



DataPrivacyBR
Research

DISCUSSION PAPER Nº 2/2021

**A MULTIJURISDICTIONAL
ANALYSIS OF DATA-DRIVEN MERGERS:**
CURRENT ASSESSMENT AND PUBLIC
POLICY PROPOSALS FOR BRAZIL

LUCAS GRIEBELER DA MOTTA

FOREWORD

After its first year of existence, Data Privacy Brasil Research Association launched a series of Discussion Papers (*Textos de Discussão*), in order to raise the subject and spark debate on emerging subjects on the relationship between technology, personal data protection, privacy, and other fundamental rights.

Inspired by the formats commonly used by research centers and think tanks around the globe, the aim of the Discussion Papers is to mobilize cutting-edge discussions and welcome new ways to understand the issues of the growing field of data protection and privacy laws in Brazil. Those kinds of documents instigate us and inspire new ideas.

As the mission of our institution is to reinforce the basis of our fundamental rights and to strengthen a culture of data protection in Brazil, we have invited scholars, professors, and other experts who are not directly connected to the Association to express their ideas in the format of policy papers. This provides a way for us to start debates and to analyze issues relating to the flow of data through new lenses, which is wholly in the public interest.

We hope that the Discussion Papers, as this one you are about to read, will inspire some innovative, sophisticated, and constructive discussions in this country. We hope that those texts will not just be shared, but most importantly also engaged with and discussed. This type of engagement in research is fundamental and goes hand in hand with our aims as a Research Association.

Bruno R. Bioni
Rafael A. F. Zanatta
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FACTSHEET

Data Privacy Brasil is an intersection between Data Privacy School and the nonprofit organization Data Privacy Brasil Research Association. This report was produced exclusively by the Association. Data Privacy Brasil Research Association is a nonprofit private organization based in São Paulo. The organization is dedicated to the relationship between data protection, technology, and fundamental rights, producing research papers and conducting actions of advocacy before the justice system, legislative bodies, or the government. The association develops strategic research projects, based on an Ethical Funding and Transparency Policy, on data protection, to provide information to support regulators, judges, and legal professionals in dealing with complex issues that require an in-depth knowledge of how technology and socio-technical systems affect fundamental rights. The Association is funded by international philanthropic organizations such as the Ford Foundation and Open Society Foundations. For more information, please visit www.dataprivacybr.org.

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A MULTIJURISDICTIONAL ANALYSIS OF DATA-DRIVEN MERGERS: CURRENT ASSESSMENT AND PUBLIC POLICY PROPOSALS FOR BRAZIL

Lucas Griebeler da Motta ¹

1. PROJECT INTRODUCTION

This study was carried out at the request of [Data Privacy Brasil Research Association](#) (“DPB”). Funding was provided by [Open Society Foundations](#) (“OSF”), a nonprofit organization which funds several independent institutions around the world in connection with research projects that have social impact. OSF’s work encompasses different areas, one of which is information protection and privacy rights of individuals and companies in the digital era.

Notwithstanding the funding from OSF and the partnership with DPB, those institutions have had no influence on the findings or opinions presented in this work. The antitrust and regulatory issues raised in this report are the result of independent analysis and the author’s own ideas based on the scholarly articles, case studies, and reports used in this work. The only alignment with DPB was regarding the scope of the project and the methodology to be deployed in this research. The study’s results were discussed with the [Brazilian Institute for Consumer Defense](#) (“IDEC”, acronym in Portuguese), who did not interfere in any way with the topics discussed herein.

¹ Bachelor of Laws from the Pontifical Catholic University of Rio Grande do Sul (“PUCRS”). Master of Laws (LLM) from the University of Chicago (Class 2020-2021). During his time as an associate at Brazilian law firms, he represented technology companies, including some of those mentioned in this report, in the context of antitrust and regulatory legal counseling. The author, however, has never represented those companies in mergers in Brazil and, since 2017, has not had any professional interaction with them. Although he represented other technology companies prior to July 2020, the author has not received any financial support from any company with a stake in the subject matters discussed in this report. The opinions presented here are based on the author’s independent academic research and do not, in any way, represent the opinions of previous clients or law firms that the author was, is, or may be part of. The author thanks Bruno Bioni, Bruno Braz, Bruno Renzetti, Camila Leite, Diogo Moyses, Mariana Rielli, Michel Souza, and Rafael Zanatta for their comments during the seminar held on February 26, 2021, by Data Privacy Brasil Research Association.

The main objectives of this report are: (i) to put into context discussions recently raised by academia, foreign antitrust authorities, and third sector organizations over relevant antitrust issues related to mergers intended to increase data collection capabilities (data-driven mergers); (ii) to demonstrate how the current merger control regime provided by Law No. 12,529/2011 is insufficient to “capture” potentially sensitive transactions in technology markets; (iii) to show that, as a result of the deficiencies indicated in the item above, the Administrative Council for Economic Defense (“CADE”, acronym in Portuguese) has failed to analyze important transactions that are scrutinized abroad; (iv) to assert that, even if CADE had investigated the mergers examined in this report, CADE’s assessment would have been incomplete and superficial; and (v) to recommend, in light of the academic materials studied and this report’s empirical results, that some institutional and legislative improvements should be made to close legal loopholes in Brazil.

In order to do so, this report is structured in the following manner: (i) the first section is this introduction; (ii) the second section describes the scope and methodology of this project; (iii) the third section establishes the assumptions upon which this research was based; (iv) the fourth section approaches the current merger control regime in Brazil and identifies loopholes affecting data-driven mergers; (v) the fifth section critically examines five transactions that were investigated by foreign antitrust authorities (Facebook/Instagram, Google/Waze, Facebook/WhatsApp, Apple/Shazam and Google/Fitbit) and identifies deficiencies in the analysis of those cases; (vi) the sixth section suggests ways to close loopholes found and antitrust advocacy actions; (vii) the seventh section ends with my conclusions.

It is not the objective of this research to advocate for or against specific mergers or for the commercial interests of any technology company. It is to the credit of those companies which have invested capital and effort into developing previously nonexistent products and services which are used by companies, governments, and individuals. Therefore, they should be appropriately rewarded, so that there remain incentives for innovation. Data-driven mergers, by themselves, do not necessarily raise antitrust or data protection concerns; in some cases, they may be very beneficial to consumers, the market, and to society as a whole.

This report was written by an independent consultant who, at the time of the writing, had no contractual, corporate or employment relationship with any technology company or law firm which may potentially have a stake in the cases analyzed here. It is worth mentioning that it is up to the anti-trust authorities to consider each specific case and to consider the arguments of all parties involved and conclude on whether a merger has any anticompetitive impacts.

2. SCOPE AND METHODOLOGY OF THE PROJECT

The scope of this work is limited to data-driven mergers in the technology market². The transactions analyzed here may have helped the acquiring company access more personal data to develop products and services for online targeted advertising, but there are cases in which such data could have been used for other purposes, such as getting access to other markets and improving existing apps. This study will not include any investigations in Brazil and abroad about potential cases of a company abusing its dominant position or violations of data protection rules.

All materials used in this study are in the public domain. As relevant documents from merger reviews are not made available to the public, especially in the United States, the analysis of certain cases in this work may be limited. Therefore, this work will not include important discussions considered confidential by antitrust authorities and the parties to the merger.

This research is not a compilation of reviews of international reports. Should access to such a document be of interest, CADE provided a study titled Competition in Digital Markets: A Review of Specialized Reports (*Concorrência em Mercados Digitais: uma Revisão de Relatórios Especializados*), in August 2020. The complete version of this document has also been made available [in English](#) and a summary of its main findings was recently published by [ProMarket](#), the blog of the George Joseph Stigler Center for Economics and State Studies at the University of Chicago. Likewise, this research does not intend to exhaustively discuss the topics raised here, nor to address recent academic research on antitrust issues and technology in detail.

It is difficult to accurately and objectively determine whether a transaction is a data-driven merger or not, after all, any corporate transaction may have numerous reasons which are not known to the author or antitrust authorities. Having said that, for the purposes of this paper, data-driven mergers are considered transactions that: (i) enable the acquiring company to collect personal data that was not readily available to the acquiring company before the transaction; (ii) increase the portfolio of personal data of the acquiring company as a result of the information held by the target company; (iii) monetize the acquiring company's core economic activities; or (iv) enable the acquiring company to enter or consolidate its position in adjacent markets. Notwithstanding the delimitation attempted here, the author acknowledges that it is not possible to perfectly categorize such transactions.

² Although acquisitions for the same purposes exist in the pharmaceutical industry, such as for obtaining information on clinical trials in relation to drug and treatment development, those types of transactions will not be analyzed here.

Given the scope set for this paper, only transactions from the past ten years will be analyzed. Therefore, the acquisition of DoubleClick Inc. ("DoubleClick") by Google Inc. ("Google")³ in 2007, which represents the starting point for the study of data-driven mergers, will not be addressed⁴. It is a

3References to Google include Alphabet Inc. ("Alphabet"), the successor to Google and the parent company of the Alphabet/Google corporate group.

4Pamela Jones Harbor's [dissenting vote](#) in 2007 foreshadowed a host of competition and privacy concerns surrounding data-driven mergers at a time when the subject was not yet talked about. The following excerpts summarize the main topics discussed in Google's acquisition of DoubleClick: "I dissent because I make alternate predictions about where this market is heading, and the transformative role the combined Google/DoubleClick will play if the proposed acquisition is consummated. If the Commission closes its investigation at this time, without imposing any conditions on the merger, neither the competition nor the privacy interests of consumers will have been adequately addressed. [...] These existing horizontal overlaps are troubling enough, and might have provided a predicate for the Commission to impose conditions on the merger. But even more troubling is that the combination of Google and DoubleClick likely will affect the evolution of the entire online advertising market – especially in light of existing network effects, and the tremendous additional network effects the transaction will generate. The majority's analysis skims too quickly over these points. Network effects deserve greater attention. In many ways, the acquisition of DoubleClick by Google is a case of first impression for the Commission. The transaction will combine not only the two firms' products and services, but also their vast troves of data about consumer behavior on the Internet. Thus, the transaction reflects an interplay between traditional competition and consumer protection issues. The Commission is uniquely situated to evaluate the implications of this kind of data merger, from a competition as well as a consumer protection perspective. The Commission should maximize its opportunity to do so, especially where the merged firm will be capable of dominating the "Database of Intentions. [...] The online advertising market already is characterized by several different types of network effects. By purchasing DoubleClick, Google will acquire data that will contribute to, and exacerbate, network effects. As a result, the Google/DoubleClick combination is likely to 'tip' both the search and display markets in Google's favor, and make it more difficult for any other company to challenge the combined firm. [...] On the search side, Google is able to charge a premium for search advertising because Google has the highest volume of searches. More searches translate to more incoming data, which enables Google to enhance the quality of the underlying algorithms used to process searches and match them to relevant advertisements. Google's search methodology and advertisement targeting become even better as consumers use Google's search engine more. Improved searches drive still more traffic to the site, which further increases the value of search advertising on Google. On the display advertising side, DoubleClick has amassed its own storehouse of information about how consumers behave on the Internet, which enables DoubleClick and its customers to make better predictions about where to place advertisements. DoubleClick's customer base comprises publishers, advertisers, and intermediators who create value for, and extract value from, the DoubleClick tools by engaging in activities that generate data about consumers' preferences and Internet behavior. [...] Post-merger, the combined Google/DoubleClick will become a 'super-intermediator' with access to unparalleled data sources. In this role, Google/DoubleClick may be able to match up buyers and sellers in ways that more fully maximize the value of all advertising space. As the merged firm's dataset grows, data-driven algorithms may perform at least as well as direct sales – if not better – in choosing which advertisements to display to generate the greatest return on investment. If this were to occur, the value of intermediated 'remnant' space might approach (or surpass) the value of directly-sold 'premium' advertisements, in terms of the ability to place the right message in front of the right Internet users at the right moment. [...] Throughout the Commission's antitrust investigation of this transaction, I was concerned that the data issues would be relegated to the consumer protection side of the agency, and would not receive adequate attention by antitrust staff. I remain concerned that the Commission's antitrust investigation relied on the parties' representations about what they intend to do with their combined data troves, even though their choices about data integration are as relevant to the antitrust analysis as they are to the consumer protection review. After all, why would Google pay billions of dollars for DoubleClick, in an effort to keep DoubleClick out of the hands of competitors, if Google does not intend to combine the two firms' valuable datasets? [...] Traditional competition analysis of Google's acquisition of DoubleClick fails to capture the interests of all the relevant parties. Google and DoubleClick's customers are web-based publishers and advertisers who will profit from better-targeted advertising. From the perspective of these customers, the more data the combined firm is able to gather and mine, the better (assuming, as the majority presumably does, that the financial benefits of highly-targeted advertising outweigh any harm caused by reduced competition). But this analysis does not reflect the values of the consumers whose data will be gathered and analyzed. Under the majority's application of Section 7, there is no adequate proxy for the consumers whose privacy is at stake, because consumers have no business relationship with Google or DoubleClick. [...] But privacy principles should protect the majority of consumers who do care about their privacy, and who would prefer greater transparency about the use of their personal information. It would be disingenuous to claim that consumer privacy is passively slipping away. Rather, it is actively reduced by the choices we make (or do not make) as a society, as we go about 'constructing the information economy through the law'. [...] I do not doubt that this merger has the potential to create some efficiencies, especially from the perspective of advertisers and

complex case which, if analyzed here, would overextend the scope of the paper⁵. This scope does not exclude major data-driven mergers of Facebook Inc. ("[Facebook](#)") as they took place within the time period chosen for the purposes of this report. In relation to Apple Inc. ("[Apple](#)"), only one transaction has been identified as a potential data-driven merger, which took place in 2018, i.e., within the period covered for the purpose of this report.

Having chosen the period indicated above, one of the main criteria for choosing the transactions discussed here was the availability of public information about each case, especially the administrative decisions issued by foreign antitrust authorities. After that, a filter was applied concerning the relevance of the transaction and how the data now available to the acquiring company increased its data portfolio after the transaction. Based on this, the following transactions were selected: (i) Facebook/Instagram (photo-sharing social network service); (ii) Google/Waze (turn-by-turn app with satellite navigation); (iii) Facebook/WhatsApp (mobile instant messaging); (iv) Apple/Shazam (recognition of musical tastes); and (v) Google/Fitbit (fitness trackers and monitoring of health habits)⁶.

Official decisions and statements by the Australian Competition & Consumer Commission ("[ACCC](#)"), the Competition and Markets Authority ("[CMA](#)")⁷, and the European Commission will be analyzed. Although the full content of its decisions is not available, some statements by the Federal Trade Commission ("[FTC](#)") on the cases indicated above will also be discussed. Those jurisdictions were included in this report as a result of the cases selected for discussion in this report, as indicated in the paragraph above. According to public information, none of the acquisitions discussed in this report have been assessed by CADE in the context of merger review, which demonstrates gaps in Brazilian laws with respect to data-driven mergers.

publishers. But it has greater potential to harm competition, and it also threatens privacy. By closing its investigation without imposing any conditions or other safeguards, the Commission is asking consumers to bear too much of the risk of both types of harm".

⁵This case yielded a considerable number of scholarly articles that may be consulted by those who are interested. Without prejudice to others, the most important are: (i) [Defining markets that involve multi-sided platform businesses: an empirical framework with an application to Google's purchase of DoubleClick](#), by David Evans and Michael Noel; (ii) [An antitrust analysis of Google's proposed acquisition of DoubleClick](#), by Robert Hahn and Hal Singer; (iii) [The Google-DoubleClick merger, the FTC, and the future of transactional privacy inquiries in the United States](#), by Christina T. Trotta; and (iv) [Stepping up to the plate: the Google-DoubleClick merger and the role of the FTC in protecting online data privacy](#), by Eli Edwards.

⁶As there was no antitrust decision on the [acquisition](#) of Nest Labs, Inc. ("[Nest](#)") by Google, this transaction was not included in this report. However, this transaction is relevant from an antitrust, Internet of Things (IoT) and personal data protection perspective. As noted in a [Forbes report](#), "there are concerns about the use of this technology. Opponents claim that installing such devices and collecting data will invade users' privacy. Google could use this data to influence consumer behavior, market products and even dictate a user's lifestyle, thus infringing on privacy. While it is too early to speculate on what kind of products Nest Labs might develop under Google's stewardship, we will continue to keep an eye out for any new developments." On interfaces between antitrust issues and personal data of users of personal assistants and other smart devices see: EZRACHI, Ariel; STUCKE, Maurice. [How digital assistants can harm our economy, privacy, and democracy](#).

⁷United Kingdom's current antitrust authority, which succeeded the Office of Fair Trading ("[OFT](#)").

When analyzing the case decisions, the main aspects considered were: (i) the activities of the merging parties and relevant market definitions; (ii) market concentration and rivalry levels within the industry; (iii) potential antitrust concerns and theory of harms raised by antitrust authorities and interested third parties; (iv) the parties' arguments for the transaction to go ahead; (v) the grounds used by antitrust authorities for their decisions; (vi) the existence of any intervention by data protection authorities or third sector organizations; and (vii) the market impact of the transaction after the implementation of that transaction, if there is public information available.

This report relies on the benefit of hindsight and may have been impacted by such bias⁸. The market conditions that were applicable at the time of each merger are no longer the same and, at the time of writing, it is possible to look back and understand a significant part of the effects of those mergers, except for Google/Fitbit, as it is the most recent. This caveat is important because antitrust authorities examine transactions based on limited data provided by the merging parties, based on the competitive and market structures at given time, and without any clues on what will happen after the merger has been approved.

For antitrust authorities, assessing a merger is an exercise of predicting the future, which is subject to methodological errors and substantial changes in market conditions, especially when it comes to technology markets. Antitrust authorities deal with multiple cases at the same time and are subject to procedural rules that limit the amount of time they can spend on their antitrust analysis. They also have to decide cases based on the best information available at the time of the case – which may, depending on the circumstances, be willfully limited by the merging parties – taking into account the risks of type 1 and type 2⁹ errors. For the most part, this research is not constrained by those aspects.

⁸Hindsight bias suggests that the sorts of decisions routinely made by the legal system, adjudicating likelihoods and foreseeability after a negative event has materialized, will often be biased toward excessively high estimates – and thus in favor of holding actors responsible – simply because the negative event materialized” (JOLLS, Christine. [Behavioral Law and Economics](#) in Yale Law School, Public Law Working Paper No. 130, Yale Law & Economics Research Paper No. 342, p. 27-28). On the one hand, it is now much easier to claim that certain transactions were problematic and should never have been unconditionally approved by antitrust authorities: for example, Facebook's takeovers of Instagram and WhatsApp, in 2012 and 2014, seemed much less sensitive than they intrinsically were; on the other hand, in 2020-2021, we can see the development of potentially sensitive commercial practices from an antitrust perspective over the years, an aspect that should be taken into account when analyzing mergers.

⁹There is a concern that merger policy has put too much weight on the risk of incorrect intervention (type I error) compared to the risk of incorrect clearance (type II error) when assessing mergers in the digital sector, leading to increased concentration in digital markets” ([LEAR's Report for the CMA on Ex-post Assessment of Merger Control Decisions in Digital Markets](#), p. 10).

3. FACTUAL ASSUMPTIONS OF THE RESEARCH

3.1 Ten myths that must be deconstructed¹⁰

Before getting into the substantive part of this paper, ten myths must be deconstructed:

Myth 1. The purposes of antitrust and data protection laws are completely different: despite being initially created for different purposes, antitrust and data protection laws may operate in concert in some situations. When it comes to digital markets, the privacy level offered to users is a nonmonetary aspect of competition that must be considered. Companies with considerable market power and dominant positions can impose exploitative data practices upon users and exclude competitors.

Myth 2. The tools used by antitrust authorities are sufficient to deal with all current concerns relating to Big Data: the main methods of economic analysis are focused on prices and frequently fail to address matters such as users' privacy rights. It is difficult to quantify the market impacts caused by a potential degradation of privacy policies, especially because it is not possible to predict how and when changes to those privacy policies will occur; and different users may interpret the same changes differently from each other. It is also difficult to analyze potential anticompetitive effects on two-sided markets, as antitrust authorities usually only pay attention to the market side that involves a financial transaction.

Myth 3. Market forces by themselves can solve privacy issues: privacy policies are often unilaterally imposed on users, who are only made aware of any changes and have no choice but to agree with them or lose access to the platform. In a competitive market, companies would compete for users' preferences by offering them options for greater choice over who has access to and control over their personal data.

¹⁰ This subsection is based upon a discussion of the "ten myths" about antitrust and privacy issues of this book: STUCKE, Maurice E.; GRUNES, Allen P. *Big Data and Competition Policy*. Oxford: Oxford University Press, 2016, p. 1-11.

Myth 4. Data-driven online markets are not harmed by network effects:

network effects can provide benefits to users, but they can also give rise to anti-trust issues. In some cases, network effects may give power to dominant firms for them to consolidate their market positions and become uncontested players. They can promptly collect different types of personal data on a large scale and deploy that data collected from a given market to leverage their activities into another market.

Myth 5. Data-driven online markets have low entry barriers:

although innovation and new forms of competition can rapidly change the way companies and users interact with each other, network effects can reduce the chances for new companies to successfully enter new markets. As "the winner takes all", there are less incentives to invest, particularly in markets where an entrant is unlikely to be able to challenge Facebook and Google.

Myth 6. Personal data has little competitive importance because it is easily available and obtained at low costs:

users' personal data on a given platform is usually deemed proprietary information of the company that collects, processes, and uses such personal data. Most the time, data collected by one company is not available to a rival because such data is a competitive advantage. Companies invest significant amounts of money to improve their ability to gather personal data and are generally unwilling to share it with competitors, even for a fee.

Myth 7. Dominant companies are not able to prevent smaller competitors from having access to relevant data:

as the constant monitoring of users is feasible, companies with robust databases can predict trends and demands, so they can detect alternatives to their products/services and see them as potential threats. With the goal of preventing the development of smaller rivals, some companies acquire those smaller rivals or simply do not allow them to have access to user data.

Myth 8. Antitrust authorities do not need to worry about data-driven markets because competition always comes from unexpected places:

there is no indisputable monopoly in the very long run. However, the fact that dominant positions may be at least in theory challenged does not mean, by itself, that antitrust authorities do not need to act to fix competitive distortions. Material reductions in choice rights, as well as in autonomy, innovation, and privacy levels should be considered in the context of antitrust investigations and merger review cases.

Myth 9. Antitrust authorities do not need to worry about data-driven markets because users benefit from free services: the fact that users do not pay for the services should not be seen as an obstacle for antitrust authorities to interfere in some markets. Users add utility and value to digital platforms when they share personal data and interact with those platforms; the combination of those actions provides relevant inputs for adjacent markets.

Myth 10. Users of free products and services should not have a reasonable expectation of privacy rights: as there are users who are dependent on some platforms to perform basic activities, those users often accept privacy policies that decrease their welfare and freedom of choice in ways that those users do not necessarily agree with. In a scenario where there were effective alternatives to rival against dominant platforms, it would be true to say that only those who are willing to provide personal data would do so. This, however, is not the case now.

3.2 Why are some companies more active in data-driven mergers?

Among others, Facebook and Google are technology companies that derive most of their revenues from online advertising services that allow them to target users with customized ads; Facebook and Google are not hardware or software companies. Their business model is viable because those companies collect and have access to a massive amount of aggregated and granular information on Internet users.

Facebook and Google use personal data as an input to develop and improve their respective algorithms to deliver the appropriate ad, at the appropriate time, to the appropriate user – and therefore earn more attractive margins from their advertising and ad serving businesses. This is not a problem in itself; it explains why Facebook and Google have a greater incentive, at least in theory, to engage in more data-driven mergers than other companies.

Figure 1 - Interactions in the online advertising market.

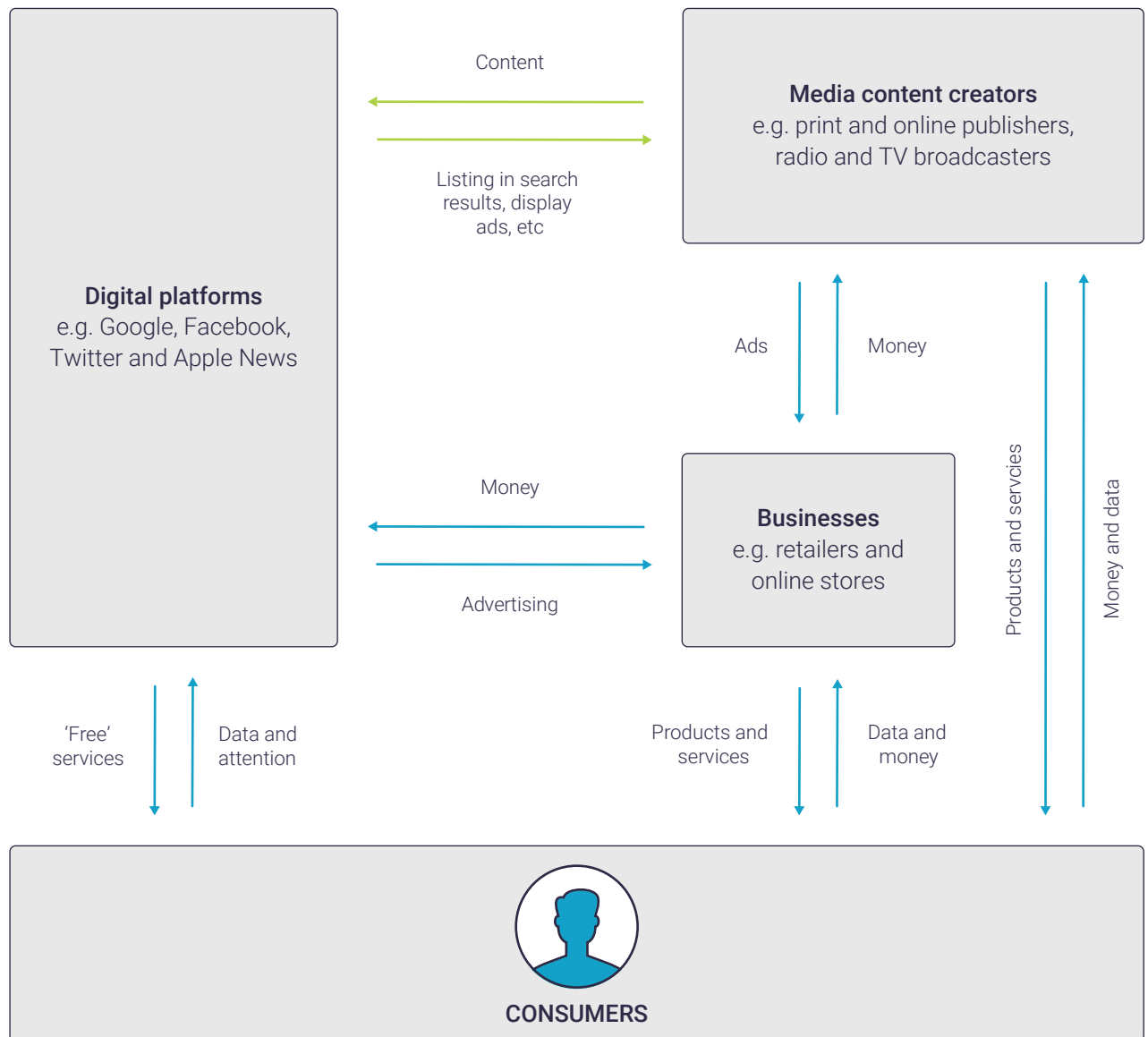
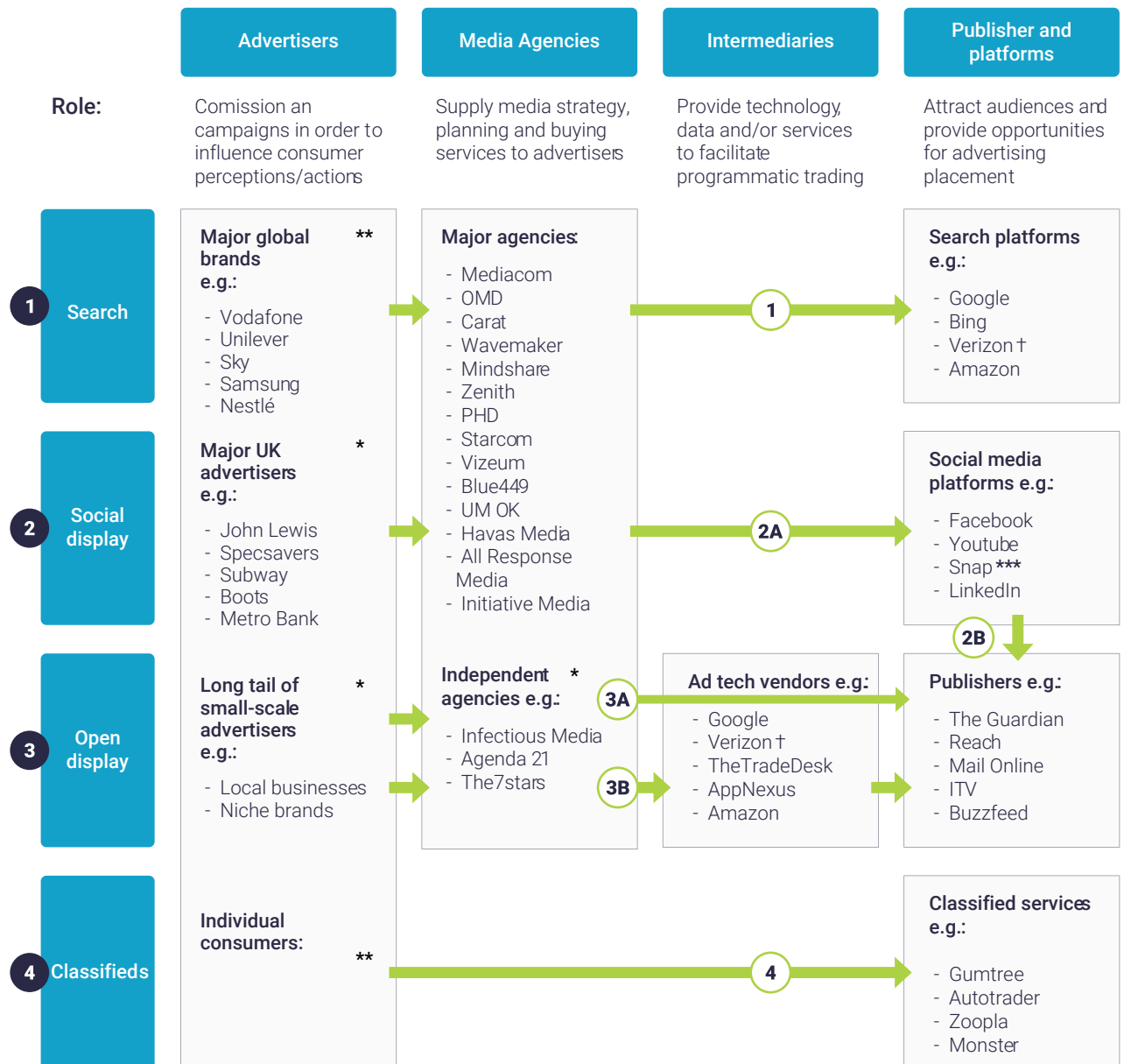
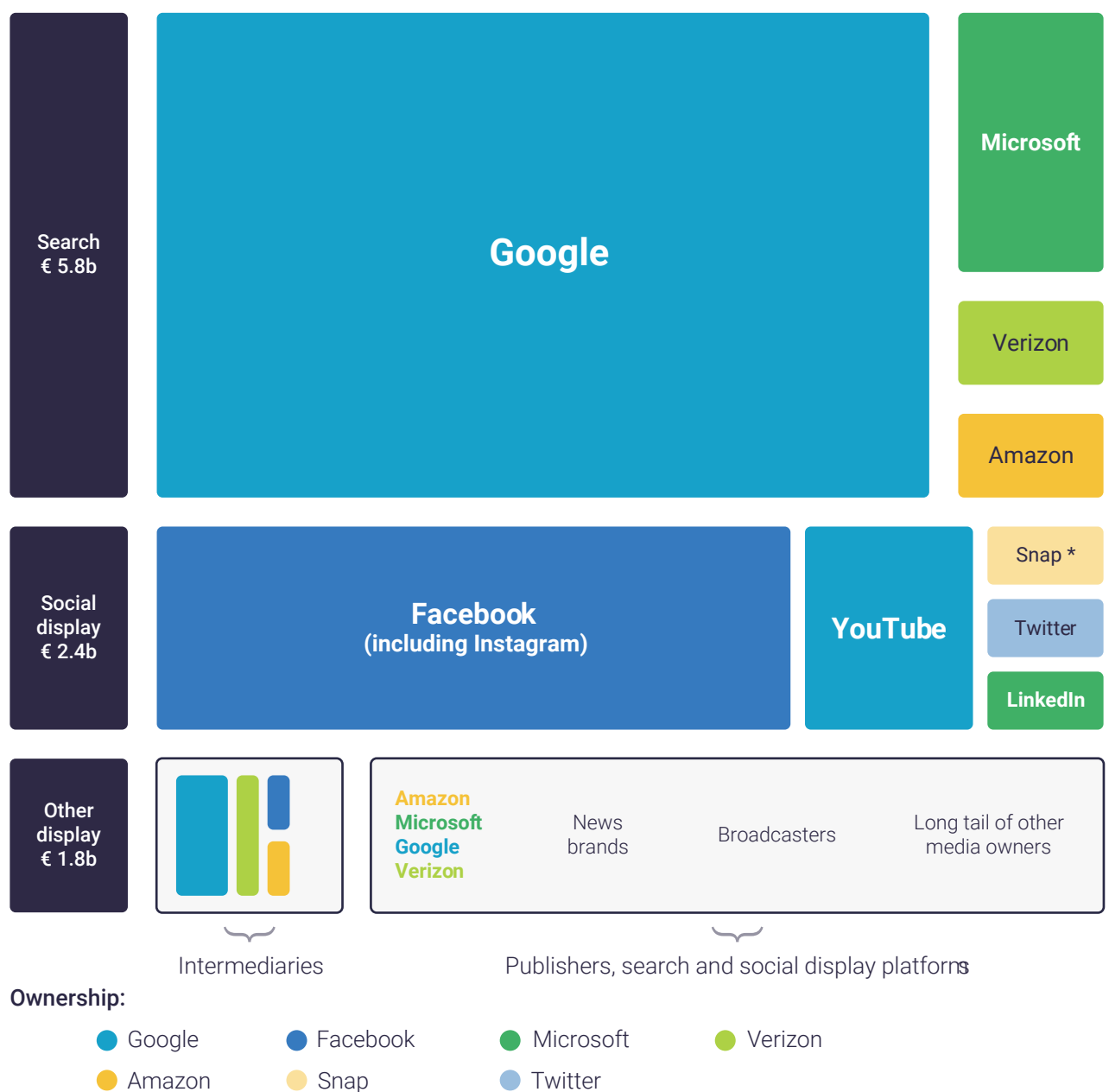


Figure 2 - Supply chain of the targeted advertising market



Even though both Facebook and Google are active in online advertising, their activities are focused on different market segments. Facebook's activities are focused on providing visual ads (photos, sponsored posts, and sponsored videos) through its social networks, while Google's activities are broader in scope: Google provides and displays ads on its own websites (especially on Google search engine) and third-party sites (Google Ads and other companies within its group), which is one of the most important lines of business of Google. Facebook and Google, therefore, offer complementary, not necessarily competing, online advertising products and services.

Figure 3 - Different segments of the online advertising market



* Snap is generally included in the social display category, although it describes itself as a camera and communications company

An [article published by ProMarket](#) explains some of the differences between Facebook's and Google's activities; the amounts in pound sterling shown in dark blue, in the first column to the left, are estimates of the amounts spent by advertisers in the UK within each online advertising segment. The purpose of the figure above is to merely illustrate that there are several segments within the online advertising market, and that Facebook and Google offer substantially different marketing campaigns.

In its last [annual report](#), Facebook reported that virtually all of its revenue is derived from selling and displaying ads. These ads are specifically targeted to reach people who match several factors, such as age, behavior, gender, interests, location etc. The personal data collected by Facebook's product portfolio is used to deliver ads, which appear on Facebook, Instagram Inc. ("[Instagram](#)"), third-party apps, and websites. Facebook's advertising revenues also depend on targeting and measurement tools, which incorporate "data signals" from users' mobile devices.

