

Competition *policy brief*

Merger Enforcement in Digital and Tech Markets: an Overview of the European Commission's Practice

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Introduction

In recent years, a wave of acquisitions in the digital economy have led the Commission to assess a substantial and increasing number of concentrations. This growing decisional practice has taken place in the midst of an intense debate focussing on three broad issues, namely: (i) the possibility to assert jurisdiction on potentially problematic cases, (ii) the substantive assessment of cases, and (iii) the design and implementation of effective remedies, in light of the specific features of the digital economy. This policy brief aims to inform this debate with a systematic review of the European Commission's decisional practice.

First, in 2016, the Commission launched an evaluation of the procedural and jurisdictional aspects of EU merger control. The evaluation results showed that a small number of transactions, which could have an impact on competition in the internal market have escaped merger control review at both EU and national level.¹ This finding confirmed mounting concerns over the frequency, notably in the digital area, of acquisitions involving firms that play a significant competitive role on the market(s) at stake despite generating little or no turnover at the time of the merger, thus falling below EU or even national merger notification thresholds. In 2021, the Commission addressed any jurisdictional gap by giving full effect to Article 22 of the EU Merger Regulation ("EUMR"). The Commission clarified that, under that provision, it would henceforth encourage and accept referrals, and thereby assert jurisdiction, in certain cases where referring Member States do not have jurisdiction to review the transaction under the national thresholds. Suitable cases include acquisitions of nascent or particularly innovative competitors. This empowers Member States to request the review of such transactions, including in digital and tech markets that would otherwise fall below national notification thresholds, provided

¹ Commission Staff Working Document Evaluation of procedural and jurisdictional aspects of EU merger control, Brussels, 26.3.2021, SWD(2021) 66 final

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The authors would like to thank Inge Bernaerts, Julia Brockhoff, Thomas Deisenhofer, Guillaume Lorient, Pierre Regibeau, Annemiek Wilpshaar and Hans Zenger for valuable contribution to this article

that the conditions of Article 22 of the EUMR are met.² The General Court recently confirmed the legality of that approach in its judgment in *Illumina v European Commission*.³ In parallel, Article 14 of the recently adopted Digital Markets Act ("DMA") obliges gatekeepers to inform the Commission of any intended concentration where the merging entities or the target provide core platform services or any other services in the digital sector or enable the collection of data, irrespective of their notifiability under the EUMR.⁴ The purpose of this provision is to ensure that the Commission is made aware of such transactions in a timely manner, and to inform Member States accordingly. This allows the

In a nutshell

The Commission's developing decisional practice showcases the particular challenges raised by mergers in digital and technology-focused sectors. Thus far, foreclosure risks resulting from conglomerate and vertical effects have been the main focus with theories of harm relating to interoperability and access degradation. The Commission has also examined data-related effects, both in horizontal (data combination) and vertical (data as an input) contexts.

This Policy Brief provides a structured analysis of the Commission's practice. In a forward-looking effort, this Brief also discusses the potential impact of horizontal mergers on innovation competition and long-term entry deterrence risks, notably in the context of ecosystems-related effects.

Finally, this Brief examines the application of the Commission's remedies policy to digital and tech mergers. Although the Commission's preference for divestiture commitments remains the rule, a narrow set of circumstances may justify other measures, provided they are similarly effective, as recent decisions in this field have shown.

² 23 March 2021 Commission Guidance on the application of the referral mechanism set out in Article 22 of the Merger regulation to certain categories of cases.

³ General Court judgment of 13 July 2022 in case T-227/21, *Illumina v European Commission* (ECLI:EU:T:2022:447).

⁴ Regulation (EU) 2022/1925 of the European Parliament and of the Council of 14 September 2022 on contestable and fair markets in the digital sector, Article 14(1).

KD-AK-22-002-EN-N, doi 10.2763/29297

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relevant authorities to request a referral of such transactions to the Commission for the purposes of merger control.⁵ Furthermore, certain Member States have adapted their own notification thresholds, and introduced alternative notification thresholds expressed in terms of transaction values in an effort to capture problematic cases.⁶ The remainder of this brief will therefore focus on substantive and remedial aspects.

Second, the substantive assessment of digital mergers has been the subject matter of many reports and studies across jurisdictions.⁷ These reports examine the specific competitive risks raised by acquisitions in the digital field. They generally highlight the fact that the particular characteristics of digital markets tend to amplify the anticompetitive effects of even fringe acquisitions. This concern stems from the risk that strong network effects and advantages generated by data access, which are generally integral to digital services, reinforce the market power of large digital platforms engaging in external growth. In broad terms, the concern is that large digital and tech companies may be able to stifle competition by pre-empting competitive disruptions by small or nascent innovative players. Preventing such effects poses several challenges to competition agencies, including the assessment of a target's potential competitive significance and the fact that these transactions often involve complementary rather than overlapping products, thus potentially leading to non-horizontal effects. Furthermore, the emergence of digital ecosystems involving relationships across multiple complementary services, led to new acquisition strategies and, therefore, novel competitive effects.

Section 1 examines how these concerns translate in concrete cases and the precise anticompetitive mechanisms unveiled by enforcers. Indeed, European enforcers, including both the Commission and National Competition Authorities ('NCAs'), have developed a significant enforcement record in this area over the past few years. This policy brief takes stock of that track record at EU level and analyses the Commission's approach.

Finally, remedies in digital and tech mergers remain a disputed topic, with certain commentators suggesting that digital mergers should not be allowed to proceed without structural remedies. Differences in applicable laws explain, to a degree, the dissimilar approaches adopted by different jurisdictions. Differences in the

nature of the cases reviewed also explain the seemingly different outcomes reached across agencies. The Commission, for its part, has accepted non-divestiture remedies in specific cases.

The Commission's policy follows applicable EU rules and case law. Notably, case law bars the Commission from automatically dismissing non-divestiture measures that might adequately remedy competition concerns. Evidently, in horizontal cases, the Commission generally does not accept remedies falling short of a divestiture. But in non-horizontal mergers, other commitments may be suitable to resolve concerns if those remedies are equivalent to divestitures in their effects. The Commission may investigate other solutions proposed by the parties to address non-horizontal concerns, as per the applicable case law. As a result, in specific circumstances, the Commission has accepted remedies that either consisted in a form of access to infrastructure, networks, services, data, or the granting of certain rights to third parties guaranteeing the interoperability of complementary elements (so-called "interoperability" remedies), both on a non-discriminatory and transparent basis. Section 2 will examine which circumstances might justify such measures, and how the Commission has ensured effective monitoring is in place.

1. The Substantive Assessment of Digital and Tech Mergers

Digital or tech products are often integrated into broader systems and therefore have to interoperate with each other, or are offered among a multitude of related services. Digital services are often offered on multi-sided platforms potentially controlled by companies that have a dual role as intermediary and competitor on these platforms, and can thus potentially exercise or leverage market power through multiple routes and strategies. Interconnectivity and platform-based offerings are therefore key aspects that competition agencies take into account in reviewing digital and tech mergers.

The decisional practice and case law is increasingly focused on the complex relationships involved in digital markets. As summarised by the General Court, *"in a digital 'ecosystem', which brings together several categories of supplier, customer and consumer and causes them to interact within a platform, the products or services which form part of the relevant markets that make up that ecosystem may overlap or be connected to each other on the basis of their horizontal or vertical complementarity. (...) Identifying the conditions of competition relevant to the assessment of the position of economic strength enjoyed by the undertaking concerned may therefore require multi-level or multi-directional examination in order to determine the fact and extent of the various competitive constraints that may be exerted on that undertaking."*⁸

⁵ Regulation (EU) 2022/1925 of the European Parliament and of the Council of 14 September 2022 on contestable and fair markets in the digital sector and amending Directives (EU) 2019/1937 and (EU) 2020/1828 (Digital Markets Act), OJ L 265, 12.10.2022, p. 1–66, recital 71.

⁶ The German and Austrian merger control rules were amended in 2017 to introduce new provisions on transaction value thresholds. The two authorities have published joint guidance (courtesy English translation: https://www.bundeskartellamt.de/SharedDocs/Publikation/EN/Leitfaden/Leitfaden_Transaktionsschwelle.pdf?__blob=publicationFile&v=2).

⁷ See, for example, Special Advisers Report to the European Commission, Competition policy for the digital era (2019); Report of the Digital Competition Expert Panel to the UK Chancellor of the Exchequer and Secretary of State for Business, Energy and Industrial Strategy, *Unlocking digital competition* (2019).

⁸ General Court judgment of 14 September 2022 in case T-604/18, *Google v Commission*, paragraphs 116 and 117.

The complementarities and interconnections in digital ecosystems therefore complicate the assessment of digital mergers. The addition of another product or service to a digital platform or ecosystem can create competition concerns in different ways. The acquirer may leverage market power from its core markets into a new market thereby expanding its ecosystem. Alternatively, the acquiring company may acquire a company in a defensive strategy to protect its core markets, for instance by increasing barriers to entry and expansion or by taking out a potential threat.

This particular context led authorities to reflect on whether the applicable review framework is well-adapted to digital and tech mergers. Traditionally, competition agencies distinguish between horizontal and non-horizontal effects, depending on whether a merger concerns overlapping firms engaged in head-to-head competition, or firms otherwise related (i.e., vertically or in a conglomerate relationship). The particular features of digital markets tend to suggest that non-horizontal theories of harm would be prevalent when reviewing such mergers. Interestingly, the decisional practice at national and EU level contrasts in this regard which points, to a degree, to the difference in the nature of cases examined at the two levels.

