RÉPUBLIQUE FRANÇAISE

Autorité de la concurrence

Only the French version is authentic and it prevails in the event of its differing from the translated version.

Opinion no. 18-A-03 of 6 March 2018 on data processing in the online advertising sector

The *Autorité de la concurrence* (plenary hearing);

Considering Decision 16-SOA-02 of 23 May 2016 pertaining to an opinion issued at its own initiative on data processing in the online advertising sector, registered under number 16/0044 A;

Considering Book IV of the French Commercial Code;

Considering the public consultation document published by the *Autorité* on 11 July 2017;

Considering the contributions received up to 15 September 2017;

Considering the other evidence of the case;

The rapporteur, the Deputy General Rapporteur and the representative of the Minister of the Economy heard during the *Autorité de la concurrence* hearings of 17 October and 30 November 2017;

Representatives from the French Union of Advertisers (UDA – *Union des annonceurs*), the French Union of Online Ad Networks (*Syndicat des Régies Internet*), Facebook Inc., Google Inc., AppNexus, Gravity, Le Monde, and Le Figaro, heard during the hearing of 17 October 2017, based on the provisions of Article L. 463-7 of the French Commercial Code (*Code de commerce*);

Adopts the following opinion:

Online advertising: Development of an ecosystem with strong growth and led by two stakeholders

Data are currently everywhere. The development of the Internet, the enthusiasm surrounding social networks and online commerce, and increasing bandwidth allow circulation of vast quantities of data at nearly instantaneous speeds. In this context, the *Autorité de la concurrence* has examined the online advertising sector, the growth of which is mainly due to commercial use of data. This type of advertising is playing an increasingly important role in financing applications and the so-called "free" Web[1].

The first observation refers to the increasing value that can be generated from these data. The vast quantity of data available on the Internet, and particularly so-called "personal" data, have been described as the "new black gold" of the 21st century[2]. These data are the ingredient that makes it possible to provide new services to users and customers, such that companies in all economic sectors are developing ambitious strategies to control access to these data and leverage their value[3]. In particular, two stakeholders have achieved exceptional success based on their capabilities in this area: Google and Facebook. By contrast, the conditions in which these personal data are collected and used, and the appropriate level of protection of private life, are increasingly debated: are Internet users sufficiently informed of the conditions in which their personal data are collected and used by companies, is their consent obtained transparently and fairly, and should the rules of public order enforced by States with regard to companies be strengthened? Some call for profound changes in current rules, as would result from, for example, affirming the principle by which the Internet user owns their personal data and grants use of this data to platforms (or, on the contrary, retains their private data and pays for the service made possible by these data)[4]. Europe has chosen to strengthen the rules and to increase harmonisation, with the General Regulation on Data Protection and the so-called "e-privacy" draft regulation (relating to private life on the Internet). Taking note of this decision to strengthen the rules for the protection of private life, the *Autorité* stressed the importance to ensure that their implementation does not distort competition by favouring some stakeholders to the detriment of others.

*

[1]In 2016, in its "Competition Law and Data" study, a joint project with the German competition authority, the *Autorité* highlighted the economic and competition issues related to the use of vast data sets referred to as "Big Data".

[2]See, for example, *The world's most valuable resource - Data and the new rules of competition - Fuel of the future* (The Economist, 6 May 2017).

[3]This article also notes: "Data are to this century what oil was to the last one: a driver of growth and change".

[4]See the manifesto *Mes data sont à moi. Pour une patrimonalité des données personnelles* (My data is mine. In favour of the patrimonality of personal data) published by the think tank GenerationLibre (president, Gaspard Koenig).

What observations can be drawn from this study?

A new world based on complex technologies

Within a a few years, an entire online advertising ecosystem has taken shape, with a range of new activities, technologies, and stakeholders, centred around so-called "programmatic" advertising and, more broadly, various forms of advertising targeting the Internet user in real time. New business functions have emerged; for example, for publishers, roles that entail developing offers that are consistent across different types of media or audience; and for advertisers, continually optimising the transmission of their advertising to Internet users who may be interested in their products with the goal of turning this interest into a purchase. As a result, there are now platforms centred on the online advertising space offered by publishers ("supply-side platforms" or SSP) and "demand-side platforms" or DSP which are centred on advertiser demand.

New techniques are also developing, such as those that support real time bidding and those that enable audience measurements for this particular type of advertising. The interface between advertiser platforms and platforms that group advertising "inventories" (i.e. all of the space available on the various pages) is supported by sophisticated bidding processes and involves advanced audience optimisation and measurement tools.

These processes bring together numerous stakeholders to work on other processes that are based on advanced and very "sequenced" technological services. As a result, the market can seem opaque, due in part to the very innovative nature of the processes and the multiple stakeholders. The more complex the technologies are, the more the capacity to best understand and use them becomes a competitive advantage.

Strong growth mainly captured by a few stakeholders

The online advertising sector is characterised by strong growth in global revenue: advertising spending used to benefit "traditional" media (press, television, cinema, etc.) is now shifting to online advertising channels, especially social networks. In addition to this general trend, there appears to be an internal evolution between the now well-established category of Internet search-related advertising, and the higher growth category called "display advertising" which covers all forms of advertising displayed on screens and not specifically linked to searches. Display advertising can take various forms: simple or animated banners, videos, so-called "native ads" which are highly integrated into the web page, etc.

The market's development is not homogeneous: the market segment with the most growth is advertising displayed on social networks. Finally, one of the study's clearest findings is the considerable economic weight of two stakeholders, both in absolute volume and growth share: Google and Facebook, which currently generate most of their revenue through the sale of advertising services (90%).

*

Market landscape: an overviewof various stakeholders.

Advertising is the main source of revenue for thousands of Internet publishers in France and worlwide constituting **a key element for financing the media** (press and audiovisual). The value of the Internet advertising market in France was estimated **at more than €4 billion in 2017.** The Internet, in France and globally, is **now the leading advertising medium**, ahead of television, with steady growth supported by the generalisation of programmatic technologies, the development of video advertising, and the high usage rate of social networks, search engines, and video sharing platforms by the French population. In the last ten years, this sector underwent rapid growth, which accelerated in 2017, with **a growth rate in France of 12% (source: SRI). It is currently characterised by an abundance of new stakeholders whose services are, to varying degrees, based on massive mining of data sources concerning individuals**, made possible by new information technology capabilities. The fundamental driver of the radical changes in this sector is the efficiency of targeting by these new forms of advertising which, according to their promoters, should enable greater efficiency than for other types of advertising in terms of return on investment.

While this sector is developing in the context of a strong technological dynamic, **its competitive equilibrium is fragile.** Admittedly many intermediation and data mining service suppliers have entered the market, capturing part of the value from the sale of publisher advertising space and the mining of data on individuals (Smart Adserver, Weborama, Teads, etc.). However, whether they supply services to advertisers or publishers, they are confronted with competition from global stakeholders, with Google and Facebook leading the pack.

Google and Facebook, the two giants of the Internet world, occupy strategic positions in this new market by using their considerable assets: network effects, capacity to produce technological innovations, considerable audience numbers, and enormous quantities of inventories and data. Google can therefore draw on the assets of its general search engine, platforms such as YouTube, and its presence at all levels of the online advertising chain, especially technical intermediation. Facebook, for its part, can take advantage of its capacity to use the data of its subscribers and sell the inventories of its social network and of Instagram, which are particularly sought after. Facebook is the most used website in France after Google Search. **Facebook and Google appear to be the two leaders** of the online advertising sector. They mainly provide free services to Internet users and **generate most of**

their revenue through the sale of their advertising services to publishers and advertisers. Their services are based on the mining of colossal volumes of information on individuals, publishers, and advertisers. These data are then enhanced, tapped into and sold indirectly through their integration in various advertising services, to target audience segments, to address ads, and to provide information on the deployment of campaigns which can be used to improve performance.

New stakeholders are also emerging whose development results directly from this sector and is based on the optimisation of innovative technological processes. In this way, a company like Criteo has built its growth on processes making it possible to "target" an Internet user and address ads to him that are specifically linked to his navigation and buying intention data. Over the last few years, Weborama, a company supplying ad server services, has adapted its economic model and today runs one of the data management platforms established in France, which helps its customers in the design of new offers or the identification of new markets. These companies, which originated as start-ups in many cases, were developed with, at their core, technologies and business plans specific to online advertising and "programmatic" advertising in particular.

Finally, "traditional" stakeholders - such as publishers and advertising agencies - still participate in this market by offering their advertising space or buying space (as they did with traditional media), but **under different conditions.** They have been forced to adapt, very rapidly, to avoid being supplanted by the new stakeholders from the Internet world. This is the trend observed, with new alliances between publishers and those offering space, such as Skyline or Gravity. **The situation faced by publishers is characterised by a very high number of stakeholders, whose size, economic model, and degree of dependence on advertising vary significantly.** Some of them are in a delicate situation and **their advertising revenue is decreasing, despite the sector's steady growth.** Those that cannot offer targeted advertising (for example, linear TV channels, at this time) may be penalised, whereas the development of the ecosystem has led certain intermediaries to capture a very significant part of the value.

To meet these challenges, the most powerful publishers, such as Amazon, are able to get vertically integrated, enabling them to sell their inventories without depending on technical intermediaries. Others have decided to form alliances, such as Gravity, which results from a digital publisher partnership for marketing audience segments and buying advertising space launched by Lagardère, *Les Echos*, SFR, and Solocal and which is now composed of important stakeholders in the digital economy.

Overall, at both the global level and in France, the majority of revenue in the sector is generated by Google and Facebook. This situation has resulted from the cumulation of several competitive advantages.

Globally as well as in France, the services Google and Facebook have made available to Internet users are the most used and have the highest audience numbers and the greatest volumes of ad impressions. These services generate very large, diversified volumes of data that are frequently updated; mining these data is the core of the advertising targeting service. **These services have the benefit of strong network effects, which result from the nature of the services provided as well as the leadership positions occupied by these companies on their respective markets; these services are also interdependent.** Furthermore, Internet users themselves can contribute to enriching services such as YouTube by putting many types of audiovisual and musical content online. The very high audience numbers for the proprietary services of Google and Facebook enable them to generate advertising revenue that is much higher than all of their competitors combined. In addition, Google and, to a lesser degree, Facebook act as intermediaries to sell the advertising inventories of many third-party publishers of websites and mobile applications. This gives them a specific position that offers them many advantages.

The vertical integration model of Google and Facebook, which is based on their presence on both publishing and technical intermediation, appears to constitute a significant competitive advantage. While other stakeholders are also present on these two activities, Google has developed an unrivalled presence on all of the intermediation business areas by supplying intermediation services to both advertisers and publishers. The advertising space purchasing tools of Google and Facebook also constitute the only platforms for implementing advertising campaigns on their respective proprietary websites, which have the highest audience numbers in France.

Google and Facebook have data mining capabilities, which give them powerful competitive advantages for the supply of advertising services. They collect data from their proprietary services but also from third-party websites and applications which use their advertising services and their data collection and analysis tools. While Google and Facebook supply Internet users with several tools that limit data collection and manage the display of ads, they nonetheless have access to unequalled volumes of data, due to the large number of users of their services, but also because of the particular nature of their services. Social networks, search engines, video-sharing platforms, and mapping services are the services for which Internet users as well as third-party publishers supply high volumes of varied data. Furthermore, **Google and Facebook have developed "logged" environments where users log in for access to services. These environments are sources of a high volume of sociodemographic and behavioural data.** In addition, the conditions according to which Google and Facebook collect data have already been challenged several times by public authorities regarding the requirement to obtain user consent. For example in France, the French data protection authority (*Commission Nationale de l'Informatique et des Libertés, CNIL*) sanctioned Google in 2014 and Facebook in 2017 for this type of violation. Recently,

in Germany and Belgium, Facebook was found guilty due to the opacity of its conditions of use, which were considered to violate the laws of these countries on data protection, and in Germany again, the Bundeskartellamt issued a statement of objections regarding the conditions in which Facebook collects data from its users on third-party sites.

The data collected by Google and Facebook from their proprietary services or third-party services are used to offer various targeting options and can be combined: contextual targeting, subject targeting, location targeting, interest targeting, retargeting, geolinguistic targeting, sociodemographic targeting, and time targeting. These different forms of targeting are based on the collection and analysis of various categories of data: data on individuals, data on products, data on sites and applications, and data on advertising campaigns (e.g. origin of conversions[5])…

In terms of ad targeting, Google and Facebook have competitive advantages which are linked to the volume and variety of data, but also and indissociably, to the size of the advertising inventories made available to advertisers, and to their audience. The combined access to data and inventories indeed offer advertisers the possibility to reach broad audience segments with their advertising - due to the large number of users of the services - and to reach clearly defined audience segments - because of the numerous targeting options and minable data. The *Autorité* also finds that, in general, the **quality of the data** that can be used for advertising campaigns should be taken into consideration, as this quality may amount to a significant competitive advantage if it impacts the efficiency of advertising campaigns. Google and Facebook offer more advanced targeting capabilities through devices than other stakeholders due to the logged services they provide to Internet users.

Finally, Google has specific competitive advantages which result from its presence both in the Display advertising sector and in the Search advertising sector, where it has held a very strong position for nearly twenty years. Furthermore, Google has over time developed several types of links between Search advertising and Display advertising through its offers for advertisers, AdWords and DoubleClick, and through its Google Analytics services range. These relationships concern advertising campaigns, available targeting options, and campaign data analysis.

*

[5] Internet users having made a purchase.

How should the online advertising sector be understood regarding competition law?

For around ten years, competition authorities have taken an interest in the online advertising sector: **based on several litigation decisions, or in merger cases, they have developed a decision-making practice making it possible to determine the competition issues in the Internet advertising sector.** Regarding merger control, the Commission has authorised several important mergers that have helped structure this sector. Regarding the prevention of anticompetitive practices, several cases concerning, to various degrees, online advertising have resulted in sanctions or commitments. At the European level, the European Commission recently fined Google 2.4 billion euros and required it to put an end to the more favourable positioning and display of its price comparison tool. The Commission also took into account Google's dominant position on the general Internet search market to qualify an abuse, the effects of which concerned the related price comparison tool market. In France, the *Autorité de la concurrence* has handled several referrals concerning Google's practices. In 2010, it issued injunctions as interim measures then accepted commitments concerning the definition and application of Adword rules for advertisers.

Competition law makes it possible to deal with certain commercial practices in the Internet advertising sector that could adversely affect public order. The more general concerns that are emerging regarding the advantages of certain stakeholders based on their size and their positions also exceed, in part, the domain of competition law strictly speaking: if necessary they will be subject to decisions made at the governmental or intergovernmental level.

In its opinion and with regard to the missions for which it is responsible, the *Autorité* issues general observations on delimiting markets and assessing the positions of the stakeholders. The *Autorité* stresses that **competition law applies to all services provided to Internet users, including when they appear to be free**, to the extent that they are offered by a platform linking several users, allowing the service provider to grant free services to Internet users when their use constitutes a sales support for professionals or advertisers.

The analysis of each of the relevant markets, each with its own characteristics, is essential for the competitive analysis of the Internet advertising sector. Google as well as Facebook have particularly strong positions in several markets that are also strategic distribution channels for numerous publishers and online vendors: search engines, social networks, video-sharing platforms, mapping, email, etc. The strong positions of Google and Facebook on these markets explain to a large extent the fact that these two companies capture most of the online advertising revenue.

Concerning advertising service markets, the information collected shows that online advertising still has specific characteristics compared to other forms of advertising, particularly TV advertising; these characteristics involve targeting possibilities and pricing methods. However, this observation may change in the future depending on the development

of targeted and programmatic TV advertising. This sector, which is already developing around mobile TV and catch-up TV, might in the future also include TV broadcasting via Internet service providers' customer-premises equipment. Access to data via ISP boxes is already an important issue in the relations between ISPs and TV service publishers. Furthermore, the possibility of locally differentiating advertising via various forms of local addressable TV advertising is a key issue for the re-examination of the audiovisual legislative framework.

Besides, the conditions of competition in the online advertising sector differ from those of the TV advertising market, although the convergence and complementarity between these two types of advertising have increased over the past few years. In a similar manner, online Search advertising and online Display advertising are also complementary in the campaigns of Internet advertisers and offer distinct targeting methods. In Search advertising, the Internet users themselves target ads that display instantaneously query by query, which is not the case for other forms of online advertising. While the competitive situation of the Search advertising market is still characterised by Google's very strong position, in the Display advertising sector, Facebook has been able to grow its revenue very rapidly; it however generates most of its revenue from the direct sale of advertising space on its own inventories, and is not yet an intermediary on a level with Google. Google remains the most important stakeholder for advertising intermediation, the distribution of ads, and the processing of data.

In the last few years, no company has succeeded in significantly increasing its market share in Europe in the Display advertising sector compared to Google and Facebook. The development of strong positions requires operating popular sites and services among Internet users, and few companies will be able to pose a significant potential threat over the next few years, with the exception of Amazon, the online sales giant that nonetheless remains a marginal stakeholder in the online advertising sector today.

Among the technical intermediaries, many stakeholders do not have proprietary sites where they could sell advertising space directly, and their position appears to be fragile in many ways. They **cannot provide advertisers access to inventories that are as extensive as those offered by Google and remain in an uncertain situation** regarding their possibilities to collect data on third-party sites and applications, in order to be able to offer personalised advertising. **Internet users are increasingly reticent about the use of their data** and increasingly use technological solutions offered by software publishers and device manufacturers (especially Apple) that limit data collection and ad display, which has an immediate effect on the turnover and profitability of publishers and certain intermediaries whose activity is based on data processing.

Several stakeholders consider their situation to be weakened by individual and collective practices and have highlighted types of behaviour that, in their opinion, might constitute anticompetitive practices. According to these stakeholders, such practices might

be scrutinized under competition law, but their examination does not fall under the consulting activity of the *Autorité.*

*

Conclusion

The economic vigour of the online advertising sector shows that technological innovations are a growth factor but also a factor of differentiation for companies that know how to use them effectively. The market stakeholders are not all benefiting from the global growth in the sector: those that are reaping the most rewards are companies that have access to vast sets of high-quality personal data and have the capacity to process them optimally in terms of technologies, services, and the sale of their inventories. This confirms the fact that holding high volumes of data with high added value, as well as having expertise in the area of technological tools making it possible to use these data and leverage their value, have become decisive competitive advantages.

Finally, the *Autorité* notes that many market stakeholders have highlighted behaviours that they consider mightdisturb competitionon the market. This justifies continued vigilance by the *Autorité de la concurrence*, including *ex officio* proceedings, if necessary, to examine any anticompetitive practices if it were to consider that there was sufficient ground to do so.

1. In issuing an opinion at its own initiative on 23 May 2016, the *Autorité de la concurrence* decided to assess the state of competition in the online advertising sector and the importance of data processing[6].

2. This opinion comes seven years after a first opinion on competition in this sector, mainly concerning online search advertising[7]. It also serves as an extension to the publication, on 10 May 2016, of the joint study by the *Autorité de la Concurrence* and its German counterpart, the Bundeskartellamt, on data and its implications for competition law[8].

3. There are several reasons behind the *Autorité*'s decision to re-examine online advertising, and particularly display advertising[9]. First, online advertising plays a key role in the digital economy. In this respect, it is a sector that finances, and in return benefits from, numerous innovations in fields such as data processing and artificial intelligence. There are also a number of other reasons for studying the online advertising sector in terms of competition. The sector has seen massive and rapid growth, with numerous technological and commercial innovations, and the development of new businesses, creating a real ecosystem in a short time. The leading position held by Google and Facebook in the sector will be examined by the *Autorité* in this opinion. It also appears to be quite a volatile sector and the positions of players are likely to change.

4. The *Autorité* also intends for this opinion to add to its understanding of the digital economy and the issues involved in regulating major platforms. The concerns and fears which they raise do not stem so much from their size, but from the power drawn from the quantity of data they collect and how they utilise it through the use of powerful algorithms. The development of artificial intelligence heightens these concerns, as machine learning is able to gather increasing knowledge from user behaviours.

5. This opinion process, which should not be thought of as a litigation procedure, forms part of an analysis of competition in the online advertising sector. By issuing this opinion at its own initiative pursuant to Article L. 462-4 of the French Commercial Code, the role of the *Autorité* is not to issue a decision on whether certain practices of an operator violate Articles L. 420 and L. 420-2 of said code. Only a complaint (or proceedings initiated *ex officio*) and the *inter partes* proceedings stipulated in Articles L. 463-1 and following of the Commercial Code would allow a decision to be issued on whether the practice in question is legal under the provisions prohibiting anticompetitive agreements and abuse of a dominant position on specific markets. This opinion is therefore not intended to identify or sanction violations by players in this sector.

---

[6] Decision. 16-SOA-02 of 23 May 2016 pertaining to an opinion under *ex officio* proceedings on data processing in the online advertising sector (see press release at: http://www.autoritedelaconcurrence.fr/user/standard.php?lang=en&id_rub=630&id_article=2780).

[7] Opinion 10-A-29 of 14 December 2010 on the competitive operation of online advertising (see press release at: hhttp://www.autoritedelaconcurrence.fr/user/standard.php?lang=en&id_rub=368&id_article=1514).

[8] Joint paper by the *Autorité de la concurrence* and the German Bundeskartellamt of May 2016 on data and its implications for competition law, published on 10 May 2016: (http://www.autoritedelaconcurrence.fr/doc/rapport-concurrence-donnees-vf-mai2016.pdf).

[9] Display Advertising refers to "*advertising on the Internet with the purchase of advertising space and the insertion of graphic or visual elements in various formats (skyscraper, banners, tiles, skins, loading pages, etc.). Display advertising, or traditional online advertising is distinguished from search advertising campaigns"* (see www.pubdigitale.fr).

6. From a procedural standpoint, the *Autorité* based its opinion on various exchanges with different players in the online advertising sector, including advertisers, publishers, advertising service providers, platforms, specialists, etc. Interviews were conducted and questionnaires sent out between autumn 2016 and spring 2017. Specific questionnaires were sent to Google and Facebook, due to their distinctive positions in the sector. Finally, a public consultation was initiated on 11 July 2017[10].

7. Following these exchanges, the *Autorité* is publishing this opinion which, in the introduction, describes the changing role of online advertising among other forms of advertising and the development of data processing and programmatic buying methods. The first part of the opinion presents an overview of the state of competition in the online advertising sector. It describes certain specific characteristics of competition in this sector and the leading positions of Google and Facebook. The second part of the opinion presents prior decisions made by competition authorities and competition law analysis criteria in the online advertising sector. The third part of the opinion covers certain legal aspects which apply to online advertising players with respect to transparency and privacy.

INTRODUCTION

8. The first observation that must be made in introduction is that the internet has, in a short time, gained major prominence in the advertising sector. The *Autorité* has based this finding on responses to its information requests received from players and SRI Online Advertising Observatory studies carried out by PwC in partnership with UDECAM[11], and IAB *Europe*[12] *Adex Benchmark* studies published in collaboration with HIS Markit.

9. It should be noted that it is difficult to assess the size of the sector as there can be disparities between sources. Problems assessing the French online advertising industry stem mainly from the fact that multiple criteria are used to determine where revenue comes from (billing address, click location, etc.) and the products' scope. Furthermore, revenue for some stakeholders is calculated based on estimates and can be different from the actual revenue of these companies.

10. The second important point to be noted in this introduction is the development of programmatic advertising and data processing in the online advertising sector. The opinion

[10] See http://www.autoritedelaconcurrence.fr/doc/consultation_publique_pub_en_ligne_11juillet17.pdf; see press release at: http://www.autoritedelaconcurrence.fr/user/standard.php?lang=en&id_rub=663&id_article=3017.

[11] The *Syndicat des Régies Internet* or SRI, is an Internet business trade association (members include Alice, AOL, MSN, Orange and Yahoo!, etc.). UDECAM is *Union des Entreprises de Conseil et Achat Media*, a union of 28 French media agencies.

[12] The Interactive Advertising Bureau is an Internet advertising trade association, originally based in the United States (members include advertising agencies, advertisers, media buying platforms, ad networks, publishers, consulting companies, technical service providers, etc.).

will describe the various services and players who provide them to advertisers and website publishers using data processing methods.

1. PROMINENCE OF THE INTERNET IN THE ADVERTISING SECTOR

11. The value of the online advertising market in France was estimated at between €3.5 and 4.2 billion in 2016[13]. **The internet is now the leading advertising media, ahead of television**[14]**,** with 7% growth in 2016[15] and 12% in 2017, according to the SRI[16].

12. France is the third largest online advertising market in Europe, behind Germany (€5.9 billion) and the United Kingdom (€14.2 billion)[17]. In 2016, online advertising accounted for 29.6% of the French advertising market, compared to 28.1% for television, 20.2% for print media, 10.5% for outdoor advertising, 6.7% for directory advertising, and 6.2% for radio[18]. In 2017, the market share for online advertising grew further to reach 34.4% of advertising investments[19].

13. This growth is linked to the strong development of high-speed networks, the number of terminals in homes, digital services and the decline of the multimedia advertising market in France.

14. Within the online advertising sector, a distinction is generally made between search advertising, which corresponds to sponsored links that appear on the search result pages of search engines following a query, and display advertising, which usually refers to forms of online advertising that use visual elements (banners, tiles, skins, etc.), which are sometimes animated orvideos.

15. According to SRI, in 2016, search advertising was the leading source of revenue, with €1.893 billion in sales, corresponding to 55% of revenue generated on the online advertising market in France, at a growth rate of 4.3%[20]. In 2017, search advertising grew by 8%[21]. Display advertising is the second source of revenue, with sales estimated at between €1.204 billion and €1.416 billion, at a growth rate of around 14% in 2016[22] and 20% in 2017[23]. The SRI found that growth in the display advertising sector entailed major disparities between advertising categories. Growth was therefore "*mainly driven by social media networks*"[24]. A significant number of advertisers confirmed the growing place of social media in their communication budgets, despite the fact that there are significant disparities in this case as well. Although the share of social media advertising remains relatively low compared to search advertising, the majority of advertisers feel that it will likely grow

[13] Figures from the 17th SRI Online Advertising Observatory Study for 2016 and the IAB Europe 2016 Adex Benchmark report.
[14] Finding from the 17th SRI Online Advertising Observatory Study for 2016.
[15] Figure (identical) from the 17th SRI Online Advertising Observatory Study and the IAB Europe 2016 report.
[16] Figure from the 19th SRI Online Advertising Observatory Study for 2017.
[17] See IAB Europe 2016 report.
[18] Figures from the SRI Online Advertising Observatory Study for 2016.
[19] Figure from the 19th SRI Online Advertising Observatory Study for 2017.
[20] Figure from the 17th SRI Online Advertising Observatory Study for 2016.
[21] Figure from the 19th SRI Online Advertising Observatory Study for 2017.
[22] Figure from the 17th SRI Online Advertising Observatory Study for 2016 and IAB Europe 2016 report.
[23] Figure from the 19th SRI Online Advertising Observatory Study for 2017.
[24] Finding from the 19th SRI Online Advertising Observatory Study for 2017.

considerably in the coming years, especially with the increase in mobile advertising (i.e. advertising displayed on mobile telephones) and live video. In the display advertising sector, "non-social" display advertising (i.e. outside social media), grew by 4% between 2016 and 2017 after a 3% decline between 2015 and 2016[25].

16. Growth in the display advertising sector can also be attributed to the rise in video advertising, which has been increasingly used in the strategies of major social networks, especially Facebook[26] ; however, numbers on video advertising again vary significantly depending on the source (the SRI online Observatory Study and the IAB Europe report). In the display advertising sector, video advertising in France was estimated to be worth between €280 and €417 million in 2016[27] (i.e. 20 to 35% of all online advertising) with growth estimated at between 11.7% and 35% for the 2015/2016 period[28]. According to the SRI, in 2017, investments in video advertising increased from €417 to €577 million, corresponding to 38% growth[29]. Video advertising on social media jumped by 90% in 2017[30]. However, video in display advertising continues to represent a small share of the market[31].

17. At the European level, investments in mobile advertising practically doubled between 2015 and 2016[32]. However, growth was slightly lower in France. Mobile advertising continues to grow for both search and display advertising, with 80% and 60% growth respectively between 2015 and 2016, and 21% and 59% between 2016 and 2017[33]. In the display advertising sector, advertising on social media networks made up most of the investments in advertising on mobile terminals[34]. In 2017, investments in advertising on mobile terminals accounted for 49% of investments in search and display advertising[35].

[25] Figures from the SRI Online Advertising Observatory Studies for 2016 and the first half of 2017.
[26] See, for example: https://www.forbes.com/sites/greatspeculations/2017/08/15/can-facebooks-watch-become-an-effective-competitor-to-youtube/#550e866c66bf.
[27] Figures from the IAB Europe 2016 report and the 17th SRI Online Advertising Observatory Study for 2016 respectively.
[28] Idem
[29] Figure from the 19th SRI Online Advertising Observatory Study for 2017.
[30] Figure from the 19th SRI Online Advertising Observatory Study for 2017.
[31] Idem.
[32] Finding from the IAB Europe 2016 report.
[33] Figures from the 17th and 19th SRI Online Advertising Obervatory Studies.
[34] For example, see http://www.socialmediatoday.com/marketing/ran/2015-06-11/6-reasons-why-mobile-and-social-advertising-are-match-made-heaven and https://unified.com/mobile-social-marketing/.
[35] Figure from the 19th SRI Online Advertising Observatory Study for 2017.

18. Finally, the growth and influence of **programmatic advertising** were underlined several times in the responses to requests for information issued by the investigation services. **Programmatic advertising is a type of advertising where ad buying purchase and campaign implementation and releaseare automated.** In most cases ad buying involves a real-time bidding system[36]. According to information gathered by the *Autorité*, the use of programmatic technologies began to truly develop in 2014 and flourished in 2015 and 2016, with some advertisers multiplying their spending on this type of advertising by ten. Although a large number of advertisers see programmatic advertising as a strong market trend, and some even as an essential channel, its share in advertising budgets still varies significantly from one advertiser to another. A distinction can thus be made between advertisers who allocate most of their budget to programmatic advertising along with those who allocate a third or half their budget to it, but with the likelihood that this will increase, and advertisers who only see programmatic advertising as a way to supplement other strategies, or who are still studying it or decreasing it, because it is difficult to measure its effectiveness.

19. Nevertheless, programmatic buying methods still account for a major portion of investments in display advertising – 53% in 2016 and 62% in 2017[37]. They increased by 51% in 2016 and 41% in 2017[38].

20. Social media networks have generated most of this growth, with 62% growth in 2016 (€453 million)[39] and 48% between 2016 and 2017 (€669 million)[40].

[36] Cf. https://www.definitions-marketing.com/definition/publicite-programmatique/.
[37] Figures from the 17th and 18th SRI Online Advertising Observatory Studies for 2016 and the first half of 2017.
[38] Idem.
[39] Figures from the 17th SRI Online Advertising Observatory Study for 2016.
[40] Figure from the 19th SRI Online Advertising Observatory Study for 2017.

Key points

The internet is now the leading advertising media, ahead of television. Online advertising is experiencing strong growth (12% in 2017) with over €4 billion in sales in France. Search advertising still has a marginal lead in this type of advertising, but display advertising is growing at a stronger rate thanks to social networks, and video and mobile advertising. Display advertising is now mainly run through programmatic advertising, i.e. it uses automated ad buying. These automated transactions are increasingly being completed through a real-time bidding process.

2. THE GROWTH OF PROGRAMMATIC ADVERTISING AND DATA PROCESSING

21. Several models, each involving varying numbers of services and players can be used for the programmatic purchase and sale of advertising space. Traditionally, programmatic advertising developed through the purchase of sponsored links on Google Search and the advertising system "AdWords". This *"integrated"* model involves a single player who publishes the site and sells advertising space using a system that it also operates. Most publishers who sell their inventory (i.e. their ad spaces, corresponding to various spaces on a webpage viewed by internet users: in columns, between paragraphs of text, etc.) through programmatic technologies use intermediaries, in that their ad space could not be sold through a vertically integrated model due to a lack of audience. These two types of models currently coexist, and some players, such as Google, are active at every level of the value chain, including as an intermediary on various links of non-integrated models.

22. The first experiments with online advertising were carried out in the United States in the 1990s. In its early days, players drew inspiration from offline advertising models, with negotiated deals. The growing number of publishers and websites led to the emergence of ad networks. This model consisted of buying inventory (i.e. advertising space on web pages) and selling it by theme (e.g. sports, technology, etc.). As the number of ad networks grew, it generated problems when running campaigns due to the risk of buying the same inventory several times from different ad networks. In addition, because of the exponential growth in the number of publishers and inventory, more and more advertising space remained unsold. The first ad exchanges were therefore created in the late 2000s[41], and programmatic transaction models were also developed in the display advertising sector[42]. Ad exchanges allowed ads to be delivered no longer just based on the affinity of the media with the target audience, but based on the characteristics of the internet user at a given moment in time. Real-time bidding (RTB) is the most widely used programmatic transaction method. It is a bidding system open to all advertisers[43]. In general, this transaction method does not involve

[41] See https://programmatique-marketing.fr/2016/04/06/tribune-libre-sur-lachat-programmatique-direct/.
[42] See. J. Rayport, Is Programmatic Advertising the Future of Marketing?, Harvard Business Review Digital Articles, 22 June 2015.
[43] The inventory is bought blind or semi-blind, i.e. the buyer cannot see the URL of the advertising space sold by the publisher, or the buyer is provided with a URL for an advertising space that is not the exact site where the ad will be displayed, but only as an indication of the category of site (ad impressions grouping several sites

any direct contact between buyers and sellers going through ad exchanges. There are other types of transaction methods besides RTB, such as programmatic direct deals. This establishes a special and even exclusive relationship between an advertiser and publisher, with greater transparency on inventory, and generally concerns higher quality advertising spaces. It covers several transaction methods, such as fixed price guaranteed deals[44], fixed price non-guaranteed deals[45], private market places (PMP)[46] and deal ID[47].

23. **Programmatic advertising involves technical and non-technical intermediation service providers for advertisers and publishers, and players specialised in supplying and analysing data** with the role of improving the performance of advertising campaigns. The main players working for the advertiser are media agencies, trading desks, ad servers and demand-side platforms (DSP). Players working for the publisher are ad sales house and ad networks, publisher ad servers and supply-side platforms (SSP). Ad exchanges are the link between supply and demand. Advertisers and publishers also use data management platforms (DMP). A number of players offer combinations of technical intermediation services (ad servers, DSP, SSP, etc.) and data processing (DMP, data analytics), which are used for targeted advertising and reporting on advertising campaigns[48]. A schematic diagram of the value chain for the programmatic advertising sector is shown below.

of the same type) (see https://programmatique-marketing.fr/wp-content/uploads/2016/03/lexique-programmatique-marketing-sri-2016.pdf).

[44] This transaction is similar to a traditional direct sale negotiated between the publisher and a single buyer. The price and inventory are guaranteed. With programmatic advertising, this type of transaction is an automated real-time process with fine-tuned audience targeting.