[Figure 4 - Facebook's revenue by category \(2018-2020\)](#)

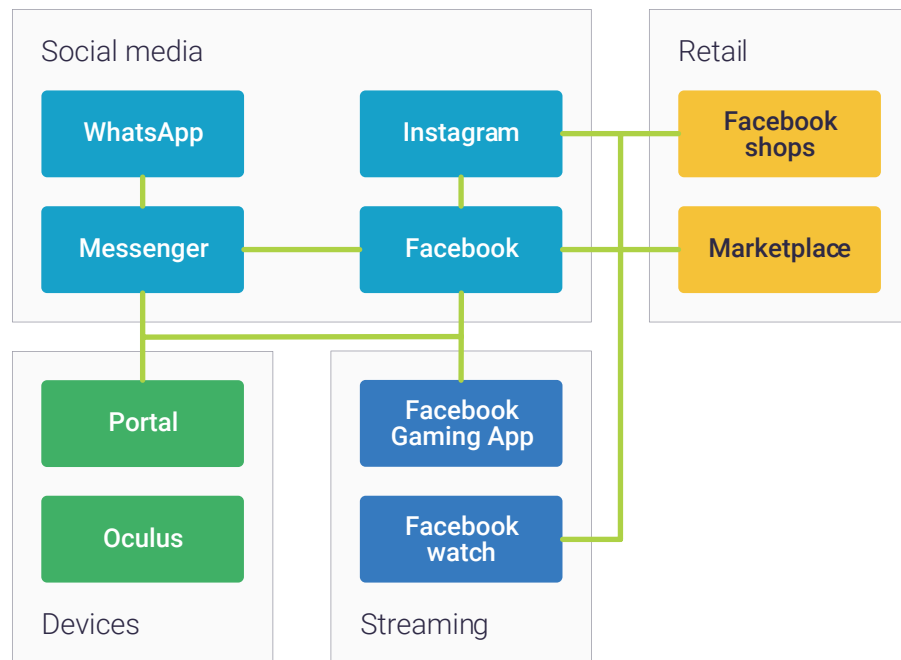
	Year ended December 31		
	2020	2019	2018
	(in millions)		
Advertising	84,169	69,655	55,013
Other revenue	1,796	1,042	825
Total revenue	\$ 85,965	\$ 70,697	\$ 55,838

Because personal data is the main input for its operations, Facebook [recognizes](#) that its revenues could be reduced by legislative and regulatory developments affecting data protection, as they may reduce its ability to collect and monitor user data¹¹. In particular, Facebook stated that, as a result

¹¹ We rely on data signals from user activity on websites and services that we do not control in order to deliver relevant and effective ads to our users. Our advertising revenue is dependent on targeting and measurement tools that incorporate these signals, and any changes in our ability to use such signals will adversely affect our business. For example, legislative and regulatory developments, such as the GDPR, ePrivacy Directive, and CCPA, have impacted, and we expect will continue to impact, our ability to use such signals in our ad products. In particular, we have seen an increasing number of users opt out of certain types of ad targeting in Europe following adoption of the GDPR, and we have introduced product changes that limit data signal use for certain users in California following adoption of the CCPA. Regulatory guidance or decisions or new legislation may require us to make additional changes to our products in the future that further reduce our ability to use these signals. In addition, mobile operating system and browser providers, such as Apple and Google, have announced product changes as well as future plans to limit the ability of application developers to collect and use these signals to target and measure advertising. For example, in June 2020, Apple announced that it plans to make certain changes to its products and data use policies in connection with the release of its iOS 14 operating system that will reduce our and other iOS developers' ability to target and measure advertising, which we expect will in turn reduce the budgets marketers are willing to commit to us and other advertising platforms. In addition, we have implemented, and may continue to implement, product changes that give users the ability to limit our use of such data signals to improve ads and other experiences on our products and services, including our Off-Facebook Activity tool and our

of specific laws and regulations involving opt-out rights, which allow users to restrict the collection of their personal data, may reduce Facebook's earnings. Facebook also referred to third-party actions that may harm the company's ability to generate cash, such as Apple's recently announced initiatives to limit the amount of personal data that Facebook and other app developers may extract from iPhone users and the Safari browser; Facebook vehemently opposed this measure.

[Figure 5 - Ecosystem of Facebook's products and services](#)



In its [last annual report](#), Google stated that while its non-advertising revenues have been growing in recent years, over 80% of the company's total revenues came from its online ad display and exchange businesses. Advertising revenues include ads displayed and delivered through Android, Chrome, Gmail, Google Play, Maps, Search, and YouTube. They also include revenue generated by AdMob, AdSense, and Google Manager, the Google-owned platforms for instant ad auctioning.

worldwide offering of certain product changes we implemented in connection with the GDPR. These developments have limited our ability to target and measure the effectiveness of ads on our platform, and negatively impacted our advertising revenue, and if we are unable to mitigate these developments as they take further effect in the future, our targeting and measurement capabilities will be materially and adversely affected, which would in turn significantly impact our future advertising revenue growth”.

[Figure 6 - Google's revenue by category \(2018-2020\)](#)

Revenue Recognition

The following table presents our revenues disaggregated by type (in millions)

	Year ended December 31		
	2018	2019	2020
Google Search and other	\$ 85,296	\$ 98,115	\$ 104,062
YouTube ads	11,155	15,149	19,772
Google Network Members' properties	20,010	21,547	23,090
Google Advertising	116,461	134,811	146,924
Google Other	14,063	17,014	21,711
Google Services total	130,524	151,825	168,635
Google Cloud	5,838	8,918	13,059
Other Bets	595	659	657
Hedging gains (losses)	(138)	455	176
Total revenue	\$ 136,819	\$ 161,857	\$ 182,527

Because personal data is a critical input for Google as well, the company [recognizes](#) that its business may be financially damaged by personal data protection and privacy regulations that benefit users; after all, the less data Google can collect, the lower is Google's ability to provide targeted advertising¹². Google has also stated in its [annual report](#) that how people perceive Google's policies on data collection, sharing, security, and use may affect Google's financial results and reputation.

¹² "We are subject to numerous U.S. and foreign laws and regulations covering a wide variety of subject matters. New laws and regulations (or new interpretations or applications of existing laws and regulations in a manner inconsistent with our practices) may make our products and services less useful, limit our ability to pursue certain business models or offer certain products and services, require us to incur substantial costs, expose us to civil or criminal liability, or cause us to change our business practices. These laws and regulations are evolving and involve matters central to our business, including, among others: new competition laws and related regulations around the world, that can limit certain business practices, and in some cases, create the risk of significant penalties; privacy laws, such as the California Consumer Privacy Act of 2018 that came into effect in January of 2020 and the California Privacy Rights Act which will go into effect in 2023, both of which give new data privacy rights to California residents, and SB-327 in California, which regulates the security of data in connection with internet connected devices; data protection laws passed by many states within the U.S. and by certain countries regarding notification to data subjects and/or regulators when there is a security breach of personal data; new laws further restricting the collection, processing and/or sharing of advertising-related data".

Figure 7 - Ecosystem of Google's products and services

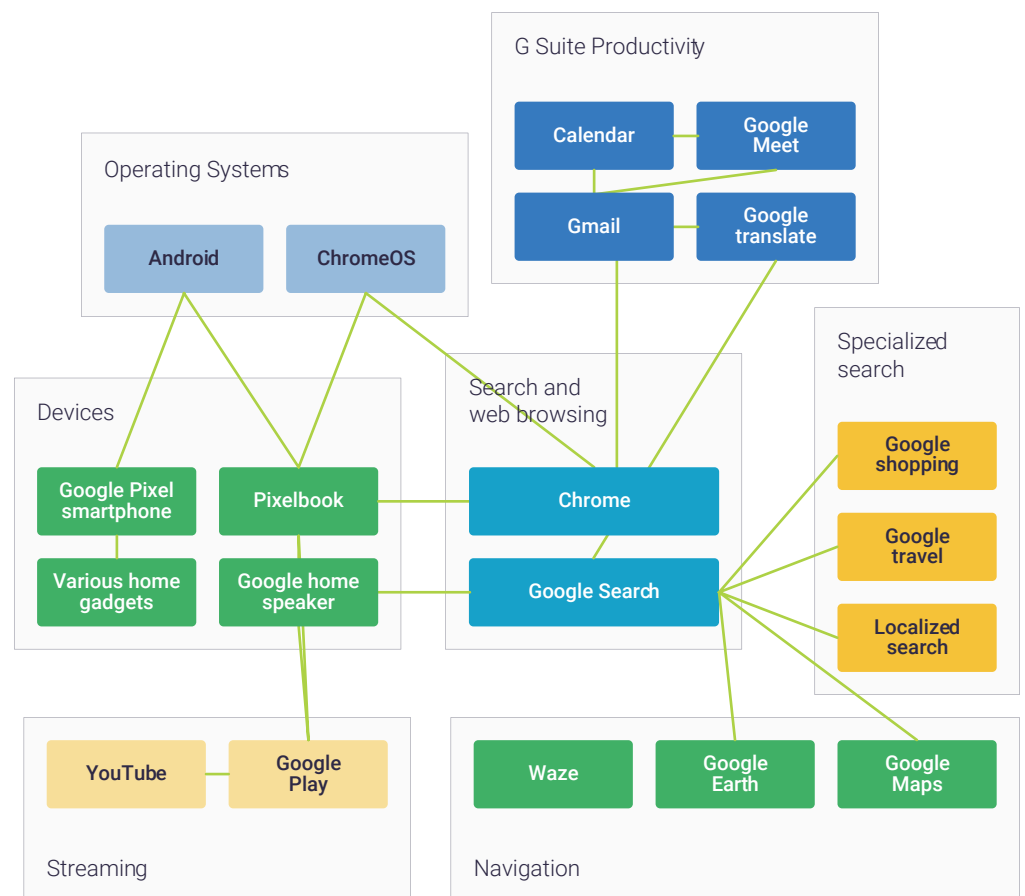
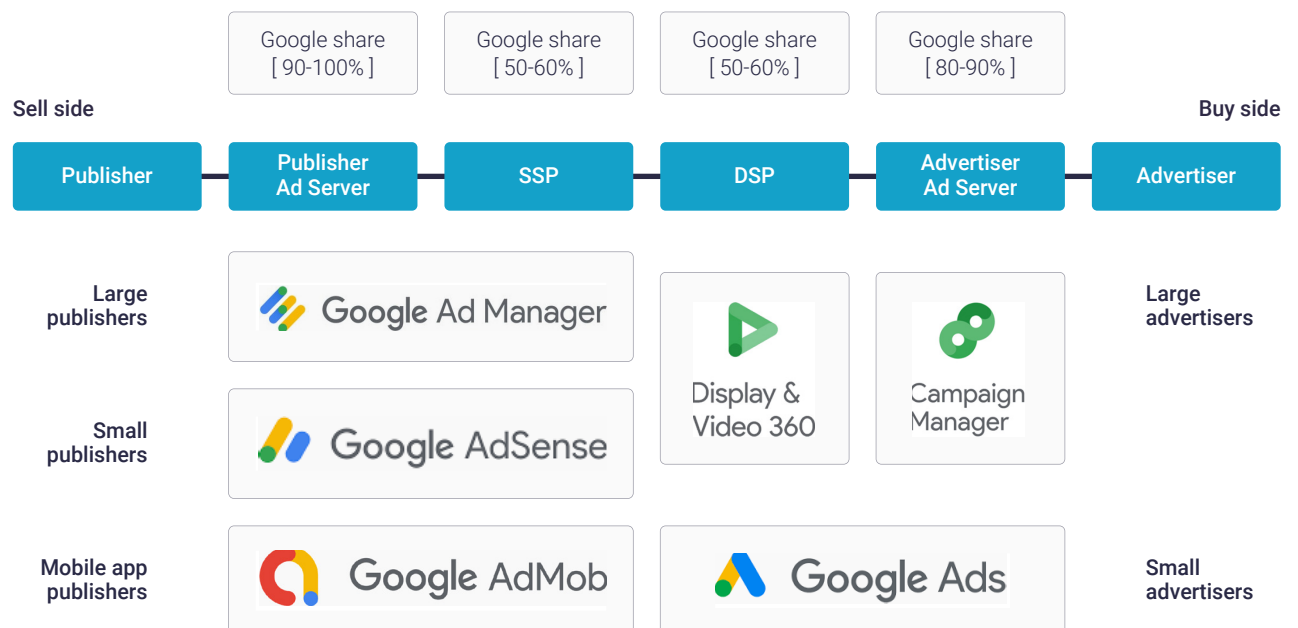


Figure 8 - Table summarizing Google's activities in the advertising market



Source: CMA

Note: We include Google AdX, Google Ad Sense and Google AdMob in our definition of SSPs and Google DV360 and Google Ads in our definition of DSPs. Share estimates at SSP and DSP levels have been computed based on data from the intermediaries we received information from.

And what about other technology companies?

Although Amazon.com Inc. ("[Amazon](#)"), Apple, and Microsoft Corporation ("[Microsoft](#)") are also part of the group of technology companies with the highest market capitalizations, the activities that generate most of the revenues of those companies are materially different from those that generate most of the revenues of Facebook and Google; it is relatively difficult to compare the activities of those Big Tech companies from methodological, qualitative, and quantitative perspectives. For this reason, it is important to understand the origin the revenues of those companies.

Amazon is an online retail service that derives most of its revenues from the sale of its own products and the sale of third-party products. Even though personal data is important to Amazon, the usefulness of that data is reflected in its sales volume, especially private label products. Since Amazon does not report earnings derived from the sale of private label products separately from its overall sales, it is difficult to estimate how much a data-driven merger could potentially be of benefit to Amazon. Given that Amazon is able to collect useful information for its business by looking at the top products sold and the sales volume of third parties, it is reasonable to assume that Amazon does not have as much incentive – at least not to the same extent as Facebook and Google – to engage in data-driven mergers. Potential antitrust issues regarding Amazon's access to third-party data are outlined in '[Amazon's Antitrust Paradox](#)', an article by FTC Chairwoman Lina Khan, and a recent investigation opened by the [European Commission](#).

According to Amazon's [annual report](#), the company has operations in five areas, namely: (i) retail sales, which encompasses physical and online stores; (ii) third-party sales services, in which Amazon does not act as a manufacturer or direct seller of products, but only as an intermediary that makes available the Amazon platform itself and provides logistics services; (iii) subscription services, which revenues are derived from Amazon Prime services, which includes priority delivery of products purchased through Amazon, as well as music and video streaming, audiobooks, e-books, and other services; (iv) Amazon Web Services ("[AWS](#)"), which provides database, infrastructure, and cloud services; and (v) others, which essentially consists of selling of advertising.

[Figure 9 - Amazon's net revenues by category \(2018-2020\)](#)

Net sales by groups of similar products and services, which also have similar economic characteristics, is as follows (in millions)

	Year ended December 31		
	2018	2019	2020
Net Sales			
Online stores ⁽¹⁾	\$ 122,987	\$ 141,247	\$ 197,346
Physical stores ⁽²⁾	17,224	17,192	16,227
Third-party seller services ⁽³⁾	42,745	53,762	80,461
Subscription services ⁽⁴⁾	14,168	19,210	25,207
AWS	25,655	35,026	45,370
Other ⁽⁵⁾	10,108	14,085	21,453
Consolidated	\$ 232,887	\$ 280,522	\$ 386,064

- (1) Includes product sales and digital media content where we record revenue gross. We leverage our retail infrastructure to offer a wide selection of consumable and durable goods that include media products available in both a physical and digital format, such as books, videos, games, music and software. These products sales include digital products sold on a transactional basis. Digital product subscriptions that provide unlimited viewing or usage rights are included in "Subscription services".
- (2) Includes products sales where our customers physically select items in a store. Sales to customers who order goods online for delivery or pickup at our physical stores are included in "Online stores".
- (3) Includes commissions and any related fulfillment and shipping fees, and other third-party seller services.
- (4) Includes annual and monthly fees associated with Amazon Prime memberships, as well as digital video, audiobook, digital music, e-book, and other non-AWS subscription services.
- (5) Primarily includes sale of advertising services, as well as sales related to our other service offerings.

Apple is a technology company which revenues mainly come from the sale of hardware (iPhones, Macbooks, iPads, AirPods, Apple TVs, Apple Watches, Beats, Home-Pods, iPods, other products that use the Apple brand, and accessories manufactured by third parties). Those products represented over 80% of Apple's total net revenues in 2020. The remaining 20% was related to Apple services, which covered advertising operations, AppleCare's (tech support service) monthly/annual fees, digital content licensing, and other generic services.

Apple's revenues from advertising are not reported separately, but it is possible to estimate that they are not a substantial part of Apple's total net revenues. This is because the commission that developers pay Apple for the distribution of their apps on App Store are included within that remaining

20% - the commission that app developers pay for Apple to distribute their apps is generally 30% on in-app purchases. In light of Apple's main sources of revenue, it is reasonable to assume that the reason behind the company's recent acquisitions was to support the development of products and services that consumers will voluntarily wish to obtain (as opposed to advertising, which is generally unwanted from users' point of view)¹³.

[Figure 10 - Apple's net revenues by category \(2018-2020\)](#)

Products and Services Performance

The following table shows net sales by category for 2020, 2019 and 2018 (dollars in millions)

	2020	Change	2019	Change	2018
Net sales by category					
iPhone ⁽¹⁾	\$ 137,781	(3) %	\$ 142,381	(14) %	\$ 164,888
iMac ⁽¹⁾	28,622	11 %	25,740	2 %	25,198
iPad ⁽¹⁾	23,724	11 %	21,280	16 %	18,380
Wearables and accessories ^{(1) (2)}	30,620	25 %	24,482	41 %	17,381
Services ⁽³⁾	53,768	16 %	46,291	16 %	39,748
Total net sales	\$ 274,515	6 %	\$ 260,174	(2) %	\$ 265,595

- (1) Products net sales include amortization of the deferred value of unspecified software upgrade rights, which are bundled in the sales price of the respective product.
- (2) Wearables, home and accessories net sales include sales of AirPods, Apple TV, Apple Watch, Beats products, HomePod, iPod touch and Apple-branded and third-party accessories.
- (3) Services net sales include sales from the Company's advertising, AppleCare, digital content and other services. Services net sales also include amortization of the deferred value of Maps, Siri and free iCloud storage and Apple TV+ services, which are bundled in the sales price of certain products.

In its [last annual report](#), Microsoft stated that it develops, manufactures, licenses, and sells electronic devices (in particular laptops, tablets, and video games), software for business and home use, database solutions, cloud computing, IT infrastructure, artificial intelligence, servers, consulting services, and advanced technical support for entities from the public and private sectors. Microsoft also owns the professional social network [LinkedIn](#). More recently, due to the pandemic, Microsoft's services for conferencing and team working have become more significant. The company also has

¹³ For example, the acquisition of Shazam Entertainment Limited ("[Shazam](#)"), an application that identifies songs and records users' music preferences, may presumably have helped Apple increase the technical capabilities of Apple Music to offer more complete data analytics to artists and studios; in addition to that, it may also have enhanced the targeting of songs of a particular music genre to Apple Music users, increasing competition in the music streaming services industry, where Apple competes with Amazon Music, Deezer, Spotify, and YouTube Music.

a [partnership with Verizon](#) to monetize ads displayed by AOL, Bing, and Yahoo; this intermediation is done through the Bing Ads tool, which generates a very limited part of Microsoft's revenues.

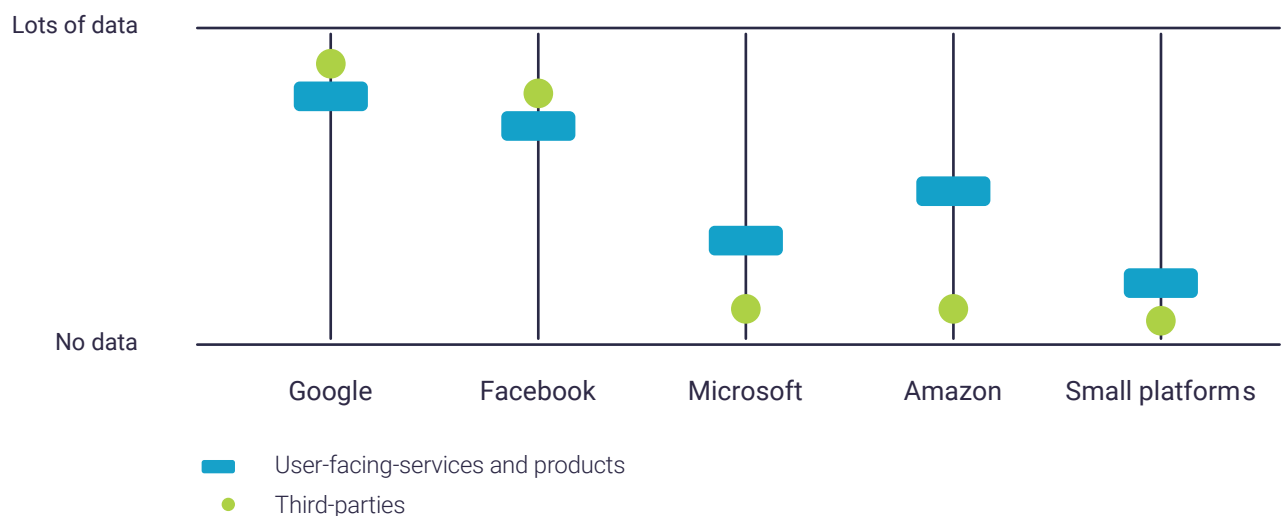
[Figure 11 - Microsoft's revenues by category \(2018-2020\)](#)

Revenue from external customers, classified by significant product and service offerings, was as follows:

Year ended June 30	2020	2019	2018
Server products and cloud services	\$ 41,379	\$ 32,622	\$ 26,129
Office products and cloud services	35,316	31,769	28,316
Windows	22,294	20,395	19,518
Gaming	11,575	11,386	10,353
LinkedIn	8,077	6,754	5,259
Search advertising	7,740	7,628	7,012
Devices	6,457	6,095	5,134
Enterprise Services	6,409	6,124	5,846
Other	3,768	3,070	2,793
Total	\$ 232,887	\$ 280,522	\$ 386,064

The figure below illustrates the amount of data collected by major technology platforms:

[Figure 12 - Scale of data collected by the major technology platforms](#)



Amazon, Apple, and Microsoft make more money from businesses other than advertising.

3.3 Antitrust and zero-price markets that make billions in revenue

As seen in the section above, billions of dollars are generated annually by digital platforms that offer their core products and services for free. Facebook and Google, for example, have market capitalizations of USD 826 billion and USD 1.372 trillion, respectively¹⁴. They have respectively generated gross revenues of USD 84.169 billion and USD 146.924 billion, in the online advertising market in 2020.

It is useful to rely on solutions offered by those companies because they improve users' well-being, enable information to be immediately transmitted worldwide; they also provide tools for the development and expansion of unlimited ventures by Facebook and Google, as well as ventures by third parties. Since they are free, those solutions are even more attractive because users do not necessarily have any immediate financial burden, such as purchasing a license or paying a monthly fee to get the functionalities they want. That feature encourages: (i) more users to join the platform; (ii) more interactions between users of the platform; and (iii) the creation of network effects¹⁵⁻¹⁶⁻¹⁷.

The actions described above repeat many times and become feedback loops:

Figure 13 - Feedback loops



¹⁴ As of March 19, 2021.

¹⁵ "Network effects are the positive economic effects that result if a service network (e.g., telephone, cable television, computer operating systems) reaches a certain critical size" (BRODER, Douglas. *US Antitrust Law and Enforcement*. New York: Oxford University Press, 2016, p. 262).

¹⁶ "Digital platform markets may be characterized by the presence of user and monetization 'feedback loops'. User feedback loops arise as more users allow a platform to collect more user data which in turn allows the platform to provide better quality services, which in turn attract a larger number of users. This user feedback loop may also translate into a monetization feedback loop where the more data a platform can collect, the better it can target its ads and monetize its services. [...] Digital platforms may also be characterized by 'network effects' (also called network externalities or demand-side economies of scale), which arise when the value of the platform to each user grows with the number of other people using the platform. Such network effects are observable in social networks, such as Facebook, where the attractiveness of the platform grows with the number of users" (GERADIN, Damien. [What should EU competition policy do to address the concerns raised by the Digital Platforms' market power?](#) Submission to the DG Competition and to the United Kingdom Digital Competition Expert Panel on the effects of digital markets, 2018, p. 4).

¹⁷ Para discussões adicionais sobre o assunto: RENZETTI, Bruno Polonio; BUENO, Carolina Destailleur; PAIXÃO, Raíssa Leite de Freitas. [Mercados Digitais: Alguns Conceitos](#) in FGV Direito São Paulo: Defesa da Concorrência em Plataformas Digitais, 2020, p. 21-39.

By collecting the information generated in this context, Facebook and Google can make money in other markets, particularly in the online advertising market. Data is an input for their complex intermediation systems for buying and selling advertising space, where ad space is auctioned in milliseconds. The transaction that takes place is a provision of services in one market in exchange for personal data that can be used in other markets. To illustrate, Facebook and Instagram profiles, which are created for free by users, provide inputs and value which Facebook uses in the targeting of marketing campaigns of advertisers within the Facebook ecosystem.

The figure below indicates the average revenue per user generated by Facebook:

Figure 14 - Facebook's average revenue per user (2020)



As far as we know, Google does not publish any estimates of this kind.

Most traditional antitrust tools are insufficient or unsuitable to deal with the peculiarities of zero-price markets¹⁸. Antitrust authorities have to deal with merger control and investigations into potential

¹⁸ "Despite its ubiquity and vital importance to the broad economy, antitrust law has failed to develop an adequate response to zero-price markets. Zero-price products, i.e., products for which firms set the price to customers at \$0, have existed for decades. Alongside the advent of the Internet, however, they exploded in number, variety, and popularity. With a combined market capitalization that easily exceeds \$1 trillion, firms offering zero-price products account for a robust and growing portion of the national output. In light of the critical importance of zero-price markets to the overall economy, antitrust law's nearly complete lack of attention to their functioning and implications is indefensible. What little precedent and commentary does exist tends to conclude summarily that antitrust law does not apply to free products. Without prices, the argument runs, there can be no markets. And without markets, there is no need for antitrust scrutiny. [...] The market features described above tend to reduce the efficacy of competition. Most relevantly for present purposes, they generally limit customers' ability to act as a check on anticompetitive behavior. Some zero-price markets may demonstrate additional features beyond

anticompetitive conducts affecting zero-price markets and those antitrust authorities often do not know what parameters to use in determining if there might be harm to consumers and/or to competition.

This problem derives from the fact that antitrust law mainly takes into consideration aspects concerning prices: market shares are calculated using revenues, mergers that may result in price increases are considered potentially problematic, and mergers that may decrease contracting, distribution, logistics, and production costs are considered potentially beneficial¹⁹⁻²⁰. While these criteria are still valid, they do not necessarily result in appropriate assessments when it comes to digital and zero-price markets²¹⁻²².

When antitrust authorities deal with aspects concerning how innovation and the quality of products and services may be affected by a merger, antitrust authorities need to consider the impacts caused by a transaction in terms of privacy and personal data protection levels offered to users. From the perspective of users, when those aspects are ignored, some mergers may immediately lead to

those discussed above that tend to reduce the efficacy of competition. As a general principle, competition in zero-price markets likely functions less efficiently than it does in the markets that were the subject of traditional antitrust analyses. The efficacy of competition in the marketplace has ramifications for error-cost analyses of antitrust: if markets are less likely to self-correct, the costs of false negatives increase. On the other hand, antitrust is institutionally ill-equipped to address many of these structural and behavioral deviations. Perfect competition, in any market, is an unreachable ideal; it may just be particularly so in zero-price markets" (NEWMAN, John M. [Antitrust in Zero-Price Markets: Foundations](#) in University of Pennsylvania Law Review, Vol. 164, 2015, University of Memphis Legal Studies Research Paper No. 151, p. 1 and 41).

19 [CADE's Guidelines on Horizontal Mergers](#), p. 27-29.

20 "When mergers reduce the welfare of the zero-price side, it becomes more difficult for antitrust authorities to assess the negative impact, since the tools used by competition authorities have been developed to analyse the price effects. Therefore, competition agencies have substantial difficulties in analysing impact in other dimensions, such as the quality of the service provided. This characteristic heavily hinders assessment by competition authorities because the traditional instrumental analysis of mergers is based on the investigation of the effects on the price. For example, the hypothetical monopolist test is focused on substitution in response to a small but significant and non-transitory increase in price to define the relevant market" (PFEIFFER, Roberto Augusto Castellanos. [Digital Economy, Big Data and Competition Law](#). Market and Competition Law Review, Volume III, n. 1, 2019, p. 60-61).

21 On the difficulty of defining relevant markets and possible methodologies for analysing cases in digital markets: Organisation for Economic Cooperation and Development ("OECD"). [Rethinking Antitrust Tools for Multi-Sided Platforms](#).

22 "The fact that dominant firms may set some prices equal to zero makes it difficult to apply the traditional antitrust approach to platform markets. Two related issues have been particularly troublesome for competition authorities: the definition of the relevant market and the assessment of market power. Let consider as an example the broadcasting industry and traditional free-to-air operators. It was claimed that since viewers receive content for free, there is no commercial relationship of the TV operators with viewers, the basis to establish the existence of a market for viewers' attention. Hence, in a number of cases the relevant market for free-to-air operators was restricted to the sale of advertising space. Relatedly, there was no possibility to establish the exercise of market power of broadcasters on viewers, even in the case of a monopolist free-to-air TV. The literature on two-sided markets has clarified that the definition of the relevant market should include all services provided to the groups of agents on board, and the assessment of market power should be done looking at the overall price level that includes charges on all sides. In this perspective a monopolist platform will charge an overall positive mark up even when opting for a very unbalanced price structure where one of the sides is served below cost or even for free. A separate assessment by side, by missing the cross-side externalities that shape the specific charges, would erroneously interpret as absence of market power a case when one side is subsidized while market power is exerted through huge mark ups on the other side" (CALVANO, Emilio; POLO, Michele. [Market Power, Competition, and Innovation in Digital Markets: A Survey](#). Information Economics and Policy, 2019, p. 8).

reductions in the privacy rights of users, who sometimes are dependent on the platform; from the perspective of rivals, it may be unfeasible to compete against a dominant player that offers free services to users on a large scale. Zero prices in one market may create structural conditions for the foreclosure of another market; and high switching costs make investments in competing platforms unfeasible²³. An illustration of this argument is that notwithstanding the fact that Microsoft's search engine Bing offers [small rewards](#) for users to use it, Bing has never taken off.

There are some authors who take an even more aggressive approach towards the topic, suggesting that under that business model, users in fact pay Facebook and Google by giving up their privacy rights; there are also proposals for alternatives through which users might pay the owners of the platforms for having access to the platforms without being subject to advertising campaigns and data collection practices²⁴⁻²⁵. In light of those arguments, the benefits or harms that a merger may cause in

23 "Technology platforms present particular challenges for antitrust enforcement. Markets tip and resulting market power is durable, so even effective antitrust enforcement is unlikely to generate fragmented markets. Nonetheless, enforcement that protects competition on the merits in the first stage and prevents exclusionary conduct in the second stage will help ensure that market participants make unfettered choices among competing platforms and that entry and innovation are not inhibited by private rent-seeking. Additionally, these markets move very quickly in areas such as new product introduction, foreclosure, and tipping. Antitrust litigation does not move quickly. Effective antitrust enforcement should move as rapidly as is practicable. However, enforcers will be most effective when they choose enforcement priorities and remedies to generate optimal deterrence of anticompetitive conduct" (Final Report on Digital Platforms of the Stigler Center for the Study of the Economy and State, p. 87).

24 "How much a user's personal information is worth to himself differs in general from how much it is worth to a platform such as Google or Facebook. To start, the user might not quite appreciate the harm to himself/herself from the loss of his privacy. This may be because the value of personal privacy may vary over time, and human beings typically have a hard time estimating future prices and values, as well as their own circumstances later in life. What may seem like a small loss today may turn out to be a significant loss in the future. But, once privacy is lost and personal information becomes the property of a digital platform, it is hard if not impossible for this information to become private again. [...] Digital platforms have imposed a requirement contract on users under which the platform automatically receives the user's personal information when he/she uses the platform's service (Internet search for Google, social network service for Facebook). The requirement contract imposes as a default 'opt-in' under which the personal information is automatically collected by the platform. Under the requirement contract, digital platforms collect the personal information without providing compensation to users beyond the in-kind compensation that a user receives from using the digital platform's product for free. Thus, the personal information market collapses and all transactions occur at a single zero nominal price. This is a market failure, implemented in favorable terms to the dominant platform. [...] One option may be to mandate that the digital platform offer the same product by asking for a fee if data is not to be harvested and the users not being subject to targeted advertising. In cases in which the data of the specific user is quite valuable, it would be possible to require the digital platform to provide a positive payment to these users so that they can join the social network. Again, this will raise several issues. First, because of its dominant position Facebook may deny users 'free' access to its services if they opt to exercise their privacy rights, it may overcharge users or not pay them the competitive price to join the social network or to buy their data. As discussed earlier, social networks of the size of Facebook have network effects and benefit from feedback loops. Strong network effects result in high market share inequality among networks, much higher profitability for large size network, barriers to entry for new networks, as well as providing the ability of a larger network to subsidize some 'influential' users to subscribe. [...] This calls for antitrust enforcement, in particular conduct as well as structural remedies, privacy regulation, but also other regulatory tools that would aim to set up a market between users and the network, ensure the transparency in the collection of data (so that users know what is collected), ensure transparency in the use of data (so that users know how their data is used), and ensure user's consent in data collection and specific use eventually with a possible compensation to the user for 'selling' his data to a company like Google or Facebook. [...] This default opt-out will create a market between the user and Facebook or Google, where the user sells his data to the digital platform. More concretely, with regard to Google, opt-out should be the default for browsers Android, and Google search. Users should have opt-out choice for other personal data, such as health data, even if this data was not acquired from the users. Users should also be able to easily set their browser to delete cookies and trackers at end of use/session and users should be able to avoid Chrome" (ECONOMIDES, Nicholas; and LIANOS, Ioannis. [Antitrust and Restrictions on Privacy in the Digital Economy](#) in Concurrences Review No. 2, 2020, p. 4, 6 e 15).

25 "For instance, advertised-based platforms, such as Google and Facebook provide free search in exchange for acquisition of

terms of privacy levels offered to users after the transaction may be a proxy to assess the impacts of such a merger²⁶⁻²⁷.

For the reasons above, acquisitions of some companies active in technology markets, especially those which are still developing – with zero or very small revenues – should be carefully analyzed. The fact that a target company does not have revenues should not be equivalent to an excuse to avoid merger control²⁸. Such transactions can strengthen dominant positions and reduce

private user information. Not only do these companies benefit from market power, to the extent that they control the most popular search engine and social media platforms, but also their users are locked-in since they face costs of switching to rival products. Furthermore, there are considerable information asymmetries resulting out of the opaque and constantly changing data and privacy policies, as well as the fact that users are not aware of the extent of companies' surveillance. In addition, these companies exploit consumers by offering a zero price in terms of monetary transaction for their product, although this zero price may be arbitrary and may underline the market failure in the acquisition of private user information. Present privacy regulations ignore this market failure as they are based on the rights of users but ignore that there is something fundamentally wrong with this market" (ECONOMIDES, Nicholas; LIANOS, Ioannis. [Restrictions on Privacy and Exploitation in the Digital Economy: A Competition Law Perspective](#). NET Institute Working Paper No. 19-15, NYU Stern School of Business, 2019, p. 13).

26 The insight that privacy constitutes a non-monetary price for data-driven services might enable competition authorities to deal with the challenges posed by market definition in online multi-sided markets with zero-priced products. These challenges are two-fold. On the one hand, in several cases competition authorities and courts failed to account for the interdependencies between the different market-sides of multisided platforms, focusing only on their paying, advertising side, while ignoring the free, user side. On the other hand, zero-pricing adds another element of methodological complexity to market definition in the online eco-system. The conventional method used, the Small but Significant and Non-Transitory Increase in Price (SSNIP) test, is not reliable for markets where goods are provided for free, and price is not the most important parameter of competition. A suggested solution to this complexity is to define markets accounting for the role of personal data on both market-sides of a multisided platform. To this end, privacy can be the proxy to substitute monetary prices as a tool for market definition. Data market could be defined by testing users' response to a Small, but Significant and Non-transitory Decrease in Privacy (SSNDP test). The SSNDP test is based on the idea that consumers barter the disclosure of personal data in exchange for free services, but unfortunately it is still not easy to make it operative" (RANCATI, Luca. [The Intersection between Anti-trust and Data Protection: Lessons from the Facebook/WhatsApp Merger and the Bundeskartellamt's Decision on Facebook's Terms and Conditions](#). Faculté des Sciences Économiques, Sociales, Politiques et de Communication, Université Catholique de Louvain, 2019, p. 52).