In a recent report to the Commission, Professor Viktoria Robertson, of the University of Graz, examined digital and tech merger cases from 19 EU Member States and the UK.⁹ The Report finds that all transactions blocked at the national level raised horizontal concerns.¹⁰ The Report further finds that, in cases resolved by a conditional clearance, conglomerate effects accounted for a minority of the theories of harm involved. The Report thus observes that despite the theoretical focus on conglomerate effects created by digital and tech mergers, those effects have not been prevalent in the cases found to be problematic at the national level.¹¹

The Commission's experience differs from the NCAs. Transactions reviewed by the Commission have instead primarily involved complementary products or services, whereas horizontal effects were mainly relevant in the Commission's decisional practice where mergers combined datasets. As a result, the Commission mainly assessed various forms of foreclosure risks, including as a result of conglomerate strategies. Such strategies involve a merged entity leveraging market power in a given product or service into another, related market, for example by way of tying or bundling practices. The Commission has also examined vertical

risks, notably the risk that the merged entity would foreclose competitors by refusing or degrading the supply of an input. Finally, some concentrations may also create or strengthen a dominant position, particularly in the context of digital ecosystems, which requires assessing the risk that expansion or entry by rival firms may be hindered by the merger.

In this context, the Commission has been able to effectively conduct its investigations while remaining within its assessment framework and backing up its findings to the same legal standards that apply to mergers in all other sectors. The Commission has thus examined (and is currently reviewing) a series of situations, falling under conglomerate, vertical, horizontal theories of harm. Each of these broad categories relate to a particular type of competitive harm, with horizontal matters usually focusing on the creation or reinforcement of market power, whereas non-horizontal effects generally concern the foreclosure of competitors. Nonetheless, a great multitude of strategies can bring such effects. The Commission's decisional practice illustrates the variety of theories of harm that it has examined. It also demonstrates the flexibility of the EU merger framework and its aptitude at capturing novel competitive risks.

1.1 Conglomerate Relationships: Interoperability Degradation

Overview of the Commission's decisional practice

Products in the digital and technological space, including both software and hardware components, often need to interact with each other as part of a broader system or equipment. Mergers involving companies that supply different components of a system may thus raise specific interoperability issues, as they might lead the merged entity to focus its efforts on integrating its own components while blocking or degrading the interoperability of competing components with its own, thus foreclosing these competitors from the relevant market.

Interoperability degradation refers to a relative deterioration of the conditions in which third parties' products interact with the merged entity's own products post-transaction (and/or vice-versa). The effect of such a strategy is ultimately that customers would prefer the merged entity's combined products over those of rival suppliers. It is a form of technical tying between products belonging to distinct relevant markets that are closely related due to their interoperation in a broader system.¹²

In practice, degrading interoperability can be achieved in two main ways. *First*, as has been the most common occurrence in the Commission's prior cases, it can be achieved by degrading the supply of assets necessary to ensure interoperability (information, interfaces, prototypes etc.). *Second*, interoperability can be affected by degrading the technical support necessary to

⁹ Merger Review in Digital and Technology Markets: Insights from National Case Law, Report to the European Commission, 12 July 2022, Viktoria H.S.E. Robertson (the 'Robertson Report').

¹⁰ These cases concern online press products and advertising (HU, *Magyar RTL Televízió/Central Digitális Média* (2017)), online real estate portals (SE, *Swedbank/Svensk Fastighetsförmedling* (2014)), ticket system services (DE, *CTS Eventim/Four Artists* (2017)), communication aids software (UK, *Tobii/Smartbox* (2019)), airline technology solutions (UK, *Sabre/Farelogix* (2020)), and online advertising services (UK, *Meta/Giphy* (2021)).

¹¹ Robertson Report, p. 7.

¹² Technical tying can also take other forms, including the technical combination of products in a persistent form (for instance by offering an integrated solution relying on two previously distinct products).

ensure or improve interoperability.¹³ Interoperability degradation can be temporal (by delaying the provision of the relevant assets or support to competitors) or it can be qualitative (by decreasing the quality of the assets or support provided).

A strategy to degrade interoperability can also take various forms: (i) it can be total (by preventing the functioning of third party products altogether), or partial (by only limiting their functionality); (ii) it can concern all third parties, or target specific companies or categories of competitors;¹⁴ and (iii) it can result from “negative” discrimination (by deteriorating the performance of third parties’ products), or “positive” discrimination, by improving the relative performance of the merged entity’s products when used together.¹⁵

The likelihood that these strategies will be adopted post-merger must be shown to the requisite legal standard. The legal framework for assessing conglomerate effects is defined in the Commission’s 2008 Non-Horizontal Guidelines.¹⁶ The Guidelines rely on a three-prong test under which the Commission must show that the merged entity would have (i) the ability and (ii) the incentive to foreclose competitors by engaging in a conglomerate strategy, and would thus have (iii) an adverse impact on competition and harm consumers.

The ability to foreclose by degrading interoperability

In order to prove that foreclosure is a likely consequence of a conglomerate merger, the Commission must first show the merged entity’s ability to foreclose competitors by engaging in an interoperability degradation strategy. The starting point to find such ability will normally lie in assessing the market power of the merged entity in one of the markets concerned. Market power may be evidenced for instance by high market shares and limited competitive constraints for the relevant products. While a finding of market power does not necessarily require that a dominant position be characterized, the Commission has often relied on

market shares consistent with dominance.¹⁷ The Commission then generally examines the scope of conceivable foreclosure strategies, supporting circumstantial evidence and the existence of counter-strategies available to competitors.

First, such harm only arises if the merged entity has the technical ability to degrade the manner in which their products interoperate with those supplied by competitors. Such degradation may have varying scopes. In certain instances, it may concern all third party products.¹⁸ In other instances, although merging firms may not be able to degrade interoperability with *all* third party products, they may instead focus foreclosure strategies on *certain* categories of competitors. Such selective degradation strategies require that merging firms are able both to identify specific companies (or groups of companies) and to technically engage in a targeted interoperability degradation. Evidence of prior instances of interoperability degradation by the merging parties or by other companies in the same or similar markets can contribute to showing that strategy’s practical feasibility.¹⁹ For instance, in *Google/Fitbit*, the Commission assessed Google’s ability to degrade Android’s smart mobile’s OS with competing wearable devices. To do so, it observed Apple’s existing practices in relation to its Apple Watch, notably allowing some functionalities exclusively on Apple Watch but not third-party smartwatches. The existence of such conduct in the sector supported the Commission’s finding that Google would also have a similar technical ability to downgrade interoperability with third party wrist-worn devices manufacturers.²⁰

In addition to the practical feasibility of degrading interoperability, the merged entity’s ability to foreclose competitors may also rely on the presence of a large pool of common customers for the interoperating products and services. That being said, interoperability degradation may also constitute an effective foreclosure strategy in situations where the relevant products are not necessarily sold to the same customers, provided the products do interact.²¹ In situations where the relevant products are sold to the same customers, the existence of a large pool of common customers supports the finding that the merged entity is able to engage in a foreclosure strategy, because the more customers tend to buy both products or

¹³ Such concerns were for instance retained in case M.8314 - *Broadcom/Brocade* (2017), due to the fact that fibre channel switches providers need to provide technical support to HBA manufacturers, both throughout the development of the products (to ensure interoperability in advance of launches, for instance via tests) and later to solve technical issues that may occur at end customers’ premises. In contrast, the Commission has dismissed similar concerns in other cases, including case M.9660 - *Google/Fitbit* (2020) (see paragraphs 763 to 771).

¹⁴ In *Google/Fitbit*, for instance, the Commission assessed the merged entity’s potential strategy of selectively degrading the way that the Android OS interacts with wrist-worn wearable devices (as opposed to all other devices or software that also interact with the OS), see paragraph 717.

¹⁵ The latter strategy is usually harder to detect, which can make it a more realistic theory of harm. In *Broadcom/Brocade*, the Commission investigated *inter alia* a possible strategy by the merged entity to favour its own fibre channel HBAs by allowing them to function with new or improved features when interoperating with the merged entity’s own fibre channel switches (see paragraph 170).

¹⁶ Guidelines on the assessment of non-horizontal mergers under the Council Regulation on the control of concentrations between undertakings, OJ C 265, 18.10.2008, pp. 6-25 (“Non-Horizontal Merger Guidelines”), paragraphs 91-118.

¹⁷ See *Broadcom/Brocade*, at paragraphs 153-154 and case M.9945 - *Siemens Healthineers/Varian Medical Systems* (2021), at paragraphs 94 et seq. For a formal finding of dominance, see case M.8306 - *Qualcomm/NXP* (2019), at paragraphs 378-404.

¹⁸ In *Qualcomm/NXP*, which involved the interoperation of different chips and chipsets, the Commission found that the merged entity would be able to reengineer the interfaces necessary to ensure interoperability post-transaction, thus degrading interoperability for all third party products used alongside the merged entity’s chips.

¹⁹ Previous examples of comparable interoperability degradation strategies are generally relevant for all legs of the Commission’s assessment of foreclosure, and not only ability to foreclose.

²⁰ See *Google/Fitbit*, paragraphs 754 and 772.

²¹ For example, an interoperability degradation strategy involving both software and hardware could have foreclosure effects in situations where end customers purchase the software themselves whereas the hardware is purchased by system integrators who incorporate it into the server that is then sold to the end customer.

services, the more purchasing patterns would be affected through technical tying.²² The importance of the common pool of customers is generally a consequence of the merged entity's market power in the tying component.

Illustrative examples can be found in *Qualcomm/NXP* or *Google/Fitbit*. In *Qualcomm/NXP*, the Commission found that the merged entity risked degrading the interoperability of Qualcomm's broadband chipsets with NFC and SE chips supplied by NXP's competitors. It found that the merged entity's customers, namely mobile device OEMs, purchased both LTE baseband chipsets, a market in which Qualcomm was dominant, and NFC/SE chips and software from NXP and its competitors.²³ In *Google/Fitbit*, the Commission was concerned that Google would leverage Android's dominant position in licensable smart mobile OS to degrade its interoperability with competing wearable manufacturers, thus foreclosing rival device makers. The Commission found that virtually all customers who purchase wrist-worn wearable devices also purchase smartphones, including Android smartphones which rely on Google's Android OS. As Google holds a dominant position in the supply of licensable OS for smart mobile devices, customers' reliance on interoperability with the Android OS was significant.²⁴

The second important type of evidence to demonstrate the merged entity's ability relates to market conditions. Indeed, certain market configurations may be further conducive to the merged entity's ability to foreclose, although these factors are generally not sufficient in themselves to establish or dismiss the existence of a conglomerate strategy. One example is the alignment of the distinct products' release dates (or "roadmap alignment" of the two category of products over time), which can support the finding of the merged entity's ability to foreclose. This is because roadmap alignment makes it theoretically possible to enforce a foreclosure strategy within the shorter term, i.e. at the beginning of the next products' life cycle. However, such alignment is not a necessary factor in establishing such ability to foreclose.²⁵

Similarly, the mere existence of standards and standard-setting organisations is insufficient to demonstrate a lack of ability to engage in an interoperability degradation strategy. *First*, standards can apply to only part of the relevant product(s).²⁶

²² See Non-Horizontal Merger Guidelines, paragraph 100.

