

# Appendix ZA: assessment of potential pro-competition interventions to address market power in open display advertising

## Introduction

1. This appendix sets out our assessment of potential interventions aimed at addressing the concerns identified in Chapter 5 and Appendix M regarding the level of competition between intermediaries on the buy-side and sell-side in the open display market.
2. We noted in our interim report that Google had a strong position in the open display market resulting from its access to advertising inventory and user data, combined with its strong position in the adtech chain. Google's market position led us to a potential concern about conflicts of interest between Google's role on the buy-side and the sell-side of the open display market. We provisionally found that there was the potential for Google to leverage its market power from its owned and operated advertising inventory into the open display market and foreclose potential competitors in advertising intermediation.
3. We sought views on the potential benefits and costs of several interventions, some of which represented different forms of separation in the intermediated display market, while others related to the provision of access to Google's inventory. The options we invited specific feedback on were:
  - whether Google should be required to **separate its publisher ad server** or operate this service independently;
  - whether Google (and possibly other platforms operating both services) should be required to **separate its demand side platform (DSP) from its supply side platform (SSP) activities** to avoid a conflict of interest; and
  - whether Google could be required to **offer access to some or all of its YouTube inventory** on reasonable request to third-party DSPs.
4. We have assessed the benefits and costs associated with these potential interventions, drawing on evidence submitted in response to our interim report, and through further engagement with stakeholders. This assessment is set out below, along with our recommendations regarding which measures should be available within the toolkit of a pro-competition regulatory body – the Digital Markets Unit (DMU). We have set out our reasoning for

recommending a new pro-competition regulatory regime in Chapter 7 of our final report.

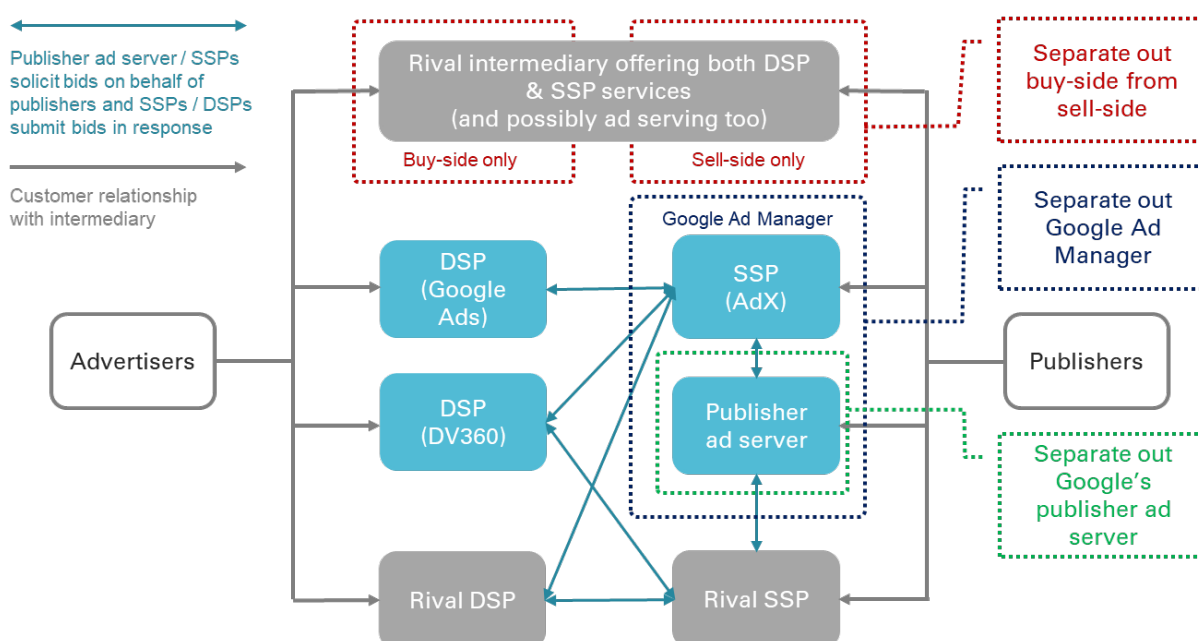
5. The design and implementation of the interventions considered in this appendix should ultimately be for the DMU to determine, following full consultation. The purpose of our detailed consideration of specific interventions is to assess the extent to which measures are available that would tackle the causes of market power at source and to demonstrate why the DMU should have the necessary powers to implement these measures if they deem them to be effective and proportionate.
6. We have set out our assessment of the potential separation options first, followed by our assessment of options relating to enhanced access.

## Separation interventions

### *Potential separation interventions identified in our interim report*

7. Figure ZA.1, below, illustrates the potential options we highlighted in our interim report for separating Google's intermediation services in the open display market, which we consider further in this report based on stakeholder responses and our final analysis of the markets which could be affected by separation.

**Figure ZA.1: Potential separation options for intermediation in the open display market**



Source: CMA analysis.

8. As we explained in our interim report, the benefit of separation remedies is that they provide for the possibility of solving problems at source, reducing the

need for ongoing and costly regulatory controls. However, these interventions are intrusive and could change the nature of competition in fundamental ways, and so close attention must be paid to the potential costs and unintended consequences of such measures.

9. We highlighted that separation, and particularly ownership separation, has the potential to deliver significant benefits in markets where one large player is able to affect the proper working of competition, in some cases across a number of markets. In digital markets, we would expect to see frequent innovation, often driven by dynamic competition. Separation would be most effective where it could be used to re-establish a more effective competitive process, which could bring new products to consumers and lower prices to businesses.
10. We also noted that separation could, however, result in significant costs. There are normally costs directly incurred as a result of separation, which might be passed onto customers, from the separation process itself and the establishment of independent businesses. Some forms of separation could also require a costly ongoing process of monitoring and reporting. There are also risks that separation remedies might not work as intended – although separation might be expected to increase the intensity of competition, the consequences for market dynamics could be hard to predict.
11. We explained in our interim report that separation remedies come in a number of forms, and that those most relevant to this context include:
  - (a) Operational separation remedies – where the affected businesses within the firm operate separately and independently from each other but are still owned by and remain under the overarching control of the same firm. Operational separation remedies may be accompanied by access remedies.
  - (b) Ownership separation – which prohibits a single firm from having control through ownership of businesses which operate the distinct functions subject to separation.
  - (c) Access remedies – which mandate access to some or all the services in which a firm has market power, on fair and reasonable terms. Access remedies almost always need to be accompanied by monitoring mechanisms including accounting separation. This latter measure requires the firm to separate relevant businesses on a virtual basis through keeping separate books for each business.
12. As illustrated in Figure ZA.1, we considered that separation could be applied in the open display markets in different ways:

- (a) We noted that Google Ad Manager had a share of supply of over 90% of publisher ad serving. A concern raised by many stakeholders was that Google's publisher ad server systematically favoured other parts of Google's adtech stack, harming competition in the process. In submissions to this study,<sup>1</sup> publisher ad serving was the digital advertising intermediation service that stakeholders had most called for to be separated out.
- (b) We noted that Google had integrated its publisher ad server and SSP, and so this intervention could be implemented either by reversing this integration and separation of the ad server as an independent service, or by separation of the combined ad server/SSP. We sought views on which of these two forms of separation would be preferable; and
- (c) We also considered, in addition to the conflicts identified above stemming from Google acting both on the buy and sell sides of open display intermediation, these conflicts might also be present when other intermediaries active in the open display market operate both on the buy side and sell side, for example offering both DSP and SSP services to advertisers and to publishers in respect of the same item of advertising inventory. We sought views on whether separation could be an appropriate remedy to address these conflicts of interest.

### ***Stakeholders' views on potential separation remedies***

- 13. We summarise the feedback we received into two sections:
  - (a) general comments on the merits or otherwise of separation as a solution to competition problems in open display and beyond; and
  - (b) more specific comments on the potential adtech separation interventions we had discussed.

### ***General comments on the merits or otherwise of separation remedies***

- 14. Google submitted that if any of our concerns remained after further investigation, they could be addressed through less intrusive means, such as initiatives to improve transparency and/or a principle within a code of conduct that it should not 'unduly discriminate between its other businesses and third parties'.<sup>2</sup>

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<sup>1</sup> See interim report, [Appendix M: Potential interventions in digital advertising](#), paragraphs 17 and 19.

<sup>2</sup> [Google's response to our consultation on the interim report](#).

