

# Understanding the Digital Markets Act

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## Abstract

In September 2022, the European Union (EU) legislature adopted the Digital Markets Act (DMA)—a landmark piece of regulation with the potential to transform the digital economy in Europe and beyond. Even after adoption, however, questions remain about its stated goals, underlying assumptions, scope, obligations, and eventual effectiveness. This article examines these questions using EU competition law not as a touchstone but as a reference point. First, the DMA’s goals of “fairness” and “contestability” can be more accurately restated as the protection of intra-platform and the promotion of inter-platform competition. Second, the DMA is based on the idea that the enforcement of the abuse of dominance provision, Article 102 Treaty on the Functioning of the European Union (TFEU), is ineffective both procedurally (due to lengthy investigations and remedial issues) and substantively (due to the difficulty of establishing dominance and abuse)—two assumptions that must be tested by examining competition law’s track record. Third, the scope of the DMA is built around the concept of “gatekeepers,” which are in turn defined based on turnover, market capitalization, and active users. Is this an application of the resurgent “big is bad” ideology or a proxy for market power? Fourth, the DMA imposes a list of dos and don’ts on gatekeepers, many of which are inspired by past or ongoing antitrust investigations. Does this experience justify the far-reaching obligations and if so, are they sufficiently flexible to allow for procompetitive gatekeeper conduct? Finally, the DMA is based on the idea that large online platforms have not continued to deliver the desired innovation outcomes and have reaped more than their fair share of the rewards from the innovation they brought. This assumption is tested by a historical look at Apple’s App Store—the most important innovation platform to arise in the digital economy.

## Keywords

platform regulation, Digital Markets Act, fairness, contestability, gatekeepers, App Store

## I. Introduction: The DMA’s Origins and Goals

In September 2022, the European Parliament and the Council adopted the Regulation on contestable and fair markets in the digital sector, better known as the Digital Markets Act (DMA).<sup>1</sup> The legislative process was speedy and, unusually, the final text is stricter than the one proposed by the European

1. Regulation (EU) 2022/1925 of the European Parliament and of the Council on contestable and fair markets in the digital sector [2022] OJ L265/1 (hereafter: DMA).

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Commission (EC) in December 2020.<sup>2</sup> With the legislative process in the rearview mirror, it is time to start looking forward to its implementation.<sup>3</sup> To properly enforce the DMA and evaluate its enforcement, it is necessary to understand this unique piece of legislation—and the DMA itself is not always as helpful in that regard, starting with its underdefined goals of “fairness” and “contestability.”

To begin understanding the DMA, it is useful to look at the bigger legislative picture. Across Europe, from Germany<sup>4</sup> to the United Kingdom,<sup>5</sup> policymakers are complementing competition law with specific acts targeting abusive platform conduct. Bills have also been introduced in the United States,<sup>6</sup> although their adoption is a more distant prospect. The idea underlying these initiatives is that competition law is too narrow, either by design or through judicial interpretation (in particular in the United States), which has led to under-enforcement, especially in the digital economy. Accordingly, the new laws are supposed to recalibrate enforcement. While they contain similar substantive provisions,<sup>7</sup> the DMA is set to be the most consequential, which is why it deserves our full attention.

In addition to sketching this global push for platform regulation, it is important to situate the DMA within the wider European Union (EU) effort to regulate various aspects of digital markets, focusing on the instruments that it interacts with.<sup>8</sup> First, the DMA is part of a package that also includes the Digital Services Act (DSA), which focuses on the accountability of online platforms regarding illegal and harmful content.<sup>9</sup> Second, the DMA goes a step further than the Platform-to-Business (P2B) Regulation of 2019, which focused on introducing transparency in the relation between platforms and their business users.<sup>10</sup> Third, the DMA shares a concern for data protection with the General Data Protection Regulation (GDPR), and even strengthens it on certain fronts.<sup>11</sup> Fourth, the DMA’s contestability goal is reminiscent of the pluralism pursued by the Audiovisual Media Services Directive.<sup>12</sup> Finally, though

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2. EC, Proposal for a Regulation of the European Parliament and of the Council on contestable and fair markets in the digital sector COM(2020)842 final. DMA, art. 7 (on interoperability of number-independent interpersonal communication services), for example, was not part of the EC proposal.
  3. At the time of writing, the EC is looking for feedback on an implementing regulation, see Commission Implementing Regulation (EU) . . . / . . . of XXX on detailed arrangements for the conduct of certain proceedings by the Commission pursuant to Regulation (EU) 2022/1925 of the European Parliament and of the Council.
  4. Gesetz zur Änderung des Gesetzes gegen Wettbewerbsbeschränkungen für ein fokussiertes, proaktives und digitales Wettbewerbsrecht 4.0 (GWB-Digitalisierungsgesetz), Jan. 18, 2021. For an English translation highlighting the new provisions, see “German Competition Act 2021—Unofficial Translation” (*D’Kart*), <https://www.d-kart.de/wp-content/uploads/2021/01/GWB-2021-01-14-engl.pdf>.
  5. See “A new pro-competition regime for digital markets” (July 2021) CP 489 for the proposal and Tom Smith, *Full Steam Ahead for the UK Digital Markets Unit*, THE PLATFORM LAW BLOG (Nov. 17, 2022), <https://theplatformlaw.blog/2022/11/17/full-steam-ahead-for-the-uk-digital-markets-unit/> on the legislative progress.
  6. See in particular H.R.3816—American Choice and Innovation Online Act, 117th Congress (2021–2022) and S.2710—Open App Markets Act, 117th Congress (2021–2022).
  7. For a comparison of both the substantive provisions and the operation of the different regimes, see Elias Deutscher, *Reshaping Digital Competition: The New Platform Regulations and the Future of Modern Antitrust*, 67 ANTITRUST BULL. 302 (2022).
  8. DMA, recital 12 states it applies “without prejudice” to those instruments. Further on their interaction, see Konstantina Bania, *Fitting the Digital Markets Act in the Existing Legal Framework: The Myth of the “Without Prejudice” Clause*, EUR. COMPET. J. (Dec. 15, 2022).
  9. At the time of writing, political agreement on the DSA had been reached, see EC, *Digital Services Act: Commission Welcomes Political Agreement on Rules Ensuring a Safe and Accountable Online Environment* (press release, Apr. 23, 2022), IP/22/2545.
  10. Regulation (EU) 2019/1150 of the European Parliament and of the Council on promoting fairness and transparency for business users of online intermediation services [2019] OJ L186/57 (hereafter: P2B Regulation).
  11. Regulation (EU) 2016/679 of the European Parliament and of the Council on the protection of natural persons with regard to the processing of personal data and on the free movement of such data [2016] OJ L119/1 (hereafter: GDPR). Notably, it strengthens the right to data portability (GDPR, art. 20), see further *infra*, Section III.
  12. Directive 2010/13/EU of the European Parliament and of the Council on the coordination of certain provisions laid down by law, regulation or administrative action in Member States concerning the provision of audiovisual media services [2010] OJ L95/1, as amended by Directive (EU) 2018/1808 of the European Parliament and of the Council amending the Audiovisual Media Services Directive in view of changing market realities [2018] OJ L303/69.

not adopted with the digital economy in mind, the Unfair Commercial Practices Directive has a similar focus on fairness and also includes a “blacklist” of banned practices.<sup>13</sup>

Notwithstanding this regulatory context, the DMA’s lineage must ultimately be traced back to competition law. The DMA is both inspired by competition law and designed to remedy the limits inherent in the enforcement of the abuse of dominance prohibition of Article 102 of the Treaty on the Functioning of the European Union (TFEU).<sup>14</sup> Such enforcement proceeds relatively slowly, *inter alia* due to the need for fact-intensive assessments, which can be particularly complex in digital markets. Many of the design choices in the DMA can be explained by this “need for speed” or procedural efficiency. This comes to the fore most clearly in its scope. Where the scope of Article 102 TFEU is determined by the concept of market power (or dominance), which requires a close examination of the market in question, the DMA relies on the concept of “gatekeeper,” for which it uses simple(r) thresholds. In addition, the DMA works with a relatively precise list of dos and don’ts that do away with competition law’s effects analysis. The DMA also largely discards the possibility to justify *prima facie* abusive conduct. When it comes to remedies, there are tweaks but no major departures from Article 102 TFEU.

This article is not a comprehensive guide to the DMA, and for specific questions—for example, regarding its legal basis,<sup>15</sup> institutional setup,<sup>16</sup> and *ne bis in idem*<sup>17</sup>—other sources should be consulted. Rather, I seek to understand and evaluate the DMA on the eve of its implementation. Section IA starts by asking *how* to evaluate the DMA, concluding that competition law should not serve as a touchstone but as a reference point, while sectoral regulation, in particular of telecommunications, is also a meaningful comparator. Given that competition law’s supposedly poor track record in digital markets was the impetus for the DMA, Section IB studies that track record, observing that both speed and remedial action have been pain points, even though the substantive provisions appeared flexible enough to be applied effectively to online platforms. Next, our attention turns to the DMA’s text. Section II examines the gatekeeper concept that determines its scope: does it signify a resurgence of the “big is bad” ideology or does it serve as a proxy for market power (and if so, how accurately)? Section III goes through the DMA’s list of obligations, checking the extent to which they are supported by past competition law enforcement. Section IV looks at justifications under the DMA, or rather the lack of them, finding that the impossibility to justify requires trusting the EC’s discretion—something that, understandably, not everyone is comfortable with. Section V zooms in on the remedy problem, which—in contrast to the problem of speed—the DMA does not resolve and at best mitigates. Finally, Section VI presents a case study of Apple’s App Store—the most important innovation platform to arise in the digital economy. The DMA is based on the idea that large online platforms have not continued to deliver the desired innovation outcomes and that the spoils from digital innovation have not been distributed fairly. A look at the evolution of the App Store allows us to test that assumption.