²³ *Qualcomm/NXP*, paragraphs 378 et seq. and 546 et seq.

²⁴ *Google/Fitbit*, paragraphs 732 to 735.

²⁵ See case M.5984 - *Intel/McAfee* (2011), paragraph 119. The Commission found that the merged entity would have the ability to foreclose in spite of Intel's cycle for new CPUs being around five years whereas security software development generally occurred within 6-12 months. Intel regularly collaborated with security software vendors throughout the duration of CPU development, particularly to ensure interoperability. As a result, the lack of roadmap alignment between CPUs and security software was not particularly relevant to ensure interoperability.

²⁶ See *Qualcomm/NXP*, paragraphs 776 and 777. The Commission found that the interfaces of NFC and SE chips were only standardised insofar

Second, standards may also be proprietary (partly or fully), or become so post-transaction. In this situation the owner of the relevant standards may be able to determine their availability to competing firms, the manner in which they can be used (and by whom), thus indicating an ability to foreclose. However, the Commission will be less likely to find an ability to foreclose when the relevant products rely on open standards licensed on fair, reasonable, and non-discriminatory ("FRAND") terms. For instance, in *Nvidia/Mellanox*, the Commission took into account the fact that Mellanox's network adapters and Nvidia's GPUs relied on the Peripheral Component Interconnect Express ("PCIe") standard in its assessment of the merged entity's (technical) ability to foreclose. PCIe is an open industry standard, which is the de facto standard for interconnecting systems within a server, and is available on FRAND terms.²⁷

Third, the ability of competitors and customers to engage in a counterstrategy is also relevant for the Commission's assessment. Counterstrategies may mitigate or neutralize the merged entity's ability to engage in interoperability degradation.²⁸ However, in order to be taken into account, such counterstrategies should be deployable in a relatively short period of time and for limited costs. For instance, reverse engineering has generally not been deemed sufficient to counter a merged entity's foreclosure strategy, due to the costs and time required, or due to the failure of such efforts to achieve the same level of interoperability as before the transaction. Thus, for example, in *Intel/McAfee*, the Commission was concerned that competing IT security products could be foreclosed if McAfee's own solutions were embedded into Intel's chips, given Intel's significant position in CPUs and chipsets. The Commission found that the merged entity would have the ability to engage in interoperability degradation, in particular because any effort to reverse engineer Intel's CPUs would be partial, time-consuming and prohibitive in terms of costs.²⁹

The incentive to foreclose by degrading interoperability

Assessing the profitability of degrading interoperability generally requires balancing out foregone revenues and increased profits resulting from the degradation. However, precise quantification may be difficult to perform, in particular due to the conglomerate relationship between the different products and the corresponding dynamics (including cross-selling opportunities or network effects).

An interoperability degradation strategy can be profitable if foreclosure can be expected to lead to material gains benefitting the merged entity. Such gains generally result from increased

as the physical/hardware layer was concerned, thus leaving room for interoperability degradation beyond this layer.

²⁷ Case M.9424 - *Nvidia/Mellanox* (2019), paragraph 202.

²⁸ Counterstrategies by competitors and customers are also generally relevant throughout the Commission's assessment of foreclosure, and not only to assess the ability to foreclose.

²⁹ *Intel/McAfee*, paragraph 145.

sales and/or higher prices for one or more of the interoperating products. The assessment of losses stemming from a foreclosure strategy, on the other hand, requires assessing the extent to which customers might switch away to alternative suppliers as a result.

Whether the relevant companies offer products for which there are few credible alternatives thus plays an important role in this assessment. When the merged entity offers such products, it is unlikely to lose a significant amount of sales if it engages in foreclosure strategies. The Commission nevertheless examines whether such incentives can be constrained. For example, it will examine whether potential targets of interoperability degradation also offer products in other markets for which there are few credible alternatives and with which the merging parties' products need to interact, in which case they may be able to retaliate against the merged entity's degradation strategy, thereby creating a counter-incentive. This assessment was decisive to dismiss competition concerns in *Nvidia/Mellanox*. The case concerned Mellanox's network adapters,³⁰ products that interact with (Nvidia's) graphics processing units ("GPUs"). In this case, the Commission found that CPUs were critical for every device or system with which the parties' products had to interoperate. AMD and (mostly) Intel, both competing with Nvidia on the GPU market (and thus potential targets of an interoperability degradation strategy), accounted for the vast majority of CPU sales (and their product could thus be considered must-haves). The Commission thus found that the merged entity would need its products to interoperate with Intel and AMD's CPUs and to have access to these CPUs' roadmap. As a result, the merged entity would be unlikely to have the incentive to downgrade the interoperability of AMD or Intel's GPUs.³¹

In addition to lost revenues, the Commission takes into account the reputational damage that may result from an interoperability degradation, potentially leading customers to switch away to out-of-market alternatives, thus making any foreclosure strategy unprofitable. Such damage may affect the merged entity, or more broadly, the relevant ecosystem or technology. For instance, in *Broadcom/Brocade*, a case that involved end customers requiring both (Brocade's) fibre channel switches, which connect multiple servers and storage devices, and (Broadcom's) fibre channel host bus adapters ("HBAs"), the Commission was concerned that the merged entity would degrade the interoperability between its own fibre channel switches and competing HBAs. The Commission therefore assessed whether a foreclosure strategy would tarnish the reputation of Broadcom's fibre channel technology (to the benefit of other networking technologies such as, e.g., cloud or IP/Ethernet). In this case, the Commission found that the technical advantages of fibre channel over competing technologies meant that the merged entity would

still have the incentives to foreclose competitors.³² However, the materiality of reputational damage will vary from one case to the other, in view of the specifics of each interoperability degradation strategy. For instance, a selective or limited degradation of interoperability targeting fewer companies and/or new entrants could have a more limited impact in terms of reputational damage, being likely less visible. Similarly, in complex value chains including many hardware and software components, users may not be able to identify the source of a decreased performance.

Concretely, to assess incentives, the Commission and the merging parties may engage in economic analyses, notably to assess diversion rates benefitting the merged entity as a result of a possible degradation of interoperability. For instance, in *Google/Fitbit*, the Commission reviewed economic analyses submitted by Google, which aimed at showing that a degradation strategy would be unprofitable for Google. The Commission ultimately found that the model submitted by Google did not accurately factor in certain market features, and therefore overestimated the amount of demand switching to iOS that would result from a foreclosure strategy. The Commission thus found that Google would likely have the incentive to engage in interoperability degradation strategies.³³

The competitive impact of foreclosure by degrading interoperability

Finally, the Commission considers the overall impact of foreclosure on prices, quality, choice and innovation. Such analysis requires assessing the scope of potential effects, by determining which companies would be affected by the conduct, and the consequences on their competitiveness. For instance, in *Google/Fitbit*, the Commission acknowledged that any degradation strategy would not affect Apple or third-party wrist-worn wearable devices connected to an Apple iPhone. Nevertheless, around 50% of the market for wrist-worn wearable devices would still be affected by a foreclosure strategy, and the Commission thus found that an interoperability degradation strategy would have a significant detrimental effect on competition.³⁴

Assessing the impact of interoperability degradation also requires analysing its effect in terms of deterring entry by new players or innovation by existing competitors, in particular for digital markets that have been historically dynamic. In *Broadcom/Brocade*, for example, the Commission concluded that a foreclosure strategy, while not necessarily sufficient to prevent Cavium, virtually Brocade's only competitor in fibre channel HBAs, from supplying fibre channel HBAs, it would eventually deprive Cavium from having sufficient resources to invest in the development future generations of those products.³⁵ On a related

³⁰ Network adapters are hardware elements that allow various servers within a datacentre to communicate with each other.

³¹ *Nvidia/Mellanox*, paragraphs 228 to 242.

³² *Broadcom/Brocade*, paragraphs 228 to 242.

³³ *Google/Fitbit*, paragraphs 792 to 801.

³⁴ *Google/Fitbit*, paragraphs 809 to 816.

³⁵ *Broadcom/Brocade*, paragraph 205.

note, the impact of an interoperability degradation strategy may in general be more acute in growing markets, such as the wrist-worn wearable devices segment, which was nascent and fast-growing at the time of the *Google/Fitbit* decision.³⁶

Conclusion on interoperability degradation

The very nature of the relationships at play in cases involving the interoperation of complementary products or services has allowed the Commission to frame its substantive analysis into conglomerate-type theories of harm. The Commission's decisional practice shows that such conglomerate assessments require sophisticated factual and economic assessments. Such cases also can lend themselves to specific corrective measures, as detailed in Section 2 below.

1.2 Vertical Relationships: Access Degradation

Overview of the Commission's decisional practice

In reviewing digital and tech mergers, the Commission has assessed access degradation theories of harm where, as is common in this sector, products or services provided by one player rely strongly on access to other products or services as inputs. Typically as a starting point, one of the merging parties will have market power in relation to such an input, and access to this input is often (but not necessarily) already provided to third parties at the time of the transaction. Furthermore, the input should be sufficiently important to lend itself to an input foreclosure concern, which means that it represents a large portion of the costs relative to the price of the downstream product, that it is critical to that downstream product and/or that it is a significant source of differentiation.³⁷

If those circumstances are found, the merger may bring about a change in incentives, namely to favour the merged entity's own downstream operations compared to third parties. The merged entity may stop making the input available to third parties, i.e. total input foreclosure. Such conduct could make it more difficult for rivals to compete on an equal footing with the merged entity and in turn have a negative impact on competition overall.

