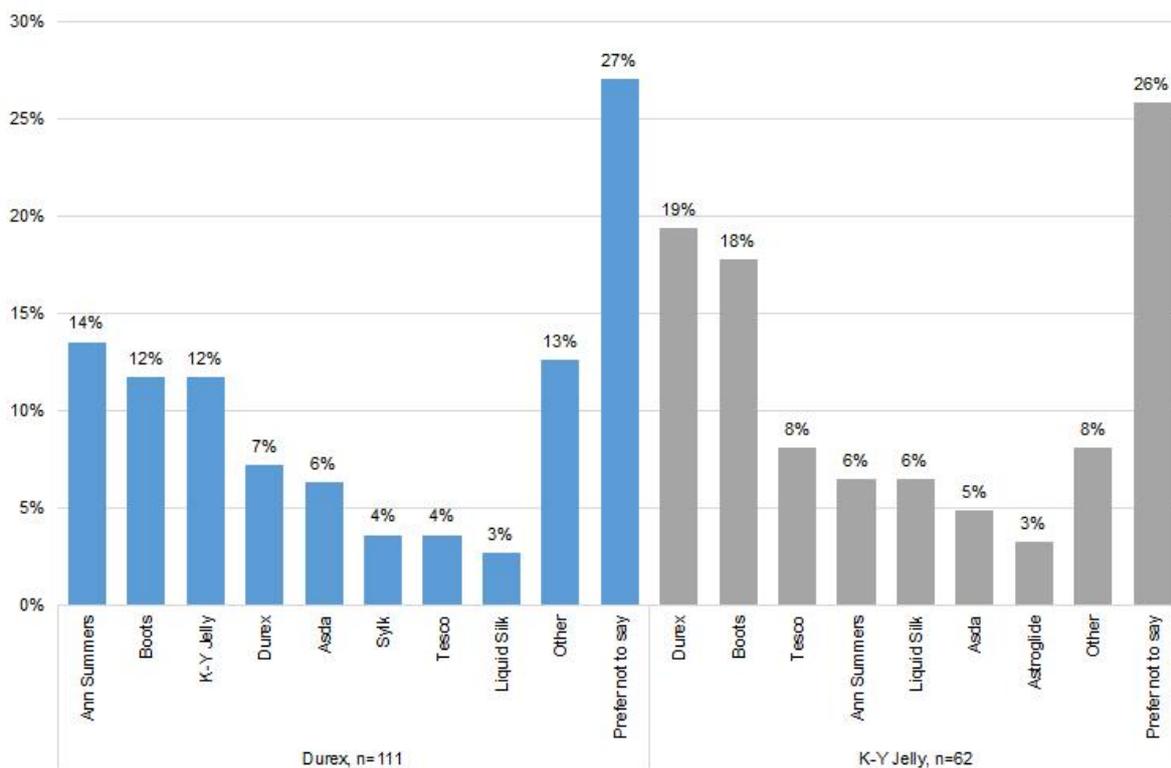


Base: Bought Durex and/or K-Y in the past 12 months, either from a supermarket or pharmacy (Q5) and in-store or both online and in-store (Q2).

27. In merger cases we are most interested in the diversion behaviour of marginal customers. Respondents who would have bought a different brand in the same store or would not have made a purchase at all in response to question 8 may be regarded as unwilling to incur the search costs associated with making a purchase of the same brand in another store or online and therefore may be regarded as a more 'marginal' set of customers.
28. Figure 19 shows that among those marginal customers of Durex products, Ann Summers (14%) was the most popular diversion brand choice, followed by Boots own-label (12%) and K-Y (12%). Among marginal K-Y purchasers, the most popular choice was Durex (19%), followed by Boots own-label (18%) and Tesco (8%). However, approximately one quarter of Durex and K-Y purchasers responded that they would 'prefer not to say' to this question. No single brand within the 'other' category accounted for more than 2% of responses.

Figure 19: Buying an alternative brand (marginal customers only)

Q9: Which brand would you have bought instead?

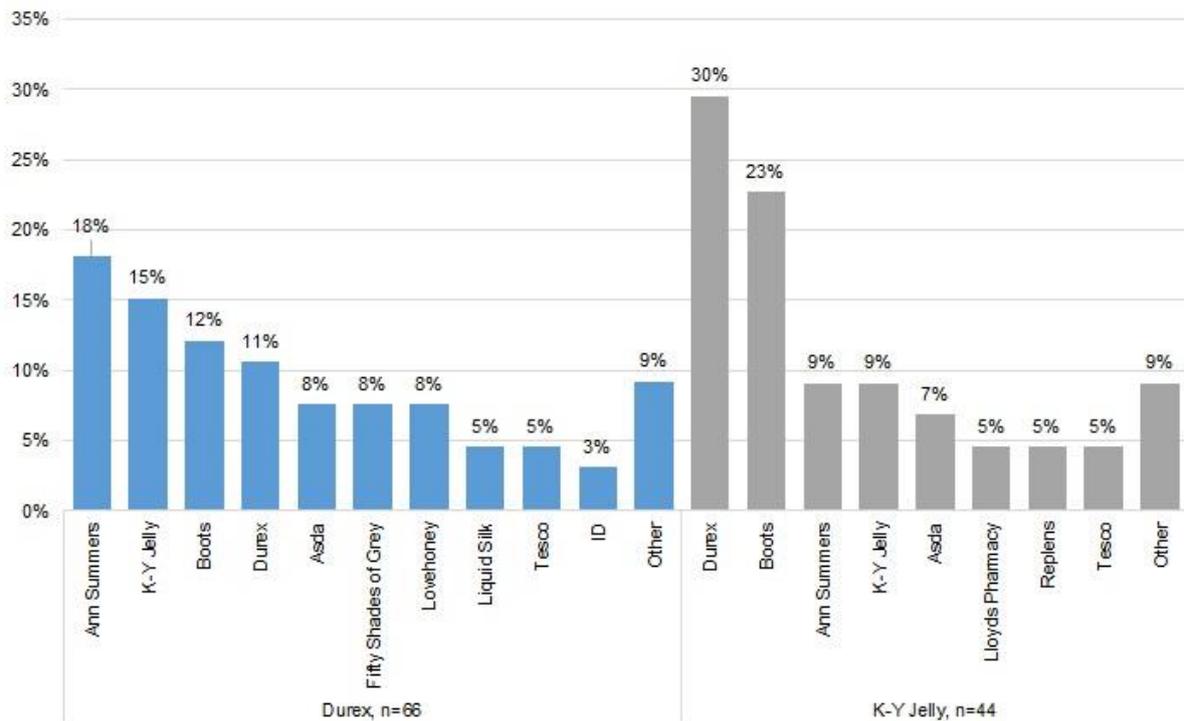


Base: Bought Durex and/or K-Y in the past 12 months, either from a supermarket or pharmacy (Q5) and in-store or both online and in-store (Q2) and would switch brands (Q8).

29. Figure 20 repeats the analysis of figure 19, but for 'infra-marginal' customers, ie those who responded that they would buy the same brand, either at another store or online. When asked what brand they would buy if this brand was no longer available anywhere, the most popular response among infra-marginal Durex product purchasers was Ann Summers (18%), followed by K-Y (15%) and Boots own-label (12%). Among K-Y purchasers, the most common response was Durex (30%), followed by Boots own-label (23%) and Ann Summers (9%).
30. 'Other' brands as an aggregate make up 9% each of Durex and K-Y purchasers' responses. However, each of these brands individually accounts for less than 2% of responses.

Figure 20: Buying an alternative brand (infra-marginal customers only)

Q12A: Now suppose that you had found that [Durex/K-Y] was no longer available anywhere. Which brand would you have bought instead?



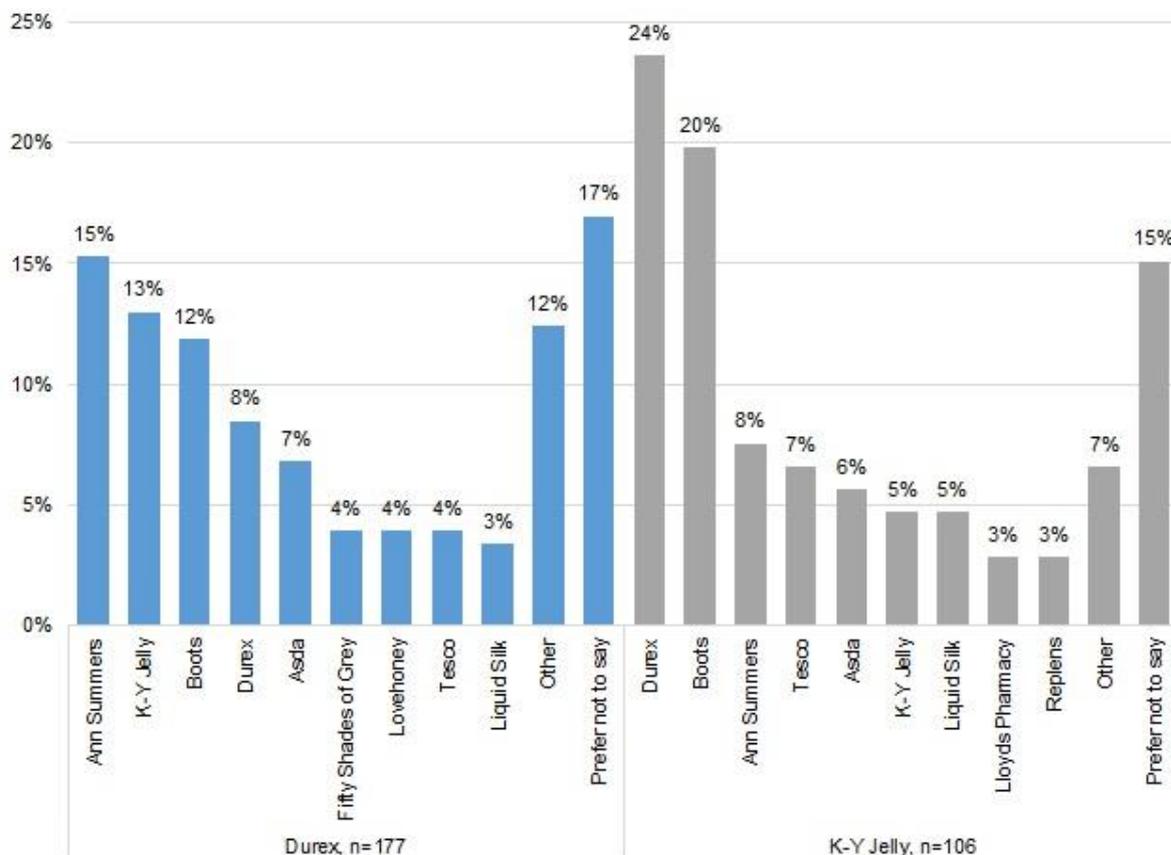
Base: Bought Durex and/or K-Y in the past 12 months, either from a supermarket or pharmacy (Q5) and in-store or both online and in-store (Q2) and would still buy original product (Q8).

31. Figure 21 shows the combined responses from figures 19 and 20. For Durex purchasers, Ann Summers, followed by K-Y and Boots own-label, were the most popular choices of personal lubricants. Among K-Y purchasers, Durex, followed by Boots and Ann Summers, were the most popular brands.

Figure 21: Marginal and infra-marginal customers

Q9: Which brand would you have bought instead?

Q12A: Now suppose that you had found that [Durex/K-Y] was no longer available anywhere. Which brand would you have bought instead?



Base: Bought Durex and/or K-Y in the past 12 months, either from a supermarket or pharmacy (Q5) and in-store or both online and in-store (Q2) and would still buy a lubricant (Q8).

Diversion ratios

- 32. In calculating the diversion ratio we have taken out ‘don’t know’ and ‘prefer not to say’ responses from question 8 as they are not informative for this purpose. However, the ‘prefer not to say’ responses shown in figures 19 and 20 have been allocated across brands in proportion to the response of those that cited brands. This utilises the information that they would divert their purchases rather than not make purchases.
- 33. The numerator of the subsequent diversion ratio is diversion to the merger party brand, while the denominator is calculated by summing diversion to the merger party brand, diversion to third party brands and those who said that

they would not purchase any product. Own party diversion, eg from one brand to another, is excluded.¹

34. Table 1 shows that this results in a diversion ratio of 14% from Durex to K-Y and 24% from K-Y to Durex. The 95% confidence interval for diversion from Durex to K-Y is 8% to 20%, and from K-Y to Durex it is 14% to 34%. This confidence takes account of sampling error, but not other potential sources of error.

Table 1: Diversion ratios (marginal customers)

	<i>Durex</i>	<i>K-Y Jelly</i>
Not purchased	28	7
<i>Divert to:</i>		
Durex	8	12
K-Y Jelly	13	1
Third party	60	33
Don't know	30	16
Diversion ratio	14%	24%

35. Table 2 shows the equivalent results for the combined sample of marginal and infra-marginal customers. The central estimate of the diversion ratio from Durex to K-Y is the same at 14%, but with a slightly narrower 95% confidence interval of 9% to 19%. The central estimate for K-Y to Durex is similar, at 27% compared to 24%, giving a 95% confidence interval of 19% to 35%.

Table 2: Diversion ratios (marginal and infra-marginal customers)

	<i>Durex</i>	<i>K-Y Jelly</i>
Not purchased	33	8
<i>Divert to:</i>		
Durex	15	25
K-Y Jelly	23	5
Third party	109	60
Don't know	30	16
Diversion ratio	14%	27%

36. It may be hypothesised that within the Durex product range, Durex Play Feel, Durex Aloe Vera and Durex Sensilube are the products that might be regarded as being the closest to K-Y in their features. Table 3 reports a summary of diversion behaviour of purchasers of these products and shows that the diversion ratio to K-Y is 12%. This is similar to the diversion ratio for all Durex purchasers, although in the opposite direction to what we might have expected.

¹ More formally, let OO = not purchased (Outside Option), MP = diversion to Merger Party, OP = diversion to Own Party, TP = diversion to Third Party and DK = Don't Know. Diversion Ratio = $(MP+DK*MP/(MP+TP+OP))/(OO+MP+TP+DK*(MP+TP)/(MP+OP+TP))$.