## A. How to Evaluate the DMA?

Given the evaluative ambition of this article, the first question is *how* to evaluate the DMA. Put differently, which mental model should one adopt when scrutinizing the DMA? One could examine the DMA on its own terms, so with its stated goals of fairness and contestability in mind. Alternatively, one could

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13. Directive 2005/29/EC of the European Parliament and of the Council concerning unfair business-to-consumer commercial practices in the internal market [2005] OJ L149/22.

14. Consolidated version of the Treaty on the Functioning of the European Union [2012] OJ C326/47 (hereafter: TFEU), art. 102.

15. Alfonso Lamadrid de Pablo & Nieves Bayón Fernández, *Why the Proposed DMA Might Be Illegal under Article 114 TFEU, and How to Fix It*, 12 J. EUR. COMPET. LAW. PRACT. 576 (2021).

16. Giorgio Monti, *The Digital Markets Act—Institutional Design and Suggestions for Improvement*, TILEC Discussion Paper 2021-004 (2021).

17. Giuseppe Colangelo & Marco Cappai, *A Unified Test for the European Ne Bis in Idem Principle: The Case Study of Digital Markets Regulation*, (2021), <https://ssrn.com/abstract=3951088>.

measure the DMA against competition law, which inspired its substantive provisions. Finally, one could qualify the DMA as sectoral regulation and adopt that frame of mind. Let us go through these options.

The DMA's stated objective is "to ensure that markets where gatekeepers are present are and remain contestable and fair."<sup>18</sup> Those goals of contestability and fairness are not explicitly defined. The clearest articulation of contestability is that it relates to "the ability of undertakings to effectively overcome barriers to entry and expansion and challenge the gatekeeper on the merits of their products and services."<sup>19</sup> The idea is that the features of platform markets (network effects, strong economies of scale, benefits from data) currently limit the contestability of gatekeeper positions and that the DMA should lower the barriers to entry, in particular to the benefit of new challengers. Fairness, by contrast, relates to "an imbalance between the rights and obligations of business users where the gatekeeper obtains a disproportionate advantage."<sup>20</sup> The idea is that gatekeepers use their superior bargaining position to appropriate the efforts of business users, either directly (by exploiting them) or indirectly (by excluding them from the market, especially when they compete with services provided by the gatekeeper). In other words, the DMA is aimed at making room for innovation by smaller players *and* letting such players reap the benefits from their innovative (and other) efforts.

In putting forward its goals, the DMA stresses that it "pursues an objective that is . . . different from that of protecting undistorted competition on any given market, as defined in competition-law terms."<sup>21</sup> Its distancing from competition (law) is, however, not entirely convincing. Based on the DMA's own explanations, "contestability" can be reworded as "inter-platform competition," while "fairness" implies a concern for intra-platform competition.<sup>22</sup> Fairness has long been a feature of competition law<sup>23</sup> but gained popularity more recently as "a way to express the overall goals and benefits of EU competition policy in a more tangible manner."<sup>24</sup> And the fairness in intra-platform relations sought by the DMA is explained by reference to exploitation and exclusion—two competition law concepts.<sup>25</sup> Contestability is more divorced from competition law. While competition law seeks to *protect* competition, the DMA also seeks to *promote* it by lowering barriers to entry at the platform level (inter-platform). Competition law may indirectly lower barriers to entry, or even do so directly when they are thrown up artificially (e.g., exclusivity agreements), but the DMA seeks to lower barriers to entry that are inherent to platforms and the multisided markets they operate in.<sup>26</sup> Finally, the DMA includes

18. DMA, recital 11.

19. DMA, recital 32.

20. DMA, recital 33.

21. DMA, recital 11. It does recognize that the objectives are complementary. On EU competition law's goal of undistorted competition, see Consolidated version of the Treaty on European Union—Protocol (No 27) on the internal market and competition [2008] OJ C115/309 ("the internal market as set out in Article 3 [TFEU] includes a system ensuring that competition is not distorted") and Case C-501/06 P *GlaxoSmithKline* EU:C:2009:610, para 63.

22. DMA, recital 32 mentions inter- and intra-platform competition explicitly. As noted by Natalia Moreno Bellosso & Nicolas Petit, *The EU Digital Markets Act (DMA): A Competition Hand in a Regulatory Glove*, (2023), unpublished manuscript, the DMA also shows a concern for extra-platform competition, which comes to the fore in recital 31.

23. See TFEU, preamble ("fair competition") and art. 101 (to be justified on account of redeeming efficiencies, an agreement between competitors must allow "consumers a fair share of the resulting benefit") (own emphases). Further on fairness as a goal of EU competition law, see Ariel Ezrachi, *EU Competition Law Goals and the Digital Economy*, BEUC Discussion Paper 2019, 12–15.

24. Johannes Laitenberger, *Fairness in Unilateral Practice Cases* (GCLC Conference, Brussels, Jan. 26, 2018). See also Alfonso Lamadrid de Pablo, *Competition Law as Fairness*, 8 EUR. COMPET. LAW. PRACT.J 147, 148 (2017) ("Connecting 'fairness' to competition law is therefore not a way to divorce the discipline from economics but to reconcile it with society, showing the wider public that it can contribute to their well-being.").

25. When it comes to abuse of dominance, fairness is more closely related to exploitation than exclusion, see TFEU, art. 102(a), prohibiting "directly or indirectly imposing *unfair* purchase or selling prices or other *unfair* trading conditions" (own emphasis).

26. Arguably, competition law's refusal to supply/essential facilities doctrine can also lower barriers to entry even when those are inherent to the market in question (e.g., because there is a natural monopoly, as in certain telecommunications markets). This doctrine, however, lies at the outer boundary of Article 102 TFEU and requires "exceptional circumstances," see Case C-7/97 *Oscar Bronner v Mediaprint* EU:C:1998:569, paras 39–40.

obligations that relate to transparency. While these are not a traditional feature of competition law,<sup>27</sup> they must be situated under the “fairness in intra-platform relations” heading. Indeed, legislators previously complemented competition law with the P2B Regulation in order to achieve such transparency, explicitly casting it as a matter of fairness.<sup>28</sup>

Thus, competition law is the unavoidable reference point: the DMA cannot be understood without it. But evaluating the DMA as competition law and nothing more would miss the point. A directly elected parliament and a council of ministers accountable at the national level decided that *something more* was called for. This is not a first: competition law, and its deficiencies, has paved the way for additional regulation before. Legislators have followed up on EC enforcement with more specific regulation in sectors from telecommunications<sup>29</sup> to finance<sup>30</sup>. Given this well-known dynamic, scholars have billed the DMA as “a revolution grounded on traditions.”<sup>31</sup> The DMA shares traits with such sectoral regulation, in particular its more prescriptive nature, even while missing a strictly sectoral focus. Competition law and sectoral regulation are both forms of economic regulation, sometimes labeled *ex post* and *ex ante*, respectively. The distinction between those forms of regulation is, however, overblown: EC decisions and court judgments set precedents, which guide future conduct *ex ante*,<sup>32</sup> while sectoral regulation also requires enforcement *ex post*.<sup>33</sup> At the end of the day, it does not matter tremendously whether one qualifies the DMA as “competition law” or as a particular instance of sectoral regulation. After all, every type of regulation should be subject to some form of cost–benefit analysis.<sup>34</sup> Moreover, despite putting forward goals of contestability and fairness, the DMA’s recitals make plain that the improvement it seeks relate to the classic parameters of competition: price, quality, choice, and innovation.<sup>35</sup> In contrast to competition law, however, choice—not price—takes the spotlight.<sup>36</sup>

In short, the DMA tries to distinguish itself from EU competition law but only succeeds in doing so to a limited extent. Fairness goes back to intra-platform exclusion and exploitation, while contestability refers to inter-platform competition (although promoting and not simply protecting such competition goes beyond competition law). At the same time, the DMA’s reason for adoption (as a response to

27. Autorité de la concurrence (AdC), Decision 19-D-26, *Gibmedia v Google (online search advertising)*, Dec. 19, 2019 did concern the non-transparent (as well as non-objective and discriminatory) nature of the Google Ads rules for advertisers, while Bundeskartellamt, Case B2-88/18, *Amazon*, July 17, 2019 concerned, *inter alia*, the transparency of its T&Cs (and changes to those T&Cs) for sellers.

28. The P2B Regulation’s name includes both “fairness” and “transparency,” but the provisions make clear that the fairness is to be found in increased transparency in platform-to-business relations.

29. Currently, see Directive (EU) 2018/1972 of the European Parliament and of the Council establishing the European Electronic Communications Code [2018] OJ L321/36 (hereafter: Communications Code). Telecommunications regulation was adopted from the 1990s onwards, initially consisting of a wider set of instruments.

30. See, e.g., Regulation (EU) 2015/751 of the European Parliament and of the Council on interchange fees for card-based payment transactions [2015] OJ L123/1 (hereafter: Interchange Fee Regulation). Note that many other instruments govern the financial sector.

31. Pierre Larouche & Alexandre de Streel, *The European Digital Markets Act: A Revolution Grounded on Traditions*, 12 EUR. COMPET. LAW. PRACT. J 542, 543–45 (2021).

32. The EC also publishes guidance to shape firm behavior up front, see in particular Guidance on the Commission’s enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings [2009] OJ C45/7.

33. Kevin Coates, *Ex-Post and Ex-Ante Rules*, 21ST CENTURY COMPETITION (Aug. 6, 2020), <https://www.twentyfirstcenturycompetition.com/2020/08/ex-ante-and-ex-post/>.

34. See generally CASS SUNSTEIN, *THE COST–BENEFIT REVOLUTION* (MIT Press 2018). This cost–benefit analysis could even take the form of decision theory/the error-cost framework, see *further* *infra*, Section III.

35. DMA, recitals 4 (“the detriment of prices, quality, fair competition, choice and innovation in the digital sector”) and 35 (“the objectives of preserving and fostering innovation and the quality of digital products and services, the degree to which prices are fair and competitive, and the degree to which quality or choice for business users and for end users is or remains high”).