27 "Zero-Price and Multi-Sided Markets: Many B2C markets in which some of the Big Tech companies participate do not involve a price-based metric of exchange. Rather, the metric centers on the provision of consumer information or attention, such as in social networking, or locational services. The nature of these zero-price markets means that antitrust analysis must focus on a non-price metric of exchange. Rather than paying a price for a service, users can be required to provide more (or different) consumer data, receive quality of service that is positively related to their provision of data, or be forced to interact with a platform in ways that impose additional costs on the user. Likewise, some Big Tech companies feature multi-sided markets, which bring together providers and users of a service or product on either side of an exchange. These concepts are not beyond the reach of the consumer welfare standard, which can accommodate a variety of market definitions and the effects of consolidation or conduct on price and non-price dimensions of competition" (MOSS, Diana L. [The Record of Weak U.S. Merger Enforcement in Big Tech](#). American Antitrust Institute, 2019, p. 8).

28 "First, free service creates a heightened need for antitrust enforcement. Because entrants face additional challenges in entering markets with zero price, there is a particularly strong case to prevent dominant firms from erecting further barriers to entry or eliminating small rivals. [...] Policymakers should take seriously the non-price harms that consumers may suffer. We acknowledge that it is difficult to put a dollar value on harms such as privacy degradation, reduced rate of innovation, or threats to democracy. But the lack of explicit prices does not mean the harms are any less real. Nor is it any surprise that the harms are not measured in dollars. In a world of consumers receiving service at no charge, key problems will almost always arise in areas other than price. To fulfill their stated mission, competition regulators must consider these harms in earnest, not reject them out of hand. [...] Policymakers might be increasingly skeptical towards mergers and acquisitions – seeking more smaller firms, the better to facilitate entry. Indeed, an independent Waze would have been the most obvious competitor for Google Maps. An independent YouTube would have been a strong competitor for the time users spend at both Google and Facebook. An independent WhatsApp could have offered users at least an alternative to Facebook's messaging feature,

the chances of success of potential entrants in the markets directly affected by the transaction – or even more importantly, in adjacent markets that are not even considered by antitrust authorities.

if not more of Facebook, with much less privacy concern thanks to WhatsApp's (then) paid service with no advertising or tracking. Sometimes, as with Waze, the competition concern is apparent on the face of a proposed transaction. At least as often, the problem is less obvious at the outset. But when a firm's "free" service reinforces its dominance, and when such a firm seeks to acquire another, experience reveals heightened basis for concern. Policymakers should be correspondingly skeptical" (EDELMAN, Benjamin; and GERADIN, Damien. [An Introduction to the Competition Law and Economics of Free](#) in Antitrust Chronicle, Competition Policy International, p. 10-11).

4. ASSESSMENT OF THE CURRENT SITUATION IN BRAZIL

4.1 Outdated merger control criteria

As this expert report will discuss, the current merger control criteria in Brazil are insufficient to capture data-driven mergers because the main aspect to be considered in Brazil is the revenues of the merging parties in Brazil. It is not rare that target companies in the technology sector have negligible or no revenues in Brazil and worldwide. They often offer free services to users, and, for this reason, they are simply ignored by antitrust authorities that do not take into consideration, for example, the value of the transaction for merger control purposes.

Article 88 of Law No. 12,529/2011 sets forth the criteria for merger control in Brazil. CADE conducts a test based on three cumulative variables to assess whether a transaction in Brazil is subject to merger control: (i) the gross revenues of the merging parties in Brazil in the year prior to that of the merger; (ii) the type of transaction to be implemented; and (iii) the existence potential or actual effects in Brazil.

The gross revenues of the merging parties in Brazil: article 88 of Law No. 12,529/2011 establishes that transactions between two different economic groups²⁹ with gross revenues greater than BRL 750,000,000.00 or BRL 75,000,000.00 in the year preceding that of the transaction are subject to merger control in Brazil. The amounts originally established by Law No. 12,529/2011 were updated by Interministerial Ordinance No. 994/2012;

The type of transaction: the provisions of article 90 of Law No. 12,529/2011 are quite broad and cover a significant number of corporate transactions. For CADE, a merger takes place when: (i) two or more independent companies merge; (ii) one or more companies acquire, directly or indirectly, through purchase agreements or share exchange transactions, shares, securities convertible into shares, tangible or intangible assets, either through an agreement or by any other means, or the control of one or more companies, or part

²⁹ Pursuant to article 2 of CADE's [Resolution No. 2/2012](#), the following entities are part of the same economic groups for the purposes of calculating gross revenues in Brazil: (i) entities that are under internal or external common control; (ii) all entities in which the entities listed in item (i) own, directly or indirectly, at least 20% of the corporate or voting capital. In the case of investment funds, the following entities are considered part of the economic group of the relevant investment fund: (i) the entities part of the economic group of the entity that directly or indirectly – individually or through quotaholders' agreements – owns more than 50% of the equity of the investment fund; and (ii) the entities under control of the investment fund and the entities in which the investment funds own, directly or indirectly, at least 20% of the corporate or voting capital.

of one or more companies; (iii) one or more companies merge with another company or merge into another company; or (iv) two or more companies enter into an associative agreement, a consortium or a joint venture³⁰. Some acquisitions of minority stakes and convertible securities are also subject to merger control in Brazil³¹;

The existence of actual or potential effects in Brazil: only transactions that can produce impacts on the Brazilian market are subject to merger control in Brazil. Even when a company has significant operations in Brazil and meets the revenues thresholds, if the transaction envisaged will produce effects only abroad, such a transaction is not subject to merger control in Brazil. A recent example was a partnership between Ford and Volkswagen to develop and license automated driving systems for autonomous vehicles. Since the project concerned a new technology that would not initially be sold in Brazil, CADE found that the transaction was not subject to merger control³². On the other hand, transactions that are carried out abroad but may produce effects in Brazil, e.g., through exports, are subject to merger control. A recent example was a partnership involving Pangang, ThyssenKrupp and TKAS Auto Steel to manufacture galvanized steel for use in the Chinese car industry. As part of the products manufactured in China were going to be sold to Brazil through exports, CADE decided that such a transaction was subject to merger control in Brazil³³.

30 Pursuant to article 2 of [CADE's Resolution No. 17/2016](#), any agreements with a term equal to or longer than two years that establish a common undertaking to explore an economic activity are considered associative agreements, provided that, cumulatively: (i) the agreement establishes that the risks and results of the economic activity encompassed by the agreement will be shared between the parties; and (ii) the parties of the associative agreement are competitors in the same market affected by the associative agreement. Data-driven mergers usually take place through corporate transactions, not through associative agreements.

31 According to articles 10 and 11 of [CADE's Resolution No. 2/2012](#), in cases where the invested company is not a competitor nor operates in a vertically related market, merger control encompasses: (i) acquisitions that result in the acquiring company holding, directly or indirectly, 20% or more of the target company's corporate or voting capital; and (ii) acquisitions made by a holder of 20% or more of the corporate or voting capital of the target company, provided that the stake that is being directly or indirectly acquired is acquired from a seller that individually holds at least 20% of the corporate or voting capital of the target company. In cases where the target company is a competitor or operates in a vertically related market, merger control encompasses: (i) acquisitions that result in the acquiring company directly or indirectly holding at least 5% of the corporate or voting capital of the target company; and (ii) subsequent acquisitions that, individually or jointly considered with past acquisitions, result in the acquiring company increasing its stake in the target company in 5% or more, if the acquiring company holds at least 5% of the corporate or voting capital of the target company prior the transaction. In the case of acquisitions of securities convertible into shares, a transaction is subject to merger control if, when converting the convertible securities into shares of the target company, the transaction envisaged by the acquiring company meets the Brazilian merger control thresholds of acquisition of corporate control or minority stake, and cumulatively will result in the acquiring company (i) having rights to appoint members of the management and supervisory bodies of the target company or (ii) having voting or veto rights on competitively sensitive matters.

32 [Merger Case No. 08700.005324/2019-77](#) (Merging Parties: Volkswagen AG and Ford Motor Company).

33 [Merger Case No. 08700.006518/2015-66](#) (Merging Parties: Pangang Group Xinchang Steel & Vanadium, Co. Ltd., ThyssenKrupp Steel Europe AG and TKAS Auto Steel Company Limited).

In addition to the merger control criteria indicated above, article 88, paragraph 7, of Law No. 12,529/2011, gives CADE the power to require the merging parties to submit a transaction that is not subject to merger control in Brazil for CADE's antitrust assessment up to one year after the transaction has been implemented ("clawback provision"). Interested third parties are also allowed to file a complaint or a substantiated petition for an investigation into a transaction that has not been submitted for CADE's review. The procedure in the context of which those interactions take place is called Administrative Procedure for a Merger Investigation ("APAC", acronym in Portuguese), which is governed by [CADE's Resolution No. 24/2019](#).

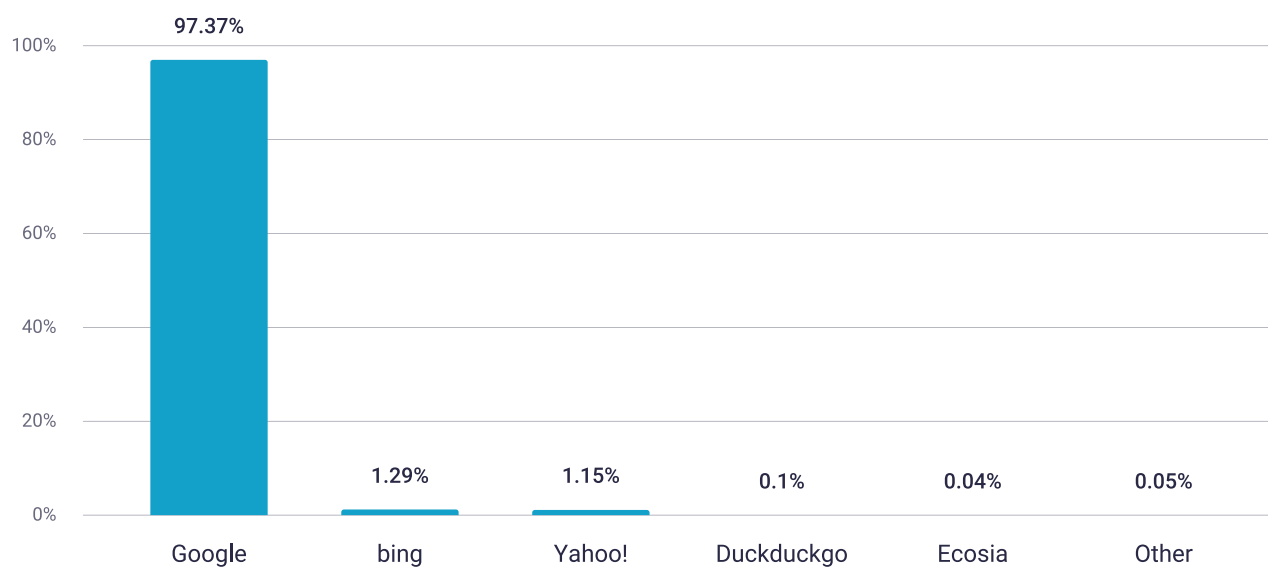
Under the current merger control criteria, it is perfectly possible to acquire targets that operate and have users in Brazil without notifying CADE. This seems to have been the case for all the transactions that are discussed in this report. There is no public record in CADE's Case Records Database ("SEI", acronym in Portuguese) of decisions by CADE's Superintendence-General ("SG", acronym in Portuguese) in Facebook/Instagram, Google/Waze, Facebook/WhatsApp, Apple/Shazam or Google/Fitbit. There is also no indication that CADE has exercised the clawback provision established by article 88, paragraph 7, of Law No. 12,529/2011 to require the submission of those cases for merger control in Brazil.

As a result of legal loopholes and a potential failure to act by the Brazilian antitrust authority, from a practical perspective, data-driven mergers are currently immune to antitrust enforcement in Brazil: even if they have direct and immediate effects on the Brazilian market, even if they are anti-competitive, such mergers go unnoticed by CADE if they concern target companies with negligible revenues in Brazil.

As the purpose of this paper is to draw the attention of CADE and other antitrust authorities to the importance of capturing data-driven mergers in digital markets, qualitative and quantitative information on the activities in Brazil of the parties to the transactions discussed in this report will be provided below. Even though it was not possible to obtain data on the penetration levels in Brazil of the products and services of the merging parties prior to the mergers, there is no impairment affecting the arguments presented in this report.

At least in theory, any legislative change that competent authorities in Brazil might make would only have prospective effects; as such, it is unlikely that consummated mergers would be re-examined. A provision to the contrary giving powers to CADE to re-examine mergers that were consummated more than one year ago (i.e., a period longer than that established by the clawback provision indicated above) would be objectionable and would cause legal uncertainty, something that is unfortunately abundant in our country.

[Figure 15 - Market shares in the Brazilian search engine market \(2020\)](#)



[Figure 16 - Market shares in the Brazilian internet browser market \(desktop and mobile - 2020-2021\)](#)

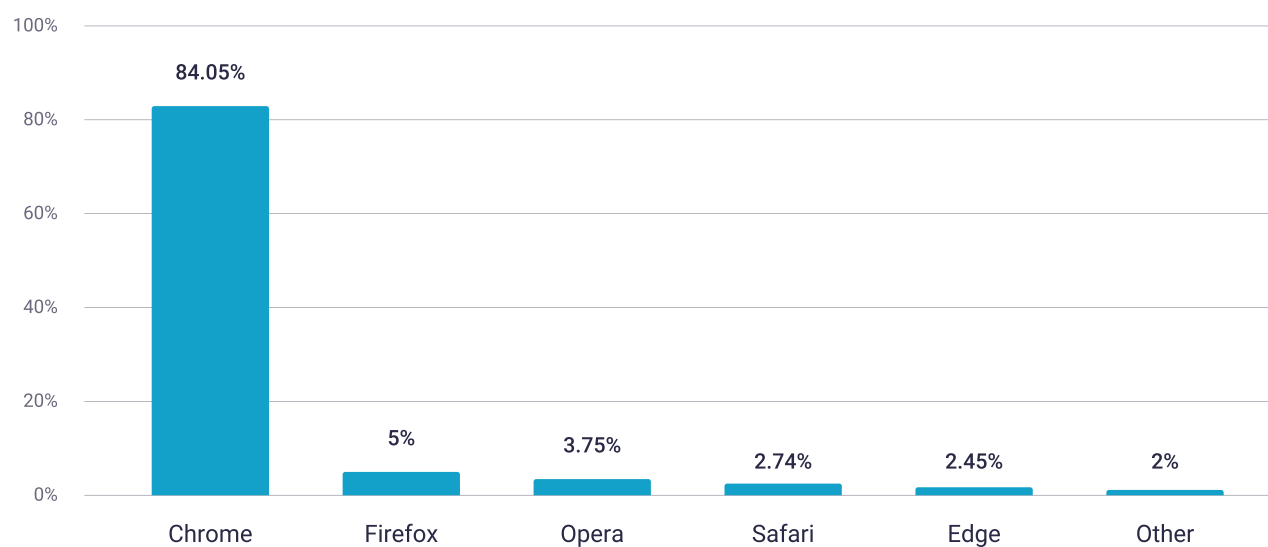


Figure 17 - Market shares of mobile operating systems in Brazil (2020-2021)

Mobile Operating System Market Share Brazil

Mar 2020 - Mar 2021

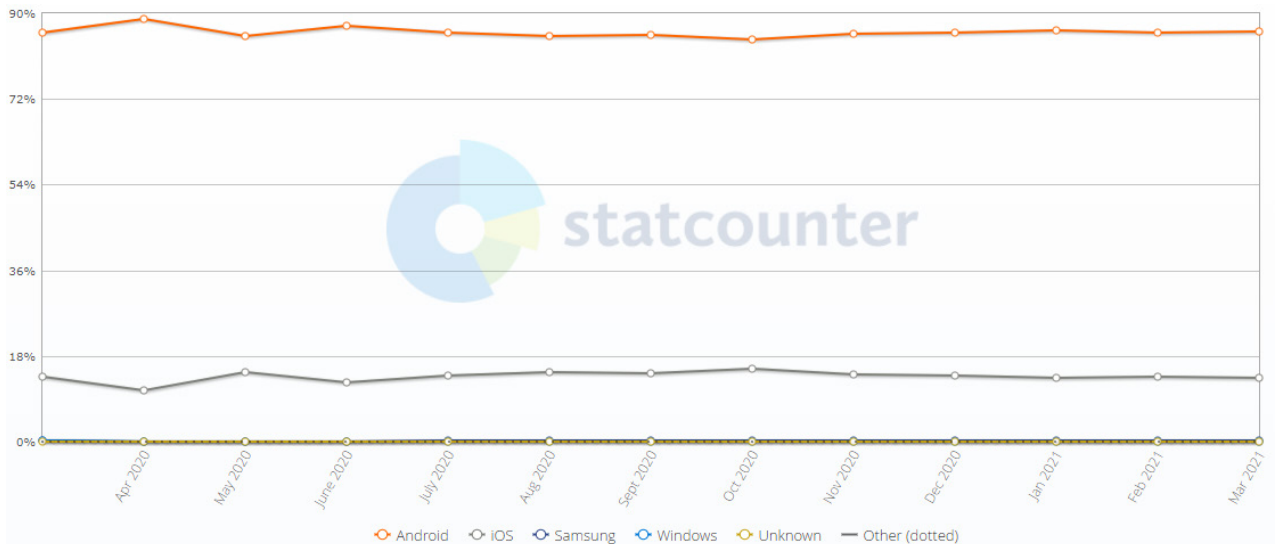
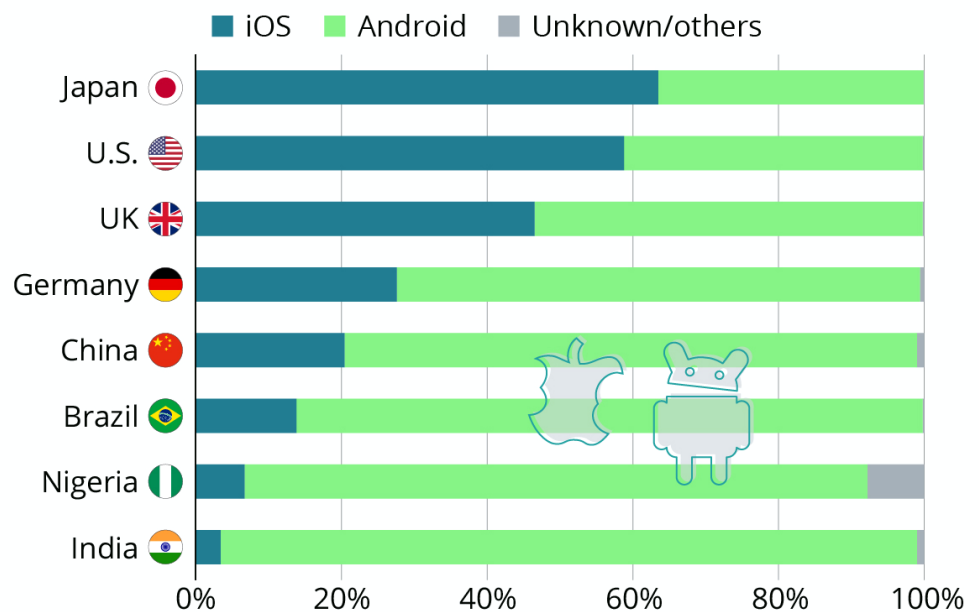


Figure 18 - Android v. iOS proportion in countries selected by Statista (jul-2020)³⁴

Apple or Android Nation?

Mobile operating systems market share in selected countries (as of July 2020)



³⁴ Figures 17 and 18 refer to the same data but they illustrate that data differently. Even though the iOS market share is smaller (approximately 15%) when compared to Android's market shares (approximately 85%), there is no direct competition between Apple's and Google's operating systems because such companies have different business models. For details, see the assumptions section of this paper.

Figure 19 - Number of active Facebook users in Brazil (2017-2025)

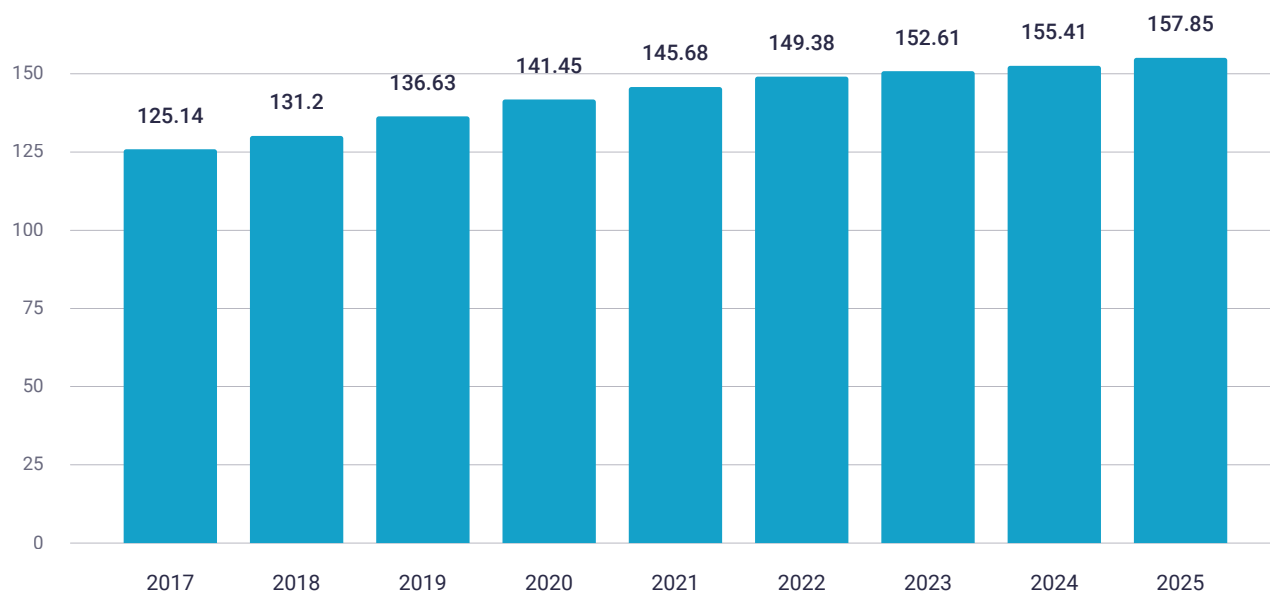


Figure 20 - Countries with the biggest number of active Instagram users (Jan-2021)

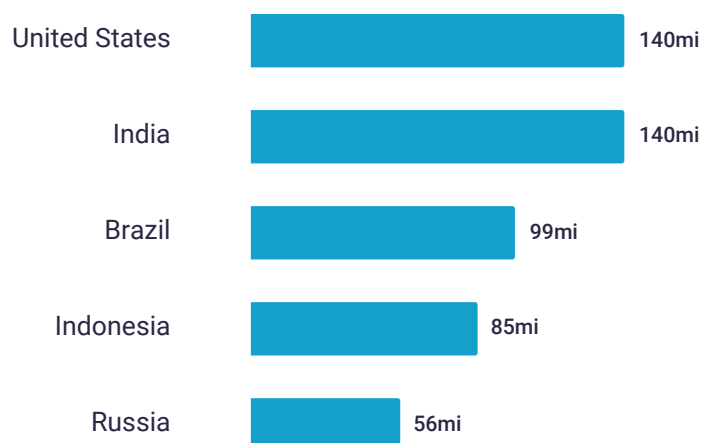


Figure 21 - Active Waze users in São Paulo/SP (Jul-2019)



Figure 22 - Top 200 most “Shazamed” songs by users in Brazil (Jan-2021)³⁵

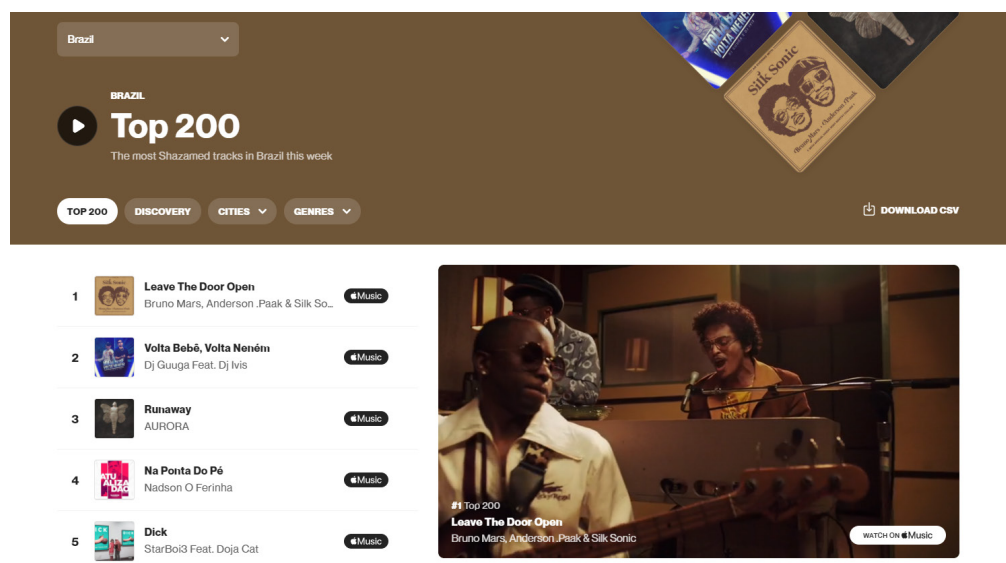
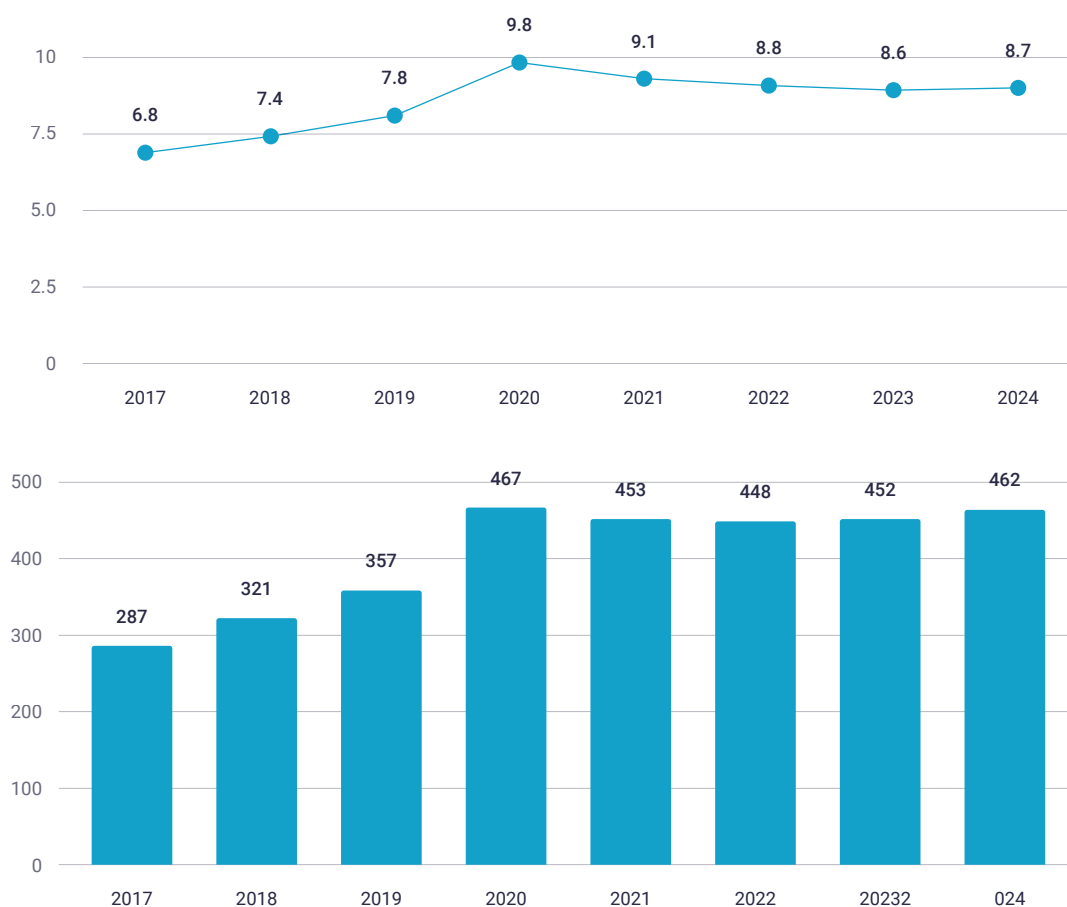


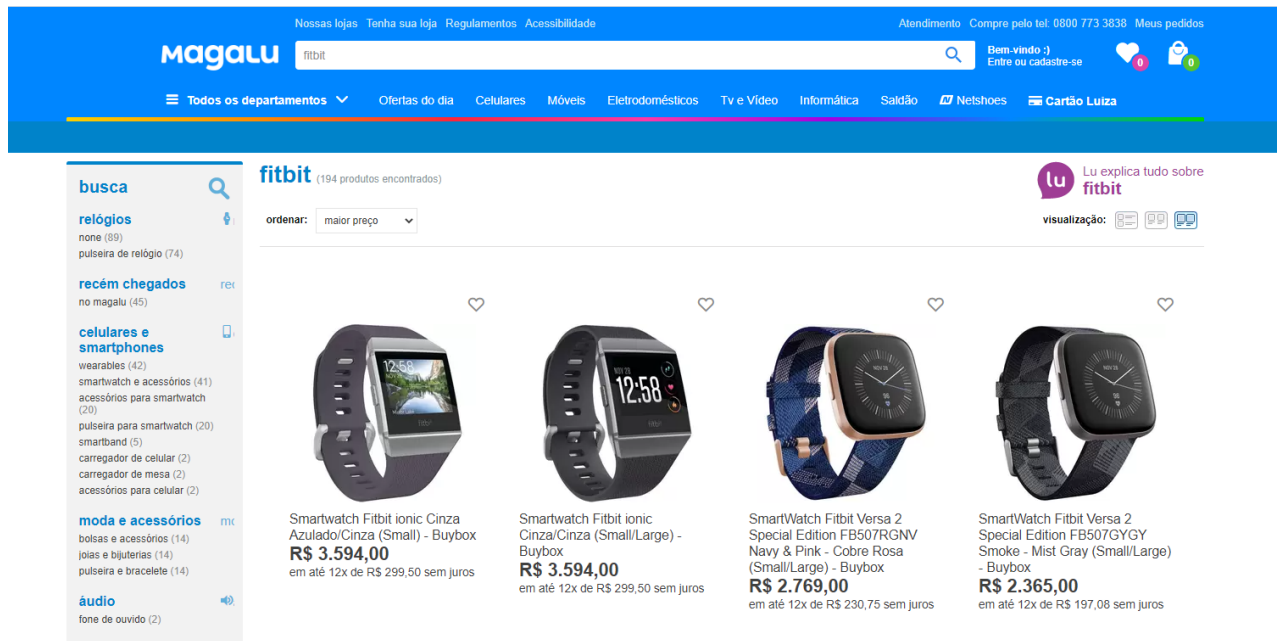
Figure 23 - Number of users and value of the wearables market in Brazil (2017-2024)³⁶



³⁵ It was not possible to identify the number of active Shazam users in Brazil. It seems that there is no publicly available data on the number of users per country.

³⁶ It was not possible to obtain market shares of wearables manufacturers in Brazil.

Figure 24 - Fitbit being sold on Magazine Luiza



Its clear from the data above that, in relation to the transactions analyzed in this report, the acquiring companies have significant activities in Brazil, and the target companies have activities that are not negligible in Brazil. Notwithstanding that, as a result of the current merger control rules in Brazil, all transactions discussed in this report have not been investigated by CADE. Some people argue that there is no need for the Brazilian antitrust laws to be updated because CADE has a claw-back provision that enable CADE to require the parties to submit for antitrust assessment transactions that do not fall within the merger control criteria currently in place. Indeed, this is true; however, at least until the date of this report, there is no publicly available information that CADE has exercised the clawback provision in connection with any data-driven merger.

Without the goal of exhausting all the possibilities, the author conducted searches on SEI to find cases where CADE used the clawback provision. The author found only four cases: (i) [Merger Case No. 08700.006497/2014-06](#), which referred to the creation of a joint venture among Betunel Indústria e Comércio Ltda. ("Betunel"), Centro-Oeste Asfaltos Ltda. ("Centro-Oeste") and Greca Distribuidora de Asfaltos Ltda. ("Greca"), which affected the market for distribution of asphalt products. In that case, the merging parties, which did not meet the threshold in terms of revenues in Brazil set out in Law No. 12,529/2011, [submitted](#) the transaction to CADE *ad cautelam* due to the parties' high market share in some regions in Brazil. Although CADE agreed that the transaction was not subject to merger control in Brazil, CADE [assessed and approved the transaction](#) based on the clawback provision; (ii) [Merger Case No. 08700.005959/2016-21](#), which referred to the acquisition of the division of contrast agents for medical exams and injection systems of Mallinckrodt Group S.à.r.l. ("Mallinckrodt") by Guerbet S.A. ("Guerbet"). Although the merging parties did not meet the minimum turnover requirements set forth in Law No. 12,529/2011, CADE decided that the submission of the transaction for merger

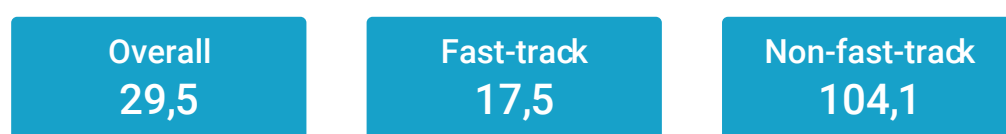
control was appropriate after receiving a complaint by GE Healthcare do Brasil Comércio e Serviços para Equipamentos Médico-Hospitalares Ltda. ("GE Healthcare") alleging high market concentration in Brazil. CADE [unconditionally approved](#) the transaction; (iii) [Merger Case No. 08700.005972/2018-42](#), which referred to the acquisition, by SM Empreendimentos Farmacêuticos Ltda. ("SM Empreendimentos"), of all shares of All Chemistry do Brasil Ltda. ("All Chemistry"). This transaction affected the market for pharmaceutical raw material distribution in Brazil. The merging parties did not meet the minimum turnover criteria set forth in Law No. 12,529/2011 but the transaction was submitted to CADE following a [decision by CADE](#) in the context of an APAC initiated by a complaint from an individual about alleged monopolization of the market for distribution of pharmaceutical raw materials. The transaction was [approved](#) by CADE's Tribunal pursuant to a [Merger Control Agreement](#) ("ACC", acronym in Portuguese). The ACC prevented, for two years, Fagron Group, which owns SM Empreendimentos, from engaging in M&A transactions; after those two years, Fagron Group was also subject to an order that required it to submit to CADE all transactions affecting Fagron Group; and (iv) [Merger Case No. 08700.001227/2020-49](#), which referred to the acquisition, by Prosegur Brasil Transportadora de Valores e Segurança S. A. ("Prosegur"), of armored cars and part of the client base of SACEL Serviços de Vigilância e Transporte de Valores-EIRELI ("SACEL"). This transaction affected the market for custody, protection, and transportation of money and valuable items in the state of Sergipe. The parties did not meet the minimum turnover criteria of Law No. 12,529/2011, and the acquisition was submitted to CADE as a result of an [APAC](#) initiated by CADE, once CADE became aware of such a transaction as a result of the submission of the Merger Case No. 08700.003244/2019-87, which referred to the acquisition, also by Prosegur, of all shares of Transvip – Transporte de Valores e Vigilância Patrimonial Ltda ("Transvip"). The acquisition was [approved](#) by CADE's Tribunal pursuant to an [ACC](#) that prevented Prosegur Group from engaging in M&A transactions in the market for custody, protection, and transportation of money and valuable items. The conditions imposed were: (a) a four-year M&A ban involving the states of Alagoas, Bahia, Pernambuco, and Sergipe; (b) a three-year M&A ban in the states of Paraíba and Rio Grande do Norte, unless the combined market shares were less than 20% in each state and the market shares of the four largest economic groups in the sector were less than 75% in each state; (c) for two years after the period indicated in (a), all transactions affecting the states of Alagoas, Bahia, Pernambuco, and Sergipe shall be submitted to CADE; and (d) for three years after the period indicated in (b), all transactions affecting the states of Paraíba and Rio Grande do Norte shall be submitted to CADE. Those four cases were spread over a period of ten years, dating back to when Law 12,529/2011 came into effect.