Table 3: Diversion ratios (marginal and infra-marginal customers who bought Durex Play Feel, Durex Aloe Vera or Durex Sensilube)

	<i>Durex</i>
Not purchased	10
<i>Divert to:</i>	
Durex	7
K-Y Jelly	11
Third party	72
Don't know	9
Diversion ratio	12%

Product use

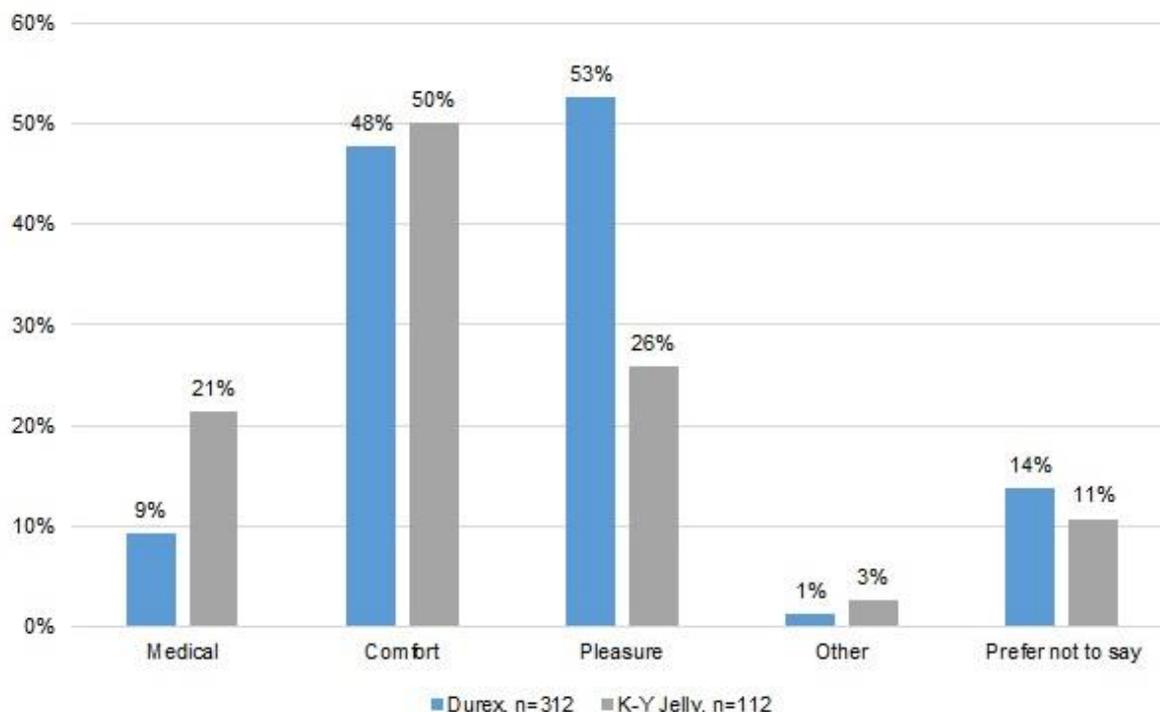
37. A programming error resulted in Q13 being omitted from the first two weeks of interviews for purchasers of K-Y. Subsequent interviews only asked questions 2 to 12 of those who had purchased K-Y, which is why some of the sample sizes are inconsistent between questions.
38. Around half of both Durex and K-Y purchasers said that they used the personal lubricant they had purchased to make sex more comfortable.² Around one in five K-Y purchasers and one in ten Durex purchasers bought the personal lubricant for medical purposes. Just over half of Durex purchasers and one in four K-Y purchasers bought the lubricant for pleasure purposes.

² This was a multi-code question meaning that a respondent could choose more than one of the response options. However, in practice, among K-Y purchasers 89% of respondents gave a single answer, while the equivalent figure for Durex purchasers is 79%. For the sake of clarity, if a respondent had ticked any combination of the five response options for question 13, including if one of these options was 'Prefer not to say', they would not have been counted as a single answer for the purpose of the numbers reported in this footnote.

Figure 22: Use of personal lubricant

Q13: What do you use [Durex/K-Y] for? Please select all that apply.

1. Medical, for example to alleviate the discomfort of vaginal dryness
2. Make sex more comfortable
3. Add pleasurable sensation to foreplay or sex
4. Other
5. Prefer not to say



Base: Bought Durex and/or K-Y in the past 12 months.

Responses to the parties' comments on the customer survey

39. Comments on the customer survey were received from J&J and from RB's economic advisers. The CMA has considered these comments and has the following responses to them.

Target population

40. The first point of RB's economic advisers is that the survey population for the TNS Omnibus Survey is a representative sample of the UK adult population rather than being representative of the population of interest, which is the purchasers of Durex and K-Y personal lubricant products and in particular those purchasing from the stores of grocery retailers and national pharmacy chains in the UK. In many merger cases a sampling frame is constructed directly from a comprehensive customer list of the target population. In this case a list was not available and an alternative approach was used.

41. The TNS Omnibus Survey is a representative random sample of the adult population of the UK, and for our purposes all Omnibus Survey respondents

were asked which (if any) brands of personal lubricant products had been purchased in the previous year. The suite of personal lubricants questions was then only asked of those who responded that they had purchased a K-Y or Durex product within the last year. This should result in a representative sample of the purchasers of these two brands' personal lubricant products, ie the population of interest. The sampling properties of this approach, in identifying a random sample of the appropriate target population, are statistically sound.

42. TNS varied the interviewing times and applied quotas to ensure that the sample it obtained was representative of the adult population with respect to key demographic characteristics. We acknowledge the point raised by RB's economic advisers that there are additional characteristics of respondents, such as education level, income and health status, for which we cannot guarantee representativeness and some other variables, such as religious feelings, sexual preferences and migrant background that have not been controlled for and that potentially affect the usage of lubricant products. However, the CMA takes the view that there is no specific reason, other than the under-coverage described elsewhere, to think the sample was unrepresentative with respect to any of these groups.
43. RB's economic advisers highlight that 9% of purchasers of Durex products claim to have purchased Sensilube and that this is out of line with this product's share of the brand's sales. The CMA agrees that 9% is high, but this does not demonstrate that the survey is unrepresentative. An alternative explanation is that the difference may be explained by some respondent error with respect to the individual product names within the Durex range.
44. RB's economic advisers are correct in their observation that the suite of questions about personal lubricants was only asked of those respondents to the Omnibus Survey who were between the ages of 18 and 65. The CMA took advice from TNS when commissioning the questions. TNS was not comfortable asking these questions of young people below the age of 18 or of people above the age of 65. We note that a recent survey conducted by [redacted] for RB about sexual well-being products is limited to the same age range and that RB has used the findings of the [redacted] survey in supporting its view that the merger should be cleared.
45. The CMA acknowledges that using the age range of 18 to 65 does result in under-coverage of the target population and that this is likely to introduce some bias into the survey results. There are some differences in the age distributions of purchasers of Durex and K-Y personal lubricants; we have assumed that there is likely to be a higher incidence of purchasers of K-Y among the over-65 population and a smaller incidence among the under-18-

year-olds and have been mindful of this when interpreting survey evidence. 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 overall validity of the survey results.

46. The degree of overlap in, for example, product use, as reported in Figure 22 is likely to be overstated as a result of under-coverage. This under-coverage may also have resulted in some overstatement of diversion ratios, although not to a large extent. This could arise if, for example, a higher proportion of purchasers of K-Y above the age of 65 are using the product for medical and functional uses and are less likely to see any of the Durex products as the next best alternative.
47. To test sensitivity to this we take the Kantar Worldpanel estimate that 30% of K-Y purchasers are above the age of 65 and employ the extreme assumption that all of these would divert to a third party product. This has the effect of down-rating the diversion ratio by 70% resulting in an adjusted diversion ratio from K-Y to Durex of 19%. The corresponding 95% confidence interval for this adjusted diversion ratio is 13% to 25%. The diversion ratio calculated from the survey responses of the 66 K-Y purchasers aged 55 to 65 in our achieved sample is 21%. This provides some empirical support for suggesting that a Durex product is the next best alternative for some K-Y customers above the age of 65.

Diversion

48. RB's economic advisers argue that the CMA should have asked a price diversion question and that in not doing so has failed to follow its own survey guidelines. It argues that the guidelines make it clear that it is only in the specific situation of retail outlets that asking a forced diversion question without a price diversion is appropriate. We acknowledge that the CMA's survey guidance uses a retail outlet example in its phrasing of the appropriateness of using price or forced diversion questions, but do not agree that this means that this is the only context in which this aspect of the guidance is valid.
49. In merger cases, the CMA is interested in the behaviour of marginal³ customers as these customers are most likely to switch following a worsening of a company's offering, eg a price rise. In many merger cases it is not possible to report diversion ratios for marginal customers due to the

³ Marginal customers are those who will purchase a particular product at the market price, but will be unwilling to pay any more for it. By contrast, infra-marginal customers would purchase the product if the price was a small increment higher.

constraints of a small sample size. In such circumstances the CMA relies on the forced diversion question⁴ to estimate diversion ratios, assuming that the diversion behaviour of marginal customers and infra-marginal customers are broadly the same. It should be noted that it is not obvious whether a diversion ratio measured from a forced diversion question will be higher or lower than one estimated from a price diversion question. Where possible, the CMA tests this assumption. For example, in surveys the CMA may try to identify marginal customers and compare their behaviour with infra-marginal customers. As noted below, such a test was carried out in this survey.

50. In the current case we were aware when commissioning the survey questions that the incidence of purchasers of K-Y and Durex personal lubricants products among the general population was likely to be low and that we would not obtain a sufficiently large number of marginal customers among the small achieved sample to enable us to use in a robust way the results of a price diversion question. The diversion questions are therefore based on the forced closure concept.
51. In practice, the questions relating to diversion do enable us to go some way towards testing the assumption that the diversion ratios we have used are similar to those of marginal customers. Question 8 of the survey asks customers what they would have done if the brand had not been available in the purchase store. Some customers responded that they would have purchased the same brand in a different store or online. The increased search costs they are willing to incur to do this may be interpreted as indicating a brand loyalty that distinguishes them from the customers that switch brands or do not make a purchase at all. The 'loyal' customers can therefore be regarded as infra-marginal and the less loyal customers as being more marginal in their behaviour. As can be seen in the tables, diversion ratios estimated from the responses of the 'quasi-marginal' customers are similar to those of the whole sample.
52. Sample sizes are close to what we would regard as being small, even for forced diversion. This, together with some degree of under-coverage, response error, the usual caveats about the hypothetical nature of the diversion questions and any residual potential for non-response bias, are factors we consider when assessing the evidential weight that can be given to the diversion results as indicators of closeness of competition, at the consumer level, between the merger parties' products. Our conclusion is that diversion ratios are smaller than those that would be implied if the product offerings were all identical. This suggests, as is consistent with the results for

⁴ For example: what would you do if the product was no longer available?

the question on use, some degree of product differentiation between the merger products. However, it is also clear from these results that for some customers these products are regarded as being substitutes and are in competition with each other.

53. RB's economic advisers commented that the survey did not include a SSNIP question and is therefore not fit for the purpose of defining the market. However, this was not one of the intended purposes of the survey. The stated survey objectives include assessing the closeness of competition between the merger parties' products and to assess the strength of constraint from online channels and these are both covered by our questions.

Respondent error

54. RB's economic advisers also made some comments about respondent error and gave examples of where this might exist. The first of these relate to the high proportion of respondents diverting to Ann Summers products. We believe these numbers may be overstated, particularly given that Ann Summers products are not available in most of the major grocery and pharmacy chains. Some respondents may have chosen Ann Summers because it was the first in the alphabetical listing of brands. This might be accentuated by Ann Summers being a relatively well-known brand. It is notable that the proportion of customers diverting to Ann Summers is higher among purchasers of the Durex products than K-Y customers. This may be consistent with Ann Summers being a closer competitor to the Durex range and some respondents ticking the first reasonable alternative within the brand list.
55. It should be noted that the real choice set of consumers in grocery retailers and national pharmacy chains is usually smaller than the list that was presented to them as response options in the survey, and that this could have led to an overstatement of diversion to third party brands that would not, in practice, have been available unless respondents had switched to another sales outlet.
56. RB's economic advisers also list some responses that they consider to be inconsistent. There will always be a small amount of response error in surveys. However, most examples they cite have a simple explanation. For example, a number of respondents said that they would switch from Durex in question 8 but then cited a Durex product in question 9. It is reasonable to assume that these consumers did not distinguish between switching product and switching brand. These consumers are not included in our diversion ratio estimates.

57. The parties have questioned some diversion from Durex to K-Y products that 'do not appear to be realistic or credible'. For example, the first case they cite is a respondent that diverted from Durex Embrace (a premium product in the Durex range) to K-Y. However, this consumer may well have faced a choice of K-Y or an own-label product if Durex products had not been available and might under these circumstances have been happy to purchase K-Y as the next best alternative.
58. J&J comments on question 13, which asks about use, and thinks that the answer options are too vague. We believe that most respondents will have understood the question and the response options as we had intended.
59. The parties comment on the number of respondents who said that they would divert to another personal lubricant brand but did not know which brand they would divert to. This is a common feature of the results from diversion questions in customer surveys. Our standard interpretation is that these customers are stating that they are likely to have diverted, but do not have sufficient information about what the alternatives would have been to be explicit about their alternative purchase. For such cases, the CMA's standard assumption is that these customers would divert to brands in proportion to those that did state their diversion destination brand. We acknowledge that this is a weakness of hypothetical diversion questions and a disadvantage of evidence based on stated rather than revealed preference.
60. J&J commented that responses to question 6a relating to whether purchases were planned were not included in the survey report and argue that planning of purchases could make the fact that choices are limited in some outlets largely irrelevant to the final purchase decision. We do not agree with this assessment. Although most survey respondents said that their purchases were planned, responses to question 6b show that most customers do not compare prices for products anywhere else before making their purchase.

Sample size

61. RB's economic advisers comment on sample sizes. We have included confidence intervals for diversion ratios in the commentary above. These are based on sampling errors, but do not take into account other potential sources of error (which cannot be quantified).
62. Both parties comment on the different base sizes in different parts of the survey. The main reason for this is that TNS initially made a programming error in the scripting of the survey questionnaire and this resulted in interviewers failing to ask the use question of respondents who had purchased K-Y products. The survey period was therefore extended to pick up

more K-Y purchasers, but for this part of the fieldwork questions the full suite of questions was not asked of Durex purchasers.

TNS consumer survey questionnaire

QS9648 Lubricant
WED 08

- F1: All adults 18-65 in GB
- F2: All who have bought K-Y Jelly or Durex Q1\7 or 11
- F3: All who have bought K-Y Jelly or Durex in a shop or pharmacy Q2\1,3
- F4: All who have bought K-Y Jelly or Durex site online Q2\2
- F5: All who had check online prices Q.6B\4
- F6: All who know where they bought K-Y Jelly or Durex Q5\NOT DK
- F7: All who bought a different brand Q8\1,4
- F8: All who would still buy KY Jelly\Durex Q8\2,3
- F9: Would buy alternative brand if had to Q12\1-33
- F10: All who have bought Durex Q1\7
- F11: All who had check online or supermarket\major pharmacy prices Q.6B\1,4
- F12: All who sought another brand Q8\2,3,4

SCRIPTERS: THERE ARE SOME LONG LISTS IN THIS SCRIPT WE ARE EXPECTING SCROLL BARS.

F1: All adults 18-65 in GB

The following questions have been commissioned by a government organisation that need to understand more about this product market to make some decisions relating to it. We appreciate that the subject is a sensitive one, but your answers are important and we would be very grateful for your cooperation.

F1: All adults 18-65 in GB

Due of the subject matter I would like you to answer these questions yourself using this machine, so that your answers remain confidential.

Your answers will become statistics along with other interviews we are conducting around the UK.