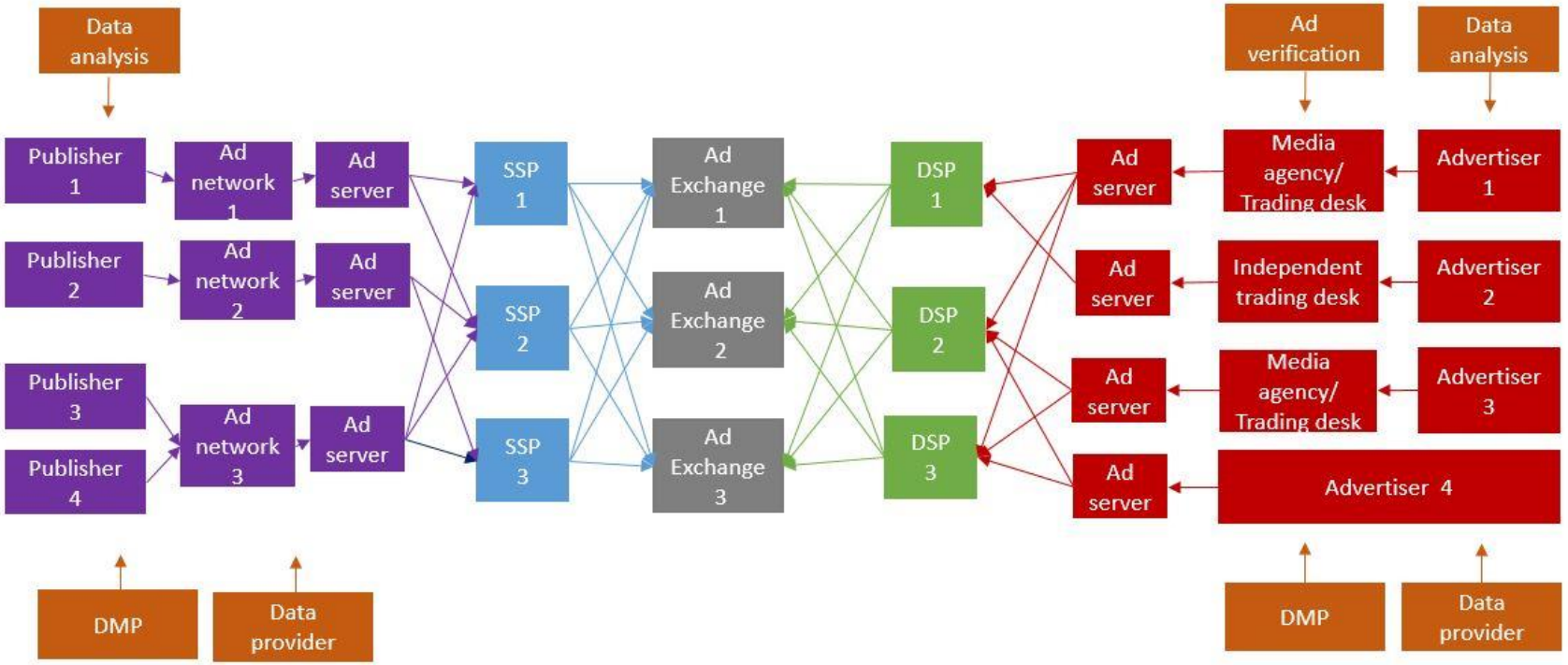
[45] With this type of transaction the price is fixed ahead of time but placement in the inventory is not guaranteed. This model is often used at the request of buyers looking for deals that guarantee more predictability on market places.

[46] These are invite-only auctions where a publisher invites a small number of selected buyers to bid on its inventory. The publisher fixes a minimum price.

[47] This type of transaction is when an advertiser is given direct access to the publisher's inventory. The publisher and advertiser (or its media agency or trading desk) negotiate the thematic environment for the ads, the format, price, targeting for a given campaign, and in the case of guaranteed Deal ID, the number of impressions. These agreements, which used to be private and directly negotiated, are now executed via software that processes data in real time, with the aim of reaching the right target at the right time, in a context that respects the advertiser's brand.

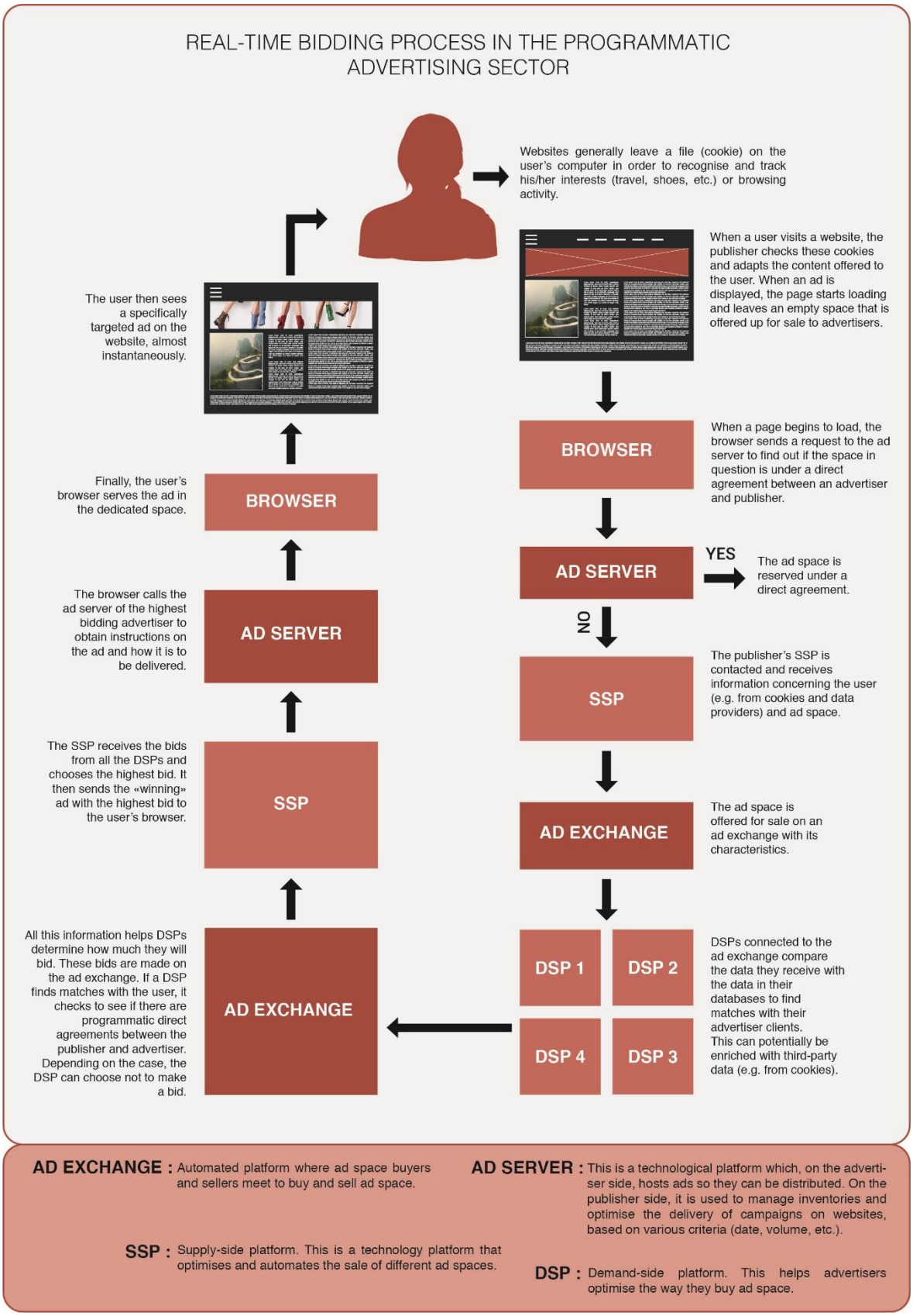
[48] For example, many DSPs have a data management platform (DMP), allowing integration with the advertiser's client file or third-party data. Similarly, some ad exchanges and SSPs are incorporated into a single entity.

Overview of players in the online advertising sector [49]



[49] Source: *Autorité de la concurrence*.

24. Bidding involves several players interacting in a process that lasts less than 100 milliseconds. It is outlined in the diagram below.



[50]

[50] Source: *Autorité de la concurrence*.

How RTB works

This diagram outlines the following process: when a user opens a website, the page loads with empty spaces for advertising. The web browser sends a request to the publisher's ad server to see if the ad space in question is subject to a direct agreement between the publisher and an advertiser (or its media agency). If it is not, the publisher's supply-side platform (SSP) is contacted. It receives all the relevant data which the publisher's ad server has on the advertising space and the internet user viewing the page[51]. The impression, i.e. the ad space in question, is then put up for sale on an ad exchange. Demand-side platforms (DSPs), advertisers connected to the ad exchange, compare the data they receive with databases containing their advertiser clients' data in order to identify any correlations. If a DSP establishes matches with the user targeted for the ad[52], it examines the data of the publisher site and the first-party or third-party data it has on the individual. It also examines whether there are programmatic direct agreements. All this information helps DSPs determine how much to bid. If a DSP does not identity a match, it can choose not to submit a bid. The SSP receives the bids from all the DSPs and selects the highest offer[53]. The SSP sends the "winning" ad to the user's browser. The browser contacts the highest bidder's ad server at the end of the bidding process to obtain instructions on the ad and its publication. Finally, the user's browser posts the ad. Due to the speed of these various operations, the ad specifically targeted at the internet user is displayed on the web page almost instantaneously.

25. There are many pricing models in the online advertising sector. The following are the most widely used models. The cost per mille (CPM) is based on the number of impressions, i.e. the display of a thousand ads. The cost per click (CPC) model allows the advertiser to only pay for every click on the ad, i.e. the number of times the user clicks on the ad to obtain more information. Cost per double click was introduced in 2007. This requires a first click on the ad and a second click on a link on the advertiser's website. This avoids counting cases where the user leaves the website as soon as they open the first page (rebound)[54]. The cost per action/acquisition (CPA) model charges for clicks that lead to a specific action or a prospect or buyer acquisition. Cost per acquisition usually refers to a click followed by the user signing up to something or a sale on the advertiser's website or applications[55]. Finally, cost per view (CPV) is specific to video advertising and is based on real views of the video, during a specific period of time.

[51] First or third-party data (for example, from cookies or third-party data suppliers).
[52] Via the user's terminal ID or a cookie.
[53] The SSP looks at the information on the highest bidding advertiser to ensure that there is not a conflict of interest (advertising on a competitor website, etc.).
[54] See Audrey Rochas, *Digital & Publicité*, Collection Digital Management, Editions Médicilline 2016.
[55] See http://www.pubdigitale.fr/dictionnaire-du-digital/cpa-cout-par-acquisition/.

26. Beyond the programmatic bidding process described above, display advertising involves a large number of players who offer various services to advertisers (a) and publishers (b), as well as data processing and supply services (c).

a) Services for advertisers

27. An advertiser may use several service providers, brokers (media agency, trading desk) and technical intermediaries (ad server, DSP) for a marketing campaign.

28. Media agencies help advertisers define and implement their communication strategies. They act as agents[56], optimise the relationship between the brand and audiences, develop the media strategy, media planning, buy ad space and use communication and advertising techniques[57]. There are many media agencies that specialise in online advertising (Netbooster, Fifty-five, Ogilvy, etc.), but the largest develop their services across several types of media (Dentsu Aegis, Havas, Omnicom, Publicis, WPP, IPG Mediabrand, etc.). They have significantly increased their range of services with the expansion of online advertising, by developing specific expertise and data processing tools[58] and programmatic buying platforms - trading desks.

29. Trading desks are centralised service platforms specialised in programmatic buying and optimising advertising campaigns[59]. They can be part of media agencies themselves or independent, or even be in-house departments with some major advertisers[60]. They act as an intermediary between the advertiser and the technological buying tool, the DSP. Trading desk teams handle real-time impression buying for their clients on ad exchanges. They manage their buying strategy through one or more DSPs, targeting and buying the audience that advertisers want to reach, and optimising their campaigns depending on their performance on different sites[61].

[56] See https://www.definitions-marketing.com/definition/agence-media/.
[57] See http://www.udecam.fr/agencesmedias.html.
[58] One media agency informed the investigation services that media agencies can provide solutions that let advertisers know about the backgrounds of consumers and the levers likely to impact them, that let them offer a standardised customer and brand experience at every touchpoint, and propose a personalised offer adapted specifically to the consumer. In particular, they offer algorithmic solutions capable of extracting information from Big Data generated from interactions between consumers, media and brands, and machine to machine (M2M) interactions, of optimising the communication strategy, transforming data in real time for decision-making purposes, and of optimising targeting.
[59] One media agency described the role of its trading desk as: consulting – to develop the most relevant and effective overall strategy to meet the media, marketing and business objectives of the advertiser throughout the sales funnel; targeting – by making recommendations on the various supplementary and exploratory targeting strategies; and buying – by purchasing advertising inventories on programmatic market places in all advertising formats and all connected devices.
[60] These include Infectious Media, RadiumOne, Quantcast, Rocket Fuel, Zebestof as independent trading desks, and AMNET (Dentsu Aegis), Affiperf (Havas), VivaKi/AOD (Publicis) and Xaxis (WPP) as media agency trading desks. Air France and SeLoger are examples of advertisers that use an in-house trading desk.
[61] See. http://www.journaldunet.com/ebusiness/publicite/1103949-ad-exchange-dsp-third-party-data-le-glossaire-du-rtb/.

30. An ad server is a technological platform for advertisers that stores and delivers advertising content for distribution. In France, the main operators are Google (*DoubleClick Campaign Manager* or DCM), AppNexus, Weborama, Sizmek, Zebestof and Adverline. Ad servers manage and optimise campaigns by modifying capping (standard practice used in digital marketing to limit how many times an individual sees the same visual content)[62] or certain advertising aspects of the campaign, by verifying its scope of distribution (audience, population, etc.) and generating statistics reports to measure performance (volumes, dates, effectiveness measures, click-through rates, conversion rates, etc.). The pricing model of ad servers is based on payment for the volume of impressions distributed, the cost per mille (CPM) model, which can vary depending on the format of ads (e.g. between standard display or video ads). There are also publisher ad servers (see below).

31. A DSP, or demand-side platform, is a technological platform that lets a trading desk or advertiser buy display inventory offered by ad networks, ad exchanges and SSP via a single management interface[63]. In France, the main DSPs are Google (DoubleClick Bid Manager (DBM)), AppNexus, Amazon, AOL, Turn, Sociomantic, Rocket Fuel, The Trade Desk, DataXu, Mediamath, Adform and Zebestof[64]. Some DSPs specialise in certain segments such as video (Videology, TubeMogul) and mobile advertising (Tabmo). DSPs can also include data processing functionalities, such as user targeting, data supply, performance and attribution measuring, and ad verification[65]. DSPs are therefore used to help advertisers find the most effective impressions for their ads. Advertisers often use several DSPs since each DSP has its specialty (general purpose, video, mobile, etc.). They are generally interconnected to several ad exchanges and SSPs in order to access a broad range of impressions. Finally, for the most part, DSPs use a pricing model based on a percentage of the purchased media.

32. Companies that provide advertisers with buying technologies also include retargeting DSPs, which are technological tools used by retargeting specialists like Criteo. Retargeting is a type of behavioural targeting that serves ads from websites that users have already visited in order to recapture their interest in products and services that they have already seen.

b) Services for publishers

33. The vertical chain on the supply side basically reflects that on the demand side.

34. Ad exchanges let publishers and advertisers buy and sell advertising space. Publishers supply their inventory via an SSP and the advertisers and their agencies buy it through a DSP. The SSPs and DSPs connect on the ad exchange. The main ad exchanges are Google (DoubleClick Ad Exchange), AppNexus, One by AOL, Yahoo Advertising, Open X, 3W AdX, LaPlaceMedia and Audience Square (for premium inventories). In terms of pricing, an ad exchange generally charges based on a percentage of the CPM.

---

[62] https://www.definitions-marketing.com/definition/capping/

[63] Lauren T. Fisher, The New Display Ad Tech Stack, A Simple Guide to a Complex Topic, eMarketer, mai 2016.

[64] See. https://programmatique-marketing.fr/2017/05/31/analyse-et-classement-des-dsp-en-2017-par-forrester/.

[65] Lauren T. Fisher, The New Display Ad Tech Stack, A Simple Guide to a Complex Topic, eMarketer, mai 2016.

35. An SSP is a technological platform that optimises and automates the sale of advertising space. It is where the publisher defines the advertising inventory it is supplying (characteristics of target audiences, available formats)[66]. An SSP sells inventory and maximises prices by setting price floors, determining which data to include in the auction and deciding which buyers can bid. SSPs can specialise in a certain format, such as video or native advertising[67]. Publishers generally connect to several SSPs and ad exchanges to maximise their revenue. SSPs usually take a percentage of the revenue generated from the publisher's inventory. Some SSPs are part of ad exchanges. Google was the first to do this, when it acquired AdMeld and integrated it into Google Ad Exchange. SSPs can also provide ad server services for publishers. Active SSPs on the French market include Google (DoubleClick Ad Exchange), AppNexus, Rubicon Project, SmartAdServer, PubMatic, OpenX, AOL, Amazon, Freewheel and Teads.

36. A publisher ad server is a technological platform for managing advertising inventory and optimising the distribution of campaigns on websites based on a number of criteria (capping, volumes, dates, performance, etc.)[68]. It also offers reporting and campaign analysis tools. Due to the fact that ad impressions are not predetermined, publishers use ad servers to predict the availability of ad space (based on trends regarding their inventory) to reserve volumes of inventory for specific advertisers and sell the remaining space to ad networks or on ad exchanges. During the ad display process, the publisher's ad server will verify whether the ad space in question is covered by direct agreements between the publisher and an advertiser (or its media agency) and give priority to the direct sale if an agreement exists, to the detriment of a programmatic deal. Generally, the publisher uses a single ad server (or an ad server specialised in a specific format) due to the complex technical integrations required and the associated costs. Several players now offer services that incorporate an ad server and an SSP (AppNexus, Smart AdServer, AOL One, Rubicon Project, and Google DFP). These solutions favour a competitive bidding approach for direct sales (non-programmatic) which are managed by the publisher's ad network by going through its ad server, contrary to programmatic sales which go through the SSP. This allows the publisher to analyse multiple buying sources to maximise the value of its inventory[69]. The main operators of ad servers for publishers are Google (DoubleClick For Publishers (DFP)), AppNexus, SmartAdServer, AOL and Freewheel. Publisher ad servers are paid for advertising using the CPM model, based on the volume of impressions delivered.

[66] Stéphane Bodier, *Le Web Marketing*, 2014 (2e ed.), Presses Universitaires de France.

[67] Native advertising is a type of online advertising that attracts the interest of consumers by serving content in the context of the user experience. It therefore matches the form and function of the media on which it appears (this typically includes ads on Facebook, Twitter and Instagram). The aim is to make the ad less intrusive and thereby increase the likelihood that the user will click on it (see https://en.wikipedia.org/wiki/Native_advertising).

[68] See https://www.iabfrance.com/sites/default/files/documents/le-trading-media-a5.pdf?download=1.

[69] See http://ad-exchange.fr/maturite-des-full-stack-et-ouverture-des-adex-aux-ssp-tiers-lavis-de-d-pironon-smart-ad-server-30105/.

37. Ad sales house sell the ad space of individual publishers, groups of publishers and media groups[70]. The ad network can be an in-house department of the publisher for whom it sells ad space (internal ad network) or an independent company selling space to several publishers (external ad network). In the online advertising industry, ad networks[71] can sell ad space to advertisers, their media agencies and their trading desks through negotiated deals or programmatic deals. Ad networks generally operate on a contractual basis with publisher ad servers, SSPs, data management platforms (DMPs) and data suppliers. They can also make deals with specialised publisher ad servers which sell part of the inventories on specific segments or formats[72].

38. Ad servers are retained by the publisher to represent it on a specific market which the publisher feels it would not be able to access on its own. The ad server works for the publisher, providing expertise and aggregated capability in an area where the publisher would not be able to monetise its inventory. Ad servers are generally paid on commission, based on a percentage of their sales.

39. Ad networks have changed their model with the arrival of RTB and ad exchanges, and are now similar to ad networks that sell ad space for small independent websites that do not have an ad network (Hi-Media, Horyzon Media, Specific Media, Advertstream, Adverline, etc.). They help small and medium-sized publishers, which, on their own, would not have the critical mass to stand out, sell their space in broad offerings. Other ad networks specialise in specific segments or formats and are similar to ad sales house. Others have gradually become SSPs and now operate using programmatic RTB. Pricing for ad spaces is usually on a CPM basis and depends on the type, format or volume of the packages offered to buyers.

c) Data processing, analysis and supply services

40. The programmatic advertising sector is characterised by the growing role of various forms of data processing at different key stages in the process. Data harnessed by publishers, advertisers and technical intermediaries can be classified into different categories:

[70] See https://www.definitions-marketing.com/definition/regie-publicitaire/. An ad network can be created to revalue inventories and increase the profitability, management, control and transparency of inventories and increase revenue through direct sales. Programmatic advertising is not necessarily the best for valuing a publisher's premium inventory with full transparency for the final buyer due to the large number of players present on the value chain. Some publishers do not use an ad network and only offer their inventories via programmatic advertising directly on sales platforms.

[71] In France, the main active ad networks on the online advertising market include France Télévisions, Orange Advertising, Lagardère Publicité, Leboncoin, Webedia Solocal, M Publicité, MEDIA.Figaro, Team Media, M6 Publicité, TF1 Publicité, auFéminin, Prisma Media Solutions, 3W Régie, AOL Advertising, Altice Média Publicité and SFR régie.

[72] These include Ligatus and Outbrain (sale of sponsored links on publisher websites), Advideum and Teads (video advertising), MBrand (mobile), Adyoulike (native advertising).

- user data: customer data (areas of interest, age, gender, language), contact information (email address, telephone number), browsing data (pages visited, time spent on a site, etc.), purchasing data (products purchased, number of orders), geolocalisation data;
- terminal data: information on the terminal, connections and the specific identifiers for the terminal (IP address, Device ID[73]);
- product data: catalogue of the advertiser's products, name and category of products searched and viewed;
- website and application data: website traffic, advertising space, site structures and themes;
- marketing campaign data: data on impressions (distribution context, volume, characteristics and quality/visibility/fraud), bidding data (bids made, winning bid price, number of bids won for bids made);
- external data (time, weather).

41. Many players provide several types of services based on data processing to advertisers and publishers. For example, Google, Facebook and Amazon provide data mining functionalities to optimise campaigns (targeting, capping) and analyse their implementation and effects. A large number of technical intermediaries (ad servers, DSP, SSP, etc.) also provide these functionalities. However, some players only provide data processing services and no intermediation. The main services are data analytics and ad verification, access to data management platforms (DMP) and the supply of third-party data[74] (data providers).

42. This data is processed to manage advertising campaigns, from targeting[75] to reporting and optimisation. Internet user data is used to identify the most relevant ad for a specific user. Advertisers create audience segments based on the profiles of internet users and match this data with other sources (particularly via data providers). The aims of data segmentation and matching are to acquire knowledge about users, optimise targeting and personalise relationships with them. Data on terminals is used to improve the user experience and recognise the same user across the different devices they use (e.g. by connecting to a Gmail account on different terminals). The user experience is improved by adapting the advertising displayed to the user's browsing environment and understanding user interactions with websites and applications. The recognition of users across their various devices is called cross-device targeting. It analyses browsers and mobile application environments used by users in order to target them with ads based on their activity, on all the computers or devices they use. Finally the data collected on the advertising campaigns is used to track and optimise

[73] The Device ID is a number attributed to a smartphone or tablet, encrypted as an advertising ID in order to protect the privacy of the mobile user (See http://ad-exchange.fr/definition-quest-ce-que-le-tracking-a-quoi-sert-un-device-id-2-16722/).

[74] This is data that is sold by specialist suppliers. It is often targeting, behavioural or sociodemographic data.

[75] The data collected provides several targeting options that can be combined when enough information is available. Contextual advertising is a form of targeting based on the content of the page where the ad is displayed. Sociodemographic targeting is a strategy that displays ads by using available demographic data (age, gender, income, nationality). Time-based targeting lets advertisers display their ads only on certain days or at specific times. Geotargeting is used to deliver ads to users based on their location. IP addresses, the use of a wifi connexion and GPS data are all ways used to target users. Behavioural targeting is based on observing the actions of users. Usually these actions include the number of pages someone has visited and the products that they look at. Retargeting is a type of behavioural targeting that serves ads from websites that users have already visited in order to recapture their interest in products for which they have already shown interest. This type of ad can be accompanied by promotional offers (e.g. for someone who put a product in their shopping cart but did not buy it, the online retailer may offer them a discount to convince them to complete the sale).

performance. Impression tracking is also used to collect specific data in order to determine the touchpoints that contributed (or not) to a conversion (e.g. the purchase of a product) and propose attribution models[76], that explain the conversion action based on past events. Advertising campaign data also helps programmatic platforms select the highest bidder, verify the characteristics of inventory and limit fraud, and therefore advertising under conditions that do not correspond with the campaign. Advertising campaign data lets advertisers bid according to their needs, and helps publishers better define their price floors.

43. Publishers or advertisers can collect data from their own site in several ways. First, data can be provided voluntarily by users (by creating an account, subscribing to a newsletter, contest, or from offline or online purchases). Data can also be collected directly by the publisher or advertiser via tracking technologies or tools on their own sites. The most widely used are first-party cookies, web tags (pixels or JavaScript tags), and ad tags. These technologies can be put in place using advertising SDKs. These various tools recognise and track internet users without identifying them by name. Data collected via these tools is mainly browsing data.

44. In general, the two main methods for collecting data are cookies (or other tracking tools that maintain the anonymity of users) and data collection in a "log-in" setting where users identify themselves by filling out a form with username and password information. This can be the case when users sign up for a service such as Gmail or a social network like Facebook.

[76] Attribution consists in explaining the final conversion action based on a given interaction. The last touch model attributes the conversion to the last click, i.e. the last advertising lever before the sale. This model is adapted to tools such as paid listings. The first touch model places more importance on the first interaction. Linear attribution takes into account all the interactions that contributed to the conversion. The position-based model is different from the linear model in that it places more importance on the first and last touchpoints. The time decay model attributes greater importance to the touchpoints closest in time to the conversion (see Stéphane Bodier, *Le Web Marketing*, 2014 (2e ed.), Presses Universitaires de France).

45. Data is also collected from third-party websites. This way, numerous players use data from partner websites where they are not the publishers, which have accepted the use of third-party cookies[77], ad tags and website tags.

Types of cookies

A tracking cookie is a piece of data sent to the user's hard drive by the server of the website they visit. It contains several pieces of data, including the name of the server that sent it, a unique identifier number, and in some cases, an expiry date. This information is stored on the computer in a simple text file that a server accesses to read and record data. Cookies have various functions: storing the content of a shopping cart, saving a geographic location, recognising an internet user from one visit to another, thanks to a unique identifier. They can also facilitate user browsing on a website. With advertising cookies, the purpose is to track the user's journey on the website.

A first-party cookie is a cookie that is defined on the domain which the user is visiting. If, for instance, the user is on www.autoritedelaconcurrence.fr, the cookie is defined on the domain autoritedelaconcurrence.fr. Although cookies are a widely used tracking tool, they are poorly adapted to cross-device uses. For example, if the same individual changes computers, they will be identified as a new individual and associated with a new cookie as long as they do not identify themselves, or if there is no cookie syncing operation.

A website tag triggers an action as soon as a web page opens or a specific action is completed. This action is performed by the user's browser or a server. The tag is used to track and analyse the user's browsing. Tags are not cookies, they are elements of the page that is opened, whereas cookies are small files sent to the computer. However, they can be used to trigger an action on a cookie (e.g. matching login credentials). A web tag can be a simple pixel or a piece of JavaScript code (see Stéphane Bodier, *Le Web Marketing*, 2014 (2e ed.), Presses Universitaires de France, and: https://www.signal.co/resources/tag-management-101/).

A tracking pixel is typically a small 1 x 1 transparent image that tracks users' visits to certain pages or when they open certain emails, and gathers technical information (IP addresses, machine configuration, etc.) on the individual behind the action. When the pixel is displayed, it loads a cookie onto the user's browser.

(see https://www.definitions-marketing.com/definition/pixel-invisible/; https://www.signal.co/resources/tag-management-101/ and https://www.quechoisir.org/page-que-choisir-en-ligne-les-cookies-et-les-technologies-de-tracage-n14323/).

Conversion pixels are a more recent solution, generally used to track purchases or equivalent actions. Pixels are placed on the confirmation page of a conversion process (order confirmation or form confirmation page, etc.). They let the ad server read the cookie, identify the user and record the conversion. For example, Facebook offers a

[77] A third-party cookie is placed on an internet user's device by the server of a domain other than the one for the website the user is on. Third-party cookies tend to be those used by audience analysis services, by different marketing tools and by ad networks and various advertising platforms (Translated from https://www.definitions-marketing.com/definition/cookie-tiers/).

conversion pixel for measuring the effectiveness of the intention of a user who clicks on a Facebook button and is redirected to an advertiser's website: a purchase after clicking on "Buy" or "Add to shopping cart", signing up after clicking on the "Sign up" button, etc.

The JavaScript pixel is placed on a web page using a piece of JavaScript code. JavaScript is a programming language used on web pages. It is used in particular by audience tracking tools, which place a marker on web pages, to obtain various pieces of information on visitors, such as the reason for the visit, how long they spend on the page, loyalty, screen resolution, type of connection, etc. (see Olivier Hondermarck, *JavaScript: le guide complet*, 4ème édition, https://sourceknowledge.com/fr/idees/article/2017/07/04/programmatic-101-javascript-vs-image-pixels/).

An ad tag can come in one of two forms. First, as an impression pixel, which tracks the number of ad impressions. Secondly, as a click command tag, which redirects the internet user to the destination page and tracks the number of clicks. Ad tags provide information on who sees the ad, who clicks, in what context and when they click.

A Software Development Kit (SDK) is a set of programming tools for mobile app developers / publishers. Marketing and advertising SDKs are particularly used to analyse the audience and behaviours in mobile apps (see https://www.definitions-marketing.com/definition/sdk/).

46. **These data collection tools play an essential role in the programmatic buying and selling process.** Firstly, they identify the internet user who will be targeted by the ad. The publisher's SSP sends information on the target user collected from cookies to the parties participating in bidding (ad exchanges, DSPs, trading desks, etc.). The DSP analyses the cookie it receives and compares it to data contained in its database on its advertiser client in order to identify any matches[78]. The DSP creates this database by placing tags on the advertiser's website, either directly or via a DMP.

[78] The process by which the SSP cookie ID is matched with the DSP cookie ID is called cookie syncing. This is necessary because internet servers can only have cookies defined on their own domain. Each server therefore identifies users via a separate cookie. The SSP sends a cookie and its ID to the DSP, which needs to compare its cookies with the SSP cookie to identify any matches. Cookie syncing is therefore a technique that compares cookies from one system with another, whether from a DSP, SSP, DMP or any other source.
(see http://www.adopsinsider.com/ad-exchanges/cookie-syncing/ and http://www.sri-france.org/wp-content/uploads/2016/03/LEXIQUEPROGRAMMATIQUE_SRI_2016.pdf).

47. Publisher ad networks can also leave cookies on website ad spaces in order to collect data on the content viewed (total number of ads displayed in the ad spaces, identification of the ads, number of users who click on each ad and later actions of these users on pages where ads redirected them) and to produce statistics[79].

48. Publisher ad servers collect data to deliver relevant ads and report on displayed ads by placing cookies that rely on unique identifiers and to identify the same user on different touchpoints[80].

49. Ad verification players leave ad tags when the ad is delivered via the publisher ad server. They use these tags to provide analysis on brand safety (in order to ensure that the brand is associated with suitable content), impression visibility, and to identify fraud.

50. Finally, third-party data providers can provide data procurement and enrichment. This data can be acquired directly from third parties under a partnership with another advertiser allowing partner data to be collected (second-party), data providers or ad verification companies, or indirectly via other players such as ad servers or data management platforms used by programmatic platform clients.

51. The following sections present data analytics and ad verification tools (i) and data management platform and data provider activities (ii).

i - Data analytics and ad verification tools

52. Players use user-centric analytics tools (measurement by observing a panel of internet users), site-centric tools (measurement of all of a website's traffic) and ad-centric tools (measurement dedicated to ad performance).

53. *User-centric* tools are generic performance indicators for websites. They reproduce the reference audience of a publisher site, measured via a representative panel of users, in order to gain insight into user profiles and uses of the site. Advertisers use these numbers to determine the influence of each publisher on the target audiences they hope to reach and develop their campaign accordingly[81]. Several companies indicated that in France, Médiamétrie/NetRatings is a reference[82]. Comscore is also a major player. According to some players, the link between this type of analytics tool and the sale of ad space is becoming less important since programmatic advertising is based more on real-time website audience measurement[83].

---

[79] See http://media.figaro.fr/informations-sur-les-cookies/.

[80] See https://www.visualiq.com/resources/marketing-attribution-newsletter-articles/cookies-tags-and-pixels-tracking-customer-engagement. When an ad server receives a request from a user to deliver an ad without a cookie, the server assigns a new ID (a random alphanumerical number such as 118D132F9423). At each subsequent request, the cookie resends the same ID, letting the ad server know that it is the same user.

[81] Its decision will be based on various indicators such as context, reach, target affinity, time spent, number of pages viewed, etc.

[82] This measurement provides monthly audience indicators (number of individual visitors, number of page views, time spent, profile, etc.) per screen measured (pc, mobile phone, tablet) and in total (global internet integrating deduplicated audience data for all screens measured).

[83] The market has switched from a media planning logic to an audience planning logic. Before, media was purchased with the audience in mind, now, targeted audiences are purchased directly in real time thanks to data.
Media planning is the process of choosing the content and media to be used within a marketing campaign, when ads should be delivered and a campaign schedule (see https://www.definitions-marketing.com/definition/media-planning/).

54. To measure the performance of a specific campaign, advertisers use site-centric tools that provide website traffic and conversion data, and ad-centric tools that define the audience and exposure quality during the campaign. These measurements are performed using data analytics services that reveal the context in which data is integrated, how it is organised and structured[84]. The main site-centric tools are provided by Google (Google Analytics and Google Analytics 360), AT Internet/Xiti, and AppNexus (Yieldex Analytics). Data analytics services can be provided free of charge, as it is currently the case in the basic version of Google Analytics.

55. These tools allow analysis of the behaviour of users on a given site to various degrees. This includes origin, journey, destinations, time spent on a page, exposure of the user to the advertising message, the user's interaction with the ad, and identification of the pages that facilitate conversions. Conversion[85] is a key element in online advertising. A conversion can be defined as the point at which an internet user or the recipient of a marketing campaign performs a desired action. This action can be a purchase, filling out a form, downloading a document or a visit behaviour model. The conversion can also be an action performed offline. Ad-centric tools are used to access data on ad performance and are generally provided by technical intermediaries (ad servers)[86]. Stakeholders often cited Médiamétrie/Nielsen's Digital AdRatings service as one of the main campaign performance measurement tools. It assesses the impact of campaigns using the Médiamétrie/NetRatings audience panel and anonymized sociodemographic data provided by Facebook (based on how Facebook users have filled their profiles). It measures the target reach and the rates of total campaign impressions served to the intended audiences. Digital AdRatings charges for its analytics services, based on the number of campaigns and the number of impressions per campaign[87].

[84] Many terms are used in reference to data analytics, including some that go beyond the analysis of data. Data text mining refers to data analytics but includes some data pre-processing or cleaning aspects and modelling considerations. Profiling refers to building profiles and categorising entities into specific profiles. Machine learning is the science that enables computers to complete tasks without being specifically programmed to do so. Algorithms give computers the ability to "learn" (i.e. gradually improve performance as they analyse data (See Introduction to MOOC on machine learning by Andrew Ng, Stanford University, and OECD (2015), Data-Driven Innovation: Big Data for Growth and Well-Being, OECD Publishing, Paris).

[85] https://www.definitions-marketing.com/definition/conversion/.

[86] See https://digitallmakers.com/mesure-digitale-essentielle/; http://analytics.fr/thematique/ad-centric/ and http://www.knowonlineadvertising.com/difference-between/site-centric-measurement-and-ad-centric-measurement/.

[87] See http://www.mediametrie.fr/internet/solutions/nielsen-online-campaign-ratings-delivered-by-mediametrie-netratings.php.

56. Ad verification refers to the various tools used to verify that ads are served in an environment that does not damage the advertiser's image, which is essential for brand safety. It also verifies that ads are actually viewed by users (measurement of visibility rate), that they are served to the chosen target (scope, context and country, audience profile, etc.) and that they have not been targeted by fraud. Ad verification tools and services have become necessary due to rampant ad fraud, the lack of transparency of certain ad serving methods and the issue of ad visibility[88]. The main ad verification firms are White Ops, Integral Ad Science (IAS), Adledge, Adloox, Meetrics, Moat, Comscore, Risk IQ, Double verify, Pixalate, Sizmek, MOAT and FraudLogiX. Some technical intermediaries such as Google DoubleClick, AppNexus and SmartAdServer have also integrated tools that offer a more basic solution for free.

ii- Data management platforms and data providers

57. Data management platforms (DMP) are used by advertisers and publishers. DMPs are connected to DSPs, SSPs, ad exchanges and ad servers in order to optimise data use across the buying and selling process.

58. For advertisers, a DMP organises, segments and exploits targets, and collects, organises and analyses consumer online and offline behaviours[89]. A DMP centralises data that can be directly accessed by advertising partners. The data integrated and organised can be first-party data on users of the advertiser's website, data purchased from third-party data providers, customer relationship management (CRM) data, mobile data, data from a messaging service provider and purchasing data[90]. For publishers, DMPs provide better knowledge of the audiences of the sites in question through sociodemographic, interest, and buying intention criteria. This in-depth knowledge helps publishers better monetise their own inventory and reassure advertisers that the audiences offered truly exist.