36. See, e.g., DMA, recital 2 (on “decreases in business users’ and end users’ choice”) and 71 (on “user autonomy, decision-making, or choice”). Given that Article 102 TFEU cases in digital markets have also been choice-centered, this is simply a feature of digital markets rather than of sectoral regulation.

competition law's perceived ineffectiveness) and more prescriptive nature are reminiscent of sectoral regulation. It is thus not necessary to fit the DMA into a competition law straitjacket, but it is justified to use competition law as a reference point. Substantive or procedural departures from competition law may very well be justified when the law is not attaining its goal of undistorted competition (and its corollary, consumer welfare). The next section assesses whether that has been the case.

## B. Competition Law's Track Record

Around 2019, a number of reports assessed the enforcement of competition law and its challenges in the digital economy.<sup>37</sup> All of them stressed the need for speedy intervention.<sup>38</sup> One important reason is the “stickiness” of market power in the digital economy: due to the characteristics of online platforms (including network effects), a dominant position—once attained—is difficult to contest.<sup>39</sup> This means that the harm of anticompetitive conduct, for example, the exclusion of competitors, is more lasting than in traditional markets—and thus greater. Moreover, once promising competitors are forced out of the market, it is difficult if not impossible to adopt and monitor remedies that restore competition.<sup>40</sup> At present, however, competition law enforcement proceeds relatively slowly. Competition law's greatest strength—its flexible, case-specific assessment—also means that each individual case is time-consuming and resource-intensive. In a rapidly changing, dynamic environment, defining the exact boundaries of markets is particularly challenging.<sup>41</sup> In addition, power manifests itself in new ways, as “intermediation power,”<sup>42</sup> “bottleneck power,”<sup>43</sup> or “strategic market status,”<sup>44</sup> which may not always qualify as *market* power. A solution would be to de-emphasize market definition and focus instead on identifying anticompetitive strategies and harm.<sup>45</sup> Another way to speed up enforcement is to complement the broad, flexible competition provisions with a set of clear-cut conduct rules in areas where the incidence and magnitude of potential harm is greatest.<sup>46</sup> The resulting system would err on the side of disallowing potentially procompetitive conduct (false positives) rather than on the side of allowing potentially anticompetitive conduct (false negatives).

In line with the aforementioned reports, the DMA laments that “the scope of [EU competition law] is limited to certain instances of market power, for example dominance on specific markets and of anti-competitive behavior, and enforcement occurs *ex post* and requires an extensive investigation of often very complex facts on a case by case basis.”<sup>47</sup> In its preparatory works, the EC set out the problems more clearly.<sup>48</sup> On the one hand, the problem is procedural: the complex legal and economic analysis required under competition law delays intervention up to the point that effects such as tipping may no

37. For the full list of reports relied on in drafting the DMA, see EC, Proposal for a Regulation of the European Parliament and of the Council on contestable and fair markets in digital sector (Digital Markets Act) (Impact Assessment Report, part 2/2) SWD(2020)363 final (hereafter: “DMA Impact Assessment—Annexes”), 2–4 and 9–14.

38. Jacques Crémer, Yves-Alexandre de Montjoye & Heike Schweitzer, *Competition Policy for the Digital Era* (Special Advisers' Report) 2019 (hereafter: “Crémer Report”), 45 and 52–53; Jason Furman, Diane Coyle, Amelia Fletcher, Derek McAuley & Philip Marsden, *Unlocking Digital Competition* (Digital Competition Expert Panel's Report) 2019 (hereafter: “Furman Report”), 104–5; Commission “Competition Law 4.0,” *A New Competition Framework for the Digital Economy* (Report for the Federal Ministry for Economic Affairs and Energy) 2019 (hereafter: “Competition Law 4.0 Report”), 23–24; Stigler Committee, *Digital Platforms* (Final Report) 2019 (hereafter: “Stigler Report”), 119.

39. Crémer Report, 42; Competition Law 4.0 Report, 48.

40. Competition Law 4.0 Report, 70 and 74.

41. Crémer Report, 47.

42. *Id.* at 48–50.

43. Stigler Report, 32 and 105–6.

44. Furman Report, 41–42.

45. Crémer Report, 3–4.

46. Competition Law 4.0 Report, 49–54.

47. DMA, recital 5.

48. EC, Proposal for a Regulation of the European Parliament and of the Council on contestable and fair markets in digital sector (Digital Markets Act) (Impact Assessment Report, part 1/2) SWD(2020)363 final (hereafter: “DMA Impact Assessment”), paras 118–21 (see paras 122–26 on how other instruments do not fill competition law's substantive gap either).

longer be reversible. On the other hand, the problem is substantive: competition law cannot intervene when tipping is a feature of the market structure rather than a result of specific conduct, and there are unfair business practices by platforms that do not necessarily have an effect on competition. The DMA’s solution is to do away with market definition and power, and to adopt a list of obligations. Before looking at the two tenets of this new approach, however, it is worth checking whether the enforcement record confirms the previous assessment. A good place to start is to look at the length of investigations, given that this is a problem in itself *and* many other perceived difficulties (e.g., the complexity of market definition) contribute to it. Table 1 records the runtime of the EC’s platform cases.<sup>49</sup>

**Table 1.** Timeframe of EC Platform Cases (2000–2022).

Case	Opening of Investigation	Statement of Objections	Adoption of Decision (type)	Total Time
<i>Microsoft I</i> <sup>50</sup>	February 10, 2000	August 1, 2000; August 30, 2001; August 6, 2003	March 24, 2004 (infringement)	4 years, 1 month
<i>Microsoft II</i> <sup>51</sup>	January 14, 2008	January 17, 2009	December 16, 2009 (commitments)	1 year, 11 months
<i>Google Search (Shopping)</i> <sup>52</sup>	November 30, 2010	April 15, 2015	June 27, 2017 (infringement)	6 years, 7 months
<i>Google Android</i> <sup>53</sup>	April 15, 2015	April 20, 2016	July 18, 2018 (infringement)	3 years, 3 months
<i>E-books (Amazon)</i> <sup>54</sup>	June 11, 2015	—	May 4, 2017 (commitments)	1 year, 11 months
<i>Google Search (AdSense)</i> <sup>55</sup>	July 14, 2016	July 14, 2016	March 20, 2019 (infringement)	2 years, 8 months
<i>Amazon Marketplace</i> <sup>56</sup>	July 17, 2019	November 10, 2020	December 20, 2022 (commitments)	3 years, 5 months
<i>Amazon Buy Box</i> <sup>57</sup>	November 10, 2020	—	December 20, 2022 (commitments)	2 years, 1 month
<i>Apple App Store Practices</i> <sup>58</sup>	June 16, 2020	April 30, 2021	—	—
<i>Apple Mobile Payments</i> <sup>59</sup>	June 16, 2020	May 2, 2022	—	—
<i>Facebook Marketplace</i> <sup>60</sup>	June 4, 2021	December 19, 2022	—	—

49. This table is limited to EC platform cases under Article 102 TFEU (thus excluding, e.g., *E-books [Apple]* (Case AT.39847)—an Article 101 TFEU case). It only considers cases in which a Statement of Objections (SO) has been issued (thus excluding, e.g., *Google—Adtech and Data-related practices* (Case AT.40670)) and where the proceedings led to an infringement or commitment decision (thus excluding, e.g., *Google—Facebook (Open Bidding) agreement* (Case AT.40774)—an investigation that was closed). All dates are taken from the EC’s case register, <https://ec.europa.eu/competition/elojade/isef/index.cfm>.

50. *Microsoft* (Case AT.37792).

51. *Microsoft (Tying)* (Case AT.39530).

52. *Google Search (Shopping)* (Case AT.39740).

53. *Google Android* (Case AT.40099).

54. *E-book MFNs and related matters (Amazon)* (Case AT.40153).

55. *Google Search (AdSense)* (Case AT.40411). The duration of this case is under counted, given that it was split off from *Google Search (Shopping)* and its opening immediately came with an SO.

56. *Amazon Marketplace* (Case AT.40462).

57. *Amazon—Buy Box* (Case AT.40703).

58. *Apple—App Store Practices (music streaming)* (Case AT.40437). There has not been an SO in two other App Store cases: *Apple—App Store Practices (e-books/audiobooks)* (Case AT.40652) and *Apple—App Store Practices [other competing apps]* (Case AT.40716).

59. *Apple—Mobile Payments* (Case AT.40452).

60. *Facebook Marketplace* (Case AT.40684).

Scholars often cite *Google Search (Shopping)* to illustrate the length of investigations. Its seven-year runtime is definitely excessive, but the case is an outlier.<sup>61</sup> Even excluding this case as well as *Microsoft I* (which started more than two decades ago), however, it tends to take about three years from opening the investigation to adopting an *infringement* decision. The time to adoption of a *commitment* decision is shorter: around two years, at least if that route is chosen quickly enough.<sup>62</sup> Also, it is noticeable that similar cases (e.g., involving Google) speed up over time, possibly because the EC can rely in part on previously defined markets.

While investigations were lengthy, the substantive analysis did not run into the limits of competition law. In *Microsoft I*, the EC effectively brought the refusal to supply and tying doctrines into the digital era.<sup>63</sup> The EC confirmed the soundness of the tying doctrine in *Google Android*, and successfully qualified a new type of agreement (“anti-fragmentation”) as abusive, stumbling only over exclusivity agreements.<sup>64</sup> The self-preferencing conduct in *Google Search (Shopping)* presented the most difficult fit with traditional competition law, but even though the EC’s analysis was not an example of clarity,<sup>65</sup> that decision too was almost fully confirmed on appeal.<sup>66</sup> In addition to the form of abuse and theory of harm, the EC’s market definition and dominance assessment survived appeal in each of these cases.