INTERVIEWER: IF RESPONDENT IS HESITANT\CONCERNED ABOUT CONFIDENTIALITY REASSURE THEM OF THIS: NO INDIVIDUAL ANSWERS GIVEN BY THEM WILL RELATE BACK TO THEM

HAND CAPI MACHINE TO RESPONDENT AND ASK THEM TO READ THE NEXT SCREEN THEMSELVES

F1: All adults 18-65 in GB

Here is a practice question just so that you can be sure you are comfortable using the machine. Ask the interviewer if you need help at this point. Otherwise tap your answer then tap the OK button to go to the first question.

Q.A How often does the weather man get the weather forecast correct? Please select a code from 1-5.

Tap OK to continue

- 1: 1. Very often
- 2: 2. Quite often
- 3: 3. Hardly ever
- 4: 4. Never
- 5: 5. Other answer – PEN WRITE IN

F1: All adults 18-65 in GB

MULTI CHOICE

Q.B And now another practice question. Please select the initials for your first, middle and last name.

USE THE BAR ON THE RIGHT HAND SIDE TO SCROLL DOWN TO THE LETTERS THAT YOU CAN'T SEE ON SCREEN

SCRIPTERS: PLEASE USE A LARGE FONT FOR THE ANSWER CODES AND A LINE SPACE INBETWEEN EACH. USE A SCROLL BAR
THE PURPOSE FOR THIS QUESTION IS TO ADD IN A SCROLL BAR AND DEMOSTRATE TO THE REPSONDENT HOW IT WORKS

- 1: A
- 2: B
- 3: C
- 4: D
- 5: E
- 6: F
- 7: G
- 8: H
- 9: I
- 10: J
- 11: K
- 12: L
- 13: M
- 14: N
- 15: O

- 16: P
- 17: Q
- 18: R
- 19: S
- 20: T
- 21: U
- 22: V
- 23: W
- 24: X
- 25: Y
- 26: Z

F1: All adults 18-65 in GB

Now it's over to you. Please read the instructions as they appear and remember to press 'OK' when you have finished each question. Please be assured that all your answers will remain confidential.

Your personal details will not be passed on to anyone following this survey. Please be as accurate as possible in your response

F1: All adults 18-65 in GB

MULTICHOICE

Q.1 Which of the following brands of personal lubricant (such as lubricating gels and intimate lubricants), if any, have you purchased in the last 12 months?

DO NOT INVERT

- 1: Ann Summers
- 2: AQUAglide
- 3: Asda own label
- 4: Astroglide
- 5: Balance Activ
- 6: Boots own label
- 7: Durex
- 8: Fifty Shades of Grey
- 9: Gynofit
- 10: ID
- 11: K-Y Jelly
- 12: Liquid Silk
- 13: Lloyds Pharmacy own label
- 14: Lovehoney own label
- 15: Numark

- 16: Pesante
- 17: Phyto Soya
- 18: Pjur
- 19: Replens
- 20: RepHresh
- 21: Sasmar
- 22: Sliquid
- 23: Superdrug own label
- 24: Super Slik
- 25: Swoon
- 26: Sylk
- 27: System JO
- 28: Tesco own label
- 29: Waterglide
- 30: Wet
- 31: Woohoo!
- 32: Yes!
- 33: Other PEN WRITE IN
- 34: Prefer not to say
- 35: None
- 36: Don't know

F2: All who have bought K-Y Jelly or Durex Q1\7 or 11

Q.2 Where have you bought [INSERT] personal lubricant in the last 12 months?

SCRIPTERS: Q2 ASKED FOR EACH GIVEN CODES 7 OR 11 AT Q1

[INSERT] = Durex Q1\7

[INSERT] = K-Y Jelly Q1\11

DO NOT INVERT

- 1: In a shop\pharmacy\adult store
- 2: On-line
- 3: Both in a shop\pharmacy\adult store and on-line
- 4: Prefer not to say
- 5: Can't remember

F2: All who have bought K-Y Jelly or Durex Q1\7 or 11

Q.3 How often have you purchased [INSERT] personal lubricant in the last 12 months?

[INSERT] = Durex Q1\7

[INSERT] = K-Y Jelly Q1\11

SCRIPTERS: Q3 ASKED FOR EACH GIVEN CODES 7 OR 11 AT Q1

DO NOT INVERT

- 1: Once a month or more
- 2: About every 3 months
- 3: About every 6 months
- 4: Once a year
- 5: Prefer not to say
- 6: Don't know

F10: All who have bought Durex Q1\7

MULTICHOICE

Q.4 Thinking about the last time you bought Durex [INSERT 1], which of these products did you buy?

[INSERT] = in store Q2\1,3

[INSERT] = online Q2\2

[Durex]

- 33: Sensilube
- 34: Play Feel
- 35: Play Aloe vera
- 36: Play warming
- 37: Play Tingle
- 38: Play very cherry
- 39: Play strawberry
- 40: Play Passion fruit
- 41: Play sensual massage 2 in 1 with seductive ylang ylang
- 42: Play sensual massage 2 in 1 with soothing aloe vera
- 43: Play stimulating massage 2 in 1 arousing guarana
- 44: Embrace pleasure gel
- 45: Play perfect glide
- 46: Play O orgasmic gel
- 47: Real Feel
- 206: Other Durex PEN WRITE IN
- 232: Prefer not to say
- Don't know

F2: All who have bought K-Y Jelly or Durex Q1\7 or 11

Q.5 Which [INSERT] did you buy it from?

Please select the last store you purchased from

[INSERT] = shop or pharmacy Q2\1,3

[INSERT] = website Q2\2

IF shop or pharmacy Q2\1,3 – THE LIST IS:

SPECIALIST STORES

- 1: Agent Provocateur
- 2: AnnSummers
- 3: Coco de Mer
- 4: Independent Specialist

PHARMACY

- 5: Boots
- 6: Superdrug
- 7: Lloyds
- 8: Independent Pharmacy

SUPERMARKET

- 9: Tesco
- 10: Asda
- 11: Sainsbury's
- 12: Morrisons
- 13: Waitrose
- 14: Co-op
- 15: Other Supermarket
- 16: Convenience Store

- 18: Prefer not to say
- 19: Don't know \ Can't remember

IF website Q2\2 – THE LIST IS:

SPECIALIST WEBSITES

- 1: Agent Provocateur
- 2: AnnSummers
- 3: Coco de Mer
- 4: Harmony
- 5: Simply Pleasure
- 6: LoveHoney
- 7: Bondara

GENERALIST

- 8: Amazon
- 9: EBay

PHARMACY

- 10: Boots
- 11: Superdrug
- 12: Other Pharmacy website

SUPERMARKET

- 13: Tesco
- 14: Asda
- 15: Morrisons
- 16: Sainsbury's
- 17: Other supermarket

- 18: Prefer not to say
- 19: Don't know \ Can't remember

F3: All who have bought K-Y Jelly or Durex in a shop or pharmacy Q2\1,3

Q.6Ai Had you planned to buy this product before you went into the shop, or did you decide to buy it once you were there?

- 1: Planned
- 2: Only decided when in the store
- 3: Prefer not to say
- 4: Don't know

F4: All who have bought K-Y Jelly or Durex site online Q2\2

Q.6Aii Did you go to the website specifically to purchase this product or did you decide to purchase to buy it after going to the website?

- 1: Planned
- 2: Only decided when on the website
- 3: Prefer not to say
- 4: Don't know

F3: All who have bought K-Y Jelly or Durex in a shop or pharmacy Q2\1,3

MULTICHOICE

Q.6B Had you compared prices of the [product] or other similar lubricant products anywhere else?

- 1: Yes, at a supermarket\major pharmacy
- 2: Yes, at an independent\smaller pharmacy
- 3: Yes, at an adult store, e.g. Ann Summers

- 4: Yes, on-line
- 5: No – FIX AND MUTUALLY EXCLUSIVE
- 6: Don't know

F11: All who had check online or supermarket\major pharmacy prices Q.6B\1,4

INSERT 11 = website Q6b\4

INSERT 11 = supermarket\major pharmacy Q6b\1

INSERT 11 = adult store Q6b\3

MULTICHOICE

Q.6C Which [INSERT 11] did you check?

SCRIPTERS IF THE RESPONDENTS SELECTS MORE THAN 1 CODE 1-3 AT Q6b, SHOW ALL SETS OF CODES WHICH SUITS THEIR DEFINITIONS AND MAKE THEM SELECT ONE FROM EACH LIST

IF Q6b\4 SHOW

SPECIALIST WEBSITES

- 1: Agent Provocateur
- 2: AnnSummers
- 3: Coco de Mer
- 4: Harmony
- 5: Simply Pleasure
- 6: LoveHoney
- 7: Bondara

GENERALIST

- 8: Amazon
- 9: EBay

PHARMACY

- 10: Boots
- 11: Superdrug
- 12: Other Pharmacy website

SUPERMARKET

- 13: Tesco
- 14: Asda
- 15: Morrisons
- 16: Sainsbury's
- 17: Other supermarket

- 19: Prefer not to say

18: Don't know \ Can't remember

IF Q6b\1 SHOW

PHARMACY

- 5: Boots
- 6: Superdrug
- 7: Lloyds
- 8: Independent Pharmacy

SUPERMARKET

- 9: Tesco
- 10: Asda
- 11: Sainsbury's
- 12: Morrisons
- 13: Waitrose
- 14: Co-op
- 15: Other Supermarket
- 16: Convenience Store

- 18: Prefer not to say
- 19: Don't know \ Can't remember

IF 6B\3 SHOW

SPECIALIST STORES

- 1: Agent Provocateur
- 2: AnnSummers
- 3: Coco de Mer
- 4: Independent Specialist

- 18: Prefer not to say
- 19: Don't know \ Can't remember

F2: All who have bought K-Y Jelly or Durex Q1\7 or 11

Q.7 How important were each of the following in choosing the product you bought. Please rate each on a scale of 1 to 5 where 1 is Not important, 2 is Neither important nor unimportant, 3 is quite important, 4 is very important and 5 is Essential.

- ...Price
- ...Brand
- ...Extra features such as taste\smell\sensation
- ...Packaging
- ...Pack size

...Suitability for medical use\relieving vaginal dryness
...Long-lasting effect
...Whether water based or silicon based

- 1: 1 – Not important
- 2: 2
- 3: 3
- 4: 4
- 5: 5 - Essential

F6: All who know where they bought K-Y Jelly or Durex Q5\NOT DK

Q.8 If the last time you went to [INSERT 3] to purchase [INSERT] you had found it was no longer available from there, what would you have done instead?

[INSERT 3] – Answer code given at Q.5

[INSERT] = K-Y Jelly Q1\11

[INSERT] = Durex Q1\7

[INSERT 8] = store Q2\1,3

[INSERT 8] = website Q2\2

[INSERT 9] = shopped online Q2\1,3

[INSERT 9] = gone to a shop Q2\2

- 1: Bought a different brand from [INSERT 3]
- 2: Gone to a different [INSERT 8] to buy [INSERT] personal lubricant?
- 3: [INSERT 9] for [INSERT] personal lubricant
- 4: [INSERT 9] for a different brand
- 5: Not bought any lubricant in [INSERT 3] or anywhere else.
- 6: Other PEN WRITE IN
- 7: Don't know

F7: All who bought a different brand Q8\1,4

Q.9 Which brand would you have bought instead?

- 1: Ann summers
- 2: AQUAglide
- 3: Asda
- 4: Astroglide
- 5: Balance Activ
- 6: Boots
- 7: Durex
- 8: Fifty Shades of Grey
- 9: Gynofit
- 10: Gynomunal

- 11: ID
- 12: KY jelly
- 13: Liquid Silk
- 14: Lloyds pharmacy
- 15: Lovehoney
- 16: Numark
- 17: Pasante
- 18: Phyto soya
- 19: Pjur
- 20: RepHresh
- 21: Replens
- 22: Sasmr
- 23: Sliquid
- 24: Super drug
- 25: Super Silk
- 26: Swoon
- 27: Sylk
- 28: Tesco
- 29: System JO
- 30: Waterglide
- 31: Wet
- 32: Woohoo
- 33: Yes!
- 34: Prefer not to say

F7: All who bought a different brand Q8\1,4

Q.10 Which product from [INSERT]?

USE THE BAR ON THE RIGHT HAND SIDE TO SCROLL DOWN TO THE LETTERS THAT YOU CAN'T SEE ON SCREEN

[INSERT] = Code selected at Q9

SCRIPTERS: THE ANSWER CODES FOR EACH INSERT ARE:

[Ann Summers]

- 1: Ann Summer Liquid satin
- 2: Ann Summer sexy cool tingle lubw
- 3: Ann Summers Heat wave
- 4: Ann Summers candy floss juicy lube
- 5: Ann Summers Slide and Ride
- 6: Ann Summers Feeling Fruity Juicy Lube
- 7: Ann Summers Juicy Lube Bubblegum mini
- 8: Ann Summers Juicy Lube Strawberry
- 9: Ann Summers Tutti Frutti Mini
- 10: Ann Summers Strip Bare

11: Ann Summers Booty Relax lube
12: Ann Summers Rabbit Lube
13: The ultra silky feel silicone lube
200: Ann Summers (nonspecific)

[AQUAglide]

14: AQUAglide original lubricant
15: AQUAglide anal lubricant
201: AQUAglide (unspecified)

[Asda]

16: Asda silky lubricant
17: Asda lubricating jelly
202: Asda (unspecified)

[Astroglide]

18: Astroglide liquid
19: Astroglide gel
20: Astroglide sensitive skin gel
21: Astroglide diamond silicon gel
22: Astroglide x silicone liquid
23: Astroglide Natural Liquid
24: Astroglide Warming Liquid
25: Astroglide strawberry liquid
203: Astroglide (unspecified)

[Balance Activ]

26: Balance activ vaginal gel
27: Balance activ vaginal menopause moisture gel
28: Balance activ conceive fertility gel
204: Balance activ (unspecified)

[Boots]

29: Boots lubricating jelly
30: Boots silky lube
31: Boots Vaginal
32: Moisturising Gel
205: Boots (unspecified)

[Durex]

33: Sensilube
34: Play Feel
35: Play Aloe vera
36: Play warming
37: Play Tingle
38: Play very cherry
39: Play strawberry

- 40: Play Passion fruit
- 41: Play sensual massage 2 in 1 with seductive ylang ylang
- 42: Play sensual massage 2 in 1 with soothing aloe vera
- 43: Play stimulating massage 2 in 1 arousing guarana
- 44: Embrace pleasure gel
- 45: Play perfect glide
- 46: Play O orgasmic gel
- 47: Real Feel
- 206: Other Durex

[Fifty Shades of Grey]

- 48: Fifty Shades of Grey Ready for Anything
- 49: Fifty Shades of Grey At Ease Anal
- 50: Fifty Shades of Grey Silky Caress
- 51: Pleasure Gel for Her
- 207: Fifty Shades of Grey (unspecified)

[Gynofit]

- 52: Gynofit Gel
- 208: Gynofit (unspecified)

[Gynomunal]

- 53: Gynomunal vaginal moisturiser
- 209: Gynomunal (unspecified)

[ID]