[88] See https://www.definitions-marketing.com/definition/ad-verification/. There are a wide range of fraudulent practices such as invalid clicks, i.e. clicks or impressions where the number is artificially increased (either manually or automatically), which does not reflect the actual interest of users, or undesirable ads or publisher sites (counterfeit goods, pages that scam users, etc.).

[89] L. Letourmy, M. Genot, C. Tanneau, P. Delahaie, *Les défis d'une transformation culturelle et managériale pour faire d'une start-up française de services informatiques un acteur global du BIG DATA*, Question(s) de management, 2/2016 (no. 13).

[90] Lauren T. Fisher, The New Display Ad Tech Stack, A Simple Guide to a Complex Topic, eMarketer, May 2016.

59. The main DMPs operating in France are BlueKai (Oracle), Adobe Audience Manager, Krux (Salesforce), Audience Center 360 (Google), Makazi, Nugg.ad, Mediamath, Lotame, Mediarithmics, Ysance, Zebestof Adform, Weborama, Nielsen Marketing Cloud, and cXense. Several DSPs include DMP services in their offerings. Some media agencies also have their own DMP, such as Havas with the Artemis platform[91]. In terms of pricing, DMP customers (advertisers or publishers) generally pay activation fees and a monthly use fee based on the volume of data stored and the volume of input and output data.

60. DMPs can often be data providers themselves, selling data gathered from their customers on their own platform. However, they also have contracts with data providers, as data is their main input.

61. Third-party data providers sell data they collect from third-party sites and supply data based on interests, geographic data and sociodemographic data, etc. Data providers include Axciom, Exelate (Nielsen), Experian, and Temelio. They often use CPM pricing or charge a percentage of the campaign bought.

62. The development of the online display and programmatic advertising sectors has led to the emergence of a range of highly segmented business services, all based on optimising the advertising process, the use of data and the use of powerful algorithms.

Key points

In its early days, online advertising resembled traditional advertising. However as the number of players grew exponentially on the different sides of the market (publishers, advertisers, audience), with the ability to personalise ads based on contexts or searches, the sector produced an increasing number of intermediaries capable of meeting specific needs. This value chain involves players such as media agencies, trading desks, ad servers, supply-side and demand-side platforms, analytics and ad verification companies, and data providers and data mining firms. Some players operate on several levels of the value chain and are able to provide integrated services.

[91] See http://www.havasmedia.com/what-we-do/artemis_alliance.

SECTION ONE: THE STATE OF COMPETITION IN THE ONLINE ADVERTISING SECTOR

63. The following section draws from the analysis of answers provided by the various players who participated in the extensive public consultation.

64. Several major firms and some smaller companies feel that competition in the sector is generally satisfactory. Facebook considers that it operates in an environment with numerous innovations, frequent new companies entering the market and significant growth. It says that it competes with numerous companies on what it calls the "attention market", to attract the attention of the public, including in offline media. In the online advertising sector, it faces competition from many players. Google also maintains that the display advertising sector is flourishing and highly competitive. It says that a large number of players operate in each business segment within the sector, which is developing rapidly with numerous innovations. With regard to significance of access to inventories in driving competition, it considers that access to the inventories of certain popular sites or platforms, especially video platforms, is just one of many channels through which advertisers and agencies allocate portions of their advertising budgets. Google considers that data is reproducible, non-rival and omnipresent ("ubiquitous goods"). It also believes that the development of programmatic advertising has improved transparency on the market by giving buyers and publishers a better understanding of performance of each ad platform, sales channel, terminal and advertising format.

65. The majority of publishers, advertisers and advertising service providers expressed opinions to the contrary, some saying that Google and Facebook form a duopoly in the online advertising sector that captures most advertising revenue and growth in the sector. Some feel that there will be less and less competition in the sector in the future. A significant number of players underlined the competitive advantage of having large audiences from the services provided to internet users. This enables Google and Facebook to sell adverting inventories and capitalise on huge volumes of data. They also pointed to the development of closed ecosystems that consolidate this position.

66. The *Autorité de la concurrence* considers that competition in the online advertising sector is unique on several fronts (1). It is also characterised by a specific dynamic, as programmatic advertising has led to the emergence of new players and new types of businesses, along with a significant number of sales and technological innovations. Similarly, targeted acquisitions and alliances between competitors, and possibilities for new businesses to enter the market or for platforms such as Amazon to expand, will likely increase competition. However, Google and Facebook hold leading positions (2).

1. THE SPECIFICITIES OF COMPETITION

67. The *Autorité* notes that the online advertising sector has several specificities in terms of competition: the role of internet users in shaping competition (a), the wide range of business models and the interdependency between players (b), the lack of transparency with regard to campaigns and the distribution of revenue (c), and the importance of data mining (d).

a) The role of internet users in shaping competition

68. The online advertising sector is characterised by the particularly important role of internet users in shaping competition, in that they are both the recipients of advertising and the sources of data, and above all, to a certain extent, they can control these parameters, by limiting data collection, ad targeting or the display of ads.

69. Firstly, internet users generate a significant portion of data used by publishers, advertisers and technical intermediaries to serve targeted ads. They can also limit the data being collected by using the tools provided by various players. When internet users limit data collection, it can affect the business of players and competition since targeted ads are likely to be sold at higher prices than non-targeted ads.

70. The online advertising ecosystem developed from the mass and widespread use of internet user data, without users being fully conscious of the extent and purposes of data collection. In its response to the public consultation, the consumer group UFC – Que Choisir underlined that *"data is often used for other purposes, of which consumers are often unaware".* Personal data protection seems to be a major concern for the French public, as shown in the recent study by the Consumer Science and Analytics Institute (*CSA*), which found that in *"2017, 85% of the French population felt concerned with the protection of their personal data in general"*[92]. The use of personal data without the prior consent of internet users, the confidentiality of personal data and the inability to delete data are some of the main fears of French people, along with pirated bank data and the protection of minors.

71. The legal framework for the protection of personal data and privacy and the conditions under which these rules are implemented by firms are key aspects in how competition on the market works. These rules govern the collection and use of data concerning individuals by setting limits and enabling users to restrict the ability of third-party companies from collecting their data, if they so choose.

[92] *La protection des données personnelles (Data protection)*, September 2017, available at: https://www.csa.eu/media/1667/1700780-csa-protection-des-donnees-personnelles.pdf

72. Several types of tools and services, such as applications and settings on mobile devices and web browsers, let users limit data collection. Facebook and Google provide their users with access to functionalities to control data collection. Web browser operators, such as Apple with Safari, also provide several tools used for similar purposes.

73. When these tools are made available to users and used by a large number of them, it can limit the implementation of certain targeting options and therefore affect the revenue of publishers and technical intermediaries. While some players have put in place ad hoc personal data control centres, not all websites can be easily configured if users want to limit data collection or targeted ads. The corresponding information is usually given in the service use conditions, but users can face a constrained choice if the website only provides the service if they accept data mining for advertising or targeted advertising purposes.

74. Secondly, users can choose to limit their exposure to ads by using ad blockers. For this opinion, a considerable portion of players indicated that the use of ad blockers significantly affected their revenue, with losses estimated at around 30%. Some considered that the major players are at an advantage due to their ability to negotiate with ad blocker publishers to receive special treatment and not have their ads blocked (this is the case for Google, which negotiated with Adblock – Eyeo – to be put on a list of authorised ads). They also have the technological and human resources to find ways around ad blocking technologies (this is the case for Facebook, which has developed techniques for rendering ad blockers ineffective).

75. To mitigate the impacts from the development of ad blockers, some advertising firms, which are not ad blocker publishers, offer functionalities and services to decrease the exposure to ads while preserving their ability to generate revenue. For example, in 2017, Google announced that it would provide internet users with an integrated ad blocker in Chrome[93], which could block ads considered as intrusive. The targeted ad formats, such as pop-up windows, autoplay videos with sound, are defined by the trade association Coalition for Better Ads, whose members include Google, Facebook, technical intermediaries, media agencies and advertising trade associations (e.g. IAB France)[94]. Google has also launched Google Contributor, a paid service currently in the test phase which lowers the number of ads displayed on partner websites[95].

[93] "*improving advertising on the web*", Thursday, June 1, 2017: (https://blog.chromium.org/2017/06/improving-advertising-on-web.html).
[94] https://www.betterads.org/
[95] https://contributor.google.com/v/beta

b) The wide range of business models and interdependency between players

76. In France, there are many publishers of online services (websites and mobile apps) whose revenue models depend on advertising. These players differ significantly in size, audience and financial resources. Publishers provide various services that meet a range of user needs and, from the publisher standpoint, are not necessarily in competition with each other. Some of them, such as television channels or newspaper publishers, generate revenue by selling other forms of advertising and paid services, while others depend exclusively on online advertising. The level and type of vertical integration also varies considerably between publishers. Most do not have an internal ad network while others can work with large general purpose ad networks or networks specialised in online advertising. Several generally large publishers operate at various levels of the value chain. They may be controlled by major e-commerce, electronic communications or computer technology groups. For example, Verizon and Altice operate in the online advertising sector as publishers, technical intermediaries and advertisers. Other groups whose main business activities are in computer technologies or e-commerce are also vertically integrated. Microsoft operates the advertising platforms linked to Bing Ads searches and social media network LinkedIn, but uses Oath, the new Verizon subsidiary that now owns Yahoo and AOL, to sell ad space for many of its services (MSN, Skype, Outlook, etc.). Amazon, whose core business is e-commerce, and which is now one of the leading companies in the IT sector, offers ad intermediation services to advertisers and publishers, and sells ads on its websites and first-party apps.

77. Players in the advertising technical intermediation sector (DSPs, SSPs, ad servers, DMPs, etc.) are also of varying sizes with contrasting vertical integration models. A significant number of businesses are smaller and may specialise in one or two programmatic advertising activities. Some IT groups such as Adobe and Oracle do not have website publishing activities but provide technical intermediation and data provision and mining services. Other players of varying size, such as Google, AppNexus and AOL provide technical intermediation services for both advertisers and publishers, as well as data collection and mining services.

78. The business models of Facebook and Google, who are both leaders in the online advertising market, differ from some of their competitors in the sector. Google and Facebook mainly provide free services to internet users and generate most of their revenue from the sale of advertising services to publishers and advertisers, similar to other companies like Twitter and Snapchat. In 2016, nearly 90% of Google revenue and over 95% of Facebook revenue was generated from online advertising[96]. Facebook and Google also have a worldwide and generally uniform presence in the online advertising sector, with the exception of a few countries (China, North Korea, etc.). These undertakings also share the fact that they grew quickly while generating extremely high sales and profit.

[96] See the annual reports of Alphabet Inc. (https://abc.xyz/investor/pdf/20161231_alphabet_10K.pdf) and Facebook Inc. (http://d18rn0p25nwr6d.cloudfront.net/CIK-0001326801/80a179c9-2dea-49a7-a710-2f3e0f45663a.pdf)

79. However, their business models and strategies differ. Google provides a wider and more diverse range of internet user services than Facebook, and its vertical integration is more advanced. Google in fact manufactures terminals, and operates the Android operating system and the web browser Chrome. It also has businesses in all advertising intermediation fields. It provides several services to advertisers (ad network, DSP, ad server) to implement campaigns and deliver ads on its own services and third-party websites and applications. In addition, it offers several services to publishers (ad network, SSP, ad exchange, ad server). Google also provides several data collection and processing services (data analytics, DMP and tag management[97]) and a range of cloud computing tools that can be used conjointly with advertising tools to process extremely large volumes of data.

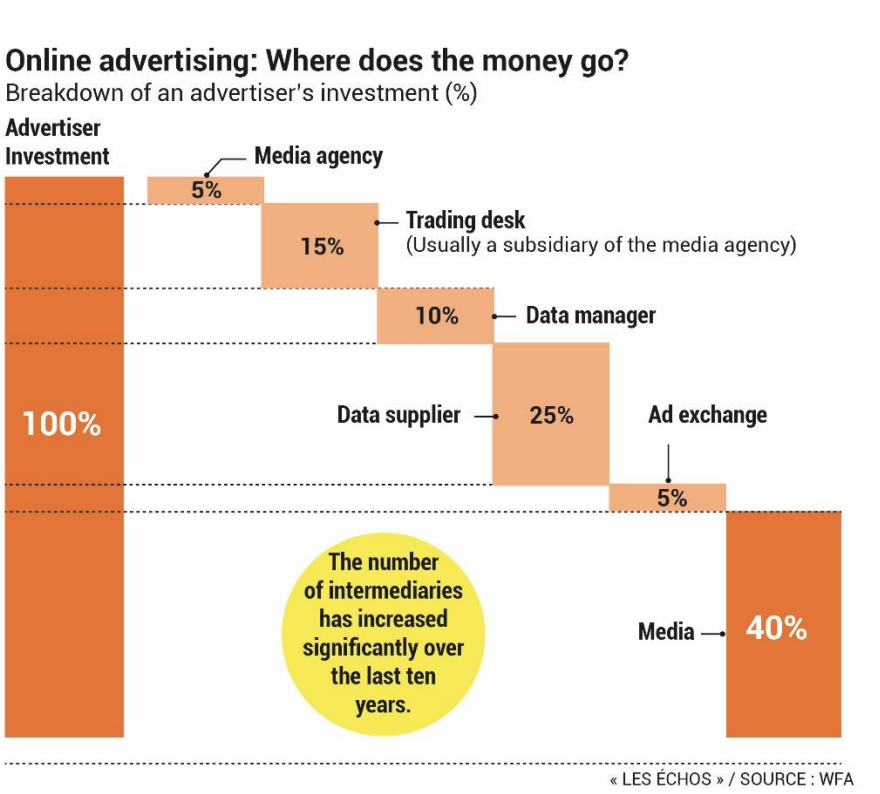
c) The lack of transparency of campaigns and unequal distribution of revenue

80. Many players expressed opinions on transparency in the advertising sector. They particularly concern data collection, the remuneration of the various intermediaries in the buying and selling process, fraud, and in general the conditions under which advertising campaigns are controlled.

81. Some players feel that online advertising helps reach a level of transparency never before achieved in the advertising sector. They also underline that in radio or television advertising campaigns, there is no way of knowing exactly how many people are reached by a campaign. Many more feel that the level of transparency of campaigns is unsatisfactory, particularly concerning the various aspects of ad verification (fraud, visibility, brand safety) and the remuneration of technical intermediaries.

82. Many observers and players who responded to the public consultation particularly feel that there is unequal revenue distribution between publishers and technical intermediaries and that the share of advertising investments from advertisers that ultimately goes to publishers is insufficient. In 2014, the World Federation of Advertisers (WFA) estimated that publishers received only 40% of advertiser investments, while intermediaries shared 60% of investments. Media agencies and trading desks take 5% and 15% of investments, respectively. DSPs, data providers and data mining services and exchange platforms take 10%, 25% and 5% of investments[98].

[97]Tags are elements added to web pages to trigger actions. Ad tags enable actions on cookies before ads are displayed or verify the display of ads https://www.definitions-marketing.com/definition/gestion-de-tags/.
[98] See https://www.wfanet.org/app/uploads/2017/04/programmatic.pdf.



83. Numerous responses to requests for information indicated that fraud seems to be a major phenomenon in the online advertising sector[99], which concerns several aspects and parameters of advertising campaigns (impressions, clicks, conversion, data mining[100]). Fraud is rampant, with the most common practices being the use of ad click bots (software simulating user clicks to generate billing) or ad stacking (several ads are displayed on the same ad space and charged to advertisers, but only the "top" impression is seen by the internet users), etc.

84. Besides fraud, there are also problems related to ad visibility and brand safety. In particular, 2016 and 2017 were marked by certain ad campaigns being shut down on YouTube in the United Kingdom following the delivery of ads on offensive videos, and several errors on the part of Facebook concerning audience measurement, which according to some commentators, over-estimated the viewing time of video ads, with aggregated data concerning the audience on pages and the time spent on its Instant Articles service[101]. Following these events, Google and Facebook announced the implementation of measures to improve the level of transparency[102] and the reliability of audience measurement.

[99] Fraud involves organised crime. According to the WFA, ad fraud could represent $50 billion by 2025 and this is a conservative estimate.

[100] See https://www.wfanet.org/app/uploads/2017/04/WFA_Compendium_Of_Ad_Fraud_Knowledge.pdf.

[101] Facebook describes instant articles as is "*a tool designed for media publishers to distribute fast, interactive articles to their readers within the Facebook mobile app and Messenger. By using the same infrastructure we use to load photos and videos, Instant Articles can load up to 10 times faster than standard mobile web articles"* (see https://www.facebook.com/business/help/825186870955247).

[102] See https://www.latribune.fr/technos-medias/publicite-pourquoi-des-annonceurs-boycottent-google-et-youtube-669530.html; http://www.lefigaro.fr/medias/2017/02/22/20004-20170222ARTFIG00161-google-accepte-d-etre-plus-transparent-sur-les-chiffres-de-youtube.php;

d) The importance of data mining

85. The business models of digital and online advertising players rely increasingly heavily on mining the data of internet users for advertising purposes. This data is generated and collected through services provided to users, publishers, and advertisers.

86. For example, search engines need to process large amounts of data concerning internet users (user searches, search history, location, language, etc.), as well as data on publishers whose websites are indexed and analysed by the search engine. Similarly, video-sharing platforms and social media networks are operated by using various types of data generated by users, such as the videos, messages and photos they post online. In the display advertising sector, large amounts of data are now capitalised on and sold indirectly via ad targeting and by tracking campaigns.

87. In the investigation for the opinion, all players underlined this essential role of data. Nonetheless, the responses pointed to the fact that other factors besides data mining also need to be taken into account in the competitive analysis. For demand-side technical intermediaries such as DSPs, competition and attractiveness of their services also depend on the publisher advertising inventories which they are able to access. In this respect, publishers and supply-side technical intermediaries are two categories of players that are able to change the conditions under which DSPs access advertising inventories. For supply-side technical intermediaries, the conditions for accessing advertisers are a key factor in competition, and ad networks and DSPs are able to change the conditions for accessing groups of advertisers.

88. As far as data mining is concerned, many advertisers indicated that it is essential for organising, implementing and assessing the effectiveness of campaigns and for gaining useful knowledge for future campaigns and marketing products and services. A majority of publishers and technical intermediaries also consider that data mining is a key factor for the competitiveness of their services and for driving competition.

https://www.lesechos.fr/27/04/2017/lesechos.fr/0212020959227_mesure-d-audience---facebook-en-appelle-a-un---big-bang--.htm.

89. For publishers, the main competition issue is to develop their audience and use their services to optimise the sale of their inventories and generate as much revenue as possible. To do this, publishers need to offer qualified audience segments, i.e. categories of individuals defined based on several criteria. Once again, this involves collecting and mining user data. Data is also essential for understanding audiences and improving services in order to increase marketable advertising inventory. For technical intermediaries, enriching their service with data is also fundamental. For example, DSPs need to use data to identify and target the various audience segments that are the most relevant for their advertiser clients.

90. Several alliances between publishers and technical intermediaries demonstrate the importance of data mining in driving competition and finding solutions that could rival with players like Google and Facebook. Some alliances ultimately aim to help publishers better promote their inventories with advertisers in the face of the competitive advantages of Google and Facebook as publishers and technical intermediaries.

91. In the technical intermediation sector, the alliance between MediaMath, AppNexus and LiveRamp, created in 2017, is worth noting. This alliance is a consortium open to other companies with the goal of developing a standard identity framework to facilitate targeting and offset the technical limitations of cookies, particularly for cross-device targeting and for buyers and vendors to identify internet users[103]. For publishers, the use of these solutions will hopefully improve the quality of audience segmentation offered to advertisers and the quality of ads displayed for internet users. This alliance followed the creation of DigiTrust in 2014, whose aim is to offer a universal ID to reduce the number of tags left on sites to gather information and which differ depending on the players.

92. In the publishing sector, particular mention should be made of the 2017 launch of Alliance Gravity, created by four founding partners (Lagardère, les Echos, SFR Group and SoLocal Group)[104] and the Skyline alliance between Le Monde and Le Figaro[105].

[103] See https://www.prnewswire.com/news-releases/appnexus-liveramp-and-mediamath-launch-technology-consortium-to-enable-people-based-programmatic-advertising-300451304.html.

[104] See https://www.lesechos.fr/23/06/2017/LesEchos/22472-084-ECH_pub-en-ligne---les-echos--lagardere--solocal-et-sfr-s-allient.htm. Negotiations are underway for investment from the L'Equipe and Bertelsmann (via M6 and Prisma Media) groups and regional written press groups (Centre France La Montagne, Le Télégramme, La Dépêche du Midi, La Nouvelle République, Sud-Ouest)

[105] See https://www.lesechos.fr/06/07/2017/lesechos.fr/030432463804_publicite-en-ligne---le-monde-et-le-figaro-s-allient-a-leur-tour.htm. The first campaigns launched via Skyline began on 7 September 2017. According to Médiamétrie Netratings numbers from May 2017, Le Monde and Le Figaro had a combined total digital audience, all media combined, of 35 million single deduplicated visitors.

93. Skyline is designed as a one-stop shop for accessing advertising inventories. It is described as a shared technological "overlay" managed through AppNexus technologies where mutual agreements can be negotiated via an ad server and programmatic sales take place through an SSP[106]. Skyline lets advertisers use targeting options but Le Monde and Le Figaro do not provide advertisers with a standardised offer in terms of data.

94. Gravity, by contrast, is a platform for selling audience segments and buying online ad space, characterised by the creation of a data-pooling alliance, created by Gravity associates and business partners[107]. It is made up of electronic communications operators (SFR, Orange, etc.), publishers (Les Echos, Lagardère Active, La Dépêche, etc.), television channels (BeIn Sport, M6, NRJ Groupe), and retailers (Fnac-Darty). Data is provided to determine the characteristics of users who use the websites of members in the alliance. Gravity defines audience segments, and in order to sell them, provides DSP technology for buying targeted space, and a trading desk service where Gravity designs campaigns and buys ad space in the name of and on behalf of its advertising clients. This initiative also demonstrates the problems publishers have in competing with the reach of certain user services (Facebook social network, Gmail email service, YouTube video sharing, etc.). The aim of the alliance is therefore to pool their ad space within a single service to achieve better reach[108]. In addition, Gravity implements a vertical integration strategy in technical intermediation, similar to Google, Facebook and Amazon. The goal is to offer a one-stop shop and limit the use of technical intermediaries to increase revenue for publishers and better manage data mining.

95. In this respect, a significant number of advertisers, publishers and technical intermediaries consider that Google, Facebook, and other players such as Amazon, have access to huge and diverse volumes of data, generated by using their own services, which have significant added value in the advertising sector. This includes data from online buying, data related to searches for products and services, sociodemographic data, geolocation data and data from services requiring users to log in with a password. Several players underlined the exclusive nature of access to this data and its use, as well as the advanced computing and algorithmic capabilities of Google and Facebook for processing large volumes of data in real time. Others indicated that by operating services in logged-in environments, these two players gather more accurate and better quality data.

[106] These tools can be used in addition to the traditional products which Le Monde and Le Figaro offer.
[107] However, these business partners (Marie-Claire, Condé Nast, Fnac Darty, and Challenges, etc.) do not have a stake in Gravity.
[108] The daily reach of this service is estimated at 44%. (https://www.lesechos.fr/04/07/2017/lesechos.fr/030427306723_pub-en-ligne---les-medias-francais-font-front-commun.htm).

Key points

Internet users are both the recipients of advertisements and often the providers of data concerning their uses or preferences, whether they are aware of this or not. This data is used to target ads and increase its value with advertisers. This dual role gives users a unique role in competition because they are able to actively decide to block ads (e.g. using ad blockers), ad targeting (with browser settings or website preferences) or the collection of their personal data (browser extensions, and when available, confidentiality settings featured on some websites). Thus, they have the ability to influence the key factors involved in competition between various players.

Although the sector has a plethora of players with varying models and organisations, two major giants stand out ahead of the rest. Google and Facebook offer seemingly free services to internet users and sell advertising services that use their users' data. Their huge audiences and inventories, and the extensive range of third-party websites on which they are able to place their ads or collect data are what make them different.

The increasing number of intermediaries and the power of some of them raise questions about transparency from the standpoint of advertisers and publishers, who also have concerns about revenue distribution in the intermediation chain.

From one end of the chain to the other, information and data have become strategic assets in a race to achieve ever increasingly effective targeting and optimise inventories. To compete with the players who hold and use the most data, alliances have been created between publishers, as is the case for Skyline, or between players operating at various levels in the value chain, as is the case for Gravity.

2. THE POSITIONS OF GOOGLE AND FACEBOOK

96. Many players who responded to the *Autorité's* public consultation feel that Google and Facebook benefit from their leading positions in the online advertising sector. Information submitted by these two firms confirm that if combined, they generate the majority of the sector's sales in France (a). This can be explained firstly by the fact that Google and Facebook provide the services most used by internet users, with audiences growing steadily since they were launched (b). This enables Google and Facebook to sell much larger volumes of ad space than their competing publishers, and attract an extremely high number of advertisers. In addition, many third-party publishers that do not directly sell their advertising inventories to advertisers use Google, and to a lesser extent, Facebook advertising intermediation services in order to reach advertisers who use their advertising tools to deliver advertising campaigns (c).

a) Google and Facebook generate the majority of the sector's sales

97. To assess the influence of Google and Facebook, the *Autorité* used the information they provided on their revenue in the French market[109], calculated based on advertisers' billing addresses, and on SRI and IAB estimates on the overall size of the market[110]. This assessment

[109] In their responses to requests for information, players provided estimates of their revenue from the French market using different methods. In addition, not all players were surveyed and responded to the public consultation.
[110] Figures used in the introduction of this opinion.

necessarily contains some imprecision due to the different methods used to geographically allocate revenue, but still gives an idea of the positions of both firms.

98. According to these various sources, in 2016, Google generated around half of all revenue in the online advertising sector in France, with three times more net revenue than Facebook, although Facebook is growing faster.

99. According to information provided by the players who responded to the *Autorité*'s consultation, apart from Google and Facebook, no companies generate more than 10% of revenue share in the online advertising sector in France. Some publishers and technical intermediaries generate significant revenue from online advertising, but much less than Google and Facebook. A number of players see little revenue growth and in some cases, their revenue has dropped.

100. The findings are the same on a worldwide scale, as shown in the eMarketer assessment below. The study considers Google as the global leader in the sector, far ahead of Facebook with revenue share at 33% in 2017. The next three competitors are Chinese firms (Alibaba, Baidu, Tencent), which are not present in the French market. Google's leading competitors in France, apart from Facebook, have less than 3% of net revenue share. They are Microsoft and Yahoo, which are mainly active on the search advertising market.

Net Digital Online Ad Revenue Share Worldwide by Company, 2016-2019[111] (forecasts)

Net Digital Ad Revenue Share Worldwide, by Company, 2016-2019
% of total and billions

	2016	2017	2018	2019
Google	32.8%	33.0%	32.4%	32.3%
Facebook	14.1%	16.2%	17.7%	18.7%
Alibaba*	6.6%	7.8%	9.0%	9.2%
Baidu	4.3%	4.2%	4.3%	4.5%
Tencent	2.2%	3.0%	4.0%	4.9%
Microsoft (Microsoft and LinkedIn)**	2.3%	2.7%	3.1%	3.5%
Yahoo	1.6%	1.4%	1.2%	1.1%
Twitter	1.2%	1.0%	0.9%	0.9%
Amazon	0.7%	0.8%	0.9%	1.0%
Verizon (AOL and Millennial Media)	0.7%	0.7%	0.6%	0.5%
Pandora	0.6%	0.5%	0.5%	0.5%
IAC	0.5%	0.4%	0.3%	0.3%
Sina	0.4%	0.4%	0.4%	0.5%
Snapchat	0.2%	0.4%	0.7%	1.1%
Sohu.com	0.5%	0.4%	0.4%	0.3%
Yelp	0.3%	0.3%	0.3%	0.3%
Other	31.1%	26.7%	23.2%	20.4%
Total digital ad spending (billions)	**$190.57**	**$223.74**	**$259.84**	**$297.41**

*Note: includes advertising that appears on desktop and laptop computers as well as mobile phones, tablets and other internet-connected devices, and includes all the various formats of advertising on those platforms; net ad revenues after company pays traffic acquisition costs (TAC) to partner sites; *includes ad revenue from Alibaba's core commerce operations and Youku Tudou; **includes ad revenue from LinkedIn*
Source: company reports; eMarketer, March 2017

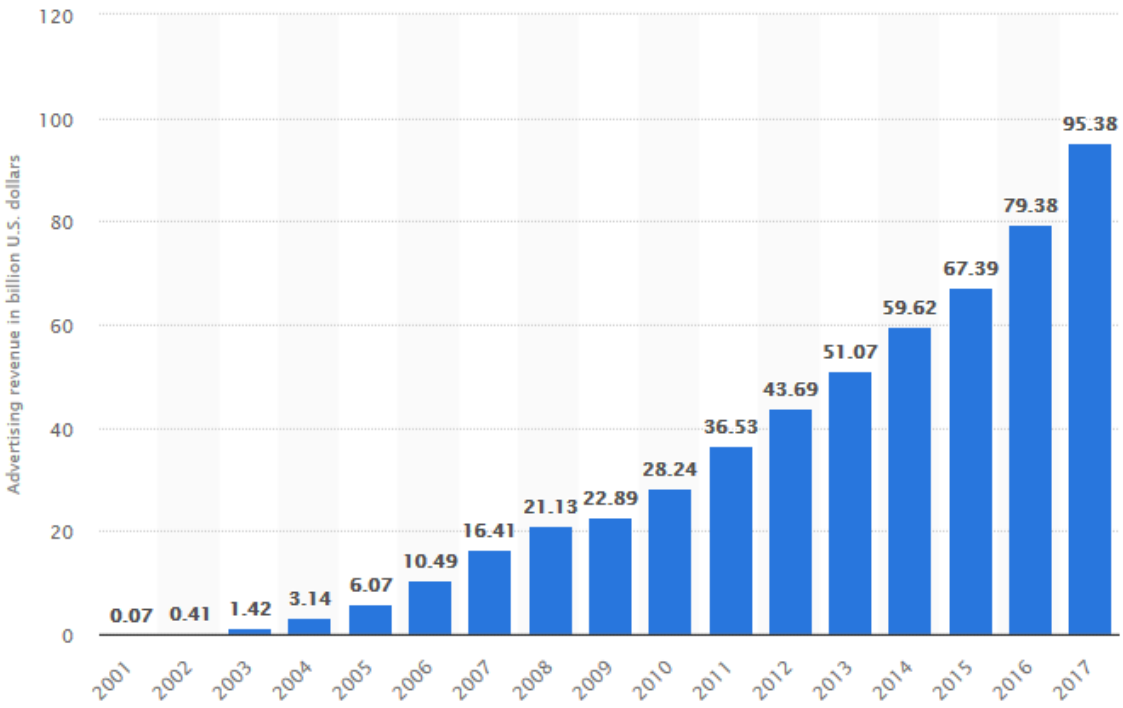
224290 www.eMarketer.com

101. Since the early 2000s, the digital advertising sector has grown rapidly as online uses have diversified and increased.

[111] Source: eMarketer.

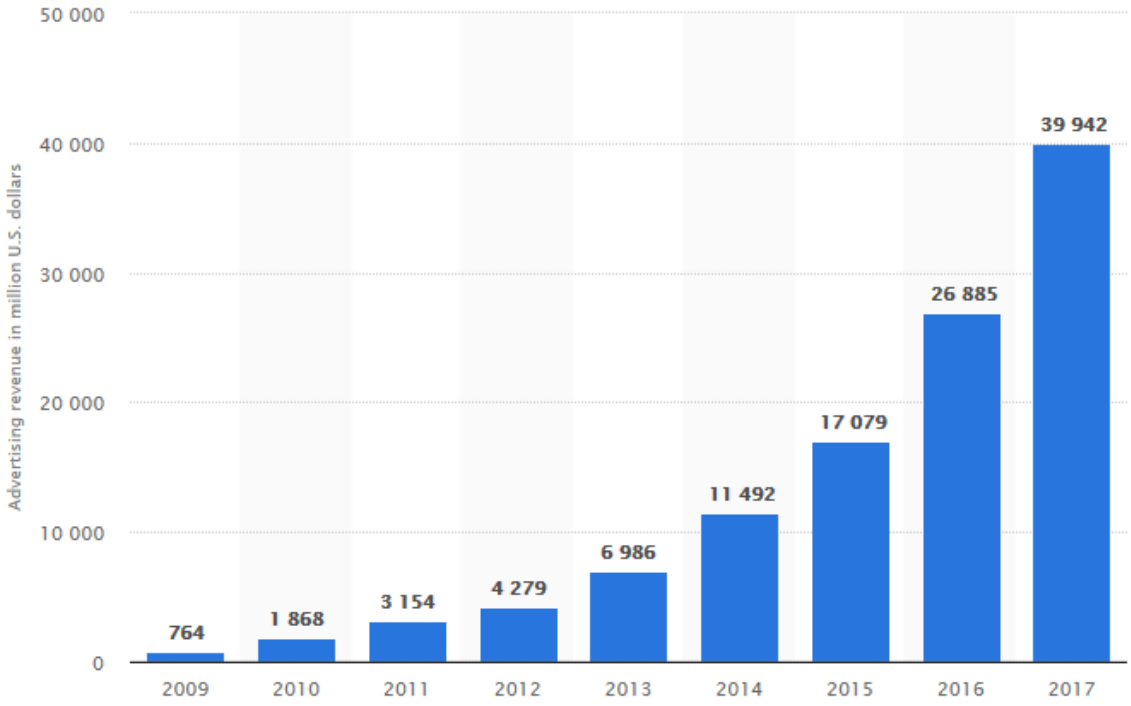
102. This growth mainly stems from the significant increase in Google and Facebook's net revenue, which constitute approximately 90% of Ad revenue. The following figures show this unprecedented growth at this level of revenue and market dynamic.

Google's annual revenue worldwide from 2002 to 2017[112]



Facebook's annual revenue worldwide from 2009 to 2017[113]

[112] Source: Statista (see https://www.statista.com/statistics/266206/googles-annual-global-revenue/).
[113] Source: Statista (see https://www.statista.com/statistics/268604/annual-revenue-of-facebook/).



103. In 2017, Google and Facebook's ad revenue grew significantly. Facebook's ad revenue jumped by 49%, to reach almost $40 billion[114], and Google's grew by 20% to exceed $95 billion[115]. Over the last six years, Google and Facebook's revenue increased by $59 billion and $37 billion respectively. Google and Facebook's financial performance is particularly exceptional in terms of profitability. Globally, in 2016 Facebook's net earnings were $10.1 billion, which represents around 37% of the company's global revenue ($27.6 billion)[116].

104. SRI estimates that in France, search advertising and social media advertising for these two main players made up 92% of online advertising growth in 2017[117].

105. The two companies also both have sustained acquisition strategies, which contributed to the growth of each of their revenue. Since the early 2000s, Google has acquired around 200 companies in various technology sectors. These companies, most of which are American, and their assets have been integrated in order to improve its services for publishers, advertisers, companies and internet users. Google's largest acquisition was Motorola in 2013, but several other major acquisitions have had a considerable influence on several of its positions on advertising markets: Applied Semantics (2001), YouTube (2006), DoubleClick (2008), AdMob (2009) and AdMeld (2011). As for Facebook, since 2005, it has acquired around sixty companies, including two user service providers, including Instagram, acquired for $1 billion in 2012, and WhatsApp, acquired for $19 billion in 2014. In the technical intermediation sector,

[114] https://investor.fb.com/investor-news/press-release-details/2018/Facebook-Reports-Fourth-Quarter-and-Full-Year-2017-Results/default.aspx
[115] https://abc.xyz/investor/pdf/2017Q4_alphabet_earnings_release.pdf
[116] Facebook's annual report to the United States Securities and Exchange Commission, available via the following link:
http://d18rn0p25nwr6d.cloudfront.net/CIK-0001326801/80a179c9-2dea-49a7-a710-2f3e0f45663a.pdf
[117] Figure taken from the 19th SRI Online Advertising Observatory Study for 2017.

Facebook has made few notable acquisitions, except in 2013 when it acquired Atlas, an ad server that now provides services for collecting and mining internet user data. A large number of Google and Facebook acquisitions over the last two years have targeted artificial intelligence, data science, computing, virtual reality and certain cutting edge technologies, such as iris recognition.