15. One publisher told us that separation of Google into distinct business units would be a key step in remedying the conflicts of interest identified by the CMA. Such separation would, the publisher continued, provide advertisers, publishers and consumers with transparency and clarity on how data is being used, and the outcomes that are being achieved by individual Google advertising products. We would need to work with international competition authorities, particularly in the US, to effect voluntary separation. Such remedies were essential to curtail ongoing consolidation to just one or two dominant players.
16. Another publisher told us that it believed neither our separation proposals nor the code of conduct on their own would be adequately effective in addressing concerns regarding Google. Google, it explained, had turned GDPR to its advantage, had removed Google News in Spain to counter the introduction a neighbouring intellectual property right for publishers and was making changes to block third party cookies on Google Chrome, all disadvantaging publishers in the process. It believed a unified cross-jurisdictional solution would be most effective. Given the UK's position as the biggest online advertising market in Europe however, intervention focussed on the UK ad inventory would help.
17. DMG Media told us that a bundle of remedies aimed at curtailing Google's market power should be adopted, including removing all exclusivities between Google's adtech products and/or Google's products and inventory. Interventions confined to UK users would be limited for international news publishers like DMG Media. Such an intervention would not count for its significant overseas traffic, representing an important portion of the overall traffic. We would need to consider implementation problems such as how an ad server would operate separately from the ad intermediation activities for certain users but not for others.<sup>3</sup>
18. Reach plc told us that on balance it was not in favour of attempting any separation interventions. We had raised some difficulties with identifying and implementing the correct intervention and Reach plc believed that as a result there was a high likelihood that such an intervention, whether begun by government or some other party, would not ultimately be implemented effectively. That would jeopardise other remedies.<sup>4</sup>
19. Oracle told us that in light of Google's recent announcements regarding changes to Chrome that could fundamentally change the functioning of open

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<sup>3</sup> [DMG Media's response to our consultation on the interim report.](#)

<sup>4</sup> [Reach plc's response to our consultation on the interim report.](#)

display, that web browsers would potentially play a more prominent role going forwards. Oracle asked us to consider whether an intervention requiring its browser to be separated from the rest of its business might be appropriate.<sup>5</sup>

20. Arete Research submitted that we should explore the promising comparisons to the regulatory regime for financial markets, which was both well-established and well-understood, when considering structural separation. Material conflicts of interest were inherent, Arete Research explained, in the bundled adtech 'stacks' of leading platforms, doubting whether Google could fairly represent publishers as an SSP when it was also one of the largest publishers in the market, as well as the leading conduit of ad spend towards third-party publishers.<sup>6</sup>
21. The Competition Law Forum told us, echoing our view that remedies should be applied and tailored by considering the behaviour and circumstances of each individual market, that we would be mistaken to apply an escalation approach to firms that were ill-intentioned (ie likely to reap benefits from loopholes in the law) or well-informed (ie using their knowledge and highly skilled advisors). It would not be necessary to begin with the least restrictive remedy option. More intrusive measures should be considered and applied from the outset. It thought that the degree of regulation required would be more akin to that prevailing in telecoms rather than a code of conduct.
22. The Competition Law Forum also told us that it believed that the most intrusive measure (ie divestiture) would in principle deliver the most effective outcome. It concurred with our view that this measure would require coordination with other authorities. The Competition Law Forum encouraged us to engage with other antitrust enforcers (especially the FTC and the Commission) to decide on the best possible option for its implementation.<sup>7</sup>
23. Damien Geradin, professor of competition law and economics at Tilburg University, and Dimitrios Katsifis, an associate at Geradin Partners, told us that concerns raised by Google's practices in open display were unlikely to be sufficiently addressed through any single remedy. We should, they explained, not hesitate to pursue a combination of structural and behavioural remedies to curtail Google's market power.<sup>8</sup>

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<sup>5</sup> Oracle's response to our consultation on the interim report.

<sup>6</sup> Arete Research's response to our consultation on the interim report.

<sup>7</sup> Competition Law Forum's response to our consultation on the interim report.

<sup>8</sup> Prof. Damien Geradin and Dimitrios Katsifis's response to our consultation on the interim report.

24. Advertisers on the whole did not submit detailed comments on these remedy proposals. One advertiser told us that it was supportive of separation remedies.
25. Privacy International told us that we should consider structural or behavioural regulatory interventions (remedies) to limit anti-competitive behaviour of platforms with a dominant or 'strategic' position in the online market. Competition and data protection authorities should, it explained, consider jointly the interface between consumer, competition and data protection law. These were complementary frameworks which needed to be used in tandem to address systemic problems with the current state of online advertising.<sup>9</sup>

*Specific comments on the potential adtech separation interventions we had discussed*

26. Google told us that it was in favour neither of separating out its ad server nor of separating out its buy-side adtech operations from its sell-side operations.
27. Google believed that stand-alone ad servers were no longer meaningful businesses and to the best of its knowledge that there were no full-featured ad servers that were not integrated with an SSP eg Xandr, FreeWheel and StickyAds. Google explained that a competitive ad server needed to be able to compare demand from different sources (convergence of SSP and ad server functionalities), particularly as programmatic spend had grown. A separated ad server would provide little value to the publisher as it created inefficiencies and there would be loss of functionality.
28. Google told us that if their DSP and SSP were to be separated, there would be significant material costs for publishers, advertisers and users. It would create a loss of technical efficiencies – eg it would result in increased latency. From an economical point of view, putting products together reduced costs. Google noted that integration between DSPs and SSPs was common, but that some successful intermediary platforms operate only as either a DSP or an SSP; The Trade Desk and Rubicon/Telaria were examples.
29. Google explained that its open display intermediary buy and sell side operations were already materially operationally separate. While supported by a common product management and engineering reporting chain at the highest level, teams working on various sell-side and buy-side products had different office locations. For example, the Ad Manager team is based in New York, while the DV360 and Google Ads teams are in different states on the West Coast of the US. Data sharing between the buy-side and sell-side was

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<sup>9</sup> [Privacy International's response to our consultation on the interim report.](#)

tightly controlled. There was a written policy that had to be abided by if the buy-side wanted access to the supply-side data and vice versa.

30. A leading news publisher told us that the key objective of any intervention should be to ensure that Google's buy side platforms behaved in the same way as any other buy side platform when integrating with Google sell side (bid stream data, auction mechanic, pre and post bid reporting etc). It further noted that, given the scale of Google's demand, the integration of Google's ad server with its SSP enabled better monetisation of publisher inventory. The publisher continued that vertical integration was not necessarily bad in itself. If, however, a vertically integrated firm had market power at some stage (eg in search and with YouTube), one wanted to prevent it from being able to leverage that market power. For that reason, it advocated the separation of Google DSPs which offered exclusive access to advertisers to search and YouTube. The publisher, however, was agnostic as to whether the ownership or operational separation model should be adopted.
31. Oracle told us that was not currently necessary nor desirable to consider a general requirement on all intermediaries to separate their buy-side and sell-side businesses. The key concern was, in its view, the leveraging of market power from one layer of the adtech stack to another. Given that many smaller players had no market power to leverage, such concern was unlikely to materialise.<sup>10</sup>
32. Beeswax, a DSP, told us that the integration of a DSP and SSP gave competitive advantages that would be hard for independent adtech firms like it to match:
  - a) use of common identifiers between DSP and SSP to facilitate the joining of buy-side and sell-side data;
  - b) ability to subsidize fees between buy and sell side, enabling automated 'supply path optimisation' algorithms to bias spending towards the cheapest supply;
  - c) ability to utilise beneficial auction mechanics across buy and sell side such as 'first look' and 'last look'; and
  - d) ability to transact with advertisers on bases (CPC, CPA, or viewability) other than the one it purchases impressions from publishers (CPM) risk

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<sup>10</sup> [Oracle's response to our consultation on the interim report.](#)



free. Such a provider could closely estimate outcomes, enabling the provider alternative payment bases.