- 54: ID glide
- 55: ID pleasure
- 56: ID sensation
- 57: ID jelly
- 58: ID millennium
- 59: ID backslide
- 60: ID velvet
- 61: ID silk
- 62: ID frutopia
- 63: ID juicy lube
- 64: ID h2o water based
- 65: ID auper silck silicone
- 66: Heat ray water based
- 67: Cool blast water based
- 210: ID (unspecified)

[KY jelly]

- 68: KY jelly

[Liquid Silk]

- 69: Liquid silk water based lubricant

70: Maximus
211: Liquid Silk (unspecified)

[Lloyds pharmacy]
71: Lloyds personal lubricant
212: Lloyds pharmacy (unspecified)

[Lovehoney]
72: Lovehoney Enjoy water-based lubricant
73: Lovehoney discover water-based anal lubricant
74: Lovehoney strawberry flavoured lubricant
75: Lovehoney stay longer delay lubricant
76: Lovehoney assorted flavoured lubricant pack
77: Lovehoney release masturbation lubricant
78: Lovehoney Cherry flavoured lubricant
79: Lovehoney chocolate orange flavoured lubricant
80: Lovehoney Passion Fruit flavoured lubricant
81: Lovehonet Peppermint flavoured lubricant
82: Lovehoney enjoy water-based lubricant sachet
83: Lovehoney delight silk water-based lubricant
84: Lovehoney flavoured lube bumper pack
213: Lovehoney (unspecified)

[Numark]
85: Numark lubricating jelly
214: Numark (unspecified)

[Pasante]
86: Adore Sterile Jelly
87: Bullet clear lube
88: Bullet silicone lube
89: Delay gel
90: Female stimulating gel
91: Gentle light lube
92: Silky TLC Lube
93: Wild strawberry
215: Pasante (unspecified)

[Phyto soya]
94: Phyto soya vaginal gel
216: Phyto soya (unspecified)

[Pjur]
95: Pjur original silicone lube
96: Pjur Acqua
97: Pjur woman
98: pjur woman nade

99: Pjur light
100: Pjur basic silicone based
101: Pjur basic water-based
102: Pjur back door glide lube
103: Pjur man premium extraglides
104: Pjur man water extraglides
105: Pjur man basic personal glide
106: Pjur analyse me relaxing anal glide
107: Pjur analyse me comfort water anal glide
108: Pjur espresso
109: Pjur cool
110: Pjur toy lube
111: Pjur myglide
112: Pjur superhero energizing ginkgo lubricant
217: Pjur (unspecified)

[RepHresh]

113: RepHresh Vaginal Gel
218: RepHresh (unspecified)

[Replens]

114: Replens long lasting moisturizer
115: Replens silky smooth Lubricants
219: Replens (unspecified)

[Sasmar]

116: Conceive Plus
117: Classic
118: Strawberry
119: Cherry
120: Warming
121: Original 2-1 Silicone
220: Sasmar (unspecified)

[Sliquid]

122: Sliquid H2O original glycerine
123: Sliquid organics natural H2O lubricant
124: Sliquid sassy glycerine free anal lubricant
125: Sliquid silver luxury silicone lubricant
126: Sliquid sea water based lube
127: Sliquid Swirl strawberry pomegranate flavoured lubricant
128: Sliquid Swirl Blue raspberry flavoured lubricant
129: Sliquid Satin lubricant personal intimate moisturiser
221: Sliquid (unspecified)

[Super drug]

130: Super drug 2 in 1 massage gel

131: Superdrug cherry lube
132: Superdrug lube tingle
133: Superdrug tube 50 ml tube pack
134: Superdrug lube 75 ml pump pack
222: Super drug (unspecified)

[Super Silk]

135: Super silk water based lubricant
223: Super Silk (unspecified)

[Swoon]

136: Swoon smooth mover water based lubricant
137: Drive me Balmy
138: Massage in a Bottle
224: Swoon (unspecified)

[Sylk]

139: Sylk personal lubricant
225: Sylk (unspecified)

[System JO]

140: Jo premium Silicone lubricant
141: Jo H2O water based lubricant
142: JO hybrid lubricant
143: JO H2O flavoured lubricant
144: JO premium anal Silicone Lubricant
145: JO Anal h2O water based lubricant
146: JO for woman premium silicone lubricants
147: JO for woman H2o water based lubricant
148: JO for woman agape' lubricant
149: JO tango couple kit
150: JO for men premium silicone lubricant
151: JO for men h2o water based lubricant
226: System JO (unspecified)

[Tesco]

152: Tesco seure clear lube
153: Tesco seure mind blowing mint lubrication
154: Tesco seure saucy strawberry lube
227: Tesco (unspecified)

[Waterglide]

155: Waterglide neutral
156: Waterglide anal
157: Waterglide silk
158: Waterglide woman
159: Waterglide warming

160: Waterglide cooling
161: Waterglide vanilla
162: Waterglide strawberry
163: Waterglide watermelon
164: Waterglide Cherry
228: Waterglide (unspecified)

[Wet]

165: Comfort personal lubricant
166: Extenze personal lubricant
167: Wet ecstasy Xtra cooling lubricant
168: Wet flavoured gel lubricant
169: Wet gelle Jelly lubricant
170: Wet light liquid lubricant
171: Wet naturals gel lubricant
172: Wet Nuru massage gel
173: Wet original gel lubricant
174: Wet uranus Anal lubricant
175: Wet warming
176: Wet wow clitoral arosual gel
229: Wet (unspecified)

[Woohoo]

177: Woohoo water based natural organic intimate lubricant
230: Woohoo (unspecified)

[Yes!]

178: Yes water based
179: Yes Oil based
231: Yes! (unspecified)

233: Don't know \ can't remember
232: Prefer not to say

F12: All who sought another brand Q8\2,3,4

Q.11 Which [INSERT] would you have gone to instead?
USE THE BAR ON THE RIGHT HAND SIDE TO SCROLL DOWN TO THE
LETTERS THAT YOU CAN'T SEE ON SCREEN

[INSERT] = store Q2\1,3

[INSERT] = website Q2\2

If (Q2\1,3 AND Q8\2) OR (Q2\2 AND Q8\3,4) – the list is:

SPECIALIST STORES

- 1: Agent Provocateur
- 2: AnnSummers
- 3: Coco de Mer
- 4: Independent Specialist

PHARMACY

- 5: Boots
- 6: Superdrug
- 7: Lloyds
- 8: Independent Pharmacy

SUPERMARKET

- 9: Tesco
- 10: Asda
- 11: Sainsbury's
- 12: Morrisons
- 13: Waitrose
- 14: Co-op
- 15: Other Supermarket
- 16: Convenience Store

18: Prefer not to say

19: Don't know \ can't remember

IF (Q2\2 AND Q8\2) OR (Q2\1,3 AND Q8\3,4)– the list is:

SPECIALIST WEBSITES

- 1: Agent Provocateur
- 2: AnnSummers
- 3: Coco de Mer
- 4: Harmony
- 5: Simply Pleasure
- 6: LoveHoney
- 7: Bondara

GENERALIST

- 8: Amazon
- 9: EBay

PHARMACY

- 10: Boots
- 11: Superdrug
- 12: Other Pharmacy website

SUPERMARKET

- 13: Tesco
- 14: Asda
- 15: Morrisons
- 16: Sainsbury's
- 17: Other supermarket

- 18: Prefer not to say
- 19: Don't know \ can't remember

F8: All who would still buy KY Jelly\Durex Q8\2,3

Q.12A Now suppose that you had found that [INSERT] was no longer available anywhere. Which brand would you have bought instead?

[INSERT] = Code selected at Q1

IF SELECTED BOTH AT Q1 – THEY WILL BE ASKED THE QUESTION TWICE

- 1: Ann summers
- 2: AQUAglide
- 3: Asda
- 4: Astroglide
- 5: Balance Activ
- 6: Boots
- 8: Fifty Shades of Grey
- 9: Gynofit
- 10: Gynomunal
- 11: ID
- 13: Liquid Silk
- 14: Lloyds pharmacy
- 15: Lovehoney
- 16: Numark
- 17: Pasante
- 18: Phyto soya
- 19: Pjur
- 20: RepHresh
- 21: Replens
- 22: Sasmr
- 23: Sliquid
- 24: Super drug
- 25: Super Silk
- 26: Swoon
- 27: Sylk
- 28: Tesco
- 29: System JO
- 30: Waterglide

- 31: Wet
- 32: Woohoo
- 33: Yes!
- 34: Prefer not to say
- 35: None
- 36: Don't know

F9: Would buy alternative brand if had to Q1211-33

Q.12B Which [INSERT] product would you have bought?
USE THE BAR ON THE RIGHT HAND SIDE TO SCROLL DOWN TO THE
LETTERS THAT YOU CAN'T SEE ON SCREEN

[INSERT] = Code selected at Q.12

SCRIPTERS: THE ANSWER CODES FOR EACH INSERT ARE:

[Ann summers]

- 1: Ann summer Liquid satin
- 2: Ann Summer sexy cool tingle lubw
- 3: Ann summers Heat wave
- 4: Ann summers candy floss juicy lube
- 5: Ann summers Slide and Ride
- 6: Ann Summers Feeling Fruity Juicy Lube
- 7: Ann Summers Juicy Lube Bubblegum mini
- 8: Ann Summers Juicy Lube Strawberry
- 9: Ann Summers Tutti Frutti Mini
- 10: Ann summers Strip Bare
- 11: Ann summers Booty Relax lube
- 12: Ann summers Rabbit Lube
- 13: The ultra silky feel silicone lube
- 200: Ann summers (nonspecific)

[AQUAglide]

- 14: AQUAglide original lubricant
- 15: AQUAglide anal lubricant
- 201: AQUAglide (unspecified)

[Asda]

- 16: Asda silky lubricant
- 17: Asda lubricating jelly
- 202: Asda (unspecified)

[Astroglide]

- 18: Astroglide liquid
- 19: Astroglide gel

- 20: Astroglide sensitive skin gel
- 21: Astroglide diamond silicon gel
- 22: Astroglide x silicone liquid
- 23: Astroglide Natural Liquid
- 24: Astroglide Warming Liquid
- 25: Astroglide strawberry liquid
- 203: Astroglide (unspecified)

[Balance Activ]

- 26: Balance activ vaginal gel
- 27: Balance activ vaginal menopause moisture gel
- 28: Balance activ conceive fertility gel
- 204: Balance activ (unspecified)

[Boots]

- 29: Boots lubricating jelly
- 30: Boots silky lube
- 31: Boots Vaginal
- 32: Moisturising Gel
- 205: Boots (unspecified)

[Durex]

- 33: Sensilube
- 34: Play Feel
- 35: Play Aloe vera
- 36: Play warming
- 37: Play Tingle
- 38: Play very cherry
- 39: Play strawberry
- 40: Play Passion fruit
- 41: Play sensual massage 2 in 1 with seductive ylang ylang
- 42: Play sensual massage 2 in 1 with soothing aloe vera
- 43: Play stimulating massage 2 in 1 arousing guarana
- 44: Embrace pleasure gel
- 45: Play perfect glide
- 46: Play O orgasmic gel
- 47: Real Feel
- 206: Other Durex

[Fifty Shades of Grey]

- 48: Fifty Shades of Grey Ready for Anything
- 49: Fifty Shades of Grey At Ease Anal
- 50: Fifty Shades of Grey Silky Caress
- 51: Pleasure Gel for Her
- 207: Fifty Shades of Grey (unspecified)

[Gynofit]

52: Gynofit Gel

208: Gynofit (unspecified)

[Gynomunal]

53: Gynomunal vaginal moisturiser

209: Gynomunal (unspecified)

[ID]

54: ID glide

55: ID pleasure

56: ID sensation

57: ID jelly

58: ID millennium

59: ID backslide

60: ID velvet

61: ID silk

62: ID frutopia

63: ID juicy lube

64: ID h2o water based

65: ID auper silck silicone

66: Heat ray water based

67: Cool blast water based

210: ID (unspecified)

[KY jelly]

68: KY jelly

[Liquid Silk]

69: Liquid silk water based lubricant

70: Maximus

211: Liquid Silk (unspecified)

[Lloyds pharmacy]

71: Lloyds personal lubricant

212: Lloyds pharmacy (unspecified)

[Lovehoney]

72: Lovehoney Enjoy water-based lubricant

73: Lovehoney discover water-based anal lubricant

74: Lovehoney strawberry flavoured lubricant

75: Lovehoney stay longer delay lubricant

76: Lovehoney assorted flavoured lubricant pack

77: Lovehoney release masturbation lubricant

78: Lovehoney Cherry flavoured lubricant

79: Lovehoney chocolate orange flavoured lubricant

80: Lovehoney Passion Fruit flavoured lubricant

81: Lovehonet Peppermint flavoured lubricant
82: Lovehoney enjoy water-based lubricant sachet
83: Lovehoney delight silk water-based lubricant
84: Lovehoney flavoured lube bumper pack
213: Lovehoney (unspecified)

[Numark]

85: Numark lubricating jelly
214: Numark (unspecified)

[Pasante]

86: Adore Sterile Jelly
87: Bullet clear lube
88: Bullet silicone lube
89: Delay gel
90: Female stimulating gel
91: Gentle light lube
92: Silky TLC Lube
93: Wild strawberry
215: Pasante (unspecified)

[Phyto soya]

94: Phyto soya vaginal gel
216: Phyto soya (unspecified)

[Pjur]

95: Pjur original silicone lube
96: Pjur Acqua
97: Pjur woman
98: pjur woman nade
99: Pjur light
100: Pjur basic silicone based
101: Pjur basic water-based
102: Pjur back door glide lube
103: Pjur man premium extraglides
104: Pjur man water extraglides
105: Pjur man basic personal glide
106: Pjur analyse me relaxing anal glide
107: Pjur analyse me comfort water anal glide
108: Pjur espresso
109: Pjur cool
110: Pjur toy lube
111: Pjur myglide
112: Pjur superhero energizing ginkgo lubricant
217: Pjur (unspecified)

[RepHresh]

113: RepHresh Vaginal Gel

218: RepHresh (unspecified)

[Replens]

114: Replens long lasting moisturizer

115: Replens silky smooth Lubricants

219: Replens (unspecified)

[Sasmar]

116: Conceive Plus

117: Classic

118: Strawberry

119: Cherry

120: Warming

121: Original 2-1 Silicone

220: Sasmar (unspecified)

[Sliquid]

122: Sliquid H2O original glycerine

123: Sliquid organics natural H2O lubricant

124: Sliquid sassy glycerine free anal lubricant

125: Sliquid silver luxury silicone lubricant

126: Sliquid sea water based lube

127: Sliquid Swirl strawberry pomegranate flavoured lubricant

128: Sliquid Swirl Blue raspberry flavoured lubricant

129: Sliquid Satin lubricant personal intimate moisturiser

221: Sliquid (unspecified)

[Super drug]

130: Super drug 2 in 1 massage gel

131: Superdrug cherry lube

132: Superdrug lube tingle

133: Superdrug tube 50 ml tube pack

134: Superdrug lube 75 ml pump pack

222: Super drug (unspecified)

[Super Silk]

135: Super silk water based lubricant

223: Super Silk (unspecified)

[Swoon]

136: Swoon smooth mover water based lubricant

137: Drive me Balmy

138: Massage in a Bottle

224: Swoon (unspecified)

[Sylk]

139: Sylk personal lubricant

225: Sylk (unspecified)

[System JO]

140: Jo premium Silicone lubricant

141: Jo H2O water based lubricant

142: JO hybrid lubricant

143: JO H2O flavoured lubricant

144: JO premium anal Silicone Lubricant

145: JO Anal h2O water based lubricant

146: JO for woman premium silicone lubricants

147: JO for woman H2o water based lubricant

148: JO for woman agape' lubricant

149: JO tango couple kit

150: JO for men premium silicone lubricant

151: JO for men h2o water based lubricant

226: System JO (unspecified)

[Tesco]

152: Tesco seure clear lube

153: Tesco seure mind blowing mint lubrication

154: Tesco seure saucy strawberry lube

227: Tesco (unspecified)

[Waterglide]

155: Waterglide neutral

156: Waterglide anal

157: Waterglide silk

158: Waterglide woman

159: Waterglide warming

160: Waterglide cooling

161: Waterglide vanilla

162: Waterglide strawberry

163: Waterglide watermelon

164: Waterglide Cherry

228: Waterglide (unspecified)

[Wet]

165: Comfort personal lubricant

166: Extenze personal lubricant

167: Wet ecstasy Xtra cooling lubricant

168: Wet flavoured gel lubricant

169: Wet gelle Jelly lubricant

170 Wet light liquid lubricant

171: Wet naturals gel lubricant

172: Wet Nuru massage gel

173: Wet original gel lubricant
174: Wet uranus Anal lubricant
175: Wet warming
176: Wet wow clitoral arosual gel
229: Wet (unspecified)

[Woohoo]

177: Woohoo water based natural organic intimate lubricant
230: Woohoo (unspecified)

[Yes!]