Unlike in traditional 'physical' markets, the relevant input in digital and tech cases may be a particular technology or software application, e.g. IP or technology (e.g., *Nvidia/Arm*)³⁸, operating system (e.g., *Microsoft/LinkedIn*)³⁹ or messaging application (e.g., *Meta/Kustomer*)⁴⁰, and access can be provided virtually, e.g. via an API or licence of the intellectual property rights relating to the technology. This also means that considerations around scarcity,

capacity limitations or availability that may be important in the case of physical inputs may be less relevant where the input is a licence to use or access a 'virtual' input.

In recent merger cases notified to the Commission, the most common theory of harm related to access degradation has been input foreclosure, with customer foreclosure also arising albeit less frequently. As in interoperability degradation described above, the Commission assesses input foreclosure by using a three-prong test analysing the Parties' ability and incentives to foreclose, as well as the foreclosure's competitive impact.

The ability to foreclose by degrading access

In digital and tech mergers, the technical means of engaging in input foreclosure may raise specific nuances in view of the type of input and how access is given pre-transaction. For example, in both *Meta/Kustomer* and *Google/Fitbit*, uniform access was given to all downstream players pre-transaction, and Meta and Google had no reason to prefer a particular downstream player over another as they had little or no own operations in the relevant downstream markets (i.e., the CRM and the nascent digital healthcare markets respectively).

In those cases, the Commission examined how, in practice, the merged entity could give its own downstream operations sole or preferential access to the input, and exclude or degrade the access of third parties post-transaction. Internal documents and past behaviour by the acquirer or by other similarly-placed players can provide supporting evidence in this regard. For example, the merged entity might have considered refusing access to all competitors (or credibly threatened to do so), or more subtle forms of foreclosure, such as developing an internal API exclusively for its own downstream business (e.g. with superior features), and degrading or neglecting to upgrade, or charging a fee (for the first time) to access, the publicly-available API that competitors depend on. In *Meta/Kustomer*, for example, evidence of past conduct and internal documents allowed the Commission to conclude that such strategies would be open to Meta.⁴¹

If a targeted foreclosure strategy is more plausible, the Commission needs to consider how, in practice, the merged entity could target certain third parties for foreclosure, e.g. close competitors, while continuing to leave other third party access seekers unaffected. In the *Meta/Kustomer* case, the Commission's investigation and evidence from internal documents, including contracts covering API access terms revealed various targeted foreclosure mechanisms that Meta contemplated, had the ability to engage in, or may have carried out or threatened in the past. This was particularly relevant in that case as a targeted foreclosure strategy appeared to be the most plausible scenario post-Transaction.⁴² Similar evidence was gathered in *Google/Fitbit*—including evidence from third party providers of

³⁶ *Google/Fitbit*, paragraph 28.

³⁷ Non-Horizontal Merger Guidelines, at paragraph 34.

³⁸ Case M.9987 – *Nvidia/Arm* (2022). Following the Phase 1 investigation, the Commission was concerned that the merged entity would have the ability to restrict or degrade access of providers of processors (competing with Nvidia) to Arm's technology. See ec.europa.eu/commission/presscorner/detail/en/IP_21_5624. The case was later withdrawn.

³⁹ Case M.8124 – *Microsoft/LinkedIn* (2016).

⁴⁰ Case M.10262, *Meta (formerly Facebook)/Kustomer* (2022).

⁴¹ *Meta/Kustomer*, paragraphs 283 and following.

⁴² *Meta/Kustomer*, paragraph 436.

apps and websites across the digital healthcare spectrum. This led the Commission to conclude that Google had the technical ability and the incentive to restrict or discontinue access to Fitbit user data via the Fitbit Web API depending on whether Google saw a company accessing such data as a competitor. In view of the significant user base of Fitbit, this could have a negative impact on start-ups and other players in the nascent digital healthcare sector.⁴³

In assessing possible foreclosure strategies, the Commission will generally first examine whether total foreclosure is possible, i.e. removing access to the input or API, and, second, whether more subtle forms of foreclosure, such as limiting or degrading the level of access in a manner sufficient to create a competitive advantage for the merged entity. The Commission does not necessarily need to conclude on whether one particular foreclosure strategy may be more likely than another.⁴⁴

Finally, when assessing the ability to foreclose, the Commission assesses whether there are counterstrategies available to downstream rivals. These strategies may vary depending on the factual circumstances of each case. For instance, in *Meta/Kustomer* the Commission investigated the credibility of “workarounds” in case Meta refused access to its messaging channel APIs, e.g. regaining access via some other (indirect) means.⁴⁵ In *Microsoft/LinkedIn*, the Commission assessed whether LinkedIn’s rival professional social networks could turn to alternative productivity software suites with similar user penetration, in case Microsoft refused access to its Outlook API or other APIs.⁴⁶ In both cases, however, the Commission considered that these strategies were either not credible, or would not suffice to constrain the merged entity’s foreclosure strategy.

The incentive to foreclose by degrading access

An assessment of the incentives to engage in access degradation can differ greatly depending on the type of strategy. For example, a market-wide refusal of access to the relevant input or APIs is the most far-reaching and clear-cut strategy, while degrading or granting inferior access to a sub-set of access seekers, such as close competitors of the merged entity is more subtle. Each strategy variation may thus involve a different balancing of the relative gains and losses.

Additionally, the incentives assessment may need to account for gains and losses that are exceedingly difficult to quantify precisely. For example the value of data, cross-selling opportunities or potential network effects, can be impossible to quantify, in particular if the relevant input is provided for free, as is the case with many products in the digital and tech sector.⁴⁷ Target valuation models and revenue projections prepared by the

acquirer and its financial advisers can sometimes assist in assessing the incentives to engage in an access degradation foreclosure strategy, but it may also be necessary to factor in a qualitative assessment of gains and losses.

The Commission recently engaged in such balancing assessments in *Google/Fitbit* and *Meta/Kustomer*. A qualitative balancing exercise was carried out in relation to access degradation of the Fitbit Web API in *Google/Fitbit*.⁴⁸ In this case, the Commission found that the Web API was used as a means of transferring user data, free of charge based on user consent, to third parties active in the nascent digital healthcare sector. The nature of the input and the potential targets of foreclosure meant that a qualitative assessment was appropriate to assess Google’s incentive to foreclose. In *Meta/Kustomer*, the Commission carried out a combined qualitative and quantitative assessment of Meta’s incentive to foreclose. A qualitative assessment was necessary in order to take into account certain unquantifiable gains, such as additional data for online ads purposes and longer-term benefits from steering businesses into the Meta ecosystem of products, and the fact that Meta was unable to quantify certain alleged losses from a foreclosure strategy, such as reputational harm.⁴⁹ In parallel, for robustness purposes, the Commission carried out a quantitative assessment of only the quantifiable gains and losses, which was possible given the B2B nature of the downstream market.⁵⁰

The competitive impact of foreclosure by degrading access

Finally, it is necessary to check if the access degradation strategy is likely to result in a significant negative effect on competition. Such a finding is only likely if the targets of foreclosure play a sufficiently important role in the competitive process on the downstream market. The higher the proportion of rivals which would be foreclosed, the more likely the merger can be expected to have a significant negative effect on competition in the downstream market. This could be as a result of a price increase, a degradation in quality or a reduction in choice or innovation, which is particularly relevant in certain digital and tech markets where price may not play an important role. For example, in *Microsoft/LinkedIn*, the targets of foreclosure were identified as competing professional social network (PSN) providers, i.e. competitors of LinkedIn, and the Commission concluded that foreclosure of access to the relevant APIs could have led to a reduction of the ability of rival PSN providers to compete and thereby have a significant detrimental effect on competition,⁵¹ e.g. through reduced choice for end users of PSN services.

Even a foreclosure strategy that is targeted at a sub-set of players in the downstream market can have a detrimental effect on competition in certain circumstances. The Commission reached

⁴³ *Google/Fitbit*, paragraph 759.

⁴⁴ For example, *Google/Fitbit*, paragraphs 521 to 525; *Meta/Kustomer*, paragraphs 282 to 293.

⁴⁵ *Meta/Kustomer*, paragraphs 298 to 302.

⁴⁶ *Microsoft/LinkedIn*, paragraph 329.

⁴⁷ And as was the case in *Google/Fitbit* and *Meta/Kustomer*.

⁴⁸ *Google/Fitbit*, paragraphs 521 – 525.

⁴⁹ *Meta/Kustomer*, paragraphs 309 – 310.

⁵⁰ *Meta/Kustomer*, paragraphs 315 and 389.

⁵¹ *Microsoft/LinkedIn*, paragraph 351.

this conclusion in *Meta/Kustomer*, were as noted above, a targeted foreclosure strategy was found to be the most credible strategy post-Transaction. Nonetheless, despite accounting for only part of the overall market, the sub-set of players in the CRM market that were close competitors of Kustomer (i.e. which had a similar business model and similar target customers), were found to play a significant competitive role compared to other players, in that they were aggressive competitors and particular drivers of innovation, which benefited the market overall.⁵²

Conclusion on access degradation

In a context where large digital and tech firms may have significant market power or dominant positions in certain markets, it is necessary for competition enforcers to be particularly vigilant where such firms acquire companies, even nascent or 'start-up' companies, whose offerings may constitute an important input for a market where the acquiring firm already has market power. The inverse may also be the case; the acquiring firm's offering may constitute an important input in the market where the target firm is active. In order to ensure that rivals can continue to have the same level of access to such important inputs, the Commission is increasingly investigating access degradation theories of harm in its decisional practice on digital mergers.

Assessing the ability and incentive of the merged entity to degrade rivals' access, and the potential impact of such strategy, often requires a thorough understanding of the technologies and products at hand and a future-looking or dynamic assessment of the markets involved. Where concerns are well-founded and their scope is sufficiently circumscribed, they may allow for considering a resolution through targeted interventions, as detailed in Section 2 below.