106. In the past three years, Google and Facebook competitors have also made significant acquisitions in the online advertising sector. These acquisitions improve the services of some large French and foreign groups but they do not significantly change the balance of competition. In the online services sector, the most significant is Microsoft's acquisition of the social network LinkedIn in 2016, allowing Microsoft to play a new role in the search advertising sector via Bing Ads, and in social media advertising. The acquisition of AOL and Yahoo by Verizon in 2015 and 2017 are also worth noting. In the technical intermediation sector, several major acquisitions have been made. Some French SMEs have been bought out, such as AlepHD (specialised in optimised bidding) by AOL in 2016, and Teads (specialised in video) and Audience Partners (data specialist) by Altice. On a global scale, TubeMogul, a DSP specialised in video advertising, was acquired by Adobe in 2016, and Oracle bought the DMP BlueKai in 2014.

b) The user services with the largest audiences are provided by Google and Facebook

107. The volume of ad space available online is determined by how large a service's audience is, in that ad spaces are created when users and their browsers open websites and mobile apps. Thus, the main key factors for measuring the influence of advertising players include:

- the reach of a website, which corresponds to the **number of distinct users over a given period of time** (the daily reach is considered more important than the monthly reach);
- the exposure of each user of a site is therefore based on two factors: **the number of impressions per page** (viewed surface), and **the number of pages visited by the user during a session on the site.** Players generally feel that the first impression during a visit has more value than ensuing impressions. The more users become loyal to a site, the more they visit it and increase its inventory (more impressions).

108. Globally, as well as in France, the services of Google and Facebook are the most used and have the highest audience figures and the greatest volumes of ad impressions.

109. According to Médiamétrie, Google is the group with the highest audience in France, with 44.9 million unique visitors per month in August 2017, ahead of Facebook (40.8), Microsoft (35.6) and the Figaro/CCM Benchmark group (30.8)[118]. The search engine Google Search is the service with the most unique visitors per day (28.9 million), again ahead of Facebook (23.8 million). YouTube (which belongs to the Alphabet group, Google's parent company) is in third place with 10.9 million unique visitors per day. Amazon has 3.5 million unique visitors per day, which is less than Instagram (5.1 million). The leading French players are Orange (7.9 million

[118] Source: Médiamétrie (see http://www.mediametrie.fr/internet/communiques/audience-internet-global-en-france-en-aout-2017.php?id=1758).

unique visitors per day), Leboncoin (4.3 million), Le Figaro (2.1 million), Le Monde (1.9 million), Pages Jaunes (1.4 million), and Cdiscount (1.4 million)[119].

110. Google provides a range of over 70 products and services to internet users, to *"get answers"* (Google Search, Google Maps, Translate, Chrome), *"watch, listen and play"* (YouTube, Google Play Musique, Chromecast, Google Play Movies & TV), *"stay connected across screens" (*Android Phones, Android Wear, Chromebook, Android Auto), *"stay in touch"* (Gmail, Google Allo, Google Duo, Google+, Google News), *"organise your stuff"* (Google Photos, Contacts, Google Agenda, Keep) and *"work smarter"* (Docs, Sheets, Sides, Drive)[120].

[119] Source: Médiamétrie (see http://www.mediametrie.fr/internet/communiques/audience-internet-global-en-france-en-aout-2017.php?id=1758).
[120] See https://www.google.com/about/products/.

111. Google's main services, which are inventories for search advertising and display advertising, are the leading services on their respective markets. On the all-purpose search engine market, Google was used for approximately 90.6% of searches in 2016, compared to 5.2% and 2.5% respectively for Bing and Yahoo Search. The search engines MSN (linked to Bing) and DuckDuckGo generated 0.9% and 0.6% of searches[121]. Google Maps and Google Play, which are also used to deliver ads on the Google Search Network[122], also lead the map services and app store markets[123]. In France, Gmail is the most widely used email service on mobile terminals, with some 15 million unique users, far ahead of Orange Mail (3.5 million), Outlook (3.3 million), Yahoo Mail (1.7 million) and SFR Mail (1.3 million)[124]. YouTube is also the leading video platform in France, ahead of Facebook and Dailymotion, with over 20 million unique video users per month and over one billion videos viewed per month on computers[125]. In addition, Google services have grown at an incredible pace, as is the case for Gmail and YouTube. For example, Gmail had nearly 350 million users at the start of 2012, and 1 billion in early 2016[126]. It should also be underlined that the audience of Google websites and services is likely to benefit from vertical integration with Android and Chrome services, which were the leading operating system and leading web browser in the world[127] in 2017 in terms of number of installs.

112. Facebook's services are also characterised by the size and growth of their audiences. In late 2017, Facebook had 1.4 billion daily users and 2.13 billion monthly users worldwide[128], up from 1.03 billion daily users and 1.59 billion monthly users two years earlier. The social media network Instagram (owned by Facebook since 2012), which has been selling advertising space since 2015, has also grown significantly. In two years, the number of users has doubled, reaching 800 million monthly users worldwide[129]. With some 500 million daily users, Instagram's audience alone was significantly higher than Snapchat in 2017[130]. In France, Facebook and Instagram totalled nearly 29 million daily users in the month of August 2017. The communication service WhatsApp has a rapidly growing user base, reaching 1.3 billion monthly users in July 2017, compared to 900 million in September 2015[131]. Facebook's services also dominate in the social media and instant messaging sector. With 14.4 million unique mobile visitors per month in France for Facebook Messenger and 11.9 million for WhatsApp,

---

[121] Source: StatCounter (see http://gs.statcounter.com/search-engine-market-share/all/france/2016).
[122] Google presents the Search Network as "[…] *a group of search-related websites and apps where [advertisers'] ads can appear. Ads […] can appear beside […] search results on Google Play, Google Shopping, and Google Maps [...] [and] with search results on websites of Google search partners. (see* https://support.google.com/adwords/answer/1722047?co=ADWORDS.IsAWNCustomer%3Dfalse&hl=en).
[123] See https://marketingland.com/facebook-google-dominated-smartphone-screens-past-three-years-215913 and http://www.lechorepublicain.fr/economie/innovation/2017/09/07/google-maps-est-l-application-de-cartographie-preferee-des-francais_12541117.html.
[124] Source: Médiamétrie (see http://www.mediametrie.fr/internet/communiques/l-audience-internet-mobile-en-france-en-aout-2017.php?id=1753).
[125] Source: Médiamétrie (see http://www.mediametrie.fr/internet/communiques/l-audience-video-ordinateur-en-france-en-mai-2017.php?id=1706).
[126] Source: Statista (see https://www.statista.com/statistics/432390/active-gmail-users/).
[127] See http://www.journaldunet.com/ebusiness/internet-mobile/1084127-part-de-marche-des-os-mobiles-en-france/ and https://www.statista.com/chart/10402/worldwide-browser-market-share-by-platform/.
[128] Source: Facebook (see. https://s21.q4cdn.com/399680738/files/doc_financials/2017/Q4/Q4-2017-Earnings-Presentation.pdf).
[129] See http://blog.instagram.com/post/160011713372/170426-700million and https://www.blogdumoderateur.com/chiffres-instagram/.
[130] On daily Snapchat users, see https://www.statista.com/statistics/545967/snapchat-app-dau/.
[131] Source: Statista (see https://www.statista.com/statistics/260819/number-of-monthly-active-whatsapp-users/).

Facebook is far ahead of Skype (2.3 million) and Google Hangouts (1.9 million)[132]. Twitter, which is Facebook's main social media competitor, attracted 4.05 million unique visitors per day in September 2017, while Facebook had 24.7 million and Instagram 4.8 million[133].

113. The growth of these services can be explained by several competitive advantages that Google and Facebook have.

114. Their services benefit from strong direct and indirect network effects, which result from their service models, as well as their prominent positions. This is particularly the case for Google Search, YouTube, Google Maps, Facebook, Instagram, Messenger and WhatsApp. These services are also interdependent. For example, Google Search provides access to Google Maps and YouTube, and Facebook gives access to Messenger. Similarly, users need a Google or Gmail account to benefit from all the functionalities of YouTube and Google Maps.

Network effects[134]

"Network effect" refers to the way in which the use of a good or service by a given user influences the value of the product to other users.

These effects are direct when the benefit users get from a group depends on the number of other users in the same group who use the service. Telecommunication networks are a classic example of this. The more people use them and the more they can be reached through them, the more useful the networks are.

Network effects can also be indirect when the benefit which users of a group get from the service depends on the number of users of the service who belong to a group different from their own. An example of this would be an online dating platform.

Direct and indirect network effects can also coexist in some cases. For example, the value of a social media network for a given user is likely to grow with the total number of users of the network (direct network effects). At the same time, the more users a social network has, the higher value it has for advertisers (indirect network effects). However, it should be underlined that indirect network effects are not necessarily symmetrical. For example, the value of a social media network for advertisers increases with the number of users. However it is unsure and even unlikely that users value a higher number of advertisers or ads, although they may appreciate the various investments made by the social network to improve its services thanks to ad revenue. The impact of network effects needs to be assessed on a case-by-case basis as their absolute importance, such as the way they change as new users are conquered, can vary depending on the service in question.

Network effects can have differing impacts on competition. They are often cited with the idea of a snowball effect that can increase market concentration. They are also considered as a potential obstacle for entry onto the market and therefore as a factor that limits competition. In this context, data collection and mining can intensify network effects

[132] Source: Médiamétrie, August 2017 (see http://www.mediametrie.fr/internet/communiques/l-audience-internet-mobile-en-france-en-aout-2017.php?id=1753).

[133] Source: Médiamétrie (see http://www.mediametrie.fr/internet/communiques/audience-internet-global-en-france-en-septembre-2017.php?id=1772).

[134] Data and its implications for competition law, 10 May 2016, *Autorité de la concurrence* and Bundeskartellamt, available at the following address:
http://www.autoritedelaconcurrence.fr/doc/rapport-concurrence-donnees-vf-mai2016.pdf

when the increase in the number of users of a company enable it to gather more data than its competitors, and increase the quality of its products or services and ultimately its market share.

Conversely, network effects can also benefit new companies entering the market if they are able to attract a high number of users for reasons other than their size (e.g. thanks to an innovative functionality), thus increasing their attractiveness to other users thanks to network effects. Network effects can therefore stimulate competition by giving new entrants the ability to quickly increase their user base. Depending on different factors, such as fixed costs or the differences in companies' market share, network effects can either increase or curb competition.

115. Network effects and the interdependency of services are reinforced by many innovations and the regular addition of new functionalities. Many website publishers and third-party content providers also contribute to the development of service audiences by integrating functionalities or content for Google and Facebook services on the pages of their websites. Publishers can integrate cards, videos and share buttons that create links between Google and Facebook services and these third-party websites.

116. Finally, internet users contribute to the audience growth of some services by posting content online. Unlike traditional websites, such as audiovisual or music-listening sites (Deezer, Spotify), the audiences of Facebook and certain Google services such as YouTube, are developed by using content that is mainly posted online by internet users. In some cases, this content can also be monetised through ads.

c) The most widely used advertising services are provided by Google and Facebook

117. The prominence of Facebook and Google in the revenue of the online advertising sector also results from specific competitive advantages in providing advertising services to advertisers and publishers.

118. Firstly, Google and Facebook are able to provide advertisers with access to both the advertising inventories of the services that they publish and own with the largest audiences, and access to the inventories of third-party websites and applications (i). Secondly, Google and Facebook have data mining capabilities that are superior to most of their competitors (ii) and offer vertically integrated services, from publishing activities to the sale of ad space (iii). Finally, in the specific case of Google, its presence in both the search advertising and display advertising sectors is likely to give it an additional competitive edge (iv).

i- The sale of first-party and third-party advertising inventories

119. Google and Facebook have competitive advantages due to their ability to sell the ad space of their own user services, and the advertising inventories of many third-party website and app publishers. Other companies, such as Verizon and Amazon, offer advertisers access to both

first-party and third-party inventories. However, the audiences of these players' first-party services are significantly smaller than those of Google and Facebook's services[135].

120. When advertisers deliver campaigns via Google and Facebook's trading desks, they are usually automatically activated to serve ads on Google and Facebook's first-party inventories and on those of third-party sites[136]. Therefore, when an advertiser sets up a campaign on the Google Display Network[137], the ads are delivered on Google-owned websites, such as YouTube and Gmail, and on third-party websites that use publisher advertising services such as AdSense[138].

121. For search advertising, Google's first-party inventories include Google Search, Google Maps and Google Play, and for display advertising, mainly YouTube, Gmail and Blogger. Advertisers also have access to the inventories of websites and apps that use Google services for publishers, such as AdSense, AdMob and DoubleClick. AdSense has two services, AdSense for Content (AFC) and AdSense for Search (AFS). AFC lets publishers place ads on website content pages, whereas AFS is a service that lets publishers use a search engine on their site that sends key words to Google in order to display relevant ads on the publisher's search results pages.

122. In view of public information and information compiled for this opinion, it appears that the number of publishers using AFC is rising significantly on a worldwide scale and in France. In 2016, Google paid out $11 billion to publishers across the world[139]. Google says that 1 million apps across the world use AdMob, its platform for delivering ads on mobile apps[140], which seems to represent a significant portion of the apps available on Apple's App Store and Google's Play Store (2.2 million and 3.3 million apps respectively in their stores in September 2017[141]). Google also indicates that $3.5 billion was paid out to app developers using AdMob[142]. DoubleClick is a set of technical intermediation services for publishers and advertisers. DoubleClick for Publishers (DFP) is the main ad server for delivering and managing ads on mobile apps, websites and online games[143]. DoubleClick Ad Exchange (AdX) is an ad exchange that handles indirect sales of ad space and also offers SSP functionalities. DoubleClick AdX is connected to advertisers who use AdWords and Google's DSP, DoubleClick Bid Manager (DBM), as well as most DSPs competing with DMB. Advertisers can also use DoubleClick Campaign Manager (DCM), the ad serving service for advertisers,

---

[135] In France, Amazon attracts 3.7 million unique visitors per day while Google and YouTube have 30.3 million and 11.6 million unique visitors respectively, i.e. 11 times the audience of Amazon. With 4.8 million unique daily visitors, Instagram's audience in France is larger than that of Amazon. Yahoo sites have a combined audience of 5.5 million unique daily visitors.
Source: Médiamétrie (see http://www.mediametrie.fr/internet/communiques/audience-internet-global-en-france-en-septembre-2017.php?id=1772).

[136] See https://support.google.com/adwords/answer/2404191?hl=en.

[137] Google says that its Display Network *"is comprised of Google properties like YouTube, Google Finance, Gmail, and others that offer display advertising, as well as a network of millions of partner sites and mobile apps on which* [advertisers can place their] *ads. "Through the Google Display Network, advertisers can access display ad inventory from publisher partners in* [the] *Google AdSense program and the DoubleClick Ad Exchange".*
(see https://support.google.com/partners/answer/2740623?hl=en).

[138] Except in the case where advertisers use managed targeting options.

[139] See https://blog.google/topics/journalism-news/more-ads-transparency-publishers/.

[140] See http://googleadsdeveloper.blogspot.fr/2017/05/google-io-new-ways-to-put-users-at.html.

[141] Source: Statista (see https://www.statista.com/statistics/263795/number-of-available-apps-in-the-apple-app-store/ (in January 2017) and https://www.statista.com/statistics/266210/number-of-available-applications-in-the-google-play-store/ (in September 2017)).

[142] See http://googleadsdeveloper.blogspot.fr/2017/05/google-io-new-ways-to-put-users-at.html.

[143] Source: Datanyze (February 2017).

and DoubleClick Search, a platform that manages campaigns on several search engines (Google, Bing).

123. Facebook's model is similar to Google in that it also lets advertisers that use its ad buying platforms deliver ads on its first-party inventories (Facebook and Instagram, and indirectly on messaging tools if ads are sent by users), and on third-party publisher inventories that use Facebook Audience Network (FAN). Facebook recommends that advertisers place ads on two types of inventories: first-party inventories (Facebook, Instagram, Messenger) and third-party inventories (via the Facebook Audience Network). This gives its *"delivery system more flexibility"* to achieve *"more and better results".* Ad placement on two types of inventories is presented as the most effective solution for advertisers. Facebook recommends that its advertisers enable *"automatic placement, which tells us to find the most relevant optimization events available across all of these placements".* The use of automatic placements on all inventories is likely to lower the *"overall cost"* of campaigns[144].

124. Facebook's position in providing ad technical intermediation services to publishers is less developed than Google, which has been on the market the longest and consolidated its position with the acquisition of DoubleClick in 2008. The revenue generated by Facebook Audience Network is currently limited as most of Facebook's ad revenue comes from selling space on its own services. In this regard, like Google, Facebook also lets publishers place and monetise content directly on its platforms. For example, Facebook offers news publishers its Instant Articles service. YouTube also provides similar services to video publishers that combines uploading on the platform and monetising ad space[145]. Facebook has a less developed presence than YouTube on the third-party video monetisation segment because its service is very recent.

ii- Data mining capabilities

125. For the consultation, a large number of players made it known that the possibility of collecting and mining large datasets is an important aspect of competition, and that Google and Facebook have significant competitive advantages. Some stakeholders feel that the data they collect has a *"rival character"*[146] due to its volume, variety, velocity and the ability to be processed in real time.

126. Google indicated that it considered that being in the possession of a large volume of data is not a long-term obstacle or competitive advantage, and that data used for ad targeting is for the most part available to all players, and that data is reproducible and non-rival. According to Facebook, *"data does not prevent the launch or growth of new competitors",* and companies *"have several ways of obtaining data".* It states that its *"competitors can and do collect data directly from users"* and that *"large and diverse datasets are available under license".*

[144] Cf. https://www.facebook.com/business/help/ipad-app/202838606926630.
[145] Cf. https://support.google.com/youtube/answer/72851?hl=en&ref_topic=6029709 et https://support.google.com/youtube/answer/94522?hl=en.
[146] The study on data and competition by the *Autorité de la concurrence* and the Bundeskartellamt states that data is *"non-rival goods in the sense that someone having and using a dataset does not prevent others, be they competitors or not, from having and using the same data as well (provided they can access them)"* (Competition Law and Data, 10th May 2016), which does not mean that datasets are necessarily reproducible.

127. Google and Facebook collect data from their proprietary services but also from third-party sites which use their advertising services, buying and selling platforms and data collection and analysis tools.

128. While Google and Facebook supply internet users with several tools that limit data collection and manage the display of ads[147], their proprietary services nonetheless generate unparalleled volumes of data, due to the number of users of their services, but also because of the nature of their services. Social media networks, search engines, video-sharing platforms and map services are services via which internet users as well as third-party publishers supply high volumes of diverse data. Furthermore, Google and Facebook have developed "logged-in" environments where users log in for access to services and provide a high volume of sociodemographic and behavioural data.

129. For this opinion, Google indicated that its first-party data is generated through the use of its services, which for the most part, are the leading services on their respective markets. This data comes mainly from Chrome, Google Search, Google Play, Google Shopping, Gmail, Google+, Google Maps, YouTube and Google Video Search, and is collected via Android (smartphones, smart TVs, internet provider boxes, smart watches and car information systems). It also comes from the wide range of services provided by Google and data collected via Chrome OS systems, Chromecast systems, and personal assistants like Google Home, which all collect personal and use data, which are usually connected to a Google ID. Google specifies that when people using its services are logged in via a Google account, they provide Google with sociodemographic and personal data[148]. Google also indicated that it collects large amounts of other data generated by users who use its services and may or may not be logged in. This includes standard information communicated by the web browser to the website host (when a web browser is used)[149], user preferences and other settings, geolocation data, cookie information, data concerning the terminal (e.g. bugs, technical settings), and mobile device data (if a mobile app is used)[150]. Facebook's first-party data comes from Facebook, Instagram, Messenger and Whatsapp. Facebook stated that it collects sociodemographic data from user profiles, user activity and data related to the involvement of users with ads. This user engagement is measured by the fact that the user actually saw the ad, or deleted it. Instagram and Whatsapp also collect profile and activity data.

[147] They can manage and secure their personal information, delete specific information that they do not want associated with their account, or browse in "private mode" so that some anonymity rules are applied.

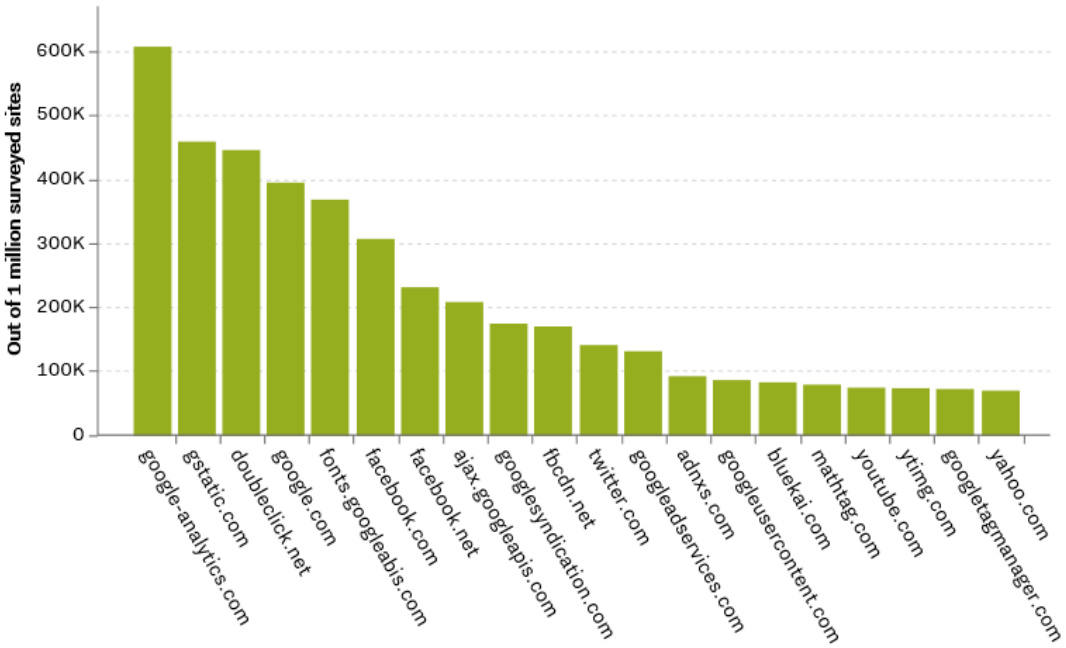
[148] This is data such as contact information (name, address, email address, telephone number), login data (username and password), demographic data (gender and date of birth), pieces of ID, bank card or bank account numbers, received and sent mail, contacts, events, uploaded photos and videos, etc.

[149] IP address; URL, including reference terms; time and date; browser characteristics, including browser and operating system version, depending on the user; data on content delivered/provided to the user (ads, pages visited, etc.).

[150] Device model and operating system version; device ID (IMEI – International Mobile Equipment Identity); unique advertising identifier such as the Android ad identifier or the Identifier for Advertisers (IDFA) depending on the device's operating system; mobile network and operator; the battery condition and capacities; purchases via apps / purchases integrated from an iOS; call history information, such as the telephone number, incoming call telephone numbers, call transfers, the date and time of calls, the length of calls, text message sending, type of calls (only for Google Voice and Hangouts).

130. Google and Facebook also collect massive volumes of data generated on third-party sites that can also be used for advertising campaigns. Facebook can collect information on user activity on third-party services when publishers install pieces of code on their website or app, such as social modules[151] or Facebook pixels[152]. These tools enable Facebook to collect data on browsing history, user actions, their IP address, browser, etc. Google also uses several data collection technologies on third-party websites. First, when a user visits a third-party site via Chrome or a device with an Android operating system, Google is able to collect user data via these services. Second, when a user visits a third-party website that use Google advertising services, social modules (such as the +1 button[153]) or analytics tools (Google Analytics), the user's browser automatically sends Google information that is similar to the information that Google saves in its own servers when the user visits its sites.

131. According to a 2016 study conducted by researchers at Princeton University on one million sites (the top sites were selected)[154], it appears that Google, and Facebook to a lesser extent, hold leading positions in third-party data collection. Although there are many third-party tracking tools, Google, Facebook, Twitter and AppNexus (via AdNexus) are the only undertakings to operate third-party tracking tools on over 10% of sites. The diagram below shows the biggest 20 third-party data collection domains on the web[155]:

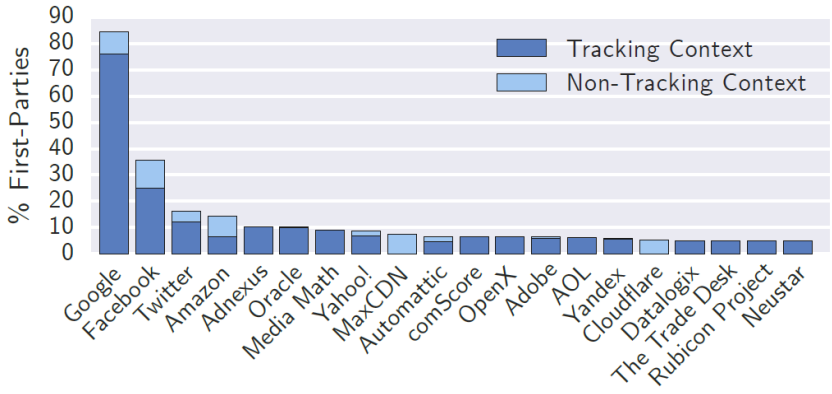


[151] Social modules, (Like button, Share button, integrated publications, and comment sections) allow content from other websites or apps to be shared with other members of Facebook.
[152] The Facebook pixel is an analytics tool for publishers to check that ads are delivered to the right people, to develop ad audiences and use Facebook advertising services for publishers wanting to display ads on their websites.
[153] Like Facebook's social modules (e.g. the Like button), this tool can be integrated into websites in order to recommend pages.
[154] Steven Englehardt, Arvind Narayanan, Online Tracking: A 1-million-site Measurement and Analysis (see http://randomwalker.info/publications/OpenWPM_1_million_site_tracking_measurement.pdf).
[155] See https://www.theverge.com/2016/5/18/11692228/google-facebook-web-tracking-survey-advertising.

132. Google operates twelve of the top twenty third-party data tracking and collection tools. These tools can be used for ad targeting, including cross-device targeting and conversion tracking. Some cookies are present on a high number of websites. Google Analytics cookies, which are used for audience analytics, targeting and ad conversion tracking concern 70% of websites examined in the study. DoubleClick cookies, which are also used to serve ads, are present on almost 50% of sites. Facebook tracking tools are used by around a third of websites, less than Google tools. Google and Facebook's main competitor is Twitter, followed by AdNexus (AppNexus), whose data collection tools are present on approximately 10% of websites.

133. According to the same study, which in this case measure by organisation (rather than by distinct entities that can belong to the same organisation), Google, Facebook, Twitter, Amazon, AdNexus (AppNexus) and Oracle are the only entities with global presence on over 10% of websites[156]:

[156] See http://randomwalker.info/publications/OpenWPM_1_million_site_tracking_measurement.pdf, Section 5.1, page 8.



134. As indicated above, data collected from first-party or third-party services is used to offer targeting options, but also to analyse the implementation of campaigns and their performance.

135. In general, Google and Facebook, along with some of their competitors provide advertisers with several types of targeting, including contextual targeting, topic targeting, location targeting, interest targeting, behavioural targeting, geolinguistic targeting, sociodemographic targeting and time-based targeting. These targeting options can be combined[157]. These different forms of targeting are based on the collection and analysis of various categories of data: data on individuals (e.g. interests, purchases, browsing, age, gender, etc.), data on products (e.g. the advertiser's product catalogue), data on websites and applications (e.g. advertising space, structures and themes of websites), external data (time, weather), and data on advertising campaigns (e.g. origin of conversions).

136. In this regard, according to a large number of stakeholders, the data with the greatest interest for providing ad services that Google collects are user searches on Google services (Google Search, Google Maps, Google Play, YouTube), websites visited, videos watched, personal information provided and geolocation data. In addition, until June 2016, Google used the content of Gmail emails for ad targeting. As for Facebook, data of particular importance for ad targeting is sociodemographic data provided by users, and data concerning their interests, contacts, moods, etc.[158].

137. The *Autorité de la concurrence* considers that in terms of advertising targeting, Google and Facebook have competitive advantages which are linked to the volume and variety of data (recent or accumulated data), but also and indissociably, to the size of the advertising inventories made available to advertisers. The combined access to data and inventories offer advertisers the possibility to reach broad audience segments with their advertising because of the number of users of the services, and to reach clearly defined audience segments because of the numerous targeting options and minable data. Due to the number of people who use their services, the high use and the data available to them, Google and Facebook are able to offer advertisers larger audience segments with more accurate targeting capabilities than their competitors.

[157] For example, an advertiser may want to set up a campaign that targets financial news sites, men aged 25 to 45, living in Lyon, with the intention of buying a car, who like hiking in the mountains.

[158] Facebook also lets advertisers target audiences via other services. Custom Audiences lets advertisers import customer lists and deliver ads to them. Lookalike Audiences lets advertisers deliver ads to users who share similar characteristics with existing customers or to users who "Liked" the advertiser's Facebook page.

138. The quality of the data that can be used for advertising campaigns should also be taken into consideration. Google and Facebook offer targeting capabilities through more advanced devices than other players due to the logged-in services they provide to internet users. One publisher indicated that unlike data from logged-in environments, cookies and pixels do not generate lasting data that takes into account cross-device uses.

iii- Vertical integration in publishing and selling ad space

139. Facebook and Google's business models are based on vertical integration between publishing and buying and selling ad space, either under direct sales or through intermediation services.

140. First, several players underlined that Google's business model is based on their global presence in the technical intermediation sector on both the supply and demand sides, which is also the case for undertakings like AppNexus, AOL, and Amazon.

141. Google publicly asserts that the use of AdWords's Display Network and the DBM DSP to buy ads on DoubleClick AdX has three advantages for publishers and advertisers[159]. The first advantage is higher cookie matches. Google states that AdWords and DBM perform best when buying inventory on DoubleClick AdX because these buying platforms share the same infrastructure with the ad exchange. That means the cookie matching loss that might occur when AdWords and DBM users buy on other ad exchanges is minimised when buying on DoubleClick AdX[160]. The second advantage is lower latency. All ad exchanges and inventory pools have a time limit for buyers to submit bids. Since AdWords and DBM run on servers in the same data centres as AdX, they can respond faster to DoubleClick AdX bid requests compared to other exchange requests. There is no network latency or timeout issues between either AdWords or DBM and DoubleClick AdX, which means publishers on DoubleClick AdX always receive bids from AdWords and DBM advertisers. Google has found that in some cases, latency issues can prevent buyers from successfully submitting a bid on up to 25% of bid requests, preventing them from fully participating in the auctions of other ad. The third advantage is reliability of the inventory, which is greater because of Google's direct relationship with publishers.

[159] See https://support.google.com/adxseller/answer/7014770?hl=en.
[160] According to Google, when AdWords and DBM buy on DoubleClick AdX, there is a higher likelihood they'll find impressions that meet their targeting criteria, creating greater auction pressure and demand for the publisher's inventory.

142. The *Autorité* also found that Google's position is also to encourage the joint use of its services for publishers, for example by integrating the publisher ad server DFP and DoubleClick AdX through a single account and functionalities that can be synchronised. It also promotes the use of DoubleClick AdX, saying that it is *"the only exchange offering access to the full demand of Google AdWords"*[161], in addition to demand from AdWords and DBM's competing platforms.

143. Secondly, many players pointed out that Google and Facebook only let advertisers who buy ad space via their buying platforms mine data generated from the services they publish. This means that Google combines supplying its data and providing intermediation services and ad servers for advertisers (AdWords, the DCM ad server and the DBM DSP), which would seem to give it an advantage over its competitors. Advertisers can define audience segments based on several types of data that only Google is able to collect. This includes user data, Google's first-party data from the use of Google services, data on websites and third-party inventories that Google sells through the Google Display Network, Adwords and DoubleClick AdX, and data from third-party websites and applications that use DoubleClick and share data with Google. Similarly, stakeholders indicate that Facebook limits the use of data generated on its platforms to those who use its own advertising services. This strategy allows the social media network to draw more from the ability to offer access to an unparalleled audience in the display advertising sector and access to sociodemographic and interest data for 30 million unique daily visitors in France[162].

iv- Google's supply of search and display advertising services

144. Google operates the most extensive range of advertising services for advertisers on the market. More specifically, it is one of the rare companies to offer both display and search advertising services to advertisers. As for Microsoft, it sells sponsored links on its search engine Bing, but does not offer any technical intermediation services in the display advertising sector.

145. Google has developed several types of relationships between search advertising and display advertising through its services for advertisers, AdWords and DoubleClick, and through its Google Analytics services range. These relationships concern the advertising campaigns that can be implemented, available targeting options, and campaign data analysis.

[161] See https://www.doubleclickbygoogle.com/solutions/revenue-management/ad-exchange/.
[162] See figures already mentioned (http://www.mediametrie.fr/internet/communiques/audience-internet-global-en-france-en-septembre-2017.php?id=1772).

146. First, Google has developed a unique interface where advertisers and their agencies can manage search campaigns and display campaigns. This way, advertisers with an AdWords account can manage campaigns on the Google Search Network, on its Display Network and on YouTube. In addition, on AdWords, Google has developed campaigns that combine both search advertising and display advertising, such as *"Search Network with Display Select"*. The available targeting options combine those available for campaigns on the Search Network and Display Network. When users search key words selected by the advertiser, the ads delivered under these campaigns can be delivered in Google Search and, more selectively, on relevant web pages of the Google Display Network. Google has developed similar services on DoubleClick such as the *"display remarketing on the Search Network"* service[163].

147. Google's presence in the search and display advertising sector also enables it to offer dual-channel data analytics services. Several Google products, including some that are still in the test phase, illustrate this complementarity. For example, advertisers who use DoubleClick have access to a conversion tracking system called Floodlight. It can optimise campaigns on the Google Display Network and Search Network, particularly by preventing conversions from being billed more than once. Google states that *"conversions that start from a display click and end with a paid search click will give last-click credit to the paid search click"*[164].

148. The new Google Analytics 360 Suite is also used to process search advertising and display advertising data via several tools (Analytics 360, Attribution 360, Optimize 360, Audience Center 360, Data Studio 360, Tag Manager 360). For example, Audience Center 360 is a data management platform that brings together data from an analytics solution, the Google Search and Google Display Networks, emails, social networks or a customer relations management (CRM) tool. This DMP is integrated into AdWords and DBM, which lets advertisers automatically access Google first-party data and over 50 third-party data suppliers. Google Analytics 360 is designed to integrate with AdWords, DBM, AdSense, AdMob and other Google advertising products, such as the publisher ad server DFP.

[163] This service combines DoubleClick Search, DoubleClick Bid and AdWords campaigns on the Display Network in order to display graphic ads to internet users who click on the ads of an advertiser associated with a sales link. Google also offers a "*remarketing lists for search ads"* service, which delivers ads to past visitors to a site when they do a Google search.

[164] https://support.google.com/ds/answer/7298761?hl=en

Key points

Although sources lack precision, it seems undeniable that Google and Facebook have extremely large market shares, with their competitors sharing a small portion of the sector's revenue. These giants also captured almost 90% of the sector's growth in 2017. This leading position also enables them to make major acquisitions, in a strategy that some competitors are following.

Google and Facebook have successfully developed extremely attractive services for users, which let them have numerous contacts with their direct users (via diverse services under one banner and a single user ID or strong network effects) and their indirect users (user tracking on sites that use Google and Facebook tools, which, in the case of Google, might represent over 80% of websites, according to one study, see Paragraph 133).

Globally, as well as in France, Google and Facebook services are the most used and have the highest audience numbers and the greatest volumes of ad impressions. Their own inventories can only be accessed through their own tools, and the data they collect can only be mobilised and processed through Google and Facebook's own tools. Some of their tools can be used in combination with solutions offered by other advertising intermediaries. Google and Facebook promote the advantages of their integrated tools, which allow campaigns to be delivered on partner networks and on their own inventories.

SECTION TWO: DECISION-MAKING PRACTICE OF THE COMPETITION AUTHORITIES AND THE ONLINE ADVERTISING SECTOR

149. For the past ten years, competition authorities have been issuing decisions on matters of litigation and mergers in the online advertising and data mining sector.

150. Regarding merger control, the EC cleared several major transactions that helped structure this sector and provided an analysis framework for competitive analysis of the online advertising and data processing sector.