178: Yes water based
179: Yes Oil based
231: Yes! (unspecified)

233: Don't know \ can't remember
232: Prefer not to say

F2: All who have bought K-Y Jelly or Durex Q1\7 or 11

MULTICHOICE

Q.13 What do you use [INSERT] for? Please select all that apply.

[INSERT] = CODE SELECTED AT Q4

- 1: Medical, for example to alleviate the discomfort of vaginal dryness
- 2: Make sex more comfortable
- 3: Add pleasurable sensation to foreplay or sex
- 4: Other PEN WRITE IN
- 5: Prefer not to say

F2: All who have bought K-Y Jelly or Durex Q1\7 or 11

Thank you for your help with this survey, we would again like to stress that this is completely confidential. Please help to ensure that this section remains confidential by not discussing the content of the questions with the person who has interviewed you.

TAP 'OK' AND THE ANSWERS THAT YOU HAVE GIVEN WILL NOT BE VIEWED BY THE INTERVIEWER. AS I MENTIONED EARLIER, THE ANSWERS YOU HAVE GIVEN WILL REMAIN COMPLETELY CONFIDENTIAL.
NOW PLEASE HAND THE MACHINE BACK TO THE INTERVIEWER.

Data analysis

Summary

1. This appendix sets out our analysis of the retail data from Nielsen combined with information on promotions of personal lubricants. The main purpose of this data analysis is to assess the closeness of competition between Durex personal lubricants and K-Y personal lubricants. These findings feed into the assessment of unilateral effects; that is, whether the merger is likely to give rise to an SLC due to the loss of actual competition between the parties. However, we also used some of the Nielsen retail data to inform our assessment of buyer power in the context of a recent cost price increase by RB.¹
2. The Nielsen dataset we used for the assessment of closeness of competition covers personal lubricant sales in terms of volumes and values in the UK between [X] and [X] in major grocery retailers (offline and online sales), pharmacies (chains and independents) and smaller retailers (such as convenience and off license stores). The dataset does not cover the sales of online retailers (with the exception of Ocado) and specialist adult stores. The Nielsen data we used to inform our assessment of buyer power covers Durex Play sales in the UK between [X] and [X] in the major grocery retailers and national pharmacy chains ([X]).
3. The promotion data [X] covers the period [X].
4. There are some overall limitations to the analysis we can conduct with the data. In particular, there have been [X]² [X] and we have only observed two significant changes in Durex prices: first, a retail price increase in relation to certain Durex personal lubricants in 2013,³ [X],⁴ and a per ml cost price increase of the same Durex products in 2015. This second change, however, is too recent to inform any analysis of the closeness of competition between different personal lubricants, and hence we only used this event to provide insights into the negotiations between RB and retailers.

¹ RB reduced the bottle size of Durex Play personal lubricants parallel to [X]. This reduction of bottle size resulted in a per ml increase in the cost price of Durex Play personal lubricants.

² Cost price is the price charged by RB/K-Y to retailers.

³ [X]

⁴ [X]

5. The only other source of price variation is promotion activity. The impact of promotions of one product on the sales of other products could give an indication whether consumers switch between them. For example, a price promotion on a Durex product would mean a relative price increase of K-Y compared to this product (but not compared with other products such as own-label) and might result in consumers switching from K-Y to Durex if these two products are competing.⁵ This analysis is not equivalent to assessing what consumers would do if the price of K-Y increased above the current price level (and with a price increase relative to all other personal lubricants) and whether Durex would constrain any such price increase (or vice versa). Still, the impact of promotion can be indicative of consumers' willingness to switch between different products. [§] promotion analysis could tell us very little about what happens to Durex sales when K-Y becomes relatively cheaper; ie the effect of a relative rise in the price of Durex.

6. In light of the above, we will present the following analyses in the remainder of the appendix, which in summary suggests some switching to K-Y following a rise in the price of Durex; and mixed evidence on switching from K-Y to Durex during Durex promotions:
 - **The impact of the increase in the per ml retail price of Durex Play lubricants in March 2013 on K-Y sales.** The fact that the retail price rise was implemented in all retailers across the UK around the same time does not allow us to make any robust analysis to assess what would have happened to K-Y sales without the retail price changes to Durex. Instead, we model monthly sales of K-Y and of Durex products and test whether the relative price increase of Durex was associated with a decrease in sales of Durex products and an increase in the sales of K-Y products. We also consider whether the price of K-Y reacted to the price rise of Durex. We find that the retail price increase in Durex did not have any impact on K-Y prices; that is, the relative price increase was permanent. We also find that the retail price increase in Durex ([§])⁶ resulted in a statistically significant decrease in the pattern (ie taking account of trend and seasonality) of average monthly Durex Play Feel sales [§]. At the same time, there was a statistically significant increase ([§]) in the pattern (again, taking account of trend and seasonality) of monthly average sales of K-Y around and after the Durex price increase. These results are

⁵ Because this type of promotion does not isolate a relative price rise of K-Y products alone, it may overestimate the switching to Durex, ie exclude switching to own-label products if only K-Y's prices rose.

⁶ The percentage change is calculated on average prices in the year before and after the change in bottle size. The calculation includes data for both the 50ml and 60ml Durex Play products in the 'transition' period between March and July 2013 when both bottle sizes were available in some retailers. This applies for all the calculations below.

consistent with consumers switching from at least some Durex Play products to K-Y in response to a relative price increase.

- **Illustration of the relationship between promotion events and sales in some of the largest retailers ([X]) in charts.** Promotion and sales data in different retailers reveal no obvious patterns of switching between Durex and K-Y in promotion periods. Although this data can be illustrative, it does not allow us to draw any strong conclusions. This is because several (non-promotion related) factors (eg trends or seasonality) may influence the sales of a given personal lubricant that are not separately identified in the charts and for which we do not control. For this reason the analysis of this data is interpreted with caution.
 - **Comparison of the impact of promotions between retailers.** To better capture the impact of promotions, we compared sales of K-Y and Durex personal lubricants between retailers with and without promotions in a given period. Choosing appropriate comparators (ie retailers without promotions that are comparable to the retailer with promotion) is challenging due to the frequency of different promotion events and differences between retailers. We identified three events where an appropriate comparator could be found and analysed the impact of the promotions in these cases. However, all these events were Durex promotions⁷. The only retailers that ran K-Y promotions [X] but we have not been able to identify a good comparator to analyse the impact of these promotions.⁸ Our findings regarding the impact of Durex promotions are mixed. In one case we observe a statistically significant⁹ drop in K-Y sales (of 8%) in response to a Durex Play promotion, which is consistent with customers switching to Durex from K-Y in that instance. In the other two cases, we did not find a statistically significant impact of Durex promotions on K-Y sales. Given the small number of observations, however, we cannot draw any strong conclusions from this analysis with respect to switching from K-Y to Durex.
7. In addition, we present graphs in Annex 3 showing the impact of the recent (March 2015) per ml cost price increase of Durex Play products on retail prices. As discussed in section 10 of the final report, the price changes illustrated by these graphs, together with information on promotional funding from the parties and retailers, provide some insights into retailers' ability and willingness to exercise buyer power with respect to Durex personal lubricants.

⁷ Looking at Durex promotion is equivalent to a situation where there is a relative rise in the price of K-Y.

⁸ This is due to some Durex products being promoted at the same time or just before the K-Y promotion period.

⁹ At the 10% level.

Price increase of Durex Play

8. As the graphs in Annex 1 demonstrate, the Nielsen data shows less variation in the price of K-Y compared to Durex personal lubricants in the major grocery retailers and pharmacy chains. For example, the price of K-Y in [REDACTED] has been almost completely flat in at least the past two years, whereas the prices of Durex personal lubricants have been, to some extent, fluctuating as a result of promotional activity. Apart from the price variation due to promotional activity, there was a significant price change of Durex personal lubricant products by retailers in March 2013 as described below.¹⁰
9. In Q1 2013, RB changed the bottle size of its Play range from 50ml to 60ml. [REDACTED]. However, the retail data shows that [REDACTED] at their own discretion, retailers increased the per ml retail price of Durex Play lubricants after the bottle size change. Figure 1 illustrates this: the average per ml retail price of products in the Durex Play range increased by around [REDACTED]% between the year before the bottle size increase and the year after.

Figure 1: [REDACTED]

[REDACTED]

Source: [REDACTED]

10. Figure 1 and Figure 2 also demonstrate that the per ml retail price of K-Y remained fairly constant during the same period and, as a result, the relative retail price of Durex Play increased compared to K-Y.¹¹

Figure 2: [REDACTED]

[REDACTED]

Source: [REDACTED]

11. The fact that such a relative retail price difference between Durex Play and K-Y has remained over time could be regarded as being consistent with less of a competitive interaction between the two products. However, it is important to consider how volumes reacted to this relative price change at retail level.
12. In Figure 3 and Figure 4 we illustrate both the average monthly sales and total monthly sales of Durex Play products and K-Y. Figure 3 suggests that the monthly average sales of eg Durex Play Feel (measured in litres) fell after the

¹⁰ As the graphs in Annex 3 show, there was also a Durex price increase in 2015. However, this change is too recent for any meaningful analysis of switching and closeness of competition between Durex and K-Y.

¹¹ This also applies to the retail price of K-Y 75ml. However, in the interest of simplicity, we use K-Y 50ml as an illustration.

Durex price increase (March 2013), which is confirmed by the analysis discussed below.¹²

Figure 3: [✂]

[✂]

Source: [✂]

Figure 4: [✂]

[✂]

Source: [✂]

13. To analyse the impact of the bottle size change and the corresponding retail price increase of Durex Play products on K-Y and Durex sales, we fitted a model to monthly time series of sales volumes of each of the products and ran a statistical test to identify whether, given the underlying pattern of the data, there was a sustained change in Durex and K-Y sales around and after the time of the Durex price increase.
14. The limited number of data observations available (March 2011 to December 2014 for all products other than Durex Passion Fruit that was only introduced in September 2011) creates some analytical challenges. Results will be sensitive to the chosen model and the form of the intervention variable used to test for a change in sales and the choice of model can be particularly subjective. Also, standard software packages normally have difficulty estimating models for such short series.
15. The approach we adopted was to apply a consistent and objective model fitting approach using the X-13ARIMA-SEATS software program¹³ which is particularly suited to modelling short monthly series. It is a highly researched and tested program that is regarded as the gold standard for seasonal adjustment of monthly and quarterly economic times series in official statistics in the UK and internationally. Central to the program is a time series model which, among other things, tests for outliers and structural breaks in time series.
16. We used the automatic modelling feature of this program to determine the best fit model for each individual series. We also defined explicitly the intervention variable that we wanted to test, which was a three month log

¹² We included volumes of Durex Play 50ml after March 2013. As noted in the submission by RB's economic advisers of 20 April 2015, Durex Play 50 ml lubricants were still sold after March 2013 for several months. Therefore we consider both 50ml and 60ml volumes.

¹³ X-13ARIMA-SEATS Release Version 1.1 Build 9, U.S Department of Commerce.

linear ‘ramp’ from April to July 2013, making no attempt to ‘mine’ the data for a stronger or different result.

17. While this analysis does not allow us to establish a causal link between the Durex price change and the change in sales volumes, a downward shift in Durex sales volumes and an upward shift in K-Y sales volumes around and after the time of the price change can be indicative and are consistent with consumers switching from Durex to K-Y when the former becomes relatively more expensive.¹⁴
18. In Appendix E of our provisional findings report we presented our analysis of K-Y and Durex volume changes. In its comments on the provisional findings, RB submitted a critique of this analysis prepared by RB’s economic advisers. One of the points that RB’s economic advisers raised was related to the Durex data that the CMA used for the analysis, and RB’s economic advisers rightly pointed out a mistake in the input data of the CMA analysis. In particular, the CMA’s dataset of total Durex sales did not contain sales of Play Passion Fruit and contained a duplicate of the Play Strawberry¹⁵ series. RB’s economic advisers also pointed out that the first and last observations in the time series that we had used only contained sales data for part of those months. We have corrected the mistake and removed the first and last observations from the time series and updated our analysis using the same (corrected and truncated) data set as RB’s economic advisers in their submission.
19. The results we obtained are the same as those of RB’s economic advisers in their submission and we reproduce their table here including an additional row showing the change in the level of sales estimated by the ramp effect.¹⁶

¹⁴ Shifts in sales volumes could also be caused by other shocks. However, we have not found evidence of any other external shocks happening at the same time that could explain the changes.

¹⁵ Durex Play Strawberry 50ml and 60ml changed name and it is now called Durex Play Saucy Strawberry 50ml.

¹⁶ RB’s economic advisers have questioned the CMA’s interpretation of the ramp effect when the intervention variable is included in an integrated model. The figures reported here are, for each series, taken from Table A8 of the relevant X-13ARIMA-SEATS output file which gives a clear and unambiguous quantification of the ramp effect.