Of course, the substantive limits of competition law may not show themselves in the cases pursued, but rather in the cases *not* pursued. The EC may have held back from investigating abusive (or unfair) practices because it anticipated the platform may not qualify as dominant in the traditional sense. Also, the cases investigated all concern *exclusionary* conduct—not *exploitative* conduct, which the EC is less willing and less able to pursue.<sup>67</sup> This is compensated somewhat by enforcement at the national level, where specific laws on abuse of economic dependence have allowed authorities to successfully bring cases against platforms’ exploiting their business users.<sup>68</sup> In addition, the EC has been careful to avoid relying on the refusal to supply doctrine to force platform access, perhaps anticipating that the strict indispensability test would be inhibitive, although excessive caution on that front may be unwarranted.<sup>69</sup>

Of all problems, remedies may present the most intractable one. To start with *Google Search (Shopping)* again: the 2017 decision obliged Google to subject its own comparison shopping service “to the same underlying processes and methods for the positioning and display in Google’s general search results pages as those used for competing comparison shopping services” (in other words,

61. The finally abandoned commitments process added some years to the case.

62. The EC is thus not exaggerating when stating that “competition law enforcement requires a detailed economic and legal analysis which, jointly with the procedural safeguards, bring the duration of the investigations to at least around two years and usually more than that,” see DMA Impact Assessment, para 119.

63. *Microsoft I* was confirmed on appeal, see Case T-201/04 *Microsoft v Commission* EU:T:2007:289.

64. Case T-604/18 *Google and Alphabet v Commission* EU:T:2022:541.

65. See Friso Bostoën, *The General Court’s Google Shopping Judgment: Finetuning the Legal Qualifications and Tests for Platform Abuse*, 13 EUR. COMPET. LAW. PRACT.J 75, 75–79 (2022).

66. Case T-612/17 *Google and Alphabet v Commission* EU:T:2021:763 (only the defensive leveraging prong was annulled).

67. On this unwillingness/inability to pursue exploitation, and its consequences for how the EC frames cases, see Friso Bostoën, *The ACM’s Apple Decision: To Boldly Go Where No Enforcer Has Gone Before*, 10 J. ANTITRUST ENFORC. 583, 585–592 (2022). Note, however, that the EC has preliminarily concluded that Meta imposed unfair trading conditions (a form of exploitation) on competing online classified ads services, see EC, *Commission Sends Statement of Objections to Meta Over Abusive Practices Benefiting Facebook Marketplace* (press release, Dec. 19, 2022), IP/22/7728. Still, in that case, the unfair conditions are imposed on competitors; it is (even more) difficult to challenge such terms when they are imposed on non-competitors, see DMA Impact Assessment, footnote 124.

68. See, e.g., Tribunal de commerce de Paris, Case 2018017655, *Ministère de l’économie et des finances v Google*, Mar. 28, 2022. Some NCAs have also been more comfortable relying on Article 102 TFEU to tackle exploitation, see AdIC, Decision 19-D-26, *Google Ads*, Dec. 19, 2019.

69. On how the EC avoided the refusal to supply doctrine in *Google Search (Shopping)*, and how the scope of that doctrine has been narrowed over time, see Friso Bostoën, *The General Court’s Google Shopping Judgment: Finetuning the Legal Qualifications and Tests for Platform Abuse*, 13 EUR. COMPET. LAW. PRACT.J 75, 82–84 (2022). The EC may, however, be forced to prove a refusal to supply in *Apple—Mobile Payments* (Case AT.40452).



equal treatment).<sup>70</sup> Google then organized an auction in which Google Shopping and competitors would bid for placement in the “Shopping Units” on equal terms.<sup>71</sup> Five years later, however, the debate on its effectiveness rages on.<sup>72</sup> It appears that only few of the users clicking on the units end up on competitors’ websites.<sup>73</sup> And even when users do click through, the competitors have to pay Google for the privilege. There certainly has not been a return to the pre-abuse situation, where more traffic made its way to comparison shopping services—and did so freely.

The jury has not reached consensus on the *Google Search (Shopping)* remedy yet,<sup>74</sup> but when it comes to the negative reception of remedies, the case is no outlier. Its successor *Google Android* concerned, *inter alia*, the way in which Google tied its web browser (Google Chrome) and search engine (Google Search) to its app store (Google Play). To remedy this abuse,<sup>75</sup> Google initially introduced a choice screen to let users install an additional browser and search engine.<sup>76</sup> It then reverted to a pay-to-play scheme reminiscent of *Google Search (Shopping)*, where search engines were selected for inclusion in the choice screen through an auction.<sup>77</sup> After criticism by competing search engines and a back-and-forth with the EC, Google finally made inclusion in the choice screen free for search engines, with the five most popular ones shown at the top.<sup>78</sup> The (for now) final remedy received a warmer reception,<sup>79</sup> but does not appear to have had any effect (yet).<sup>80</sup>

The *Google Android* remedy benefited from the experience of the *Microsoft* cases.<sup>81</sup> In the first *Microsoft* case, the EC ordered Microsoft to break the tie between the Windows operating system (OS) and Windows Media Player (WMP) by offering a version of Windows without WMP.<sup>82</sup> That remedy is broadly considered a failure.<sup>83</sup> There was simply no demand for the WMP-free version of Windows, for

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70. *Google Search (Shopping)* (Case AT.39740) Commission Decision of June 27, 2017, para 700 (see para 671 for the “equal treatment” phrasing).
71. Olivier Heckmann, *Changes to Google Shopping in Europe*, GOOGLE ADS & COMMERCE BLOG (Sept. 27, 2017), <https://adwords.googleblog.com/2017/09/changes-to-google-shopping-in-europe.html>.
72. For an assessment by an academic who advises complainants, see Philip Marsden, *Google Shopping for the Empress’s New Clothes—When a Remedy Isn’t a Remedy (and How to Fix it)*, 11 EUR. COMPET. LAW. PRACT. J 553 (2020).
73. See *Id.*, footnotes 3–4 for numbers from the EC and rivals. See also the empirical study by counsel for complainants: Thomas Höppner, *Google’s (Non-)Compliance with the EU Shopping Decision*, (2022), <https://ssrn.com/abstract=3700748>.
74. Even Commissioner Vestager vacillates, stating in Nov. 2019 that “we still do not see much traffic for rival competitors when it comes to shopping comparison,” but offering a more positive assessment in February 2020, see Carmen Avram, Parliamentary question—E-003869/2019(ASW) (Nov. 19, 2019) and Answer given by Executive Vice-President Vestager (Feb. 10, 2020).
75. As required by *Google Android* (Case AT.40099) Commission Decision of July 18, 2018, paras 1394–97.
76. Paul Gennai, *Presenting Search App and Browser Options to Android Users in Europe*, THE KEYWORD (Apr. 18, 2019), <https://www.blog.google/around-the-globe/google-europe/presenting-search-app-and-browser-options-android-users-europe/> (the apps would be installed in addition to Google’s alternatives).
77. Paul Gennai, *An Update on Android for Search Providers in Europe*, THE KEYWORD (Aug. 2, 2019), <https://www.blog.google/around-the-globe/google-europe/update-android-search-providers-europe/> (this time, however, the selected search engine would become the default).
78. *About the Choice Screen*, ANDROID (Aug. 29, 2022), <https://www.android.com/choicescreen/>.
79. See Natasha Lomas, *Google Ditches Pay-to-Play Android Search Choice Auction for Free Version after EU Pressure*, TECHCRUNCH (June 8, 2021), <https://techcrunch.com/2021/06/08/google-ditches-pay-to-play-android-search-choice-auction-for-free-version-after-eu-pressure/>.
80. Between the adoption of the decision in July 2018 and Dec. 2022, Google Search’s market share on mobile (which includes not only Android but also iOS) shifted not more than 0,1% according to Statcounter, see <https://gs.statcounter.com/search-engine-market-share/all/europe>.
81. The *Microsoft* cases have benefited from retrospective analyses, see in particular DAN GORE & ASHWIN VAN ROOIJEN, *Ex Post Assessment of European Competition Policy: The Microsoft Cases*, in ASSIMAKIS KOMNINOS & NICOLAS PETIT (eds), EX POST EVALUATION OF COMPETITION CASES (Kluwer 2021), 17–44.
82. *Microsoft* (Case COMP/C-3/37.792) Commission Decision of Mar. 24, 2004, para 1011.
83. See also Nicholas Economides & Ioannis Lianos, *A Critical Appraisal of Remedies in the E.U. Microsoft Cases*, 2 COLUM. BUS. L. REV. 346 (2010).

various reasons, including that it was priced equally to the Windows version *with* WMP, and that Microsoft's leveraging had made WMP the dominant media player, which meant that files were encoded specifically for it. The remedy for the other abuse in that case, Microsoft's refusal to provide interoperability information, did not fare much better: it took four years and over €1B in penalty payments for Microsoft to provide complete and accurate information at fair, reasonable, and non-discriminatory (FRAND) terms, without discernible effect on the market.<sup>84</sup> In the second *Microsoft* case, Microsoft committed to remedy its tie between Windows and Internet Explorer (IE) by providing users with a browser choice screen. Even though it led to a €560M fine for non-compliance, the remedy was hailed as a success.<sup>85</sup> The market actually shifted, with Google Chrome surpassing IE within a few years.<sup>86</sup> Subsequent studies have, however, thrown doubt on the choice screen's role in this shift,<sup>87</sup> it may simply be that the quality difference between IE and Chrome was so large that it overcame users' *status quo* bias.<sup>88</sup>

In conclusion, it appears that competition law's limits are mainly procedural. Proceedings have been fairly lengthy, although the EC could have done more to intervene speedily, for example, by imposing strict deadlines or making wider use of interim measures.<sup>89</sup> Substantively, the limits were less apparent. Defining markets, establishing market power, and developing theories of harm in line with the form of abuse all proceeded without too many hiccups. The record was limited to cases of exclusion, though, and mostly not of the refusal to supply type; the EC has yet to decide cases of platform exploitation, which may present more difficulties. Ultimately, the most vexing problem is that of remedies: their implementation adds years to an already lengthy investigation, and their success has been mixed at best. We return to this problem, and its underlying reasons, in Section V.