Some argue that, if the merger control criteria in Brazil were changed, it would on average take longer to review each merger, causing CADE to be overloaded and decide cases poorly. That argument is not well-founded for the following reasons: (i) CADE is one of the fastest antitrust authorities across the globe and, except for very rare occasions, such as that involving a lack of quorum for CADE's Tribunal to adjudicate cases due to political tensions – i.e., an aspect that is outside of CADE's control –, CADE is able to clear noncomplex mergers in as little as two weeks and complex mergers in as little as three months; (ii) CADE may also have assistance from employees of other governmental agencies

and organizations, especially from the technology sector; and (iii) it is not appropriate to ignore transactions that may pose significant antitrust concerns because, as a result of more work to perform, the employees of CADE would be less diligent; that concern may be overcome by better allocating personnel or extending the review time.

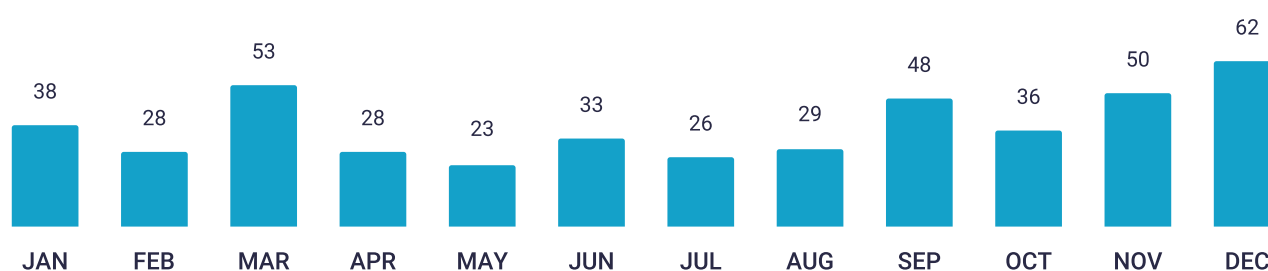
[Figure 25 - Average merger review time \(2020\)](#)

Average review time (days)



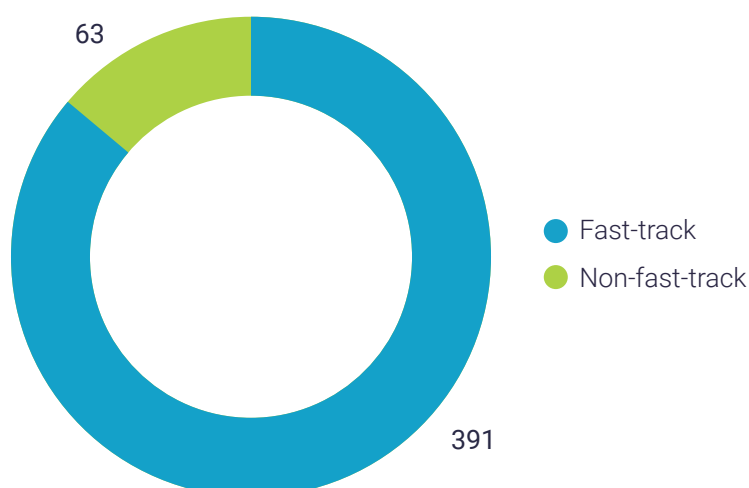
[Figure 26 - Total number of mergers assessed by CADE \(2020\)](#)

Number of merger cases assessed: 454



[Figure 27 - Fast-track and non-fast-track mergers \(2020\)](#)

Number of fast-track and non-fast-track mergers (2020)



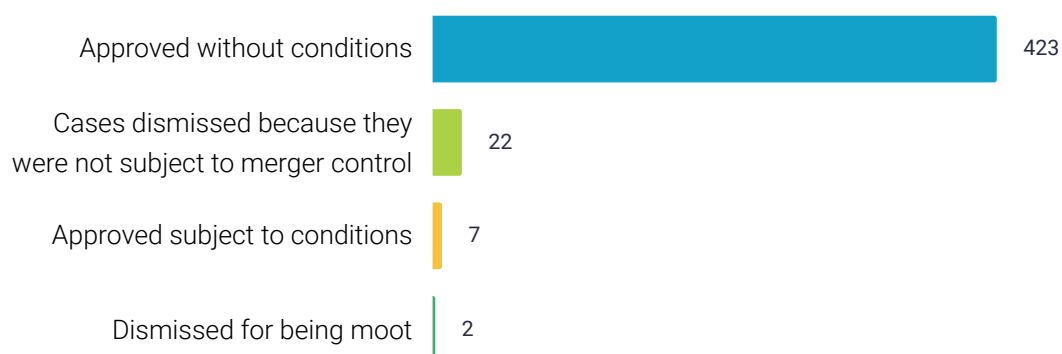
[Figure 28 - Number of decisions by different authorities within CADE \(2020\)](#)

Mergers cases decided by each body of CADE (2020)



[Figure 29 - Outcome of the merger decisions \(2020\)](#)

Mergers by decision (2020)



Below is a recommendation for new merger control criteria for Brazil:

Combination of the gross revenues of the merging parties in Brazil: a potential new wording for article 88 of Law No. 12,529/2011 could be: "Transactions carried out by economic groups that have combined gross revenue in Brazil higher than BRL 825,000,000.00³⁷ in the year prior to the transaction shall be submitted to CADE for merger control review".

Reasons for adopting the rule indicated above: (i) with the combination of the gross revenues of both economic groups involved in the transaction, even though the target company does not have revenues, the transaction would still be subject to merger control; (ii) this rule would encompass transactions by entities that have substantial gross revenues in Brazil, but engage in transactions that are not subject to merger control (for example, a merger between two economic groups which revenues are no more than BRL 749,999,999.99); (iii) in a scenario where the value of the transaction is not part of the merger control criteria, there are

³⁷ This amount is the sum of the figures that are currently in place for merger control purposes in Brazil..

less incentives for the parties to structure a deal through which they can artificially undervalue the value of the transaction to avoid the submission of the transaction to CADE; (iv) in a scenario where the market shares of the parties are part of the merger control criteria, there is more room for legal uncertainty as a result of difficulties in the process of defining relevant markets and estimating market shares; and (v) CADE would review more mergers in advance, which would reduce the need to use the clawback provision of article 88, paragraph 7, of Law No. 12,529/2011, which is already underused. For mergers that are clearly noncomplex, CADE may have a different system for calculating filing fees.

4.2 Significant room for improvement of procedural rules

The main procedural rules applicable to merger control were established by articles 53 to 65 of [Law No. 12,529/2011](#) and articles 106 to 133 of [CADE's Internal Rules](#) ("RICADE", acronym in Portuguese). [CADE's Resolution No. 2/2012](#) is also important because it established different rules based on the complexity of merger cases, which may be processed under a fast-track regime or a non-fast-track regime; such a resolution also gives instructions for the merging parties to calculate the gross turnover of their economic groups, indicating which entities shall be considered for merger control purposes, as well as explains what kinds of transactions via capital markets are subject to merger control; the annexes of such a resolution are the standard forms to be filled out by the merging parties.

Merger cases that are not complex are processed under a fast-track regime³⁸, [CADE's Resolution No. 16/2016](#) states that CADE's deadline for reviewing a fast-track merger is thirty days. More complex mergers are subject to a non-fast-track regime. Article 113 of [RICADE](#) states that, before submitting a transaction to CADE, the merging parties are allowed to contact SG to clarify their questions. This is the pre-submission process, which is often used by the merging parties to establish relevant market definitions, the methods to be deployed to calculate market shares, discuss whether international cooperation (waivers to begin the review process) is required, etc. From an operational perspective, CADE works on the basis of [SG's Internal Handbook on Mergers Subject to the Non-Fast-](#)

³⁸ According to article 8 of [CADE's Resolution No. 2/2012](#), the following transactions are eligible for the fast-track regime: (i) creation of joint ventures to operate in a new market, in which there is no horizontal or vertical relationship between the parties' current activities; (ii) acquisitions in which the acquiring company and its economic group were not previously active in markets horizontally or vertically related to those of the target's activities prior to the merger; (iii) situations where the combined market shares of the parties after the merger would clearly be less than 20%, at the discretion of SG, so that there is no doubt that the transaction is not material from an antitrust standpoint; (iv) situations where the market shares of the parties and their economic groups after the merger would clearly be less than 30% in any relevant market that is vertically integrated; (v) mergers where the combined market shares of the parties after the merger would not result in [Herfindahl-Hirschman Index](#) ("HHI") variations higher than 200 points; and (vi) other cases that, although not explicitly indicated above, are simple enough for SG to decide not to pursue a further investigation. The decision taken by SG to say that a given case is eligible or not for the fast-track regime is discretionary, and there are no provisions for an appeal against such a decision by SG. Whenever possible, companies usually opt for the fast-track regime, since it is faster and requires a smaller amount of evidence; as such, cases under the fast-track regime usually do not involve the issuance of RFI letters to clients and competitors.

[Track Procedure](#), which includes a number of recommendations to standardize procedures, as well as some templates that should be used by CADE's employees.

All mergers submitted to CADE should be submitted using the templates of Annexes I and II of [CADE's Resolution No. 2/2012](#). Annex I deals with non-fast-track mergers, which require more details and more data on the transaction and the parties; whereas Annex II deals with fast-track mergers, which are presented using a shorter version of the template applicable to non-fast-track mergers. The current versions of those templates do not have a specific section asking the parties for information on acquisition and combination of data as a result of the transaction.

As soon as the filing form has been completed and reviewed by the merging parties and their lawyers, a request for merger approval is sent to SG with the transactional documents, power of attorneys, and a proof of payment of CADE's fees. If the merging parties wish, they may also submit in advance: presentations, financial reports, legal opinions, and, depending on the circumstances, a proposal of antitrust remedies to alleviate antitrust concerns in cases where the merging parties anticipate that their transaction is going to raise significant antitrust issues.

If there is need for additional documents or information, SG notifies the parties so that they can take the necessary actions. However, if SG agrees that the request for approval and the merger form meet the applicable requirements, SG will order that a very brief summary of the case be published in the Brazilian Official Gazette ("[DOU](#)", acronym in Portuguese); DOU will contain basic information on the transaction, such as the names of the merging parties, the type of transaction, and the economic sectors involved. According to article 117 of [RICADE](#), this notice triggers a fifteen-day deadline for interested third parties who may be affected by the merger to submit a petition to CADE requesting intervention³⁹. Although third parties usually use that deadline to submit petitions challenging the transaction, a third party is not always challenging a transaction; for example, they may simply want to be actively included in the merger review process so that they can raise issues that are less obvious or commonplace for CADE, in line with the practices adopted by some nonprofit organizations before the European Commission.

According to applicable regulations, any interested third party that wishes to intervene in the merger must submit all the documents and statements necessary to support its allegations within fifteen calendar days after the summary of the case was published. However, depending on the case and the complexity level of a given transaction, SG or the Chairman of CADE's Tribunal may grant an extension of fifteen days. If the interested third party does not file within the deadline the documents and opinions that were the reason for the request for a deadline extension, CADE will automatically

³⁹ According to article 117, paragraphs 4 and 5 of [RICADE](#), SG does not need to wait for this period to elapse to decide on cases that are subject to the fast-track regime; when SG approves a case before the deadline available for third parties to submit their petitions has elapsed, any request for intervention by third parties will be addressed to the Chairman of CADE's Tribunal.

limit the participation of that interested third party in the merger review process of the transaction. In any event, any interested third party will not be given access to confidential data of the merging parties or other documents that are not available to the public; in other words, interested third parties have rights of access to data that are substantially the same available to noninterested third parties.

Once the steps mentioned above have been taken, SG has three options: (i) it may issue a final decision approving the merger, if the merger does not require further investigation and clearly does not harm competition; (ii) SG may issue a decision dismissing the case because the transaction is not subject to merger control in Brazil; or (iii) SG may seek additional evidence, so that it needs to indicate the measures to be taken, such as the sending of RFI letters to clients and competitors, requests for additional data from the merging parties, other divisions within CADE, governmental agencies, regulatory authorities, or other entities from the federal, state, or local governments. In addition, SG may also decide that the merger is complex and ask CADE's Tribunal, pursuant to article 88, paragraphs 2 and 9, of [Law No. 12,529/2011](#), for an extension of the merger review period from 240 calendar days to 330 calendar days. Once the additional investigation is concluded, SG may close the market investigation and issue a final decision either approving the merger or challenging it – in the latter case, the merger will be referred to CADE's Tribunal for further consideration. When SG challenges a case, SG may suggest antitrust remedies for the merger to be cleared by CADE's Tribunal, or SG may simply suggest that CADE's Tribunal block the merger.

Interested third parties may appeal from SG's decisions that approved or dismissed a transaction within fifteen calendar days from the publication of SG's decision, pursuant to article 65 of [Law No. 12,529/2011](#)⁴⁰. If an appeal has been filed or SG has challenged the transaction, the merger will be assigned to a Reporting Commissioner part of CADE's tribunal, and the merging parties have thirty calendar days to submit a written statement rebutting the concerns raised by SG or interested third parties, as applicable, according to article 58 of [Law No. 12,529/2011](#). During this period, the merging parties and interested third parties may submit studies, new pieces of evidence, and statements to support their respective arguments. In accordance with article 124 of [RICADE](#), the merging parties may also submit a draft ACC to CADE's Tribunal, if they have not previously done so. Following that, the Reporting Commissioner may decide that additional measures should be taken (by SG or his/her own staff) or schedule the case for adjudication by all members of CADE's Tribunal.

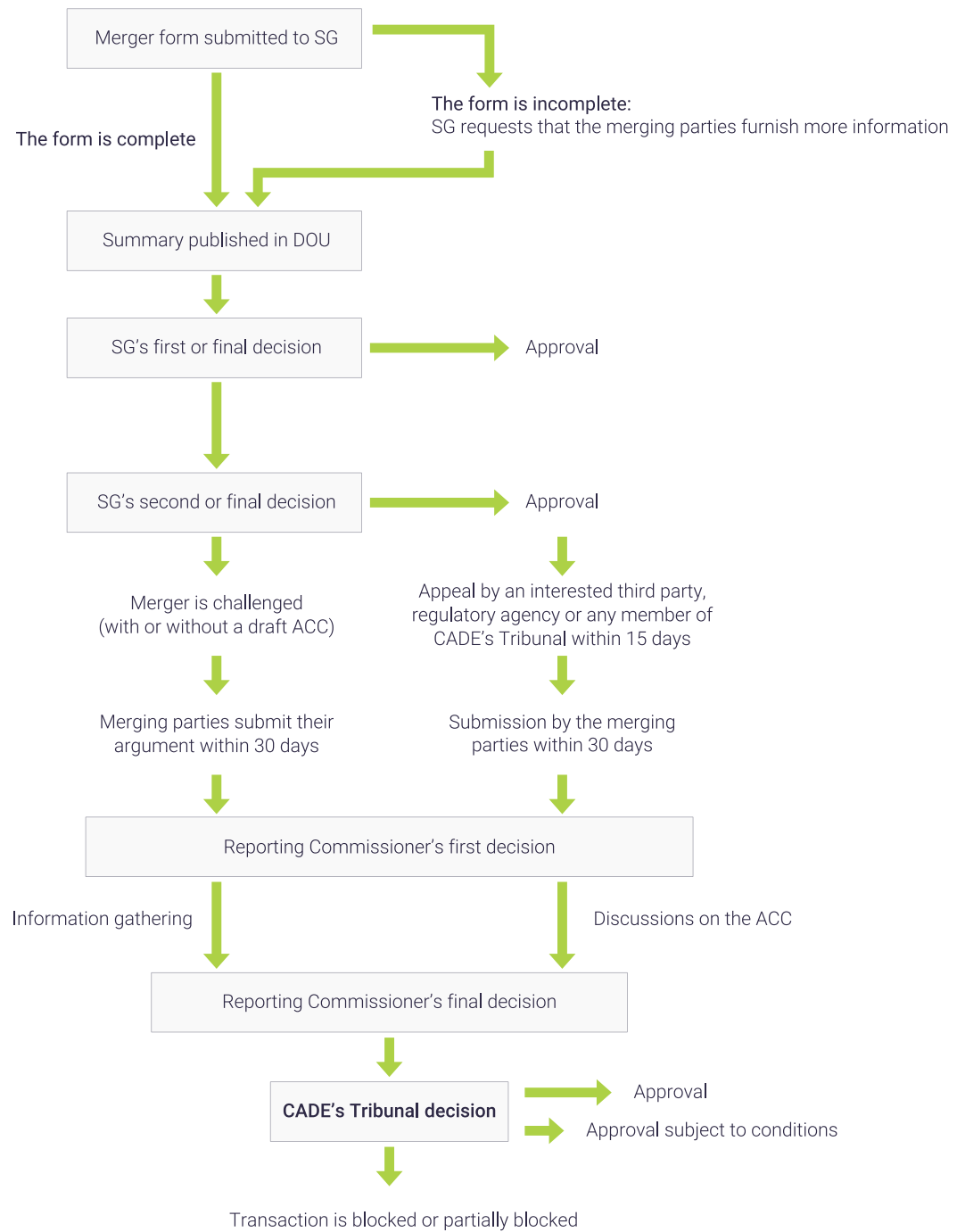
When a case is to be adjudicated, CADE's Tribunal may: (i) approve it without conditions; (ii) approve it subject to conditions set forth in an ACC or subject to conditions unilaterally imposed by CADE's Tribunal; (iii) dismiss the case because the merger was not subject to merger control in Brazil; or (iv) block it, disregarding any antitrust remedies previously offered by the merging parties in a draft

⁴⁰ Pursuant to article 65, II, of [Law No. 12,529/2011](#), a member of CADE's Tribunal may also choose to analyze a merger that has already been approved by SG or a merger that SG has dismissed for not being subject to merger control in Brazil. Although the exercise of such a right was quite rare in the past, CADE's Tribunal has exercised that right more frequently in recent years.

ACC. Article 61, paragraph 2, of [Law No. 12,529/2011](#) provides for the following types of conditions that may be imposed for a merger to be approved: (i) the sale of specific assets or a combination of assets; (ii) the split up of a company; (iii) the sale of controlling interests in a given company; (iv) the separation, from accounting and legal perspectives, of the activities of the merging parties (Chinese walls or ring-fencing); (v) compulsory licensing of IP rights; and (vi) any measures that are necessary to address any antitrust concerns.

The flowchart below describes the main phases of the merger review process:

Figure 30 - Flowchart of the merger review process



Source: PEREIRA NETO, Caio Mario da Silva; CASAGRANDE, Paulo Leonardo. *Direito Concorrencial: doutrina, jurisprudência e legislação*. São Paulo: Editora Saraiva, 2016, p. 184.

CADE's procedural rules are not themselves an obstacle to conducting detailed investigations of data-driven mergers that may raise antitrust concerns. However, there is significant room for improvements to make CADE's decision-making process more transparent and encourage interested third parties to be more active, especially when it comes to third sector organizations and academia, who may provide CADE with relevant input during the process of merger review. I present below some suggestions:

Creation of a website containing all relevant data concerning merger cases that are currently under review: this would improve transparency and make it easier for interested third parties to become involved. CADE could provide a table that is constantly updated on its website, containing the number of the case records of each merger case, the name of the merging parties, the markets affected by the transaction, the date of the submission of the merger before CADE, and the deadline for interested third parties to submit their petitions. Even though CADE publishes its main official activities in DOU, it is burdensome and costly to monitor publications in official gazettes, which contain lots of dispersed information from many governmental bodies.

Creation of a system through which academia, regulatory agencies, and third sector organizations can register to automatically receive updates on merger submissions in specific sectors: this measure is intended to make it easier for CADE to work with organizations that are not necessarily against the interests of the merging parties but may provide relevant information for the antitrust assessment of the merger. At least in theory, they have no reason to distort the merging parties' arguments, as opposed to competitors that may file statements intended to delay, or cause inconvenience to, legitimate transactions carried out by competitors. For example, the Brazilian National Data Protection Authority ("ANPD", acronym in Portuguese) should be notified about every transaction that potentially involves the acquisition or the potential consolidation of databases, containing personal information.

All information and materials provided by the merging parties that were pertinent to CADE's decision-making process should be made publicly available via SEI: this measure would improve the transparency of CADE's relationship with the merging parties and their lawyers, especially when it comes to meetings with SG and members of CADE's Tribunal. Presentations and minutes of meetings, together with a summary of the matters discussed, should be made available on the case records to ensure all interested parties have access to the same records, provided that confidential and sensitive data is protected pursuant to Law No. 12,529/2011 and the RICADE.

Drafts of ACCs as well as reports on efficiencies and compliance with ACCs should be made available for discussion with interested third parties before a merger is approved by CADE's Tribunal: currently, most mergers that are approved with behavioral or structural conditions are not discussed with market participants and interested third parties. The parties and their lawyers provide a draft ACC, which may not necessarily address all antitrust issues raised during the investigation; or the parties and their lawyers may also submit reports that refer to efficiencies that are not consistent with market realities or are unfeasible. Reports on the merging parties's compliance with ACCs should also be made available so that they can be examined by third parties who may be affected by the obligations imposed on the merging parties.

Submission of independent reports on the achievement or not of the efficiencies promised by the merging parties to CADE: depending on the case, if the transaction had raised sensitive antitrust concerns but was approved based on the efficiencies promised by the merging parties, CADE could order the submission of semiannual reports to ascertain if the efficiencies have been achieved or not (improvements in terms of distribution and logistics, enhancement of management of financial and human resources, reduced production costs and prices to consumers, etc.), with qualitative and quantitative data prepared by an independent trustee. If the efficiencies promised by the merging parties have not been achieved, CADE could review the ACC or, depending on the case, re-examine the merger.

Creation of more rights to intervene and petition to the benefit of interested third parties: currently, Law No. 12,529/2011 and RICADE provide for relatively limited rights for interested third parties to engage in the investigation of a merger. Interested third parties should have the right to submit questions for the consideration of CADE, the merging parties, and other interested third parties, including regulatory agencies and entities that may be potentially affected by the merger. Depending on the case, subject to CADE's discretion in terms of pertinence and relevance, the merging parties and interested third parties should answer to the questions raised by interested third parties, who would be subject to procedural fines should they abuse their rights of participation and petition. To avoid conflicts of interest and any abuse of rights, interested third parties, especially associations and third sector organizations, should inform CADE, at least confidentially, their main sources of funds and how they intend to pay the costs involved in the merger review process.

Creation of an obligation for all people involved in CADE's decision-making process to sign a statement confirming that they are independent and do not have any conflicts affecting the transaction that is being approved or blocked:

this recommendation is designed to reduce speculation about the potential influence of certain entities on CADE and its employees. In particular, the individuals who are part of CADE's decision-making process should sign a statement that they have not benefited, directly or indirectly, from any gifts, courses, or trips paid for by companies that have merger cases pending before CADE or by entities that those companies provide funds. This is a reasonable concern and addresses facts that were recently [reported in the New York Times](#).

Inclusion of a specific section in the templates of merger forms about the acquisition and consolidation of databases:

in the context of data-driven mergers, it is essential that CADE asks the merging parties for information on the acquisition, collection, processing, and use of personal data. CADE should investigate to what extent a merger may enhance the databases of the acquiring company in general terms (i.e., not only in the markets directly affected by the transaction) and whether there is an expectation that the privacy policies of the acquiring company and the target company are going to be significantly amended after the merger. This new section of the merger form, including relevant confidential parts, should be shared immediately with ANPD for CADE and ANPD to discuss any potential data protection concerns and what are the best approaches to address those concerns. This new section of the merger form would not be required to be filled out in the context of mergers that clearly do not involve the acquisition of databases containing personal data.

Materials produced in the context of international cooperation should be made public if they are also public in the jurisdiction where they were produced:

it is not uncommon for CADE to cooperate with international peers during the merger review of transactions with global effects. However, it is rare for CADE to make available to the public all materials CADE received by foreign antitrust authorities, provided that those materials are also publicly available in the jurisdiction where they were produced. If CADE uses data derived from international cooperation, CADE should ensure that its decision is based on domestic levels of competition and market conditions, to avoid replicating aspects that are not necessarily applicable to Brazil.

The recommendations listed above are in no order of importance or preference to the author.

5. THE INTERNATIONAL EXPERIENCE

5.1 A comparative overview of merger control criteria

The main technology companies operate across the globe and their transactions generally have worldwide effects. Consequently, their transactions are subject to different merger control regimes, as applicable in any relevant jurisdiction. The merger control regimes of other countries may be more flexible, sophisticated, or restrictive than the merger regime established by Law No. 12,529/2011.

In any event, there is a common feature affecting the criteria usually adopted by the jurisdictions which decisions will be discussed in this expert report: none of them considers only the gross revenues of the parties as the main threshold for merger control⁴¹. This may indicate that the Brazilian antitrust laws adopted a simple and reductionist parameter, which is not necessarily consistent with the best international practices in antitrust law. However, it is worth mentioning that the mere reproduction of foreign legislation, without considering how to best adapt it to each country, usually results in disastrous effects – as such, the mere reproduction of foreign legislation should be avoided.

The table below summarizes the main merger control criteria of the antitrust authorities deemed relevant for the purposes of this expert report:

Authority	Current merger control criteria
ACCC	<p>Australia's merger control rules are set out in the 2010 Competition and Consumer Act, which is supplemented by the ACCC Merger Guidelines.</p> <p>There is no mandatory pre-merger control regime in Australia, but the ACCC recommends that some mergers should be voluntarily submitted before they are implemented by the merging parties. Essentially, the ACCC recommends that mergers involving merging parties that offer products that are potentially complementary or substitutes to the products offered by the other party should be submitted to the</p>

⁴¹ Aware of that aspect, in 2017 the antitrust authorities of Germany (Bundeskartellamt) and Austria (Bundeswettbewerbsbehörde) amended their laws to include a complementary merger criterion involving the value of the transaction: [Guidance on Transaction Value Thresholds for Mandatory Pre-Merger Notification](#).

ACCC	<p>ACCC if the combined market shares of the merging parties would be greater than 20% in Australia. The ACCC may order that certain parties and/or companies active in a particular industry submit their transactions prior to their implementation.</p> <p>The ACCC has also the discretion to require the merging parties to submit mergers that do not fall within the criteria above, which are merely indicative.</p>
CMA	<p>There is no pre-merger control regime in the UK, under the 2002 Enterprise Act and the 2013 Enterprise and Regulatory Reform Act. Even if a given merger meets the basic criteria established by the UK authorities, the merging parties are not required to follow a pre-merger review regime and submit the merger for the CMA's consideration. However, the CMA has discretion to ask the merging parties to submit transactions that meet the applicable merger control criteria in force in the UK.</p> <p>These are main criteria considered by the CMA: (i) target company's revenues greater than GBP 70 million in the UK; (ii) combined market shares after the transaction higher than 25% in any relevant markets in the UK. Other merger control criteria may be found here.</p> <p>There are specific rules for certain industries, such as the development or production of items for military use, development of artificial intelligence and quantum technology solutions, and the design and maintenance of some computing technologies.</p> <p>There may be changes to the antitrust laws of the UK because of the Brexit.</p>
European Comission	<p>According to the criteria set out by European Council Regulation No. 139/2004, there are two main situations where acquisitions shall be submitted for merger control in the EEA.</p> <p>Situation 1: (i) combined worldwide revenues of all merging parties over EUR 5 billion; and (ii) aggregate EEA-wide revenues of each of at least two of the merging parties over EUR 250 million.</p> <p>Situation 2: (i) combined worldwide revenues of all merging parties over EUR 2.5 billion; (ii) in each of at least three Member States of the EEA, combined aggregate revenues of all merging parties over EUR 100 million; (iii) in each of at least three Member states included for the purpose of item (ii), aggregate turnover of each of at least two of the merging parties over EUR 25 million; and (iv) aggregate EEA-wide revenues of each of at least two of the merging parties over EUR 100 million.</p> <p>However, a transaction is not subject to merger control in the EEA if the merging parties achieve more than 2/3 of their aggregate EEA-wide revenues within one and the same Member State. This exception applies to both situations mentioned above.</p>

European Commission	<p>There is also a mechanism called <i>referral</i>. This enables the merging parties or the antitrust authorities of each Member State of the EEA to ask for a particular case to be transferred from one jurisdiction to another or to be assigned to the European Commission. This measure allows for an antitrust analysis following a one-stop-shop approach, so that, at least in theory, the most suitable antitrust authority may decide the case; in other words, this measure allows for a broader examination of the transactions, possibly undertaken by the EEA-wide antitrust authority.</p>
FTC/DoJ	<p>The merger control of the United States is relatively complex and takes into account the value of the transaction and the size of the merging parties. For the purposes of this expert report, the author used the tool for comparing antitrust laws across countries provided by Thomson Reuters. As such, the text of this box comes from such a tool offered by Thomson Reuters.</p> <p>Section 7A of the Clayton Act, also known as the Hart-Scott-Rodino Antitrust Improvements Act, requires parties to non-exempt proposed mergers exceeding certain thresholds to notify the FTC and the Department of Justice (“DoJ”).</p> <p>The following are notifiable events: (i) acquisitions of corporate voting securities, assets, and controlling interests in non-corporate entities such as partnerships and limited liability companies; (ii) mergers; (iii) the formation of joint ventures, corporations, and non-corporate entities.</p> <p>Acquisitions of corporate voting securities are notifiable even if they do not confer “control” over the target entity, as long as they exceed the applicable transaction value and the applicable party-size thresholds. There is no limitation period for the FTC and the DoJ to review a merger or acquisition, even post-closure.</p> <p>As a rule, transactions with a value of USD 92 million⁴² or less in the United States are not subject to merger control (base year 2021). This figure is adjusted on an annual basis, along with the other monetary thresholds listed in the statute.</p> <p>Transactions that result in the acquiring person holding an aggregate amount of voting securities, non-corporate interests, and/or assets of the acquired person valued above USD 92 million but less than 368 million are notifiable if the ultimate parent entities (“UPE”) of the acquiring and acquired parties satisfy the applicable size of person test indicated below (base year 2021).</p> <p>Where the acquired UPE is in the manufacturing sector, both: (i) one UPE involved in the transaction has worldwide total assets or annual net sales of at least USD 184 million; and (ii) the other UPE has worldwide total assets or annual net sales of at least USD 18.4 million.</p>

⁴² The Portuguese version of this expert report was based on the 2020 values for merger control purposes in the United States. The English version of this expert report reflects the 2021 figures for merger control purposes in the United States.

FTC/DoJ

Where the acquired UPE is in a non-manufacturing sector, either: (i) the acquired UPE has at least USD 184 million in total assets or annual net sales and the acquiring UPE has at least USD 18.4 million in total assets or annual net sales; or (ii) the acquiring UPE has total assets or annual net sales of at least USD 184 million and the acquired UPE has total assets (but not annual net sales) of at least 18.4 million.

For the formation of a corporate entity, either: (i) one of the acquiring UPEs has at least USD 184 million in annual net sales or total assets, and the other acquiring UPE has at least USD 18.4 million in annual net sales or total assets, and the to-be-formed entity has total assets of at least USD 18.4 million; or (ii) each of the acquiring UPEs has at least USD 18.4 million in annual net sales or total assets and the to-be-formed entity has total assets of at least USD 184 million.

For the formation of a non-corporate entity, the acquiring UPE acquires control of the non-corporate entity and the acquiring UPE has annual net sales or total assets of either: (i) at least USD 184 million, where the to-be-formed non-corporate entity has total assets of at least USD 18.4 million; or (ii) USD 18.4 million and the to-be-formed non-corporate entity has total assets of at least USD 184 million.

A party's UPE is the entity with control over that party, or control over one or more intermediate entities with control over that party, but that is not itself controlled by another entity. Control is defined as having either: (i) beneficial ownership of 50% or more of the voting securities; (ii) the present right to appoint 50% or more of the board of a corporate entity; or (iii) the right to 50% or more of the profits or 50% or more of the assets on dissolution of a non-corporate entity. Total assets and annual net sales include the assets and sales of the UPE and all of its controlled entities, but do not include minority interests in non-controlled entities.

Transactions that result in the acquiring person holding an aggregate amount of voting securities, non-corporate assets and/or assets of the acquired person valued in excess of USD 368 million are notifiable regardless of the size of the UPEs, unless otherwise exempt.

There are exemptions to merger control in the United States. Some of them are: (i) certain acquisitions of assets in the ordinary course of a party's business, such as goods and supplies; (ii) acquisitions of certain types of real property, such as new and used facilities not being acquired with a business, unproductive real property, and office and residential buildings; and (iii) passive investments 10% or less and where the investor has no intention of participating in the formulation, determination, or direction of the basic business decisions of the issuer.

Given the complexity of the parameters in force in the United States, if the parties have questions on whether their transaction is subject to merger control, they can [informally ask](#) for the FTC's advice on the matter.

FTC/DoJ

If a given transaction gives rise to material antitrust concerns and should be blocked, and from the perspectives of the FTC and the DoJ, it is necessary to litigate the case before judicial courts.

5.2 Critical analysis of merger cases

5.2.1 Facebook/Instagram (2012)

On April 9, 2012, Facebook [announced](#) that it had agreed to acquire Instagram, which was, in Facebook's own words, a "fun and popular mobile photo sharing app". The acquisition price was approximately USD 1 billion, made up of a cash payment to Instagram shareholders and an exchange of Instagram shares for Facebook shares. As of June 2012, Instagram reportedly had only 13 employees and was not generating revenues. At that time, Instagram still didn't show ads.

As mentioned by Professor Randal Picker in his [contribution](#) to the Antitrust Law Subcommittee of the U.S. House of Representatives, the acquisition of Instagram came at a critical time when Facebook was trying to increase its footprint on mobile devices. Facebook was initially created as a social network to be accessed by personal computers, but Instagram was created as a tool aimed at mobile devices. Facebook's fear, supposedly, was that Instagram would add new functions that would supplant those of Facebook and move to monetize its operations through advertising⁴³.

The transaction was approved in the [United States](#) and the [United Kingdom](#). In the United States, the FTC did not issue a decision analyzing the case in detail. The only document found was a [letter from the FTC](#) to the parties' lawyers on August 22, 2012, stating that the FTC would not take any action in connection with the transaction, and that the investigation had been closed. According to [public information](#), the FTC apparently did not proceed with the investigation into the acquisition because Facebook and Instagram provided functionally distinct and free products, so it would be difficult to sustain a claim or theory that the merger would cause any harm to users.

In the United Kingdom, the then OFT issued a [brief decision](#) that the merger did not raise anti-trust concerns. The acquisition was submitted there because Facebook had a market share of more than 25% in the social networking services market, the same in which Instagram also operated. As

⁴³ This point was also addressed by the OFT: "It is likely that pre-merger Facebook was aware of Instagram's growing user base: Instagram was Apple's App of the Year in 2011 and had several high-profile users (such as Barack Obama). Given that Instagram's user base was growing rapidly it may have been the case that Facebook perceived that Instagram would grow to be a credible social network competitor. Third parties advised that it would not be difficult or expensive for Instagram to expand its services to a website and to add at least some functionality similar to Facebook's" (paragraph 25 of the [OFT decision](#)).

a result of Facebook's market shares, disregarding Instagram's market share, the 25% market share threshold was triggered.

According to the OFT, despite both being social networks, Facebook and Instagram were distinct services. Most of Facebook's revenues came from the display of ads to its users, while Instagram was an app that allowed users to take pictures and apply special effects to those pictures, then share them with other Instagram users or post them on other social networks, including Facebook. Therefore, aside from the Facebook Camera tool, Facebook and Instagram were not similar from the point of view of advertisers and users⁴⁴.

The OFT stated that Facebook was predominantly used to connect users who know each other, such as friends, classmates, coworkers, family members, and people within the social circles the users took part in. While Instagram was frequently used by users who used pseudonyms when posting photos with filters and visual effects. Facebook posts would usually only be available to users' friends, whereas Instagram posts, by default, would be open to anyone⁴⁵.