151. For example, in its 2008 Decision on the acquisition of DoubleClick by Google, it considered the data processing capacities of DoubleClick when assessing the network effects and the effects of its position on the ad server market. In its Facebook/WhatsApp and Microsoft/LinkedIn Decisions from 2014 to 2016, it particularly investigated the potential effects of data combinations made possible by the mergers on competition in the online advertising sector.[165] In May 2017, the European Commission reiterated the importance of data in competitive analysis by fining Facebook for providing incorrect or misleading information on the ability to establish automated matching between Facebook and WhatsApp users' accounts.[166] In France, the *Autorité de la concurrence* is increasingly considering the competitiveness of major online players in markets and the role of data in driving competition on digital services markets. In a recent decision on the acquisition of Concept Multimédia, publisher of the Logic-Immo website, by the Axel Springer group, the *Autorité* analysed the risks of exclusionary conduct regarding competitors on the small online advertising markets, associated with data acquisition.[167]

152. The greater role of data in competitive analysis is also demonstrated by how litigation is handled. In the 2017 Google Shopping case, the European Commission considered the role of data in the definition of relevant markets[168] and in its assessment of barriers to entry and expansion on the general search services market.[169]

153. In the following sections, the *Autorité* intends to restate the key aspects of prior decisions made by competition authorities on the definition of relevant markets (1), determination of the positions of stakeholders on the market (2), and finally, understanding of the concerns expressed in their various responses to requests for information (3). These observations are made without prejudice to any analysis that may be carried out by the *Autorité* as part of a litigation procedure.

[165] In particular, see Points 175 to 181 of the Microsoft/LinkedIn Decision and Points 184 to 190 of the Facebook/WhatsApp Decision.
[166] http://europa.eu/rapid/press-release_IP-17-1369_en.htm
[167] Decision no. 18-DCC-18 of 1 February 2018 on full takeover of Concept Multimédia by the Axel Springer group.

[168] See, in particular, Points 158 and following of Google Search (Shopping) Decision 39740 .
[169] See, in particular, Points 286 and following of Google Search (Shopping) Decision 39740 .

1. DEFINITION OF RELEVANT MARKETS

154. Defining relevant markets is a key step in merger control and the fight against anticompetitive practices. It serves to identify the scope of competition between companies and, subsequently, to assess their market power. A relevant market "*is defined as the area where the supply and demand of a specific product or service meet. In theory, on a relevant market, the units supplied are fully substitutable so that consumers can choose between suppliers when there are more than one. This implies that each supplier is subject to the price competition of other suppliers. On the other hand, a supplier on a relevant market is not directly restricted by the price strategies of suppliers on different markets because they sell products or services that do not meet the same demand and are therefore not substitutable products for consumers. Full substitutability between products or services rarely occurs. The* Conseil *therefore considers as substitutable and on the same market any products or services that can reasonably be considered by consumers as alternatives that they can choose between to meet the same demand.*"[170]

155. The notion of relevant market implies effective competition between the products and services belonging to this market, which presumes that there is sufficient substitutability for the same intended use.[171] Definition of relevant product markets is not limited to the objective characteristics of the relevant products and services: the competition conditions and structure of supply and demand on the market must also be taken into consideration.[172] Although demand substitutability is the most immediate and effective disciplinary factor on the suppliers of a given product,[173] supply substitutability can also be considered when defining a market, in situations where its effects are as immediate and effective as the effects of demand substitutability[174]. The geographical market is the territory where the companies are engaged in the relevant supply and demand and where competition conditions are uniform.

156. In terms of market definition, the online advertising sector has several specific features. First, competition between the publishers and user service providers selling their advertising spaces is characterised by the presence of very diverse companies. Advertising spaces can be sold by content publishers (e.g. a press website) or by service providers (e.g. an e-mail provider). Similarly, advertising spaces can be sold by multi-sided platforms where users can publish and view their content (video sharing platforms), or by traditional publishers who produce their own content or purchase it from third-party companies (television service publishers). Second, the supply of advertising services is characterised by the co-existence of a number of models, a large number of services with changing scope, and numerous innovations. Some companies have a business model based on the direct sale of advertising spaces for services they publish themselves (e.g. social media). Other companies that do not necessarily have large audiences

[170] Annual Reports of the *Conseil de la concurrence*, in particular 2001.
[171] Judgment of the Court of Justice of 13 February 1979, 85/76, Hoffmann-La Roche v. Commission, Paragraph 28. Also see the Commission Notice on the definition of relevant market for the purposes of Community competition law, OJ C 372, 9.12.1997.
[172] Judgment of the Court of Justice of 9 November 1983, 322/81 322/81 Nederlandsche Banden Industrie Michelin v. Commission, Paragraph 37; Judgment of the General Court of 25 March 2015, T-556/08 Slovenská pošta v. Commission, Paragraph 112.
[173] Ibid.
[174] There is substitutability of supply when suppliers can redirect production to the products or services in question and sell them in the short term without having to bear additional costs or risks in response to small, yet permanent, variations to the relative prices.

must sell their advertising spaces via technical intermediary services and third-party ad server providers. They are therefore not present across multiple sides of a platform. Some intermediaries provide both services for publishers and advertisers (AppNexus), whereas others only provide services for one type of stakeholder (advertisers or publishers). The online advertising sector is therefore characterised by the existence of numerous markets, including service publishing, intermediation, ad server services and data mining services.

157. The following focuses on user services (a) and advertising services for advertisers and publishers (b).

a) User services

158. The *Autorité*'s observations begin with the way in which the decision-making practice has considered the market of user services provided without user payment. Depending on the case, the various supplies and demands expressed could either constitute different sides of a single market, or alternatively, strongly independent relevant markets that would therefore need to be investigated in the light of their interactions.

159. Many digital services are provided at no financial cost to consumers and have a revenue model based on the sale of advertising spaces to advertisers, including traditional websites, search engines, social networks and video sharing platforms. Most user services provided by Google (Google Search, YouTube, Chrome, Gmail, Maps) and Facebook (Facebook, Instagram, WhatsApp) are free in the sense that users can access these services without paying any financial contribution. The question of whether or not competition law should apply to the supply of these services and whether it is necessary to modify the scope of analysis for competition authorities has been studied by academics.[175] Some authors have underlined the challenges of applying tools such as the SSNIP test to establish the level of substitutability between services provided without financial consideration, and the difficulties associated with developing an equivalent test based on quality rather than pricing criteria (SSNIQ). In the KinderStart.com case in 2007 in the United States, one court considered that search engines did not constitute a relevant market under competition law as the service was free.[176]

160. This approach is very different to the one followed in recent decisions, for both merger control and litigation cases.

---

[175] Geoffrey A. Manne, Joshua D. Wright, Google and the Limits of Antitrust: The Case Against the Antitrust Case Against Google, Harvard Journal of Law and Public Policy, 34:1, 2011; Sebastian Wismer, Arno Rasek, Market definition in multi-sided markets - Hearing on Re-thinking the use of traditional antitrust enforcement tools in multi-sided markets, 21-23 June 2017 (see http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DAF/COMP/WD(2017)33/FINAL&docLanguage=En).

[176] United States District Court, N.D. California, San Jose Division. Kinderstart.com, LLC, a California limited liability company, on behalf of itself and all others similarly situated, Plaintiffs, v. Google, Inc., a Delaware corporation, Defendant. Extract from order: "*KinderStart has failed to allege that the Search Market is a "grouping of sales." It does not claim that Google sells its search services, or that any other search provider does so. Rather, it states conclusorily that "[a]ny search engine must be free to the user because of past user experience and expectations with search engines and due to the preexisting governmental and technological policy of Internet freedom and Internet neutrality." KinderStart cites no authority indicating that antitrust law concerns itself with competition in the provision of free services. Providing search functionality may lead to revenue from other sources, but KinderStart has not alleged that anyone pays Google to search. Thus, the Search Market is not a "market" for purposes of antitrust law*".

161. Examples include the Facebook/WhatsApp (2014) and Microsoft/LinkedIn (2016)[177] Decisions in which the Commission defined a relevant market of social networking services[178] and a relevant market of professional social networking services. Social networking services are defined as multi-sided platforms that provide services for consumers and businesses.[179] The Commission emphasised that the vast majority of social networking services are provided with no financial consideration from users. In these two decisions, the Commission also defined distinct markets for online advertising services.[180]

162. In 2017, in the Commission's Decision condemning Google's abuse of its dominant position on the price comparison market,[181] the two relevant markets defined by the Commission are the general search services market and the price comparison services market. For the general search engine market, the Commission emphasised that these services are an economic activity subject to antitrust law and that, "*even though users do not pay a monetary consideration for the use of general search services, they contribute to the monetisation of the service by providing data with each query.*"[182] It added that "*in most cases, a user entering a query enters into a contractual relationship with the operator of the general search service*"[183] and states that Google's Terms of Service provide that: "*By using our Services, you agree that Google can use such data in accordance with our privacy policies.*"[184] In this regard, the *Autorité* underlines that the decision to provide a service without direct financial consideration is the choice of companies and that nothing prevents a company from providing a service without user payment. Furthermore, Google and Facebook can provide paid versions of their services. Facebook has marketed a paid version of its social network for businesses[185] and in the United States, for example, Google offers the subscription-based service YouTube Red for ad-free access to YouTube.[186]

[177] European Commission, Decision of 6 December 2016, Microsoft / LinkedIn, COMP/M.8124.
[178] European Commission, Decision of 3 October 2014, Facebook / WhatsApp, COMP/ M.7217, Point 62.
[179] European Commission, Decision of 6 December 2016, Microsoft / LinkedIn, COMP/M.8124, Point 87.
[180] European Commission, Decision of 6 December 2016, Microsoft / LinkedIn, COMP/M.8124, Point 152 and following.
[181] European Commission, Google Search (Shopping) Decision, COMP/39.740.
[182] European Commission, Google Search (Shopping) Decision, COMP/39.740, Point 158.
[183] European Commission, Google Search (Shopping) Decision, COMP/39.740, Point 158.
[184] See http://www.google.com/intl/en/policies/terms/.
[185] See http://www.lefigaro.fr/secteur/high-tech/2016/10/10/32001-20161010ARTFIG00261-facebook-lance-un-reseau-social-payant-pour-les-entreprises.php.
[186] See https://www.youtube.com/red?hl=fr&gl=FR.

163. The *Autorité* then collected observations on the determination of the scope of Internet user services markets.

164. On this issue, Facebook stated that it considered itself active on an "*attention market*", covering all activities that seek to capture the attention of Internet users. It says that "*competition with a view to attracting user attention should be the key focus of any market definition analysis."* It considers that it is in competition with "*numerous other online and offline services*" and that "*competition is not limited to competition between Facebook and platforms offering particular products or services (e.g. social networks).*" It maintains that "*irrespective of the specific way in which a platform attracts the user's attention - by offering services similar to those currently offered by Facebook or by offering other functionalities -, it becomes a Facebook competitor once it seeks to capture the attention capacity of online users, which is, by definition, limited.*" In support of its position, Facebook adds that it is "*currently seeking to attract user interest and attention by offering them a large variety of tools and functionalities, and by constantly updating and improving them. Facebook began as a means for university students to remain connected by visiting their friends' profile pages. While maintaining this function, Facebook has evolved so that users can be connected, share, discover, make transactions and communicate with others through a large variety of free products and services, including, but not limited to, a messaging service, content sharing, live videos, games, payment methods and purchase and sale lists.*" Facebook considers that "*regardless of the content or functionality of the service, the only relevant criterion is that the service captures the time and attention of users.*"[187]

165. The *Autorité de la concurrence* emphasises that analysis of the functionalities and uses of a product or service is a key step in determining the scope of markets[188]. Without prejudice to more in-depth analysis that could be carried out at a later stage, the fact that Facebook seeks to attract attention does not seem sufficient, on first analysis, to establish that it is in competition with all companies whose products or services require the attention of their users.

166. It is worth restating the positions of the European Commission in its Facebook/WhatsApp (2014) and Microsoft/LinkedIn (2017) Decisions, with regard to the scope of social networking markets, which are defined as "*services for users to connect, share, communicate and express themselves*" on the web or on a mobile application. In its annual report, Facebook provides a similar definition of the purpose of its social network: "*Facebook enables people to connect, share, discover, and communicate with each other on mobile devices and personal computers.*"[189] When acquiring WhatsApp, Facebook stated that its social networking service had three basic functionalities: the User Profile, Newsfeed and Timeline.[190] It informed the

[187] To support its argument, Facebook quotes the article by David S. Evans: Attention Rivalry Among Online Platforms, 9 J. COMPETITION L. & ECON. 313, 314 (2013). This article was financed by Google.

[188] For example, see the Commission Facebook / WhatsApp Decision M.7217, Paragraphe 51: "*The overwhelming majority of respondents to the market investigation indicate that the essential functionalities of a social networking service include creation of a public or semi-public profile and list of friends/contacts. 20 Other important features include exchanging messages (one-to-one, one-to-group or one-to-many), sharing information (for example, posting pictures, video or links), commenting on postings and recommending friends. A service does not necessarily have to have all of these functionalities to be qualified as a social network*."

[189] See https://s21.q4cdn.com/399680738/files/doc_financials/annual_reports/FB_AR_2016_FINAL.pdf.

[190] Paragraph 48 of Decision M.7217, Facebook / WhatsApp.

Commission that WhatsApp was not in competition with Facebook, in particular due to the lack of core social networking functionalities in the WhatsApp service.[191]

167. On this point, the *Autorité* observed that the functionalities and information accessible on the Facebook social network were increasing in number (weather, games, marketplace, etc.) and are not only available on social networking services. However, these developments do not call into question the core functionalities that make Facebook a social network. Nevertheless, these changes to the service are likely to illustrate the presence of Facebook on other relevant markets than social networks. Many digital service and product offerings, such as mobile telephone services, are composed of many services, which can belong to distinct relevant markets, without this preventing the definition of the main market in question. In its Facebook/WhatsApp Decision, the Commission also considered that the Facebook Messenger service, also accessible via the Facebook home page, was provided on the communication services relevant market, which is distinct from the social networking market.

b) Advertising services

168. Numerous prior decisions exist for these services. National and EU competition authorities have considered the issues of defining the scope of relevant markets in the online advertising sector on numerous occasions, in opinions, studies, merger authorisation decisions and litigation decisions. The main issues discussed focused on the substitutability between different forms of advertising (i). Some merger control decisions went into greater detail on the definition of the technical intermediation and data mining markets in the advertising sector (ii). One of the main questions raised today is whether or not television advertising and online advertising now belong to the same market.

[191] Paragraph 50 of Decision M.7217, Facebook / WhatsApp ("*The Notifying Party does not pronounce itself on the existence of a distinct market for social networking services. However, the Notifying Party submits that in any event WhatsApp is not active in such potential market in competition with Facebook. This is notably due to the lack of core social networking functionalities in WhatsApp*").

i- Different forms of advertising

169. The *Autorité* sets out a number of observations on the level of substitutability between online advertising and television advertising, and between the different forms of online advertising.

Online advertising and television advertising

170. Some stakeholders who responded to the consultation believe that changes to audiovisual content consumption methods and the convergence of technologies and terminals have reached the stage that it would now be justified to define a single video advertising market that covers both television and online advertising. They maintain that this change in decision-making practice would be justified insofar as audiovisual content is accessible on all screen types. Furthermore, they consider the characteristics and performance of these two categories of advertising formats to be similar and the current market to be structured around the sale of online and offline video advertising spaces. However, other stakeholders believe that television advertising and online advertising remain complementary, yet distinct, markets.

171. Until now, the *Autorité* and the European Commission have considered that online advertising belongs to markets distinct from other types of advertising (offline: TV, press, radio, etc.).[192] In its 2008 Google/DoubleClick Decision, the Commission underlined the specificity of targeting in online advertising and the pricing differences between the two markets. The Commission has not modified its practice since.[193] In 2010, in its sector inquiry into the competitive operation of online advertising and its Decision on the acquisition of TMC and NT1 by the TF1 group[194], the *Autorité* also stated that "*online advertising and offline*

[192] European Commission, Decision of 21 December 2016, Verizon / Yahoo, COMP/M.8180, Paragraph 25; Decision of 30 October 2014, Facebook / WhatsApp, COMP/M.7217, Paragraphs 75 and 79; Decision of 18 February 2010, Microsoft / Yahoo! Search Business, COMP/M.5727, Paragraph 61; Decision of 11 March 2008, Google / DoubleClick, COMP/M.4731, Paragraphs 45, 46 and 51; *Autorité de la concurrence*, Opinion no. 10-A-29 of 14 December 2010 on the competitive operation of online advertising, Paragraphs 111 and following; Decision no. 10-MC-01 of 30 June 2010 pertaining to the demand for interim measures made by Navx, Paragraphs 123 and following; Decision no. 10-DCC-11 of 26 January 2010 pertaining to the acquisition of NT1 and Monte-Carlo Participations by the TF1 group, Paragraphs 111 to 148.

[193] European Commission, Decision of 18 February 2010, Microsoft / Yahoo! Search Business, COMP/M.5727, Paragraph 61; Decision of 30 October 2014, Facebook / WhatsApp, COMP/M.7217, Paragraph 75; Decision of 9 September 2014, Viacom / Channel 5 Broadcasting, COMP/M.7288, Paragraphs 36, 38 and 40: "*In its past decisions, the Commission has drawn a distinction between online and offline advertising, based on two main factors: specificity and pricing. In terms of specificity, online advertising is capable of efficiently reaching a much more targeted audience and of allowing advertisers to know how many users have viewed or clicked on an advertisement. On the contrary, offline advertising is traditionally unable to provide these features. In terms of pricing, the two have different pricing mechanisms: whereas offline pricing is measured in general criteria of impacts viewed by consumers, online advertising can be bought in a number of ways (such as cost per thousand page views, or based on a "cost per click"*). […] *The large majority of respondents to the market investigation in the present case confirmed that TV advertising represents a separate product market*"; Decision of 13 May 2016, Towerbrook Capital Partners / Infopro Digital, COMP/M.7987, Paragraph 10; Decision of 21 December 2016, Verizon / Yahoo, COMP/M.8180, Paragraphs 22 and 25; Decision of 6 December 2016, Microsoft / LinkedIn, COMP/M.8124, Paragraph 159.

[194] *Autorité de la concurrence*, Decision 10-DCC-11 of 26 January 2010 pertaining to the acquisition of NT1 and Monte-Carlo Participations (AB group) by the TF1 group.

advertising do not belong to the same relevant market."[195] In particular, it referred to differences regarding pricing methods, targeting, interactivity, entry costs and campaign monitoring tools.[196] This Decision stated that "*each media type has […] its function and its own role, and the consumption methods for each of them are different and complementary. The press or internet are especially appreciated for their capacity to provide a large amount of information on a product or allow interaction with the reader or user. The budgets allocated to each media type are not determined by placing the different media in competition with one another based on their costs, but more by matching the advertisers' objectives with the qualitative advantages provided by each media type. These different media are therefore characterised by their complementarity*." [197] More recently, in its Decision 14-DCC-50 pertaining to the acquisition of Direct 8 and Direct Star, the *Autorité* stated that there "*is increasing convergence between online advertising and television advertising due to the development of online video display advertising.*"[198]

172. In its contribution to the *Autorité*'s consultation, the CSA stated that "*there is increasing convergence and complementarity between online advertising and television advertising but they still belong to distinct relevant markets.*"[199] In this regard, the *Autorité* has observed that TF1 Publicité communicates with advertisers on the fact that television and the internet are characterised by an "*effective complementarity*"[200] and that "*determining the correct TV - Digital media mix has become a key issue for brands. Replay on MYTF1 is a natural response to the quest for TV complementarity.*"[201]

173. Furthermore, it is worth adding that, the competition conditions on the television advertising market and the online advertising market still vary significantly. The barriers to entry on the television advertising market are higher than in the sector of online publishing and online advertising. Furthermore, while online services publishing is characterised by a vast diversity of players and services, television services publishing is a much more uniform sector. The online advertising sector vertical chain also includes technical intermediaries that are not active in the television advertising sector. Finally, television advertising is subject to a specific legal regime whereby advertisements must be broadcast simultaneously in the whole of the service zone.[202]

[195] Paragraph 136 of Opinion no. 10-A-29. However, the *Autorité* mentioned the competitive pressure placed on television media by the internet and a potential convergence in the future. (Decision no. 10-DCC-11 of 26 January 2010 pertaining to the acquisition of NT1 and Monte-Carlo Participations (AB group) by the TF1 group, Paragraph 148).
[196] Paragraph 120 and following of Decision no. 10-DCC-11.
[197] Paragraph 132 of Decision no. 10-DCC-11.
[198] Paragraph 106 of Decision no. 14-DCC-50.
[199] Contribution of the CSA to the public consultation launched by the *Autorité* under this opinion.
[200] See http://s.tf1.fr/mmdia/a/40/7/tv-digital-une-complementarite-efficace-10978407xjzsv.pdf?v=1.
[201] See https://www.tf1pub.fr/actualites/carrefour-optimise-la-complementarite-tvdigital-avec-optireach.
[202] Article 13 of French Decree no. 92-280 of 27 March 1992 relating to publicity, sponsorship and armchair shopping.

174. For advertisers, television advertising has specific features that enable them to reach a very large number of consumers at the same time. Online advertising remains a less costly promotional tool than television advertising, and targets a much larger potential number of advertisers. Furthermore, the objectives of online advertising campaigns are more diverse than in television advertising, in particular due to the interaction made possible by online advertising. Online display advertising is used to implement advertising campaigns that target audience segments defined for the purposes of the campaign, on the basis of targeting options that are not currently available in television advertisements, which can also be combined (local geo-targeting, interest targeting, action targeting, etc.). Online advertising offers advertising control and performance measurement tools that are not used in the television advertising sector. The level of substitutability between online search advertising and television advertising seems even more limited.

175. Nevertheless, the *Autorité* underlines that where applicable, decision-making practice must take into account commercial and technological innovations and modifications to legal regimes for advertising. In this regard, in August 2017, the French Ministry of Culture launched a public consultation into simplification of the rules relating to television advertising under the French Law of 30 September 1986 and Decree no. 92-280 of 27 March 1992. In particular, this could result in television channels having the possibility of developing segmented advertising activities, with forms of television advertising that include certain targeting methods drawing on the technological possibilities of broadcasting via the internet access providers' routers.

Different forms of online advertising

176. Throughout the consultations, stakeholders discussed the substitutability between different forms of online advertising. Two major issues emerged. Firstly, the issue of defining a social network advertising market, and secondly, the issue of the level of substitutability between search and display advertising.

177. The issue of advertising on social networks was investigated by the European Commission in its Decision on the acquisition of WhatsApp by Facebook in 2014. At the time, stakeholder responses were split. In this opinion, the responses of stakeholders suggest that the specificities of social networks, especially Facebook, are mainly related to the data generated on these services, which is then used to offer targeting options to advertisers. According to a significant proportion of stakeholders, the detail and relevance of data for advertising purposes are one of the specificities of advertising on social networks. Other stakeholders underlined the very competitive advertising rates on social networks and the quality of ad integration within the social network environment, in the form of native advertising. Finally, it seems that some media agencies have developed entities dedicated to advertisements on social networks.

178. Regarding the level of substitutability between search and display advertising, in its sector inquiry of 2010 into the competitive operation of the online advertising sector, the Autorité concluded that "*search-related advertising and display advertising today satisfy advertiser needs that are still essentially distinct*." [203] It also observed that "*the specifics of the search-related commercial link seem above all to reside in the different way of targeting the prospect*"[204], and that campaigns are "*more affordable […] with search*." Finally, it considered that "*the nearest products in terms of targeting quality are not real alternatives*" (contextual advertising services, the Facebook service, retargeting services, search engine optimisation).[205] In 2014 in its Facebook/WhatsApp Decision, the European Commission said the following, while keeping the issue open: "*The market investigation also supported to a large extent the existence of a further sub-segmentation of the online advertising market between search and non-search advertising. Indeed, the majority of the advertisers who took part in the market investigation considered that search and non-search ads are not substitutable as they serve different purposes (for search ads, mainly generating direct user traffic to the merchant's website, while, for non-search ads, mainly building brand awareness) and, as a result, most advertisers would not be likely to switch from one type to another in the event of a 5-10 % price increase. Similarly, the majority of the competitors who took part in the market investigation submitted that search and non-search ads are not substitutable from an advertiser's point of view.*"[206]

179. Many stakeholders responding to the consultation carried out by the *Autorité* made observations on the differences between the two categories of online advertising. According to one advertiser, search advertising "*is certain to give users content that meets their requirements. The advantage is that it is not the advertiser pushing content, but to some extent, it is the user who chooses the content and offer for which they wish to receive information.*" According to this analysis, users are expecting to receive responses immediately after making a query and the sponsored links appear among or alongside the responses directly requested, which is less true for other forms of advertising. Other forms of advertising, including on social networks, do not offer as precise targeting with regard to the content of the advertisement and the moment it is displayed. According to another advertiser, "*search engines play an important role in corporate strategy. They reach a population actively looking for information. Search advertising is therefore an effective online advertising tool with a return on investment that is generally higher than other digital media.*"

180. Several stakeholders also underlined the complementarity between the two forms of online advertising. One advertiser stated that "*display advertising can trigger a search, exposing users to* ex post *search advertising*." Similarly, another advertiser considers that "*the use of advertising on search engines is complementary to other digital media (video, banners, social networks, articles, etc.). Search advertising reaches an audience "looking for" precise information. For example, someone typing "alarm" into a search engine is looking for precise information on this topic, which could already be interpreted as an intention to purchase. Other online advertising formats work before this search, for example, by displaying a banner showing alarms on a website selling surveillance cameras, or to a precise target, e.g. 20-25 year olds on social networks.*"

[203] Paragraph 150 of Opinion no. 10-A-29.
[204] Paragraphs 151 and following of Opinion no. 10-A-29.
[205] Paragraphs 161 and following of Opinion no. 10-A-29.
[206] Paragraph 76 of Decision M.7217, Facebook / WhatsApp.

181. Furthermore, the *Autorité* underlines that paid search advertising is often implemented by advertisers in consideration of the position of their website in the natural search results. Depending on the characteristics of a company and its competitive environment, it can implement a traffic acquisition strategy via sponsored links if it is unable to occupy the top natural results.

182. Furthermore, the structure of the search advertising market differs significantly from the display advertising market. Currently, the number of suppliers on the online search advertising market is much smaller. Entry onto the market is characterised by a number of barriers to entry and expansion. One of these barriers is the need to develop a sufficiently powerful general search engine and a platform for selling search ads.

ii- Advertising intermediation and data mining

183. When DoubleClick was bought by Google in 2008, the Commission analysed the advertising intermediation sector. It observed that advertising inventories can be sold "*through either direct sales or intermediated sales*" on the overall online advertising market. It considered that "*a separate market for intermediation in online advertising can be defined in view of the fact that there is no substitute for the service provided by intermediaries for the sale of smaller publishers' inventory and for the sale of (at least) part of the remnant inventory of larger publishers that also use the direct sales channel*."[207]

184. The Commission also defined a separate market for the provision of online display ad serving (i.e. the services provided by ad servers), and believed that this market could be further distinguished depending on whether services are provided to advertisers or publishers.[208] The Commission considered that the geographical scope of the intermediation and provision of ad serving markets was at least EEA-wide.[209] This distinction was also made by the *Autorité de la concurrence*, particularly in 2010,[210] and in later Commission decisions.[211] The possible separation of mobile intermediation was discussed in a merger decision (M Commerce) but left open.[212]

[207] Paragraph 68 of Decision M.4731, Google / DoubleClick.
[208] Paragraphs 74 to 81 of Decision M.4731, Google / DoubleClick.
[209] Paragraphs 85 to 91 of Decision M.4731, Google / DoubleClick.
[210] Paragraphs 23 and 24 of Decision no. 10-DCC-152 of 3 November 2010, Axel Springer AG / Se Loger.
[211] Paragraphs 82 and 83 of Decision M.5727, Microsoft/Yahoo! Search Business; Paragraph 175 of Decision M.6314, Telefónica UK / Vodafone UK / Everything Everywhere / JV; and Paragraph 64 of Decision M.6967, BNP Paribas Fortis/Belgacom/Belgian Mobile Wallet.
[212] Paragraphs 175 to 181 of Decision M.6314 Telefónica UK / Vodafone UK / Everything Everywhere / JV.

185. In the investigation for the opinion, stakeholders made observations on technical intermediation developments as well as on the decision-making practice of competition authorities. Many stakeholders, including Google, underlined that intermediation and ad serving services are increasingly converging. Publishers can use SSPs and ad servers together, either as one product or as two separate yet integrated products. Furthermore, these stakeholders consider the frequency of innovations and emergence of new products to be incompatible with a decision-making practice that defines a separate product market for each advertising technology. Finally, they maintain that the intermediation and ad server markets were defined at a time when SSPs were still an emerging technology. On the other hand, other stakeholders consider that DSPs and SSPs "*basically only serve to establish contacts between buyers and sellers,* [whereas] *publisher ad servers provide technical functionalities vital to the delivery of online advertising, such as video file hosting, campaign trafficking (programming of start / end / volume / priority), and impression records, which are directly used for invoicing. In this sense, ad servers belong to a separate market.*" Although the *Autorité* observed some convergence between ad servers and technical intermediation services (DSPs, SSPs, ad exchanges, etc.) in the context of the investigation for this opinion, it recalls that a similar observation was made in 2008 by the Commission. No information emerged from the consultation performed under this opinion that would call into question the conclusions of the Commission's analysis.

186. With particular regard to Google offers at this stage, the *Autorité* notes that its ad server services remain separate from its DSP DoubleClick Bid Manager (DBM) and its SSP / DoubleClick Ad Exchange service (AdX). In its response to requests for information from the investigation services, Google presented the DoubleClick Campaign Manager (DCM) service as its ad server solution for advertisers and DoubleClick for Publishers (DFP) as an ad server for publishers. Google also stated that DFP and its SSP / AdX[213] could be used together or separately. On its website, Google states that "*DFP is fully integrated with DoubleClick Ad Exchange, giving you instant connection to millions of Google AdWords advertisers, top networks, trading desks, and DSPs - all competing for your inventory.*" [214]

[213] The SSP service provided by Google is integrated into its ad exchange, DoubleClick AdX.
[214] See https://www.doubleclickbygoogle.com/solutions/revenue-management/dfp/.

187. In the DoubleClick decision, the Commission also observed that in some instances, the intermediation and ad server services can be bundled, such as for Google AdSense.[215] The Commission underlined the "*tendency towards vertical integration*", illustrating this with the fact that "*DoubleClick, an ad serving technology provider, is launching an ad exchange in order to enter intermediation.*"[216]

188. In several of its merger decisions,[217] the European Commission considered that data analytics services could be further segmented into three categories, without issuing a final decision on whether each of these categories should constitute a separate market:

- "*a market for marketing information services comprising the supply of data on individual consumers (for example age, social group, activities, consuming habits, address) for direct marketing purposes;*"
- "*a market for market research services (which aims at measuring and understanding consumer attitudes and actual purchasing behaviour and patterns)* […]";
- "*a market for media measurement services, which are aimed at measuring the audience of specific media, such as television and internet.*"[218]

[215] Paragraphs 35 and following of Decision M.4731, Google / DoubleClick.

[216] Paragraphs 39 and following of Decision M.4731, Google / DoubleClick.

[217] European Commission, Decision of 12 February 2001, VNU / AC Nielsen, COMP/M.2291, Paragraphs 10 to 12; Decision of 23 September 2008, WPP / TNS, COMP/M.5232, Paragraphs 10 and following; Decision of 4 September 2012, Telefónica UK / Vodafone UK / Everything Everywhere / JV, COMP/M.6314, Paragraphs 197 and following; Decision of 11 October 2013, BNP Paribas Fortis / Belgacom / Belgian Mobile Wallet, COMP/M.6967, Paragraph 76; Decision of 9 January 2014, Publicis / Omnicom, COMP/M.7023, Paragraph 618; Decision of 23 February 2016, Sanofi/Google / DMI JV, COMP/M.7813, Paragraphe 44; Decision of 21 December 2016, Verizon / Yahoo, COMP/M.8180, Paragraph 32.

[218] Paragraph 76 of Decision M.6967, BNP Paribas Fortis / Belgacom / Belgian Mobile Wallet. The European Commission also considered whether there could be a separate market for the provision of data analytics services for mobile advertising in Paragraphs 197 to 203 of Decision M.6314, Telefónica UK / Vodafone UK / Everything Everywhere / JV.
In the M Commerce Decision (Paragraphs 529 and following, in particular. 540-541), under competitive analysis of the impact of the operation on the data analytics market, the Commission mentioned companies such as BlueKai or Experian, that are 'pure' data providers, as data analytics providers. The Commission lists three types of services included in the data analytics services ecosystem: (i) "*analytics services*", i.e. "*web-oriented analytical services either as a web-based (SaaS) or installed solution for tracking online behaviour. Often unable to relate to "customer behaviour" but only broad trends onsales//searches*." (ii) "*data and media services*", i.e. "*information-driven business models of using consumer data either shared, or developed to help customers with acquisition or retention*", which include BlueKai and Experian, and (iii) "*managed services*" i.e. "*managed services within the customer management space around either campaign management, analytics or loyalty service*."

189. The public consultation did not raise any aspects likely to call this type of approach into question.

2. DETERMINATION OF THE POSITIONS OF STAKEHOLDERS

190. The positions of the two main stakeholders in the online advertising sector can be determined using the criteria for characterising a dominant position, which is defined as a "*position of economic strength enjoyed by an undertaking which enables it to prevent effective competition being maintained on the relevant market by giving it the power to behave to an appreciable extent independently of its competitors, customers and ultimately of its consumers*. *In general a dominant position derives from a combination of several factors which, taken separately, are not necessarily determinative.*" [219] This notion of independence is related to the degree of competitive constraint exerted on the undertaking in question. Dominance entails that these *"competitive constraints are not sufficiently effective and hence that the undertaking in question enjoys substantial market power over a period of time*." [220] This means that the undertaking's decisions *"are largely insensitive to the actions and reactions of competitors, customers and, ultimately, consumers.*" [221] The main criteria for determining the dominant position are the market shares held by companies, but also the existence of barriers to entry or barriers to expansion, and the countervailing buying power of clients. In its opinion of 2010, the *Autorité* also took into consideration the profitability of the companies analysed.[222]

191. Case law and prior decision-making practice have outlined various principles for considering potential proximity between relevant markets. In this regard, analysis must take into account the two-sided nature of many markets on which Google and Facebook are active and any connections between these markets. It is useful to recall thatstate that in two-sided markets, "*the economic balance in a market cannot be grasped independently of the conditions prevailing in an interconnected market. Although separate, the two markets operate interdependently, and this specificity can be taken into consideration both when determining the scope of a market and when analysing the effects of the operation on the competition and efficiency gains.*"[223] Depending on the case, a two-sided market can either be assessed by defining a single market with two indivisible sides or by determining the scope of the two separate sides of this market. Related markets are markets "*upstream or downstream of one another*" or markets with "*similar although not fully substitutable services*."[224]

[219] Judgment of the Court of Justice of 14 February 1978, United Brands / Commission, 27/76, Paragraphs 65 and 66.
[220] Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings, Paragraph 10.
[221] Ibid.
[222] Paragraph 232 of Opinion 10-A-29.
[223] *Autorité de la concurrence* Merger Control Guidelines.
[224] *Autorité de la concurrence*, Decision 08-D-09 of 6 May 2008 relating to funeral practices implemented in the city of Lyon and its surroundings, Paragraph 159 (and confirmed by the Appeal Decision of the Paris Court of Appeal, 31 March 2009, 2008/11353).

192. In this regard, the *Autorité* underlines that the competition situation in the online advertising sector can be analysed from various perspectives, depending on the context of analysis. The criteria used and their respective importance can vary depending on whether we are dealing with merger control or examination of abuse of a dominant position.

193. For the past ten years, European competition authorities have analysed the positions of online advertising stakeholders in various legal contexts (mergers, opinions) and at different levels of detail.