Table 1: Effect of Durex Play price rise on K-Y Jelly and Durex Play sales

Variable	K-Y Jelly			Durex Play							
	50ml	75ml	50ml & 75ml	Aloe Vera	Feel	Passion Fruit	Strawberry	Tingle	Very Cherry	Warming	Total
Ramp estimate	8%	not sig	10%	-54%	-20%	not sig	-12%	not sig	-36%	355%	not sig
ARIMA Model	(1 0 0) (1 0 0)	(0 1 1) (0 1 1)	(0 0 1) (1 0 0)	(0 0 0) (1 0 0)	(0 1 1) (0 1 1)	(1 1 0) (1 0 0)	(1 0 0)	(1 0 0)	(1 0 1)	(0 0 0) (0 1 1)	(2 0 0)
<i>Fixed Variables</i>											
Ramp	0.0253** (0.00979)	-0.0036 (0.03414)	0.0304*** (0.00531)	-0.1437*** (0.01440)	-0.0616** (0.02690)	-0.0643 (0.17131)	-0.0387*** (0.01400)	0.0315 (0.03964)	-0.1036** (0.04436)	0.1822** (0.06691)	0.0122 (0.03633)
Constant	13.5246*** (0.03364)		13.8751*** (0.01866)	10.7702*** (0.02764)			12.3551*** (0.02784)	12.6930*** (0.09240)	11.5664*** (0.10539)	-0.1974*** (0.06212)	14.1107*** (0.09084)
<i>Non-seasonal AR</i>											
Lag 1	0.6071 (0.10972)					0.7288 (0.10136)	0.2036 (0.14417)	0.6346 (0.11208)	0.7400 (0.15520)		0.4895 (0.13916)
Lag 2											0.2674 (0.14057)
<i>Seasonal AR</i>											
Lag 12	0.6453 (0.09997)		0.6953 (0.09301)	-0.1863 (0.15041)		0.1875 (0.18817)					
<i>Non-seasonal MA</i>											
Lag 1		0.5454 (0.11932)	-0.3286 (0.12181)		0.7037 (0.09447)				0.2357 (0.22917)		
<i>Seasonal MA</i>											
Lag 12		0.9966 (0.19772)			0.9973 (0.19965)					0.4074 (0.14252)	
Number of Obs.	46	46	46	46	46	40	46	46	46	46	46
Number of Obs. (effective)	46	33	46	46	33	39	46	46	46	34	46
AIC	1090.7929	790.7632	1120.1964	937.8736	824.4664	887.8711	1061.6561	1133.0844	1061.9019	728.8697	1243.9304
AICC (F-corrected-AIC)	1092.2929	792.1917	1121.6964	940.8210	825.8950	891.4840	1066.6561	1134.0600	1063.4019	731.0126	1245.4304

Source: Analysis of the Nielsen data using X-13ARIMA-SEATS.

Note: Outliner terms that are part of the automatic model selection procedure are not included in the table.

20. This analysis finds a statistically significant [~~ⓧ~~] in K-Y 50ml average sales. The model fitting exercise was also run for the monthly time series of K-Y 75ml packs, but the level shift intervention variable is not statistically significant (tested at a 5% significance level). The same analysis for a combined dataset taking into account the sales of both K-Y products showed a statistically significant level shift [~~ⓧ~~].
21. RB's economic advisers in their submission also argued that the CMA's results are not robust to plausible changes in the regression specifications; the inclusion of time trend, the maximum order of integration and ARMA terms, and the definition of the ramp variable. With respect to the inclusion of a time trend (and seasonality), the X-13ARIMA-SEATS automatic modelling procedure tests for significance and only includes appropriate model parameters if certain criteria are met. The maximum order of integration and of ARMA terms has been determined through empirical testing involving thousands of different series. RB's economic advisers argue that the limits are too restrictive, particularly for series with potentially seasonal effects, but our understanding is that the seasonal terms in the model will capture these effects if they are present. As described above, we have adopted a strict method for testing our hypothesis of the ramp effect and have resisted the temptation to test different forms of the intervention variable.
22. The CMA fully acknowledges the sensitivity of results to model choice when modeling monthly time series in this way with this number of observations. However, our approach has been carefully defined to be both objective and to be based on the best model fit, as defined by the X-13ARIMA-SEATS model fitting procedure. The CMA notes that RB's economic advisers have only provided alternative models for two of the series that it has analysed: Play Strawberry and Play Cherry.
23. In sum, our analysis of Durex and K-Y sales data suggests that there was a statistically significant increase in K-Y sales [~~ⓧ~~]. There was a statistically significant decrease in Durex Play Feel sales of [~~ⓧ~~]% and of Aloe Vera of [~~ⓧ~~]%, these being the two products within the Durex range that might be expected to be the closest competitors to K-Y Jelly.¹⁷ Results for the other Durex Play products were mixed, with no statistically significant change for total sales across the Durex Play range. The increase in K-Y sales is

¹⁷ We considered whether the drop in Durex Play sales could be a result of stocking effect. The end of line 50ml product was heavily promoted in some retailers before the bottle size change, which could lead to consumers buying more during this promotional period and to a drop in sales after the promotion. However, we consider that any such effect was minimal. If consumers had stocked up on the product, we would observe a large jump in the sales of Durex before the bottle size change. The dataset does not indicate such a jump. In addition, any stocking effect would likely to last for a limited period of time. However, our analysis shows a sustained decrease in the sales level of Durex and not only a short term drop in sales.

consistent with consumers switching from Durex to K-Y in response to a relative price change and provides some evidence of these two products competing.

24. In the run-up to the publication of the provisional findings, RB's economic advisers also submitted a regression analysis testing the impact of the change in Durex bottle size, and the consequent change in price, on volume sales of K-Y 50ml bottles. The specification controlled for other factors thought to affect K-Y volume sales, including seasonality (through the inclusion of seasonal indicators), the number of stores stocking K-Y, and the general economic climate (through the inclusion of the unemployment rate). The results show no statistically significant increase in K-Y volumes. However, we have identified serious limitations in the analysis of RB's economic advisers:
- Their model uses 18 months of observations of K-Y 50ml sales, which is significantly smaller than the sample used by the CMA. Such limited number of observations is unlikely to be sufficient to estimate effects with enough precision. This is confirmed by the fact that most of the variables included in the model are not statistically significant.
 - The choice of quarterly seasonal indicators for analysing monthly sales may not be appropriate in this particular market where sales are strongly affected by short (a few weeks long) periods around Valentine's Day or Christmas.
25. For this reason, we concluded that the econometric analysis submitted by RB's economic advisers does not constitute a reliable source of evidence.

Impact of promotions

26. Apart from the retail price increase of Durex Play products in March 2013, the main source of relative retail price changes of different personal lubricant products is promotional activity. Therefore, the impact of promotional campaigns might be helpful in assessing the closeness of competition between different products. For example, if we observe that, all else equal, the sales of Durex products increase and the sales of K-Y drop when Durex lubricants are on promotion (that is, their price decreases), then it could be an indication of K-Y customers switching when the relative price of K-Y increases compared to Durex. The difficulty with this analysis is to find promotional events where the impact of the promotions can be separated from other factors that may affect sales. To control for some of these factors, such as seasonality, we looked for ways to compare sales in different retailers with and without promotion on Durex or K-Y. More specifically, based on sales and promotion data of retailers covering the period from [X], we identified

promotion events that ran only in certain retailers and compared the impact of these promotions to retailers where no promotions were run in the same period. In identifying the appropriate events and appropriate comparators, we needed to find examples of promotions and retailers where the retailers: (a) were of comparable size; (b) stocked both Durex and K-Y; (c) did not run any other promotions in the K-Y/Durex promotion period and did not run any promotions for a sufficiently long time before the promotion event; and (d) had fairly similar patterns of sales of the products in question before the promotion period. As a consequence, we could only use three examples, which may place limits on our analysis.

27. Before discussing this analysis, we refer to some graphs (presented in Annex 2) that illustrate the relationship between promotion events and sales of personal lubricants in different retailers. While these graphs are useful to understand the importance of promotions in driving sales, and provide some insights into the interaction between some personal lubricant products, any analysis trying to identify switching patterns is limited in the absence of controlling for other factors that might affect sales.
28. It is also important to note that promotions in one retailer may affect sales in other retailers if consumers switch from one retailer to the other in response to a promotion. A retailer-by-retailer analysis would not capture this effect (eg if we observe a sharp decline in the sales of K-Y in one supermarket, we would not be able to tell whether this is in reaction to the promotion of another product in another supermarket). However, we would expect that the impact of a promotion is greater within a retailer than across retailers, so if we observe no or only small impact within a retailer, it is unlikely that the promotion would have had a significant impact in another retailer. Also, the consumer survey suggests that almost 80% of people who bought personal lubricants did not compare prices of the product or other similar lubricant products anywhere else before their last purchase.
29. The possibility of shopping around between retailers may also affect the results of the comparison between retailers in paragraphs 33 to 47; any switching we may observe from, for example, K-Y to Durex in response to a Durex promotion would underestimate the real impact of the promotion if K-Y consumers might have switched from the 'comparator' supermarket to the supermarket with promotion in response to the promotion. This bias, however, is likely to be small in light of consumers' search behaviour suggested by the survey: around 80% of K-Y and Durex purchasers said they had not compared prices in other retailers before purchasing the product.

30. We did not include K-Y promotions in our analysis as we did not find a reliable comparator, partly due to the small number of K-Y promotions (we only found two examples in [X]).
31. In the following, we summarise the main findings from looking at sales and promotion data of some of the large retailers – namely [X] (see Annex 2 for more details). Then we discuss the comparison between retailers with and without promotion in given periods.

Promotions and sales volumes within retailers – with no controls

32. We have looked at sales and promotion data in different retailers to illustrate the impact of promotions on sales of personal lubricants. The graphs that illustrate the impact of promotions and the detailed analysis are presented in Annex 2. The retailer-by-retailer data does not reveal any obvious patterns of substitution between K-Y and Durex products, but suggests that there is interaction between branded and own-label products; however, this is in the form of consumers switching from own-label products to branded products when the latter are on promotion and not vice versa. Given the noise in the data and the fact that we have not controlled for the factors that may affect the sales of K-Y and Durex lubricants other than promotions of these products, this analysis has limitations. In order to gain further insights into the potential impact of Durex promotions on K-Y sales,¹⁸ we made comparisons between retailers trying to identify any difference in sales that promotion events may cause. We will present this analysis in turn.

Promotions and sales volumes between retailers – with controls

33. Although most retailers promote personal lubricants frequently, and Durex products in particular, the timing of these promotions may differ between retailers and there are periods when there are no promotions. We sought promotion events where we could do simple before and after analyses comparing the sales of retailers with promotion to retailers without promotion ('comparator retailer') in the given period. To illustrate what this analysis could reveal, consider two retailers, both selling Durex and K-Y, which do not run any promotions of personal lubricants for a certain period. However, in the next period, one of the retailers runs a promotion (eg offering price discount) on Durex while the other keeps selling personal lubricants without running any promotions. If consumers switch between K-Y and Durex when the relative price of these products change, then one would expect K-Y sales to fall in the

¹⁸ As pointed out in paragraph 34, we did not identify K-Y promotion events that could be analysed.

retailer with Durex promotion compared to K-Y sales in the comparator retailer. Assuming that sales in the two retailers would follow largely similar patterns absent the promotion,¹⁹ a significant difference in changes of K-Y sales in the promotion period between the two retailers could be indicative of consumers switching from K-Y to Durex when the latter is on promotion.

34. Choosing appropriate comparators for this analysis is challenging due to the frequency of different promotion events and differences between retailers. In particular, we need to identify examples of promotions and retailers where the retailers: (a) were of comparable size; (b) stocked both Durex and K-Y; (c) did not run any other promotions in the K-Y/Durex promotion period and any promotions for a sufficiently long time before the promotion event; and (d) had fairly similar patterns of sales of the products in question outside the promotion period. The small number of K-Y promotions and the challenges around finding appropriate comparators means that we did not find an appropriate K-Y promotion event for analysis. Even for Durex Play,²⁰ we managed to identify only three events where an appropriate comparator could be found.

Summary of the results

35. The main findings of our analysis are the following:
- [X] the [X] range [X]. We found that K-Y sales were, in fact, slightly higher in [X] than in the comparative retailer ([X]) in the promotion period compared to the non-promotion 'before' period. However, this result was not statistically significant. This suggests that there was no significant switching from K-Y to Durex when the price of the latter decreased significantly.
 - [X] ran a promotion in [X] on [X] Durex [X] range, resulting in a price [X]. The sales of K-Y in [X] in this period [X] than in the comparator retailer ([X]) in the promotion period compared to the non-promotion 'before' period. However, this result was not statistically significant.
 - [X] decreased the prices of the [X] Durex [X] range by [X] in [X]. Our comparison suggests that K-Y sales in [X] in the comparator retailer ([X]) in the promotion period compared to the non-promotion 'before' period. This result was statistically significant.²¹ This finding is consistent

¹⁹ In other words, assuming that seasonality and other demand shocks affect the two retailers in the same way.

²⁰ [X]

²¹ At the 10% level.

with some consumers choosing Durex [☒] instead of K-Y when the former is promotion.

36. The above results do not provide a clear picture of the interaction between Durex and K-Y sales when the former is on promotion: we found a sizeable statistically significant negative impact on K-Y sales (a drop of 8%) during a Durex promotion period in one of the retailers; however, we did not find a statistically significant difference in the other two examples we analysed.

Analysis

37. In order to try to disentangle the impact of promotions of Durex on the sales of K-Y from other factors that may affect the level of sales (such as seasonality and the level of demand in a particular retailer), we ran regressions on the sales of K-Y in retailers with and without Durex promotion in a given period, controlling for time, retailer and including a variable that captures whether a promotion on Durex was run in the given time period. The regression we considered is the following:²²

$$\ln_{-} Q_{kyjelly,r,t} = a + b_1 dt + b_2 dtp + b_{3i} Retailer_i + e_i$$

where $\ln_{-} Q$ is the sales of K-Y [☒], in retailer r , at time t . *Retailer* is a dummy variable identifying the retailers we are considering whereas dt is a time dummy capturing the point in time when the promotion is active and dtp is the interaction dummy between promotion and time. The dummy dt captures changes in sales not related to promotion in the given period (eg impact of seasonality) while dtp captures the difference between sales of the retailers with and without promotion in the promotion period. For example, if we look at sales of K-Y when Durex is on promotion in one of the retailers, a negative coefficient of dtp would indicate that sales of K-Y were lower in the promotion period in the retailer with the promotion compared to the comparator retailers than in the non-promotion periods which would be consistent with consumers switching from K-Y to Durex in response to the price promotion.

Events to consider

38. It is important to find good comparators for our analysis. Generally speaking, the more comparable the retailers are before the promotion, the more

²² This is a so-called difference-in-difference specification. However, we do not use this model to analyse causal effects due to the low number of events and observations we can analyse. Rather, we use this model as a descriptive tool.

informative the analysis of the promotion periods will be. To this end, we were looking for time periods and retailers where:

- during the promotion period of the product of interest in one of the retailers, no promotions are run in the retailers that we use as comparators;
- no promotions are run by the retailers for a sufficiently long period before the promotion period (comparable to the length of the promotion period);
- the retailers are of comparable size;²³ and
- the sales of the products of interest move closely together in the retailers that we compare before the promotion period.

39. Based on these criteria, we identified the following promotion events to be analysed:

Table 2: Promotion events

<i>Event details</i>	<i>Products on promotion</i>	<i>Chosen comparator(s)</i>	<i>Notes</i>
[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]
[X]	[X]	[X]	[X]

Source: [X] report from RB.