The OFT said Facebook and Instagram would not be competing for marketing opportunities because Instagram would have limited potential to do so. In the OFT's view, Instagram users spend less time on the social network compared to Facebook users, a factor that would reduce Instagram's attractiveness to advertisers. Another factor weighing against Instagram was the fact that Instagram collected a limited amount of personal data from its users. Some interested third parties, however, stated that Instagram did have the potential to monetize immediately or to develop this opportunity as its number of users grew⁴⁶.

44 At the time of the OFT decision, Instagram had 45 times more downloads than Facebook Camera

45 The merging parties and third parties told the OFT that the functionality of Instagram's social network and Facebook's social network services were significantly different. While Facebook is predominantly used by off-line friends using their real identities to connect online and share experiences (including photos), Instagram is predominantly used to share artful images by individuals often using pseudonyms. The information posted on Facebook is generally shared amongst friends only. By contrast, on Instagram the default position is that photos are available to all other users of the service. Users of Instagram can also post individual photos to other social networks (including Facebook)" (paragraph 22 of the [OFT decision](#)).

46 "In terms of whether Instagram may have the potential to compete with Facebook's photo sharing app for advertising revenue, one third party told the OFT that it does not consider that Instagram provides significant marketing opportunities. The commercial opportunities are limited because consumers take and upload photos, but do not spend a significant amount of time in the app. This limits its attractiveness to advertisers for two reasons. First, eyeballs are not on the app for a significant period of time and second, limited user data is captured. Some third parties took a different view, namely that social apps and websites do not always present monetisation opportunities from the outset, but rather grow their user base and then develop monetisation opportunities once they have a large enough user base to be attractive to advertisers. Few third parties, however, believed that Instagram presented immediate monetisation opportunities. [...] The parties' revenue models are also very different. While Facebook generates revenues from advertising and users purchasing virtual and digital goods via Facebook, Instagram does not generate any revenue. Instagram is not currently an actual competitor to Facebook for advertising revenue and it has limited networking functions" (paragraphs 18-19 and 22-23 of the [OFT decision](#)).

Regardless of the possibility that Instagram would be able to monetize its operations immediately, the merging parties and interested third parties suggested that Google – which owned the social network Google+ and many subsidiaries active in the ad exchange markets – was the indisputable market leader, capturing virtually 44% of the world's online advertising spending. Also, according to the merging parties and interested third parties, websites that collected behavioral and demographic information, such as Bing, Google, and Yahoo, would have a competitive advantage over Facebook, even after the acquisition of Instagram. For those reasons, the OFT dismissed antitrust concerns that pertained to the display advertising market⁴⁷.

The main antitrust concerns identified by the OFT were related to the vertical effects of the transaction and potential barriers to increasing the number of users. The vertical effects of the transaction would create a risk that Facebook would prevent Instagram users from posting their photos on social networks other than Facebook, and that Facebook would deteriorate the Application Programming Interfaces (“APIs”)⁴⁸ between Instagram and rivals of Facebook⁴⁹. However, that hypothesis was ruled out because one of the attractions of Instagram was precisely the fact that users were able to post photos that used Instagram filters across different social networks, especially Facebook. If the interoperability between Instagram and other social networks was limited, Instagram would lose some of the functionality that made it relevant to its users, who would then be less likely

47 “The parties did not provide market share information for its UK advertising sales. They advised, however, that Facebook has a market share of 0-10% of European online display advertising by revenue and 0-10% of European online advertising revenues. The parties advised that Google has a 44% share of global online advertising expenditure. Third parties advised that the main constraints on Facebook for advertising income are sites that gather user demographic and behavioural data (amongst other information) and are effective outlets for brand advertising. These sites include Google, Yahoo, and Microsoft. [...] In summary, the evidence before the OFT does not show that Instagram would be particularly well placed to compete against Facebook in the short run. In addition, there are other firms that appear to be presently able to compete against Facebook for brand advertising. For these reasons, the OFT believes that there is no realistic prospect that the merger may result in a substantial lessening of competition in the supply of display advertising. [...] One third party informed the OFT that Google is the strongest constraint to Facebook because it has a social network, Google+, and because its combined services allow it to gather large volumes of information on users making it an attractive proposition for advertisers. Google has an additional ability to constrain Facebook through its AdSense subsidiary which matches advertisers to online advertising space. [...] In addition to its strength in advertising, its competitor status through Google+ and its important role as an advertising intermediary, Google also operates Google Play, an online app store for the Android mobile operating software. Overall, Google appears to have several options for retaliation in the event that its social network was foreclosed by the merger parties” (paragraphs 27-29 and 34-35 of the [OFT decision](#)).

48 According to [Red Hat](#)'s definition: “An API is a set of definitions and protocols for building and integrating application software. API stands for application programming interface. APIs let your product or service communicate with other products and services without having to know how they're implemented. This can simplify app development, saving time and money. When you're designing new tools and products—or managing existing ones—APIs give you flexibility; simplify design, administration, and use; and provide opportunities for innovation. APIs are sometimes thought of as contracts, with documentation that represents an agreement between parties: If party 1 sends a remote request structured a particular way, this is how party 2's software will respond. Because APIs simplify how developers integrate new application components into an existing architecture, they help business and IT teams collaborate. Business needs often change quickly in response to ever shifting digital markets, where new competitors can change a whole industry with a new app. In order to stay competitive, it's important to support the rapid development and deployment of innovative services.”

49 “The OFT considered whether the merger parties would foreclose rival social networks by (a) preventing Instagram users from uploading their photographs to those networks and the effect of such an action on competition; or (b) deteriorating the quality of the connection of the API between Instagram and rival social networks” (paragraph 31 of the [OFT decision](#)).

to use Instagram after Facebook's acquisition⁵⁰. The OFT understood that the creation of barriers to expansion would be relatively low because the attractiveness of an app can be transitory, and because Instagram grew from 1.4 million users in January 2011 to 24 million users in February 2012⁵¹.

The decision of the OFT, of August 2012, was based on the knowledge that was available at that time, in light of the documents submitted to the antitrust authority by the merging parties. The market dynamics and forces in place at that time were completely different from those currently in place; without a statement by the merging parties regarding their future plans, it was difficult to predict what exactly would happen to Instagram post-acquisition or in a scenario where Facebook had not acquired Instagram. Without the acquisition, would Instagram have grown sufficiently to exert competitive pressure on Facebook? Would Instagram have been acquired by another company, such as Google or Microsoft? Would Facebook Camera have supplanted Instagram? Would Instagram have been an ephemeral app that disappeared in a few years? Would Instagram alone have reached more than a billion users, the milestone at which Facebook stopped reporting the number of active Instagram users?

50 "Third parties agreed that the parties have the technical ability to prevent Instagram users from uploading their photos to rival social networks. In terms of incentive, the benefit of the foreclosure strategy may be to increase the likelihood that a photo taken with Instagram would be posted to Facebook. The cost would be that Instagram may become less attractive to users if its social functionality were more limited. However, third parties were unclear about the impact of any such restriction on the popularity of the Instagram app. They noted that at least part of Instagram's appeal is that photos can be uploaded to other social networks. It is also the case that there are a myriad of photo apps with similar functionality to Instagram which can upload photos to social networks. [...] Third parties generally agreed that the merger parties would have the technical ability to foreclose rivals or to partially foreclose rivals by reducing their ability to upload to Facebook. The majority of third parties did not, however, believe that this would be a sensible commercial strategy on the merger parties' part. They believed that Facebook has the incentive to allow its users to upload photos from as many sources as possible – customer engagement increases the volume of user information that Facebook has and thereby makes the network more appealing to advertisers. In terms of the effect of any such action, third parties told the OFT that camera apps would still be able to upload photos to social networks other than Facebook. The OFT also note that there is at least one app, TwitPic, dedicated to uploading photos to Twitter, a rival social network. Moreover, it is possible to link in Facebook to photos on other social networks. On balance, it appears as though the merger parties may have the technical ability to foreclose competing photo apps. The majority of third parties did not believe that the parties would have the incentive to pursue such a strategy because it would likely decrease users' level of engagement with Facebook. In any event, users would not be prohibited from using competing camera apps nor from posting their photos to several other popular outlets" (paragraph 32-33 and 39-41 of the [OFT decision](#)).

51 "In terms of whether other apps or social networks could replicate Instagram's success, it is relevant that Instagram grew rapidly from having 1.4 million users in January 2011 to around 24 million users in February 2012. Whilst this indicates the strength of Instagram's product, it also indicates that barriers to expansion are relatively low and that the attractiveness of apps can be 'faddish'. Indeed, there is some speculation that the acquisition by Facebook in itself may discourage some Instagram users from using the app" (paragraph 36 of the [OFT decision](#)).

Figure 31 - Timeline of the rollout of Instagram's features

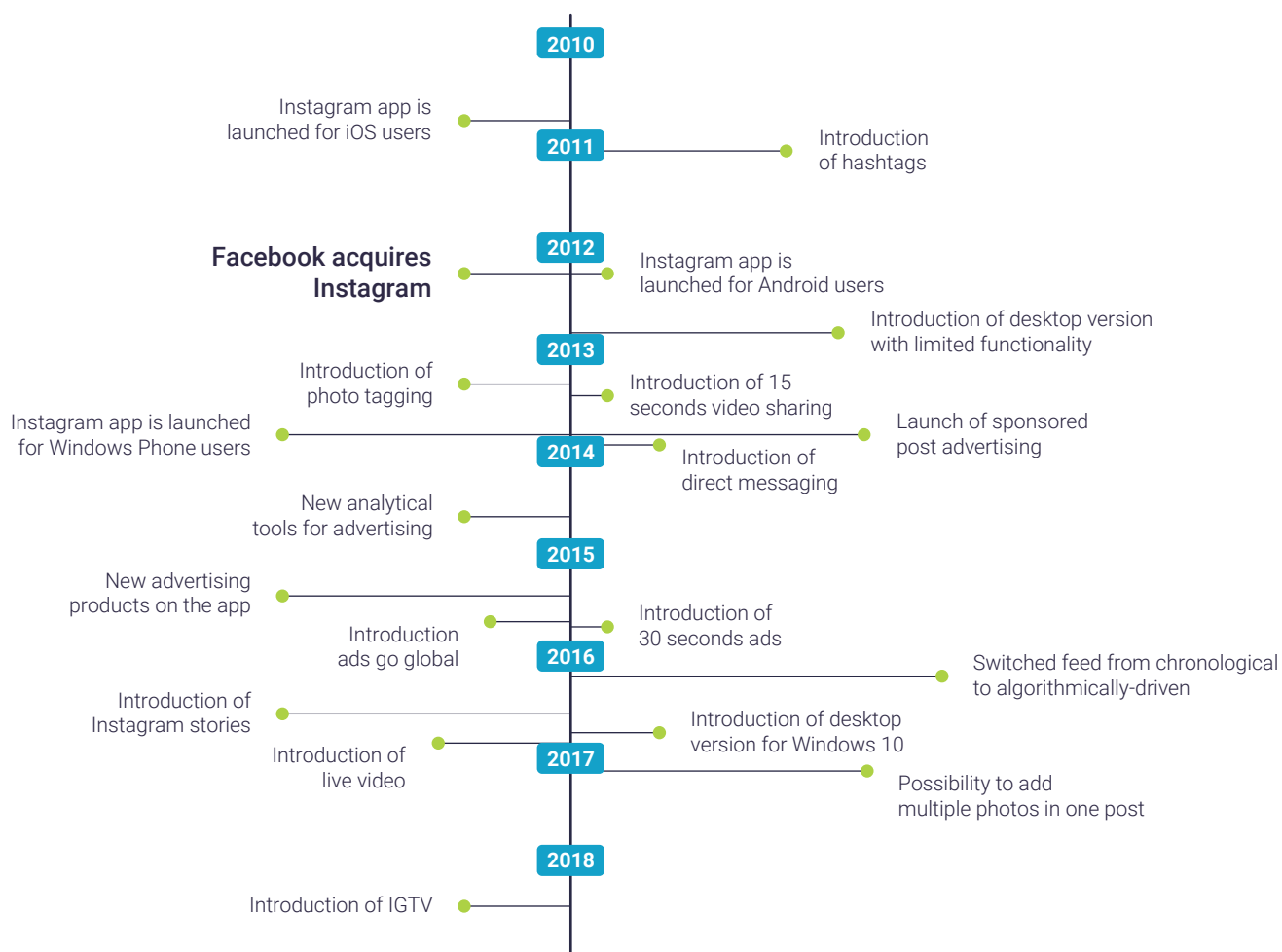
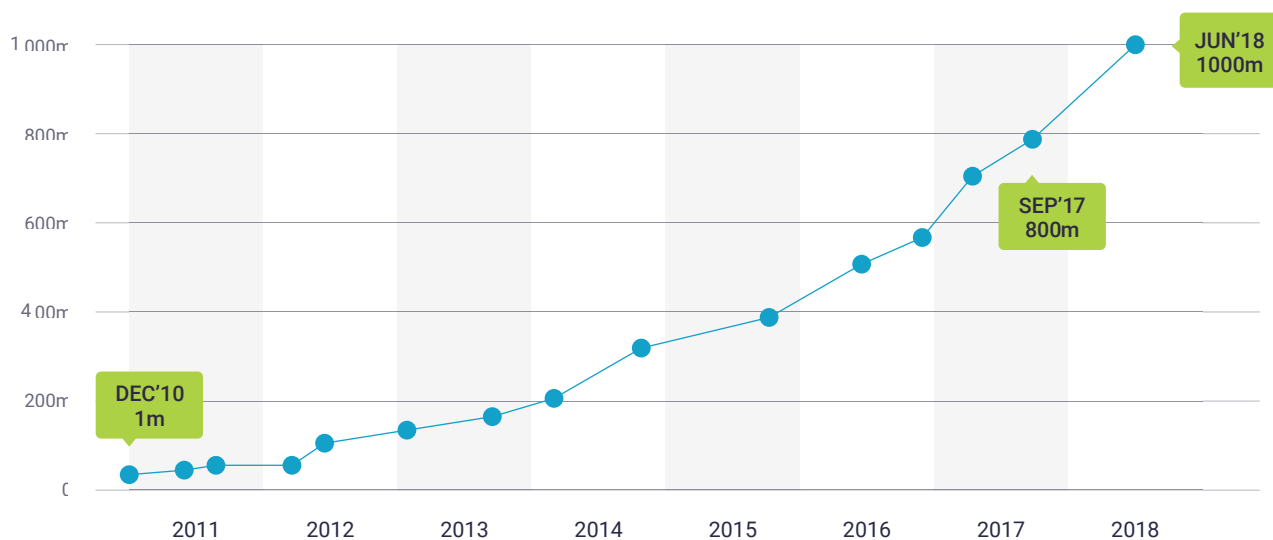


Figure 32 - Growth in the number of Instagram users (2010-2018)



Assessing the competitive conditions in different contexts is one of the main difficulties in analyzing data-driven mergers in the technology sector. It is virtually impossible to create a reliable counterfactual when the markets affected by the transaction are subject to a high degree of innovation and volatility.

Any critical analysis of the transaction will inevitably have the benefit of hindsight, after all, almost a decade has passed, and there have obviously been important changes in the market since that time. In the early 2000s, the trends to share photos and interact with other users involved photo-blogs, MySpace, Orkut, and Tumblr. Those options are either no longer popular or are no longer available. The social network Google+ did not take off, and, in 2016, TikTok arrived on the scene, which has only recently achieved substantial numbers of daily posts and active users. Similarly, apps that provided similar services as those provided by Instagram, such as Camera Awesome, Camera+, Flickr, Hipstamatic, Path, and Pixable, are either no longer available or not even remotely a threat to Instagram.

In 2019-2020, as part of the US House of Representatives' extensive antitrust investigation into the technology sector, which resulted in the production of a [Majority Staff Report and Recommendations](#), [internal Facebook emails](#) were discovered. Those e-mails indicated that Facebook believed that Instagram was not just a complementary filter application for photos but rather a direct competitor to Facebook. According to those documents, Instagram, which was a startup at that point that earned no revenues, represented a serious risk to Facebook's dominance in the social media market; so, by acquiring Instagram, Facebook intended to "neutralize a potential competitor" and "integrate their products with" those of Facebook.

If those internal emails had been available to antitrust authorities while the merger was still being investigated, they may have taken antitrust issues more seriously and considered a potential effect of integrating both platforms and how Facebook would be able to monetize Instagram with advertising. Depending on what Facebook told the FTC and OFT about Instagram in the documents submitted as part of the merger investigation (unavailable because they are confidential⁵²), it is not possible to rule out the chance that Facebook provided information that is inconsistent with the internal emails mentioned in the paragraph above.

That information asymmetry prevented the FTC and the OFT from having access to relevant data that would have led to a more accurate antitrust assessment of the acquisition of Instagram. Possibly, the biggest mistake made by the OFT – and perhaps by the FTC, even though there is no publicly available decision approving the acquisition – was that the OFT only considered a static perspective of competition, in which Facebook and Instagram would remain, after the merger, exactly

⁵² In this regard, CADE is more transparent because it requires the parties to provide a public version of the merger form, which is available on SEI for any interested party to access it.

the same as they were before the merger: two distinct platforms that could not be integrated or reformulated. The OFT could also have investigated in greater depth to what extent Facebook's market power in the online advertising market would be enhanced as a result of the combination of databases of Facebook and Instagram containing personal information of their respective users. That theory of harm was not negligible because, in the year prior to the acquisition, 85% of Facebook's [revenues](#) came from the monetization of its users' data through targeted ads⁵³. It seems that the OFT did not actually deem the acquisition of Instagram as a data-driven merger⁵⁴.

In November 2012, three months after FTC and OFT approval, Facebook [updated](#) its privacy policy to allow it to collect and use Instagram's user data for Facebook-targeted advertising purposes. A month later, in December 2012, Facebook [updated](#) Instagram's privacy policy to make it consistent with that of Facebook. Less than a year later, in November 2013, Instagram finally [incorporated](#) ads into its platform. According to [estimates](#) by [RBC Capital Markets](#), the investment advisory and financial markets division of the [Royal Bank of Canada](#), Instagram's cash-generation potential in terms of advertising opportunities was between USD 1.3 billion and USD 2.1 billion for the first year of operations. This meant that Facebook quickly recouped the purchase price of Instagram, and that Instagram's founders either were not aware of their company's cash-generating potential or simply wanted to keep Instagram free of advertising.

It was not possible to obtain the official privacy policies of Facebook and Instagram prior to the acquisition of Instagram to assess how the users' rights in terms of privacy protection were

53 LEAR's report believes that this concern becomes even more serious when users of the target company become to be owned exclusively by the acquiring company: "If the transaction made some users that were previously shared between the merging parties, exclusive to the merged entity, this could increase the merged entity's market power in the market for online advertising. This would have been dependent on the extent of usage overlap: intuitively, the likelihood that the merged entity's user base becomes more exclusive as a result of the merger increases as the portion of overlapping users increases. [...] If the transaction led to the creation of a larger platform, or increased the ability of the platform to target ads, this could increase the merged entity's attractiveness to advertisers and deprived competitors of a similar opportunity. As a preliminary step, the Authorities should have explored whether some form of integration between Facebook and Instagram infrastructure was possible to give advertisers the opportunity to design joint ad campaigns reaching the users of both platforms. If this was technically feasible, the Authorities should have assessed whether Instagram's user base represented an increment to the platform's size that was valuable for advertisers. In this respect, collecting data on demographics characteristics of Facebook's and Instagram's users could have revealed whether the transaction allowed the merged entity to reach a more comprehensive audience than Facebook and Instagram did by themselves" ([LEAR's Report for the CMA on Ex-post Assessment of Merger Control Decisions in Digital Markets](#), p. 77-78).

54 "Finally, the Authorities did not explore ToHs related to data combination. The merging parties could have combined their arguably considerable data endowments, enriching their social graph of users. In line with the economic literature reviewed in section I.2.4 and in Annex A.4 and with the ToHs explored by other CAs described in section I.4.2.2, the Authorities could have assessed whether data combination could have resulted in the merged entity gaining a significant competitive advantage that could have led to foreclosure of alternative suppliers. With respect to this, the Authorities could have investigated whether the merging parties had the technical ability to implement such data combination, their incentives to pursue such a strategy and the overall impact on competition. Both depended on the extent to which combining the datasets would have increased the merged entity's ability to target ads, making it more attractive to online advertisers. In this assessment, the Authorities should have considered also that if targeted advertising generally benefits from enriching the platform's dataset, there are diminishing returns to scale; in addition, machine learning technologies have been making collecting extensive datasets less and less necessary" (idem, p. 78)

affected⁵⁵. According to Instagram's [current privacy policy](#), Instagram collects and processes from its users the following information: (i) communications, content and interactions within Instagram; (ii) date and location of posts; (iii) locations that can be seen through the application's camera; (iv) Facebook data such as religious and political preferences preferences, health status, ethnic data, and general interests; (v) information about people, pages, accounts, hashtags, and contact groups, including mobile contacts, call logs, and SMS history; (vi) content viewed (photos, publications, and videos), people and accounts that the user interacts with, times, frequency and duration of activities on Instagram; (vii) transactions carried out on Instagram, such as purchases and donations, including credit and debit card numbers, contact details, billing and delivery details; (viii) comments, contacts, messages, and other activities by third parties that refer to the user; (ix) device information (including mobile devices, computers, tablets, televisions, and other electronic devices that interact with Instagram in some way), such as operating system, hardware and software versions, battery levels, signal strength, hard drive space, browser, user behavior on the device (foreground and background activities, cursor movements etc.), app identifiers, accounts used and games played, Bluetooth signals, Wi-Fi hotspots, cell towers, connection speed, real-time location, camera etc.; (x) place of residence, nearby or frequently visited places; (xi) physical features for facial recognition; and (xii) data stored by third parties who are Facebook partners, such as advertisers, developers, and other independent websites, who share with Facebook the activities and behavior of users outside of the Facebook/Instagram ecosystem, regardless of whether the user has an account associated with Facebook and Instagram.

On December 9, 2020, the [FTC](#) and a [coalition of 48 US states](#) filed against Facebook complaints alleging abuse of dominant position ([Section 2 of the Sherman Act](#)) and anticompetitive acquisitions ([Section 7 of the Clayton Act](#)); among other goals, the complaints seek a divestiture of assets and a corporate restructuring by Facebook, including Instagram. At this moment, it is impossible to predict what would be the outcome of those legal disputes and when they will be solved. Given the magnitude of the interests involved, it is likely that the litigation between Facebook and the US government will potentially go all the way to the Supreme Court if the parties fail to reach a settlement.

5.2.2 Google/Waze (2013)

In June 2013, Google, through its subsidiary Motorola Mobility Holding (“MMH”), acquired Waze Mobile Limited (“[Waze](#)”) for USD 966 million⁵⁶. The acquisition was [approved](#) by the OFT on

⁵⁵ “Following the acquisition, Facebook also degraded Instagram users’ privacy by matching Instagram and Facebook Blue accounts so that Facebook could use information that users had shared with Facebook Blue to serve ads to those users on Instagram” (paragraph 127 of the [US states’ complaint](#)).

⁵⁶ Some news websites reported different acquisition prices, typically between USD 1.1 to 1.3 billion. The author referred to USD

November 11, 2013. At that time, it was believed that Waze, still a market entrant, would not pose much rivalry against Google Maps, at least in the UK. It was reported that the case [had been considered by the FTC](#), but it was not possible to find a public decision (if indeed there is one).

Waze provides real-time location and navigation services, but in a way that is different from its main competitors. As it functioned as a social network as well, Waze provides – and at the time of the transaction already provided – more information than Google Maps (which was limited to how to get from Point A to Point B). For example, Waze users could link their Facebook accounts to Waze instantly connect with friends and previously unknown users.

By clicking on the cell phone screen, it is possible to discover other Waze users along the route, check the level of Waze usage based on those users' avatars, add information about traffic (accidents, police checks, potholes and blockages on the routes, traffic jams, dangerous/risky situations, fixed and mobile speed cameras etc.), find certain useful places without needing to search for them (ATMs, parking lots, pharmacies, convenience stores, gas stations, roadside restaurants, places to stay overnight). In certain cases, as those involving gas stations, it is possible to compare the fuel prices practiced by nearby gas stations. Those prices are updated almost daily, and the information available on Waze usually comes from its users.

Waze's main source of revenues derived and still derives from advertising based on user's destination and location. Given that Google's business model is also based on targeted advertising, Waze's vast databases of users' browsing history and preferred locations (in particular, home and work) were particularly valuable to Google. Therefore, the acquisition of Waze would give Google access to new patterns of user behavior and control over the main threat to Google Maps⁵⁷⁻⁵⁸.

966 million because that was the amount indicated in the OFT's decision.

57 "In a 2013 interview, Waze CEO Noam Bardin described the competitive battle against Google: 'What search is for the Web, maps are for mobile.' The search mechanism on smartphones, he said, was the map. To find restaurants, for example, you may look at Yelp reviews. But you may start your search on Yelp with a map of restaurants in a specific neighborhood; alternatively, you may start with the users' reviews and end with the map location of your dining choice, with directions thereto. Very few companies hold this mapping data, and Google was outdistancing its rivals on maps, as it did with search. Waze, its CEO felt, posed the only real competition to Google maps. (Waze used to benchmark its map quality to Google's until Google terminated Waze's access to its APIs, or application programming interface, which is a set of programming instructions and standards for accessing the program and requesting services from that program.) The stakes are large, as geolocation and mapping data are key for advertisers. Using users' geolocation data, Google and Waze can track where people are and influence where they will go by providing them information on nearby advertisers (such as promoting a nearby Taco Bell). The first step is to target users by their location. The next step is to combine all the data on the user (tastes, search history, etc.) to target him with behavioural ads" (STUCKE, Maurice E.; GRUNES, Allen P. *Big Data and Competition Policy*. Oxford: Oxford University Press, 2016, p. 93).

58 Personalized suggestions based on a set of consumer-specific data (friends and social network events, likes, interests, location history, key terms from private conversations and e-mails etc.) are and will be increasingly common and this will raise not only antitrust issues, but also data protection issues. In this sense, see: NIELS, Gunnar; JENKINS, Helen; KAVANAGH, James. *Economics for Competition Lawyers* – 2nd edition. Oxford: Oxford University Press, 2016, p. 181.

According to Waze's [current privacy policy](#), the app collects the following information from its users: (i) name, email address and telephone number; (ii) home, work, and other favorite addresses (bars, friends and family homes, cafes, malls, restaurants etc.), if provided by the user; (iii) behavior and routine based on destinations and times; (iv) chat messages with other users; (v) social networks, if linked to Waze; (vi) telephone contacts, if authorized by the user; (vii) browsing and search history, including frequent locations; (viii) data from the cell phone's sensors and receivers; (ix) interaction with sponsored advertising and content (e.g., whether the user has clicked on the advertisement, whether the user has passed by or visited the advertised place etc.); (x) audio and voice when using Waze features; (xi) activities on websites and apps that partner with Waze (e.g., Spotify), if authorized by the user; and (xii) cell phone brand, battery level, ISPs, and operating system.

Waze may have begun to collect more information after it was acquired by Google⁵⁹, but as early as 2013 there was a [concern](#) about the future use of data collected by Waze, particularly because such data was not originally treated as confidential. As soon as the acquisition was announced, [Consumer Watchdog](#), a nonprofit organization based in California, sent a [letter to the DoJ and the FTC](#) asking them to block the merger. The request was based on the fact that the acquisition would increase Google's dominant position in the online advertising market by allowing Google to collect more personal data.

Notwithstanding the issues mentioned above, which were clear at the time of the OFT's decision, the transaction was approved without conditions. Initially, the merging parties argued to the OFT that the case did not even need to be submitted because both Google and Waze did not charge for their services. The OFT rejected that argument because both merging parties had non-negligible revenues from online advertising and especially because the combined market shares of Google Maps and Waze would exceed 25% in the UK – i.e., one of the triggers for merger control in the UK.

Google and Waze argued that the relevant product market should be defined broadly, suggesting that personal navigation devices (standalone GPS devices such as Garmin and TomTom), integrated navigation systems (built-in GPS vehicle systems), static maps available on the Internet, and mobile navigation apps (such as Apple Maps, Google Maps, Nokia HERE, and Waze) should all be included. The merging parties also stated that the geographic scope of the market should have a nationwide scope due to language differences. The OFT left open the relevant market definitions because the transaction would not lead to significant market concentration in the UK.

The market definitions proposed by the merging parties were inappropriate because Waze has always been a more sophisticated and comprehensive tool when compared to standalone GPS devices, which are all paid for, and built-in vehicle GPS systems: none of them could gather personal data from users in real-time, as opposed to Waze. GPS services at that time were more akin to Apple

⁵⁹ Não foi possível localizar a íntegra da política de privacidade do Waze em período anterior ao da aquisição pelo Google.

Maps, Google Maps, and Nokia HERE, which main purposes were to identify routes from Point A to Point B. It would also be unreasonable to compare Waze with static internet mapping services for the same reasons. Finally, language differences by themselves are insufficient to limit the geographic scope of the transaction because Waze had already offered options to change interface and language before it was acquired by Google.

Google argued that its activities would not overlap with those of Waze because Google Maps and Waze had different functionalities: Google Maps provided walking and public transportation option, which were not available on Waze; while Waze could provide information about road and traffic conditions which was not available on Google Maps. In addition, Google Maps was based on images captured by its own vehicles or from satellites. That argument may have been inconsistent with internal reports of Google and Waze, as well as with submissions by interested third parties⁶⁰. The argument is also inconsistent with a [pronouncement](#) by Noam Bardin, the CEO of Waze, before the transaction. According to him, Google Maps was the only close competitor to Waze⁶¹.

The merging parties also submitted four additional arguments to the OFT⁶². The first argument was that Waze had no advantage as a pioneer, which does not seem to be credible. In fact, Waze was apparently the first navigation service that collected real-time user data and enabled social media-like interactivity. The second argument was that Waze had no network effects, which also seems to be inaccurate. As Waze has provided since the beginning of its operation free services to its users while making money with advertising services, there is a two-sided market with network effects. The third argument was that Waze faced considerable competition from pre-installed apps (Google Maps

60 It is not possible to state this categorically because relevant parts of the decision were kept confidential. However, given the context and language used by the OFT, that statement is plausible: "In considering the closeness of competition between the parties, the OFT notes that both parties' applications are listed under the navigation sections of application stores. A comparison of the products shows that both applications provide turn-by-turn navigation, whether this is on a familiar or unfamiliar route, including point of interest information, traffic information and alternative routes. In addition, Google's research reports state that [CONFIDENTIAL]; and [CONFIDENTIAL]. Google's consumer research report commented that [CONFIDENTIAL]. The OFT considers that these statements indicate that the parties' applications are frequently used for the same purposes by users. Third parties did consider Waze and Google to be competitors. One competitor considered that the acquisition removed Google's closest current competitor, but this view was not generally shared by third parties. The OFT notes that in September 2012, Apple recommended that users download Waze (along with Bing and MapQuest) whilst it improved its own map application. The parties' internal documents show that [CONFIDENTIAL] to be competitors. In one document, Waze described itself as [CONFIDENTIAL]. Further evidence indicates that Google was [CONFIDENTIAL] to Waze as a competitor and seeking to [CONFIDENTIAL] by Waze, for example, [CONFIDENTIAL]" (paragraphs 33-35 of the [OTF decision](#)).

61 "The parties submit that Waze does not have a first mover advantage and does not benefit from network effects. The parties state that Waze's current low reach implies that there are a substantial number of smartphone users who do not use Waze. [...] The OFT does not therefore consider that, on the basis of the evidence, Waze had achieved sufficient scale in the UK to the extent that it was benefitting from significant and insuperable network effects, or that this would lead to an acceleration in its future growth" (paragraphs 46 and 49 of the [OTF decision](#)).

62 "First, the strongest competitive constraints in the market may be expected from applications which are native and have access to a large user base. Integration of a map application into the operating system creates opportunities for operating system developers to use their own or affiliated services (for example search engines and social networks) to improve the experience of users and it allows for the collection of real-time traffic information" (paragraph 57 of the [OTF decision](#)).

on Android and Apple Maps on iOS)⁶³. Although this is factually true, this line of reasoning cuts both ways: if the pre-installation of certain applications has a relevant effect on competition, then Google acknowledges that part of the grounds for the accusations made by the European Commission in the context of the Android investigation – which resulted in the imposition of a EUR 4.34 billion fine on Google – is valid. It is also worth mentioning that using iOS does not prevent Google Maps or Waze from being installed on Apple devices, so it is not appropriate to rule out the possibility of multihoming. The fourth argument was that navigation data and maps were commodities that are easily replicable⁶⁴. In fact, this may be the case for tools that take a user from Point A to Point B (vehicle-based and standalone GPS devices, or older versions of Google Maps), but this was not the case of Waze. Waze's database was updated daily and in real time by its users⁶⁵. Had this argument been reasonable, Google would not have bought Waze for nearly USD 1 billion.

The OFT ignored other important aspects of the case. Interested third parties stated that Waze's services would be constantly improved as a result of the collection of real-time user data and frequent interactions of Waze users with each other, and between Waze users and Waze. The OFT was also inaccurate by stating that Waze had not attracted much attention from British users: in fact, Waze was able to reach approximately 4.5 million users within its three and a half years of activities⁶⁶.

63 "First, the strongest competitive constraints in the market may be expected from applications which are native and have access to a large user base. Integration of a map application into the operating system creates opportunities for operating system developers to use their own or affiliated services (for example search engines and social networks) to improve the experience of users and it allows for the collection of real-time traffic information" (paragraph 57 of the [OTF decision](#)).

64 "The parties submit that mapping data has become commoditised and, as such, any supplier wishing to offer a mapping product is able to license data and combine data from various sources. During its investigation, the OFT found evidence that developers of navigation applications do multisource data to develop their own applications" (paragraph 76 of the [OTF decision](#)).

65 Esse aspecto levantado em manifestações de terceiro interessados no caso: "A number of third parties considered that it would be difficult for a new entrant to replicate the success achieved by Waze. One third party commented that the strength of Waze was that it had focused on building such a community where users feel that they are creating something new. It was therefore considered by some third parties that it would be difficult for another entrant to compete with an equivalent model to Waze" (paragraph 77 of the [OTF decision](#)).

66 "The OFT notes that Waze considered its data to be [CONFIDENTIAL]. For example, Google's minutes from a meeting [CONFIDENTIAL] quote Waze as saying [CONFIDENTIAL]. The OFT received mixed views from third parties on the quality and coverage of Waze's UK map data but it was generally considered that the data would improve over time (due to Waze's data generating process) rather than currently representing a high standard that would be comparable to Google Maps. In terms of the detail and accuracy of Waze's Maps, Google concluded that in terms of a number of [CONFIDENTIAL], Waze was, [CONFIDENTIAL] although they were [CONFIDENTIAL]. Google considered that Waze may have been able to [CONFIDENTIAL] that it is common for developers to multi-source data. However, although evidence indicates that Waze could achieve [CONFIDENTIAL], the OFT notes that no analysis was undertaken of UK cities. Therefore, whilst there is evidence to indicate that Google did consider Waze as a competitor and that Waze's map data for some areas, such as some US cities, was of a good standard or could be improved relatively easily, on balance, the evidence does not indicate that Waze's mobile application represented a strong competitive constraint to Google's in the UK. Despite the concerns raised by third parties, the evidence before the OFT does not indicate that Waze had been successful in attracting sufficient users to build a UK map that would currently be considered to have good coverage and detailed accuracy and features compared to that of alternative providers of map data. [...] In the UK, Waze has witnessed strong growth in a relatively short period of time. Data provided by the parties shows that Waze's registered users increased from a little over [1,000 – 100,000] when it was launched in January 2010 to [500,000 – 4,000,000] by August 2013, of which over [50,000 – 2,000,000] are active users" (paragraphs 37-39 and 41 of the [OTF decision](#)).

Furthermore, the OFT did not admit a counterfactual argument based on which Waze could have become a relevant competitor to Google – even though, at the time of the transaction, Waze already had been a relevant competitor to Google.

As noted in the LEAR report, the antitrust analysis in this case was deficient: during the merger control investigation, important submissions by interested third parties were not thoroughly discussed and examined. The analysis of the OFT was limited to traditional methods of antitrust assessment. As such, it overestimated the importance of Apple Maps, ignored the potential complementarity of the data portfolios held by Google and Waze, disregarded possibilities of improved monetization of Waze's operations, and focused only on the user side of the app, ignoring the side of advertisers⁶⁷.

It has been reported that the Google/Waze case is about to be [re-examined by the FTC](#).