194. In 2008, in its DoubleClick decision, the Commission established that "*through these direct and intermediated* [ad space] *sales channels, Google is the leading provider of online advertising, and in particular of search ad space in the EEA*."[225] It observed that "*Google has a leading position, not only in the overall EEA search advertising market, but also in the overall intermediation market and/or the two possible sub segments (search and non-search) of the intermediation market*."[226] In 2010, in its sector inquiry into the competitive operation of online advertising, the *Autorité* considered that "*no single stakeholder appears to be in a position to achieve dominance in the market for display advertising space. Indeed, even if one included contextual commercial links (such as those offered by Google AdSense for Content) in display advertising, because they are displayed links without this being explicitly request by the web user, Google's share of this market would be under 20%. Facebook is merely one player among many for the time being. A major media agency estimated its market share at roughly 10% of display. If display advertising were segmented, e.g. to distinguish intermediary advertising from direct sales, or to account for the distinctive features of certain media (like video), the structure of these sub-markets could well reveal stakeholders as leaders.*"[227] It considered that "*several factors point to Google having a dominant position in the search-based ads market. Market share, profitability and pricing levels are the first evidence of this. In addition, while the capacity to set high prices in this market seems limited, Google appears to be in a position at the very least to exercise market power through the contracts it concludes with its advertisers. Finally, the barriers to entry seem high to compete with both the Google search engine and the search-based ads business.*" [228] In its 2016 decision on the acquisition of LinkedIn by Microsoft, the European Commission considered that the online non-search advertising sector was "*fragmented and led by Facebook and Google, each with revenues several times greater than the Parties' combined revenues*."[229]

[225] Paragraph 95 of Decision M.4731, Google / DoubleClick.
[226] Paragraph 109 of Decision M.4731, Google / DoubleClick.
[227] Paragraphs 224 and following of Decision M.4731, Google / DoubleClick.
[228] Paragraphs 228 and 229 of Decision M.4731, Google / DoubleClick.
[229] Microsoft/LinkedIn Decision, Paragraph 171.

195. The following focuses on the stakeholders' market shares (a), barriers to entry and expansion (b), and countervailing powers (c).

a) Market shares

196. The general principles for assessing a dominant position are well established. "*Very large market shares are in themselves, save in exceptional circumstances, evidence of the existence of a dominant position. An undertaking which has a very large market share and holds it for some time, by means of the volume of production and the scale of supply which it stands for - without those having much smaller market shares being able rapidly to meet the demand from those who would like to break away from the undertaking which has the largest market share - is in a position of strength which makes it an unavoidable trading partner and which, already because of this, secures for it, at the very least during relatively long periods, that freedom of action which is the special feature of a dominant position. Thus, a market share of 70 to 80% constitutes in itself a clear indication of the existence of a dominant position"*[230]. Similarly, according to CJEU case law, a 50% market share constitutes in itself, save in exceptional circumstances, evidence of a dominant position.[231] An undertaking with a market share below 40% in the relevant market is unlikely to hold a dominant position. The Commission considers that "*however, there may be specific cases below that threshold where competitors are not in a position to constrain effectively the conduct of a dominant undertaking, for example where they face serious capacity limitations*." [232] In addition to the market share of the undertaking investigated, it is important to consider the relationship between the market shares held by said undertaking and its competitors. The General Court considered that in recent and fast-growing sectors characterised by short innovation cycles and a dynamic context, high market shares are not necessarily indicative of market power.[233]

197. The *Autorité* sets out a number of observations regarding the market shares of Google and Facebook in the markets for user services (i) and publisher and advertiser services (ii).

198. Its initial observations concern data and indicators for calculating market shares. It underlines that, to this end, the investigation services asked the various stakeholders to provide information on their revenue, activity volume and number of clients. Given the partial nature of responses and the use of variable indicators to calculate revenue, the *Autorité* is unable, in this opinion, to give a reliable assessment of the market shares held by all stakeholders on the technical intermediation and ad serving markets. Nevertheless, some information provided gives a general overview and can be used to compare the respective significance of companies. Drawing particularly on the estimates of the SRI and IAB relating to the overall size of the online advertising market, the *Autorité* was able to measure the size of Facebook and Google, both generally and on certain specific markets. It also drew on assessments published online by certain companies, for the intermediation, data mining and analysis, and user services markets.

[230] Judgment of the General Court of 17 December 2009, Solvay / Commission, T-57/01, Paragraphs 275 to 279.
[231] Judgment of the Court of Justice of 3 July 1991, AKZO Chemie BV / Commission, C-62/86, Paragraph 60.
[232] Guidance on the Commission's enforcement priorities in applying Article 82 of the EC treaty to abusive exclusionary conduct by dominant undertakings, Paragraph 14.
[233] Judgment of the General Court of 11 December 2013, Cisco / Commission and Microsoft, T-79/12, Paragraph 69.

i- User services markets

199. Assessing the significance of stakeholders on the user services market is important in competitive analysis of the online advertising sector as it determines the size of audiences and inventories, and the volume and variety of the data that can be used.

200. Measuring market shares can raise difficulties related to determining which companies are active on a market and selecting indicators to calculate each company's volume of activity. These choices are important variables as they impact how the size of a company in the market is perceived.

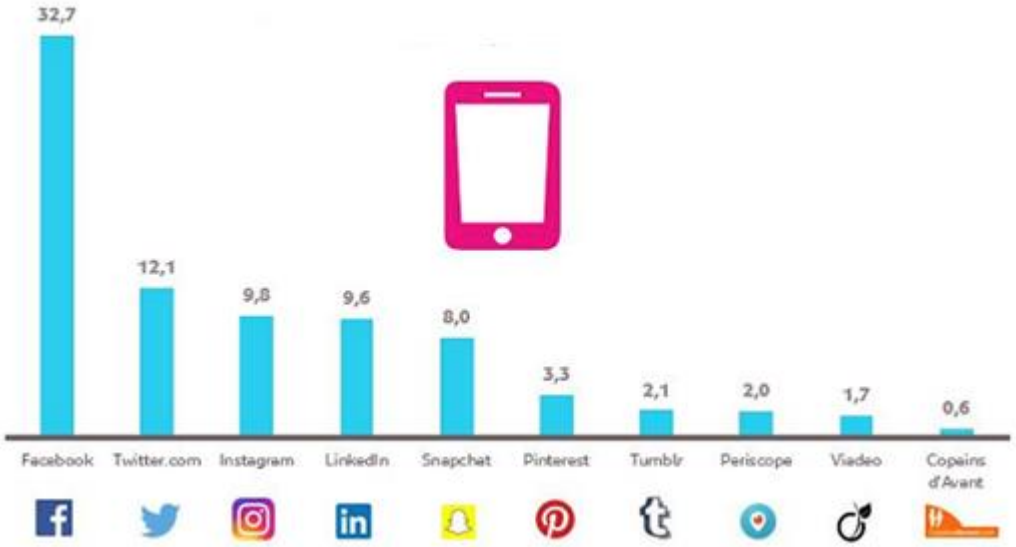
201. Many volume indicators can be considered for the Internet user services markets, which vary depending on the service. For example, the number of accounts, number of monthly and daily users, number of visits to a website, number of users logged in, number of videos uploaded by users or number of videos viewed are frequently used on markets such as social networks or video sharing platforms. However, indicators such as the number of monthly and daily users are imperfect as they do not indicate the time effectively spent using a service. Neither do they give indications on the volume of user data that the platform can collect and then use to target audience segments.

202. Determining the position of stakeholders in the market also raises difficulties related to identifying the companies and the services provided on a relevant market. YouTube is sometimes listed in the category of social networks, although the service's main purpose is to host and provide audiovisual content. In its Facebook/WhatsApp Decision, the Commission observed that the companies clearly perceived by stakeholders as social networks are Facebook, Google+, LinkedIn, Twitter and Myspace.[234] In this regard, the *Autorité* observes that in many opinion surveys, YouTube is not listed in social network rankings,[235] and neither is it included in Médiamétrie studies.[236] During ex-officio proceedings into Facebook's practices, the Bundeskartellamt considered in its preliminary analysis that Twitter, Snapchat, LinkedIn and YouTube were not active on the same social network market as Facebook services.[237]

[234] Paragraph 148 of Decision M.7217, Facebook / WhatsApp.
[235] For example, see https://www.blogdumoderateur.com/etude-piper-jaffray-spring-2017/.
[236] See http://www.ratecard.fr/etude-mediametrie-chiffres-daudience-reseaux-sociaux-mobile/.
[237] Background information on the Facebook proceeding, 19/12/2017:
(http://www.bundeskartellamt.de/SharedDocs/Publikation/EN/Diskussions_Hintergrundpapiere/2017/Hintergrundpapier_Facebook.html?nn=3591568)

203. There are a number of sources able to illustrate the significance of Facebook on the social network market. For example, according to Médiamétrie, on mobile terminals, Facebook and Instagram users represent over half of the unique visitors to the top ten social networks, including professional social networks such as LinkedIn or Viadeo. In France, Facebook and Instagram together make up around 50% of unique visitors to the 10 main social networks, with over 42 million unique visitors.

Top 10 social networks on mobile devices in France (millions of unique visitors)[238]



204. Other indicators such as the time spent may be used to quantify the social network audience. The *Autorité* does not have figures on time spent on Facebook in France, but observes that in the United States, it is longer than the time spent on other social networks, although this time has been falling since 2016. In the United States, the time spent on Facebook is approximately 18 hours each month, 4 hours each month on Snapchat and 3 hours on Instagram.

[238] Source: Médiamétrie and Médiamétrie Net Ratings, Mobile Internet Audience, July 2016, base: 15 years old and over.

Time Spent with Select Social Media Platforms Among US Social Media Users, 2016 & 2017[239]

Time Spent with Select Social Media Platforms Among US Social Media Users, 2016 & 2017

	Stickiness	Average time spent per user (hrs:mins)	Average sessions per user	Average session duration (mins:secs)
2016				
Facebook	75%	32:43	311	6:18
Snapchat	48%	3:03	119	1:32
Twitter	43%	2:37	37	4:12
Facebook Messenger	44%	0:54	64	0:51
2017				
Facebook	70%	18:24	173	6:23
Snapchat	47%	4:00	144	1:40
Twitter	27%	3:02	32	5:44
Facebook Messenger	49%	1:34	67	1:25

Note: ages 18+; among users of each platform
Source: Verto Analytics, "Verto Index: Social Media Apps and Websites," Oct 31, 2017

232866 www.eMarketer.com

205. For Google, a series of indicators also illustrates the important positions of its services on several relevant markets. This is the case for services constituting commercial advertising inventories for advertisers such as Gmail, Google Search, Google Maps or Google Play.

206. According to Médiamétrie, Gmail is the service in France in the e-mail services market[240] with the largest number of monthly users on mobile terminals, far ahead of Orange Mail, Outlook, Yahoo Mail and SFR Mail.

[239] Source: eMarketer.
[240] European Commission, Decision of 21 December 2016, M.8180, Verizon / Yahoo.

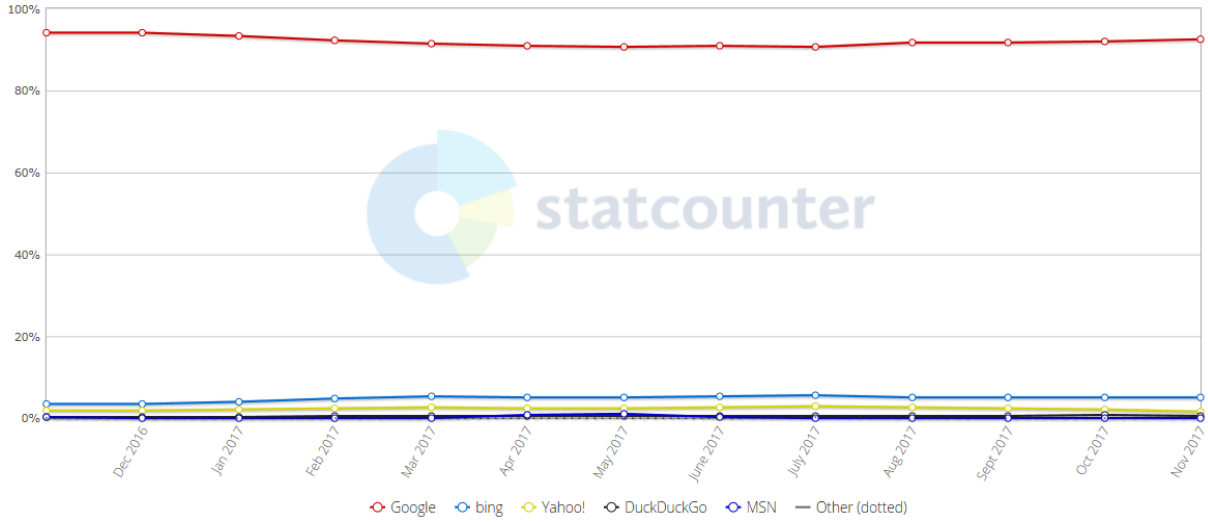
Number of unique monthly visitors to the different e-mail services in France on mobile terminals[241]

Rank	Websites and applications (Brands and Channels)	Number of unique monthly visitors
1	Gmail	14,958,000
2	Orange Mail	3,453,000
3	Outlook.com	3,328,000
4	Yahoo Mail	1,697,000
5	SFR Mail	1,326,000

207. Google is also in a leading position globally and in France for map services. According to Médiamétrie, in July 2017, of a total 35.4 million unique visitors to a website or application in the "Maps/Itineraries" category, Google Maps and Waze received approximately 28 and 9.6 million visitors. Mappy, ViaMichelin and Apple Maps received 11.8 million, 8.4 million and 5.9 million visitors respectively.[242]

208. According to StatCounter, Google Search holds a market share of over 90% in France in the general search services market. No other search engine has a market share above 5%.

General search engine market shares in France[243]



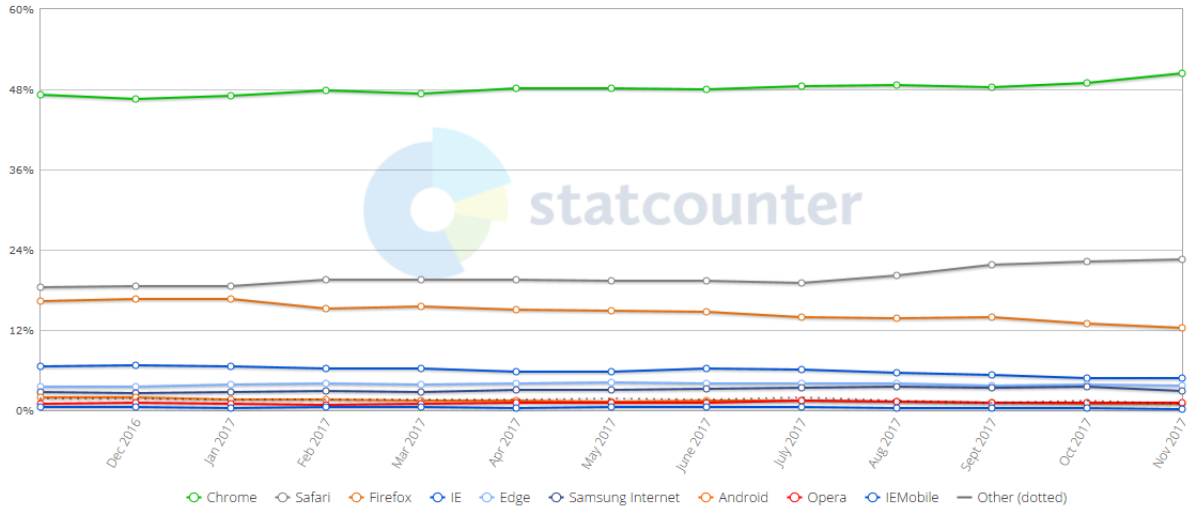
[241] Source: Médiamétrie, Top 5 websites and applications in the e-mail sub-category, by number of monthly visitors, August 2016.

[242] Source: Mediamétrie, Total Internet Audience in France in July 2017 (see http://www.fdcom.coop/export/sites/default/fr/federations/les-scop-communication/_media/docs-fede-communication/Etudes/1144-AudienceInternet_Juillet2017.pdf).

[243] Source: Statcounter, December 2016 - November 2017 (see http://gs.statcounter.com/search-engine-market-share/all/france/#monthly-201611-201711).

209. Google also holds strong positions on markets with major services for ad serving and website promotion, such as web browsers, with Google Chrome. According to StatCounter, Chrome holds a market share of approximately 50% in the web browser market in France. Its main competitor is Safari, with a market share of under 25%.

Web browser market shares in France[244]



210. According to the *Autorité*, there are uncertainties regarding the methods for measuring the position of YouTube on the market. The question of whether the relevant market to consider is the video sharing platform market or the video content distribution market produces mixed responses. Video sharing platforms offer different functionalities to users than catch-up television websites, for example. Catch-up TV websites do not allow users to upload videos or make money from them. Users who view online content use services in different ways. For example, a platform like YouTube is used to access music that can be streamed or downloaded using third-party softwares. Furthermore, while catch-up television services are used to access a limited number of recent programmes, generally for a limited period after their television broadcast, video-sharing platforms constitute a very uniform video library with an ever-increasing volume. The search technologies used by YouTube are the same as those used by Google Search, and queries on YouTube, which generate targeting data, have higher volumes than for general search engines like Bing.

211. Of the fifteen companies listed in the Médiamétrie ranking, YouTube hosted over 50% of the videos viewed each month on computers for August 2017, but this approach may underestimate the significance of the platform as it only considers views on computers, and is not based on an exhaustive overview of the market, including all stakeholders and counting all videos viewed.

[244] Source: Statcounter, December 2016 - November 2017 (see http://gs.statcounter.com/browser-market-share/all/france/#monthly-201611-201711).

Top 15 most-visited video websites from a computer in France [245]

Rank	Brand support BS	Unique users per month	Videos viewed per month	Total time spent per months in hours
1	YouTube	20 185 000	1 097 275 000	51 877 000
2	Facebook	13 176 000	559 208 000	28 175 000
3	Orange	4 306 000	65 907 000	3 235 000
4	AlloCine	2 596 000	13 472 000	271 000
5	Dailymotion	2 314 000	35 564 000	4 051 000
6	Yahoo	2 037 000	61 538 000	1 313 000
7	MYTF1	1 744 000	22 526 000	6 475 000
8	SFR	1 673 000	5 838 000	989 000
9	franceinfo	1 548 000	3 972 000	237 000
10	MSN	1 535 000	9 741 000	285 000
11	France Televisions	1 433 000	9 236 000	3 988 000
12	LCI	1 277 000	4 938 000	149 000
13	auFeminin	1 268 000	2 090 000	41 000
14	BFM TV	1 154 000	6 152 000	1 587 000
15	Marmiton	1 139 000	2 016 000	40 000

212. The figures provided by Google for the global and French advertising revenue generated by YouTube show a significant increase in the platform's turnover. In this regard, the *Autorité* underlines that analysis of the position of YouTube on the online advertising market cannot be dissociated from analysis of Google's more general position on the market.

ii- Ad services and data mining markets

213. The online advertising sector has undergone significant changes since the first *Autorité* opinion on the online advertising sector issued in 2010. The most significant changes are probably the position now held by Facebook and the development of a large number of technical intermediaries in the display advertising sector. Nevertheless, despite these changes, the information collected during the investigation for this opinion does not offer grounds for the *Autorité* to call into question the findings of the European Commission and the *Autorité de la concurrence* with regard to Google's positions on the overall online advertising market and on the search advertising, technical intermediation and ad serving markets.

214. In 2016, Google remained the leading player on the overall online advertising market with revenue significantly higher than Facebook. By using an approach that considers all search and display ad revenue, Google's revenue represented over 40% of the online advertising market in France in 2016.

215. Information available to the *Autorité* shows that Google's market share on the online search advertising market alone is no lower than 70%, which, at this stage, cannot call into question the analysis carried out in 2010 on the existence of a dominant position on the search advertising market.

[245] Source: Médiamétrie (see http://www.mediametrie.fr/internet/communiques/l-audience-video-ordinateur-en-france-en-aout-2017.php?id=1754).

216. Excluding search advertising revenue, it would appear that Facebook and Google generated relatively similar levels of revenue in 2016. However, Facebook's growth seems stronger. In 2017, its revenue overtook Google in the display advertising sector.

217. However, the market shares of these two companies could be different if the market were broken down into smaller sub-segments, differentiating between the non-search advertising market and the advertising intermediation market, as the Commission did in its Google/DoubleClick Decision.[246]

218. In the advertising intermediation and ad serving sectors, Facebook is not currently as big a player as Google, which has held a leading position since its acquisition of DoubleClick in 2008. Following this operation, Google also strengthened its range of publisher services through the acquisition of AdMob in 2010. This operation was authorised by the FTC, which took into account Apple's entry onto the advertising market, despite competition problems resulting from the merger of the two main ad networks.[247]

219. A significant proportion of Google's revenue in the display advertising sector now comes from the provision of intermediation and ad serving services through its various services for advertisers and publishers. A significant proportion of the total non-search advertising revenue declared by Google comes from intermediation services provided under the Google Display Network, the DoubleClick Ad Exchange and the DoubleClick Bid Manager.

220. In the context of the investigation for the opinion, the *Autorité* did not seek to establish a precise estimate of Google's market shares in the intermediation and ad serving markets. Some stakeholders provided estimates of market shares and other information that can illustrate Google's significant position on these markets. According to one stakeholder on the ad serving market, Google's market share in France for advertiser ad servers represents around 65% of volume. For example, a major media agency in France stated that Google's DSP, DoubleClick Bid Manager (DBM), represents over 90% of access costs to the various DSPs it uses. One technical intermediary also stated that DBM represented 40% of the impression volumes sold via its platforms.

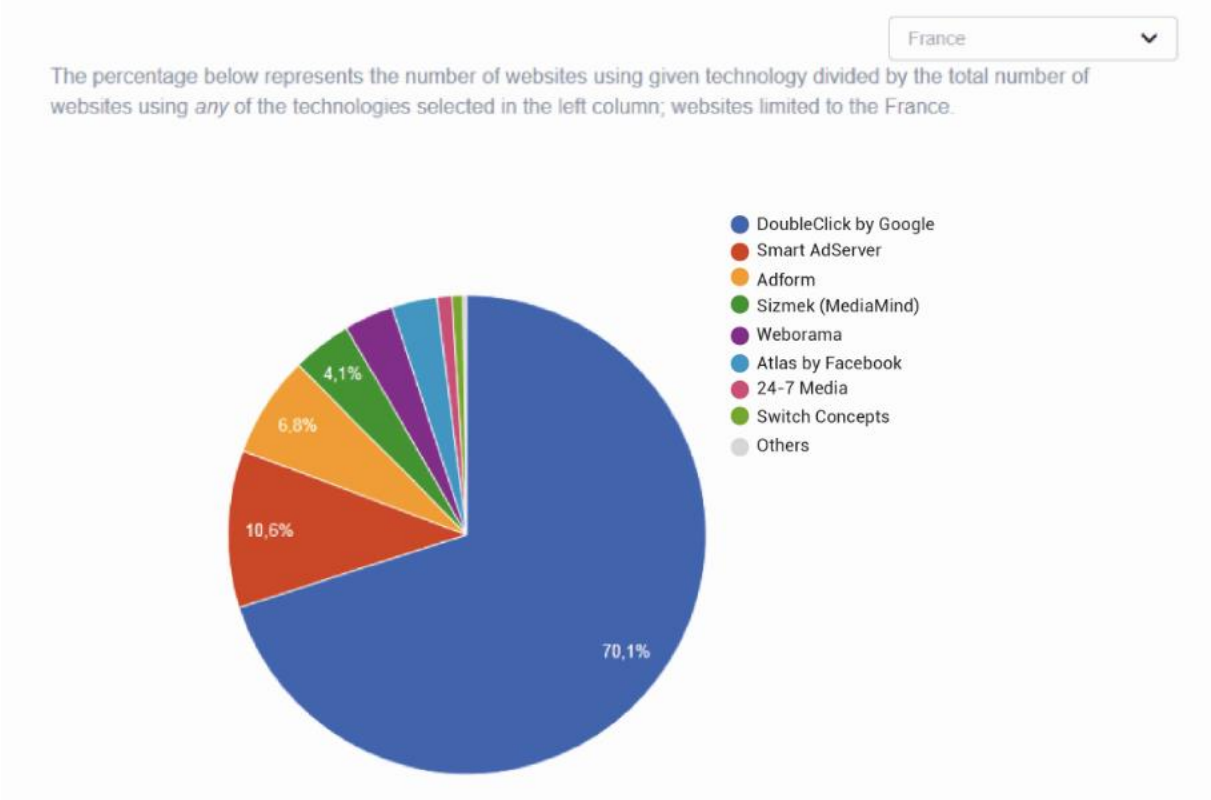
221. In light of the information at its disposal, the *Autorité* observes that Google's DSP, DBM, appears to be the DSP that generates the largest revenue, and which has significant growth. According to information collected at this stage by the *Autorité*, no DSP has currently reached this level of revenue on a global level, including AppNexus and Mediamath. The revenue of DataXu ($200 million), OpenX ($141 million) and The Trade Desk[248] is also reported to be much lower.

[246] Paragraph 108 of Decision M.4731, Google / DoubleClick.
[247] See https://www.ftc.gov/sites/default/files/documents/closing_letters/google-inc./admob-inc/100521google-admobstmt.pdf.
[248] See https://adexchanger.com/ad-exchange-news/inc-mags-revenue-survey-shows-growth-happening-ad-tech/.

222. Assessing Google's position in the technical intermediation and ad serving sector must take into consideration all services provided to publishers (AdSense, AdMob and DoubleClick) and advertisers (AdWords and DoubleClick). The revenue generated by the DBM DSP only constitute part of Google's advertising intermediation revenue.

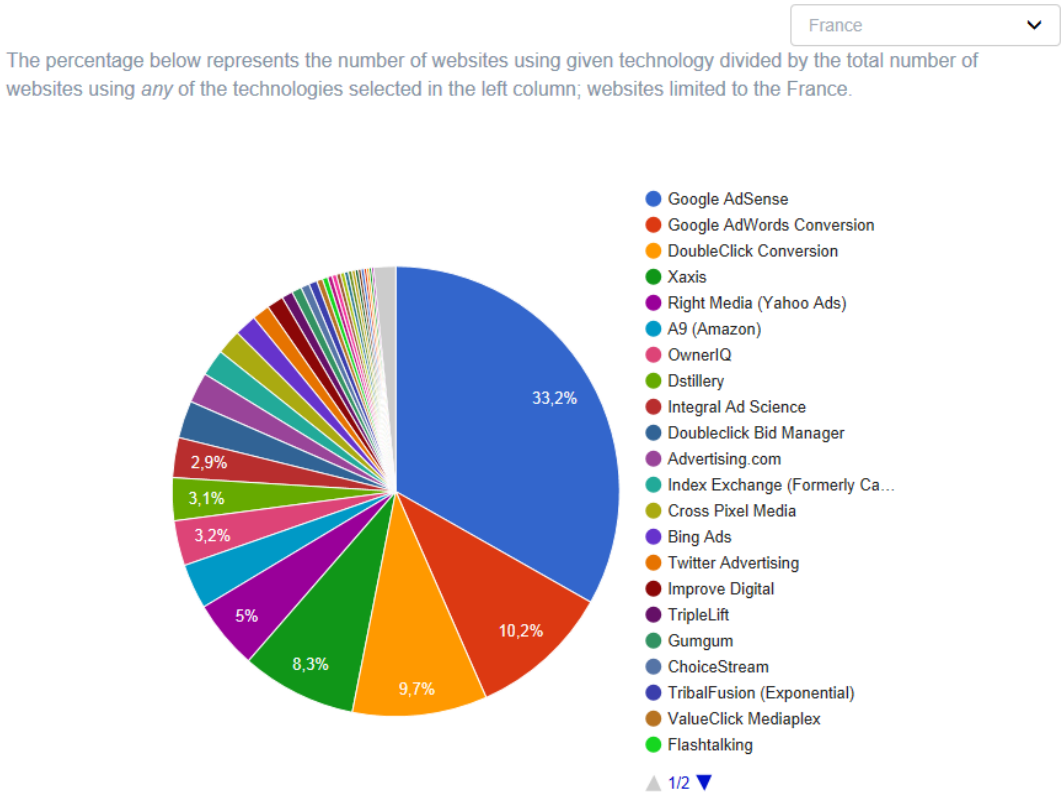
223. Several respondents provided estimates of market shares in terms of the volumes generated by companies that collect data on the technologies used by website publishers. The following estimates were provided by Datanyze,[249] whose capital is partially controlled by Google Ventures, a subsidiary of Alphabet,[250] Google's parent company. They can provide initial indications regarding the size of stakeholders in certain technical intermediation, ad serving and data mining markets. However, the *Autorité* is unable to vouch for the objectivity, exhaustivity and stability of the data published. The following figures show the market shares of ad servers and ad networks in France.

Estimated market shares by number of websites in France in the ad serving sector, Datanyze (February 2017)



[249] See https://www.datanyze.com/.
[250] See https://www.gv.com/portfolio/.

Estimated market shares by number of websites in France in the ad network sector, Datanyze (February 2017)



b) Barriers to entry and to expansion

224. The existence of barriers to entry and barriers to expansion must also be taken into account when determining the position of companies. These can "*take various forms. They may be legal barriers, such as tariffs or quotas, or they may take the form of advantages specifically enjoyed by the dominant undertaking, such as economies of scale and scope, privileged access to essential inputs or natural resources, important technologies or an established distribution and sales network. They may also include costs and other impediments, for instance resulting from network effects, faced by customers in switching to a new supplier. The dominant undertaking's own conduct may also create barriers to entry, for example where it has made significant investments which entrants or competitors would have to match, or where it has concluded long-term contracts with its customers that have appreciable foreclosing effects. Persistently high market shares may be indicative of the existence of barriers to entry and expansion.*"[251]

225. In the context of the investigation for the opinion, many stakeholders made observations on the various barriers present in the online advertising sector. Facebook and Google maintain that they are active in an environment characterised by numerous innovations, frequent entries onto the market and significant growth. Conversely, other stakeholders consider that there are

[251] Communication from the Commission - Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings, Paragraph 17.

barriers to entry and expansion, related to various aspects associated with the provision of Internet user services (i) and advertising services (ii).

i- User services markets

226. The user services markets on which Google and Facebook are active appear to present many types of significant barriers to entry and expansion, which will now need to be taken into consideration for analysis of the competitive situation of the overall online advertising market and legal qualification of the stakeholders' positions. Barriers to entry and expansion on the user services markets are likely to impact the capacity of stakeholders to increase their advertising revenue and market shares.

227. High market shares and the gap with the leading competitor may be an indicator of the existence of these barriers, and appear to have been observed, particularly for search engines, mapping services, social networks, video sharing platforms and e-mail services. On each of these markets, Google and Facebook have held significant positions for many years and their services are constantly growing in size.

228. Furthermore, these markets are characterised by the need for significant initial and recurring investments (improvement of service quality, development of new services, acquisitions, etc.). Many markets in which Google and Facebook are active are also characterised by powerful direct and indirect network effects, which help improve the audience and revenue generated by these services. In this regard, Google and Facebook are competing with major players, but they are generally much smaller. The social network market in France and Europe is driven by several key players (Snapchat, Twitter, Google+), but which, for many years, have maintained significantly lower audience levels than Facebook and Instagram. Similarly, in the video sharing platform market, YouTube has consistently widened its lead over Dailymotion since its acquisition by Google in 2006. Microsoft has made significant investment in the general search services market in order to increase Bing's market shares, which has nevertheless proven inadequate.

229. Due to their audience, Google and Facebook also enjoy significant economies of scale, likely to help reduce production costs. These audiences also allow them to collect larger volumes of data than their competitors. Access to these volumes of data helps improve the general quality of service, and in particular, the algorithms used to provide the service.

230. All these aspects tend to confirm that the main markets in which Google and Facebook are active are characterised by significant barriers to entry and expansion.

231. In addition, some Google and Facebook content distribution and referencing platform services are capable of creating barriers to expansion into related markets in which they are not necessarily active. In this regard, several stakeholders underlined the importance of services such as Google Search, Facebook or YouTube in developing the traffic to their own websites and applications.

ii- Ad services and data mining markets

232. Barriers to entry for publishers in the online advertising space market may be considered low, given that they can use intermediation services like AdSense. However, the entry of publishers onto the direct sales market requires reaching a certain audience level to attract advertisers. Furthermore, the direct sale of ad spaces via proprietary programmatic technologies and platforms (AdWords, Facebook Ad Manager, Twitter Ads) is subject, in particular, to the development of a bidding platform, which requires significant financial investments and human resources. One European player in data mining and ad serving considers that "*traditional media publishers especially are caught in the vicious circle of the technological barrier to entry, as successful digital projects require considerable technological investments, which the revenue they generate does not allow them to make.*"

233. Some stakeholders consider that Amazon, whose main retail activity is e-commerce, may change this competitive balance in the future.

234. In this regard, responses from the public consultation maintain that Amazon has significant competitive advantages compared to other competitors of Google and Facebook in Europe. Many stakeholders consider that the purchase data generated on Amazon's e-commerce services is useful for advertisers and benefits from the quality of data generated in "logged-in" environments after the user has logged in. On the other hand, Amazon is the world leader in cloud computing services, ahead of Microsoft, Google and IBM. Along with Google, it has some of the most advanced data mining capacities. Many ad intermediation stakeholders have developed infrastructure based on Amazon's computing services.

235. Amazon's growth in the advertising sector already appears stronger than Twitter or Snapchat, which is largely explained by the interest of advertisers in ad services linked to product searches made on the website's search engine. In addition, Amazon is able to offer aggressive prices as advertising is not its core business. However, despite these competitive advantages, Amazon's growth prospects in the advertising sector and increased market shares may currently be limited. Indeed, the eMarketer institute forecast that Amazon will have a global market share of 1% in the online advertising sector in 2019.[252] Information communicated to the *Autorité de la concurrence* by Amazon does not suggest any significant changes to these forecasts. Although there is a significant growth in advertising activity, the level of ad revenue is much lower than for Google and Facebook.

[252] Source: eMarketer, Net Digital Ad Revenue Share Worldwide, by Company, 2016-2019, 14 March 2017 (http://www.emarketer.com/Chart/Net-Digital-Ad-Revenue-Share-Worldwide-by-Company-2016-2019-of-total-billions/205364).

236. Amazon's growth prospects can mainly be explained by the smaller number of unique visitors per day compared to Google and Facebook, which may be linked to the very nature of the website, currently just offering an e-commerce service.

Top 20 most visited brands in France[253]

Rank	Brands	Unique visitors per month	Unique visitors per day
1	Google	44 604 000	30 302 000
2	Facebook	40 788 000	24 673 000
3	YouTube	37 278 000	11 649 000
4	Wikipedia	25 556 000	3 155 000
5	Orange	25 215 000	8 304 000
6	Amazon	24 315 000	3 784 000
7	Microsoft	23 529 000	3 074 000
8	Leboncoin.fr	23 514 000	4 835 000
9	Windows Live	21 449 000	3 682 000
10	Apple	21 045 000	9 579 000
11	Twitter	20 609 000	4 050 000
12	Instagram	19 298 000	4 765 000
13	Yahoo	18 928 000	5 490 000
14	Pagesjaunes	18 685 000	1 711 000
15	Le Figaro	18 356 000	2 300 000
16	Le Monde	17 470 000	2 238 000
17	franceinfo	16 860 000	2 020 000
18	SFR	16 130 000	3 684 000
19	LinkedIn	15 989 000	2 061 000
20	Le Parisien	15 655 000	1 534 000

237. Nevertheless, the development of the Internet of Things and the spread of personal assistants will generate a large amount of data with potentially significant commercial uses, and could change the competitive balance of the online advertising sector in the long term. In this new sector where the positions have not yet been established, Amazon seems to have higher market shares than Google in the United States, with around 70% of the market compared to around 24% for Google.[254]

238. Many stakeholders stated that the advertising intermediation and ad serving markets are also characterised by the existence of significant barriers.

239. Firstly, the *Autorité* observed that many stakeholders entered the market without the support of a major group and became major players in intermediation. This is true for SSPs such as PubMatic (2006), Rubicon Project (2007) and OpenX (2008) or DSPs such as Invite Media (2007), Mediamath (2007), Rocket Fuel (2008), DataXu (2009) or The Trade Desk (2009). However, entry onto the advertising intermediation market is partially subject to a series of computing and software investments for the development of algorithms, and the establishment of partnerships with platforms, publishers and advertisers. This sector is also characterised by a large number of acquisitions and Google's growth has been achieved primarily through several major acquisitions: Applied Semantics (2003), the DoubleClick network (2008), the AdMob network/SSP (2009), the Invite Media DSP (2010) et the Admeld SSP (2012). Over the past three years, several computing groups (Adobe, Oracle, Salesforce) also made acquisitions in intermediation and data mining. These acquisitions generally counteract the

[253] Source: Médiamétrie (see http://www.mediametrie.fr/internet/communiques/audience-internet-global-en-france-en-septembre-2017.php?id=1772).