33. Beeswax cautioned against too aggressive enforcement of any ban on acting on both sides of the market, as this might capture some business models that might not be the intended focus of this remedy. For example, many media companies and ad networks worked both with publishers and advertisers.<sup>11</sup>
34. Finally, IAB UK questioned how the separation of DSP and SSP for all intermediaries would work or be monitored in practice. It noted the broader risk that such an intervention could be misplaced, as it would fail to address the question of access to data. All firms would be disadvantaged if there was an unfair balance of data in the marketplace regardless of whether they had buy-side or sell-side operations.<sup>12</sup>

### ***Assessment of the case for separation in the open display markets***

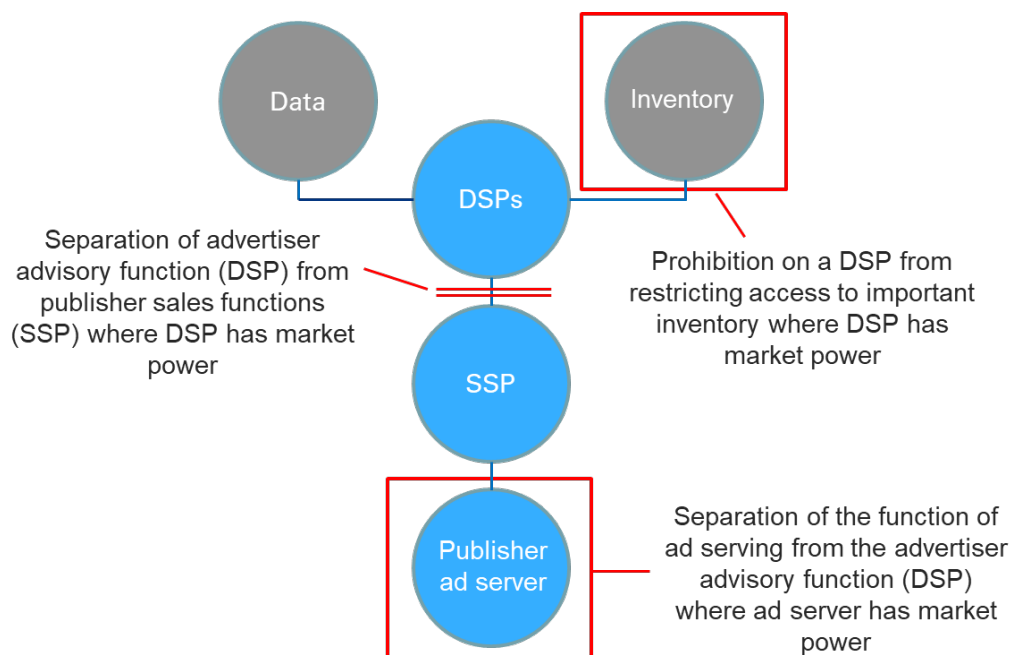
35. Since our interim report we have refined our analysis of the open display market in response to the feedback we received and our own further investigation. In particular, we now separate the open display value chain into a number of discrete functions as set out in Appendix M to make clearer the nature of the conflict, if any, between the same firm carrying out more than one of these discrete functions for the same item of inventory.
36. Figure ZA.2 illustrates the businesses within adtech intermediation which operate these different functions. We refer to these business and functions in our assessment of where there is a case for separation and also for access remedies in the section on Access to YouTube remedies below.

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<sup>11</sup> [Beeswax's response to our consultation on the interim report.](#)

<sup>12</sup> [IAB UK's response to our consultation on the interim report.](#)

**Figure ZA.2: Separation and access options in open display**



Source: CMA analysis.

37. In the following paragraphs we assess the nature of Google’s potential conflicts in the open display market, and the associated problematic behaviours and harms to competition that might arise in consequence, based on the updated analysis which better reflects the functions which Google undertakes in the open display advertising markets. We also set out the evidence we have for the problematic behaviours and harms.

*Assessment of separation of Google’s ad serving function (publisher ad server)*

38. In this section we explain that our concerns primarily relate to the ad serving function currently undertaken by the publisher ad server, and the implication of this finding for the appropriate form of separation interventions. In this analysis, by ‘ad serving function’, we mean the activity of making the final decision about which ad from a number of possible candidate ads to serve on the publishers’ site. We therefore consider the case for separating Google’s ad serving function from its advertiser advisory function.

39. We firstly set out the potentially problematic behaviour ie the transmission mechanism that generates the harm that would therefore need to be addressed by any remedy. We then set out the harm that would arise and finally the evidence we have for that harm existing. We draw on the analysis we set out in Chapter 5 and Appendix M.

### *Potentially problematic behaviour*

40. In a typical real-time transaction, when a user opens a webpage (or uses an app), an automated process is put in motion in which the publisher ad server currently takes the final decisive step. This final step – the ‘final say’ on how inventory is allocated – is where the publisher ad server compares the bids received, together with any pre-existing direct deals between the publisher and specific advertisers, and decides which ad is to be served on the webpage. This step is part of the publisher sales function – setting the rules for the selling process, contacting potential buyers, collecting and ranking their offers, determining who the inventory is allocated to and the price to be charged.
41. The other step in this automated process which is critical to determining which ad is served on a publisher site is the second step<sup>13</sup> in which a DSP evaluates the advertising opportunity based on the objectives of the campaigns of all their customers (advertisers and media agencies) and automatically generates a bid to be sent to the relevant SSP. This step is part of the advertiser advisory function – determining buying and bidding strategies, based on the advertiser’s objective and the available information.
42. One way of describing Google’s behaviour is that there is a conflict between the ‘final say’ (Google acting as a sell-side intermediary) and the advertiser advisory function (Google acting as a buy-side intermediary). In other words, the decision on behalf of the publisher regarding the final say of how an individual item of its inventory is allocated to an advertiser is potentially in conflict with the decision on behalf of the advertiser regarding whether and how much to bid for that item of publisher’s inventory.
43. Another way of describing Google’s behaviour here is that as a sell-side intermediary with market power Google would be in a position to discriminate in favour of its own buy-side intermediary (regardless of whether its own buy-side intermediary holds market power or not). The sell-side intermediary in this case (Google’s publisher ad server) has market power for reasons discussed in Appendix M and Chapter 5.

### *Harm*

44. There are potential harms to adtech market participants as a result of Google having the ability to favour its own buy-side intermediary.

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<sup>13</sup> These steps are set out in Appendix M.

- *For publishers (who are end customers)*
45. Publishers' inventory would not necessarily be sold impression-by-impression to the optimal buyer from their perspective. Google would be able to sell impressions to those advertisers that would allow Google to earn the highest fees as a buy-side intermediary. This would result in an accumulation of micro opportunity costs that in aggregate would represent lost incremental revenue to the publisher.
  46. Over the longer term, there would be less revenues for publishers, meaning less ability to invest in content and therefore less ability to compete for user attention against some integrated platforms.
    - *For independent DSPs (who are not end customers) and therefore for advertisers (who are end customers)*
  47. Independent DSPs would be at a competitive disadvantage relative to Google's DSP and therefore may not get the opportunity to secure the ad on behalf of their advertiser customers even where that advertiser would get the greatest value from winning the auction.
  48. The reduction in business handled by independent DSPs would over time lead to less competition between DSPs, meaning that advertisers would have less choice regarding DSPs and would most likely face higher prices from the remaining DSPs. Harm would also result from any reduction in innovation that DSPs would otherwise have reflected in their offerings to advertisers.

#### *Evidence*

- *Evidence of Google holding market power in publisher ad serving*
49. Google is the dominant provider in publisher ad serving ([more than 90]% UK market share), while at the same time operating the largest DSPs, which have exclusive access to YouTube inventory and, possibly, access to data from Google's user facing services. Google's UK market share of DSPs as a percentage of the value of ads purchased is [50-60]%.
  50. Publishers tell us the main cost of switching to a non-Google ad server is the risk of losing access to Google's DSPs (particularly Google Ads), which they consider a very important source of demand.

- *Evidence of Google discriminating in favour of its buy-side intermediaries*

51. Over recent years Google has deployed a series of practices, notably ‘last look’, restrictions to open bidding, unified pricing rules and restrictions of access to auction data for publishers. All of these practices have prompted complaints that Google has the ability and incentive to leverage its market power in publisher ad serving within open display by self-preferencing its DSP.
52. The evidence therefore suggests that Google has the ability and incentive to discriminate in favour of its own DSP.

*Implications for remedy design*

53. As summarised in paragraphs above, our report has found evidence that Google’s publisher ad server has the ability and incentive to favour Google’s DSPs and that an intervention that addresses this might deliver benefits by promoting competition and innovation in digital advertising. As described above, many stakeholders supported an intervention which would separate Google’s publisher ad server from its DSP.
54. However, we are concerned that an intervention framed in this way might not be effective in the medium-term if the market changes substantially. The adtech ecosystem is not static: it has reached its current structure through sequential changes and innovations, and is likely to continue to change.<sup>14</sup> In particular, recent proposals envisage a future structure where auctions will be run on the user’s browser (in particular, Google is considering removing third-party cookies from Chrome). In a scenario where browsers have a ‘final say’ over inventory allocation, the integration by the same provider of a browser and a DSP could be problematic, as neither publishers nor competing DSPs would have any control over the browser chosen by the user, with the result that they will be unable to react if the provider favours its own DSP. As a result, should this eventuality arise, the ‘final say’ would be taken by the browser, rather than the publisher ad server as is currently the case.
55. We therefore consider that any remedy to require separation of sell-side and buy-side intermediaries should be implemented on the basis of functions, rather than with reference to the current structure of the intermediation chain. This could be presented as a requirement for separation of any sell-side intermediary (ie an intermediary performing a publisher sales function) which has the ‘final say’ regarding which ad is served, and which has market power,

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<sup>14</sup> For a description of the past evolution of the adtech ecosystem, see Appendix M.

from a buy-side intermediary (ie an intermediary with an advertiser advisory function) owned by the same firm.