40. In selecting the events, we looked for promotion events of the Durex [X] range and in particular at [X]. We could not use promotions for K-Y for the reasons given in paragraph 30.

Overview of results

1. [X] on Durex [X] range. Comparator retailer: [X]. Before period: [X]

41. [X] promoted the Durex [X] range for [X]. We focused on sales of [X], [X] and K-Y in the promotion period and analysed how the sales of these products evolved in [X] and the comparator retailer before and during the promotion.

²³ As a general rule we have considered that a retailer is a good comparator if its sales of the promoted product exceed on average 200 units per week. This is in line with the weekly average sales of national grocery retail chains and pharmacy chains. We assume that retailers having less than 200 units of personal lubricants per week would face a different demand compared to retailers having sales far above 200 units.

42. Our regression analysis suggests the following (see Table 1 in Annex 2):
- The positive coefficient of the promotion-time interaction dummies (*dtp*) suggests that the sales of [X] on average were greater in [X] compared [X] in the promotion period than in the pre-promotion period. This statistically significant difference is [X]% [X].
 - For K-Y, the difference in average sales in [X] compared to [X] in the promotion period is not statistically significant.

43. The graphs below illustrate the evolution of sales.

Figure 6: [X]

[X]

Source: [X]

Figure 7: [X]

[X]

Source: [X]

2. [X] promotion [X] on Durex [X]. Comparator retailer: [X]. Before period: [X]

44. Our regression analysis of Durex promotions in [X] shows the following, focusing on the promotion-time interaction dummy (see Table 2 in Annex 2 for details):

- The positive coefficient of the promotion-time interaction dummy (*dtp*) of Durex [X] suggests that difference between [X] sales of this product was on average significantly higher in the promotion period than in the pre-promotion period (14.1%), as we would expect. This is statistically significant at the 10% level.
- For K-Y, the difference in average sales in [X] in the promotion period is not statistically significant.

45. The graphs below illustrate the evolution of sales.

Figure 8: [X]

[X]

Source: [X]

Figure 9: [X]

[X]

Source: [X]

3. **[X] promotion [X] on Durex [X]. Comparator retailer: [X]. Before period: [X]**

46. Our regression analysis of Durex [X] promotion in [X] shows the following, focusing on the promotion-time interactions (see Table 3 in Annex 2 for details):

- The positive coefficient of the promotion-time interaction dummy (*ntp*) of Durex [X] suggests that [X] sales [X] compared to [X] were on average higher in the promotion period than in the before promotions period (13.3%) which is consistent with what we would expect. This is statistically significant at the 10% level.
- At the same time, the coefficient for the promotion-time dummy (*ntp*) of K-Y suggests that K-Y sales in [X] lower on average compared with [X] in the promotion period than in the before promotion period. This is statistically significant at the 10% level.

47. The graphs below illustrate the evolution of sales.

Figure 10: [X]

[X]

Source: [X]

Figure 11: [X]

[X]

Source: [X]

Summary of findings

48. The above results do not provide a clear picture of the interaction between Durex and K-Y sales when the former is on promotion. The number of events we analysed is small and does not allow us to draw strong conclusions on the causal link between the promotion of one product and the sales of the other. In two examples we did not find a statistically significant difference in the sales of K-Y in the retailers that we compared. However, in one case we found a statistically significant negative impact on K-Y sales in the Durex promotion period (at the 10% level).

Retail prices of personal lubricants in larger retailers

Figure 1: [✂]

[✂]

Source: [✂]

Figure 2: [✂]

[✂]

Source: [✂]

Figure 3: [✂]

[✂]

Source: [✂]

Figure 4: [✂]

[✂]

Source: [✂]

Promotions and sales volumes within retailers

[REDACTED]

1 The main promotion events we identified in [REDACTED] are the following:

- [REDACTED]
- [REDACTED]
- [REDACTED]

49. We note that there is a slight discrepancy between the start of the week for the promotion data and the sales data so the impact of the promotion sometimes appeared to be a bit delayed.

50. The below graph illustrates the impact of K-Y and Durex promotions.

Figure 1: [REDACTED]*

[REDACTED]

Source: [REDACTED]

*[REDACTED]

51. [REDACTED]

52. The graph clearly suggests that both K-Y and Durex sales are sensitive to their own promotions; in other words, promotions seem to have a strong impact on sales. However, because of the ‘noise’ in the data (due to its weekly volatility), it is difficult to draw any strong conclusions on what causes the increase in sales; that is, whether it is mainly a result of attracting new consumers or, at least to some extent, of switching. Promotions may have a stocking effect, but if this was the case, we would expect sales to fall below pre-promotion levels right after promotions – which does not seem to hold for promotions in [REDACTED].

53. The first K-Y promotion in [REDACTED] seemed to have a clear negative impact on the sales of [REDACTED] own-label personal lubricant. This suggests that when the branded (K-Y) lubricant becomes cheaper, consumers switch from own-label to branded lubricants, and at the end of the promotion the sales of own-label recover.²⁴ However, this does not necessarily mean that consumers of

²⁴ [REDACTED] sells [REDACTED] types of personal lubricants: [REDACTED]. In the interest of simplicity, we only plotted sales [REDACTED]. However, sales of [REDACTED] own-label product follow a fairly similar sales pattern in the period in question but Durex

branded lubricants would switch to own-label lubricants if the price of branded lubricants increased above the non-promotion level²⁵. Sales of own-label products seem to be affected in the other (Durex and K-Y) promotion periods; however, the impact is smaller than the impact of the first K-Y promotion²⁶ and we could not conclude on whether the drop in sales is a result of the promotions or other factors. Also, sales of own-label seem to be positively affected by [REDACTED].

54. In terms of the interaction between Durex and K-Y lubricants, no obvious pattern emerges. Durex sales seem to drop in the first half of the first K-Y promotion period, but this drop is from an increased level of sales in the Durex promotional period so might not be related to the K-Y promotion. Also, the second half of the K-Y promotion seems to positively affect the sales of Durex, which might be a result of the K-Y promotion driving attention to Durex lubricants as well (spill over) or some unidentified Durex promotion. There seems to be a small dip in sales [REDACTED] 60ml sales remain constant. The fall in [REDACTED] sales is more likely to be due to the end of the [REDACTED], and the decrease in [REDACTED] could be explained by the volatility of the data and might not be linked to the K-Y promotion. Regarding K-Y's reaction to Durex promotion, the graph does not provide evidence of a strong link. Although K-Y sales seem to drop during the latest Durex promotion period, the drop is of the same magnitude as the drop in K-Y sales in [REDACTED], so there might be seasonality effect.²⁷
55. In sum, [REDACTED] promotional data on its own does not offer clear evidence on switching between K-Y and Durex.

[REDACTED]

56. Sales and promotion data in [REDACTED] (see Figure 2) show similar patterns as [REDACTED] data with regards to the following:
- Durex sales are strongly affected by (Durex) promotion periods.²⁸
 - Sales of [REDACTED] own-label personal lubricant ([REDACTED]) seem to be clearly affected by Durex promotions, suggesting that consumers switch from own-label lubricants to branded ones when the latter are promoted.

promotions, understandably, seem to have smaller impact on the sales [REDACTED]. Note that part of the decrease of own-label in the second half of the first K-Y promotion period could also be related to the increase in Durex sales.

²⁵ This may be due to asymmetric switching between branded and unbranded products. Consumers buying own-label may be more likely to switch to Durex when the latter is on promotion. However consumers buying Durex may be less inclined to switch to own-label when own-label is relatively cheaper as they value the brand.

²⁶ This difference might be a result of differences in the promotion events.

²⁷ We note that sales in [REDACTED] might have also been affected by promotional activity. However, we do not have data to assess this.

²⁸ [REDACTED]

However, as noted earlier, this does not tell us anything about what would happen if the price of branded lubricants increased above the non-promotion price level (that is, whether buyers of branded lubricants would switch to own-label).

- There is no clear link between the sales of K-Y and Durex promotions (or at least, any link would be less clear than in the case of own-label). It might be that sales of K-Y would have been higher in Durex promotion periods absent the promotion; however, without controlling for other factors that might affect K-Y sales, it is not possible to draw conclusions from this data.

Figure 2: [REDACTED]*

[REDACTED]

Source: [REDACTED]
*[REDACTED]

57. In addition to the above comparison, the [REDACTED] data also allowed us to look at sales of other branded personal lubricants, such as [REDACTED]. The green bars in Figure 3 represent Durex promotions whereas the blue bars indicate promotions of other brands.

Figure 3: [REDACTED]

[REDACTED]

Source: [REDACTED]

58. The graph shows that alternative [REDACTED] introduced them in its stores. It is also clear that the sales of these products are quite reactive to their promotions. However, it would be difficult to assess whether the promotion of these products had any impact on the sales of Durex lubricants as most of alternative brand promotion periods are adjacent to Durex promotions. However, [REDACTED], Durex sales seemed to be lower in the promotion periods of alternative brands compared to the between-promotion period. This could suggest that promotions of alternative brands had at least some impact on Durex sales.

[REDACTED]

59. [REDACTED] is different from the previous retailers in that [REDACTED]. Therefore, sales data in [REDACTED] may provide useful insights into the interaction between Durex and K-Y [REDACTED]. At the same time, promotion events of [REDACTED] lubricants are much less frequent than in the other retailers we analysed. Figure 4 shows that we [REDACTED] (green bars). We did identify other promotion events in relation [REDACTED] (blue bars); however, this product is likely to be [REDACTED]. Similar to other retailers, [REDACTED].

60. Nevertheless, Figure 4 confirms some of the findings from other retailers' data. In particular, [X] promotions seem to have a spill-over effect on the sales of other Durex lubricants and that [X].
61. The figure might suggest a drop in K-Y sales in the Durex Play promotion period ([X]) compared to the pre and post-promotion periods. However, this drop is not significantly greater than changes in K-Y sales in the non-promotion period, and relatively low sales before the [X] peak are consistent with what we can observe in [X] (and to a smaller extent in [X]). As a consequence, it would be difficult to conclude on the impact of Durex promotion on the sales of K-Y based on this data.

Figure 4: [X]

[X]

Source: [X]

[X]

62. [X] is fairly similar to [X] in that [X]. The bars on Figure 5 indicate Durex Play promotions. As in the case [X], it would be difficult to assess how Durex promotions affect K-Y sales given the noise in the data.

Figure 5: [X]

[X]

Source: [X]

[X]

63. [X] stocks a [X] (including Durex, K-Y, [X] and [X] own-label products) and promotes many of these products frequently. As in the case of other retailers, the sales and promotions data of [X] do not suggest any obvious patterns of switching between Durex and K-Y when the former is on promotion.²⁹ Moreover, given the large number of products and promotion events, it would be even more difficult to disentangle what causes any changes in sales of K-Y. However, the [X] data offers a good opportunity to explore, at least to some extent, the interaction between [X] own-label lubricants and Durex: both Durex and [X] offer and promote regularly a [X] lubricant.
64. Figure 6 shows how promotions affect the sales of Durex [X] and [X].

²⁹ Note that K-Y was not promoted in [X] in the given period.

Figure 6: [REDACTED]

[REDACTED]

Source: [REDACTED]

65. The figure suggests the following:

- Durex promotions negatively affect the sales of the own-label personal lubricant as can be seen in [REDACTED].
- [REDACTED] boosted sales of both products; a similar pattern we observed with other retailers.
- When the own-label product stopped being on promotion in [REDACTED], sales dropped sharply and Durex sales shot up.

Results of the promotion analysis – with controls

Table 1: Durex promotion in [REDACTED] (comparator: [REDACTED])

	<i>Variable</i>	<i>Coefficient</i>	<i>p-value</i>
Log of quantity Durex [REDACTED]	[REDACTED]	[REDACTED]*	[REDACTED]
	[REDACTED]	[REDACTED]†	[REDACTED]
	[REDACTED]	[REDACTED]†	[REDACTED]
	[REDACTED]	[REDACTED]†	[REDACTED]
Log of quantity Durex [REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
	[REDACTED]	[REDACTED]†	[REDACTED]
	[REDACTED]	[REDACTED]†	[REDACTED]
	[REDACTED]	[REDACTED]†	[REDACTED]
Log of quantity K-Y 50ml	[REDACTED]	[REDACTED]	[REDACTED]
	[REDACTED]	[REDACTED]	[REDACTED]
	[REDACTED]	[REDACTED]†	[REDACTED]
	[REDACTED]	[REDACTED]†	[REDACTED]

Source: [REDACTED]

*[REDACTED]

†[REDACTED]

Note: standard errors clustered by week.

Table 2: Durex promotion in [REDACTED] (comparator: [REDACTED])

	<i>Variable</i>	<i>Coefficient</i>	<i>p-value</i>
Log of quantity Durex [REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
	[REDACTED]	[REDACTED]*	[REDACTED]
	[REDACTED]	[REDACTED]†	[REDACTED]
	[REDACTED]	[REDACTED]†	[REDACTED]
Log of quantity K-Y 50ml	[REDACTED]	[REDACTED]*	[REDACTED]
	[REDACTED]	[REDACTED]	[REDACTED]
	[REDACTED]	[REDACTED]†	[REDACTED]
	[REDACTED]	[REDACTED]†	[REDACTED]

Source: [REDACTED]

*[REDACTED]

†[REDACTED]

Note: standard errors clustered by week.

Table 3: Durex promotion in [X] (comparator: [X])

	<i>Variable</i>	<i>Coefficient</i>	<i>p-value</i>
Log of quantity Durex [X]	[X]	[X]	[X]
	[X]	[X]*	[X]
	[X]	[X]†	[X]
	[X]	[X]†	[X]
Log of quantity K-Y 50ml	[X]	[X]	[X]
	[X]	[X]*	[X]
	[X]	[X]†	[X]
	[X]	[X]†	[X]

Source: [X]

*[X]

†[X]

Note: standard errors clustered by week.

Per ml price of Durex Play products before and after the 2015 bottle size change

[✂]

Figure 1: [✂]

[✂]

Source: [✂]

Figure 2: [✂]

[✂]

Source: [✂]

Figure 3: [✂]

[✂]

Source: [✂]

Figure 4: [✂]

[✂]

Source: [✂]

[✂]

Figure 5: [✂]

[✂]

Source: [✂]

Figure 6: [✂]

[✂]

Source: [✂]

Figure 7: [✂]

[✂]

Source: [✂]

Figure 8: [✂]

[✂]

Source: [✂]

Figure 9: [✂]

[✂]

Source: [✂]

[✂]

Figure 10: [✂]

[✂]

Source: [✂]

Figure 11: [✂]

[✂]

Source: [✂]

Figure 12: [✂]

[✂]

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Figure 13: [✂]

[✂]

Source: [✂]

Figure 14: [✂]

[✂]

Source: [✂]

Figure 15: [✂]

[✂]

Source: [✂]

[✂]

Figure 16: [✂]

[✂]

Source: [✂]

Figure 17: [✂]

[✂]

Source: [✂]

Figure 18: [✂]

[✂]

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Figure 19: [✂]

[✂]

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Figure 20: [✂]

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Figure 21: [✂]

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Figure 22: [✂]

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Source: [✂]

Figure 23: [✂]

[✂]

Source: [✂]

Figure 24: [✂]

[✂]

Source: [✂]

[✂]

Figure 25: [✂]

[✂]

Source: [✂]

The indicative price rise calculation

Introduction

1. This appendix explains the indicative price rise (IPR) calculation we performed for Durex and K-Y personal lubricants. We carried out this analysis to assess the merger party's incentive to try to increase prices in grocery retailers and national pharmacy chains following the merger. This analysis feeds into the assessment of the competitive effects of the merger. In order to calculate the IPR, we used diversion ratios based on the TNS consumer survey commissioned by the CMA, data on variable profit margins submitted by the parties and made assumptions about shape of the demand curve and the nature of competition in the market.