## II. The Gatekeeper Concept: “Big Is Bad” or Market Power Proxy?

With a good view of the DMA's *raison d'être*, as well as a mental model to examine it, let us start going over the substantive provisions, starting with its scope. The DMA's scope is determined by the concept of “gatekeeper”—a term that entered the antitrust lexicon some years prior.<sup>90</sup> “Gatekeeper” is defined as an undertaking providing core platform services (CPS) that is designated as gatekeeper according to certain criteria.<sup>91</sup> It makes sense to look at the two components—CPS and gatekeeper status—separately, keeping the DMA's goal of procedural efficiency in mind.

CPS are defined by reference to a close list of types of online platforms.<sup>92</sup> They include the usual suspects, including intermediation services (e.g., marketplaces and app stores), search engines, social

84. *Microsoft* (Case COMP/C-3/37.792) Commission Decision of July 12, 2006 (€280,5M) and *Microsoft* (Case COMP/C-3/37.792) Commission Decision of Feb. 27, 2008 (€899M, lowered to €860M on appeal).

85. EC, *Commission Fines Microsoft for Non-Compliance with Browser Choice Commitments* (press release, Mar. 6, 2013), IP/13/196 (“the choice screen was very successful with users: for example, until Nov. 2010, 84 million browsers were downloaded through it”).

86. MICHAEL CUSUMANO, ANNABELLE GAWER & DAVID YOFFIE, *THE BUSINESS OF PLATFORMS* (Harper Business 2019), 127–29.

87. Omar Vásquez Duque, *Active Choice vs. Inertia? An Exploratory Analysis of Choice Screens Applied in the European Microsoft Antitrust Case*, (2021), <https://ssrn.com/abstract=3766468>.

88. Trade journals at the time largely recommended Chrome while reviewing IE negatively, see, e.g., Megan Geuss, *Which Browser Should You Use?*, PCWORLD (Feb. 26, 2012), [https://www.pcwORLD.com/article/250566/which\\_browser\\_should\\_you\\_use\\_.html](https://www.pcwORLD.com/article/250566/which_browser_should_you_use_.html).

89. The one time the EC did impose interim measures, it did so within four months of opening proceedings. The case was closed with a commitments decision one year after. See *Broadcom* (Case AT.40608).

90. See, e.g., Lina Khan, *Sources of Tech Platform Market Power*, 2 GLTR 325, 326–28 (2018).

91. DMA, art. 2(1).

92. DMA, art. 2(2).

networks, OS, and advertising (intermediation) services, as well as some less obvious choices.<sup>93</sup> The DMA defines each of these CPS separately, often in reference to other EU regulation.<sup>94</sup> The idea is that CPS constitute gateways in the digital economy, with the capacity to affect a large number of end-users and businesses, which is not a problem in itself.<sup>95</sup> Sufficiently serious concerns around fairness and contestability only arise when a CPS becomes a *unavoidable* gateway—in other words, a gatekeeper.<sup>96</sup>

Gatekeeper status is dependent on three *qualitative* criteria. For each criterion, there are *quantitative* thresholds; when those are met, the qualitative criterion is presumed to be fulfilled. According to those qualitative criteria and corresponding quantitative thresholds, an undertaking qualifies as gatekeeper if<sup>97</sup>

- (a) it has a significant impact on the internal market: this is the case where it achieved an annual EU turnover above €7.5B in each of the last three financial years, *or* where its average market cap amounted to at least €75B in the last financial year, and it provides the same CPS in at least three Member States;
- (b) the CPS it provides is an important gateway for business users to reach end-users: this is the case where in the last financial year, the CPS had at least 45M monthly active end-users established or located in the EU and at least 10,000 yearly active business users established in the EU;
- (c) it enjoys an entrenched and durable position: this is the case where the thresholds of (b) were met in each of the last three financial years.

The DMA thus clearly does away with market definition, going as far as stating that “[a]ny justification on economic grounds seeking to enter into market definition . . . by the undertaking providing core platform services should be discarded, as it is not relevant to the designation as a gatekeeper.”<sup>98</sup> Speed is further enhanced by a proactive approach that puts the initial burden on the potential gatekeeper. If an undertaking meets the thresholds, it must notify the EC within two months.<sup>99</sup> Based on the information received, the EC then designates the undertaking as gatekeeper within a month and a half.<sup>100</sup> The undertaking can rebut the gatekeeper presumption by showing that, despite meeting the quantitative thresholds, it does not meet the qualitative criteria, but the scope for doing so appears limited.<sup>101</sup> While speeding up the process, the downside of quantitative thresholds is that they are inflexible. This inflexibility is compensated somewhat by the possibility for the EC to conduct market investigations: through a competition law-like procedure, it can designate gatekeepers that meet the qualitative criteria but not the quantitative thresholds.<sup>102</sup>

The question is what these thresholds are meant to capture—and what they actually capture. The motivation seems twofold: to skip the market power assessment, including market definition, in favor

93. I.e., video-sharing services, number-independent interpersonal communication services (NIICS), web browsers, virtual assistants and cloud computing services, see further *infra*.

94. DMA, art. 2(5)–(13). For example, the definitions of “online intermediation services” and “online search engine” are borrowed from the P2B Regulation.

95. DMA, recital 14.

96. See DMA, recital 15.

97. DMA, art. 3(1)–(2).

98. DMA, recital 23.

99. DMA, art. 3(3).

100. DMA, art. 3(4) (see also recital 16 on the “fast designation process”).

101. The undertaking must “manifestly call into question” the presumption with “sufficiently substantiated arguments,” see DMA, art. 3(5). If it is successful in doing so, the EC starts a market investigation to settle the matter, which it “endeavour[s] to conclude” within 5 months, see DMA, art. 17(3).

102. Most of the elements accounted for in the investigation are barriers to entry, including economies of scale and scope, network effects, data-driven advantages, switching costs and user lock-in, and vertical integration, see DMA, art. 3(8). The market investigation should be concluded within 12 months, with preliminary findings within six months, see DMA, art. 17(1)–(2).

of procedural efficiency, but also to go further than competition law's concept of dominance.<sup>103</sup> The chosen thresholds essentially relate to size. This approach is not foreign to competition law: merger control, a branch of competition law where speed is also paramount, has long worked with turnover thresholds to determine jurisdiction.<sup>104</sup> Still, it is fair to ask whether the gatekeeper concept embodies a return to the “big is bad” ideas of yore.

Commissioner Breton, who was co-responsible for drafting the DMA, took care to dispel such ideas, stating that the criteria sought to capture the behavior of the platform.<sup>105</sup> He argued that “size, per se, is not a problem,” but nuanced this statement by adding that “of course, size can amplify the impact of harmful behavior.”<sup>106</sup> While Breton alleged that the EC didn't have a “list” of platforms,<sup>107</sup> Schwab, European Parliament Rapporteur on the DMA, was less guarded:

He said Google, Apple, Amazon, Facebook and Microsoft, were the “biggest problems” for EU competition policy. “Let's focus first on the biggest problems, on the biggest bottlenecks. Let's go down the line — one, two, three, four, five — and maybe six with Alibaba . . . But let's not start with number 7 to include a European gatekeeper just to please [US president Joe] Biden . . . .”<sup>108</sup>

The gatekeeper test does seem arrived at through backwards induction: the EC had an idea which companies should be captured—in particular the GAFAM (Google, Apple, Facebook, Amazon, and Microsoft)—and then crafted the thresholds accordingly.<sup>109</sup> Then again, a study supporting the DMA's impact assessment covering nineteen firms showed that, whichever metric you rely on, two clusters emerge: one with the GAFAM and one with the other platforms.<sup>110</sup> In other words, it appears difficult *not* to end up with the GAFAM. Based on the thresholds in the DMA's final text, coming up with a reasonably accurately list of platforms that will qualify as gatekeepers is next to impossible, but the EC itself expects that they will result in about ten gatekeepers.<sup>111</sup>

As Schwab's statement indicates, the DMA's scope is targeted at solving the biggest problems for EU competition policy. It thus makes sense to return, once more, to competition law as a reference point. In particular, the question is to which extent gatekeeper status diverges from market power. To answer that question, however, one is forced to embark on the fool's errand of listing potential CPS with gatekeeper status. Some have done so based on the thresholds of criterion (a), that is, a €75B + market cap or €7.5B+ in revenue. Note that, since these thresholds apply to the undertaking *as a whole*,

103. DMA, recital 5 (“existing Union law does not address, or does not address effectively, the challenges to the effective functioning of the internal market posed by the conduct of gatekeepers that are not necessarily dominant in competition-law terms”).

104. Council Regulation (EC) No 139/2004 on the control of concentrations between undertakings [2004] OJ L24/1, art. 1. The substantive assessment of the “significant impediment to effective competition” (art 2) is an effects-based one though, in contrast to the DMA's list of obligations.

105. Samuel Stolton, *Breton Reveals Details on Gatekeeper Criteria in Digital Markets Act*, EURACTIV (Nov. 26, 2020), <https://www.euractiv.com/section/internet-governance/news/breton-reveals-details-of-future-digital-gatekeeper-definition-in-eu-law/>.

106. *Id.*

107. *Id.*

108. Javier Espinoza, *EU Should Focus on Top 5 Tech Companies, Says Leading MEP*, FINANC. TIMES (May 31, 2021), <https://www.ft.com/content/49f3d7f2-30d5-4336-87ad-eea0ee0ecc7b>.

109. Mario Mariniello & Catarina Martins, *Which Platforms Will Be Caught by the Digital Markets Act? The “Gatekeeper” Dilemma*, BRUEGEL (Dec. 21, 2021), <https://www.bruegel.org/blog-post/which-platforms-will-be-caught-digital-markets-act-gatekeeper-dilemma>.

110. Joe Sunderland et al., *Digital Markets Act Impact Assessment* (Support Study) Dec. 2020, 123–48 (Facebook sometimes dropped out of the cluster, while Booking.com was sometimes close to entering it). See also the study of platforms' positions in individual business areas (148–75).