5.2.3 Facebook/WhatsApp (2014)

In February 2014, Facebook [acquired](#) WhatsApp Inc. ("[WhatsApp](#)") for USD 19 billion. Founded in November 2009, WhatsApp is an instant mobile messaging platform through which users communicate with each other in real time. It replaced traditional SMS provided by mobile phone companies, which charged a fixed price per message or offered packages of a preset number of messages per month. As internet access spread to mobile devices, WhatsApp quickly became popular because it allowed users to send how many messages they want for free or, in some countries, for an annual fee of only 99 cents.

⁶⁷ "The Authorities may have over relied on the competitive constraint that Apple Maps would have exerted on the merged entity. Apple Maps was only available on iOS devices, which represented 30-31% of smartphone sales in the UK at the time of the merger and could represent an indirect constraint on Google Maps for Android devices only to the extent that Google cannot discriminate between the two OSs. If Google were to lower the quality of Google Maps on Android, for instance by introducing ads (which, being generally considered as a nuisance, would represent a drop in quality) Android users would not be able to switch to Apple Maps. The Authorities could have investigated whether such discrimination was feasible. [...] All in all, there may have been enough evidence for the Authorities to conclude that Waze could have become a relevant competitive force. Most importantly, the range of ToHs analysed in the decision was incomplete. ToHs developed by the Authorities focussed solely on the effect that the merger could have had on the users' side of the market. However, turn-by-turn navigation apps are provided to users for free and are monetized elsewhere. The Authorities could have explored monetization channels and evaluate whether the merger could have had an adverse effect in the markets where monetization occurs. [...] In conclusion, the Authorities seem to have discarded valuable pieces of evidence signalling that Waze may have become a relevant competitor to Google Maps. At the same time, they may have put too much weight on the existence of other competitors, especially for Android devices. Still, it is hard to say whether such evidence would have been enough for the Authorities to adopt a different decision, meeting the probatory standard needed to block a merger. [...] This makes the range of ToHs analysed in the decision incomplete. Current business models and monetization avenues should represent an unavoidable step for the development of a ToH because, quite simply, market power is not exerted for its own sake, but has the ultimate objective of increasing profits. The incentives to, for instance, reduce innovation efforts and deliver lower quality to users do not directly depend on the number of users lost, but on the revenue lost due to that drop in users. [...] Finally, the Authorities omitted to explore the effects of the merger on the several economic activities related to the provision of turn-by-turn navigation services, which represent the way these services are monetized. This is the result of an insufficient understanding of how the services provided by the merging parties are monetized, both directly and indirectly" ([LEAR's Report for the CMA on Ex-post Assessment of Merger Control Decisions in Digital Markets](#), p. 14-15, 97-98 and 106).

In the United States, there is no publicly available decision on the merits of the merger. The only relevant document found on the FTC website was a [letter](#) sent to the companies on April 10, 2014. In such a letter, former FTC director Jessica Rich expressed her concerns about the promises made by Facebook – which data handling/processing practices had been previously investigated by the FTC – in the sense that, after the transaction, there would be no changes in terms of confidentiality and security of WhatsApp users' conversations.

In 2011, Facebook was [investigated by the FTC](#) for allegedly providing misleading information about the level of privacy it provided to its users. In that investigation, the FTC alleged that Facebook: (i) continued to share personal information that users had marked as restricted to "friends only" or "friends of friends", with certain apps and business partners, ignoring the existing privacy policies; (ii) failed to indicate that after changes to its privacy policies, users could no longer restrict access to their names, profile pictures, gender, friends list, and friends likes, as opposed to the company's promises that its users would have control over their data; (iii) enforced new privacy policies retroactively – and without prior consent from its users –, making personal information previously marked as "restrict" by users, public again; (iv) misrepresented to users the range of personal data that is collected by companies that partner with Facebook; (v) shared personal information and user behavior patterns on the social network with advertisers, without users' prior consent; (vi) allowed applications that partner with Facebook to show users a "Verified App" sign, when, in fact, Facebook had not verified any application; (vii) stored and shared users' photos and videos with third parties even after users had deleted the content from their own social media accounts, in violation of the privacy policies applicable at that time; and (viii) transferred user data from Europe to the United States without complying with the obligations set forth by the [US-EU Safe Harbor Privacy Principles](#).

This investigation was [closed](#) in November 2011 with a [settlement](#) through which Facebook undertook to: (i) no longer provide misleading information to its users; (ii) obtain prior consent from users when Facebook enacts new privacy policies that revoke rights previously granted to Facebook users; (iii) block access to personal data of users who deleted their respective Facebook accounts, within thirty days; (iv) design and maintain a comprehensive compliance program to reduce privacy risks to users regarding current and future products/services offered by Facebook; and (v) submit to the FTC independent audit reports to demonstrate compliance with the terms of the settlement with the FTC, every two years and for a period of twenty years. In July 2019, the FTC imposed a [fine](#) of USD 5 billion on Facebook because Facebook had allegedly breached the commitments indicated above. In April 2020, the FTC [approved amendments](#) to the original settlement to, [among other conditions](#), order the establishment of an independent privacy committee and the limitation of powers of Mr. Mark Zuckerberg, founder and CEO of Facebook, to interfere with decisions on some aspects of privacy affecting users of Facebook and other affiliated companies.

In Europe, the merger was [approved without conditions](#) by the European Commission on October 3, 2014. Due to WhatsApp's low revenues in Europe, Facebook's acquisition was not subject

to merger control at the EEA level. However, the case was subject to merger control in at least three EU countries⁶⁸. The parties asked the European Commission to review the transaction via referral. There was no opposition from the national antitrust authorities of the three countries which had jurisdiction to examine the transaction.

According to the European Commission, there was no overlap between the activities of Facebook and WhatsApp because the first company operated social networking services, and the second company operated mobile instant messaging services. Among other things, the European Commission believed that Facebook and WhatsApp were not competitors because: (i) WhatsApp was only available on smartphones and could not be used on other devices (a limitation that was overcome with WhatsApp Web, which enabled users to use WhatsApp with their computers, as long as they authorize the functionalities of WhatsApp Web on their mobile devices; (ii) Facebook had more complete and sophisticated networking features than WhatsApp, which was limited to communicating between known contacts who, at least in theory, knew the phone numbers of each other's; (iii) Facebook allowed the creation of content and the sharing of such content with friends, friends of friends, or the general public – Facebook users could post comments and react to the Facebook posts, features not available on WhatsApp; (iv) Facebook offered the possibility of sharing personal data not available on WhatsApp, such as “events” (births, marriages, college admissions, moving from one place to another, etc.), marital status, interests (sports, movies, books, restaurants, travel preferences); (v) WhatsApp messages were received and replied to in real time, which enabled instant communication between users, a feature that was not necessarily feasible on Facebook (which is not truly accurate, as users could interact with each other via Facebook chat or Facebook Messenger before the acquisition of WhatsApp); and (vi) Facebook generated revenues by collecting personal data from its users and displaying third-party ads on its platforms, while WhatsApp did not store, collect, or process personal data for targeted advertising purposes.

Because the European Commission understood that the acquisition did not raise antitrust concerns, it left open relevant market definitions and, at least from the perspective of the author, incurred in factual and methodological errors. For instance, the European Commission: (i) included Twitter, Google Hangouts, Snapchat, Skype, and Facebook Messenger within the same market to estimate WhatsApp's market share in certain European countries, notwithstanding the fact that most of those players are not direct substitutes to the functionalities offered by WhatsApp⁶⁹; (ii) did not

68 The European Commission's original decision does not mention the names of those countries.

69 “On the basis of the market share data provided by the Notifying Party (in this regard see Section 5.1.2), in the period between November 2013 and May 2014 in Spain WhatsApp was the market leader (30-40%), followed by Twitter (10-20%), LINE (10-20%), Google Hangouts (5-10%) and Facebook Messenger (5-10%). In France the market leaders were Android's messaging platform and Facebook Messenger (both 10-20%), followed by WhatsApp. [...] For example, the market leader is Viber in Croatia and Greece, Android's messaging platform in Denmark and Snapchat in Norway. In Hungary, Poland and Lithuania, Facebook Messenger is the market leader, while WhatsApp is at best the third player. In Ireland and in the Netherlands, WhatsApp is the market leader and Facebook Messenger is the third player. [...] A number of other players provide consumer communications apps in competition with the Parties in the EEA and worldwide. These

perform an in-depth investigation into the transaction because both parties offered free services, so there would be no incentives for the parties to “increase” their prices after the transaction⁷⁰, ignoring the fact that Facebook makes money through targeted advertising based on personal data collected for free from its users; (iii) asserted that, because there are no significant entry costs and there are no significant barriers to entry, a developer is able to launch an instant messaging app without significant hurdles⁷¹, ignoring the fact that, if that was indeed the case, Facebook itself could have developed a successful competitor to WhatsApp; (iv) underestimated the effects arising from the transaction because of multihoming⁷², ignoring concerns in connection with the potential anticompetitive exercise of portfolio powers⁷³; and (v) affirmed that there would be no foreclosure or interoperability

include integrated companies active also in the provision of smartphone hardware and operating systems, such as Apple with iMessage, BlackBerry with BBM, Samsung with ChatON, Google with Google Hangouts and the Android messaging platform, Microsoft with Skype. Competing consumer communications apps are also provided by mobile network operators along with traditional telecommunications services: examples of these apps are Joyn (the brand name of the Rich Communication Services program launched by the GSM Association for the creation of interoperator communication services over the Internet), Libon by Orange and Tuenti by Telefónica. Finally, many other providers of consumer communications apps are active on the market, such as LINE, Viber, Threema, Telegram, Snapchat and WeChat” (footnotes 13-14 and paragraph 85 of the [European Commission decision](#)).

70 “The Notifying Party takes the view that market shares are of limited use for the assessment of the Transaction, since it concerns services which are characterised by ease and rapidity of entry and fast growth, as well as multi-homing, and which are mainly offered for free. [...] In line with the Notifying Party’s arguments, the Commission has found in its market investigation that there are no significant costs preventing consumers from switching between different consumer communications apps. [...] First, all consumer communications apps are offered for free or at a very low price. [...] In addition, certain respondents suggested that Facebook could increase WhatsApp’s subscription fee, as a result of which WhatsApp’s users would switch to Facebook, thereby increasing Facebook’s subscribers and, thus, Facebook’s advertising revenues and/or power vis-à-vis advertisers. However, respondents did not provide any evidence that users would switch to Facebook in response to a potential increase in WhatsApp’s subscription fees. Quite the contrary, as explained above in Section 5.1.3.2, the Commission has found that WhatsApp is not the closest competitor to Facebook Messenger (let alone to Facebook’s social networking site). In any event, even if such increase in WhatsApp’s subscription fee and subsequent user switching were to take place, as will be explained further below, the market investigation indicated that a sufficient number of alternative providers of online advertising will remain active post-Transaction alongside Facebook” (paragraphs 92 and 109, as well as footnote 93 of the [European Commission decision](#)).

71 “In previous decisions, while ultimately leaving the exact geographic market definition open, the Commission found that a number of factors suggested that the geographic market for consumer communications apps would be at least EEA-wide, if not world-wide.⁹ The factors pointing to such conclusion included the lack of legal or technical barriers restricting the use or trade of consumer communications apps, the lack of differences in terms of quality, price and features (with the exception of some geographic areas), the identical users’ habits in consumer communications apps within the EEA and worldwide and, finally, the fact that suppliers of consumer communications apps provide their services on a global level with limited differentiation in the quality and the features in the EEA. [...] Moreover, barriers to entry and expansion for competitors and switching costs for customers would be very low, so that any attempt of the merged entity to leverage its market position could be easily countered. In particular, should the merged entity introduce or raise its prices or stop innovating, customers could easily switch to competing services which are available free of charge and which will provide new features and better quality services (paragraphs 36 and 94 of the [European Commission decision](#)).

72 “Furthermore, the EEA market for consumer communications apps features a significant degree of multihoming, that is, users have installed, and use, on the same handset several consumer communications apps at the same time. In particular, WhatsApp and Facebook Messenger have been reported as being the two main consumer communications apps simultaneously used by the majority of the users in the EEA. This fact suggests that the two consumer communications apps are to some extent complementary, rather than being in direct competition with each other (paragraph 155 of the [European Commission decision](#)).

73 Although owning distinct product/service portfolios that at the same time compete with each other is not an antitrust issue, depending on the specific case, the indirect effect may be the creation of barriers to entry: “Portfolio power can prevent new players

issues because Facebook and WhatsApp do not control mobile operating systems⁷⁴, an aspect that is materially irrelevant in this case because neither company generates material revenues directly from the development and/or licensing of software for Android and iOS.

In addition to the shortcomings indicated above, the European Commission overlooked sensitive issues involving the impact the acquisition would have on how Facebook and WhatsApp users' data would be collected and used for monetization of Facebook's activities. Although only recently there has been greater awareness on the issue, back in 2014 the European Commission pointed out that right after Facebook had announced the acquisition of WhatsApp, thousands of users installed Telegram, which supposedly provided greater privacy rights to its users⁷⁵. That aspect may suggest that users are indeed sensitive to factors other than price, which would mean that data protection is an important matter to be considered when investigating mergers. A more recent example of that argument was the [4,200% increase](#) in the number of downloads of Signal, a privacy-focused instant messaging app, shortly after Facebook released a [new privacy policy for WhatsApp](#).

The European Commission also dismissed antitrust concerns affecting the online advertising market because there was no overlap between Facebook – which activities involve data collection and generation of revenues from advertising – and WhatsApp – which did not collect personal data

from being able to enter the market, reduce already-established players' ability to compete, and make anticompetitive practices easier. In markets strongly marked by economies of scope, firms with a bigger portfolio benefit from lower average production costs than other competitors with less product variety. Owning an extensive portfolio may decrease costumer transaction costs, as they deal with a single firm, which offers several products and brands, instead of many smaller suppliers with one product each. Establishing a relationship with many suppliers generates relevant transaction costs: every product's prices and conditions must be negotiated, contracts must be written and managed, etc. Nevertheless, this power may prevent smaller competitors from accessing to the market, as customers negotiating with them incur in higher costs. In the medium and long terms, the favoured firm may take advantage of this condition and exercise the market power obtained, rising the prices of its products and, possibly, gaining market share from smaller firms in the segment. That player may use its wide portfolio to implement aggressive strategies and eliminate competition in the market, reducing prices in a segment in which it wants to gain market share while offsetting the losses in other markets (cross subsidization). A wide portfolio has important effects for players in terms of marketing. A firm that offers several products maximises its brand awareness and marketing efficiency, since by advertising one product all others are also promoted" ([CADE's Horizontal Merger Guidelines](#), p. 38-39).

74 "The Commission also considers that the Transaction is unlikely to give rise to an increase in switching costs. None of the Parties has control over the operating system of a smartphone, and therefore none of them could make it more burdensome for users to switch between different consumer communications apps. [...] The Commission considers that the Transaction is unlikely to give rise to an increase in entry barriers, as the Parties do not have control over any element influencing entry. In the first place, the Parties do not have control over the operating system of smartphones, and are not therefore in the position to foreclose access to the final user of the consumer communications service. In the second place, email addresses, phone numbers and other elements which could be used as identifiers to access competing apps are ultimately controlled by the users. In the third place, the handsets' native address book for phone numbers or email addresses which could be used to build up a communication network is potentially available to all rival consumer communications apps providers" (paragraphs 112 and 121 of the [European Commission decision](#)).

75 "After the announcement of WhatsApp's acquisition by Facebook and because of privacy concerns, thousands of users downloaded different messaging platforms, in particular Telegram which offers increased privacy protection. [...] Privacy concerns also seem to have prompted a high number of German users to switch from WhatsApp to Threema in the 24 hours following the announcement of Facebook's acquisition of WhatsApp" (footnote 79 and paragraph 174 of the [European Commission decision](#)).

to be used for advertising purposes⁷⁶. The European Commission also stated that there would be no significant concentration of personal data under the control of Facebook after the transaction because Google would still be the largest company in the online advertising market, with Apple, Amazon, eBay, Microsoft, AOL, Yahoo, Twitter, LinkedIn, Adobe, and Yelp also exerting competitive pressure on Facebook⁷⁷.

Those grounds adopted by the European Commission are highly objectionable. The fact that there is a dominant player in the online advertising market does not justify the creation of another, and no analysis of the sub-divisions of the online advertising market was conducted. The online advertising services offered by Google are different from those offered by Facebook, which are limited to its walled garden of social networks. Moreover, the competitors to which the European Commission made references to in its decision are not adequate substitutes to Facebook because their reach, scale, and revenues are not comparable to those of Facebook: (i) most of the revenues generated by Apple, Amazon, eBay, Microsoft, and Adobe do not derive from online advertising; (ii) AOL and Yahoo have experienced a trend of declining revenues across the years; and (iii) Facebook, Twitter and Yelp do not have comparable sizes in terms of revenues ([Twitter's USD 3.716 billion](#) and [Yelp's USD 872 million](#) v. [Facebook's USD 85.965 billion](#) in 2020).

One of the most critical mistakes of the European Commission was that it did not conduct an in-depth investigation into a potential data sharing between Facebook and WhatsApp after the transaction⁷⁸. Even more serious was the fact that the European Commission failed to do so after it

76 "Since only Facebook, and not WhatsApp, is active in the provision of online advertising services, the Transaction does not give rise to any horizontal overlaps in the market for online advertising or in any sub-segment thereof. Moreover, WhatsApp does not currently collect data about its users concerning age, verified name, gender, social group, activities, consuming habits or other characteristics that are valuable for advertising purposes. Also, WhatsApp does not store messages once they are delivered, and a message is sent only to and from the handsets that are associated with the mobile phone numbers used. Once a user's message has been delivered WhatsApp has no record of the content of that message. Therefore, since WhatsApp does not currently collect any user data that are valuable for advertising purposes, the Transaction does not increase the amount of data potentially available to Facebook for advertising purposes" (paragraphs 165-166 of the [European Commission decision](#)).

77 "In this regard, the Commission refers to the results of the market investigation presented above [...], which indicate that, post-Transaction, there will remain a sufficient number of alternative providers of online advertising services. In addition, the Commission notes that there are currently a significant number of market participants that collect user data alongside Facebook. These include, first of all Google, which accounts for a significant portion of the Internet user data and, in addition, companies such as Apple, Amazon, eBay, Microsoft, AOL, Yahoo!, Twitter, IAC, LinkedIn, Adobe and Yelp, among others" (paragraph 178 of the [European Commission decision](#)).

78 "One example as to the complex nature of forward-looking analysis may be found in the Facebook/WhatsApp transaction. In its appraisal, the Commission considered the possibility of Facebook implementing automated matching between Facebook and WhatsApp users' accounts. Facebook informed the Commission that a reliable automated matching would not be possible. Nonetheless, in August 2016 the companies announced the possibility of linking WhatsApp users' phone numbers with Facebook users' identities. The Commission subsequently found, contrary to Facebook's statements in its notification of the transaction, that the technical possibility of automatically matching already existed in 2014 at the time of notification. In 2017, the Commission fined Facebook EUR 110 million for providing incorrect or misleading information during its investigation. The case highlights the limitations in the enforcer's ability to accurately predict technological changes and their significance. It also illustrates the asymmetric information available at the time of the appraisal, as companies often benefit from first-hand knowledge as to technology and markets. Also noteworthy is the difficulty to predict

learned that the merging parties had potentially provided misleading information in the context of the merger review; the European Commission only imposed a fine of EUR 110 million⁷⁹. According to the European Commission, those antitrust concerns were not material because: (i) Facebook would not benefit from significant network effects because 70-90% of WhatsApp users were already Facebook users, and 60-70% of Facebook Messenger users were already WhatsApp users⁸⁰; (ii) the parties had not submitted any documents suggesting that there was any intention to combine the databases of Facebook and WhatsApp⁸¹; (iii) a potential combination of databases for online advertising purposes affecting WhatsApp would be subject to changes to WhatsApp's privacy policies, a measure that

whether the merger will yield negative or positive innovation" (EZRACHI, Ariel; STUCKE, Maurice. [Working for the European Commission: Digitalisation and its Impact on Innovation](#), 2020, p. 73).

79 According to Facebook, it would be technically impossible to have a match between profiles of Facebook users and WhatsApp users, unless users of both services manually matched their respective profiles: "The Notifying Party submitted that integration between WhatsApp and Facebook would pose significant technical difficulties. Notably, integration of WhatsApp's and Facebook's networks would require matching WhatsApp users' profiles with their profiles on Facebook (or vice versa). This would be complicated without the users' involvement since Facebook and WhatsApp use different unique user identifiers: Facebook ID and mobile phone number, respectively. Consequently, Facebook would be unable to automatically and reliably associate a Facebook ID with a valid phone number used by a user on WhatsApp. Matching of WhatsApp profiles with Facebook profiles would most likely have to be done manually by users, which in the Notifying Party's view is likely to result in a significant backlash from both users of Facebook and WhatsApp who do not want to match their accounts. Finally, the Notifying Party stated that, beyond the difficulties in matching user IDs, significant engineering hurdles would have to be overcome to enable cross-platform communications, reflecting the fundamentally different architecture of Facebook and WhatsApp (including the former being cloud-based, the latter not). Based on the above, the Commission considers that technical integration between WhatsApp and Facebook is unlikely to be as straightforward from a technical perspective as presented by third parties. Moreover, it would pose a business risk for the merged entity as users could switch to competing consumer communications apps. [...] As explained in paragraphs 138-139, the Commission takes into account that there are likely to be significant technical hurdles to enable the integration of WhatsApp and Facebook. In particular, such integration would likely require involvement of users of both WhatsApp and Facebook to match/create their profiles on both platforms. Any forced transfer of WhatsApp users onto the Facebook social network (for example, by compelling WhatsApp users to register on Facebook) may alienate users and cause their outflow to competing consumer communications apps. Moreover, enabling cross-platform communication would necessitate substantial re-engineering of the services and rewriting of their code, given the differences in their architecture" (paragraphs 138-139 and 160 of the [European Commission decision](#)).

80 "In any event, even if some integration of WhatsApp with Facebook were to take place post-Transaction, it would be mitigated by the fact that there is already a significant overlap between the networks of WhatsApp and Facebook. Indeed, on the basis of the estimates provided by the Notifying Party, in the period between December 2013 and April 2014, between 20-30% and 50-60% of WhatsApp users already used Facebook Messenger and between 70-80% and 80-90% of WhatsApp users were Facebook users and were therefore already within the reach of Facebook Messenger. Conversely, over the same period 60% to 70% of Facebook Messenger active users already used WhatsApp. Therefore, the net gain in terms of new members to the communications network would be much more limited than the addition of WhatsApp users to the Facebook user base would suggest. This means that preexisting network effects would be unlikely to substantially strengthened by the Transaction. [...] In any event, even if an integration of WhatsApp with Facebook were to take place, it would be mitigated by the fact that a large number of WhatsApp's active users (70-90%) are already users of Facebook. Therefore, potential net gain in terms of new members to the social network would be much more limited than the addition of WhatsApp users to the Facebook user base (also considering that addition of all users is unlikely)" (paragraphs 140 and 162 of the [European Commission decision](#)).

81 "The current plans of Facebook, as evidenced by its submissions to the Commission, public statements and internal documents, do not provide support for a future integration of WhatsApp with Facebook of the sort that would. [...] Moreover, the Notifying Party submits that Facebook has no current plans to introduce advertising on WhatsApp post-Transaction. [...] According to the Notifying Party, the Transaction would not impact the type of data that WhatsApp collects and stores. Facebook has publicly made it clear that it has no current plans to modify WhatsApp's collection and use of user data" (paragraphs 161, 170 and 182 of the [European Commission decision](#)).

Facebook committed not to undertaking⁸²; and (iv) data owned by WhatsApp would be of "marginal use" for Facebook's advertising activities⁸³.

The European Commission's reasons are not appropriate and will be challenged here in the same order they were described in the paragraph above: (i) despite the high overlap (multi-homing) between users of both Facebook and WhatsApp, the users of each service generate different kinds of information (social networking behavior v. keywords in the context of private conversations that may be monetized) that, when combined, increment the data portfolio to which Facebook has access to; (ii) the documents submitted to the antitrust authorities were chosen by the merging parties themselves, so it is perfectly feasible, at least in theory, for them to omit internal information if that omission is in the merging parties' interest; (iii) privacy policy changes result from unilateral impositions by the owners of the apps/platforms; privacy policies may be changed without any prior approval by government authorities or the users of the services that are being affected by the changes⁸⁴ – it is also worth recalling that past promises may be broken without legal consequences and are not judicially enforceable; and (iv) when the target company can collect and has access to additional data held by the owner of both platforms, any new information available is potentially monetizable.

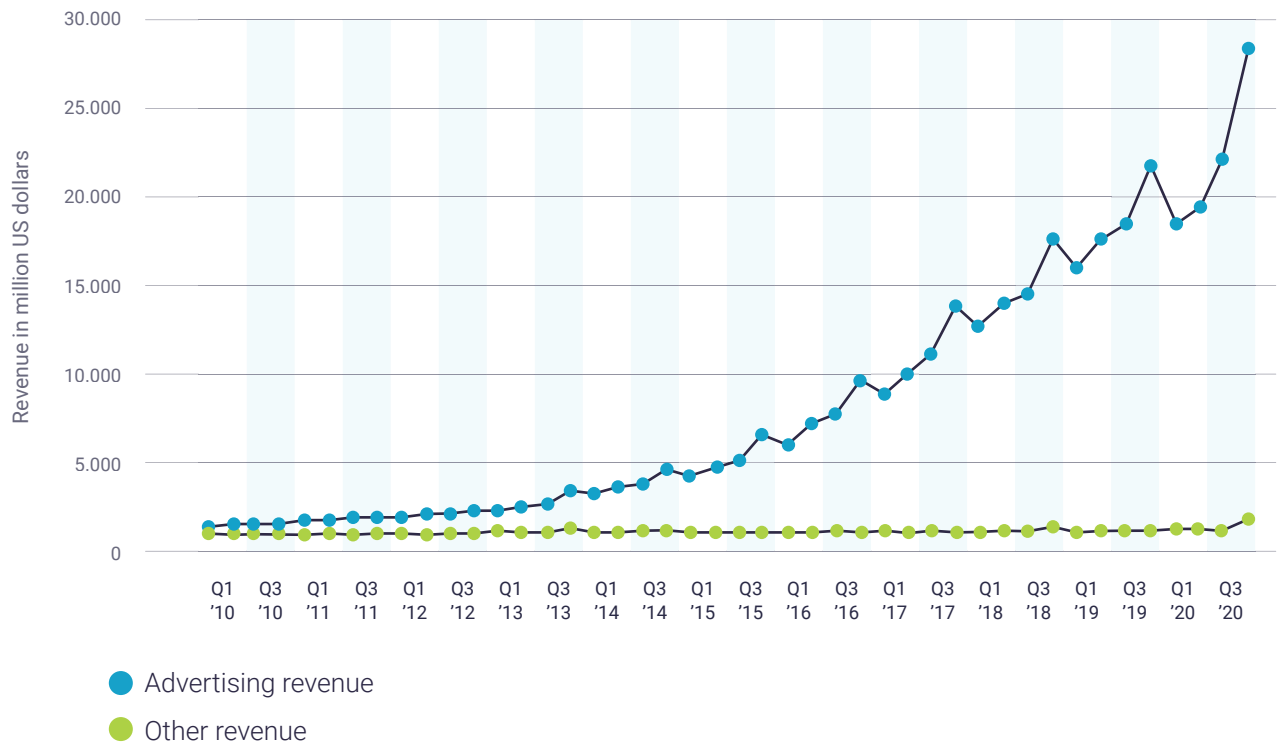
Although it is not possible to establish, with concrete and solid economic evidence, a direct relationship of cause and effect, it is important to highlight that since 2014, the year WhatsApp was acquired by Facebook and only two years after the acquisition of Instagram, Facebook's revenues have increased exponentially. In fact, there are other reasons to explain the exponential growth of Facebook's revenues since 2014, but it is reasonable to conclude that the acquisitions of Instagram and WhatsApp also played a crucial role in that growth.

82 "As regards the ability of the merged entity to introduce targeted advertising on WhatsApp, this would theoretically be possible, subject to WhatsApp changing its privacy policy. [...] As with all Facebook services, to the extent an affiliate of Facebook engages in any sharing of data with another affiliate, it will do so in a manner consistent with the promises the relevant affiliates have made to users and with notice to the extent required by law. [...] As regards the ability of the merged entity to collect data from WhatsApp users who also have a Facebook account and use them for advertising on Facebook, this would require, first, a change in WhatsApp's privacy policy" (paragraphs 173, 182 and 185 of the [European Commission decision](#)).

83 "The Notifying Party submits that the data that WhatsApp has access to is at best of marginal utility for Facebook's advertising purposes and would not enhance Facebook's ability to target advertisements on its services. Today, the only data that WhatsApp has about its users is their names and the mobile phone numbers with which the accounts are associated. This data is available to all suppliers of apps installed on users' handsets, including Facebook" (paragraph 181 of the [European Commission decision](#)).

84 According to WhatsApp's [privacy policy](#) in force as of the time of the release of the Portuguese version of this expert report: "We may amend or update our Privacy Policy. We will provide you notice of amendments to this Privacy Policy, as appropriate, and update the "Last Modified" date at the top of this Privacy Policy. Your continued use of our Services confirms your acceptance of our Privacy Policy, as amended. If you do not agree to our Privacy Policy, as amended, you must stop using our Services. Please review our Privacy Policy from time to time".

Figure 33 - The evolution of Facebook's revenues by segment (2010-2020)



Finally, as mentioned in the section that dealt with Facebook/Instagram, the [FTC](#) and a [coalition of 48 US states](#) filed against Facebook complaints alleging abuse of dominant position ([Section 2 of the Sherman Act](#)) and anticompetitive acquisitions ([Section 7 of the Clayton Act](#)); among other goals, the complaints seek a divestiture of assets and a corporate restructuring by Facebook, including WhatsApp. The US states' complaint alleges that WhatsApp was acquired after Facebook had monitored the growth of WhatsApp in terms of number of downloads using an app called Onavo, which was acquired by Facebook months earlier: that is, a data-driven merger to engage in another data-driven merger⁸⁵.

⁸⁵ "In October 2013, Facebook made another acquisition designed to hamper competition. But this time, instead of acquiring a rival or potential rival, Facebook acquired an important tool, 'the planet's largest mobile [data] panel,' with which Facebook could intensively monitor scores of applications and identify and assess emerging competitive threats, including, for example, WhatsApp. The acquisition of the company that owned that tool – an Israeli data analytics company, Onavo Mobile, Ltd. – also enabled Facebook to deny other firms that might seek to acquire these emerging threats access to the Onavo tool. Onavo's core mission as a startup had been to provide data compression and virtual private network ('VPN') services to consumers. By virtue of the data that ran through its service, however, Onavo had the ingredients necessary to offer rich data analytics and the ability to monitor app usage, mobile and Wi-Fi data usage, location data, and in-app user engagement with content by millions of users on their mobile devices. Onavo obtained its data in real time from its network of millions of mobile users that had downloaded the Onavo apps and used its VPNs to access websites around the world – and licensed this data through its 'Insights' service. It described itself as the 'most comprehensive market intelligence service in the mobile industry'. Before its acquisition, Onavo's technology helped its growing roster of technology and venture capital clients, including Facebook, assess and quantify metrics like market trends, user engagement, and user behavior on new and emerging apps and internet services. [...] Zuckerberg and his top executives closely monitored Early Birds Reports and other analyses derived from Onavo data to watch for emerging competitive threats. For example, Onavo data and analytics played a significant role in Facebook's targeting and ultimate acquisition of WhatsApp" (paragraphs 137-139 and 147 of the [US states' complaint](#)).

5.2.4 Apple/Shazam (2018)

The acquisition of Shazam, [announced](#) in late 2017, cost Apple USD 400 million. This transaction was [approved](#) by the European Commission on November 6, 2018. The case was not subject to merger control according to European Community regulations, due to Shazam's low worldwide revenues, which were approximately EUR 45.2 million in 2016.

The case came to the attention of the European Commission through a referral raised by the Austrian antitrust authority which, at the time, had the following cumulative merger control [criteria](#): (i) combined worldwide revenues of the merging parties over EUR 300 million in the year prior to the transaction; (ii) combined revenues in Austria of the merging parties over EUR 30 million in the year prior to the transaction; and (iii) worldwide revenues of at least two of the merging parties over EUR 5 million⁸⁶. On December 12, 2017, the antitrust authorities of Spain, France, Iceland, Italy, Norway, and Sweden endorsed the referral requested by the Austrian authority.

Shazam is a developer and distributor of apps of music recognition for cell phones, computers, and tablets. Through Shazam, users can identify the songs that are playing where they are. The device captures the sound waves of the song and forwards the information to Shazam databases, which returns the name of the song, the artist who is performing the song, the album the song is part of, lyrics, video clips, applications for the purchasing of the song, among other kinds of information. Based on the music patterns of the songs that a Shazam user asks to be identified, the app also suggests other artists and other similar songs, directing the user to streaming apps and websites to purchase or preview the audiovisual content.

Shazam's revenues, at least prior to its acquisition by Apple, derived from the display of advertisements, as well as from agreements with independent companies, commissions earned by directing Shazam users to partner apps and websites, and from the licensing of data and music statistics, used to measure audience levels of artists and songs. According to a [statement](#) by Apple, following the acquisition, Shazam would stop displaying ads to its users.

According to Shazam's [current privacy policy](#), the app collects information about how users interact with partner apps and websites, and also, potentially, the following data: (i) user credentials (Apple ID, email, Google ID, social networks etc.); (ii) "Shazamed" albums and songs, in addition to the recommendations made by the application to the user; (iii) pages visited and buttons clicked on those pages; (iv) cell phone model, operating system, and IP address; and (v) user location. Depending on

⁸⁶ Since November 2017, the Austrian antitrust authority had determined that transactions meeting these criteria are also subject to merger control in Austria: (i) the undertakings concerned achieved an aggregate worldwide turnover of more than EUR 300 million in the last business year preceding the transaction; (ii) the undertakings concerned achieved an aggregate domestic turnover of more than EUR 15 million in the last business year preceding the transaction; (iii) the value of the transaction is more than EUR 200 million; and (iv) the undertaking to be acquired is active to a large extent on the domestic market.

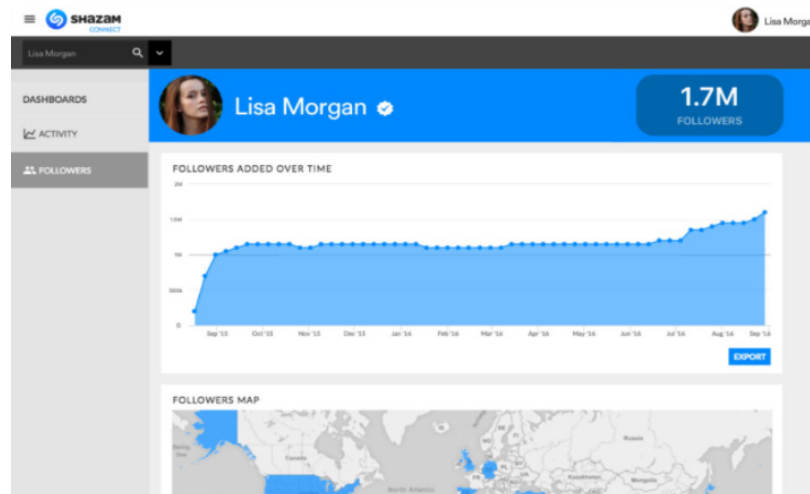
user preferences, Shazam may also be integrated with Apple Music or Spotify, which would give Shazam access to even more data. That information may be shared with third parties and, upon the acquisition, could be used by Apple to improve its own products and services.

For the entertainment industry, the data collected by Shazam is a valuable asset. As indicated in a [CNBC report](#), Shazam knows who is listening to what, when, and where, creating a huge repository of musical information for every user, city, and country. Through Shazam, it is possible to ascertain the musical taste of users, as well as the location and time at which the music was “Shazamed”. Depending on the case and subject to users' permission, it is also possible to identify some of their behavior patterns on music streaming applications.

With those pieces of information, independent artists, publishers, record labels, content producers, and streaming apps can better understand trends and their target audience⁸⁷ – and, in Apple's case, develop new features for Apple Music, increasing competition against Spotify. In addition, with Shazam's data, there is even more detailed information available for professional versions of streaming apps, which contain data analytics for artists and record labels.