Diversion ratios

2. Given the lack of evidence on actual consumer behaviour, we consider that the diversion ratios calculated from the TNS survey results provide useful evidence for the assessment of pricing incentives.
3. When calculating the diversion ratios, we made a number of decisions as to how to use the result from the survey:
 - RB sells a range of Durex personal lubricants, and some of these lubricants may be more closely competing with K-Y than others. However, we consider that it is appropriate to use the diversion ratios that we calculated taking all Durex products into account. This is because (a) the sample size becomes very small when we start breaking down the data product by product; and (b) the calculated diversion ratios are not significantly different between focusing on a subset of products and the whole range of Durex lubricants (see Appendix D, paragraph 36).
 - While Durex and K-Y are sold by every large grocery retail chain and pharmacy chain (in fact, these are the only two personal lubricant products that are sold by every large grocery retail and national pharmacy chains), the availability of alternative brands differs retailer by retailer. The possibility of calculating diversion ratios on a retailer-by-retailer basis, however, is limited by small sample sizes (especially for K-Y purchasers). Therefore, we used the diversion ratios calculated for the whole sample of respondents. This means that our diversion calculations may underestimate the likely diversion between the Parties' products in retailers where these are the only two personal lubricants sold.

- As discussed in Appendix D, the survey enabled us to distinguish between ‘marginal’ and ‘infra-marginal’ consumers to some extent. For the IPR calculations, we used the diversion ratios calculated for the combined results of marginal and infra-marginal consumers. This is because (a) the sample size is larger for the combined results; and (b) the calculated diversion ratios are not significantly different for marginal and infra-marginal customers (see Appendix D, paragraphs 34-35).
4. Taking the above into account, our central estimates for the diversion ratio from Durex to K-Y is 14% and the diversion ratio from K-Y to Durex is 27%. To account for sampling errors, however, we used confidence intervals¹ for the diversion ratio estimates. The 95% confidence interval for diversion from Durex to K-Y is 9% to 19%, and from K-Y to Durex it is 19% to 35%.

Margins

5. The parties provided the CMA with profit margin data of their personal lubricant products. The data from J&J indicates that the gross profit margin of K-Y personal lubricants is between [X] % and the gross profit margin of different Durex products is between [X] %. We used these ranges for the IPR calculations.

Assumptions about the demand curve and nature of competition in the market

6. We assume that companies compete on price in a differentiated goods market. These assumptions are consistent with what we observed in the market in that personal lubricants are differentiated products and we have found no indication of capacity constraints in this market. We note that the model we used has some limitations in that it does not take into account the complexity of negotiations around cost prices and other terms and conditions (such as the level of promotional funding). Notwithstanding, the model can be informative for demonstrating the changes in the pricing incentives of the merged firm.
7. We assume a linear demand curve in the results shown below. This is a common and conservative assumption for IPR calculations.²

¹ A confidence interval gives an estimate range of values that is likely to include an unknown population parameter, the estimated range being calculated from a given set of sample data. The selection of a confidence level determines the probability that the confidence interval produced will contain the true parameter value. A 95% confidence interval indicates that the probability of observing a value outside of this area is less than 0.05.

² Alternatively, we could have assumed a constant elasticity demand curve. However, this demand curve has some counterintuitive properties, such as demand not becoming more elastic as price increases and that there is no price so high that demand falls to zero.

The IPR calculation

8. We have used the above diversion ratios and margin data to calculate the IPR for Durex and K-Y personal lubricants. As mentioned above, we assume linear demand and we also assume that units have been rescaled to make the slope of the demand curve -1 for both Durex and K-Y products.³ By making this assumption, we implicitly assume that the own-price elasticity of both products is the same. We recognise the restriction on the slope of the demand curve is a limitation to our model; however, in the absence of data on eg the own and cross-price elasticity of demand for the products, we considered this assumption to be a good starting point.⁴
9. The consumer survey suggests that the diversion ratios from Durex to K-Y and from K-Y to Durex are not symmetric. Therefore, we decided to use an asymmetric IPR formula.⁵ This formula allows for differences in margins and diversion ratios between the firms. This asymmetric model also takes into account the relative prices of the products. Given the limited information we have on Parties' actual cost prices and that RB sells a range of products, it would be challenging to come up with an exact estimate of the relative price measure we should use for the calculations. Therefore, we used a range of possible price ratios for our calculations.⁶
10. We note that the TNS survey focused on consumer switching rather than diversion of retailers between the parties so diversion ratios we used for the calculations are based on this retail level data. Evidence from retailers suggests that consumer behaviour in this market, and in particular, consumers' awareness of and the marketing behind different brands strongly influences retailers' choice of the products they stock. The parties' views were consistent with this.

³ This follows the methodology provided in Shapiro, Carl (2010), [Unilateral Effects Calculations](#).

⁴ As discussed in further detail in footnote 7, we performed a sensitivity test on the formula we used based on the model in Hausman et al (2010), [Unilateral Effects with General Linear Demand](#), Mimeo, MIT. This model uses a more general demand function.

⁵ The asymmetric indicative price rise formula with linear demand, based on the model set out in Shapiro (2010)

for product A is $\frac{\Delta p_A}{p_A} = \frac{m_A D_{BA}(D_{BA}+D_{AB})+2D_{AB}m_B \frac{p_B}{p_A}}{4-(D_{BA}+D_{AB})^2}$, where m_i are pre-merger variable margins of the products, D_{AB} and D_{BA} are the diversion ratios between the products and p_i is the pre-merger equilibrium price. For product B, the formula is $\frac{\Delta p_B}{p_B} = \frac{m_B D_{AB}(D_{BA}+D_{AB})+2D_{BA}m_A \frac{p_A}{p_B}}{4-(D_{BA}+D_{AB})^2}$. The formula based on Hausman et al (2010), assuming that the

cross-price derivatives of the demand functions are equal, is $\frac{\Delta p_A}{p_A} = \frac{m_A D_{BA} D_{AB} + D_{AB} m_B \frac{p_B}{p_A}}{2(1-D_{BA} D_{AB})}$ for product A and $\frac{\Delta p_B}{p_B} =$

$\frac{m_B D_{AB} D_{BA} + D_{BA} m_A \frac{p_A}{p_B}}{2(1-D_{BA} D_{AB})}$ for product B.

⁶ In particular, we used Durex/K-Y price ratio of 1 but we tested the sensitivity of the results to prices ratios of 0.7 and 1.5. These made little difference to the results using a price ratio of 1.

11. Evidence also suggests that most retailers would pass through cost price increases by suppliers which suggests that an increase in cost prices would be likely to translate into higher retail prices.
12. Given the relationship between consumers' and retailers' choices and the relationship between upstream and downstream prices, we consider that data on consumer behaviour and the calculated diversion ratios are informative for assessing the closeness of competition between the merger parties' brands and the incentive of the merger party to try to increase the cost price post-merger.
13. Based on the above assumptions, we computed that the IPR for Durex and K-Y personal lubricants would be in the range of 4.1% to 11.8%, and 6.3% and 17.2% respectively, depending on the assumptions about margins, diversions ratios and the relative cost price of the products.⁷ The tables in Annex 1 show a breakdown of these results.
14. We note that these results are only indicative and should not be interpreted as predictions of the actual price rise we would expect post-merger. As noted above, in our model we used consumer level data and did not take into account the negotiation between suppliers and retailers. In that sense, these results would reflect the price rise we would expect (absent supply-side responses or other countervailing factors) if the suppliers were posting retail prices. While this is not the case in the market, we consider that these results are indicative of the merger party's incentive to try to increase cost prices post-merger, especially in light of the relationship between upstream and downstream prices which will lead to increases in retail prices. We also note that we have not taken into account supply-side responses such as new entry or repositioning of existing products, or exercising buyer power which could counter the incentive to increase prices. This potential countervailing factors are discussed separately.

⁷ Using the specification in Hausman et al (2010), these ranges are 3.8-10.5% for Durex and 6.4-17.7% for K-Y.

Indicative price rise for K-Y and Durex personal lubricants

Table 1: IPR for Durex

		%		
Price ratio=1		<i>Diversion ratio from K-Y to Durex</i>		
Low margin case		<i>Low case (19%)</i>	<i>Central case (27%)</i>	<i>High case (35%)</i>
<i>Diversion ratio from Durex to K-Y</i>	Low case (9%)	4.1	4.9	5.8
	Central case (14%)	6.1	7.0	8.1
	High case (19%)	8.2	9.2	10.4
Price ratio=1		<i>Diversion ratio from K-Y to Durex</i>		
High margin case		<i>Low case (19%)</i>	<i>Central case (27%)</i>	<i>High case (35%)</i>
<i>Diversion ratio from Durex to K-Y</i>	Low case (9%)	4.5	5.5	6.8
	Central case (14%)	6.7	7.8	9.2
	High case (19%)	8.9	10.1	11.8

Source: CMA calculations.

Table 2: IPR for K-Y

		%		
Price ratio=1		<i>Diversion ratio from K-Y to Durex</i>		
Low margin case		<i>Low case (19%)</i>	<i>Central case (27%)</i>	<i>High case (35%)</i>
<i>Diversion ratio from Durex to K-Y</i>	Low case (9%)	6.3	9.0	11.8
	Central case (14%)	6.7	9.5	12.5
	High case (19%)	7.3	10.2	13.3
Price ratio=1		<i>Diversion ratio from K-Y to Durex</i>		
High margin case		<i>Low case (19%)</i>	<i>Central case (27%)</i>	<i>High case (35%)</i>
<i>Diversion ratio from Durex to K-Y</i>	Low case (9%)	8.2	11.8	15.5
	Central case (14%)	8.7	12.4	16.3
	High case (19%)	9.3	13.1	17.2

Source: CMA calculations.

Glossary

Act	Enterprise Act 2002.
Ansell	A supplier of SWB products including personal lubricants .
Astroglide	A personal lubricant supplied by Harlow Lubricants.
Balance Activ	A personal lubricant product supplied by BBI Healthcare.
CMA	Competition and Markets Authority.
Countervailing buyer power	A customer's ability to use its negotiating strength to limit the ability of the merged firm to raise prices.
Durex	A brand of personal lubricant products owned by RB .
Embrace Pleasure Gel	A personal lubricant product supplied by Durex .
Entry and expansion	The scope to enter, develop and sell within a market (in this case the personal lubricant market).
Firefly	Firefly Research Ltd. A research company.
Grocery retailers	Customers of RB and J&J . Grocery retailers comprise mass market retailers such as Asda, Sainsbury's, Tesco, Waitrose and Morrisons.
Independent pharmacies	Customers of RB and J&J . Independent pharmacies are any pharmacies not directly affiliated with a chain. These are supplied by wholesalers.
ID Juicy Lube	A brand of personal lubricant products supplied by Westridge Labs.
J&J	Johnson & Johnson, Inc. A US-based multinational group with more than 250 companies located in 60 countries which supplies healthcare products worldwide. J&J includes McNeil-PPC, Inc. , which is the vendor of the K-Y brand and a subsidiary of J&J.
K-Y	An abbreviation for the K-Y brand of personal lubricant products owned by J&J .

K-Y brand	A brand of personal lubricant products owned by J&J . In the UK J&J supplies only its basic K-Y Jelly product under the K-Y brand.
K-Y business	The rights, liabilities, and assets relating to the K-Y brand which McNeil-PPC, Inc. , a subsidiary of J&J , has sold to RB globally.
K-Y Jelly	A personal lubricant product supplied under the K-Y brand by McNeil-PPC, Inc. , a subsidiary of J&J .
Liquid Silk	A brand of personal lubricant supplied by Bodywise.
McNeil-PPC, Inc.	The direct vendor of the K-Y brand and a subsidiary of J&J .
National pharmacy chains	Customers of RB and J&J . National pharmacy chains comprise Boots, Superdrug and Lloyds Pharmacy. RB and J&J supply them directly with personal lubricant products.
Online retailers	Customers of RB and J&J . Online retailers comprise companies such as Amazon and eBay and specialist (adult) online retailers such as Lovehoney. Retailers sell the products online.
Own-label	A grocery retailer or pharmacy chain's personal lubricant product, eg Tesco's Sequire personal lubricant . Also referred to as private label products.
Pasante	A brand, supplier and online retailer of personal lubricants .
Play Feel, Play Aloe Vera, Play Warming, Play Tingling, Play Tingle, Play Cheeky Cherry, Play Very Cherry, Play Saucy Strawberry, Play Passion Fruit, Play Sensual Massage 2in1, Play Soothing Massage 2in1, Play Stimulating Massage 2in1, Play	Personal lubricant products supplied by Durex in the UK.

**Perfect Glide, Play
O Orgasmic Gel**

Personal lubricant Water-based or silicone-based specialised lubricants used primarily during human sexual activity to reduce friction and ease movement. Personal lubricants can be classified as 'functional' or 'problem-solving' products (designed to relieve vaginal dryness during sex) or 'pleasure-enhancing' (designed to add fun and to enhance the pleasure of sexual activity).

Real Feel A **personal lubricant** product supplied by **Durex**.

RB Reckitt Benckiser Group plc. A global consumer goods company, with operations in 66 countries and 106 brands, including **Durex**. RB is the ultimate owner of all assets belonging to Reckitt Benckiser.

Replens A **personal lubricant** product supplied by Crescent Pharma.

Retail ready A term used to describe products that retailers can sell immediately because they fulfil their requirements; eg the suppliers of the products can scale production to distribute the products to many stores, have the facilities to receive orders for the products, and can support the products with promotions.

Sensilube A **personal lubricant** product supplied by **Durex**.

SKUs Stock keeping units.

SLC Substantial lessening of competition.

Specialist (adult) retailers Customers of **RB** and **J&J**. Specialist (adult) retailers comprise retailers such as Ann Summers.

Super Slik A brand of **personal lubricants** supplied by Herrco Cosmetics.

SWB Sexual well-being. A retailers' category of products that includes condoms, **personal lubricants**, body and massage oils, sexual accessories and toys and pregnancy testing kits.

Swoon	A brand of products, including personal lubricants , supplied by Lovehoney.
Sylk	A brand, and supplier, of personal lubricants .
Yes	A brand of personal lubricant products supplied by the Yes Yes Company.
Vaginal moisturisers	Products designed to provide relief from the discomfort of vaginal dryness as an ongoing problem (ie not just during sexual intercourse), which typically have a normal pH level (close to the body's natural pH level).
woohoo!	A brand of personal lubricants supplied by Essential Health Products.