111. DMA Impact Assessment, para 148 (the DMA's final thresholds correspond to the “low threshold” considered, but they are at the *highest* end of that “low threshold,” which should result in a number of gatekeepers at the *lowest* end of the EC's 10–15 gatekeepers estimate). Adding a requirement that a gatekeeper provides at least *two* CPS, which was considered during the legislative process, would have brought the number down to 5–7, see para 149.

the services of digital conglomerates are more easily captured, as opposed to those of undertakings that command a leading position in a single platform market.<sup>112</sup> But lists based solely on these thresholds are inevitably over inclusive. Indeed, the user-based thresholds of criterion (b) will likely serve as the greatest filter as they require 45M monthly active end-users in the EU (about 10% of the population)<sup>113</sup> as well as 10,000 yearly active business users in the EU. When it comes to those user numbers, however, there are issues of information availability<sup>114</sup> as well as issues of interpretation.<sup>115</sup> For example, what is the end-user of a business-focused cloud service?<sup>116</sup> In any case, it seems that based on this filter, some CPS belonging to large undertakings (e.g., Microsoft’s Bing) are nevertheless unlikely to make the cut.<sup>117</sup> For some CPS, like virtual assistants, it is unclear whether *any* undertaking meets the user thresholds: enough users might have *access* to Apple’s Siri, given that it is installed on every iPhone, but have they *engaged* with it in the last month? Are 45M users engaging with their Amazon Echo (Alexa) or Google Home?<sup>118</sup> In ascertaining so, are we counting every member of a household that owns a smart speaker, or only those who engage with it (and how would that work)?

Based on limited information and erring on the side of under rather than over inclusiveness, the list of CPS that meets the market cap/revenue thresholds *and* the user thresholds, could look something like Table 2.<sup>119</sup> It excludes two CPS: cloud services due to interpretation difficulties and virtual

**Table 2.** Potential Gatekeepers.

Potential Gatekeeper	Core Platform Services			
	Intermediation	Search	Social	Video-sharing
Google (Alphabet)	Play Store	Google Search	—	YouTube
Apple	App Store	—	—	—
Microsoft	Microsoft Store	—	LinkedIn	—
Amazon	Amazon Marketplace	—	—	—
Facebook (Meta)	Facebook Marketplace	—	Facebook Blue, Instagram	Facebook Watch, IGTV/ Reels
	NIICS <sup>120</sup>	OS	Browser	Advertising <sup>121</sup>
Google (Alphabet)	Gmail, Messages, Google Meet	Android (Auto)	Chrome	Related to CPS (search), intermediation
Apple	Mail/iCloud, iMessage	iOS (CarPlay), macOS	Safari	Related to CPS (intermediation)
Microsoft	Outlook, Teams	Windows	Edge	Related to CPS (social)
Amazon	—	—	—	Related to CPS (intermediation)
Facebook (Meta)	Messenger, WhatsApp, Instagram	—	—	Related to CPS (social), intermediation

112. On how the major platforms constitute conglomerates, see Marc Bourreau & Alexandre de Stree, *Digital Conglomerates and EU Competition Policy* (CERRE Report) 2019.

113. See World Bank, *Population, Total—European Union* (population of 447M in 2021), <https://data.worldbank.org/indicator/SP.POP.TOTL?locations=EU>.

114. Potential gatekeepers do not often publicize user numbers, let alone for the EU specifically. Websites such as Statista may provide numbers, but they should be treated with caution. By February 17, 2023, however, providers had to publish the average monthly active users of their platform, and in particular whether they reached the 45M threshold to qualify as “very large online platform” or “very large online search engine” under the DSA (see art. 24(2)). Martin Husovec kept track of these disclosures, see FindYourVlop - Chart mapping VLOP and VLOSE across the EU, [https://docs.google.com/spreadsheets/d/1H89uABJZCg0BQIUdpDPE0XBpdtXWPGQbwLW4Ug\\_hmNo/edit](https://docs.google.com/spreadsheets/d/1H89uABJZCg0BQIUdpDPE0XBpdtXWPGQbwLW4Ug_hmNo/edit). These numbers, which came in at the eleventh hour (for this article), are in line with the estimates presented here.

assistants because none may attain gatekeeper status. Many specific services were culled based on educated guesses of user numbers (e.g., Bing).

Is the DMA leaving competition law's market power requirement behind? Yes and no. In their core markets, the GAFAM have already been found dominant (see Table 2, cells shaded in light gray). According to the EC, Google is dominant in the markets for general online search (Google Search)<sup>122</sup> for licensable smart mobile OS (Google Android),<sup>123</sup> for Android app stores (Play Store),<sup>124</sup> and for online search advertising and search advertising intermediation (Google AdWords, now Google Ads, and AdSense).<sup>125</sup> Apple is dominant in the market for the distribution of apps—at least music streaming apps (App Store);<sup>126</sup> it may also be dominant in some mobile OS market.<sup>127</sup> Microsoft's Windows was previously found dominant in the market for PC OS and its position has changed little since.<sup>128</sup> Amazon is dominant in the provision of online marketplace services to third-party sellers (Amazon Marketplace).<sup>129</sup> Facebook is dominant in the markets for personal social networks (Facebook and Instagram) and online display advertising on social media.<sup>130</sup> Granted, some of these findings of dominance are preliminary (Apple, Amazon, and Facebook). In cases where the General Court has examined the EC's findings,

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115. Users are identified and their number is calculated in accordance with the methodology and indicators set out in the DMA's Annex, but that Annex too leaves questions open (or even gives rise to them).
  116. Some cloud services are more business-focused (Google Cloud, Amazon Web Services and Microsoft Azure), while others are more consumer-facing (iCloud, Google Drive and Microsoft OneDrive). These are not two sides of the same platform though; indeed, cloud services are one-sided rather than multisided, further complicating user number estimation, see Damien Geradin, Konstantina Bania, Dimitrios Katsifis & Alexandru Circiumaru, *The Regulation of Cloud Computing: Getting It Right* (2022), 6–9, <https://ssrn.com/abstract=4285731>.
  117. In 2022, Bing's market share in Europe (not the EU) hovered around 3.5–4%, see *Search Engine Market Share Europe—December 2022* (Statcounter), <https://gs.statcounter.com/search-engine-market-share/all/europe>. Given that around 10% of the EU's population needs to be actively using the service, Bing might not meet threshold (b) (Yahoo, with its 1% market share, certainly does not). Microsoft did report >45M users, but those numbers were rightly called into question, amongst others by Megan Gray based on New Search Engine Market Share Data from Cloudflare and Wikipedia (July 6, 2022), <https://spreadprivacy.com/search-engine-market-share-data-two-new-sources-cloudflare-and-wikipedia/>. One potential explanation for Bing's seemingly inflated user numbers is that the service continues to pop up as a default in Windows (or even when trying to “find out more” about a screensaver).
  118. Google Assistant, embedded in Google Home, is also available on Android devices, which—similarly to Siri—increases its odds of reaching 45M end-users.
  119. Other undertakings that might currently qualify as gatekeepers or could do so in the future include SAP, Oracle and Salesforce as cloud computing services (the definition of which appears to include software-as-a-service [SaaS] providers), Alibaba, Airbnb, Booking.com and Uber as intermediation services, and ByteDance (TikTok) as social network.
  120. Number-independent interpersonal communications services.
  121. Online advertising services (and networks, exchanges, and other intermediation services) only constitute a CPS when provided by an undertaking that also provides another CPS, see DMA, art. 2(2)(j). Online advertising services often constitute the “other side” of the market of a CPS such as search engines or social networks, while advertising intermediation services constitute platforms in their own right. For an in-depth look at the sector, see Competition and Markets Authority (CMA), *Online Platforms and Digital Advertising* (Market Study) July 2020. The EC is investigating Google for self-preferencing in advertising intermediation but no SO has been issued, see EC, *Commission Opens Investigation into Possible Anticompetitive Conduct by Google in the Online Advertising Technology Sector* (press release, June 22, 2021), IP/21/3143.
  122. *Google Search (Shopping)* (Case AT.39740) Commission Decision of June 27, 2017, section 6.2.
  123. *Google Android* (Case AT.40099) Commission Decision of July 18, 2018, section 9.3.
  124. *Id.*, section 9.4.
  125. *Google Search (AdSense)* (Case AT.40411) Commission Decision of Mar. 20, 2019, sections 7.2–7.3.
  126. EC, *Commission Sends Statement of Objections to Apple on App Store Rules for Music Streaming Providers* (press release, Apr. 30, 2021), IP/21/2061.
  127. Given that Google Android is dominant in the market for licensable OS, would iOS be dominant in a market for non-licensable OS? Instead, there may be a systems market including the phone (iPhone) and OS (iOS).
  128. *Microsoft* (Case AT.37792) Commission Decision of Mar. 24, 2004, section 5.2.1.
  129. EC, *Commission Accepts Commitments by Amazon Barring it from Using Marketplace Seller Data, and Ensuring Equal Access to Buy Box and Prime* (press release, Dec. 20, 2022), IP/22/7777 (in France, Germany and Spain).
  130. EC, *Commission Sends Statement of Objections to Meta Over Abusive Practices Benefiting Facebook Marketplace* (press release, Dec. 19, 2022), IP/22/7728.

however, it consistently confirmed them.<sup>131</sup> National competition authorities (NCAs) have come to similar findings of dominance (e.g., on Google Ads,<sup>132</sup> Google Android and the Play Store,<sup>133</sup> and the App Store<sup>134</sup>) and found it in other markets such as ad servers (Google's DoubleClick).<sup>135</sup> Thus, in the GAFAM's core markets, gatekeeper status appears to serve as an accurate proxy for market power. At the same time, the DMA captures services with a significant number of users outside of the GAFAM's core markets. These are less likely to qualify as dominant in their respective markets, but that does not mean competition law does not reach them. When a platform leverages the dominant position from its core market to an adjacent one, competition law can intervene even without market power in that adjacent market.<sup>136</sup> If Microsoft had LinkedIn preinstalled on every Windows PC, for example, it might run into trouble.<sup>137</sup> Similarly, the EC's *Facebook Marketplace* case concerns the way in which Facebook ties its online classified ads service, Facebook Marketplace, to its dominant personal social network, Facebook, which can be anticompetitive even without the former being dominant.<sup>138</sup>