*Assessment of separation of Google's advertiser-facing functions (DSP) from publisher-side functions (SSP and ad server)*

56. In this section, we assess concerns associated with the buy-side intermediary favouring the sell-side intermediary and consider the case for separating Google's advertiser advisory function from its publisher sales function.
57. We firstly set out the potentially problematic behaviour. We then set out the harm that would arise and finally the evidence we have for that harm existing. We draw on the analysis we set out in Chapter 5 and Appendix M.

*Potentially problematic behaviour*

58. The decision on behalf of the advertiser regarding whether and how much to bid for an item of publisher's inventory is in conflict with the decision on behalf of the publisher regarding how an individual item of its inventory is allocated.
59. In respect of Google, it has the incentive as a buy-side intermediary with market power (either DV360 or Google Ads) to discriminate in favour of own sell-side intermediary (Google Ad Manager) regardless of whether own sell-side intermediary holds market power or not. The buy-side intermediaries in this case (Google's DSPs, DV360 and Google Ads) have market power for reasons discussed in Appendix M.

*Harm*

60. There are potential harms as a result of Google having the ability to favour its own sell-side intermediary.
  - *For advertisers*
61. Advertisers would not get to purchase impression-by-impression the publisher inventory associated with the highest ROI (return on investment) for that advertiser; rather they would purchase impressions from publishers that allow Google to earn the highest fees as a sell-side intermediary.
62. This would result in an accumulation of additional costs that in aggregate could represent significant additional expenditure on digital advertising incurred by the advertiser. Over the longer term, more money spent on advertising might mean worse higher prices for end consumers.

- *For independent SSPs / publisher ad servers (who are not end customers)*

63. Independent SSPs would be discriminated against and therefore would not get the opportunity to sell the ad on behalf of their publisher customers.
64. The reduction in business handled by independent SSPs and publisher ad servers would over time lead to less competition between SSPs and between publisher ad servers, meaning that publishers would have less choice regarding SSPs and publisher ad servers. This in turn would lead to them most likely facing higher prices from the remaining SSPs / publisher ad servers. Harm would also result from any reduction in innovation that SSPs and publisher ad servers would otherwise have reflected in their offerings to publishers.

### *Evidence*

65. Google's UK market share of DSPs in terms of the value of ads purchased is [50-60]%.
66. In relation to Google Ads, demand for third-party display inventory is overwhelmingly channelled through Google's own sell-side intermediary, SSP AdX, with the value of the impressions won by Google Ads through AdX [several] times that of impressions won through other third-party SSPs.
67. We acknowledge that through the integration of its DSP and SSP Google has the ability to achieve a high level of matching between the user offered by the publisher and the user desired by the advertiser. This is for two reasons. Firstly, Google uses a common identifier for the same user across its DSP and SSP and, secondly, the low level of latency in the communications between its DSP and SSP means that, unlike for rival DSPs, none of Google's own DSP bids would be timed out. Notwithstanding these efficiencies, the evidence suggests the existence of a degree of self-preferencing between Google's DSPs and SSP, but it is difficult to establish how significant in practice that self-preferencing is.
68. AdX does not participate in header bidding. This makes it difficult for publishers to access it in an efficient manner when using non-Google publisher ad servers. Since, as seen above, demand from Google Ads is overwhelmingly channelled through AdX, the result is equivalent to Google Ads discriminating against non-Google publisher ad servers.
69. The evidence therefore suggests that Google has the ability and incentive to discriminate in favour of its own SSP and publisher ad server and may be doing so.

### *Implications for remedy design*

70. As set out in the paragraphs above, we consider that Google has the ability and incentive to favour its own businesses when it operates advertiser-facing functions which have market power. An intervention which separated Google's buy-side from its sell-side functions would therefore address the potential for leveraging of market power discussed in this and previous section. It would also address the risks that Google is able to extend its market power into the more competitive parts of sell-side activities, or to create additional barriers to entry from potential competitors into publisher-facing functions.

### *Conclusion on the case for separation in the open display market*

71. In summary, for the reasons above, **we consider that the DMU should have the power to impose separation of Google's buy-side and sell-side functions. This could address the ability and incentive of Google both to exercise market power in the ad serving function to favour its advertiser-facing intermediaries. The same separation could also address Google's ability to exercise market power in the advertiser-facing function to favour its own publisher-facing intermediaries.**
72. These would be pro-competitive interventions that would represent a stronger form of intervention than the principles within the 'open choices' objective of the code. We discuss in the section below whether this separation could take the form of a pro-competitive intervention in the form of operational separation or divestiture, which could be supported by the code of conduct.

### *Integration of DSP and SSP independent of market power*

73. We noted in our interim report that we had been told that, in addition to the conflicts identified above stemming from Google acting both on the buy and sell sides of open display intermediation, conflicts might also be present when other intermediaries active in the open display market operate both on the buy side and sell side, for example offering both DSP and SSP services to advertisers and to publishers in respect of the same item of advertising inventory. We sought views on whether there was a case for considering a general requirement on all intermediaries active in the open display market to separate their buy-side and sell-side businesses, as is required in some other markets where firms act on behalf of both buyers and sellers.
74. As set out in Appendix M, we consider vertical integration between an SSP and a DSP where neither holds market power to be less problematic. This is because:



- (a) On the one hand, competition between SSPs should significantly reduce SSPs' incentive to discriminate against competing DSPs:
- (i) With the widespread adoption of header bidding, many publishers multi-home with several SSPs, which compete against each other for each single impression. Multiple SSPs have therefore access to the same inventory, giving DSPs many alternative routes to reach the same publisher.
  - (ii) By looking at their own win rates, DSPs can compare the outcome they get through different SSPs and re-direct their bids towards those SSPs where they are more likely to win. Switching between SSPs is relatively easy.

As a result, as long as header bidders are not discriminated against by the publisher ad server (mostly likely owned by Google), an SSP giving a substantial advantage to its own DSP would be likely to see the chances of winning the impression significantly reduced, as DSPs that are discriminated against would migrate to competing SSPs.

- (b) On the other hand, many customers of DSPs (ie advertisers or media agencies) are large and sophisticated, have tools to compare the performance of different DSPs, and face low switching costs. If a DSP has no market power,<sup>15</sup> should it favour its own SSP to the detriment of its own customers, the latter would respond by switching to alternative providers.

75. Based on the analysis above, we do not believe that there is currently a case for separation interventions in all cases of vertical integration of buy-side intermediaries acting for the advertiser and sell-side intermediaries acting for the publisher. Intervention is therefore unlikely to be necessary where the intermediaries do not have market power.

### ***Our assessment of how separation could be applied in adtech markets***

76. In the section above we explain how Google as a digital advertising intermediary acting both for publishers (the sell side) and advertisers (the buy side) for the same item of inventory has both the ability and incentive to discriminate in favour of itself and in Appendix M we describe cases in which it may well be doing so. In the former case Google as a sell-side intermediary would be discriminating against independent buy-side intermediaries (DSPs) and the in the latter case Google as a buy-side intermediary would be

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<sup>15</sup> Market power could derive, for example, from exclusive access to inventory or data.

discriminating against independent sell-side intermediaries (SSPs and publisher ad servers). We concluded that there are potential harms to competition, both immediate (static harms) and over the longer term (dynamic harms).

77. These concerns both result from Google's common ownership of its publisher-facing businesses and its advertiser-facing businesses. Therefore, a remedy that would successfully address the harms arising from one of these behaviours may at the same time successfully address the harms arising from the other of these behaviours. We carry out below a single analysis of potential remedy options and consider their effectiveness in addressing one or both of the harms we have identified above.
78. As set out in Chapter 8, there are various forms of separation, each of which could be applied to achieve the functional splits described above. These can be categorised as:
  - (a) full ownership separation (divestiture);
  - (b) operational separation, which would include management separation and 'firewalls' between different businesses under common ownership; or
  - (c) restrictions directly targeted at conflicts of interest, where intermediary firms are not allowed to act on both sides of a single transaction.
79. The final category described above would be a more limited form of ring-fencing. This is used in markets such as financial services, where there are legal requirements on buy-side and sell-side operations to act independently in any particular transaction. This form of separation could work well where there are strong conflicts of interest, but more limited overall market power. For example, if the decision on serving ads were moved to the browser, all owners of browsers could be subject to a restriction on serving both sides of a single transaction to offset the risk of a conflict of interest arising. However, at present, we do not expect that this remedy could be made effective in any way that is materially distinct from requiring ownership separation of the publisher ad server, as Google has a 90% market share in the publisher ad server. We therefore do not consider this to be a relevant option in this case.
80. The objective of the remedy would be to achieve independence between Google's buy-side and sell-side intermediary functions in terms of their respective decision making, which would remove the ability and incentive of these intermediary functions to favour one another.
81. As described in Appendix U, the code of conduct principles can also be applied to address self-preferencing and discrimination in open display

advertising on a case by case basis. The code could be effective in addressing the potentially problematic behaviours described above, but with no additional formal separation requirement on Google.