1.3 Data Related Effects

With the emergence of data as a key input into many online services, the ability to access and use data has become an important element in merger control. Data can be classified according to various characteristics, for example, data can be personal or non-personal (and thereby subject to different regulatory regimes); data can be collected, volunteered, inferred or observed; data can be traded or non-traded. All of these and other factors may be relevant for the competitive assessment.

Overview of the Commission's decisional practice

Broadly, there are three main ways in which data may come into play in the competition law assessment: (i) as an important input; (ii) as a competitive product or (iii) data privacy settings as a non-price parameter of competition. These data-related issues also overlap with the competition law assessment of interoperability, privacy, network effects, ecosystems, data portability that may

be necessary for multi-homing, or data migration-related issues that may raise switching costs.⁵³

In most merger cases to date, data related issues were assessed in the framework of potential horizontal non-coordinated effects. Within the horizontal assessment framework, multiple elements may be assessed related to data. In markets where data is an important part of a product or service, a potential accumulation of data (combination of data sets) as a result of a merger are assessed.⁵⁴

First, the combination of two datasets may increase the merged entity's market power in a hypothetical market for the supply of this data post-merger. In this scenario, data aggregation strengthens the market power of the merged entity in a market for providing products or services for which data is valuable. Such dataset combination may also increase barriers to entry/expansion in the market for actual or potential competitors, which may need this data to operate on this market. Competitors may indeed be required to collect a larger dataset in order to compete effectively with the merged entity than absent the merger.

Second, even if there is no intention or technical possibility to combine the two datasets, it may be that pre-merger the two companies were competing with each other on the basis of the data they controlled (or for example privacy settings they had for the relevant data) and this competition would be eliminated by the transaction.

Data issues were also examined as a vertical effects, where data as an input may increase market power in a related downstream or upstream market, potentially also raising barriers to entry for other players that may not have access to such data.

Lastly, regulatory and data privacy rules also play a role in the relevant assessments.

Data and horizontal effects

The decisional practice distinguishes data that is traded from data that is not traded. To the extent that a merger would lead to horizontal overlaps on data markets, the starting point would normally be an assessment of market shares and the availability of alternative data sources.

Assessing the role of non-traded data requires understanding the reasons for the absence of data transactions. Notably, the Commission investigates whether there are regulatory, contractual or other restrictions to 'monetising' data or making it available to third parties. The Commission thus seeks to establish if there is a 'hypothetical' market for non-traded data, which may in fact become traded data in the near future. In this respect, to assess whether data may become tradable in the near future it may be necessary to assess factors that may prevent specific

⁵² *Meta/Kustomer*, paragraphs 444 and following.

⁵³ Case M.4731 - *Google/DoubleClick* (2008).

⁵⁴ Paragraph 36 of the Horizontal Merger Guidelines.

datasets from becoming traded⁵⁵ – such as privacy rules or other regulatory or technical barriers.

In a setting where there are no indications that data acquired through an acquisition would have become traded data absent the transaction, it is important to assess what the acquiring party plans to do with the data. The merged entity's control over data may make expansion or entry by rivals more costly or difficult to the detriment of competition.⁵⁶

The Commission may carefully consider the type of data collected and the type of services such data input may be used for. Among the relevant factors or characteristics of data that may be taken into account for the assessment, the Commission has in prior cases notably considered the volume, value, variety and velocity of the update of the database concerned (the so-called "4 Vs").⁵⁷

In its assessment of these factors, the Commission will investigate data as an input for another service, as well as the parties' market position in relation to that identified service or on a vertically related/neighbouring market. If the Commission finds that data is an important input and the market players have a degree of market power in the relevant service market for which data is used, the Commission will then assess the effects of the data combination often as a data accumulation theory of harm or in a vertical scenario, if an acquisition of an important input (data) would harm competition.

This assessment is in line with paragraph 36 of the Commission Horizontal Merger Guidelines, which sets out that a merger can significantly impede effective competition if the merged entity gains such a degree of control over an asset that expansion or entry by rival firms may be more difficult. However, such assessment requires weighing the short-term benefits of improving the merged entity's product against the longer-term harm to rivals facing increasing difficulties in contesting the merged entity's position or less incentives to invest in competing with the merged entity. Indeed, short-term benefits could include, for example, a materially improved ability to personalise or target the downstream service as a result of additional data input acquired. As data uses are diverse and case-specific, in order to understand whether increased barriers to entry or expansion nevertheless warrant intervention in a given case, the Commission will consider the relevance of the data (whether it may be considered an important input), the Parties' position in the relevant markets and the effects of the combination or acquisition of such data.

⁵⁵ Commission decision of 6 September 2018 in case M.8788, *Apple/Shazam*, paragraphs 225-235; *Google/Fitbit*, paragraphs 403-413.

⁵⁶ Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings (2004/C 31/03) ("Commission Horizontal Merger Guidelines"), paragraph 36.

⁵⁷ *Google/Fitbit*, paragraph 418.

In this context, the availability of data played a determinative role in *Google/Fitbit* and *Meta/Kustomer*. In *Google/Fitbit* the Commission found that Fitbit's data could be used to build user profiles that could improve Google's tailoring of the ads (i.e. strengthening its dominant position in the online search advertising market). The Commission found that Fitbit's health and wellness data was not available to competitors and that it was unlikely to become available on the market in the future. The Commission assessed whether the data combination would likely strengthen Google's market position, giving it a significant competitive advantage, resulting in an impairment of Google's rivals in the relevant markets.⁵⁸ In contrast, data related concerns were dismissed in another case, where the relevant data was readily available on the market and the acquired data set is in fact owned or controlled by the third parties – *Meta/Kustomer*. In that case, access to data was dependent on agreements with Kustomer's business customers who themselves needed end customer consent. Moreover, the Commission found that Meta's rival providers of online display advertising services had access to similar commercial data because of the strong commercial interest of businesses in sharing such data with both Meta and rival advertising platforms in order to measure and optimise the performance of their ad campaigns.⁵⁹ No data-related concerns were retained as a result.

Vertical effects, data as an input

With respect to input (data) foreclosure (i.e., vertical non-coordinated effects), as explained in the preceding section, the Commission examines such effects by considering whether the merged entity would have the ability and incentive to engage in input foreclosure, and whether this would have an impact on competition. In terms of ability, the Commission first assesses if data could be an important input within the meaning of paragraphs 31 and 34 of the Non-Horizontal Guidelines. In this sense the Commission considers if the data is traded or could potentially be traded to third parties. Second, it considers if the merger may change the incentives of the merged entity to start monetising such data and/or use the data to improve its own services downstream. This approach was notably adopted in *Microsoft/LinkedIn*, where the Commission dismissed concerns in this respect. In particular the Commission found that LinkedIn's data could not be qualified as an important input, such that access to that data could not give Microsoft an anti-competitive advantage over its competitors.⁶⁰

⁵⁸ *Google/Fitbit*, paragraphs 414-468.

⁵⁹ *Meta/Kustomer*, paragraphs 560-561.

⁶⁰ This finding relied on multiple factors. First, the Commission found that machine learning-based functionalities were already offered by CRM software solutions available on the market, and these solutions operated without access to the LinkedIn data. Second, LinkedIn not only did not offer its data to third parties today, but it did not have any firm plan to do so absent the merger. Third, the use of LinkedIn data, before and after the merger, would still be subject to applicable data protection laws. Fourth, even if LinkedIn data were to become an input for machine learning and artificial intelligence, whilst important and useful to this end, it would be only one of many datasets which could

Where the Commission finds ability to foreclose rivals from an important data input, in line with its framework, it will consider the incentives to foreclose. In such assessment, complex issues may arise if data is not yet traded and insufficient information is available to assess if a foreclosure strategy would be profitable. In such instances, a review of the parties' internal documents and a detailed assessment the transaction's rationale may be informative of the future incentives with respect to foreclosing rivals from accessing data.

Finally, the Commission assesses the overall impact of foreclosure on effective competition. In such assessment the Commission may consider if the entire market may be impacted, or only subsets thereof.⁶¹ The Commission would also assess what exact impact a restriction to data access would have. In order for competition concerns to be warranted, rivals must be hampered in their ability to compete and innovate, or there must be a likelihood that data foreclosure would raise barriers to entry to potential competitors.

Regulatory issues and data privacy rules

In the context of data-related competition assessments, wider regulation and in particular data protection⁶² and privacy rules may be relevant when they relate to the competitive process. This may be so in two respects.

First, the Commission may examine if there are certain regulatory limitations preventing the combination of datasets. To the extent the Commission finds that the applicable data protection and privacy laws do not prevent the combination of data sets following the transaction, the Commission assesses competitive effects as a result of such a combination. Thus, in *Microsoft/LinkedIn* the Commission noted that Microsoft and LinkedIn were subject to data protection rules (including the GDPR rules) with respect to the collection, processing, storage and usage of personal data, which, subject to certain exceptions, limited their ability to process the dataset they maintain.

Second, privacy may be an important element of quality of a product/service. In such circumstances, as with other non-price factors, the Commission will assess whether the merging parties were competing on this parameter and whether the transaction results in a loss of competition in this respect.⁶³

1.4 Ecosystems Related Effects

Competition in digital services increasingly occurs among a few large ecosystems. The OECD found that "*digital ecosystems of complementary products and services centred around [a] core*

service offer a line of products and services with a technological linkage increasing the complementarity between them. Large economies of scope and scale across markets, and network effects facilitate the development of ecosystems on the supply side, while consumer[s] synergies due to technological linkages play an important role on the demand side."⁶⁴

The increasing concerns around digital ecosystems relate, among others, to (i) conditions of access and interoperability, which may afford market power to the ecosystem's owner, (ii) the negative impact on consumers and market entry of the closed functioning of competing ecosystems, and (iii) the risk that certain platforms may be able to accumulate vast amounts of data from the various components of their ecosystems.⁶⁵ Some concentrations may give rise to a combination of these issues jointly.