[254] See https://www.emarketer.com/Chart/US-Voice-Enabled-Speaker-User-Share-by-Player-2017-of-total/207531.

limited barriers to entry and expansion as they prevent new players from reaching a significant size and being able to compete with the positions of established stakeholders.

240. According to a major ad service provider for advertisers, the main barriers are linked to "*access to advertising inventory*", the "*availability and relevance of user data"* and the *"technical expertise for interfacing with advertiser websites*." In this regard, many stakeholders underlined that Google had access to data sets in connection with the provision of intermediation services to which its competitors did not have access. Others maintained that it was difficult to reproduce the scope of Google and Facebook's offers in terms of audiences and advertising inventories.

c) The countervailing powers of advertisers and publishers

241. Finally, analysis of the position of a player under competition law requires assessment of the competitive pressure exerted by stakeholders that are not competitors of the company in question. Thus, "*competitive constraints may be exerted not only by actual or potential competitors, but also by customers. Even an undertaking with a high market share may not be able to act to an appreciable extent independently of customers with sufficient bargaining strength. Such countervailing buying power may result from the customers' size or their commercial significance for the dominant undertaking, and their ability to switch quickly to competing suppliers, to promote new entry or to vertically integrate, and to credibly threaten to do so"* [255]

242. The *Autorité de la concurrence* sets out several observations that tend to show that the countervailing powers of publishers, advertisers and technical intermediaries are not significant on the online advertising market, for a number of reasons.

243. Generally, many publishers, media agencies and advertisers underlined the difficulty or impossibility of negotiating with players such as Google or Facebook. Many companies stated that agreements made with these players were tantamount to standard form contracts.

244. Each publisher represents a miniscule proportion of the total demand for intermediation services for search or display advertising. Similarly, each advertiser also represents a very limited proportion of demand for the purchase of ad space.

[255] Communication from the Commission - Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings, Paragraph 18.

3. STAKEHOLDER'S CONCERNS

245. During the investigation for the opinion, many companies described a number of situations and practices used by various players in the advertising sector.

246. These are very varied and some, if established, may have an impact on competition.

247. Nevertheless, the *Autorité* emphasises that the application of competition law complies with strict standards of evidence and is subject to *adversarial* proceedings, ensuring that the parties have access to the case. Therefore, under this opinion, the *Autorité* will limit itself to presenting certain practices mentioned by stakeholders in their responses to requests for information, and restating certain aspects of prior decisions and case law with regard to the abuse of dominant position and prohibited agreements, without making any qualifications whatsoever.

248. Firstly, some stakeholders identified practices that they present as strategies for bundling or tied sales, low prices and exclusivities. The behaviour mentioned includes the association of several intermediation services, the link between intermediation services and services supplying targeting data, and the link between an intermediation service and exclusive access to a website's inventory. Many stakeholders consider that some companies make access to their data contingent on the purchase of their own advertising solutions and services, and that this data could not be used on competing ad services. Furthermore, data access is said to be provided free of charge with the use of services and solutions.

249. In order to establish the abusive nature of a tied sale,[256] first, the tying and tied products must be two separate products,[257] and second, the undertaking concerned must be dominant in the market for the tying product. Third, consumers must not have a choice to obtain the tying product without the tied product. Finally, the tied or bundled sale must foreclose competition.[258] The ban on tied sales for dominant undertakings is likely to apply in situations where consumers have the choice of obtaining the tying product without the tied product, although the effects of mixed bundling are less significant.[259] As far as contractual exclusivities are concerned, they may prove abusive when they "*are designed to deprive the purchaser of or restrict his possible*

[256] Judgment of the Court of First Instance of 17 September 2007, Microsoft v Commission, T-201/04, Paragraphs 842 and 859, and the case law and doctrine to date cited; which was used by *Autorité de la concurrence* in Decision 12-D-25 of 18 December 2012 on practices used in the rail freight sector, Paragraph 620.

[257] Also Microsoft v Commission Judgment, T-201/04, Paragraphs 917 and following. Stand-alone consumer demand must be established for each product. For the Commission, this involves checking if, in the absence of tying or bundling, a substantial number of customers would purchase or would have purchased the tying product without also buying the tied product from the same supplier, thereby allowing stand-alone production for both the tying and the tied product (European Commission, Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings, Paragraph 51). Furthermore, case law and doctrine to date has considered that just because two products are complementary does not mean they are not distinct products. (Microsoft v Commission Judgment, T-201/04, Paragraphs 921 and 922).

[258] Communication from the Commission; Microsoft v Commission Case, T-201/04, in particular Paragraphs 842, 859 to 862, 867 and 869; Decision no. 11-MC-01 of 12 May 2011 on the application for protective measures made by Kiala France and Kiala SA in the parcel delivery sector, Paragraph 281.

[259] The *Autorité de la concurrence*, like the European Commission, differentiates between various types of bundled sales, depending on the type of tie between the products (contractual, technical or incentive bundling, e.g. receiving a preferential rate when two products are purchased at the same time): "pure bundling" refers to sales tied by the solely sales-motivated requirement to purchase two or more products together; "technical bundling" refers to sales tied by the technical integration of products; "mixed bundling" refers to the sale of multiple products together under significantly better conditions than if products are purchased separately (however, the two products can be purchased separately, unlike pure bundling) (See Opinion 10-A-13 of 14 June 2010 on the cross- usage of client databases, Paragraph 8).

choices of sources of supply and to deny other producers access to the market."[260] There is a higher probability of foreclosure effects when exclusivity clauses cover a significant proportion of clients and when they are likely, together, to generate a locking effect. It is worth mentioning again that in the online advertising sector, the European Commission, in its Statements of Objections to Google regarding the AdSense service, also observed exclusivity that could harm competition, in the form of agreements requiring third party publisher websites to source all or the majority of their online contextual ads from Google.[261]

250. Secondly, the practices described by stakeholders relate to the use of a leveraging effect whereby dominant positions on certain services markets are used to boost positions on other markets, and potentially distort competition on these markets. The behaviours exposed in the responses to the consultation concern the media audit and media agency sectors, the provision of ad services and data mining services for advertisers. The *Autorité* has already observed that such practices, when established, may cause foreclosure effects in some cases, in particular if the information held by a dominant undertaking cannot be accessed or reproduced by its competitors, thereby constituting privileged information whose use is likely to produce restrictive effects on competition.[262]

251. Thirdly, some publishers and intermediaries consider that they are subject to differential treatment by players they believe to be dominant in the ad intermediation sector. This behaviour relates firstly to the possibility of monetising certain types of videos on a platform, and secondly to conditions for DSP access to some platform publishers' marketplaces and ad inventories. Discriminatory behaviour contrary to competition law can exist for two reasons. It can involve artificially strengthening the position of the dominant undertaking, which it expresses through the competition it exerts on either the market dominated or another market. Discrimination can also distort competition without the undertaking implementing it being a direct stakeholder on the market affected. Through unjustified differential treatment, the dominant undertaking can use its special position to give an artificial advantage or disadvantage to stakeholders located at another production stage, whether partners, clients or suppliers.[263]

[260] Judgment of the Court of Justice of 13 February 1979, *Hoffmann-La Roche v Commission*, 85/76, Paragraphs 89 and 90.
[261] See http://europa.eu/rapid/press-release_IP-16-2532_en.htm.
[262] Opinion 10-A-13 on the cross-usage of client databases, Paragraph 20.
[263] Decision 10-MC-01 of the *Autorité de la concurrence* of 30 June 2010 on the request for interim measures from Navx, Paragraphs 183 and 184.

252. Fourthly, several stakeholders noted the development of what they consider to be obstacles to interoperability in the advertising intermediation sector. A study carried out in 2014 by the Competition Market Authority and the *Autorité de la concurrence* on open and closed systems emphasised that "*the absence of interoperability between systems prevents users of competing systems from interacting with other systems, leading to a situation where network effects are restricted to within a system (e.g. a proprietary instant messenger which can only be used on one ecosystem).*"[264] In litigation cases, some practices that could limit interoperability were considered as a refusal of access to an essential facility,[265] such as for the Microsoft case.[266] Interoperability issues can also be considered in terms of discrimination, transparency or bundling practices.

253. Fifthly, several stakeholders highlighted the existence of restrictions on the possibilities for collecting and accessing certain data. For example, many platforms are said to refuse television service publishers access to data on the use of their own services. One large media agency stated that some major players refuse to integrate campaign tracking information for certain advertising formats, supply data on qualification by audience impression, or provide research statistics for advertiser brands. One technical intermediary believes that there is a lack of transparency regarding the data transmitted by certain platforms, and stated that "*the main issue in working with platforms that provide access to the ad inventory of publisher websites (such as "RTBs" or even "APIs") is the fact that exchanges with these platforms are only based on self-reported data that they pass onto buyers. In practice, it is impossible for "technical intermediary" buyers to verify the precision, veracity or authenticity of data. This results in a lack of transparency and visibility, creating an asymmetry between these platforms and "technical intermediation" buyers.*". One television services publisher considers that major platforms generally refuse to be measured via the integration of third-party tags on their websites, instead choosing the selective transmission of data at a later date. Some audiovisual services publishers consider that they are also facing limitations regarding access to the data generated on some social media networks. This type of practice is said to deprive publishers of the possibility of adapting their content to the profiles and interests of webpage visitors and proposing targeted ads.

---

[264] The economics of open and closed systems, 16 December 2014 (http://www.autoritedelaconcurrence.fr/doc/economics_open_closed_systems.pdf)

[265] For example, see *Conseil de la concurrence*, Decision 03-MC-04 of 22 December 2003 on the application by Messageries Lyonnaises de Presse for interim measures (and subsequent appeals/decisions); Decision no. 04-D-54 of 9 November 2004 on practices used by Apple Computer Inc. in the internet music downloads and digital walkmans sectors; Decision 08-D-04 of 25 February 2008, on practices used by Nouvelles Messageries de la Presse Parisienne (NMPP).

[266] In the case of Microsoft and the interoperability of Windows with administrator servers, the Commission observed that "*Microsoft's behaviour as regards disclosures of interface information* [information allowing interoperability] *must be analysed against the backdrop of two key elements* […]. *First, Microsoft enjoys a position of extraordinary market strength on the client PC operating system market. Second, interoperability with the client PC operating system is of significant competitive importance in the market for work group server operating systems.*" (Paragraph 586 of the Commission Decision, quoted by Decision 04-D-54, listed above, Paragraph 70).

254. Access restrictions can be considered in a number of ways by competition authorities. Refusal to grant access can be considered anticompetitive if the data in question constitutes an essential facility for the activity of the company seeking access,[267] or if it is discriminatory.[268] Access restrictions can also be considered in terms of bans on anticompetitive agreements. The Decision by the *Conseil de la concurrence*[269] on practices in media audience measurement and ad tracking[270] can be cited in this regard, as it investigated practices by the Audipub Economic Interest Grouping (EIG) with regard to media consulting companies. The EIG comprised Médiamétrie for audience data, SECODIP for tracking ad messages, and Espaces TV. It offered products resulting from the cross-processing of audience and ad tracking data, in order to optimise advertising investments. Decisions on the development and sale of products were made unanimously by members of the EIG. Together, Médiamétrie and SECODIP defined and controlled access conditions for these products. The *Conseil* considered that media consulting companies needed access to audience data and the tools created through the processing of said data and ad tracking. It observed that Médiamétrie and SECODIP, acting together within the Audipub EIG, adopted a sales policy that lacked transparency and which was characterised by the use of delaying tactics with regard to the media consulting activity.[271] It considered that these practices, resulting from cooperation of the two stakeholders within the Audipub EIG, restricted access of an operator "*to Audipub products and services that could be useful in carrying out its activity*"[272] with the aim and potential effect of limiting access to the media consulting market.[273]

[267] According to European case law, and as observed by the *Autorité de la concurrence* and the Bundeskartellamt in their joint paper of 10 May 2016 on data and its implications for competition law, an undertaking can request access to a facility or network if the incumbent's refusal to grant access concerns a product which is indispensable for carrying on the business in question, if it is not justified by objective considerations and if it is likely to exclude all competition in the secondary market. Furthermore, in the Bronner Judgment, the CJEU ruled that a product or service is only indispensable if there are no alternative products or services and if there are technical, legal or economic obstacles capable of making it impossible or unreasonably difficult for any other company, alone or in partnership, to develop products or services in the downstream market. These CJEU criteria only seem to be met if the data held by the company in question is truly unique and if its competitors cannot obtain said data by other means to provide its services (Pages 20 and following, citing the Judgments of the Court of Justice of 29 April 2004, IMS Health, C-418/01, Paragraph 37, and 26 November 1998, Bronner, C-7/97, Paragraphs 44 and 45; and the Article by Damien Geradin and Monika Kuschewsky, Competition law and personal data: preliminary thoughts on a complex issue (2013), available from: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2216088).

[268] *Autorité de la concurrence*, Decision 14-D-06 of 8 July 2014 on practices used by Cegedim in the medical information database sector. Also see the joint paper by the *Autorité de la concurrence* and the Bundeskartellamt on data concerning this case. (Page 21).

[269] The *Conseil de la concurrence*, France's competition authority, became the *Autorité de la concurrence* in 2009.

[270] *Conseil de la concurrence*, Decision no. 98-D-53 of 8 July 1998 on practices observed in the media audience measurement and ad tracking sectors.

[271] Verimédia only received the surveys it had ordered from the Audipub EIG very late and had no access to the Micromarché software on the grounds that the agreement signed with the EIG made no explicit mention of access to this product, although this precision was never discussed upon execution of the contract.

[272] *Conseil de la concurrence*, Decision 98-D-53 of 8 July 1998, p.18.

[273] See the *Conseil de la concurrence* 1998 Activity Report on this case.

255. Sixthly, several stakeholders made specific criticisms on audience measurement and the certification of certain companies by third-party bodies, thereby establishing associations of undertakings. It would be useful to consider certain aspects of prior decisions on standardisation, certification and audience measurement.

256. Competition authorities have generally been in favour of agreements for the purposes of standardisation, which by their very nature, are designed to facilitate the development of new markets and improve the offer conditions. Standardisation generally tends to strengthen competition and reduce production and sales costs to the benefit of all economies. In its opinion of 16 November 2015 on standardisation and certification activities, the *Autorité* stated that "*the existence of consensual standards reduces the barriers to entry formed by national specificities and opens access to new markets by establishing clear and fair rules of play for all relevant companies. By facilitating compatibility and interoperability between different products and services, the adoption of standards has a positive effect on competition, as it promotes diversity of offer and allows purchasers to compare various aspects of a product or service more easily, thus improving competition on the merits*."[274] Standardisation also provides companies with a "forum" to discuss the exclusion of certain products or technologies on a market, which therefore also constitutes a risk of anticompetitive effects.[275] For example, when analysing an agreement made between HighCo, Sogec and Perifem for the adoption of the Webcoupon format, a secure standardised e-coupon, the *Autorité* considered that this standardisation agreement risked foreclosing the market[276] and was not eligible for exemption from the Commission's guidance.[277] Many commitments were made to maintain dynamic competition on the market.[278] It is important to state that certification is "*an economic activity closely linked to the standardisation activity from which it partially derives* […], *while standardisation is cooperative by nature as its objective is to set a common rule, certification is an ordinary trading activity fully open to competition* […]."[279] According to prior decisions, only a "*system which is completely open, independent and transparent and provides for the acceptance of equivalent guarantees from other systems*" can guarantee the absence of restrictive effects on competition.[280] Finally, according to the Commission's Guidelines on horizontal co-operation, a body only has the right to test compliance of products or services with the standard if the exclusivity is limited to a certain period of time and if the certification fee is reasonable and proportionate to the cost of the compliance testing.[281]

[274] Opinion 15-A-16 of 16 November 2015 on the analysis of standardisation and certification activities in the light of competition law.
[275] *Autorité de la concurrence*, Decision 10-D-20 of 25 June 2010 on the practices implemented in the market of electronic discount coupons, Paragraph 49.
[276] Paragraphs 51 to 54 of Decision 10-D-20.
[277] Paragraphs 60 and following of Decision 10-D-20.
[278] Paragraphs 106 and following of Decision 10-D-20.
[279] *Autorité de la concurrence*, Opinion 15-A-16 of 16 November 2015 on the analysis of standardisation and certification activities in the light of competition law, Paragraph 51.
[280] European Commission, Decision of 29 November 1995, 95/551/EC, COMP IV/34.179, 34.202, 216, Dutch Cranes (SCK, FNK), Paragraph 23; criteria confirmed by the Judgment of the Court of First Instance of 22 October 1997, T-213/95 et T-18/96, Paragraphs 136 and 137.
[281] Guidelines on the applicability of Article 101 of the Treaty on the Functioning of the European Union to horizontal co-operation agreements, Paragraph 319.

257. For audience measurement, it is also important to consider relevant case law and doctrine to date in the AudiPRESSE case,[282] which called into question an audience survey on the magazine press published by this company, which was controlled by paid magazine publishers. Its results were systematically used by media agencies to define their ad campaign plans. The *Conseil* observed that the media excluded from the survey, i.e. free magazines, could not work with media agencies and could therefore not access the associated ad resources, which are the only sources of funding for free magazines. The *Conseil* therefore considered that the non-objective, non-transparent or discriminatory conditions for the inclusion of magazines in the audience survey were likely to raise competition problems, particularly with regard to Article L. 420-1 of the French Commercial Code (*Code de commerce*).[283] AudiPRESSE offered commitments to allay these concerns, including a reform of its rules in order to include free magazines in its survey, and the representation of the association for the development of free information press on its management boards.

Key points

For around ten years, competition authorities have been making decisions on litigation cases and mergers in the online advertising and data mining sector.

From the perspective of market definitions, online advertising has a large variety of players and business models. Many key points can be identified in prior decisions:

- Internet user services can sometimes be provided without financial consideration, but are nevertheless likely to be subject to competition law, particularly due to revenue received on related markets or on other "sides" of the same market. The functionalities offered to users are still essential for identifying the scope of the market (for example, prior decisions have already differentiated between the functionalities of a social media network and internet search);

- Until now, prior decisions on ad services have differentiated between the types of advertising (online or television; online search or online non-search advertising), but has also taken into consideration the increasing specialisation of the supply and demand for intermediation services.

Beyond the scope of the market, prior decisions have provided information on identifying the position of players in the online advertising sector, while emphasising that the markets and positions of players must be analysed taking into account any links between markets or the multisided nature of these markets:

- The market share must therefore be analysed, differentiating between user services (which can raise difficulties in terms of indicators) and the positions for ad and data mining services. Although indicators are variable, Google and Facebook appear to have important positions on many markets;

- Analysis of barriers to entry also takes into consideration the specific features of user services, particularly the levels of investment required and user membership to these services

[282] *Conseil de la concurrence* Decision 06-D-40 of 20 December 2006 on practices used in the magazine press sector.
[283] Paragraph 16 of Decision 06-D-40.

(in particular, network effects). For ad services, it particularly takes into account network effects associated with the audience required to attract advertisers;

- Finally, the countervailing powers of advertisers and publishers are also assessed, but appear quite limited in this sector.

During the investigation for the opinion, many stakeholders described a number of situations and practices used by various players in the advertising sector. Although the practices described cannot be investigated as part of an opinion, the *Autorité* notes that these practices involve situations that have already been considered under various configurations in prior decisions.

SECTION THREE: THE NEED FOR A FRAMEWORK TO REBALANCE TRANSPARENCY RULES AND PROMOTE SUSTAINABLE COMPETITION

258. Since the early 2000s, national and European public authorities have regulated various aspects of online advertising, on the basis of pre-existing legal frameworks or by creating new rules, particularly in order to ensure the protection of consumers, their privacy and personal data. At the same time, the industry has also structured itself to regulate various aspects concerning the provision of ad services, primarily in bodies such as the Interactive Advertising Bureau, and sometimes under co-regulation. For example, in 2010, the French government met with ten trade bodies to sign a code of ethics for targeted advertising and the protection of internet users. France has always been attentive to the issue of personal data protection and in 1978, brought in general legislation on data protection, which served as a model across Europe. Furthermore, CNIL controls, sanctions[284] and recommendations[285] in the online advertising sector and for user protection, has helped improve the protection of online user data and the legal certainty of stakeholders.

259. Online user data mining has become a critical issue in recent years, particularly due to the increased volume of data and the number of terminals connected, along with the relative lack of transparency in the practices and rules applied by stakeholders.

260. Due to the increasing significance of online user data mining and the associated economy that has been created, data protection rules will continue to play a major and increasingly important role in competition in the sector, within a context where the general regulations on data protection and the law pertaining to personal data protection come into effect. Data protection rules will also have a significant impact on economic regulation of the online advertising sector.

261. First, decisions by supervisory authorities such as the CNIL will have a significant impact on the development or resorption of regulatory asymmetries between the various stakeholders, which could limit the development of competition by indirectly accentuating the competitive advantages of companies with strong positions in data mining. Second, these authorities will be able to ensure strict compliance of the conditions for user data collection and mining with the legal framework for personal data protection, thanks to more efficient powers of sanction. For example, in May 2017, the CNIL sanctioned Facebook for several breaches of the French Data Protection Act ("*Loi Informatique et Libertés"*). It considered that Facebook performed a massive compilation of personal data of internet users in order to display targeted advertising and collected data on browsing activity of internet users on third-party websites, via a cookie, without their knowledge.[286] Similarly, under a settlement made with the FTC (Federal Trade Commission), responsible for the protection of American consumers, Google already recognised in 2012 that it had collected data from users of the mobile browser Safari in 2011 and 2012, even though users had explicitly opposed this collection.[287] Besides privacy issues, the mass unsupervised collection of protected and theoretically inaccessible personal data may provide undue advantages in competition between stakeholders.

262. In general, the *Autorité* considers that it is necessary to develop a legislative framework to give publishers and advertisers a high level of transparency in their relationships with ad

[284] See https://www.cnil.fr/en/facebook-sanctioned-several-breaches-french-data-protection-act.
[285] See https://www.cnil.fr/fr/publicite-en-ligne-la-cnil-precise-les-regles-respecter-lissue-de-ses-controles; https://www.cnil.fr/fr/solutions-pour-les-cookies-de-mesure-daudience; https://www.cnil.fr/fr/solutions-pour-la-publicite.
[286] See https://www.cnil.fr/en/facebook-sanctioned-several-breaches-french-data-protection-act.
[287] See https://www.ftc.gov/news-events/press-releases/2012/08/google-will-pay-225-million-settle-ftc-charges-it-misrepresented.

intermediaries and content distribution platforms, ensuring the absence of asymmetries in transparency and user data mining. According to several stakeholders, these asymmetries are primarily the result of difficulties applying rules to certain players, some of whom are based outside of France or the European Union. In this regard, the *Autorité* sets out observations on the application of the "Sapin" Law implementing decree in the online advertising sector (a), which came into force in January 2018, and plans for new European privacy and data protection rules, currently under negotiation at European level (b). The responses of stakeholders with regard to regulation in the online advertising sector suggests that these two regulatory changes could have significant effects on competition dynamics and business relationships between the various players in the sector.

1. THE SAPIN LAW ON TRANSPARENCY

263. French Law no. 93-122 of 29 January 1993 on Transparency and the Prevention of Corruption in Business and Public Procurement Procedures, known as the "Sapin" Law, established a framework for advertising services to ensure greater transparency by:

- giving intermediaries purchasing ad space (at the time, mainly agencies and centres) agent status, forbidding them from taking on buyer/seller status[288] and from receiving remuneration from the ad space seller;[289]
- forbidding ad space purchase consultants from receiving any remuneration or advantage whatsoever from the ad space seller;[290]
- requiring ad space sellers to directly invoice the advertiser[291] and report on the conditions under which the services were provided[292] in the month following delivery of the ad.

[288] Article 20: "*Any (...) space may only be purchased by an intermediary on behalf of an advertiser and under a written mandate agreement. This agreement shall establish the conditions for remuneration of the agent by detailing, where applicable, the various services that will be carried out under said mandate agreement and the amount of their respective remuneration. It shall also mention the other services provided by the intermediary outside of the mandate agreement and the total amount of their remuneration. Any rebate or price advantage of any kind whatsoever provided by the seller must appear on the invoice sent to the advertiser, and may only be held in full or in part by the intermediary by virtue of an express condition in the mandate agreement*."
[289] Article 21.
[290] Articles 22 and 24.
[291] Article 20, Paragraph 4.
[292] Article 23.

264. In 2010, in its opinion into the online advertising sector, the *Autorité* made observations on implementation of the Sapin Law. In particular, it highlighted that the Sapin Law places the onus on the medium or ad-sales house that sells the space and on the intermediary commissioned by the advertiser, and did not tackle the "*separate question of the transparency that a publisher could demand of an intermediary that it commissions to sell its advertising inventory to advertisers*."[293] The *Autorité* considered that "*the development of multi-media ad-sales houses and networks selling to the advertisers the pooled advertising space of hundreds or even thousands of publishers now raises the question of the transparency that a publisher (or an ad-sales house tied to a publisher) can legitimately expect from the intermediary that it uses to sell some or all of its advertising space*." The *Autorité* called for "*legislative clarification*" that "*could for instance introduce minimum reporting obligations (in the case of Google AdSense type networks for example, regarding the provision to site publishers of further details on keywords, the destination of links, the conversion rate of clicks, etc.) as well as, for larger networks, an auditing mechanism, possibly controlled by a third-party certifying body*."

265. In 2013, at the request of the French Ministry of Economy and Finance, the General Council of Economy, Industry and Technologies (CGEIT - *Conseil Général de l'Économie de l'Industrie et des Technologies*) analysed technical and economic issues associated with implementation of the Sapin Law in the online advertising sector.[294] It recommended enforcing the provisions of the Sapin Law and adapting them to online advertising, with clarification of the notion of ad networks, adapting the notion of mandate, and allowing technical intermediaries to play a role in invoicing. The report also recommended enforcing transparency for the identity of media, advertisers and invoicing information. According to the authors of the report, "*real-time bidding no longer allows each media to send invoices for each space purchased, but the techniques and data available can meet stakeholders' need for transparency.*"[295] In particular, they proposed organising consultation between the various stakeholders to define the processes to put in place in order to ensure the transparency of transactions and implement invoicing control tools. Finally, the report recommended clarifying the scope of the notion of recommending ad space purchase.

266. In 2015, during discussions concerning the "Macron law", an amendment was made to rectify the "*legal ambiguity regarding implementation of the "Sapin Law" in the digital sector*" and adapt the resulting obligations to "*new forms of digital advertising.*" The Parliamentary Commission report observed that "*the "Sapin Act", adopted over twenty years ago, put a stop to the lack of transparency that previously characterised the advertising sector. Nevertheless, it must be recognised that this legislation is not suited to new forms of digital advertising, which are based on models that do not always allow for the implementation of current regulations. Everyone agrees that it is necessary to regulate the digital advertising market, but that it is impossible to simply transpose standards developed for an analogue medium to a digital environment*." The report points out that "*the business models for the new activities - particularly the Criteo retargeting activity expressly mentioned - do not provide equivalent*

[293] Paragraphs 377 and following of Opinion. 10-A-29.
[294] Report on Sapin Law and online advertising, July 2013, see https://www.economie.gouv.fr/files/files/directions_services/cge/Rapports/2014_10_09_SG_Mission_application_loi_Sapin_publicite_sur_internet.pdf.
[295] Page 4 of the report.

transparency guarantees to those for the activities of traditional players, and may therefore become illegal if the provisions of the Sapin Law were implemented as is."[296]

267. Article 131 of Law no. 2015-990 of 6 August 2015 for Growth, Activity and Equal Economic Opportunities, known as the "Macron Law" specified that the Sapin Law shall apply to "*digital advertising*" services. In Article 20, it adds that agent status shall apply to any ad space purchased by an intermediary "*on any media whatsoever*" and in Article 23, "*in the online advertising sector, procedures for the enforcement of reporting obligations [...] are specified by decree of the French Supreme Administrative Court* (Conseil d'État)."

268. Decree no. 2017-159 of 9 February 2017 established two legal regimes for managing reporting obligations - a general regime for non-programmatic purchasing services and a special regime for programmatic purchases. For both regimes, ad space sellers must send information on the total and unit cost of the spaces invoiced. This information is automatically provided under the general regime and upon request for programmatic purchases. Under the general regime, ad space sellers are also required to provide information on the date and location of ad displays. Under the special regime for programmatic purchases, ad space sellers are required to provide information relating to:

- effective completion of services: display environment, message content, format, performance;
- technical quality of services: tools, stakeholders, qualitative objectives;
- protection of the advertiser's image/reputation: display on illicit websites, brand safety;
- commitments made under codes of best practice.

269. Several observations can be made.

270. The *Autorité* considers that modification of the 1993 Act, which now applies explicitly to online advertising, and the implementing decree for these new provisions, are important steps forward and a demonstration of the legislator's desire to regulate a key sector in the digital economy, by adapting the rules defined for traditional advertising methods to the new processes developing in the digital environment. In this regard, several stakeholders declared that they had already taken into account the requirements of the Sapin Law in their purchasing and sale of online ad space.

[296] See R. Ferrand, report on behalf of the Special Commission responsible for assessing Government Bill no. 2447 relating to growth and activity, Book 1, Vol. 2: doc. AN, no. 2498, 19 January 2015.

271. It considers that the obligations for information contained in the decree are likely to improve the level of transparency in the online advertising sector. This is a positive change in a context of increasing fraud, ads displayed with inappropriate content and campaign audience and performance measurement errors.

272. Given the observations received from advertisers, publishers and technical intermediaries, the *Autorité* nevertheless states that there are significant differences in interpretation regarding implementation of the Law and Decree. Several stakeholders underlined that an interpretative circular would be required to specify the conditions for implementation of the Decree. The differences mainly focus on the notion of ad space seller. In this regard, the UDA considers ad space sellers to be the media or a network representing one or more media. A major website publisher expressed reservations on whether the notion of ad space seller can be applied to publishers and networks. In particular, it pointed out the fact that publishers and their networks do not have access to all the information provided for in the Decree:

- ad content;
- service results as per performance indicator(s) agreed upon the purchase of services;
- total amount invoiced;
- identification of consulting stakeholders, separate from digital technology providers, involved in carrying out services;
- results obtained as per qualitative objectives defined by the advertiser or its agent before campaign launch, such as targeting, optimisation or efficiency.

273. Similarly, when publishers or their networks do have access to information, it is incomplete. For example, with regard to the technological tools, technical skills and providers, publishers are only able to identify the SSPs, supply-side ad servers, publisher or network data providers and the publisher DMP; however, publishers and their networks have no information on DSPs or demand-side DMPs.

274. Furthermore, the *Autorité de la concurrence* is unsure about the conditions for implementation of the Law and Decree for companies based outside of France. In this regard, the notion of equivalent obligations imposed outside France, which allows for exoneration from Sapin regulations, can lead to significant differences in interpretation. In addition, when a seller based in another EU Member State is subject to the Sapin Decree, the French administrative authorities do not always have the ability to effectively verify implementation of the Decree obligations.

275. Furthermore, the *Autorité* considers that the Law's scope of application does not take into account all transparency issues in the online advertising sector, in particular issues concerning publisher access to audience data and ad campaign data. In this regard, the *Autorité* reiterates observations made in its first opinion on online advertising in 2010, regarding "*transparency that a publisher (or an ad-sales house tied to a publisher) can legitimately expect from the intermediary that it uses to sell some or all of its advertising space.*" In the investigation for the opinion, many transparency problems were discussed by publishers which do not necessarily fall under the implementation of competition rules. These mainly include the level of remuneration for publishers and publisher access to campaign performance data.

276. In conclusion, the *Autorité* considers that the amendment of the Sapin Law in 2015 and the implementing decree that will come into force in 2018 are likely to improve the level of transparency in the online advertising sector, but have not yet removed all ambiguities identified by the stakeholders, or answered certain legitimate concerns likely to modify competition conditions. Should legislative changes be considered, the *Autorité* would insist on the need to not penalise smaller players. It considers that the introduction of thresholds applicable to the largest platforms, as planned under Decree no. 2017-1435 of 29 September 2017,[297] is an approach that is generally justified with regard to the constraints and barriers to entry that these regulations can create for smaller players.

Key points

The *Autorité* sets out observations on Decree no. 2017-159 of 9 February 2017, for implementation of Article 131 of Law no. 2015-990 of 6 August 2015 for Growth, Activity and Equal Economic Opportunities, which specified that the Sapin Law applies to digital advertising services. The advertising sector has historically been subject to specific regulations, in particular transparency obligations to prevent money laundering. The extension of these provisions to digital advertising should have positive economic effects for advertisers, but might place a significant burden on some of the sector's intermediaries.

Although this Decree is a positive step forward in the development of transparency in the advertising sector for advertisers, there are still different interpretations and grey areas concerning its implementation conditions. Furthermore, the scope of the Law's application does not take into account all transparency issues in the online advertising sector, in particular issues concerning publisher access to audience data and ad campaign data. In this regard, the *Autorité* reiterates obligations made in its first opinion on online advertising in 2010, regarding "*transparency that a publisher (or an ad-sales house tied to a publisher) can legitimately expect from the intermediary that it uses to sell some or all of its advertising space.*" It also calls for the clarification of transparency obligations, which could be rebalanced to take into account, firstly the burden they represent for smaller technical intermediaries and secondly, the lack of transparency that certain publishers face in accessing data regarding access to their own pages or content.

[297] See https://www.economie.gouv.fr/transparence-plateformes-numeriques-decrets-renforcent-legislation and https://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000035720925&dateTexte=&categorieLien=id.

2. PROPOSED EUROPEAN E-PRIVACY REGULATION

277. The *Autorité* first observes that internet users have gradually become aware that their data is collected and processed when they use certain services, despite a lack of formal acceptance of usage conditions. According to the barometer published by the CNIL on digital practices and the management of personal data, in 2016, only 2 in 10 internet users browsed the internet without taking any precautions, i.e. without having configured their internet browser and without having installed an ad blocker.[298]

278. However, a significant proportion of users are probably not fully aware of the highly complex collection mechanisms and ultimate use of their processed data. The online advertising market seems to have developed much more quickly than user awareness of the value of the data they provide while browsing the internet and the very principle of the transmission and use of said data, despite recent public debate of the value of data and its return to users.

279. The main beneficiaries of this imbalance between the relative lack of user understanding and the existence of very large-scale data collection currently seem to be the major platforms, in particular Google and Facebook, for reasons associated with their role as an entry point and their omnipresence for users accessing and browsing the internet. The role they currently play for users is also the result of the extremely large investments they have made to develop new services and increase their efficiency, and their capacity for innovation. Furthermore, the possibility of this imbalance worsening cannot be excluded, due to an increasing number of data collection points[299] and the emergence of artificial intelligence and mass processes to use large quantities of data for multiple applications. European regulations, including the ePrivacy proposal, aim specically at protecting users' personal data and giving them back control of their data.

280. Although privacy protection issues in themselves do not fall under the *Autorité*'s jurisdiction, it wishes to warn against the effects of data collection management and limitation mechanisms. Depending on the mechanism selected, some companies may indeed be disadvantaged over others, which could lastingly modify competition dynamics.