82. In this section, we compare the effectiveness of applying the code alone, against the options of implementing a code and an additional pro-competitive intervention of one of the following forms of separation:
- (a) operational separation (eg separation of activities, requirement for independent reporting, and equivalent treatment); and
  - (b) ownership separation.
83. All of these remedies are intended to address the harms identified above: the difference between the remedies is not the objective but the method of implementation. In each case the objective is to achieve sufficient independence between Google's buy-side and sell-side intermediary functions in terms of their respective decision-making that competing DSPs and SSPs / publisher ad servers both a) experience actual equivalent treatment to Google's DSPs and SSPs / publisher ad servers in the here and now, and b) expect equivalent treatment will continue in future, thereby giving such firms the confidence to invest.
84. We have described the code of conduct and the ability of the DMU to address self-preferencing behaviour through the code in Appendix U.
85. The code would be able to address some of the behaviours described above. Through the principles within the 'open choices' objective, the DMU would be able to impose requirements on Google not to prefer its own businesses, and through the principles within the 'trust and transparency' objective, the DMU would be able to require Google to provide evidence that its activities were consistent with these principles.
86. We set out our analysis of the merits of these three options (the code alone versus additional pro-competitive interventions of operational separation or ownership separation) against some relevant criteria.

#### *Apply code of conduct principles*

87. Under this option, the DMU would address the concerns described in this section using the code. Google would need to follow rules as set out in the code in respect of the selling / buying of ads served to UK users. The code would be able to address some of the behaviours described above. Through the principles within the 'open choices' objective, the DMU would be able to impose requirements on Google not to prefer its own businesses, and through

the principles within the 'trust and transparency' objective, the DMU would be able to require Google to provide evidence that its activities were consistent with these principles.

#### *Likely effectiveness*

88. The effectiveness of the intervention will depend on the ability of the DMU to provide sufficiently clear guidance under the code on how Google should adhere to 'no self-preferencing' / 'no undue discrimination' rules for both buy-side and sell-side intermediary functions.
89. On the basis of our analysis in Appendix U, we think the code should address the ability to favour own cross-side intermediary functions where this can be identified in advance and specified in guidance. It will not, however, address the incentive to favour own cross-side intermediary functions. Applying and enforcing a code of conduct would not alter the underlying incentives of Google's management to operate the businesses in a common interest.
90. Common ownership by Google across the buy-side and sell-side intermediary functions might still have an indirect influence on whose interests are prioritised (eg advertisers being prioritised at the expense of publishers) when it comes to developing future products.

#### *Costs*

91. There could be significant set-up costs to Google in developing a capability to demonstrate in practice that its complex adtech algorithms and auction processes result in no undue discrimination between its own cross-side intermediaries on the one hand and independently owned cross-side intermediaries on the other. There would also be some ongoing compliance costs in responding to requests from the DMU when scrutinising the operation of algorithms etc, ie generating the necessary base evidence, preparing reports and liaising with the DMU.
92. The DMU would need to develop the internal capability and reserve some of its resources to scrutinise Google's actual behaviour in adtech markets when required. It is likely that the DMU would need to devote resources to develop specific guidance on how Google would be able to demonstrate compliance with no undue-discrimination rules and update these rules in line with experience and to reflect changes in market conditions over time.
93. If the code is not able to be sufficiently clear about what represents acceptable treatment of Google's own businesses by comparison to third

parties, there may be additional costs and uncertainty as the DMU reviews the compliance of Google with the code.

*Potential costs to efficiency and mitigation measures*

94. Google would not need to change its processes in terms of soliciting and responding to bids and the accompanying matching of user data on the buy-side with user data on the sell-side, but might need to change the terms and conditions on which it compares bids and offers from different intermediaries.

*Risk of ineffectiveness in achieving objective*

95. There is a risk that the complexity of these markets, with significant information asymmetries and complex algorithms supported by AI, may mean that it is difficult to impose and/or robustly monitor the absence of self-preferencing between Google's digital advertising buy-side and sell-side intermediary functions.
96. Notwithstanding the provisions of the code, Google might in practice respond more swiftly to internal needs rather than develop solutions that address both internal and external requirements at the same time in an even-handed manner.

*Pro-competitive intervention: Operational separation*

97. Operational separation – introduced through a pro-competitive intervention - would apply additional constraints on Google over and above the limitations on self-preferencing proposed in the code of conduct. The form of operational separation would be targeted specifically at the behaviours described above. Some examples of additional constraints which would be covered by operational separation are set out in Box ZA.1 below.

### Box ZA.1: Operational separation requirements over and above the code

Under both the code and any operational separation regime Google would be required to actively refrain in its dealings with independent intermediaries from unduly preferring its own competing intermediary functions. A regime of operational separation, however, would bring with it more proactive accompanying measures to help ensure that this requirement was not only being met but also that competing intermediary firms would have confidence that Google did not have the ability (and potentially the incentive) to change its activities in a way which would counteract the objectives of the code.

These proactive accompanying measures might include the following:

- **Management and organisation** – Google could, among other things, be required to ensure that buy-side and sell-side intermediaries had separate management teams with no overlap between the two. Operational separation could include a requirement for the management of the different businesses to operate separate incentive schemes that did not depend on wider corporate group performance. Google might be required to establish ‘firewalls’ to prevent access to privileged information by effectively insulating the function generating the information from other functions who might want to use that information.
- **Equivalence of treatment** – A requirement that internal and external cross-side intermediaries are subject to, amongst other things, exactly the same systems and processes would mean that there would be no independent intermediary specific interfaces into Google adtech systems such as Authorized Buyers. Equivalence of treatment might also entail taking steps to ensure that Google was not be able to gain an advantage against competing intermediaries in relation to the use of Google-specific cross-side common user identifiers or exclusive co-location of buy-side and sell-side servers.
- **Transparency of operational performance** – Google might be required to document in detail in advance how its algorithms and advertising auctions work, with particular emphasis on the descriptions of how non-discriminatory treatment between internal and external cross-side intermediary functions would be being achieved. There might be regularly scheduled scrutiny of these algorithms and auctions against the detailed documentation of how the algorithms and auction processes are intended to work, undertaken either by the regulator or an independent ‘algorithms’ auditor, potentially even in the absence of actual complaints.
- **Transparency of financial performance** – Google might be required to keep accounting records for each separated intermediary function and regularly prepare, have independently audited and publish profit & loss and balance sheet statements for these functions. Such statements would separately analyse the performance of each separated function split between transactions channelled to Google’s cross-side intermediaries and those channelled to independent cross-side intermediaries. Internal transfers would need to be accounted for on the basis of arm’s length charges.

### *Likely effectiveness*

98. If operational separation is imposed effectively, this should mean that, while through continuing ownership across buy-side and sell-side intermediary functions Google retains the incentive to inflict harm, Google's no longer has less direct ability to act on this incentive. Operational separation, if effectively implemented, should result in the separate buy- and sell-side management teams operating under different, and specifically tailored, incentive schemes designed to minimise the likelihood of these teams acting in the interests of Google as a whole.
99. As a result of operational separation, there should be enhanced visibility that in-house and external cross-side intermediaries are being treated in an equivalent manner.
100. As adtech markets continue to evolve, the form of Google's self-preferencing behaviour might also evolve. Under operational separation the DMU would be in a position to flexibly adapt the regime to address any new problematic behaviour that arises, thereby enabling the regime to remain relevant over the longer term.

### *Likely effects*

101. Operational separation should reduce the risk of either the buy-side or sell-side intermediary functions designing their systems and products in a way which takes account of what is in the interests of Google as a whole when developing future services.
102. This may provide additional incentives both to Google and to third parties in developing new products, where Google might currently have the incentive not to interoperate with those products. The strength of the effects on dynamic competition by other digital advertising firms will depend on the confidence that Google's competitors would have in the effectiveness of operational separation, rather than ownership separation, in achieving the objective of Google's management teams acting independently.