87 “The music industry is undergoing a significant change with a shift from physical to digital distribution. In this environment, user data already plays an important role today and that role is likely to grow in the future in the music industry. Such data may include: (i) device data (for example, unique device identifier, device language, operating system), (ii) demographic data (for example, name, gender, age); and (iii) behavioural data (for example, user's clicks in app, the time users spend in various screens, microphone volume level, track titles, artists, time and location of when a song has been played, the reason why a song stopped playing, social media activity). The user data gathered by the players in the music industry has several different uses, including but not limited to: (i) development of new methods for delivering music to consumers; (ii) generation of data analytics; (iii) helping artists to understand their performance; (iv) identification of new music trends and prediction of future music hits; (v) understanding the music tastes of listeners in order to offer personalized playlists and provide music recommendations; and (vi) targeting advertising. In the past, in order to gather similar data and generate useful insights, the music industry relied primarily on more traditional sources of information, such as physical sales data and how often songs were played on the radio. Today, with the transformation brought by digitisation, there are more players active at different levels of the music industry value chain and more data is available. In fact, the industry can rely on more precise information not only on what people are listening to, but also on where, when and through which device they are listening to it. [...] When consumers use Apple Music, notably by playing video and audio content, Apple collects information on: title and artist of the video and audio played on the app; [...] content the users ‘love’, comment, or share; the time at which the song was played, and the time at which the song stopped playing; [...] where in Apple Music the song was played; device level information (for example [...]), the user's Apple identifier, and the user's Internet protocol (“IP”) address. Similar information is collected by Apple on [...]. Such information is used by Apple in order to produce personalized musical recommendations for its own subscribers, as well as to offer data products similar to those offered by Shazam to the general public. Notably, Apple displays for free on its websites and apps music charts based on its iTunes sales data (‘music consumption charts’). Such data can provide useful insights to music labels and artists on the performance and “trendiness” of their repertoire. Moreover, in January 2018 Apple has launched ‘Apple Music for Artists’, which includes a dashboard giving artists access to a database on consumers' listening and buying habits. [...] The Customer Information could be used by Apple to improve the performance of its customer acquisition effects, by performing more targeted advertising or marketing campaigns aimed at customers of rival music streaming app service providers (in particular Spotify's freemium customers). This customer group could arguably be more prone to switching and take an Apple Music's subscription, compared to the universe of all other potential addresses of Apple's targeted advertising or marketing campaigns, which may be not be a music enthusiast. In turn, this could undermine the growth of Apple Music's rivals, in particular those operating on the basis of a business model whereby the conversion of free users into paid subscribers is important” (paragraphs 64-66, 71-72 and 215 of the [European Commission decision](#)).

Figure 34 - Shazam with data for artists and labels



The [Bureau Européen des Unions de Consommateurs](#) ("BEUC") was reportedly involved in the merger review process conducted by the European Commission and had raised some antitrust and data protection issues. Although it was not possible to have access to BEUC's submissions to the European Commission, BEUC made available a [blog post](#) about its views on the case. Essentially, BEUC's concern was that Shazam would treat Apple products in a more favorable manner.

Aspects involving access to and acquisition of data were not investigated in detail by the European Commission. In fact, the European Commission was more concerned about the possibility of discrimination and market foreclosure affecting iOS v. Android and Apple Music v. Shazam, on the basis that, following the acquisition, Apple could make it difficult for Shazam to be interoperable with competing music streaming platforms and operating systems. There was also a concern associated with the possibility of Apple having potential access, via Shazam, to sensitive data from Spotify, especially what songs are being listened to, playlists, and friends' activities. However, the European Commission understood that, even though from a technical perspective it would be possible for Apple to have access to those kinds of data, Apple would not take advantage of those kinds of data as a result of contractual restrictions⁸⁸.

Since Apple was not a direct competitor of Shazam in the markets for development and licensing of music recognition apps, the transaction was approved without conditions by the European Commission. The European Commission essentially understood that: (i) Shazam does not have a significant

⁸⁸ There is no reason to discredit this claim, but that argument, by itself, seems not to be sufficient to eliminate antitrust concerns. When Google acquired DoubleClick, Google said to the European Commission that Google was prevented from having access to data of DoubleClick. However, after the acquisition, relevant agreements had been changed to allow Google to have access to databases of DoubleClick. More details on the matter can be found in the [European Commission decision](#) in Google/DoubleClick.

market position and has low revenues⁸⁹; (ii) the data collected by Shazam was limited to the music industry and was complementary to the data that Apple already gathers from the users of its products and services⁹⁰; and (iii) there were other companies, such as Google, Facebook, Microsoft, and Twitter, which also collect personal data from their users for targeted advertising purposes⁹¹.

The findings indicated above are not factually incorrect, but they are objectionable.

Without doubt, the goal of any business is to maximize its profits and its number of users. However, in the technology sector, low revenues do not necessarily entail that a company does not have a critical mass of valuable information and usefulness, especially from the perspective of an acquiring company. Developing apps and algorithms is costly and it is not possible to predict when

89 "First, the evidence in the Commission's file indicates that, albeit Shazam has a significant market share in the market for music recognition apps and its competitors do not appear to have the same strength in particular in terms of brand recognition and attractiveness to users in the EEA, this does not appear to have translated in a significant degree of market power, including vis-à-vis providers of digital music streaming apps. Indeed, the revenues generated by Shazam from the partnership with digital music streaming apps are very limited" (paragraph 281 of the [European Commission decision](#)).

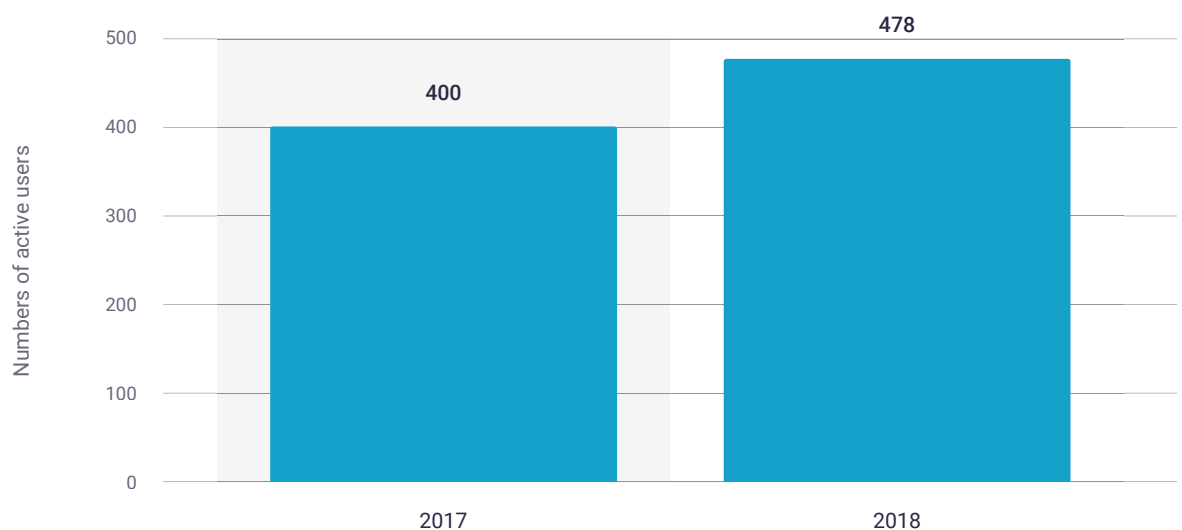
90 "In the market investigation, the Commission has investigated the degree of substitutability (or complementarity) between the Parties' different data products, notably their music data charts. In this respect, the majority of the respondents to the market investigation indicated that Shazam's charts are complementary to rather than substitutable for Apple's charts because the music charts compiled by Shazam may give an indication of the popularity of certain music tracks, as well as of future music trends (music discovery) while Apple's charts reflect estimates of Apple's own music sales and/or usage patterns (music consumption)" (paragraph 123 of the [European Commission decision](#)).

91 "During the first phase investigation, the Notifying Party submitted that the publication of music data charts and similar music data analytics does not correspond to a specific activity belonging to a relevant product market, but is instead an ancillary feature of the core business of music streaming or voice recognition. However, if a market existed for the collection of data on individuals' music tastes and the analytics of such data, such a market should, according to the Notifying Party, not be limited to data collected in the digital music industry, but should cover all data compiled relating to music preferences, including data gathered by undertakings active in the wider field of online social networks, such as LinkedIn, Facebook, WhatsApp or Google which collect the same type of data on their users, and even additional and more valuable information. [...] The ability to access the Customer App Information on Android, and thus to derive the Customer Information, is not limited to Shazam and would not be limited to Apple post-Transaction. Indeed, any app that is installed on an Android device is allowed by the Android Developer Guidelines to access the Customer App Information. Although arguably Shazam's installed base allows it to gather the Customer App Information for a very high number of (music enthusiast) users, the same would be true for Facebook and Twitter, for example, which also collect information on their users' interest. In fact, even if Apple were to gain access to the Customer Information, its ability to target subscribers of competing music streaming services post-Transaction is not set to increase materially. Indeed, the market investigation confirmed the Notifying Party's claim that there exist several providers, including, but not limited to Facebook, Google, and Twitter, which allow for the targeting of music enthusiast audiences (including some players allowing targeting of audiences of users of digital music streaming distributors, such as Spotify app users) which Apple could rely upon to target such users already pre-Transaction. Further, the ability to target subscribers of competing music streaming services post-Transaction would not be limited to Apple, as Apple Music's rivals could also rely on the same third party services post-Transaction (as well as pre-Transaction). [...] Finally, Shazam's data on user music discovery is not a key asset and is not unique. Shazam's User Behavioural Data [...]. In the music industry, the most potentially valuable data relates to actual music consumption (that is, sales, streams) because that is most representative of the correlation across multiple songs a user may like. As a result, the most interesting and valuable data to offer digital music streaming services is held by music streaming providers themselves. [...] Even considering the potential market segment for online advertising for music enthusiasts, the Commission notes that, as explained in Section 8.3.3.2., a number of major companies offering online advertising services on inventories far larger than Shazam, including Google and Facebook, allow advertisers to target music enthusiasts and would remain available to competitors of Apple Music post-Transaction" (paragraphs 120, 247-248, 271 and 301 of the [European Commission decision](#)).

the investment will be recouped; the ways through which the owner intends to monetize its apps and algorithms also play a significant role (monthly subscription, single purchase, partnership with websites and other applications, selling advertising, etc.).

Before it was bought by Apple, Shazam had accumulated operating losses of approximately USD 23.4 million in 2017 – a figure that is negligible for a deep-pocketed acquiring company⁹². Notwithstanding that, Shazam had a substantial worldwide user base of approximately 478 million people. Shazam was an independent app developer operating with negative financial results, but when Shazam and its databases are integrated with Apple's operations, enhanced functionalities and new ways to monetize Shazam become available, so that Shazam could even overcome its past financial losses. According to [Billboard news](#), it seems that that was exactly what happened to Shazam after its acquisition by Apple: Shazam started generating profits as early as 2018.

[Figure 35 - Number of active Shazam users \(2017-2018\)](#)



In relation to data complementarity, there is simply no point in acquiring a competing or overlapping database: repeated data increase storage and processing costs without necessarily adding any value to the acquiring company. From the perspective of the acquiring company, the goal is to gain control over data that the acquiring company was not able to collect before the transaction, so that the transaction may enhance its data portfolio concerning new users to offer them new products and services, as well as products and services that are even more personalized⁹³.

⁹² According to information from the [Digital Music News](#), Shazam's 2017 financial statements can be found at [this link](#).

⁹³ "Data complementarity: many contend that combining diverse data may give an advantage. For example, Google can improve its search results pages by using the clicks of other users making similar queries. That is, it can learn by leveraging on its scale. Or it could improve / personalize its search results by combining data coming from its email app Gmail or other lines of business. [...] Suppose we are trying to predict the value of some variable Y and there are two datasets X and Z containing relevant information. For instance, if Y is

Finally, the arguments used by the European Commission to dismiss antitrust concerns involving a potential increase in the capabilities of Apple and Shazam to collect additional data from their users are inadequate. The European Commission stated that, as Google, Facebook, and Microsoft also have access to personal data for advertising purposes, Apple would not be the only company engaging in this kind of practice. In fact, it is reasonable that Apple shall not be discriminated by anti-trust authorities in a scenario where other companies are allowed to adopt similar practices. However, it is unreasonable, at least from a user perspective, that the European Commission automatically admits a potential elasticity in terms of use of personal data collected by Shazam, in a different context and prior to the acquisition, simply because other companies engage in similar practices.

5.2.5 Google/Fitbit (2020–2021)^{94–95}

In November 2019, Google announced its plans to acquire Fitbit Inc. (“Fitbit”), which manufactures smart watches and wrist-worn wearables that monitor physical and daily activities of its users. Fitbit collects data on people's health every day, such as the number of calories they burn, heart rates, the quality and length of sleep, weight, etc. Fitbit also owns worldwide databases and health social networks, which enables Fitbit to develop intelligent solutions to improve the businesses of healthcare service providers and insurers. The transaction involved the payment of USD 2.1 billion for the corporate control of Fitbit. According to Google, the acquisition of Fitbit did not have the goal of acquiring more personal data for advertising purposes.

a binary variable telling whether a particular user is interested in purchasing a given product then X could contain the activity of the user on social networks and Z could contain her activity on the world wide web, say her browsing history. Clearly adding Z to X or X to Z allows mechanically for better prediction. But how much? Typically, variables in X and Z are correlated. Individuals tweeting about technology are more likely to visit online electronic retailers. This correlation reflects substitutability among data sets. That is, to some extent both data sets contain the same information when it comes to predict if a consumer would be interested in buying a new product for advertising purposes. If firms are paid on the basis of how accurate their predictions are, substitutability alone means that the willingness to pay for data set Z is lower for firms who already have data set X compared to those who do not. Or, in other words, that the value of the bundle X+Z is lower than the sum of the value of having X and the value of having Z alone. Complementarity, instead, reflects the idea that the willingness to pay for Z is higher for firms who already have X. This may occur, for instance, if the covariates interact somehow. Tweeting about a product maybe a better predictor of the intention to buy it if the consumer has looked up this product on an e-commerce website. X and Z can be both complements and substitutes at the same time. Which one prevails depends on whether the willingness to pay for Z is higher or lower for those who already have X relative to those who do not” ([LEAR's Report for the CMA on Ex-post Assessment of Merger Control Decisions in Digital Markets](#), p. 160).

⁹⁴ Part of this analysis was included in “[Why we should be careful about Google's promises in the Fitbit deal](#)”, an article written by the author and published by ProMarket, the publication of the George Joseph Stigler Center for the Study of the Economy and the State, linked to the University of Chicago. DPB invited to author to elaborate this expert report as a result of that article

⁹⁵ Disclosure: IDEC filed a complaint before CADE asking Google to submit the acquisition of Fitbit for merger control in Brazil. As IDEC stated on [its website](#): “this initiative is part of an international coalition to put pressure on antitrust authorities around the world to examine the impact of the Google-Fitbit transaction, [...] which is an emblematic case on how the processing of personal data can be used to reduce the quality of services and, consequently, competition in the digital and healthcare markets”. Notwithstanding that, IDEC has not had any influence on the analysis carried out in this expert report, which is the result of independent research and ideas of the author.

At least as of the date of this writing, there are no publicly available antitrust decisions involving this case. The author interacted with the European Commission to try to find out when the clearance decision would be made available and was informed that the European Commission and Google were still discussing some confidentiality aspects of the nonconfidential decision to be made available on the website of the European Commission. The ACCC has not yet issued a decision on the acquisition of Fitbit. As the critical analysis of the acquisition of Fitbit is only based on publicly available materials as of March 2021, the author may have incurred in material mistakes or omissions which the author reserves the right to correct, if appropriate, as soon as the nonconfidential versions of the decisions of the ACC and the European Commission are published.

The author has examined almost all Fitbit's [financial reports](#) since its IPO; as such, the analysis presented here is based on those financial documents. The quantitative data provided by Fitbit to the Securities and Exchange Commission ("SEC") indicates that, from a financial perspective, the company has failed to perform as expected across the years – and that aspect was reflected in Fitbit's shares.

Upon its IPO, in June 2015, Fitbit's shares were [priced at USD 20.00](#). Although Fitbit shares rose soon after the IPO, reaching approximately USD 50.00 per share, Fitbit's shares plummeted to USD 10-15.00. In mid-2016, the shares were traded at around USD 15.00; in mid-2017, Fitbit's shares traded at less than USD 10.00; in 2018, Fitbit's shares consistently traded at prices USD 6.50; and in 2019, prior to Google's announcement of the acquisition, Fitbit's shares traded at USD 3.00-5.00. After the announcement of the acquisition, Fitbit's shares experienced a price appreciation and were traded at USD 6.00-7.00.

The two figures below show the historical share price of Fitbit's common shares in 2015-2020, as well as a comparison between the cumulative returns of Fitbit's shares v. S&P 500 and Nasdaq Composite indexes from 2015 to 2019:

Figure 36 - Compared financial performance: Fitbit v. S&P 500 and Nasdaq Composite

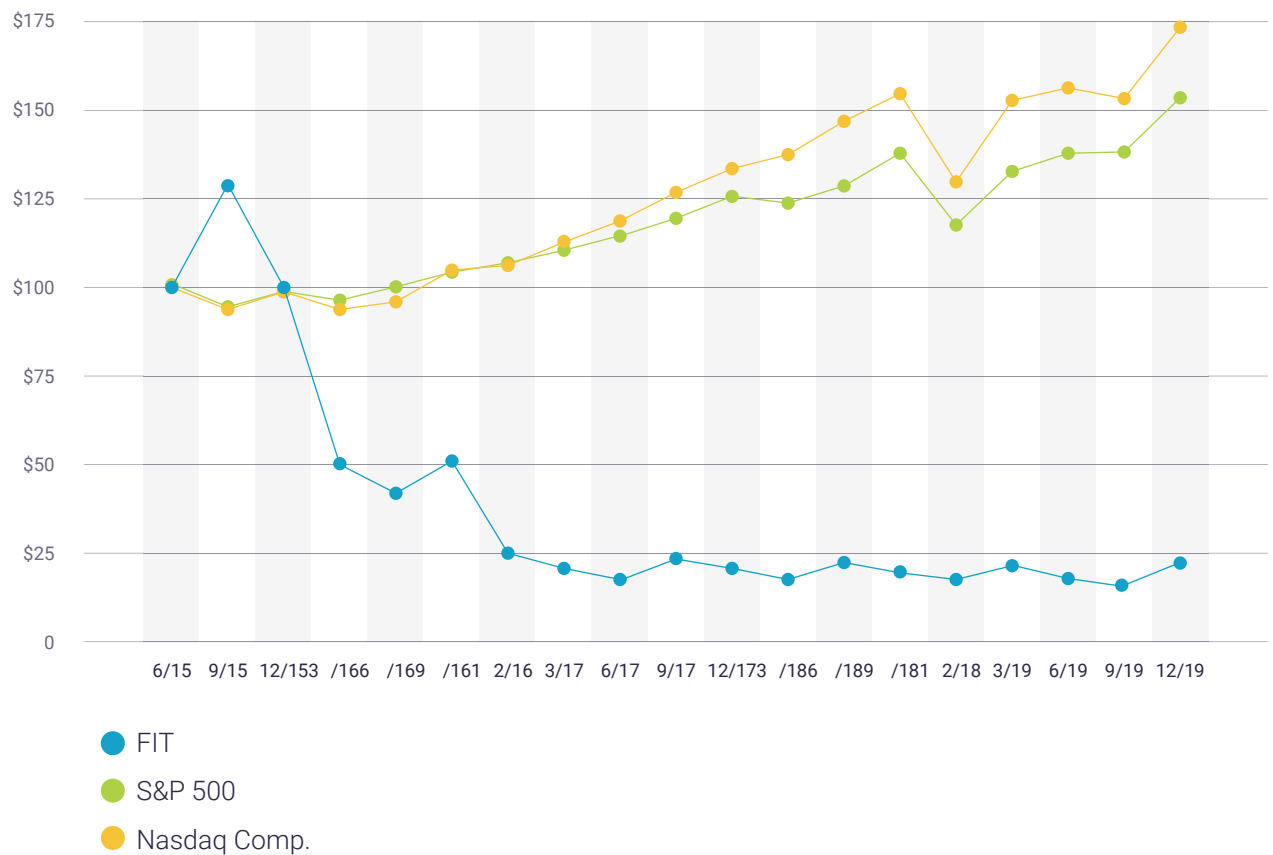


Figure 37 - Chart with Fitbit's share prices (2015-2020)

Fitbit Inc (FIT)

6.93 unch (unch) 01/14/21 [NYSE]

QUOTE OVERVIEW for Thu, Jan 14th, 2021

Day Low	6.93	Day High	6.93
Open	6.93		
Previous Close	6.93		
Volume	1,700		
Avg Vol	4,196,255		
Stochastic %K	58.06%		
Weighted Alpha	+5.24		
5-Day Change	-0.13 (-1.84%)		
52-Week Range	5.85 - 7.34		



Fitbit's financial statements indicate that the company has been facing negative net results since 2016. Although Fitbit's revenues increased between 2015 and 2016, after 2016 Fitbit's revenues significantly decreased. Fitbit's negative net results of 2016 more than tripled in 2019. At least by October 2020, Fitbit had recorded a net loss of USD 138.25 million, approximately 30% less than the figure recorded for the same period in 2019, that is, USD 199.87 million. As can be seen in the tables below, Fitbit's net and operating margins have also been consistently negative over the years.

[Figure 38 - Fitbit's financial statements \(2015-2019\)](#)

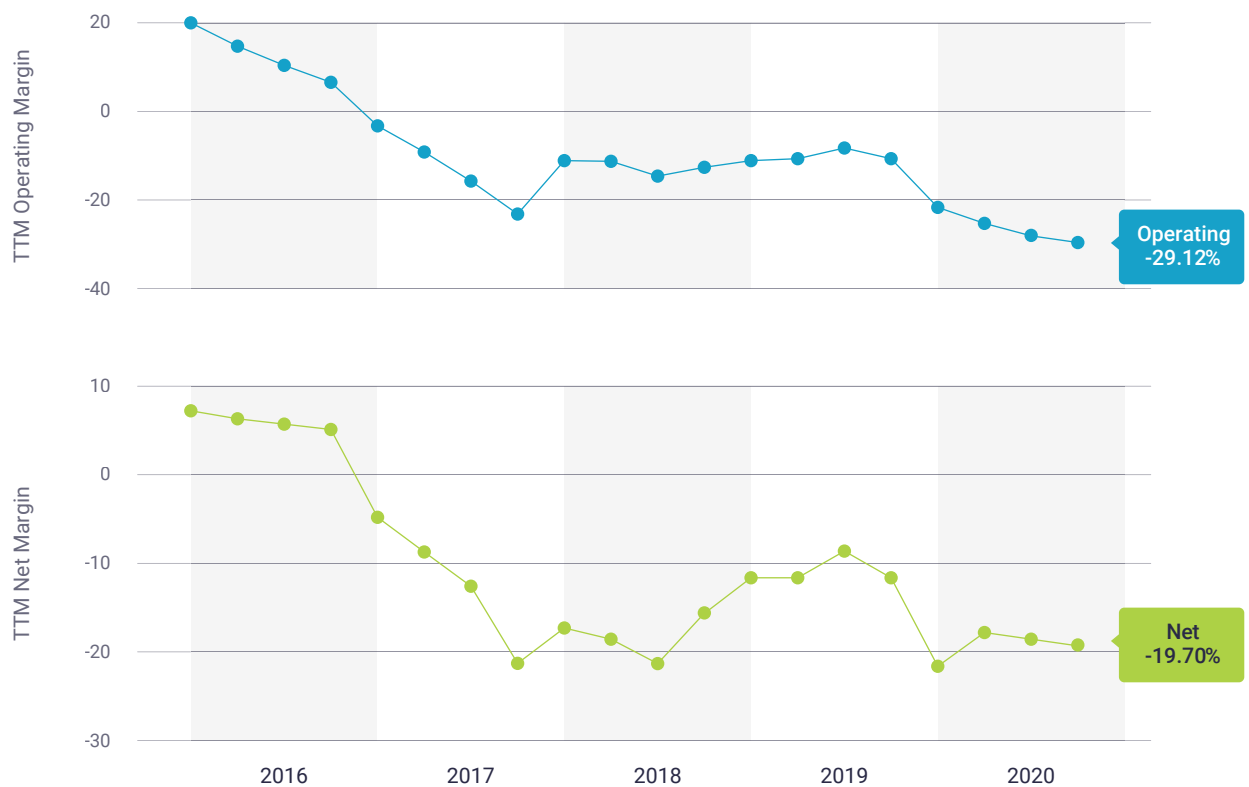
	For the Year ended December 31				
	(in thousands, except per share data)				
	2019	2018	2017	2016	2015
Consolidated Statements of Operations Data					
Revenue	\$ 1,434,788	\$ 1,511,983	\$ 1,615,519	\$ 2,169,461	\$ 1,857,998
Cost of revenue	1,007,116	908,404	924,618	1,323,577	956,935
Gross profit	427,672	603,579	690,901	845,884	901,063
Operating expenses:					
Research and development	300,354	332,169	342,012	320,191	150,035
Sales and marketing	329,800	344,091	415,042	491,255	332,741
General and administrative	118,231	116,627	133,934	146,903	77,793
Change in contingent consideration	---	---	---	---	(7,704)
Total operating expenses	748,385	792,887	891,988	958,349	552,865
Operating income (loss)	(320,713)	(189,308)	(201,087)	(112,465)	348,198
Interest income (expense), net	10,291	7,808	3,647	3,156	(1,019)
Other income (expense), net	1,357	(2,642)	2,796	14	(59,230)
Income (loss) before income taxes	(309,065)	(184,142)	(194,644)	(109,295)	287,949
Income tax expense (benefit)	11,646	1,687	82,548	(6,518)	112,272
Net income (loss)	\$ (320,711)	\$ (185,829)	\$ (277,192)	\$ (102,777)	\$ 175,677

[Figure 39 - Fitbit's financial statements \(3Q 2020\)](#)

	Three months ended		Nine months ended	
	Oct 03, 2020	Sep 28, 2019	Oct 03, 2020	Sep 28, 2019
Revenue	\$ 363,932	\$ 347,200	\$ 813,362	\$ 932,646
Cost of revenue		228,120	529,586	627,027
Gross profit		135,182	283,776	305,619

Revenue	\$	363,932	\$	347,200	\$	813,362	\$	932,646
Cost of revenue		228,120		239,248		529,586		627,027
Gross profit		135,182		107,952		283,776		305,619
Operating expenses:								
Research and development		90,771		65,693		256,093		213,651
Sales and marketing		60,726		71,296		183,157		222,972
General and administrative		35,493		23,083		112,583		74,640
Total operating expenses		186,990		160,072		551,833		511,263
Operating loss		(51,178)		(52,120)		(268,057)		(205,644)
Interest income (expense), net		(268)		2,388		1,038		8,476
Other income (expense), net		965		(492)		3,198		1,242
Loss before income taxes		(50,481)		(50,224)		(263,821)		(195,926)
Income tax expense (benefit)		3,971		1,669		(125,566)		3,950
Net loss	\$	(54,452)	\$	(51,893)	\$	(138,255)	\$	(199,876)

Figure 40 - Fitbit's net and operating margins (2016-2020)



There are several factors that may have damaged Fitbit's share price and Fitbit's cash generation ability. Frequently, startups do not generate profits in their early years, and all the money they generate is reinvested in their operations, as well as in research and development. It seems that Fitbit was doing exactly that. It is also frequent that companies that have strategic assets but are not being able to maximize their profits are subject to transactions through which their corporate control is changed. This is a good practical example of the [Coase's theorem](#): under certain market conditions, when transaction costs are low – which seems to be the case here: Google is a financially sophisticated company active in the technology sector with access to relevant data on the target company; Fitbit was a publicly listed company that used to upload its financial data on the SEC website; Google and Fitbit are able to hire the best financial and legal advisors available on the market, etc. –, it is reasonable to assume that assets will be allocated to the economic agent that values them the most.

Every corporate transaction is intended to increase the target company's possibilities to generate cash flows. Considering that it seems that Fitbit was not able to obtain significant financial results by selling the wearables it manufactured as an independent company, it is necessary to understand the way Google intends to monetize Fitbit from now on.

Google said that the acquisition of Fitbit was not about data, but hardware. It is possible that Google has some innovative ideas on how to revolutionize Fitbit and integrate it with other products and services that users will appreciate. However, at this juncture, without having further information (which is subject to confidentiality protections because it refers to IP rights of Google and Fitbit), it is difficult to predict what Google intends to do with Fitbit. It seems that Fitbit's most valuable asset is its powerful database, particularly because the technology associated with the manufacturing process of wearables seems not to be irreplicable; [Amazon has recently entered](#) the wearables market, and there are many manufacturers active in that market.

Google has the money, brands, distribution channels, and the people to develop and sell virtually all kinds of hardware or software if it wants to. Google did so with its Google Pixel phones in a market [dominated by Samsung, Huawei, Apple, and Xiaomi](#). So, Google can also develop its own smartwatches and fitness trackers to compete with Apple, Samsung, Fitbit, and Garmin.

Google is virtually ubiquitous and has access to massive and granular information on its users via a [multitude of ventures](#), such as Android (mobile OS), Calendar (time-management and scheduling assistant), Chrome (web browser), Drive (cloud solution), Gmail (email), Maps and Waze (real-time geolocation), Nest (smart speaker for voice interaction with services through Google Assistant), and many others. But one thing Google does not have yet is a tool to directly monitor the daily activities and lifestyles of its users. Fitbit presents a singular opportunity to fill this gap. As soon as Google takes control over Fitbit, it is likely that Fitbit will become profitable, but not necessarily through the sales of wearables – the relevant market that is being investigated by antitrust authorities. The trump

card for Google concerns adjacent markets, such as online advertising, or new markets, such as digital healthcare.

This transaction could theoretically allow Google to receive sensitive information from Fitbit users and combine the databases of both companies. This antitrust issue was raised on June 18, 2020, by the ACCC in its [statement of objections](#): “Based on Google's track record of strategic acquisitions, this would have allowed the company to increase its touch points with users, accumulate additional information from these users and strengthen its market power”. On August 4, 2020, the European Commission initiated a [Phase II](#) merger review to determine: Google's data advantage in terms of targeted advertising; the effects of a combination of the databases of Google and Fitbit, as well as how that combination might affect the market for digital healthcare solutions; and potential incentives for degradation of interoperability of competing wearables with Android.

Apart from using Fitbit data for targeted advertising purposes, the proposed acquisition is of particular relevance at a time when Google is reportedly exploring [new ventures](#) in the health care industry by collecting and processing medical data from patients in 21 US states. Considering that Fitbit has almost [30 million active users](#) and a [decade's worth of records of detailed health metrics](#) Fitbit appears to be a strategic and well-timed acquisition. After all, Fitbit has [recorded and validated](#) more than 181 billion hours of heart rate data, 9 billion nights of sleep, 457 billion minutes of exercise, 175 trillion steps, and 10 million added female health tracking of menstrual cycles and fertility windows.

As [noted by the ACCC](#), Fitbit has non-replicable and unparalleled datasets on its users, since a wrist-worn device that is used all the time collects metrics that cannot be captured accurately by other means such as browsing history, credit card spending patterns, behavior on social media, location, and cookies. After the Fitbit acquisition, Google could combine its super profiles with the vast trove of personal health information from Fitbit to monetize ads⁹⁶.

A significant part of Google's business refers to the collection and use of personal data for online advertising purposes, which represents most of Google's revenues. Leaving aside Fitbit databases, there are some hardware-oriented ventures for Google to explore. Some examples are: to acquire manufacturing plants of smartwatches and fitness tracks; to enter into licensing and technology transfer agreements with Fitbit. In those alternative scenarios, both companies and their respective databases would remain separate, which would mitigate reasonable antitrust concerns raised by some antitrust authorities and nonprofits organizations.

Specifically in relation to nonprofit organizations, it was possible to see that they have played

⁹⁶ MORTON, Fiona M. Scott; DINIELLI, David C. Omidyar Network: [A Roadmap for a Monopolization Case Against Google Regarding the Search Market](#), 2020, p. 19.

an active role in the merger control investigation of this transaction, something that was not so obvious in the other data-driven mergers analyzed in this expert report. DPB and IDEC engaged in discussions with several international advocacy groups and compiled a document containing the main submissions of those groups in connection with the acquisition of Fitbit⁹⁷. The most important parts of those submissions are reproduced below:

[Australian Privacy Foundation](#) (“APF”): submitted a [statement to the ACCC](#) saying that institutional cooperation among foreign authorities would help counterbalance potential regulatory arbitrage between countries, and that the transaction is inconsistent with the recommendations of the [ACCC Final Report on Digital Platforms](#). It also submitted a memo by Professor Bruce Baer Arnold, Canberra Law School, which contained the following arguments: (i) health data is one of the most important assets a company can possess, as it indicates how a person lives in terms of their choice of food, physical exercises, sleep patterns, education levels and occupation, in contrast to simple demographic data such as age, gender and ethnicity. The value of that information is based on the scale of the data, which is immediately processed and covers millions of identifiable people, and based on the potential to combine that data with other data, which provides many ways to deploy targeted advertising of products and services; (ii) the acquisition of Fitbit is part of Google's global strategy to increase its footprint in the healthcare market; (iii) given that Google faces fierce competition from other wearables manufacturers, and that the margins of that industry are low, Google would not necessarily be interested in marketing this type of hardware; (iv) Google would be acquiring personal data from residents of virtually all developed countries, and no other company could reasonably replicate that data; (v) by acquiring Fitbit, Google would have a consolidated brand and a ready-made user base from which it would be possible to create a constant flow of information to support partnerships with health insurers; (vi) the transaction would result in the expansion of Google's family of products and services, which should be considered an “information group”, given that its activities depend on the collection, processing, and dissemination of personal data; (vii) the constant expansion of those “information groups” should be subject to laws that reflect society's expectations regarding informed consent, transparency in the processing and sharing of personal data, as well as mechanisms for correction and rescission of consent; (viii) the acquisition of Fitbit would not affect the wearables market, which does not necessarily involve sophisticated technology protected by patents, and would make it possible for Google to engage in discriminatory

⁹⁷ The author thanks Camila Leite Contrí, Researcher at IDEC's Telecommunications and Digital Rights Program, for coordinating this international cooperation.

practices in the online advertising market; (ix) Google's access to data collected by Fitbit would allow Google to expand its activities into the healthcare market, in which Google might enter into agreements to share users' personal data; (x) competent authorities should pay special attention to: (a) the identity of the entities that will receive data from Google; (b) what data will be shared by Google; and (c) what is the purpose of using this data; (xi) relevant authorities should treat transactions carried out by Google as a means for Google to expand its data portfolio, rather than examining each transaction individually and taking into account only the particularities of a given market segment; (xii) It is not clear how Fitbit will share users' personal data with third parties, and the acquisition may increase the level of intrusion of Fitbit's privacy policies; and (xiii) some healthcare companies are already offering wearables to its consumers, a practice that is not sensitive by itself. However, it is important that consumers are given all the information necessary to understand how wearables work, what information they collect, and the extent and scope of the consumer's relationship with the health insurer and third parties. Consumers should also have the right, at any time, to revoke their consent without suffering any harm (such as discriminatory commercial conditions or denial of healthcare services). It is also important that health insurers publish their policies that govern their personal data collection and use practices.

BEUC: submitted a [statement to the European Commission](#) asking for a careful examination of the case, on the basis that previous decisions involving data-driven mergers were wrong and resulted in a number of antitrust investigations into the practices of the main companies active in the technology sector. BEUC's main allegations were: (i) the acquisition may reduce consumers' choice rights and hinder their privacy rights; (ii) the European Commission should carefully examine the potential effects derived from the transaction affecting the accumulation of data at a large scale, in line with the recommendations of the [Competition Policy for the Digital Era Report](#) and the [Communication on the European Data Strategy](#); (iii) users are generally unable to bargain for their privacy rights and are subject to unilateral privacy policies imposed by companies; (iv) even if Google did not use Fitbit data for online advertising purposes, other Google divisions, especially those involved in healthcare projects, might use Fitbit data; (v) Google has a history of backtracking on its commitments affecting the non-combination of databases, as happened in the acquisition of DoubleClick; (vi) after the acquisition of Fitbit, Google would be able to establish barriers to the entry/expansion of competitors as they would need access to a similar level of information as that collected by Fitbit; (vii) the European Commission should take into account the content of the personal data collected by Fitbit, the variety

of information collected from the same user, the speed at which data is gathered and the economic relevance of that data; (viii) as Google already has agreements with healthcare companies to digitalize and process medical data from patients, Google could combine those kinds of data with the data collected by Fitbit and develop artificial intelligence tools that would give Google considerable power in the healthcare sector, even in the short term, as an entrant. In that situation, Google might freely collect personal data from Fitbit users and combine it with medical information collected free of charge from hospitals and health insurers and then sell health intelligence solutions at monopoly prices⁹⁸; (ix) it is impossible to rule out the possibility that Google is acquiring Fitbit to “exterminate” a nascent competitor (killer acquisition), which could potentially represent a threat to Android products; and (x) Google might terminate the licensing of its wearables operating system to competitors or discriminate against competitors which offer users more protective privacy policies.