Although some of these concerns were addressed in the preceding sections, the competitive effect of the acquisition and integration of an asset via a merger, to complement, extend or reinforce an existing ecosystem may raise specific issues relevant to a merger review. Those concerns are gaining increasing relevance in the Commission's decisional practice. From a theoretical perspective, two frameworks could be considered for the assessment of a possible ecosystems-related anticompetitive effect.

First, ecosystems-related effects could be assessed as a conglomerate theory of harm. Indeed, a merger would typically allow the acquiring platform to add a complementary element to its ecosystem, thus raising the concern that it may be able to leverage market power in its core market into the newly acquired product or service. The presence of an ecosystem may add a layer of complexity to such a theory, in the sense that there may not be a direct link between the platform's core market and the acquired activity, such that leveraging market power may only occur via sophisticated forms of bundling or tying. For instance, a digital ecosystem may be able to leverage market power across interlinked complementary products or services in indirect ways that have not yet been considered in the Commission's decisional practice, or in the Commission's Non-Horizontal Merger Guidelines.

Novelty notwithstanding, there is no fundamental impediment to finding such conglomerate risks. The applicable legal standard, as defined by the case law, is that "[s]ince the effects of a conglomerate-type merger are generally considered to be neutral, or even beneficial, for competition on the markets concerned (...) the proof of anti-competitive conglomerate effects of such a merger calls for a precise examination, supported by convincing evidence, of the circumstances which allegedly produce those

be used to provide CRM with advanced functionalities, and alternative data sources would remain in the market. See *Microsoft/LinkedIn*, paragraphs 246-277.

⁶¹ *Microsoft/LinkedIn*, paragraph 275.

⁶² For example, EU General Data Protection Regulation which came into force on 25 May 2018.

⁶³ *Microsoft/LinkedIn; Apple/Shazam*, paragraph 208.

⁶⁴ 29 October 2021 OECD Executive Summary of the Hearing on Competition Economics of Digital Ecosystems, DAF/COMP/M(2020)2/ANN6/FINAL, p. 2.

⁶⁵ See, e.g., 2019 Special Advisors Report on Competition Policy for the Digital Era, Jacques Crémer, Yves-Alexandre de Montjoye and Heike Schweitzer, p. 34.

effects”.⁶⁶ The Commission is therefore bound to demonstrate the likelihood of anticompetitive effects to the requisite legal standard. Even if mergers in digital ecosystems may involve novel forms of leveraging compared to traditional or classic tying and bundling considered in the Commission Non-Horizontal Merger Guidelines, leveraging strategies may be even more “plausible” than in traditional markets. The likelihood of anticompetitive effects would nonetheless need to rely on adequate evidence and be proven to the same legal standard.⁶⁷

Second, ecosystem-related effects can also lead to dominance concerns. Enlarging the ecosystem by an acquisition may lead to the creation or the strengthening of a company’s dominant position in one “core” market (or more), and in turn further lock customers in or incentivise them to remain within its so-called “walled garden” of services. For example, as outlined above, in *Meta/Kustomer* the Commission concluded that Meta would have the incentive to engage in input foreclosure, including because of the benefits from steering businesses into its ecosystem of products. In that regard, Meta’s presence across multiple markets was an important element in the Commission’s finding of a competition concern in *Meta/Kustomer*.⁶⁸

Ecosystem-related effects can thus be assessed under paragraph 36 of the Commission’s Horizontal Merger Guidelines, which, as noted above, provides that a merger can significantly impede effective competition if the merged entity gains such a degree of control over an asset that expansion or entry by rival firms may be more difficult.⁶⁹

⁶⁶ Court of First Instance judgment of 25 October 2002 in case T_05/02, *Tetra Laval v Commission*, at 155 (confirmed in Court of Justice judgment of 15 February 2005 in case C-12/03 P, *Commission v Tetra Laval*, at 45; Court of First Instance judgment of 14 December 2005 in case T-210/01, *General Electric v Commission*, at 69 and 76.

⁶⁷ The Commission recently assessed such possible effects in case M.10349 – *Amazon/MGM*, examining the competitive impact resulting from adding MGM’s content into Amazon’s existing bundle of audio-visual services and marketplace service products. The Commission dismissed competition concerns, finding that Amazon lacked market power in video-on-demand subscription services, and that MGM’s content was unlikely to significantly increase Amazon’s Prime Video position.

⁶⁸ *Meta/Kustomer*, paragraphs 315 and 389.

⁶⁹ Indeed, the Commission Horizontal Merger Guidelines, paragraph 36, note that “[s]ome proposed mergers would, if allowed to proceed, significantly impede effective competition by leaving the merged firm in a position where it would have the ability and incentive to make the expansion of smaller firms and potential competitors more difficult or otherwise restrict the ability of rival firms to compete. In such a case, competitors may not, either individually or in the aggregate, be in a position to constrain the merged entity to such a degree that it would not increase prices or take other actions detrimental to competition. For instance, the merged entity may have such a degree of control, or influence over, the supply of inputs or distribution possibilities that expansion or entry by rival firms may be more costly. (...) In markets where interoperability between different infrastructures or platforms is important, a merger may give the merged entity the ability and incentive to raise the costs or decrease the quality of service of its rivals”.

Economic literature focusing on ecosystems competition emphasizes the importance of dynamic efficiency and innovation, pointing to the need of assessing competitive effects in terms of potential competition and future rivalry. As a result, anticompetitive effects resulting from entry deterrence are a key focal point in assessing the impact of ecosystem acquisitions.⁷⁰ Horizontal concerns regarding the elimination competition among important innovators can also be assessed under paragraph 38 of the Horizontal Merger Guidelines, as illustrated by the Commission’s recent decisional practice in other sectors preventing harm brought about by horizontal mergers that risk eliminating potential future competitive constraints on a dominant player’s core business.⁷¹

Demonstrating such effects calls for a complex prospective assessment, over a long-term time horizon, requiring the Commission to assess aspects that include the merger’s impact on innovation competition and capabilities. Such assessment should allow the Commission to establish whether a merger risks impeding rivals’ ability to enter or challenge the merged entity or reducing their incentives to invest to compete.⁷²

2. Remedies in Digital and Tech Mergers

2.1 The legal framework and the Commission’s remedy policy

Structural remedies are systematically preferred in the Commission’s decisional practice, and are the benchmark against which any other solution is assessed.⁷³ However, other remedies can be appropriate in specific cases, when such remedies constitute an effective way to solve a specific competition concern and do not require excessively onerous or indefinite monitoring.⁷⁴

Under the Commission’s long-standing policy, divestiture commitments are the best way to eliminate competition concerns resulting from horizontal overlaps.⁷⁵ As the Robertson Report shows, horizontal effects in digital and tech mergers at national

⁷⁰ See, e.g., Marc Bourreau and Alexandre de Stree, *Digital Conglomerates and EU Competition Policy*, March 2019, available at SSRN: <https://ssrn.com/abstract=3350512> or <http://dx.doi.org/10.2139/ssrn.3350512>; OECD Hearing on Competition Economics of Digital Ecosystems, 3 December 2020, summary and expert contributions available at: <https://www.oecd.org/daf/competition/competition-economics-of-digital-ecosystems.htm>.

⁷¹ See Commission decisions in cases M.7932 – *Dow/Dupont* (2017) and M.8084 – *Bayer/Monsanto* (2018); General Court’s judgment of 9 March 2015 in case T-175/12, *Deutsche Börse v Commission*, paragraphs 157-179 (ECLI:EU:T:2015:148).

⁷² See *Meta/Kustomer*, paragraph 597.

⁷³ See Commission notice on remedies acceptable under Council Regulation (EC) No 139/2004 and under Commission Regulation (EC) No 802/2004, (2008/C 267/01) “Commission Remedies Notice”, paragraphs 10 and 17.

⁷⁴ Furthermore, under the EU Merger Regulation and applicable case law, the Commission must clear a modified transaction that no longer significantly impedes effective competition.

⁷⁵ Remedies Notice, paragraph 17.

level required intervention due to such effects. Similarly, as explained above, horizontal effects may also be relevant to future cases at EU level.

On the other hand, the Commission's recent decisional practice shows that many mergers in the digital and tech sectors involve players active in vertically-related or neighbouring markets, which can mean that a divestiture may not always be the most appropriate method to solve competition concerns.⁷⁶ If competition concerns can be removed by targeted, clear-cut and enforceable changes to market practices, non-divestiture remedies can allow, and have allowed, the Commission to intervene in a proportionate manner to address non-horizontal concerns. However, in situations where such targeted solutions are unavailable or would be ineffective, a prohibition is the most appropriate course of action.

The Commission does not accept just any type of non-divestiture remedy. The Commission's Remedies Notice distinguishes from other non-divestiture remedies those measures that consist in granting access to infrastructure or inputs on non-discriminatory terms to commitments relating to the future behaviour of the merged entity.⁷⁷ Access remedies may be accepted if they are at least equivalent to divestitures in their effects. In practice this means that an access remedy may be unsuitable if it would need to remain in place for a particularly long duration or on an indefinite basis, because this suggests that there is unlikely to be a lasting structural change in the market, and that a dependency on the merged entity would remain over the long-term. In past cases, access remedies have been accepted because it could be reasonably foreseen that access would no longer be required after a given period (e.g., 5 or 10 years) because there will have been sufficient entry in the intervening period, or other changes in the market structure or consumer behaviour, such that the merged entity would no longer be expected to have market power in relation to the input in question.⁷⁸

Furthermore, access or interoperability commitments are generally only suitable to prevent well identified and circumscribed anticompetitive effects. In transactions raising wide-ranging competition concerns, or where the merged entity would likely adopt a myriad of different foreclosure strategies,

⁷⁶ As a general rule, divestitures are an effective solution in non-horizontal cases, notably to remedy vertical effects. For recent example, see cases M.9728 - *Altice/Covage*, M.10702 - *KPS Capital Partners/Real Alloy Europe* and M.10792 - *Philip Morris International/Swedish Match*.

⁷⁷ Commission Remedies Notice, paragraph 17.