### *Costs*

103. In addition to the implementation costs of complying with the code (as set out above), further costs would also be incurred to meet the additional requirements imposed by operational separation such as the ability to trade with internal and external cross-side intermediaries in exactly the same way.

104. There would need to be a process of defining and documenting the lines of business which are subject to operational separation. The form of separation necessary to achieve the objectives might be different to how Google currently operates its business, which could result in additional costs. The DMU would be able to consider how Google's current business operates in identifying the most effective approach to operational separation which could achieve the greatest benefits while mitigating the amount of additional costs.
105. Some activities that are currently combined might need to be sourced separately, incurring additional costs. We, however, understand that Google already operates its buy- and sell-side intermediary functions under a significant degree of separation.
106. Monitoring costs to the DMU would likely be greatest under operational separation. By comparison to the code, the DMU would need to monitor the additional obligations required by operational separation.
107. More resources would also be needed to develop and update guidance as to how Google would demonstrate adherence to the additional requirements of operational separation over and above those needed to demonstrate compliance with the code. For example, a requirement to treat third parties and Google's own businesses equally may be difficult to implement and monitor in practice.
108. As mentioned above, the form that self-preferencing behaviour might take may change as adtech markets involve. Therefore, the DMU would also need to devote resources to actively reviewing whether the monitoring it was undertaking remained appropriate to detecting all likely forms of self-preferencing behaviour and, if not, take appropriate steps.

*Potential costs to efficiency and mitigation measures*

109. Google currently develops and maintains separate software systems for advertiser customers on the one hand and publisher customers on the other. Its buy and sell side operations are already materially operationally separate. Our current understanding is, therefore, that there are limited direct costs which are common between the buy-side and sell-side.
110. There are some operational efficiencies that would need to be considered in any assessment of the benefits and costs associated with operational separation.
  - (a) Firstly, Google deploys an internal common user identifier to improve its ability to match user data from the buy-side to user data from the sell-



side. The adoption of a pan-industry common user id would mitigate the loss of this Google-specific benefit.

(b) Secondly, Google has a common taxonomy for data fields and seamless integration between the two sides. The adoption of pan-industry taxonomy and integration standards would mitigate the loss of this Google-specific benefit.

(c) Thirdly, Google might currently derive benefits from having its buy-side and the sell-side servers physically located near each other, meaning that bid submissions do not risk being timed out when responding to bid requests. Operational separation could require more comparable treatment to third parties' servers.

#### *Risk of ineffectiveness in achieving objective*

111. It should be possible to design and implement measures as discussed above, which would have to be applied for UK inventory. The risk of ineffectiveness would be mitigated if Google imposed sufficiently robust internal firewalls and management independence.

112. As with relying on the code, there remains a risk that the complexity of these markets, with significant information asymmetries and complex algorithms supported by AI, may mean that it is not practicable to impose and/or robustly monitor the absence of self-preferencing between Google's digital advertising buy-side and sell-side intermediary functions.

#### *Pro-competitive intervention: Ownership separation*

113. Under this pro-competitive intervention, Google would not be permitted to own both an advertiser-facing advisory function and also a publisher ad serving function. To comply with this requirement Google would be required to divest to a third-party either its buy-side or sell-side intermediary functions.

#### *Likely effectiveness*

114. By virtue of complete independence of buy-side from sell-side intermediary functions, Google would neither have the *incentive* nor the *ability* to inflict the static and dynamic harms to the interests of either publishers or advertisers through the self-preferencing behaviours identified above.

115. With complete independence both the buy-side and the sell-side intermediary functions would be fully incentivised to innovate in the interests of only advertisers and publishers respectively. This should also provide the

strongest incentives to competitors to develop new product and enter and expand both publisher and advertiser-facing businesses.

116. There could be an adverse effect on efficiency where there are benefits for the open display advertising ecosystem of Google's incentives to design new products which benefit its vertically integrated business. Where it would be in the common interest of both advertisers and publishers for a development to be invested in (eg an operational efficiency) but the resulting benefits are not expected to be sufficiently large for the independent buy-side or independent sell-side intermediary to invest in the development on a standalone basis, then there is a risk that an overall beneficial development might not go ahead.

### *Costs*

117. In addition to the implementation costs envisaged under operational separation, there would be further costs to Google such as the cost of organising the sale / flotation of a new business containing either the buy-side or sell-side intermediary functions.
118. There would in principle be lower costs of monitoring compliance in relation to the self-preferencing identified as the primary case for separation. However, Google would retain market power on one side of the market and some other forms of monitoring would be likely to still be required to ensure that the behaviours do not re-emerge.
119. The DMU would also need to monitor how the market changes over time, and whether or not the ownership separation remains relevant and effective. It is likely that the Code would still need to be applied to Google's publisher or advertiser-facing businesses, if it disposed of one but retained the other.

### *Potential costs to efficiency and mitigation measures*

120. Ownership separation would also result in any operational efficiency losses which would occur under operational separation. There would similarly be some scope for mitigating measures to be taken.
121. For example, Google currently has single teams (eg product development) that provide support to a number of different internal business functions. Whilst members of such support teams would not at the same time be supporting both the buy-side and the sell-side functions, there might be some loss of benefits from operating support teams at scale within a single corporate group.

### *Risk of ineffectiveness in achieving objective*

122. The greatest risk of this intervention would be that ownership separation is justified based on one market structure, and that the market changes while ownership separation is being implemented. Google may have incentives to reduce the importance of the business being separated. This could mean that the ownership separation does not address the actual competition problems by the time it is implemented.

### **Conclusion on separation interventions**

123. Our analysis above indicates that there are potential remedies that could be effective in addressing the harms described above which would result from Google's:
- sell-side intermediary, which both has market power and exercises the 'final say' in determining the allocation of inventory to advertisers, discriminating in favour of its own buy-side intermediary; and
  - buy-side intermediary with market power discriminating in favour of own sell-side intermediaries.
124. The code of conduct we have described in Chapters 7 and 8 and Appendix U is designed to address the ability of Google to exercise market power. This would include the forms of self-preferencing described above. We recognise that, at least initially, the code of conduct may be the best way to seek to address the behaviours that we have identified in this appendix and Appendix M. However, the DMU should pursue harsher separation remedies if the code is in danger of being insufficient.
125. As we discussed above, separation remedies could bring additional benefits, over and above those which the code of conduct could achieve. Separation would seek to address Google's incentives to favour its own cross-side intermediary functions and would be expected to change how these functions within Google would respond to the development of new technologies or services by their competitors. We would expect that effective separation would therefore also promote entry and expansion by actual or potential competitors in both publisher-facing and advertiser-facing intermediary markets. This should bring benefits to users of Google's services, including advertisers and publishers, and therefore ultimately can be expected to benefit consumers.
126. Our analysis also indicates that there would be costs of implementing operational separation and there might be some disruption to users. If the

DMU were to find, potentially following co-operation from Google, that the code of conduct and associated guidance were sufficient to address the concerns raised by Google's intermediary competitors, then many of the potential benefits could also be achieved without incurring the additional costs of separation. This would be most likely to be the case if, through either voluntary commitments or through the trust and transparency requirements of the code, Google were to implement some of the separation and reporting proposed above within the option of operational separation.