To tease out the DMA's novelty relative to competition law, it is useful to examine those CPS where none of the GAFAM have their core product, that is, video-sharing platforms, number-independent interpersonal communications services (NIICS), web browsers, virtual assistants, and cloud computing services. It is difficult to find a common thread here. For starters, NIICS and cloud services are one-sided rather than multisided, so they can hardly be core *platform* services.<sup>139</sup> When it comes to market power, the (B2B) cloud services market seems oligopolistic rather than monopolistic (with Amazon, Microsoft, and Google accounting for 80% of it).<sup>140</sup> Competition law is poorly equipped to deal with such oligopolies, so this is where the DMA goes further.<sup>141</sup> In NIICS, virtually every GAFAM firm has a presence, with Facebook's WhatsApp standing out. The EC has repeatedly qualified this market as competitive, among others because users multi-home (i.e., use several services in parallel).<sup>142</sup> Various scholars have proposed limiting the scope of the DMA, or at least tempering its application, when users on both sides of the platform multi-home, which indicates the platform is not a bottleneck.<sup>143</sup> Then again, this criterion is difficult to apply to NIICS given that, as mentioned, these services are one-sided: there is one homogeneous user group (people sending messages)—not two. One reason to include them

131. The definition of relevant market falls within the broad discretion given to the EC when engaging in complex economic assessments, which reduces the chance of annulment on appeal.

132. AdIC, Decision 19-D-26, *Gibmedia v Google (online search advertising)*, Dec. 19, 2019, section II.C.2.

133. Autorità Garante della Concorrenza e del Mercato (AGCM), *Google Fined Over 100 Million for Abuse of Dominant Position* (press release, May 13, 2021), <https://en.agcm.it/en/media/press-releases/2021/5/a529>.

134. ACM, Case ACM/19/035630, *Apple*, Aug. 24, 2021 (Summary of Decision), provisionally confirmed by Court of Rotterdam, Cases ROT 21/4781–82, *Apple v ACM*, Dec. 24, 2021 (the market for “iOS app store services for dating app providers”).

135. AdIC, Decision 21-D-11, *Publishers v Google (online advertising)*, June 7, 2021, section II.D.2.

136. See Case C-333/94 P *Tetra Pak v Commission* EU:C:1996:436, para 25 and the cases referenced there.

137. See *Microsoft/LinkedIn* (Case M.8124) Commission Decision of Jan. 20, 2017 contains a commitment to prevent this (paras 418–21).

138. EC, *Commission Sends Statement of Objections to Meta Over Abusive Practices Benefiting Facebook Marketplace* (press release, Dec. 19, 2022), IP/22/7728.

139. Alexandre de Stree, Richard Feasey, Jan Krämer & Giorgio Monti, *Making the Digital Markets Act More Resilient and Effective* (CERRE Recommendations Paper) May 2021, 13–14. NIICS are networks, governed by direct rather than indirect network effects. On cloud computing services, see footnote 116.

140. Ofcom, *Ofcom to Probe Cloud, Messenger and Smart-Device Markets* (press release, Sept. 22, 2022), <https://www.ofcom.org.uk/news-center/2022/ofcom-to-probe-cloud-messenger-and-smart-device-markets>. See also Japan Fair Trade Commission (JFTC), “Cloud services” (Report) June 2022.

141. Market investigations, especially when coupled with enforcement competence, can be an effective tool to tackle anticompetitive conduct in oligopolistic markets, but few authorities have such competence (the EC does not either).

142. See *Microsoft/Skype* (Case COMP/M.6281) Commission Decision of Oct. 7, 2011, confirmed on appeal in Case T-79/12 *Cisco v Commission* EU:T:2013:635; *Facebook/WhatsApp* (Case M.7217) Commission Decision of Oct. 3, 2014.

143. Heike Schweitzer, *The Art to Make Gatekeeper Positions Contestable and the Challenge to Know What Is Fair: A Discussion of the Digital Markets Act Proposal* (2021) Z. EU. P. 503 and Damien Geradin, *What Is a Digital Gatekeeper? Which Platforms Should Be Captured by the EC Proposal for a Digital Market Act?* (2021), <https://ssrn.com/abstract=3788152>.

may be that the EC previously underestimated the cost of switching between NIICS.<sup>144</sup> Consider, for example, how outrage over changes to WhatsApp’s T&Cs led users to flock to competing messaging services before,<sup>145</sup> but no other services attained critical mass as a result, which means users can at best use the competing services for a limited set of contacts and might end up fully returning to WhatsApp out of convenience. The DMA seeks to solve this by mandating interoperability between NIICS.<sup>146</sup> When it comes to virtual assistants, as mentioned, Amazon and Google have a strong position due to their smart home speakers, while Apple’s virtual assistant continues to compete on account of being hosted on the iPhone—again, a fairly competitive situation. While having some independent capabilities, virtual assistants are not so much platforms as interfaces for other platforms (e.g., Amazon’s Marketplace or Google Search). But at least for now, they are not the interface of the future that their developers had hoped for; rather, they are cash burners with no clear path to profitability.<sup>147</sup> Video-sharing platforms like YouTube have not been known for their broader competitive significance, although they can constitute an important piece of their owners’ advertising stack. Browsers, finally, are an important market. They have been the subject of two EC cases, but always as the market *to which* market power is leveraged.<sup>148</sup> They also have their own competitive significance: they are the gateway to the open web and can thus offer an alternative to a more closed intermediation channel—that is, unless the owner of such a walled garden is able to diminish the utility of that alternative by underpowering the browsers in its ecosystem (see further *infra*, Section VI). Such conduct would be difficult to challenge under traditional competition law,<sup>149</sup> so the DMA can play a complementary role there.

In conclusion, what should we make of the DMA’s gatekeeper concept? It is certainly fixated on size, which opens itself up to critique casting it as a “big is bad” ploy. The DMA itself argues that size, in terms of market cap/revenue and user numbers, is a way to capture entrenched, unavoidable platforms with a significant impact on the internal market. With great size comes great harm—and thus responsibility. Looking ahead to the platforms that will likely be designated as gatekeepers, the GAFAM are front and center, with perhaps a few others joining their ranks. These firms have grown into conglomerates and given that the market cap/revenue thresholds, in contrast to the user number ones, apply to the undertaking *as a whole*, the GAFAM are especially like to be captured. Based on statements from officials and preparatory documents, this focus is an intended feature, not a bug of the DMA. Returning to competition law as our reference point, however, shows that gatekeeper status—while arrived at through a completely different methodology—may also serve as a proxy for market power. This applies in particular to the GAFAM’s core markets, in which they have been found dominant: the OS-based ecosystems (Windows, iOS, Android), search (Google), social (Facebook), marketplaces (Amazon), and the related advertising services (in case of Google and Facebook). In such cases, a market power shortcut may be justified (although the available precedent should already speed up subsequent competition law proceedings, reducing the gains of that shortcut). Moving beyond these markets, the market power narrative becomes less fitting. This is not a problem per se, given that the DMA is supposed to complement competition law. The chosen CPS, however, do not tell a coherent story of how it is supposed to do so. In some of these markets (e.g., cloud computing), there is a potentially oligopolistic situation, which is

144. See in particular *Facebook/WhatsApp* (Case M.7217) Commission Decision of Oct. 3, 2014, paras 108–15 and 127–40.

145. See, e.g., Zoe Kleinman, *WhatsApp Users Flock to Rival Message Platforms*, BBC (Jan. 12, 2021), <https://www.bbc.com/news/technology-55634139>.

146. DMA, art. 7.

147. Ron Amadeo, *Amazon Alexa Is a “Colossal Failure,” on Pace to Lose \$10 Billion This Year*, ARS TECHNICA (Nov. 21, 2022), <https://arstechnica.com/gadgets/2022/11/amazon-alexa-is-a-colossal-failure-on-pace-to-lose-10-billion-this-year/>.

148. *Microsoft (Tying)* (Case AT.39530) Commission Decision of Dec. 16, 2009 and *Google Android* (Case AT.40099) Commission Decision of July 18, 2018.

149. Similarly to Ofcom’s cloud computing market investigation (see footnote 140), the CMA market investigation of mobile browsers suggests that traditional infringement proceedings would be difficult, while showing the unique value of market investigations to overcome such limits. See CMA, *Mobile Browsers and Cloud Gaming Market Investigation* (Issues Statement) Dec. 2022.



difficult to put in terms of dominance.<sup>150</sup> In others (e.g., NIICS and browsers), there is conduct that is hard to tackle under competition law because it does not fit the traditional exclusionary mold (interoperability and strategic neglect, respectively). In any case, while gatekeeper designation should result in speed gains relative to market power assessments (also because the designation is “valid” for three years),<sup>151</sup> the process will not be a walk in the park either. The identification and counting of users can lead to particular interpretative difficulties, although it will help the EC that the burden is placed on the potential gatekeeper. If it wanted to, the EC could have stuck closer to a competition law methodology. This can be the case for sectoral regulation: the EU telecommunications regime also works with a designation process, but only of undertakings with “significant market power” measured according to competition law principles.<sup>152</sup> The DMA could have found a middle ground between market power and gatekeeper status, for example, by introducing a safe harbor for platforms that face multi-homing on both sides. But even that would slow down proceedings and procedural efficiency seems to have taken priority, resulting a risk of over inclusiveness. At the end of the day, the best understanding of the DMA’s scope may be that it covers not only the markets in which the major platforms have their core activities but also adjacent, competitively less significant markets so as to capture entire ecosystems. This is in line with Commissioner Vestager’s statement that “perhaps the biggest threat to competition and innovation comes from platforms that are not just a single business, but the center of large empires.”<sup>153</sup>

### III. DMA Obligations: Competition Law Shortcuts or Perversions?

The DMA divides its gatekeeper obligations in two groups: the “self-executing” obligations of Article 5 and the obligations susceptible of being further specified of Articles 6–7.<sup>154</sup> Scholars have made a sport of categorizing the DMA obligations in different ways, but always with competition law in mind.<sup>155</sup> With the ambition to make everything “as simple as possible but not simpler,”<sup>156</sup>

150. The concept of “collective dominant position” could be of help but is rarely relied upon given the difficulties involved, see Case T-342/99 *Airtours v Commission* EU:T:2002:146.