⁷⁸ For example, in *Microsoft/LinkedIn*, the remedy, which was designed to protect professional social networks competing with LinkedIn, was limited to five years since at the time there was already a clear trend towards accessing social media on smartphones, where Microsoft did not have market power, instead of desktops and PCs, where Microsoft had market power via its Windows operating system and Office productivity suite. As such, the remedy was targeted at preserving competition via access to or integrations with the Windows OS and Office productivity suite during this intervening period when desktops accounted for a larger, if declining, proportion of traffic on social networks.

even access or interoperability remedies cannot effectively protect competition in the market, in which case a prohibition is the Commission's only available course of action.

Other solutions may also be explored. However, any commitment proposal's suitability requires that it be deemed equivalent to divestitures in its effects. This excludes behavioural remedies consisting in a promise to act in a certain way, as such measures cannot be deemed to resolve competition concerns effectively.

2.2 Lessons learnt in the digital and tech space

Where the Commission identifies concerns related to access or interoperability degradation, commitments should aim at preserving a level of access or interoperability that is sufficient to allow third party products to effectively compete.

While each case is specific to its own facts, the Commission's recent decisional practice displays several common factors, relevant to assessing the suitability of such access or interoperability remedies:

- The likely foreclosure should arise from a well-identified plausible conduct that the merged entity would likely engage in and that would be fully prevented by the remedy. As a result, the conduct at issue must be circumscribed. Indeed, access remedies appear less suitable in cases in which a plurality of possible foreclosure strategies are identified, as it would be difficult to foresee and effectively curtail all possible foreclosure strategies.⁷⁹
- The fact that access is already granted pre-merger is relevant, as maintaining pre-existing forms of access may present fewer implementation risks when pre-existing access terms can constitute a benchmark that the Commission could rely upon. Relatedly, in order to be deemed suitable, any access or interoperability remedy should rely on well-established business practices, against which the remedy's implementation can be effectively benchmarked.⁸⁰

⁷⁹ By the same logic, for access or interoperability commitments to remove potential competition concerns, they must unambiguously cover all of the technical and commercial elements that are necessary to ensure access or interoperability pre-transaction. In that context, the Commission will pay close attention to various key terms mentioned in the commitments (including for instance "APIs", "interoperability", "support", or "interoperability information/data"), which need to be defined clearly and exhaustively to ensure the effectiveness of the commitments.

⁸⁰ Commitments indeed need to factor in potential improvements to access or interoperability that would be introduced after the transaction. This was a particular consideration in *Meta/Kustomer*, for example, where the Commission considered that Meta could create a separate private API for Kustomer, which the Commission did not have reason to object to, provided the corresponding public API for Kustomer's competitors would be equivalent in all relevant ways. See *Meta/Kustomer*, paragraphs 633-635, 677 and 686.

- The number of access or interoperability seekers should be reasonable and easy to identify from the outset,⁸¹ as a large number of access seekers would likely prove unmanageable and impossible to monitor, thus defeating the remedy's proper implementation.⁸²
- Standard terms of access should be identifiable and adequate to solve competition concerns (i.e., standard supply or licensing terms and conditions). In cases in which access needs to be tailor-made to each company, non-divestiture remedies appear less suitable. Similarly, if access requires price negotiations, a remedy would be uncertain and potentially ineffective, whereas such complexity does not arise when access remains free of charge.⁸³

Remedies should be made future proof, to ensure that new or improved features made available to the merged entity's service⁸⁴ or to a relevant third party that would not be a foreclosure target⁸⁵ are also made available to third parties.

Where the Commission identifies a data-related concern, the possible solutions that could be explored depend on the pre-transaction situation (e.g. whether the data was traded or non-traded) and the type of data involved.

In *Google/Fitbit*, a merger that increased the merged entity's data advantage to such an extent that it was found to impede rivals' ability to compete against the services provided by Google, a commitment not to use the acquired data related to the services/markets where concerns arose (a so-called "data silo") was found suitable to solve the competition problem in light of the very specific facts of the case. Notably, the case involved sensitive health data which, by nature, could not lend itself to an access commitment. As a result, the Commission considered that a data-related issue in a situation where such data could *not* be made available to competitors could be resolved by maintaining the relevant data in a separate silo. In this particular case, such separation was technically possible, and the length of the commitment (10 years) was sufficient, yet flexible enough for

⁸¹ For example, in Case M.8744 - *Daimler/BMW/Car Sharing JV* (2018), the beneficiaries of API access were 'integrator apps', i.e. mobile applications that aggregate several different transport options, and car sharing service providers.

⁸² For example, in *Meta/Kustomer*, there was a clear-cut definition of who could benefit from the remedy, and in fact the main players were relatively few in number and identified to the Commission during the investigation.

⁸³ Although remedies in digital and tech markets such as API access and interoperability remedies are by their nature relatively technical, it is necessary that their complexity does not undermine their effectiveness from the outset. For example, if there is a single API that is publicly available free of charge prior to the transaction, the commitment could be largely focused on maintaining equivalent access conditions following the merger, as was the case in *Google/Fitbit* and *Meta/Kustomer*.

⁸⁴ See in this regard the future proofing mechanism provided for in *Meta/Kustomer*, paragraph 667.

⁸⁵ *Google/Fitbit*, paragraph 995.

possible future market changes to be taken into account (given that some future data uses may not exist at the time of the decision).⁸⁶ Given the particular circumstances of the case and its precise theory of harm, the suitability of similar commitments to other situations is unclear.

Evidently, market participants' input on remedy proposals are key to understanding whether the above factors exist in each particular case. A positive market test of the remedies would need to fully support the design and effectiveness of the remedy proposed.

2.3 Implementation Monitoring and Self-Policing Remedy Provisions

To ensure their effectiveness, access or interoperability commitments can only be accepted if it is clear at the outset that the monitoring devices proposed will ensure that those commitments are effectively implemented.

Monitoring requirements should present no particular difficulties, and implementation can be easily "self-policed" by the market. In order to be deemed suitable, the Commitments' monitoring should be feasible and effective. In cases in which identifying a breach of the Commitments is difficult or would entail significant delays, non-divestiture remedies cannot effectively solve competition concerns.⁸⁷

Monitoring fundamentally relies on the merging parties' full cooperation over the lifetime of the remedies. The Commission's Remedies Notice provides that, in principle, monitoring has to be done by those undertakings wishing to benefit from the commitments. Measures such as access to a fast dispute resolution mechanism may allow the Commission to conclude that market participants themselves have the means to effectively enforce and police the commitments in a timely manner, such that no permanent monitoring of the commitments by the Commission is required. Fast track dispute resolution mechanisms are now commonly included in Commitments, e.g., in *Google/Fitbit*⁸⁸ and *Meta/Kustomer*.⁸⁹ For self-policing and enforcement to be effective, it is also necessary for the beneficiaries of the commitments to have the means to verify if the merged entity is favouring its own competing offering, e.g. via

⁸⁶ Commission decision of 17 December 2020 in *Google/Fitbit*.

⁸⁷ Given the inherently technical nature of digital and tech markets, this may involve requiring that the monitoring trustee be assisted by a technical expert with relevant expertise, e.g., in software engineering, as was the case in *Google/Fitbit* (commitments, paragraph 28) and *Meta/Kustomer* (commitments, paragraph 17). It is also necessary for the merged entity to commit to providing the monitoring trustee (and technical expert) with all necessary access. This may include for example access to the merged entity's software engineering personnel working on the relevant technology or API (see *Google/Fitbit* commitments, paragraph 25) and direct access to the underlying technology or source code (see *Meta/Kustomer* commitments, paragraph 15).

⁸⁸ *Google/Fitbit*, paragraph 908.

⁸⁹ *Meta/Kustomer*, paragraph 673.

a private API that is superior to the public API made available to third parties. This might require a degree of transparency on the part of the merged entity. Thus, in *Meta/Kustomer*, the commitments require the merged entity to publish improvements or new features added to the relevant APIs.⁹⁰

2.4 Conclusion on Remedies

The above list is not intended to be exhaustive or prescriptive, but is rather an illustrative set of considerations based on recent digital and tech mergers. The Commission thoroughly scrutinises and market tests commitments (provided they are not clearly insufficient) so that market participants, including the intended and potential beneficiaries of the tested remedies, provide their view, and help the Commission to conclude on whether the remedies are sufficiently workable, self-policing and capable of effective monitoring so as to remove the SIEC or the serious doubts.

Digital and tech mergers are continually raising novel issues. Remedies in such cases are not one-size-fits-all, and while the Commission's toolkit is quite flexible, there will remain cases where a workable solution may not exist and a prohibition may be necessary. The Commission's policy and practice is also naturally evolving with time and experience, and will continue to do so, as the Commission monitors how remedies in previous cases have performed over time.

Conclusion

Digital and tech mergers have disrupted markets and business practices to such an extent that they have stress-tested merger control regimes, in more ways than one. The conclusion of that test, at the present point in time, is that the EU framework of review is proving resilient and flexible. Based on this framework, the Commission conducts a fact-based and case-specific assessment, resulting in (sometimes novel) theories of harm (and potentially remedies) which fit the economic reality of the relevant markets. As the industry consolidates and the Commission reviews more concentrations, the scrutiny of transactions in the digital and tech space intensifies. This results in increased interventions by the Commission, via remedies or in-depth investigations.

Finally, a new legislative environment dawns with the entry into force of the DMA. Designated gatekeepers will be subject to specific rules, including with respect to interoperability or data use. This regulatory shift may impact the Commission's review of concentrations involving gatekeepers, adding a novel element to factor in the competitive assessment of such transactions.

⁹⁰ *Meta/Kustomer*, Commitments, paragraph 3.