Electronic Frontier Foundation (“EFF”): published an [article on its website](#), which was shared with the DoJ. It asked for the transaction to be blocked. EFF's main allegations were: (i) the acquisition of Fitbit would take away from Fitbit users their right and expectation of not having their personal data collected and processed by Google, from which they did not buy the smart watches. The acquisition would entail the transfer of personal data collected by Fitbit – which users consented to – to Google, a company that users had no prior voluntary relationship with; and (ii) users should be free to keep using the systems they learned to use and paid for this use rather than be forced to give their personal data to Google, which is expected to exercise its business model based on the constant “surveillance” of users' habits.

98 With respect to this topic, BEUC raised some examples involving DeepMind Technologies Limited (“DeepMind”), a subsidiary of Google in the UK, focused on artificial intelligence solutions for the health and neuroscience industries: “An independent panel reviewing Google’s DeepMind and its use of public UK NHS health data highlighted that ‘there would be considerable sensitivity if Deep- Mind Health’s business model involved selling data, either in a depersonalized form or in a raw form’. It also recommended that DeepMind Health should ‘look at ways of entrenching its separation from Alphabet and DeepMind more robustly so that it can have enduring force to the commitments it makes’ – a recommendation that seems to have been ignored given that Google has now apparently fully integrated DeepMind Health within it. Furthermore, DeepMind’s integration with Android, exacerbates the problem of establishing what Google is doing with such individual personal data. DeepMind Health has been reported to have pledged that data will never be connected to Google accounts or services, or used for any commercial purposes like advertising or insurance. However, an independent panel tasked with looking into this highlighted a mammography partnership with Royal Surrey County Hospital NHS Foundation Trust in the UK, where digital images of historic mammograms, stripped of their personal data, were hosted on Google’s Cloud service – ‘which might lead some to think that this promise was already being broken’. Furthermore, Google has announced that the data and AI from another NHS project could go global in that its resulting Streams app ‘could become an essential healthcare tool for medical professionals across the globe’ (see footnote 51 of the [submission filed by BEUC before the European Commission](#)). Further details on the facts reported by BEUC may found on Wired UK: [Why Google consuming DeepMind Health is scaring privacy experts](#).”

[Open Technology Institute](#) (“OTI”): submitted a [statement to the European Commission](#) during Phase II of the merger review, criticizing Google's proposed remedies for keeping databases separate. OTI's main allegations were: (i) the scope of the remedies offered by Google is limited and it will be difficult to enforce the conditions set out in the draft merger control agreement; (ii) despite the preliminary remedies offered by Google, Google would still be able to use Fitbit data, such as device information, GPS data, device usage levels, and information collected by third parties, for targeted advertising purposes; (iii) Google's control of Google Maps and Waze means that it would be even better placed to capture location data of its users, especially those who go to places without taking their phones (wearables would play the role of a mobile phone in this case); (iv) apart from the broken promises by Google affecting its acquisition of DoubleClick, prior to acquiring Nest, the CEO of Nest stated that the personal data of Nest users would be managed independently from Google. However, shortly after the acquisition had taken place, Nest informed new users that they would need to create a Google account and required preexisting users to convert Nest accounts into Google accounts; (v) despite the antitrust remedies offered by the merging parties, there are past cases in the United States where some companies have a history of violations of the merger control remedies they agreed upon – and nothing have been done to address that issue; (vi) any method for the monitoring of the conditions offered by Google would require access to information provided by Google itself – and this would also be applicable, to a certain extent, to the monitoring trustees; and (vii) there was a recent whistleblower, allegedly by an employee of Google, that Google had been secretly transferring medical information of 50 million Americans from a healthcare company database to databases and servers owned by Google, in potential violation of US laws. Such practices might become more frequent after the acquisition of Fitbit. More details on the subject may be found in [this article](#) by The Guardian.

[Privacy International](#) (“PI”): PI has probably been the most active nonprofit organization before antitrust authorities for the purposes of the Fitbit merger. Among other documents, PI submitted a [statement to the European Commission](#), a [statement to the ACCC](#), and a [response to the ACCC's statement of issues](#). Taking all three documents into account, PI's main allegations were: (i) the acquisition of Fitbit would reduce Google's incentive to compete in terms of protection of personal data and quality of privacy policies with other manufacturers of wearables; (ii) the data portfolio held by a given company before and after a transaction should be examined by antitrust authorities – the more data a company collects and acquires, the more opportunities it has to combine and integrate more data, and the more valuable is a data-driven merger; (iii) Google

and Fitbit are potential competitors in the market for providing data to healthcare providers; (iv) privacy policies are not binding and may be unilaterally changed by the companies that enact them, so there is no possible way to guarantee privacy rights of users; (v) even if Google anonymized Fitbit data, the data that Fitbit collects is so detailed and granular that it would be technically possible, in principle, to decode and reassemble it based on each users' profile; (vi) Google's market power is part of a vicious cycle involving the amount of personal data Google has and can process: the greater its market power, the more access it has to data, which reinforces its existing market power; and (vii) when a company has a great degree of market power, should the user's privacy rights be reduced, there are no options available for the user, so his/her only choice is to remain with the platform with less rights or exit the platform.

Public Knowledge ("PK"): sent a [brief letter](#) to the DoJ asking them to be prudent when considering the case.

Note: the names of the organizations indicated above have been listed in alphabetical order, so the listing does not represent any sort of order of importance or preference for one entity over another. Substantially similar arguments raised by different organizations have not been repeated above.

An important coalition of economists also expressed their views on the transaction:

Centre for Economic Policy Research ("CEPR"): published an [academic discussion](#) on the case and asked the European Commission to, if possible, block the transaction. CEPR's main arguments were that: (i) a conventional and static view of the dimensions of competition would tend to ignore how much Fitbit data can reinforce Google's dominant position in other markets. The amount and variety of data that Google holds in one market could be used to leverage its position into other markets, cross-subsidising data between different areas of the company; (ii) the new digital healthcare solutions market could end up being created in a concentrated form since its beginning, which would not bring any benefits to users of healthcare and medical services. This is because the data collected by Fitbit could be used as an input into the decision-making of companies in the healthcare sector, which could deny/reduce coverage or price discriminate based on the habits of users; (iii), Google could predict and compare the likelihood of a group of people developing certain diseases, by using artificial intelligence or algorithms. That information would be extremely valuable to medical and healthcare service providers, which would be willing to pay Google significant amounts to avoid high-risk patients; and (iv) the antitrust remedies offered by Google might be technically circumvented and would not necessarily

reduce the antitrust concerns derived from the transaction. This study had a number of co-authors, including [Cristina Caffarra](#), Senior Consultant at [Charles River Associates](#) (“CRA”), and [Tommaso Valletti](#), former Head of the Department of Economics of the European Commission and current Head of the Department of Economics and Public Policy of [Imperial College London](#).

Note: although the author has reproduced the most relevant allegations of the organizations listed above, that does not mean that the author fully or partly endorses those allegations.

The concerns raised by third sector organizations and members of academia are not just potential or overly theoretical. It is possible that more experienced users who are sensitive to privacy issues may migrate from Fitbit to other options that have clearer and more transparent privacy policies. Such a trend could damage Fitbit's operations, as was mentioned by the company in its [2019 annual report](#) and in the [last quarterly report of 2020](#). Those documents indicate that it was still unclear how the acquisition of Fitbit by Google would affect the data collection practices of Fitbit and how the market would react to that uncertainty:

“Our customers and users may experience uncertainty associated with the Merger, including with respect to treatment of user data and concerns about possible changes to our products and services or policies. Similarly, our partners and suppliers may experience uncertainty associated with the Merger, including with respect to current or future business relationships with us. Uncertainty may cause customers or users to refrain from purchasing our products and services, and partners and suppliers may seek to change existing business relationships, which could result in an adverse effect on our business, operations, and financial condition in a way that may be material to our company”.

On December 17, 2020, the European Commission announced that it had [approved the transaction](#) with these main conditions: (i) Google will not use some of the data collected and processed by Fitbit for online advertising purposes (the types of information covered by this restriction are included in Annexes 4 and 6 of the [public version](#) of the merger control agreement with the European Commission)⁹⁹; (ii) Fitbit's databases will be kept separate through the deployment of a technical structure to

⁹⁹ Pursuant to Section F of the [public version](#) of the antitrust remedies, the following businesses are part of Google's advertising division: “any current or future Google Service providing search advertising, display advertising, and advertising intermediation, including advertising measurement, regardless of the property on which ads are displayed, including any Google owned and operated properties. For the avoidance of any doubt, any Fitbit Services providing search advertising, display advertising, and advertising intermediation developed, offered, or sold following closing of the Concentration would constitute Google Ads for the purposes of these Commitments. Google Ads currently includes the following services: Google Ads (includes Google Display Network, Google Search Network, YouTube Ads,

store the protected data, which will be subject to auditing and access controls; and (iii) Google must give users from each Member State of the EEA the chance to accept or deny the use, by Google's divisions other than advertising, of their personal data that is covered by the antitrust remedies and is stored either on Google or Fitbit accounts. ING Bank N.V. ("ING") was [hired](#) as a monitoring trustee. Those conditions shall apply for ten years, and some of them may be extended for another ten years by the European Commission. The conditions relating to API interoperability were not included here because they do not refer to collection, processing, and use of personal data, i.e., the focus of this expert report. Google proposed the same conditions to the ACCC, which [rejected them](#) on December 22, 2020.

The acquisition of Fitbit was the first data-driven merger in the technology sector cleared subject to conditions. This might represent an improvement in terms of antitrust policy, but the outcome of the case before the European Commission is not necessarily the most appropriate. That is because the European Commission seems to have based its decision on the assumption that the only markets in which Google could exert its dominance after the transaction would be the ones for online advertising and software licensing for wearables. For that reason, only those markets were considered during the design of the antitrust remedies.

Indeed, the market for online advertising, where Google has had a dominant position for decades, and the market for wearables, where Fitbit has a small market share compared to other competitors, were directly affected by the transaction; however, they were not the only ones affected by the transaction, so the European Commission should have considered potential effects derived from the transaction on the nascent market for digital healthcare solutions.

According to a [press release](#) by the European Commission, as the digital healthcare market is nascent, it is open and competitive. That approach ignores that the data collected by Fitbit, which is detailed and large in terms of volume, is the richest input a company may have to establish itself in such a nascent market. When that data can be combined with other data held by Google's divisions engaged in healthcare projects, it is possible to expect that Google might start its operations in this new market with a competitive advantage that is not replicable and can create market distortions. Entrants will not have access to Google's data as raw materials – and Google is not subject to any obligation to share such data with third parties; and if Google was willing to share such data with third parties, Google could do that in a discriminatory fashion. Thus, even though the market for digital healthcare solutions is still nascent, it may be virtually dominated since the beginning by Google.

The antitrust remedies agreed with the European Commission allow Fitbit data to be used by Google to develop products and services aimed at the medical and healthcare sectors. While it cannot be used for its targeted advertising business, Google may license such data to hospitals and health insurers, which would be willing to pay significant sums for sensitive patient data. The antitrust remedies also do not prevent Google from migrating data from Fitbit accounts to Google accounts, which would make it possible to combine user data across platforms. A measure like that would result in the same approach reportedly adopted by Google after its acquisition of Nest: for a user to continue using Fitbit, he/she will be required to create Google accounts and migrate his/her data from Fitbit accounts to Google accounts. While at this point it is not possible to affirm that this will necessarily happen, Google's history involving its acquisitions of DoubleClick and Nest should not be forgotten.

The Chief Economist of the European Commission, [Pierre Régibeau](#), explained in a recent [article](#) his reasons for believing that the decision by the European Commission was correct. In short, he stated that: (i) Fitbit has a 5-10% market share in the wearables market in Europe; (ii) the concerns raised by academia and third sector organizations were "apocalyptic" and without evidence; (iii) even without acquiring Fitbit, Google might enter the wearables market and capture data similar to that captured by Fitbit; (iv) there is no evidence that the data collected by Fitbit has any value because there is currently no market for the sale of that kind of data; (v) health data is not scarce and will not necessarily give Google any competitive advantage; (vi) there is no evidence that the combination of Google's and Fitbit's data may be of any productive use to Google; (vii) antitrust authorities are not responsible for examining privacy issues if users are given an option to have the final say; (viii) the ownership of health data on certain users does not necessarily produce negative impacts on the market, as individuals may pay less for healthcare plans in the future; and (ix) had the acquisition been blocked by the European Commission, the merging parties would have challenged such a decision before European courts.

The author respectfully disagrees with all arguments indicated in the paragraph above. Each of those arguments above will be addressed here, in the same order they appeared in the paragraph above: (i) if the transaction only affected the wearables market, indeed, low market shares would not give rise to antitrust concerns. However, it seems that it does not make sense to affirm that the transaction is only about hardware, a market where Fitbit competes against Apple – the absolute market leader – and has poorly performed from a financial perspective across the years; (ii) without having access to the merging parties' internal information, which is only available to them and the European Commission, in fact it is impossible for interested third parties to submit indisputable and sufficient evidence to cause a merger to be blocked; (iii) if Google chose to acquire Fitbit even though Google could have entered the wearables market organically, it is because Google had some reason to do so. It would be difficult for Google to build a robust database as that of Fitbit within a short period of time – not to mention the risks associated with the development of a product that might not become popular and cause the failure of the project; (iv) at least to some extent, there

is no market for the sale of health data collected by Fitbit because there are laws and regulations that limit that kind of practice. The fact that there is no immediate market for something does not mean that what could be potentially sold has no value; (v and vi) if Fitbit's health data were easily replicated and had no value, it is unlikely that Google would have been willing to pay USD 2.1 billion for a company with a poor financial performance; (vii) there is no point in having the final say if the only options available to users are to give consent under pressure or exit the platform; (viii) this argument goes both ways: just as some users may benefit from having their personal data collected and processed by healthcare providers, other individuals may be forced to pay higher fees or be prevented from having access to certain healthcare services. In practice, consumers are more likely to lose than benefit when they are subject to lengthy monitoring of their health habits and lifestyle. Dominant health insurers might also make the use of wearables mandatory for consumers to be entitled to certain discounts or loyalty programs; (ix) there is always a risk that a decision might be challenged by the merging parties, and this cannot be a credible argument to avoid an appropriate decision in an opposite way. It is rare for courts to reverse the merits of the decisions of antitrust authorities, especially in merger cases – provided there are no serious procedural errors that may have harmed the procedural rights of the merging parties – here a memorandum on the matter by White & Case LLP.

I sincerely hope that the official grounds of the European Commission decision are materially different from those discussed above.

On January 14, 2021, Google [implemented](#) the acquisition of Fitbit and asked the New York Stock Exchange (“NYSE”) to delist Fitbit's shares from trading on the stock exchange. On the same day, the ACCC [stated](#) that it will investigate the early implementation of the acquisition. Although the FTC and DoJ have done nothing other than letting the waiting period elapse, it was [reported](#) that the DoJ mentioned that it might still review the merger, notwithstanding the fact that Google had already implemented the transaction. Although this has been a remote possibility over the last years, now it might not be so remote because Google has been facing, at least as of the time of this writing, three antitrust lawsuits brought by the [DoJ](#), a [coalition of states led by Texas](#), and another [coalition of states led by Colorado](#).

5.3 Challenges found

In abstract terms, it is not easy to find the best scope for antitrust¹⁰⁰. This becomes even more acute when it comes to merger control in the context of digital markets, where it is necessary to strike a balance between antitrust and data protection laws. Those laws are imperfect legal frame-

¹⁰⁰ Those issues have been discussed in academia since the 1970s and 1980s, see: EASTERBROOK, Frank H. Limits of Antitrust in University of Chicago Law Occasional Paper, No. 21, 1985.

works that are designed to, among other objectives, protect the interests of consumers and users. Depending on the case, it is difficult to ascertain which tool is the most suitable to address market distortions and implement relevant public policies¹⁰¹.

In concrete terms, below are presented the potential shortcomings of the merger decisions discussed in this report:

Facebook/Instagram (OFT/CMA): only a static dimension of competition was considered. It was not taken into account a possibility that, following the transaction, Instagram could incorporate new features or be used for other purposes. A scenario where Instagram could be monetized by displaying targeted ads to its users, i.e., the same activity that generates for most revenues of Facebook at time of the transaction, was also ignored.

Google/Waze (OFT/CMA): traditional solutions of geolocation and turn-by-turn navigation were considered part of the relevant markets in which Google and Waze used to compete. Standalone GPS devices and GPS integrated with the systems of a vehicle do not collect personal data and do not offer the same options for interaction between users and the potential to generate revenues from targeted advertising. Although maps are public information, Waze's database encompass large user portfolios and their navigation history, things that are not easily replicable and publicly available. The fact that Waze had not reached critical mass in the UK at the time of the transaction does not mean that it was not important from a competitive perspective, particularly because Waze was able to attract 4 million users within just three and a half years since its launch.

Facebook/WhatsApp (Comissão Europeia): the possibility of competition between Facebook and WhatsApp was partly underestimated because Face-

101 "Approaching data protection from the prism of antitrust, which focuses on dominant companies and specific behaviours such as collusion, blinds us from seeing that especially in the absence of an underlying comprehensive privacy protection statute, there are privacy harms committed every day by companies of all sizes and in all types of markets. Given the importance of privacy for people's dignity, political organization, and social life, the protection of personal data should be a goal on its own, standing independently of competition policy. [...] The lack of competition due to high levels of concentration, for example, may make it more likely that dominant platforms will be able to demand more personal data in order to sell more advertisements, but enforcement is triggered only when abuses can be demonstrated. [...] The nexus between accumulated personal information and the dominance of internet platforms is properly within the scope of antitrust review, and antitrust enforcement to remedy anticompetitive uses of personal information can, and should, also strive to maximize consumer welfare through vigorous protection of consumer privacy. [...] Barriers to entry that result from data, from an entrenched user base, or from application lock-in may be just as real as those that incumbent broadband providers benefit from. When it comes both to broadband and internet platforms, it is vital for policymakers to act to address issues of market power, to ensure that consumers are protected, and to ensure that platforms promote public interest values like diversity, equity, and democratic discourse. Antitrust should, in sum, be part of the toolkit necessary to protect the privacy of consumers. But we would be making a disservice to consumers and privacy if we would rely solely on antitrust to protect them" (FELD, Harold; KIMMELMAN, Eugene; ROSSI, Agustín. [The limits of antitrust in privacy protection](#) in International Data Privacy Law, Volume 8, Issue 3, 2018, p. 271-272, 274 and 276).

book had more social networking features than WhatsApp, and WhatsApp was more used on mobile devices. Twitter, Google Hangouts, Snapchat, and Skype were considered competitors active in the same relevant market in which WhatsApp has activities even though those apps were not functionally interchangeable with each other. The price dimension of competition played a significant role, and antitrust concerns were dismissed because there were no incentives for price increases in markets where users received services for free. The sharing of databases between Facebook and WhatsApp was not something initially considered by the European Commission, because the merging parties stated that it was technically unfeasible to do that. Even after becoming aware that the merging parties had been able to overcome that technical barrier and starting an investigation against the merging parties due to the submission of misleading information, the European Commission only imposed a fine on the merging parties instead of revising the transaction based on the new assumption that the integration of databases is technically possible.

Apple/Shazam (Comissão Europeia): it is likely that this acquisition was not designed to affect the online advertising market, but rather to improve the functionalities of Apple Music in terms of recommending songs, music genres, and playlists to users of the platform. It is not necessarily appropriate to compare Apple with Facebook and Google in markets for the collection and use of personal data, because Apple does not make substantial revenues from online advertising, and the personal data collected by Shazam is limited to the musical tastes of its users; also, the capabilities and forms through which such data can be monetized are not comparable to those of Facebook and Google. The fact that Facebook and Google collect, process, and use more personal data than Shazam, by itself, is not enough to waive a more detailed antitrust analysis of the effects that the transaction may have on the privacy rights of Shazam users.

Google/Fitbit (Comissão Europeia): this is the first data-driven merger in digital markets which was approved subject to conditions, although the agreed conditions were probably insufficient. The use of personal data was restricted to the online advertising market, and Google has explicit authorization to use personal data of its users in a market for digital healthcare solutions, which is still nascent. With access to the databases of Fitbit, Google can, at least in theory, start its activities in this new healthcare market with competitive advantages that are not easily matched or replicated by entrants. Google's history of fines imposed by the European Commission and Google's breaches of promises involving the protection of personal data of its users were disregarded.

In Brazil, none of those mergers were submitted for merger control; merger control rules in Brazil should be changed.

Notwithstanding that fact that the FTC is one of the leading antitrust authorities on the planet, the letters it usually sends to the merging parties do not contain any substantive analysis of the cases and are not always easily available on the internet. This makes it difficult to access market data and examine the grounds of the decisions by the FTC; as a result of that, there is very little material to support academic research and develop public policy recommendations. The FTC's statistical year-books provide useful quantitative information on the cases analyzed by the FTC, but they are of little help in qualitative terms. While it is beyond the scope of this expert report to make recommendations to authorities outside Brazil, it would be helpful if the FTC published a summary of cases closed in Phase I and the reasons for FTC's decisions in connection with cases closed in Phase II. The author acknowledges that the FTC analyzes many more transactions than CADE, but any measure to increase transparency are always welcome.

[Figure 41 - Number of transactions reported to the FTC \(2010-2019\)](#)

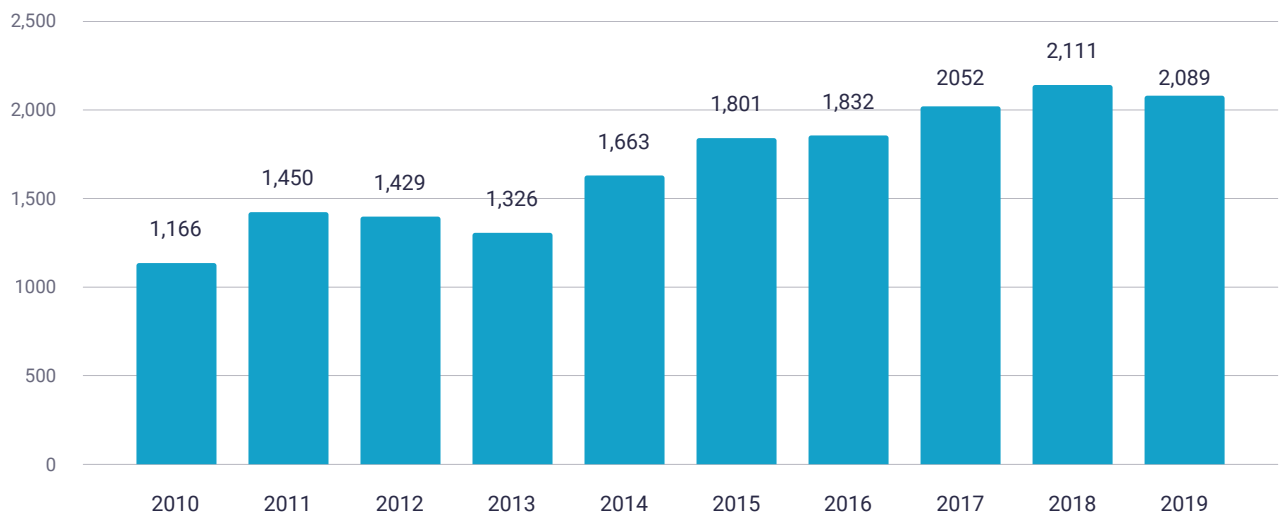
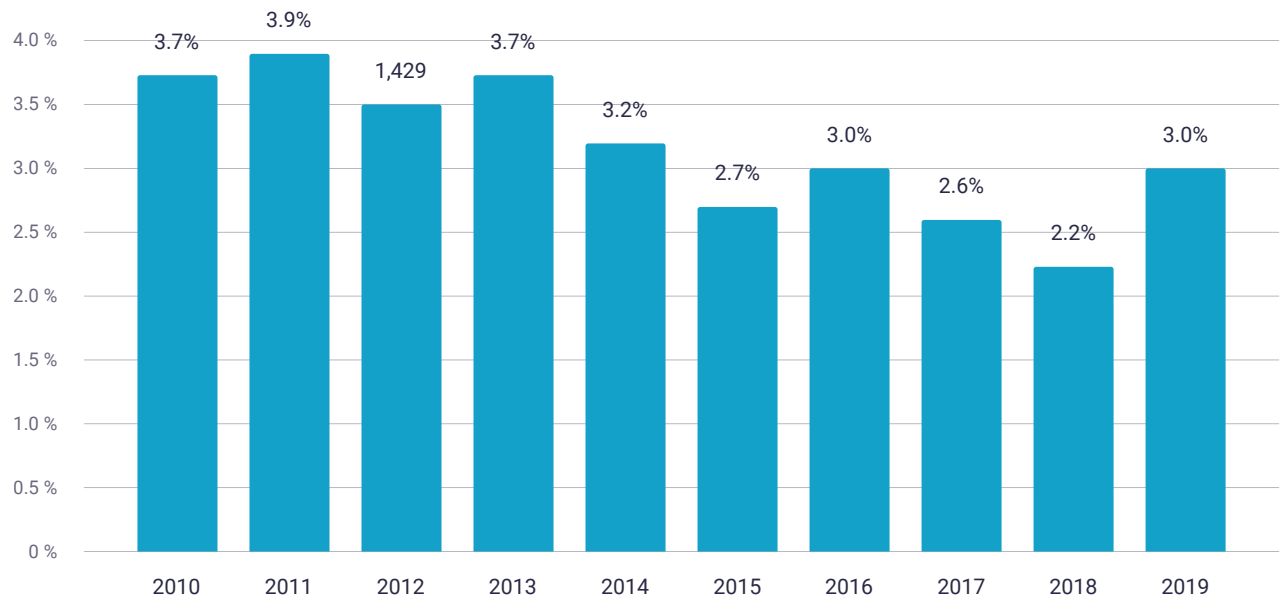


Figure 42 - Percentage of transactions that went to Phase II at the FTC (2010-2019)



Other than Google/Fitbit, no merger cases have been approved with behavioral or structural conditions. Antitrust remedies in digital markets are difficult to design, implement, and monitor. There are no publicly available data on mergers in which antitrust authorities have imposed obligations of interoperability of personal data, but perhaps this may be a reasonable option if properly designed¹⁰². It is also difficult to ascertain the use elasticity of personal data of users because that data had been collected in a different context for a different purpose and prior to the merger.

Recent merger control guidelines have not covered relevant aspects of data-driven mergers. Examples are the [New US Vertical Merger Guidelines](#), published on June 20, 2020 (rescinded by the FTC on September 16, 2021), and [CADE's Guidelines on Antitrust Remedies](#), published on October 16, 2018. A report elaborated by CADE's Department of Economic Studies ("DEE", acronym in Portuguese) on the [Application of Antitrust Remedies by CADE](#), published on May 20, 2020, also did not address the issue. As they are older, the [ACCC](#) and [European Commission](#) guidelines have the same shortcoming.

The [new CMA guidelines](#), published on March 18, 2021, does mention data issues:

"The CMA may consider a wide range of mechanisms through which the merged entity could potentially harm its rivals when supplying inputs. These may include, for example: refusing or restricting supply, increasing prices, reducing quality or service levels, deteriorating product interoperability, slowing the

¹⁰² For further discussion on data interoperability: CRAVO, Daniela Copetti. [Direito à portabilidade de dados: interface entre defesa da concorrência, do consumidor e proteção de dados](#). Rio de Janeiro: Editora Lumen Juris, 2018.

rollout of upgrades, restricting licensing of intellectual property, shutting down APIs, reprioritising R&D spending, or **limiting access to data**. [...] Particularly in complex and dynamic markets, firms may not focus on short term margins but may pursue other objectives to maximise their long-run profitability, which the CMA may consider. This may include eliminating a possible long-term threat, increasing the stickiness of existing customers, positioning themselves strongly in high-growth markets, gaining customers to obtain direct or indirect network effects, obtaining **access to customer data or enabling cross-selling within a broader ecosystem**. [...] Incumbents may have early mover advantages as a result of branding or creating switching costs. **The data held by many digital market firms allow them to hone, improve and personalise their products and services, and this may be difficult for an entrant to replicate in a timely manner**. Early mover advantages may be strengthened by the combination of the merger firms. [...] Barriers to entry and expansion might be particularly high if some of these factors are present in combination. **For example, an incumbent might have a large cost advantage from its scale and/or data while also benefitting from network effects**" (p. 56, 58 and 75).

It is important that other antitrust authorities follow this example.

6. RECOMENDATIONS FOR POTENTIAL IMPROVEMENTS

This section summarizes the improvements suggested by the author throughout this expert report, both in terms of substantive and procedural legal improvements. This section also proposes some institutional and competition advocacy measures that could be adopted by CADE without the need for legislative changes.

Establishment of new merger control criteria for Brazil: “Transactions carried out by economic groups that have combined gross revenues in Brazil higher than BRL 825,000,000.00 in the year prior to the transaction shall be submitted to CADE for merger control review”.

Suggestions of procedural improvements: (i) creation of a website containing all relevant data concerning merger cases that are currently under review; (ii) creation of a system through which academia, regulatory agencies, and third sector organizations can register to automatically receive updates on merger submissions in specific sectors; (iii) all information and materials provided by the merging parties that were pertinent to CADE’s decision-making process should be made publicly available via SEI; (iv) drafts of ACCs as well as reports on efficiencies and compliance with ACCs should be made available for discussion with interested third parties before a merger is approved by CADE’s Tribunal; (v) submission of independent reports on the achievement or not of the efficiencies promised by the merging parties to CADE; (vi) creation of more rights to intervene and petition to the benefit of interested third parties, especially allowing them to ask questions to CADE, the merging parties, and others; (vii) creation of an obligation for all people involved in CADE’s decision-making process to sign a statement confirming that they are independent and do not have any conflicts affecting the transaction that is being approved or blocked; (viii) inclusion of a specific section in the templates of merger forms about the acquisition and consolidation of databases; and (ix) release to the public of materials produced in the context of international cooperation, provided that they were also public in the jurisdiction that originally produced such materials.

Creation of a new Merger Control Unit within CADE (“CGAA”, acronym in Portuguese) specialized in the technology sector: SG’s [current structure](#) has eleven

CGAAs, each of which is specialized in mergers, cartels, and unilateral conducts. CGAA-1 is responsible for analyzing non-fast-track mergers and investigating unilateral conducts in the agribusiness, pharmaceutical, and technology markets. Notwithstanding the high technical skills of CADE's staff allocated to each CGAA, it would be helpful to create or reallocate a CGAA to only deal with matters affecting digital markets. Each economic sector has its peculiarities and with better specialization CADE's staff would be able to make increasingly technical and sophisticated decisions. CGAAs that specialize in specific areas would be able to exchange knowledge and experience in an efficient and transparent manner with market players, nonprofit organizations, academic institutions, members of academia, and foreign antitrust authorities, which will encourage discussions among institutions and people with diverse backgrounds.

Elaboration of specific reports by DEE: there are several [Reports by CADE](#) that consolidate, explain, and publish CADE's case-law on specific markets, taking into account economic and legal aspects. Important markets such as those for agricultural inputs, payment processing methods, cement, maritime container transportation, hospitals, diagnostic medicine and healthcare services, air cargo and passenger transportation, port services, higher education, and retail sale of automotive fuels have already been within the scope of those reports by CADE. Different areas within CADE, especially DEE and SG, could start producing a report on the market for online targeted advertising, encompassing all stages of the supply chain of that market. To achieve that goal, CADE could ask market players, nonprofit organizations, academic institutions, and members of academia for collaboration – in addition to asking cooperation from foreign authorities that prepared similar studies for their respective jurisdictions. Some examples of excellent reports prepared by CADE's international peers and other government agencies: (i) Portugal's *Autoridade da Concorrência*: [Ecossistemas Digitais, Big Data e Algoritmos](#); (ii) ACCC: [Digital Platforms Inquiry](#); (iii) the Netherlands' *Autoriteit Consument & Markt*: [Market Study into Mobile App Stores](#); (iv) France's *Autorité de la Concurrence*: [Opinion on Data Processing in the Online Advertising Sector](#); (v) Germany's *Bundeskartellamt*: [Market Power of Platforms and Networks](#); (vi) Germany's *Bundesministerium für Wirtschaft und Energie*: [A New Competition Framework for the Digital Economy](#); (vii) UK's CMA: [Online Platforms and Digital Advertising Market Study](#); (viii) Mexico's *Comisión Federal de Competencia Económica* ("COFECE"): [Rethinking Competition in the Digital Economy](#); (ix) European Commission: [Competition Policy for the Digital Era](#) and [Digitalisation and its Impact on Innovation](#); and (x) Japan Fair Trade Commission ("JFTC"): [Report of Study Group on Data and Competition Policy](#).

Technical cooperation with ANPD¹⁰³: in the same way that CADE has technical cooperation agreements with the [National Telecommunications Agency](#) (“Anatel”, acronym in Portuguese), the [National Agency of Petroleum, Natural Gas and Biofuels](#) (“ANP”, acronym in Portuguese), the [Brazilian Central Bank](#) (“BCB”, acronym in Portuguese), the [Brazilian Federal Public Prosecution Service](#) (“MPF”, acronym in Portuguese) and the [Federal Court of Auditors](#) (“TCU”, acronym in Portuguese), CADE should have a technical cooperation agreement with ANPD. This is particularly crucial when it comes to mergers involving potential antitrust remedies that involve data sharing, data interoperability, or restrictions of access to certain databases.

The proposals above are not in any order of preference or priority.

103 Note to translation: after the release of the Portuguese version of this expert report, CADE and ANPD signed a technical cooperation agreement.

7. CONCLUSION

Seven months of research were needed to complete this expert report. During this time, the author engaged in: (i) the critical analysis of 81 academic articles, 26 publications by government authorities, 23 statements by government authorities on cases involving the companies mentioned in this expert report, and 8 statements/submissions by international advocacy groups; (ii) interactions with antitrust authorities and international organizations to ask for public information on relevant merger cases; (iii) 5 meetings with DPB and IDEC to ensure that the methodology previously agreed with DPB, IDEC, and the author was followed; (iv) a seminar to receive substantial feedbacks and answer questions and criticisms raised by academics and professionals specializing in antitrust and data protection; and (v) a [webinar](#) with former members and staff of SG and CADE's Tribunal, which had had 547 views as of the date of release of the Portuguese version of this expert report, to discuss some of the topics discussed in this expert report.

It was not the goal of this report to exhaust all the practical and theoretical issues of the topics discussed in this expert report. The number of footnotes and hyperlinked references in this document should make this clear to everyone. The discussion on data-driven mergers is relatively new and, to the best of my knowledge, no critical, detailed, and multijurisdictional analysis of the cases discussed here has been produced so far; as such, this expert report has a merit. However, this expert report is not immune from criticism, nor will it produce consensus among all the readers; after all, that was never its purpose.

This research was intended to identify the main issues associated with data-driven mergers, especially those derived from the fact that digital markets are usually characterized by prices equal to zero, a feature that Brazilian and foreign antitrust authorities and laws are not necessarily ready to deal with. By examining qualitative and quantitative information, it was possible to explain why some specific companies are more active in data-driven mergers than other companies, and how the history of prior engagement with data-driven mergers should be taken into consideration in the context of merger control of new transactions – after all, data protection is also a dimension of competition. The critical analysis of the five mergers selected for this paper had the goal of highlighting potential failures that should not be repeated in future cases – but it is not intended to suggest that the merger decisions of those cases should have had different outcomes. Ideas for initiatives of competition advocacy and recommendations for improving the Brazilian antitrust legal framework were presented in this expert report; they are reasonable and, if jointly deployed, may produce positive results for the country. However, if individually considered, they are unlikely to be a “silver bullet”.