281. The European Commission ePrivacy Regulation proposal of 10 January 2017 is part of the European Union strategy for a single digital market. The first stage in the review of the European legislative framework for the protection of personal data led to adoption of the General Data Protection Regulation (GDPR)[300] in May 2016, which is set to come into force on 25 May 2018. At the same time, the Commission reviewed the framework for electronic communications, in particular by proposing a directive to establish a European Electronic Communications Code.[301] The ePrivacy Regulation has the dual objective of providing a high level of privacy protection for all users of electronic communications services and natural persons with regard to the processing of personal data, and ensuring the free circulation of electronic communications services, equipment and data, and "*a level playing field for market*

[298] General Barometer on digital practices and the management of personal data, summary of results (2016 campaign:
(https://linc.cnil.fr/sites/default/files/atoms/files/synthese_cnil_barometre_generique_2016.pdf)
[299] Watches, cars, weighing scales, headsets, speakers, personal voice assistants, smart TVs, sign posts in public spaces, etc.
[300] Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC.
[301] Proposal for a Directive of the European Parliament and of the Council establishing the European Electronic Communications Code, COM (2016) 590 final/, 2016/0288(COD) of 14 September 2016.

players."[302] The proposal intends to bring privacy rules in the electronic communications sector in line with the principles of the GDPR, while adapting them to technological developments.[303] The Commission initially intended for the GDPR and ePrivacy regulations to come into force at the same time on 25 May 2018. However, the absence of any agreement at this stage in the procedure means that this cannot be guaranteed.[304]

282. Under current regulations, trackers (cookies or otherwise) requiring user consent cannot be stored or read on a terminal without user consent. Cookies requiring prior information and consent include cookies for targeted advertising, some audience measurement cookies, and social network cookies generated mainly by their share buttons. User consent is currently obtained via information or configuration banners for this type of cookie on publisher websites, like in the example below.[305] However, shopping basket cookies on a trading site, session IDs or customisation of the user interface do not require consent, as they are necessary for the service to function.[306]

283. The ePrivacy Regulation replaces this "opt-out" policy where the user is given the possibility to refuse the use of cookies with an "opt-in" policy, where the user is required to give positive consent. Article 9 establishes the requirement to obtain user consent, where consent means, by reference to the GDPR, "*any freely given, specific, informed and unambiguous indication of the data subject's wishes by which he or she, by a statement or by a clear affirmative action, signifies agreement to the processing of personal data, relating to him or her*." This explicit consent approach prior to the processing of personal data is not limited to cookies. It is designed to apply to all tracking technologies without distinction, whether cookies, pixels or data collection within a "logged-in" environment. Whatever the technology used, personal data may only be processed after obtaining user consent, which must be collected fairly and separately for each data processing purpose.

[302] See Article 1.1 of the proposal.

[303] By bringing into line the rules of Directive 2002/58/EC of 12 July 2002 on the protection of privacy in the electronic communications sector, as amended by Directive 2009/136/EC (see recitals 6 and 12 of the proposed regulation).

[304] See http://www.lexplicite.fr/projet-de-reglement-eprivacy/: "*the proposed regulation is being considered in first reading by both the Parliament and the Council. The Council recently published amended versions of the proposal on 8 September and 6 October 2017. The committees consulted by the Parliament returned their opinions on 4 and 5 October 2017, while the Committee on Civil Liberties, Justice and Home Affairs (LIBE) published a draft report on 9 June 2017, with the final version published in October. Following the European Parliament vote on the basis of this report and additional amendments, the European Union Council will be able to approve Parliament's amendments, in which case the law will be considered adopted. Failing this, it will address a common position to Parliament, which can either accept or amend the content upon second reading*."

[305] The CNIL gives the following example: "*By continuing to browse our website, you accept the use of [cookies or other trackers] to provide you with [e.g. targeted ads to match your interests] and [e.g. establish visitor statistics]*."

[306] See https://www.cnil.fr/fr/cookies-comment-mettre-mon-site-web-en-conformite.

284. Article 8.2 of the proposed law also states that "*the collection of information emitted by terminal equipment to enable it to connect to another device, and, or to network equipment shall be prohibited, except if:* [in particular], *a clear and prominent notice is displayed informing of, at least, the modalities of the collection, its purpose, the person responsible for it* […] *as well as any measure the end-user of the terminal equipment can take to stop or minimise the collection*." User consent could be obtained according to the intended purpose of the tracker, depending on whether or not tracking is necessary (in particular, use and operation of the service or ad tracking).

285. While the abovementioned articles are technologically neutral, Article 10 requires publishers of software "*permitting electronic communications, including the retrieval and presentation of information on the internet*" to offer users "*the option to prevent third parties from storing information*" on their terminal equipment or processing information already stored on that equipment. Although this provision does not target a specific software program, its scope of application will mainly affect browsers, which could become the main technical tool to ensure that user consent is obtained and complied with.

286. In the investigation for the Opinion, a large number of stakeholders expressed concerns regarding the provisions contained in the proposed regulation, particularly in terms of the asymmetry between the obligations of the various stakeholders.

287. Firstly, moving from an opt-out to an opt-in policy will have a varying impact depending on the collection technology used, due to probable bias on the part of the user. A user who has logged in and has more immediate knowledge of the service provided would more easily accept the processing of personal data, without knowing whether this collection is for service provision or ad tracking purposes. Conversely, users who have not logged in would not necessarily realise that ad tracking contributes to the revenue of the publisher whose website they are visiting. This difference in perception would result in a favourable bias towards logged-in environments when consent is collected, even though the ePrivacy Regulation is aiming at neutral market conditions.

288. Secondly, neither would making the browser the collection and control point for consent be neutral. Although a browser can block third-party cookies and thereby ensure that data is not collected, it does not have the technical capacity to ensure that the data collected within logged-in environments and processed on servers is used in accordance with user consent. Furthermore, giving browsers the possibility to determine precisely how user consent is requested and collected or the capacity to flatly refuse all cookie tracking would make them able to disadvantage data collection via cookies.

289. According to one French publisher, "*in its current form, the proposed regulation presents a certain number of major risks for the digital advertising sector. It is vital for the proposed "ePrivacy" Regulation to propose solutions that protect individual rights without favouring some players over others. Allowing browsers to block all third parties from accessing the terminal gives browser software publishers completely disproportionate levels of power compared to other stakeholders in the internet ecosystem. This point is clearly a major economic issue and currently favours GAFA, some of whom own browsing software.* […] *The proposal also seems to indirectly favour the environments managed by GAFA, at the expense of less intrusive third-party solutions as they are based on anonymous identifiers. Although indiscretions potentially linked to an increased number of more or less responsible players in the advertising ecosystem need to be avoided, it is important to make sure that ecosystems based on free content financed by ads are not compromised as they also ensure the diversity and reliability of information.*"

290. According to another French press publisher, "*the proposal could have a very significant impact on the business model of online publishers, and may even place them at risk* […] *as their model is based on the provision of free content funded by advertising.*"

291. According to the Presse Quotidienne Nationale (PQN), the proposed regulation would "*significantly affect the business model of the press by limiting its ability to make income from data mining, which currently plays a key role in sales policies and reader loyalty. With e-Privacy, 57% of digital revenue for PQN publishers, representing 30% of total publisher revenue would disappear*." Secondly, the proposed regulation "*would prevent publishers from proposing targeted ads, which are accepted by readers, despite the fact that these ads are set to represent 100% of revenue by 2020.*" Thirdly, it "*would accentuate the phenomenon of intermediation between publishers and their readers, breaking the strong relationship of trust between the press and its readers. Readers more widely accept cookies from press websites (95%) than from other websites (88%). With e-Privacy, this acceptance rate would fall drastically and it would no longer be possible to differentiate between websites*." Fourthly, it "*would strengthen the major global internet players at the expense of European website publishers, including press publishers, and would exacerbate the competitive imbalance on the online advertising market*." Finally, "*protection of users' privacy would decrease, in direct opposition to the intended purpose, by strengthening players that require users to log in to use a service, such as Facebook or Amazon.*"[307]

292. The *Autorité* sets out several observations on this matter.

293. Implementation of the regulation must not distort competition between online advertising stakeholders. Although establishing rules to obtain the informed consent of users regarding personal data collection must be supported as a step forward in terms of privacy protection, it is also important to implement rules that do not excessively or unduly favour certain players over others.

[307] Contribution of SPQN to the public consultation.

294. It seems to the *Autorité* that the mandatory collection of explicit user consent at browser level may disadvantage stakeholders that operate using (first-party or third-party) cookies, compared to other players that have implemented logged-in environments and obtain general consent for data collection in return for the service provided when users sign up. The consent planned under the proposed regulation should at least be obtained from each website to ensure that the various types of stakeholders start on a level playing ground. This obligation should cover all trackers and include logged-in environments, precisely differentiating data processing types by their ultimate purpose, i.e. giving users the possibility of accepting or refusing certain uses of their data with the same presentation and information conditions for cookies and logged-in environments.

295. Finally, verification that consent has been obtained should be carried out at a later date by the competent authorities in order to check that stakeholders are effectively applying this obligation, so that all collection and monitoring technologies are monitored and verified to provide the same guarantees.

296. Some stakeholders consider that refusing all ad tracking would not result in the elimination of ads on the webpages visited by users, but could lead to the development of non-targeted ads, which could be greater in number to compensate for the impossibility of displaying targeted ads, which are more effective and profitable. Finally, some believe that the imbalanced conditions between cookies and logged-in environments could lead to the *de facto* spread of logged-in environments, which would ultimately lead to reinforced user tracking.

Key points

Personal data is a very specific input whose monetisation potential is strictly monitored by the legislator. Although ad targeting is not solely based on personal data, the value now associated with the processing possibilities for this data makes it a key aspect in competition between stakeholders. In this sense, varying compliance with rules on personal data protection could strengthen or weaken the positions of stakeholders.

The legal framework for privacy and data protection and the powers of regulators will be significantly strengthened when the General Data Protection Regulation comes into force. This change will enable better management of the practices of major players, but also raises legitimate concerns for publishers and their capacity to collect data in order to improve the content offered to users and the personalisation of advertisements. Many stakeholders expressed concerns regarding the European e-Privacy Regulation proposal of 10 January 2017. Introducing the collection of user consent at web browser level under an opt-in policy could significantly affect the business model of publishers by limiting their capacity to process data and serve personalised ads. Furthermore, the proposal would favour stakeholders in the ad sector who also operate web browsers, such as Google, and to a lesser extent Apple and Microsoft, along with stakeholders who provide services in logged-in environments and who are therefore less dependent on trackers for data collection. In this regard, the *Autorité* opinion underlines the need not to distort competition between online advertising stakeholders. While establishing rules to obtain the informed consent of users regarding personal data collection must be supported as a step forward for privacy protection, it is also important to implement rules that do not excessively or unduly favour some stakeholders more than others. It seems to the *Autorité* that the mandatory collection of explicit user consent at browser level may disadvantage stakeholders that operate using (first-party or third-party)

cookies, compared to other stakeholders that have implemented logged-in environments and obtained what is considered to be general consent for data collection in return for the service provided when users sign up. The consent planned under the proposed regulation should at least be obtained on each website with conditions that ensure that the various types of players start on a level playing field. This obligation should cover all trackers and include logged-in environments. Failing to do so could mean that already fragile technical intermediaries may disappear in favour of the market leaders who rely on logged-in environments, and that publishers may probably be encouraged to move towards the generalisation of logged-in environments, which would paradoxically go against the users' desire for anonymity.

CONCLUSION

297. Since 2010 and the publication of the *Autorité*'s first opinion on competition in the online advertising sector, the industry has undergone profound changes associated with the emergence of new technologies, new activities and services, and the entry of new market players . In just a few years, the internet has become the first advertising media, ahead of television, and the growth of online advertising is accelerating (12% in 2017), mainly thanks to search advertising, which remains the leader, but also display advertising. This growth is now driven by investments in social media networks, video advertising and advertiser interest in targeted advertising and programmatic transaction methods. The online advertising sector has become a sort of laboratory at the forefront of transformations in the digital economy. Its development has been supported by the latest advances in Big Data and Artificial Intelligence.

298. Nevertheless, the sector dynamics and growth have some fragilities, for various reasons.

299. In the first place, although in some ways, the development of the online advertising sector is similar to all sectors subject to major technological innovations affecting market structure, here it is especially important, first because changes have repercussions on data access and funding conditions, which are one of the foundations of democracy, and second, because the sector is increasingly based on the processing of personal data, which touches on certain individual liberties.

300. Citizens and public authorities are increasingly expressing legitimate concerns regarding the issues of the protection of privacy and personal data. Furthermore, users are increasingly using ad blockers and data control systems, which is impacting the revenue of many publishers. The General Data Protection Regulation and the proposal for a European e-Privacy Regulation presented by the European Commission in 2017 illustrate this change. The *Autorité*'s opinion sets out observations on this proposal, concerning the need to guarantee equal competition conditions for online advertising players with regard to data mining. The importance of data in competition was also pointed out by all stakeholders, although other factors must also be taken into consideration in competitive analysis (size of ad inventories, conditions of access to ad inventories and advertisers for intermediaries, algorithm performance, etc.).

301. Secondly, sector development is currently mainly to the advantage of two players, which worries their competitors, both publishers and intermediaries, and also some advertisers. Google and Facebook generate most revenue in this sector, both globally and in France, and are also capturing a large proportion of growth. This situation is firstly linked to the success of their user services, which have large audiences across all themes. Google and Facebook are also the main providers of ad services to advertisers and publishers. They offer advertisers access to the ad inventories of their user services, in addition to ad inventories belonging to the publishers that use their ad intermediation services. They also offer advertisers advanced targeting capabilities, as a result of the volume, diversity and quality of the data they collect on the individuals using their services and third-party publisher services. The combination of these targeting capabilities and the very large total audience on their services and on third-party publisher services that use their intermediation services, allows advertisers to reach large and qualified audience segments.

302. Thirdly, online advertising is frequently criticised by advertisers, who focus firstly on the unfair distribution of revenue between publishers, who apparently only receive 40% of advertiser investments, and the various supply-side and demand-side intermediaries, and secondly on the lack of campaign transparency. The sector is faced with the existence of many and varied fraudulent practices, and issues such as ad visibility and preservation of brand reputation are major concerns for advertisers.

303. Beyond a general assessment of the state of competition in the online advertising sector, the *Autorité*'s opinion was the opportunity to collect information on the positions of certain stakeholders, sales practices and obstacles to the development of competition.

304. In this regard, the practices mentioned by stakeholders who responded to the *Autorité*'s requests for information are likely to belong to categories regularly assessed by competition authorities. These include: (i) the implementation of strategies for tied sales, low prices and exclusivities; (ii) the use of dominant positions on certain services markets to leverage better positions on other markets; (iii) the implementation of differential treatment in ad intermediation; (iv) the development of obstacles to interoperability in ad intermediation; (v) the existence of restrictions for collecting and accessing certain data; (vi) procedures for audience measurement and the certification of companies by third-party bodies. The purpose of this opinion is not to issue a position on the legality of these practices, which need to be analysed within the framework of *inter partes* proceedings.

305. Other information provided by stakeholders does not necessarily fall under the implementation of competition rules and is currently governed by a specific regulatory framework to improve campaign transparency for advertisers. In this regard, the *Autorité* sets out observations on French Decree no. 2017-159 of 9 February 2017, which specified that the Sapin Law shall apply to digital advertising services. Although this Decree is a positive step forward for the development of transparency in the advertising sector for advertisers, there are still different interpretations and grey areas concerning its conditions for implementation. Furthermore, the scope of the Law's application does not take into account all transparency issues in the online advertising sector, in particular issues concerning publisher access to audience data and ad campaign data. The *Autorité* therefore calls for the clarification of transparency obligations, which could be rebalanced, to take into account, firstly the burden they represent for smaller technical intermediaries and secondly, the lack of transparency that certain publishers face in accessing data regarding their own pages or content.

Deliberation on the debriefing of Mrs Clémence Hardy and Mr Mathieu Guennec, Rapporteurs (*Case Officers*), and the speech by Mr Nicolas Deffieux, Deputy General Rapporteur, by Mrs Isabelle de Silva, President, Mrs Élisabeth Flüry-Hérard, Mrs Claire Favre, Mr Thierry Dahan, Vice-Presidents, Mrs Chantal Chomel, Mrs Séverine Larere, Mrs Pierrette Pinot, Mrs Carol Xueref, Mr Olivier d'Ormesson and Mr Fabien Raynaud, members.

The Meeting Officer,	The President,
Caroline Orsel	Isabelle de Silva

Online advertising - glossary

Ad exchange: advertising marketplace that connects ad space sellers with buyers.[308]

Ad server: this is a technological platform that, when used by an advertiser, hosts its advertising content, and when used by a publisher, delivers advertisements to websites or mobile applications. This tool is also used to monitor ad campaigns by providing statistics and indicators (capping, volumes, dates, effectiveness measures, click-through rates, conversion rates, etc.).

Ad verification: Ad verification refers to all technical procedures in online advertising for checking the quality of an advertising inventory or impression. These processes check that the advertisements are delivered in an environment that does not damage the advertiser's image, that they are actually seen and that they are delivered to the chosen target audience.

Advertiser: an advertiser is the company or organisation responsible for a communication operation (advertising, marketing, etc.) with the aim of promoting its products and services or brand.[309] The advertiser is the company that commissions a campaign. In order to perform its advertising campaign, it purchases advertising space (television advertisement, metro poster space, space on a website, etc.) Advertisers are therefore the clients of advertising media and agencies.[310]

Advertising inventory: refers to all of the available advertising space for sale at a given time, for a given period, and for a given advertising medium[311]. The online advertising inventory corresponds to the display area of the advertising spaces on each page of a website, multiplied by the number of times this page is opened (every time it is opened, a new advertising display area is possible).

Advertising network / advertising saleshouse: an advertising network is an entity responsible for selling the advertising space in a medium or media group. An ad network or saleshouse can be independent company, selling spaces on a number of media.[312] In France, ad sales houses (régies publicitaires) can also be a company department. Advertising networks (*réseaux publicitaires*) originally referred to the middle men in internet advertising, organising publisher inventories by theme in order to propose these categories to media agencies and advertisers. With the growth of programmatic advertising, ad networks / saleshouses now sell spaces on small or mid-sized independent websites that do not have their own advertising department, allowing these publishers, who otherwise would not have the critical mass to be seen, to sell spaces in large auctions. Ad networks and sales houses are also

[308] Translated from A. De Baynast, J. Lendrevie, *Publicitor – Publicité online & offline*, *8th edition*, Dunod, p.410.
[309] Translated from https://www.definitions-marketing.com/definition/annonceur/.
[310] Translated from A. De Baynast, J. Lendrevie, *Publicitor – Publicité online & offline*, *8th edition*, Dunod, p.113.
[311] Translated from https://www.definitions-marketing.com/definition/inventaire-publicitaire/.
[312] Translated from https://www.definitions-marketing.com/definition/regie-publicitaire/.

increasingly specialising in specific inventories dedicated to particular formats (video, native advertising, etc.) or premium categories.

Algorithm: an algorithm is a sequence of rules that should be performed in an exact order to carry out a certain task. It is an instance of logic that generates an output from a given input.[313] Algorithms can be represented in plain language, codes or programs that can be read and executed by a machine. With the evolution of computer science, they are now used to automatically perform repetitive tasks involving complex calculations and data processing.[314] In the media industry, there are many and varied algorithms that can function by matching or statistical or semantic approaches.[315]

API: API stands for Applications Programming Interface, through which two software applications or programs can connect in order to interact and exchange data.[316] An API is generally open and provided by the software owner.[317] It means that a program can use the services and functionalities of another program.

Banner: a banner is a type of advertising format in the form of a bar displayed on a webpage.[318] Banners are generally active and by clicking on the banner, internet users are redirected to the relevant website.

Big Data: the expression Big Data refers to the mass collection of data and any algorithmic tools used to make sense of them, i.e. transforming data into information and then knowledge. Big Data is often characterised by the three "V"s[319]: "Volume" refers to the mass of data collected, "Variety" to it huge diversity and "Velocity" to the processing speed made possible by next-generation hardware and algorithms. A fourth "V" is sometimes added, for "Value" [320].

Bounce rate: this is the percentage of visitors who enter a website page and leave without viewing any other pages.[321]

Branding: this is one of the advertiser's advertising objectives and involves developing the brand image by creating a unique name and image for a product. The product is then immediately associated with the brand.

Brand safety: actions to ensure that advertisements are shown in an environment that does not harm the advertiser's image.

---

[313] OECD, (2017), Algorithms and Collusion, Background Note by the Secretariat, DAF/COMP(2017)4, p.7.
[314] Ibid.
[315] Translated from CSA Lab, (2017), *Le rôle des données et des algorithmes dans l'accès aux contenus, Rapport 1 in Les mutations de la mise à disposition de contenus audiovisuels à l'ère du numérique : conséquences et enjeux*, p.6
[316] Translated from http://www.definitions-marketing.com/definition/api/.
[317] Ibid.
[318] Translated from A. De Baynast, J. Lendrevie, *Publicitor – Publicité online & offline*, *8th edition*, Dunod, p.380.
[319] OECD (2015), Data-Driven Innovation: Big Data for Growth and Well-Being, OECD Publishing, Paris, p.449.

[320] *Autorité de la concurrence* and *Bundeskartellamt*, a joint paper dated 10 May 2016 on Competition Law and Data, p. 4 - 5 and the sources quoted.
[321] Translated from A. De Baynast, J. Lendrevie, *Publicitor – Publicité online & offline*, *8th edition*, Dunod, p.98.

Capping: Capping means using an ad server to specify the maximum number of times a particular advertisement is shown to a specific visitor to a website, during a digital campaign's launch phase. [322] The aim is to optimise campaigns and reduce overexposure or intrusiveness associated with the format and/or multiple displays.

Click-Through Rate (CTR): this is a performance indicator that measures the ratio of the number of clicks logged on a specific advertisement to the number of times it is displayed.[323] This rate gives the percentage of users who view a banner and activate it by clicking on it.[324]

Contextual advertising: this refers to all advertising techniques that target an audience using specific media depending on the context of the individual receiving the message.[325] In online advertising, this generally refers to text links displayed dynamically depending on the textual content of the webpage. Targeting by affinity on a themed website can also be considered a form of contextual advertising.

Conversion: a conversion is defined as a campaign visitor or recipient carrying out the desired action.[326] This may be a purchase, filling in a form, downloading a document or a visit behavioural model. Conversion can also be an action carried out offline, such as a phone call or store visit. The action considered to be a conversion depends on the context of the campaign, the type of activity and the objectives assigned to a target or campaign.

Conversion funnel: a conversion funnel is a schematic representation of the journey a consumer takes through a website. It is used to quantify and visualise the losses in visitor numbers at each step of the journey. The most-frequently analysed steps in conversion funnels are filling in a form from the first field to confirmation, and the purchase process from adding an item to the basket until finalisation by payment and receipt of purchase confirmation. Conversion funnels are key aspects in analysing a website's performance.[327]

Cookie: this is a txt file saved on a user's hard drive or terminal, either by the server of the website they are visiting (first-party cookies), or by a third-party server, i.e. a separate domain (third-party cookies).[328] It contains various information, including the name of the server that stored it, a unique identifier and, generally, an expiry date. Cookies are used to store user browsing information (e.g. shopping basket) and improve the browsing experience. For advertising sales and purchasing operations, almost all stakeholders (ad servers, inventory providers, verification tools, data management tools) also place their own cookies to ensure that they have successfully completed their task in delivering the advertisement and monitoring the ad campaign.

Cost Per Action or Cost Per Acquisition (CPA): this is a pricing model where the advertiser pays for the number of actions generated by the campaign.[329] The cost per action is

[322] Translated from http://www.definitions-marketing.com/definition/capping-publicitaire/.
[323] Translated from https://www.definitions-marketing.com/definition/taux-de-clic/.
[324] Translated from A. De Baynast, J. Lendrevie, *Publicitor – Publicité online & offline, 8th edition*, Dunod, p.365.
[325] Translated from https://www.definitions-marketing.com/definition/publicite-contextuelle/.
[326] Translated from https://www.definitions-marketing.com/definition/conversion/.
[327] Translated from S. Bodier, *Le web marketing*, Presses Universitaires de France, 2014, p. 117.
[328] Translated from https://www.definitions-marketing.com/definition/cookie/.
[329] Translated from A. De Baynast, J. Lendrevie, *Publicitor – Publicité online & offline, 8th edition*, Dunod, p.357

generally based on a click followed by registration or purchase on the advertiser's website or applications.[330]

Cost Per Click (CPC) or Pay Per Click (PPC): this is a pricing model for online advertising campaigns based on the number of clicks on the advertisement.[331]

Cost Per Mille (CPM) or Cost Per Thousand (CPT): this is the most used pricing model in display advertising,[332] where the advertiser pays for the advertising space on the basis of one thousand ad displays.[333] The price is calculated according to the number of impressions, i.e. the number of times the advertisement is displayed. This indicator is used to assess and compare the advertising rates of different websites based on the number of page viewed with advertisements.[334]

Cost Per View (CPV): this is a pricing model specifically for video formats, based on the number of times a video is actually viewed during a specific period. The ratio of display space to the time a video is displayed are just some of the criteria used to determine whether the advertisement is considered to have been viewed. These criteria are discussed between the parties.

Data: data is a "*reinterpretable representation of information in a formalized manner suitable for communication, interpretation or processing.*"[335] In contrast to knowledge and information, data is assumed to have an "objective existence", and can be measured, namely in bits and bytes. The value of data mainly comes from production, circulation, aggregation and formatting operations, in particular when processed by algorithms.[336]

Data Analytics: this expression refers both to (i) the objective of creating knowledge through a range of techniques and tools used to better understand and analyse data, and (ii) the objective of automating decision-making by allowing machines and systems to make autonomous decisions on the basis of data analysis.[337] By collecting data on the website audience, number of visits, number of clicks on an advertisement, user behaviour (pages viewed, duration of visits, etc.)[338] and many other indicators, advertisers can optimise the effectiveness of their advertisement to their target audience and publishers can increase their advertising revenue, all using largely automated processes.

Data Management Platform (DMP): this is a platform designed for both advertisers and publishers. In general terms, a DMP is the technology platform used to automatically integrate different data sources in order to supplement and corroborate them. For advertisers, a DMP is used to centralise the storage of audience data that advertising partners can directly access,

---

[330] Translated from http://www.pubdigitale.fr/dictionnaire-du-digital/cpa-cout-par-acquisition/.
[331] Ibid.
[332] Translated from http://www.promisemedia.com/online-advertising/best-revenue-deals-cpm-cpc-or-cpa.
[333] Translated from S. Bodier, *Le web marketing*, Presses Universitaires de France, 2014, p. 117.
[334] Translated from A. De Baynast, J. Lendrevie, *Publicitor – Publicité online & offline*, *8th edition*, Dunod, p.356.
[335] Extract from international standard ISO 2382-1:1993, Information Technology - Vocabulary - Part 1: Fundamental Terms, available at: https://www.iso.org/obp/ui#iso:std:iso-iec:2382:-1:ed-3:v1:en:fig:1 (Section 2: 01.01.02).
[336] OECD (2015), Data-Driven Innovation: Big Data for Growth and Well-Being, OECD Publishing, Paris, p.449.

[337] OECD (2015), Data-Driven Innovation: Big Data for Growth and Well-Being, OECD Publishing, Paris, p.452.
[338] Translated from S. Bodier, *Le web marketing*, Presses Universitaires de France, 2014, p.117.

provide a detailed explanation of the online and offline behaviour of its clients, use offline CRM data for online campaigns (CRM onboarding) and automate and standardise campaign feedback.[339] For publishers, DMPs are used to better understand the website audiences through socio-demographic criteria, affinities or by determining purchasing intent. This detailed knowledge helps publishers to better monetise their inventory and reassure buyers of the authenticity of the audiences proposed.

Data Provider: stakeholders that sell third-party data.

Demand-Side Platform (DSP): this is a technology platform, primarily for advertisers, designed to optimise and automate the purchase of advertising spaces proposed by the various Ad Exchanges and SSPs. It is a single interface through which advertisers can manage their purchase orders.[340]

Display advertising: display advertising is the online advertising method closest to traditional advertising. It consists of purchasing an advertising space on a website for a given period. These tiles, banners or skins are integrated into the content of a publisher's website to be seen by users, like for traditional urban advertising displays.

First-party data: this is data available to the publisher or advertiser that has been collected either online (e.g. behavioural data collected via cookies or self-reported data) or offline via traditional sales promotion channels (contests, loyalty cards, vouchers, etc.) and the CRM base (Customer Relationship Management). This data can be compiled with data collected online within a DMP (in an operation known as CRM onboarding). [341]

Impression: in advertising, an impression is the display of an advertising item (banner, video, text advertisement). The term is mainly used for the display of graphic items (banner, skyscraper, tile, video, etc.).[342]

IP (Internet Protocol) Address: number assigned to each device connected to a network, in particular the internet. An IP address may be static or change each time the device connects.

Machine Learning: machine learning is a subfield of Artificial Intelligence which designs intelligent machines through the use of algorithms that iteratively learn from data and experience.[343] Machine learning therefore gives "*computers the ability to learn without being explicitly programmed.*"[344]

Media agency: media agencies support advertisers in drawing up and implementing their communication strategies. They optimise the development of relationships between the brand

[339] Translated from L. Letourmy, M. Genot, C. Tanneau, P. Delahaie, *Les défis d'une transformation culturelle et managériale pour faire d'une start-up française de services informatiques un acteur global du BIG DATA, Question(s) de management* (no. 13), 2016, p. 35-47.
[340] L. T. Fisher, "The New Display Ad Tech Stack: A Simple Guide to a Complex Topic", eMarketer, 2016.

[341] Translated from https://www.definitions-marketing.com/definition/first-party-data/.
[342] Translated from https://www.definitions-marketing.com/definition/impression-publicitaire/.
[343] OECD, (2017), Algorithms and Collusion, Background Note by the Secretariat, DAF/COMP(2017)4, p.7.
[344] Ibid.

and their target audiences. They are responsible for media strategy, media planning and ad buying. They also use a variety of communication techniques and dissemination means.[345]

Media planning: media planning is the action of choosing which media will be used in an advertising campaign[346] and at what moments the advertisement will be delivered, and establishing a campaign schedule to reach the target audience while optimising the budget.[347]

Native advertising: this is a type of advertising with a form, location and content that strongly resembles and integrates the content usually delivered by the website hosting the ad.[348] The aim is to make the advertisement less intrusive, thereby increasing the probability of users clicking on it.[349]

Profiling: this is any kind of data processing that involves creating profiles from information collected on users (interests, browsing behaviour, location and travel, etc.).[350] Profiling can be nominative, pseudonymous or anonymous.

Prospect or Lead: potential client to win over.

Reach: reach is the number of people covered by a campaign, website or ad network. For a campaign, it is the proportion or number of users belonging to the target audience exposed to an advertisement at least once during the campaign period. For a website or social network, the reach is the number of users exposed to the website or network over a given period.[351]

Real-Time Bidding (RTB): a programmatic technology for internet advertising where online advertising spaces are assigned in real time by auctions from advertisers or agencies for the corresponding formats and targeting criteria.[352] This auction system can be private or on public marketplaces.[353]

Retargeting: this is a form of behavioural targeting that consists in sending an advertising message to profiles that have demonstrated an intent to buy by, for example, placing an item in the basket and then cancelling it when visiting an advertiser's website.[354]

---

[345] Translated from *Union des entreprises de conseil et d'achat media* (UDECAM), http://www.udecam.fr/?page_id=1803.
[346] Translated from https://www.definitions-marketing.com/definition/media-planning/.
[347] Translated from Arnaud de Baynast, Jacques Lendrevie, *Publicitor – Publicité online & offline*, *8th edition*, Dunod, p.357.
[348] Translated from https://www.definitions-marketing.com/definition/native-advertising/.
[349] Translated from https://www.definitions-marketing.com/definition/publicite-native/.
[350] Translated from https://www.definitions-marketing.com/definition/profiling/.
[351] Translated from https://www.definitions-marketing.com/definition/reach/
[352] Translated from https://www.definitions-marketing.com/definition/real-time-bidding/.
[353] L. T. Fisher, The New Display Ad Tech Stack: a simple guide to a complex topic, eMarketer, 2016.
[354] Translated from *Le Pense Pas Bête du Programmatique du SRI* (See http://www.sri-france.org/wp-content/uploads/2016/03/LEXIQUEPROGRAMMATIQUE_SRI_2016.pdf) .

Search advertising: search advertising is a method for placing sponsored ad links in results obtained from a search engine query.[355] Ad links target key words entered by internet users in a search engine.[356]

Search engine: a tool for finding information in a database via a query or the use of key words. A search engine indexes the information available so that users making a query can quickly obtain a list of the information identified and its location in the order of its perceived relevance.[357]

Search Engine Advertising (SEA): Search Engine Advertising is a paid service where advertisers can position themselves above or next to natural search results through a real-time bidding system. The best-known SEA is Google AdWords. An advertiser selects key words and specifies its budget and maximum cost to see its advertisement appear in the list of results following a user's query.

Search Engine Optimization (SEO): search engines rank links returned in response to user queries, using relevance criteria defined by the search engine. Natural results cannot be modified by partnerships or for payment. Search Engine Optimization techniques seek to optimise the websites listed by a search engine by adapting their design or content so that they are considered more relevant by search engines, placing them higher in the list of results.

Second-party data: this is data from a partner that is generally collected or exchanged through a partnership, often between two complementary stakeholders (e.g. a property listings website and a bank), or which may have been purchased.[358]

Social networks: social networks can be described as systems or services through which users can connect, create groups of friends, share and/or create content together, communicate and express themselves via a website or mobile application.[359] Social networks are a relatively recent phenomenon and most players on this market appeared in the 2000s. Their business model and functionalities vary considerably and are constantly changing. Most social networks can be accessed free of charge. However, they can be monetised in a number of ways, such as through online advertising or by offering certain paid services for superior or premium quality. Social networks can be specialised by the type of activities they encourage and/or target audience (professionals, private individuals, etc.).

Supply-Side Platform (SSP): this is a technology platform for publishers which aims to optimise and automate the sale of advertising space. It provides a detailed description of the characteristics of audiences and individuals that may be reached by the advertising space sold by the publisher, using data from the publisher and other sources. SSPs are used by publishers, ad networks / saleshouses or private marketplaces to sell their advertising space

[355] B. J. Jansen et T. Mullen, Sponsored search: An overview of the concept, history, and technology, International Journal of Electronic Business [6(2)], 2008, p.114-131.
[356] I. Dinner, H. Van Heerde, S. Neslin, Driving Online and Offline Sales: The Cross-Channel Effects of Traditional, Online Display, and Paid Search Advertising, Journal Of Marketing Research [serial online], 2014.
[357] Translated from S. Bodier, *Le web marketing*, Presses Universitaires de France, 2014, p. 117.
[358] Translated from https://www.definitions-marketing.com/definition/second-party-data/.
[359] Translated from A. De Baynast, J. Lendrevie, *Publicitor – Publicité online & offline*, *8th edition*, Dunod, p.369.

inventory. Publishers specify the conditions of sale for its inventory (lowest price, formats, any advertisers excluded, etc.).[360]

Tag: a tag is added to a webpage to monitor visits or trigger actions (on the page seen by the user or remotely on an advertising server). They can count the number of advertisement clicks and impressions, redirect users who clicked to the destination webpage, determine who has seen the advertisement, in which context and at what time.

Targeting: an advertising technique that consists of customising promotional content delivered to users on the basis of criteria such as their browsing behaviour or interests (behavioural targeting), the theme and content of a website (contextual targeting), the geographical location of an individual (geographical targeting), their social, demographic and economic characteristics, such as age, gender, income, etc. (sociodemographic targeting), or the time, day or week (time targeting). [361]

Third-party data: this is data that is sold by dedicated third-party data providers. It often consists of targeting, behavioural or socio-demographic data.[362]

Tracking pixel: this is a picture element that can be inserted into a webpage to collect technical information (IP address, URL, etc.) and measure behaviour (e.g. the number of visits to a webpage).[363] An "impression pixel" is a pixel delivered at the same time as the advertisement is created in order to track the impressions and measure their effects.[364] Displaying this type of pixel downloads a cookie onto the user's browser for tracking. Conversion pixels track user purchases and are generally placed on the confirmation webpage within a conversion process.[365] These pixels are generally placed on the webpage using JavaScript code to collect more detailed information.[366]

Trading Desk: this is a specialised and centralised platform for ad buying on behalf of advertisers, on ad exchanges and via Real-Time Bidding (RTB). It acts as an intermediary between the advertiser or its media agency and the Demand-Side Platform (DSP). Trading Desks can be incorporated into a media agency, can be independent, or can be in-house for certain large advertisers.[367]

---

[360] Ibid.

[361] Translated from A. De Baynast, J. Lendrevie, *Publicitor – Publicité online & offline*, *8th edition*, Dunod, p.399, 400, 403, 452.
[362] Translated from https://www.definitions-marketing.com/definition/third-party-data/.
[363] Translated from https://www.definitions-marketing.com/definition/pixel-invisible/.
[364] Translated from https://www.definitions-marketing.com/definition/pixel-dimpression/.
[365] http://www.knowonlineadvertising.com/tracking/what-is-conversion-tracking/
[366] Translated from https://sourceknowledge.com/fr/idees/article/2017/07/04/programmatic-101-javascript-vs-image-pixels/.
[367] Translated from http://www.definitions-marketing.com/definition/trading-desk/.