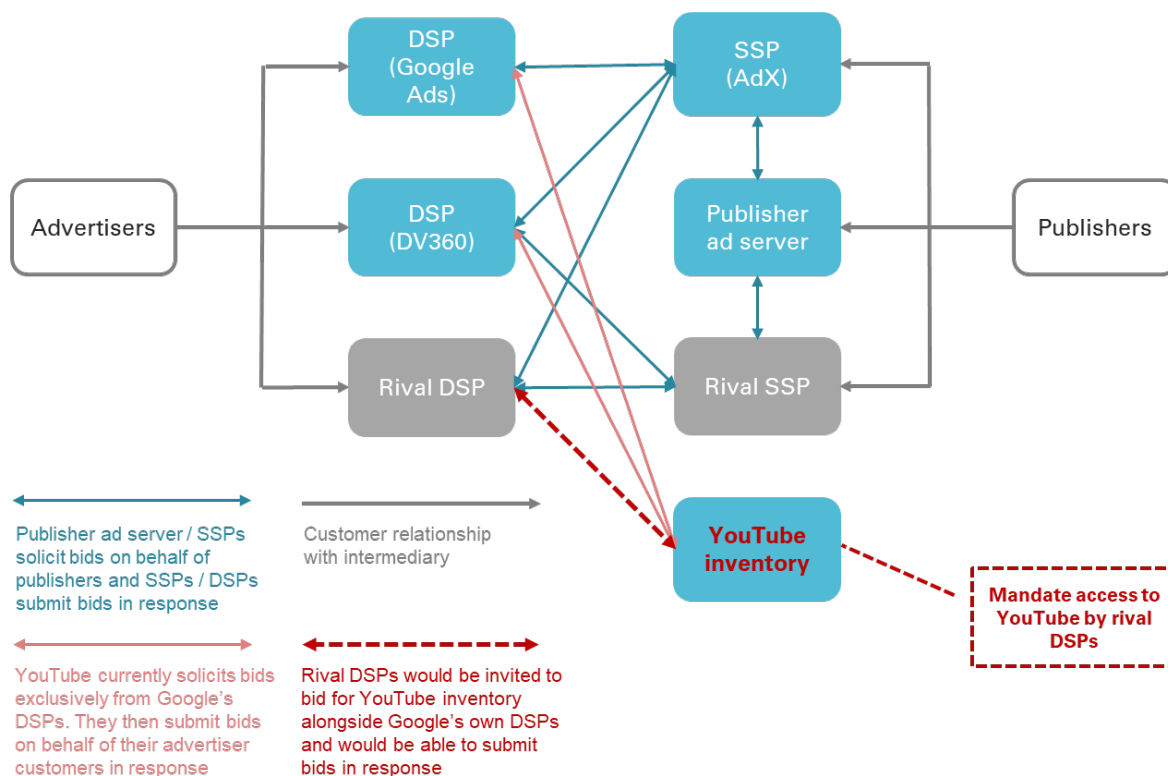
127. Ownership separation would be the most effective in eliminating the incentive for self-preferencing behaviour. However, as indicated in the assessment, it is feasible that many of the benefits from ownership separation could also be achieved by operational separation. Operational separation could be more flexible and could be adapted more readily to changes in the market, whereas ownership separation is best suited for a 'one-off' intervention that may increase costs in the short-term but will deliver long-term structural benefits.
128. There are important trade-offs between these options, and in any decision to implement separation in addition to the principles under the code. As the code is implemented, further work will be needed to come to a final assessment of whether these additional separation measures are necessary. We therefore recommend that the DMU should have the ability to assess the case for separation in open display markets, and the power to implement separation where it finds that the benefits outweigh the costs. We expect that this case would be most likely to be made where the DMU is in practice unable to effectively monitor and control Google's behaviour through the kind of measures proposed to be included in the code of conduct.

## **Access to YouTube inventory**

### ***Potential intervention to mandate access to YouTube inventory***

129. In our interim report we set out a potential access intervention regarding Google's YouTube inventory. This option is illustrated by Figure ZA.3 below.

**Figure ZA.3: Potential YouTube access remedy for intermediation in the open display market**



Source: CMA analysis.

130. As we explained in our interim report, stakeholders had told us that Google is able to exploit its market power in the provision of YouTube inventory to gain an advantage in open display advertising markets. Currently, if an advertiser wants to include YouTube advertising within its campaign, then it would have to use Google's own DSPs to access it. Given advertisers' preference for using a single DSP for any one campaign, that might lead to the situation where the same (Google) DSP was used more broadly to reach both YouTube and non-YouTube audiences.
131. A possible intervention which could address this concern would be to open up YouTube inventory for sale by third parties. The purpose of the intervention would be to improve competition between intermediaries, most notably rival DSPs, in their being able to offer a comprehensive campaign service to advertisers. We had received several calls for this intervention.
132. Under this possible intervention, independent DSPs would be given the opportunity to purchase YouTube inventory on behalf of their advertisers (or their media agencies) via the specific interface that Google developed for YouTube. Google's own DSPs (Google Ads and DV360) when competing to be the advertiser's DSP for an individual campaign would therefore lose their exclusivity advantage in this respect.

133. Under this intervention, Google would continue to run its YouTube auction. Instead of simply aggregating demand from DV360 and Google Ads, Google's two DSPs, Google would now include any demand from advertisers who had chosen to place their ad spend, not with DV360, but with a competing DSP. To ensure that this form of intervention would be effective, there might need to be a mechanism to help ensure that Google would treat the different sources of demand on a consistent basis.
134. We explained in our interim report the potential competition benefits of such an intervention, while also highlighting a range of practical challenges and potential costs and risks of implementing it. We sought views from stakeholders on this potential intervention.

### ***Stakeholders' views on access to YouTube inventory***

135. Several of the respondents who provided detailed comments supported this proposal. Google was the exception to this view.
136. Google told us that its current approach to bar all third-party access to YouTube was justified by privacy law, commercial necessity and reputational risk. Restricting access to both to its own targeting data and inventory (such as YouTube inventory) was the best way to:
- prevent user information from being leaked to potentially malicious actors: third-party DSPs with access to YouTube inventory could build profiles of users based on their viewing history, which would be a data protection risk; and
  - ensure that the ads appearing on its pages were of a consistently high quality, as widespread third-party ad serving on our properties could increase latency and make it harder for it to scan for 'bad' ads.
137. Google noted the lively competition between different DSPs and ad networks, noting that some of its rivals had important advantages over Google's DV360 in terms of their technology and service as well as access to inventory and data. Advertisers, it submitted, highly regarded the services of other large DSPs such as The Trade Desk, Xandr, Amazon and Criteo.<sup>16</sup>
138. Google emphasised that, on YouTube, it now offers mainly TrueView 'skippable' ads. TrueView ads, Google explained, did not lend themselves to being offered to external third parties because the auction dynamics it had developed for it took into account advertisers' campaign goals and user

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<sup>16</sup> [Google's response to our consultation on the interim report.](#)

experience factors such as types of ads recently viewed and likelihood to watch a video to the end. As a result, its advertiser customers, whether via Google Ads, DV360 or direct reservations, did not purchase YouTube inventory on the basis of real-time bidding (RTB). Third-party real-time-bidding would inherently be limited by Google's obligations under EU data protection law, preventing the sharing of impression-level user-identifying YouTube data signals with third-party buyers. In order to support RTB functionality, Google explained, it would need to develop a much deeper integration between AdX and YouTube's native ad serving systems, a process that would involve significant complexity. It added that DSPs would themselves have to make a substantial investment to integrate with Google's systems.

139. The Guardian Media Group told us that it believed that Google was on a path to overcoming privacy concerns in relation to selling publisher display inventory through Google Ad Manager. YouTube, it added, was ultimately a publisher, and could ask users for consent to send data to third parties in order to enable the sale of YouTube inventory through other DSPs.<sup>17</sup>
140. Oracle told us that opening up YouTube inventory to independent DSPs would offer a straightforward solution to improve competition between DSPs and should not raise privacy concerns. It was important that we devised a mechanism to ensure that Google treated its and non-Google demand on the same basis and that such mechanism should be subject to review by an independent third party.<sup>18</sup>
141. Beeswax, a DSP, told us that this remedy was for it the most promising remedy proposal to level the playing field with Google. It was, however, important to mandate access via the standard open RTB interface used across the rest of the industry, rather than the proprietary interface used by DV360. Beeswax added that in open exchange markets 'skippable' ads were extremely common and therefore doubted Google's argument regarding privacy. It also noted that the markets for video ads had greatly expanded since Google stopped independent DSPs from access YouTube inventory in 2016. If this proposal proved infeasible, then the alternative would be to prevent access to this inventory from DV360.<sup>19</sup>
142. DMG Media told us enabling non-Google DSPs to access YouTube supply would likely generate significant value. The majority of demand across DMG Media's own video supply was being monetised by non-TrueView campaigns, indicating that there was a significant demand in market for standard instream

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<sup>17</sup> [The Guardian Media Group's response to our consultation on the interim report.](#)

<sup>18</sup> [Oracle's response to our consultation on the interim report.](#)

<sup>19</sup> [Beeswax's response to our consultation on the interim report.](#)

video ads. In any case, a 'skip' button would be a fairly simple feature to add into the creative.