Annex: Main Case References and Summaries

Conglomerate Relationships: Interoperability Degradation

The Commission's main cases in this area include the following:

- *Intel/McAfee* (2011): where the Commission found that (McAfee's) security software solutions needed to interact with hardware, and particularly (Intel's) central processing units ("CPUs"), to ensure that devices, including phones or computers, are protected from malicious content. The Commission was concerned that competing IT security products could be foreclosed if McAfee's solutions were embedded into Intel's chips, given Intel's significant position in CPUs and chipsets. Interoperability commitments were adopted to preserve competition in security solutions.⁹¹
- *Broadcom/Brocade* (2017): a case that involved end customers requiring both (Brocade's) fibre channel switches, which connect multiple servers and storage devices, and (Broadcom's) fibre channel host bus adapters ("HBAs"), which are cards mounted on the relevant devices, in order to operate their fibre channel network. The Commission was concerned that the merged entity would degrade the interoperability between its own fibre channel switches and competing HBAs. Given Brocade's position in switches, the Commission was concerned that the merged entity would thus foreclose competitors from the fibre channel HBA market. The transaction was cleared subject to Broadcom's commitment to ensure post-merger interoperability with competing HBAs.⁹²
- In *Qualcomm/NXP* (2019), (Qualcomm's) broadband chipsets, a component that allows smartphones to connect to cellular networks, interacted with (NXP's) chips, including near field communication ("NFC") and secure elements ("SE") chips, enabling short-range communication. Given Qualcomm's significant position in baseband chipsets, the Commission was concerned that Qualcomm would degrade their ability to interoperate with competing NFC and SE chips. Interoperability commitments were adopted to preserve competition in NFC and SE chips.⁹³

⁹¹ Case M.5984 – *Intel/McAfee*, Commission decision of 26 January 2011, paragraphs 128 to 174 and 297 to 355.

⁹² Case M.8314 – *Broadcom/Brocade*, Commission decision of 12 May 2017, paragraphs 148 to 207 and 233 to 281.

⁹³ Case M.8306 – *Qualcomm/NXP*, Commission decision of 18 January 2018, paragraphs 768 to 807 and 957 to 1127.

- In *Nvidia/Mellanox* (2019), (Mellanox's) network adapters needed to interact with (Nvidia's) graphics processing units ("GPUs"), specifically discrete GPUs for data centres. Network adapters are hardware elements that allow various servers within a datacentre to communicate with each other. When servers are accelerated with GPUs, these adapters may also need to interact directly with GPUs. The Commission cleared the transaction unconditionally, as it did not find evidence that the merged entity could or would have the incentive to foreclose Mellanox's competitors by engaging in interoperability degradation.⁹⁴
- In *Google/Fitbit* (2020), Fitbit's wrist-worn wearable devices needed to interoperate with Google's Android operating system ("OS"). This enables the device to interact with apps installed on Android smartphones, download apps on the device, or transfer data. The Commission was concerned that Google would leverage Android's dominant position in licensable smart mobile OS to degrade its interoperability with competing wearable manufacturers, thus foreclosing rival device makers. To obtain the Commission's clearance, Google committed to continue licensing for free public APIs covering all current core functionalities that wrist-worn devices need to interoperate with an Android smartphone to original equipment manufacturers (OEMs).⁹⁵
- In *Siemens Healthineers/Varian Medical Systems* (2021), a merger in the area of medical devices, the Commission assessed the risk of interoperability degradation between imaging solutions (produced by Siemens Healthineers) and radiotherapy solutions (produced by Varian), and found concerns, leading to the adoption of interoperability remedies.⁹⁶

Vertical Relationships: Access Degradation

The Commission assessed access degradation concerns in a series of cases, including:

- *Microsoft/LinkedIn* (2016): where the Commission was concerned that the merged entity would shut out LinkedIn's competitors from Microsoft's application programming interface ("API"),⁹⁷ access to which is required in order for competing applications to interoperate with Microsoft's products and access user

⁹⁴ Case M.9424 – *Nvidia/Mellanox*, Commission decision of 19 December 2019, paragraphs 149 to 273.

⁹⁵ Case M.9660 – *Google/Fitbit*, Commission decision of 17 December 2022, paragraphs 730 et seq.

⁹⁶ Case M.9945 – *Siemens Healthineers/Varian Medical Systems*, Commission decision of 19 February 2021, paragraphs 77 to 116 and 140 to 167..

⁹⁷ In essence, APIs allow software programs and hardware, or different software programs, to communicate with each other.

data stored in Microsoft's cloud. The Commission was thus concerned that competing professional social network ("PSN") suppliers would be foreclosed, thus tipping the market in LinkedIn's favour. The Commission ultimately cleared the transaction subject to several commitments, among which Microsoft's commitment to make the necessary APIs, programs and gateway available to competing PSNs.

- *Google/Fitbit* (2020): where the Commission was concerned, amongst other things, that Google would have the ability and incentive to unfairly preference Fitbit and its own services by blocking or degrading access to Fitbit's Web API for third party health and fitness apps, such as Apple's Health app or Strava, which many Fitbit users consented to sharing their data with. To obtain the Commission's clearance, Google committed for 10 years to continue to grant free and non-discriminatory access to Fitbit's Web API for any third party applications subject to user consent, as required pre-transaction.
- *Meta (formerly Facebook)/Kustomer* (2022): where Meta controlled a major part of the upstream market for over-the-top ("OTT") messaging channels, through its ownership of Facebook Messenger, Instagram and WhatsApp. Such messaging channels were an important input for customer relationship management ("CRM") software, which is used by businesses to interact with their customers. Indeed, Kustomer supplied CRM software that integrated Facebook Messenger, Instagram and WhatsApp. The Commission was therefore concerned that Meta might give Kustomer favourable access to its channels over competing CRM players. The transaction was cleared subject to conditions, including for 10 years to continue to grant free and non-discriminatory access to current and future core functionalities of its WhatsApp, Instagram and Messenger APIs for third party customer service CRM providers.

Data Related Effects

The Commission assessed data-related horizontal competition concerns in particular in the following cases:

- *Meta (formerly Facebook)/Kustomer* (2022): where the Commission examined the data held (downstream) by Customer Relation Management ("CRM") software solutions. CRM solutions may hold different types of data on behalf of their business customers about their end customers (eg. product queries, post-sale communications, etc). In other words, the Commission investigated what data Meta would obtain from Kustomer's customers and if it would obtain a competitive advantage as a result. Kustomer offers a business-to-business product and does not own the

data of its business customers. The Commission found that access to data would be dependent on agreements with its business customers who need consent from their end customers. In any event, the Commission ruled out competition concerns, because of Kustomer's small size, even taking into account its potential growth, the amount of additional data will not be significant.⁹⁸

- *Google/Fitbit* (2020): the Commission examined the data collected via Fitbit's wearable devices and the interoperability of wearable devices with Google's Android operating system for smartphones. The Commission found that by acquiring Fitbit, Google would acquire (i) the database maintained by Fitbit about its users' health and fitness; and (ii) the technology to develop a database similar to that of Fitbit. By increasing the already vast amount of data that Google could use for the personalisation of ads, it would be more difficult for rivals to match Google's services in the markets for online search advertising, online display advertising, and the entire "ad tech" ecosystem. The transaction would therefore raise barriers to entry and expansion for Google's competitors for these services to the detriment of advertisers, who would ultimately face higher prices and have less choice.⁹⁹
- In *Facebook/WhatsApp* (2014), the Commission assessed a theory of harm related to data used for online advertising services. Although at the time of the transaction, WhatsApp was not active in advertising and did not collect data useful for advertising purposes, the Commission investigated whether it could start doing so after the transaction, thereby strengthening Facebook's ability to carry out targeted advertising and strengthening its position in this market. These concerns were dismissed, *inter alia* because the Commission found that there were a sufficient number of competing online advertising providers, as well as a sufficient number of market players that collect user data.¹⁰⁰

Cases where the Commission considered data as part of its assessment of potential vertical effects include:

- *Microsoft/LinkedIn* (2016): where the Commission examined the combination of two businesses that collect, store and process data about millions of users and their activity. In its assessment, the Commission first identified the products and services of LinkedIn and Microsoft where the aggregation, in various forms,

⁹⁸ Case M.10262 – *Meta (formerly Facebook)/Kustomer*, Commission decision of 27 January 2022.

⁹⁹ Case M.9960 – *Google/Fitbit*, Commission decision of 17 December 2020.

¹⁰⁰ Case M.7217 – *Facebook/WhatsApp*, Commission decision of 3 October 2014.

of data could play a role. Second, it analysed the role of the parties' datasets in the markets involved. The Commission identified and assessed: (i) possible horizontal non-coordinated effects in the market for online advertising; and (ii) possible non-coordinated vertical effects related to input foreclosure in the market for customer relationship management (CRM) software solutions. With respect to possible vertical effects, the Commission adopted a three step assessment further described below.¹⁰¹

- In *Apple/Shazam* (2018): each of Shazam and Apple collected data on their users and their activity through their respective apps and services, however the overlap only concerned 'customer' data. No overlap arose in relation to the Parties' user behavioural data, which is not licensed by the Parties to third parties. The Commission investigated whether post-merger Apple, having obtained additional data, could target its competitors' customers and encourage them to switch to Apple Music, resulting in a competitive disadvantage. In this respect the Commission compared the Shazam User Data to other datasets available on users of digital music services using four relevant metrics using the 'Four Vs': that is the variety of data composing the dataset; the speed at which the data are collected (velocity); the size of the data set (volume); and the economic relevance (value). The Commission found that the integration of Shazam's and Apple's datasets on user data would not confer a unique advantage to the merged entity in the markets on which it operates. Any concerns in that respect were dismissed because Shazam's data was found to not be unique and Apple's competitors would still have the opportunity to access and use similar databases.¹⁰²
- *LSEG/Refinitiv* (2021): the Commission's investigation focused on trading services for European Governments Bonds ('EGBs'), where both parties are active, as well as on the provision of financial data products and the provision of trading and clearing services for over-the-counter interest rate derivatives ('OTC IRDs'), where one party is active upstream of the other in the value chain.¹⁰³

¹⁰¹ Case M.8124 - *Microsoft/LinkedIn*, Commission decision of 6 December 2016.

¹⁰² Case M.8788 - *Apple/Shazam*, Commission decision of 6 September 2018.

¹⁰³ Case M.9564 - *LSEG/Refinitiv Business*, Commission decision of 13 January 2021.