143. DMG Media, however, understood that third party pixel tracking across YouTube had been disallowed in 2019. Ad and user tracking across YouTube now had to occur via Google's Ads Data Hub which in turn fed data to DV360 and Google Ads. The ability to track users across YouTube was now therefore limited to the Google ecosystem via signed-in users and first-party Google cookies. In opening up YouTube supply to other DSPs, DMG Media added, a cookie syncing process would need to take place in order for the DSP to target using its advertisers' data sets.<sup>20</sup>
144. The Telegraph Media Group submitted that, in order to protect personal information, a data sharing / transparency framework supported by a code of conduct could be implemented. There was also a case for reversing the onus of proof, requiring SMS firms such as Google to demonstrate to the satisfaction of the regulator that it was fairly treating non-Google demand.
145. A publisher noted that were the proposal to be restricted to access to non-TrueView inventory, Google would essentially be keeping the more desirable self-marked inventory to itself while offering up the less desirable inventory to third parties.
146. The Competition Law Forum told us that the best way to avoid advertisers being forced to choose Google as its intermediary if they wanted to place their own ads on YouTube was to either structurally or operationally separate YouTube. Failing that a regulatory regime could be created to force Google into offering its services to all intermediaries that request them without discrimination.<sup>21</sup>

### ***Assessment of the case for an access remedy in relation to YouTube inventory***

147. Since the interim report, we have refined our analysis of the open display market in response to the feedback we received and our own further investigation. In this section we set out our latest analysis regarding the role of Google's YouTube inventory in potentially harming competition between DSPs.
148. We firstly set out the potentially problematic behaviour, ie the transmission mechanism that generates the harm that would therefore need to be addressed by any remedy. We then set out the harm that would arise and

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<sup>20</sup> [DMG Media's response to our consultation on the interim report.](#)

<sup>21</sup> [Competition Law Forum's response to our consultation on the interim report.](#)



finally the evidence we have for that harm existing. We draw on the analysis we set out in Chapters 3 and 5 and in Appendix M.

### *Potentially problematic behaviour*

149. Of all the social media platforms in the UK, YouTube has the largest number of active users and is continuing to grow, reaching over 90% of people online in the UK [every month], with good coverage across all age segments (see Appendix C). In December 2019, users spent [90-100] billion minutes per month on YouTube, compared with [over 50] billion minutes on Facebook. Most consumers use YouTube for video streaming, with 76% of them stating that its use for watching videos was either fairly important (30%) or very important (46%) (see Chapter 3). The most common reasons consumers in the UK access YouTube are for entertainment and to view 'how-to' videos on the platform. YouTube provides access to a wider range of video content than other social media firms that rely more on user-generated content.
150. As a result of all of the above, access to YouTube is very important to larger advertisers seeking to engage a DSP to run a digital campaign on their behalf that has the potential to reach a targeted UK audience with video ads. Video is the largest display advertising format (around 40%).
151. In the context of this evidence about the importance of video advertising for competition between DSPs, and the importance of YouTube within video advertising, Google's decision to restrict access to its YouTube inventory to advertisers wanting to run a campaign across multiple media to its standalone DSP offering for advertisers, DV360, is likely to have an adverse effect on its competitors. In other words, DV360 has exclusive access to YouTube inventory, giving it a competitive advantage over other DSPs.

### *Harm*

152. Using a single DSP gives advertisers the ability to manage frequency across the entire campaign, making sure that the same ad is not served too frequently to the same user. Therefore, if an advertiser wants to include YouTube in a campaign, it has a strong incentive to use Google's DSP for the entire campaign.
153. Therefore, the harm arising from lack of access to YouTube would be to competition across DSPs offering campaign management services to advertisers wanting to run a multimedia campaign.

## *Evidence*

154. The value of advertising on Google's YouTube platform corresponds approximately to [15-30]% of the value of open display advertising in the UK; in video advertising, the value on YouTube is [80-110]% of that of the open market (see Appendix C).<sup>22</sup>
155. Several DSPs submitted that exclusive access to YouTube provided a very significant advantage to Google's DSPs and created a barrier to the growth of competitors. One intermediary explained that access to YouTube is important because all major brands and agencies spend a significant amount of the media budgets there and thus have to use DV360 to access it. That gave DV360 a large advantage on third-party inventory as well because it is the only DSP able to measure and frequency cap ad impressions across all media buys including YouTube. Another DSP submitted that access to unique or otherwise inaccessible walled-garden inventory was even more important than scale for a DSP; DSPs that had exclusive relationships with supply sources, or restrict access to supply sources for other DSPs, have a far greater advantage.
156. Further evidence is provided by the former CEO of AppNexus (now Xandr) in a testimony to the US Senate on 21 May 2019. Google's decision to no longer allow third-party advertising technology on YouTube, he explained, was a response to the threat posed by AppNexus. This proved to be 'devastating move for AppNexus and other independent ad technology companies', as 'YouTube was (and is) the largest ad-supported video publisher'.
157. The impact of Google's approach is confirmed by submissions we received from advertisers in relation to DV360. Every respondent to our information request used DV360, although in many cases they also used other DSPs, depending on the campaign. All those advertisers who had decided to use a single DSP across all their campaigns chose DV360. Based on advertisers' submissions, exclusive access to YouTube inventory was one of the main reasons for choosing DV360.
158. The evidence therefore suggests that Google, as the holder of YouTube inventory, has the ability and incentive to discriminate in favour of its own DSP by denying access to this inventory to rival DSPs.

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<sup>22</sup> Ranges are derived from the analysis presented in Appendix C.

### ***Other relevant considerations***

159. As summarised in the discussion above, our report has found evidence that Google DSPs' exclusive access to YouTube's inventory gives it an advantage in open display advertising markets.
160. We proposed in our interim report that this could be addressed through rival DSPs being given access to YouTube inventory, as illustrated in Figure ZA.3. above. All respondents to our interim report who expressed a view on this measure, other than Google, supported this measure, as set out in the stakeholder views above, including the form of access that we proposed. We remain of the view that access to YouTube would allow rival DSPs to provide a more competitive offering to advertisers wanting to run a display advertising campaign including video advertising.
161. As explained to us by Google, the current generation of YouTube ads, 'skippable' TrueView ads, unlike most other display advertising, are now not sold on the basis of real time bidding. This development has been enacted by Google to reflect resource prioritisation. Google told us that third-party real-time-bidding would inherently be limited by Google's obligations under EU data protection law, preventing the sharing of impression-level user-identifying YouTube data signals with third-party buyers. Supporting this functionality would also involve significant complexity in that auction dynamics not only consider the level of the advertiser bid but also optimise for advertiser campaign goals and consider user experience factors such as types of ads recently viewed and likelihood to watch a video to the end.
162. Google has said that implementing our proposed remedy would require additional investment, possibly substantial, both by Google and any DSP which wanted to integrate with YouTube on this basis or the standard RTB basis. We agree that the cost of implementation, both by Google and other DSPs, would be part of the assessment of whether Google should be required to offer access to the inventory. Google would need to provide further evidence of these costs so that they could be balanced against the potential benefits for competition by the DMU, if it were to take this remedy forward. Given the importance of YouTube in video advertising markets, our expectation is that the benefits of a fully effective remedy could be significant.
163. The DMU would also have to believe that the costs for DSPs would not be so high that the remedy would be ineffective. As indicated in this section, other DSPs have indicated that they would intend to use the proposed access if it were offered and did not raise concerns about cost effectiveness. If this

remedy were to be taken forward, there would also be a need for consideration of how implementation costs would be recovered.<sup>23</sup>

164. Google has also told us that data protection law would prevent it from sharing the necessary impression-level user-identifying in order to offer access on the basis of real-time bidding. We firstly note that this remedy would not necessarily need to be offered on the basis of real-time bidding, rather on the basis on which Google currently provides YouTube inventory to its own advertiser customers. We note from The Guardian Media Group's response above that Google appears to have found a solution to gaining suitable consent on behalf of third parties where Google acts for publishers.
165. We recognise that there are likely to be some complications in the process of ensuring that any access remedy was consistent with data protection legislation. In the context of the range of digital advertising products currently used by DSPs, and that under an access remedy the data is only being used for the same purpose as under Google's advertising products, we expect it there may be ways in which the access could be implemented. We expect that this would need further work by the DMU, working with Google and the stakeholders that have indicated that they would use an access product that became available.

### ***Conclusion on mandating access to YouTube inventory***

166. In summary, we have found that there are likely to be benefits, potentially significant, from third parties having access to Google's unique inventory, particularly YouTube, as the exclusive access to this inventory presents an opportunity to further strengthen Google's market power. We also recognise that there are challenges in implementing such access remedies, although our current expectation is that these challenges should not be insurmountable.
167. **We therefore recommend that the DMU should have powers to oblige DSPs with market power which operate in the open display market to supply their own inventory on reasonable terms to third-party DSPs.**
168. These powers would be applied where the benefits of opening access to the inventory are sufficiently large to outweigh any costs.

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<sup>23</sup> For example, Ofcom relies on the *Six Principles of Cost Recovery* it has developed to help it systematically address the various relevant policy and practical considerations of recovering the costs of implementing remedies it has imposed in a pro-competitive yet cost-minimising way. See, for example, paragraph 6.11 in this [Ofcom 2017 decision](#).