151. The EC shall review whether the gatekeepers continue to meet the criteria/thresholds at least every three years, see DMA, art. 4(1).

152. The “significant market power” assessment is carried out by national regulatory authorities in line with EC, “Guidelines on market analysis and the assessment of significant market power under the EU regulatory framework for electronic communications networks and services” (Communication) C(2018)2374 final.

153. Margrethe Vestager, *Competition and the Digital Economy* (OECD/G7 Conference, Paris, June 3, 2019), continuing: “In many cases, that means that a platform business runs an ecosystem of related products, which all work seamlessly together.” The DMA’s text also exhibits a focus on ecosystems, see e.g., recital 64 (“regardless of whether end users ‘multi-home’, gatekeepers often provide number-independent interpersonal communications services as part of their platform ecosystem, and this further exacerbates entry barriers for alternative providers of such services and increases costs for end users to switch”).

154. You could put the DMA, art. 7 obligations on interoperability of NIICS in their own category, but art. 8 states that the EC can adopt implementing acts specifying the obligations of both arts 6 and 7, which is why it makes sense to group them together.

155. See, e.g., Pinar Akman, *Regulating Competition in Digital Platform Markets: A Critical Assessment of the Framework and Approach of the EU Digital Markets Act*, 47 EUR. LAW REV. 85 (2022) (distinguishing obligations pursuing fairness, targeting conflicts of interest, and preserving contestability); Alexandre de Streel, Bruno Liebhaberg, Amelia Fletcher, Richard Feasey, Jan Krämer & Giorgio Monti, *The European Proposal for a Digital Markets Act: A First Assessment*, (2021) CERRE Assessment Paper, <https://cerre.eu/publications/the-european-proposal-for-a-digital-markets-act-a-first-assessment/> (distinguishing four underlying theories of harm, i.e., lack of transparency, platform envelopment/lack of access to gatekeepers’ platforms and data, lack of mobility, and lack of balance); Pablo Ibáñez Colomo, *The Draft Digital Markets Act: A Legal and Institutional Analysis*, 12 EUR. COMPET. LAW. PRACT. J 561 (2021) (distinguishing between obligations, particularly those of art. 6, that seek to prevent the strengthening, leveraging and exploitation of market power); Natalia Moreno Belloso & Nicolas Petit, *The EU Digital Markets Act (DMA): A Competition Hand in a Regulatory Glove*, (2023), unpublished manuscript (distinguishing obligations focused on exclusionary impacts in inter-platform, intra-platform and extra-platform relations; adverse exploitative practices; and transparency concerns).

156. An aphorism often ascribed to Albert Einstein, see <https://quoteinvestigator.com/2011/05/13/einstein-simple/>.

I divide most of the DMA's obligations in just two groups: negative and positive.<sup>157</sup> Although there are too many exceptions to speak of a "rule," negative obligations tend to correspond to the DMA's fairness goal, that is, to protect intra-platform competition, while positive obligations are more likely to relate to contestability, that is, to promote inter-platform competition. Let us examine the two groups.

Negative obligations or "don'ts"—proscriptive rules—are the prohibitions typical to competition law. Enforcement of such obligations results in injunctions or cease-and-desist orders ("reactive" remedies).<sup>158</sup> In the DMA's text, negative obligations can be recognized from their wording, with "shall not" or "shall refrain" being giveaways (although language is bendable and thus not always helpful to unearth the nature of the obligation). An example of a negative obligation is the prohibition of anti-steering measures, which prevent business users from communicating and promoting offers to end-users acquired via the CPS.<sup>159</sup> These negative obligations tend to relate to the DMA's fairness goal, that is, seek to prevent gatekeepers from excluding or exploiting (business) users of its CPS.

Positive obligations or "dos"—prescriptive rules—are less usual for competition law. When it comes to remedies, a simple injunction does not suffice; rather, positive obligations require the enforcer to specify a desired course of action in greater detail ("proactive" remedies).<sup>160</sup> Such remedies are not unheard of in competition law but are usually avoided given that they come with a greater need for design expertise and consistent monitoring.<sup>161</sup> It is therefore only logical that most of the DMA's positive obligations are those that are "susceptible of being further specified" (Article 6). The text hints at the nature of such obligations with phrases like "shall allow (and technically enable)" and "shall provide." A good example is the obligation of gatekeeper search engines to provide third parties with access to ranking, query, click, and view data on FRAND terms.<sup>162</sup> Positive obligations tend to relate to the DMA's contestability goal, that is, the promotion of inter-platform competition.

Like the goals they correspond to, the two types of obligations are related.<sup>163</sup> If the mainly positive obligations succeed in spurring inter-platform competition, a more competitive marketplace should limit intra-platform abuse, given that business users would have (more) options to turn to when dissatisfied with their treatment by the platform. In that case, the market could solve issues of intra-platform abuse, limiting the need for the mainly negative obligations. The other way around, negative obligations may make room for business users to grow from application provider to platform challenger, thus increasing

157. "Most," because I am not including the transparency obligations, which share the "shall provide" phrasing with other positive obligations, see, e.g., DMA, arts 5(9)–(10). Like the transparency obligations, art. 5(6) also relates to the P2B Regulation (art. 11). While transparency obligations are positive, they must be situated under the "fairness in intra-platform relations" heading, see *supra*, Section IA. At the same time, such obligations allow business users to compare different platforms more easily and may thus promote inter-platform competition.

158. On the distinction between reactive and proactive remedies, see Pablo Ibáñez Colomo, *Legal Tests in EU Competition Law: Taxonomy and Operation*, 10 EUR. COMPET. LAW. PRACT.J 424, 435–36 (2019).

159. DMA, art. 5(4). The phrasing of this provision illustrates the previous sentence's point on language obscuring the nature of the obligation. It reads: "The gatekeeper *shall allow* business users . . . to communicate and promote offers . . . to end users acquired via its core platform service" (own emphasis). This seemingly positive obligation can also be stated as: "The gatekeeper *shall not prevent* business users from communicating and promoting offers to end users acquired via its core platform service" (similar to the wording used in DMA, art. 5(3)).

160. Again, language is bendable though. Consider *Google Search (Shopping)*: the remedy in that case can be put in negative terms (do *not* self-preference) or in positive ones (*accord* equal treatment), see *supra*, Section IB.

161. Two types of abuse stand out as *requiring* a remedy that is positive: *de novo* refusal to supply cases require a specified obligation to give access, while excessive pricing cases require an obligation to charge a fair price. In part due to these remedial difficulties, competition authorities are wary of taking up such cases.

162. DMA, art. 6(11).

163. See DMA, recitals 32 (last sentence) and 34.

inter-platform competition. Note also that many obligations can simultaneously have an effect on intra- and inter-platform competition, although a dominant nature or goal can usually be identified.

With an idea of the two types of obligations, we can start evaluating them. Remember, these obligations do not require an effects analysis of the type that characterizes competition law; rather, the DMA seeks to ensure fairness and contestability “independently from the actual, potential or presumed effects of the conduct of a given gatekeeper . . . on competition on a given market.”<sup>164</sup> Moreover, the fact that a number of obligations seek to *promote* inter-platform contestability, in other words, actively *inject* competition, implies that the DMA considers dominance—or even size—in core platform markets an issue as such. Competition law, by contrast, has always held that a dominant position “is not in itself a ground of criticism.”<sup>165</sup> Therefore, those who see the DMA’s obligations as espousing “big is bad” ideas cannot be accused of seeing ghosts.

There is, however, a competing explanation. The preferred method to shape competition-related rules is decision theory or the error-cost framework.<sup>166</sup> Its goal is to minimize total social costs, which include the costs of false positives (finding violations where conduct did not harm competition, thus over deterring procompetitive conduct) and false negatives (*not* finding violations where conduct did harm competition, thus under deterring anticompetitive conduct). Rules must be carefully calibrated to strike the right balance, but that nuance itself comes at a cost: the more complex (the application of) the rule, the higher the costs incurred by the enforcer (when conducting investigations) and by its subjects (in terms of legal certainty).

According to this theory, clear-cut rules that do not require an effects analysis may be justified in particular circumstances. This could be the case when the total costs from false negatives are higher than those of false positives, for example, because a type of conduct is likely to be anticompetitive and the concomitant harm is great. The harm may be great because markets themselves do not solve the issue—or at least not within a reasonable timeframe. Enforcers may only be able to intervene sporadically due to the cost associated with complex investigations. And even in cases where enforcers do intervene, the dynamics of the market (in particular tipping) may perpetuate the harm despite remedies. This kind of reasoning seems to have supported the DMA proposal.

Of course, such a reasoning must be backed up. Economic research, both formal and empirical, can help do so, but enforcement experience provides the most useful precedent to show that a type of conduct is likely to be anticompetitive (at least when engaged in by a firm with market power). To check whether enforcement experience offers a solid basis for the DMA’s obligations, Table 3 surveys their precedents. It includes only European investigations where at least a statement of objections has been issued (excluding decisions that have been definitely annulled on appeal) as well as market studies and investigations.<sup>167</sup> This is limiting because the experience in other jurisdictions can also be a valuable source for policymaking.<sup>168</sup> The list of precedents is, however, temporally “generous” to the DMA given that it is updated until December 2022, while the initial text was proposed in December 2020.<sup>169</sup>

164. DMA, recital 11.

165. Case C-209/10 *Post Danmark v Konkurrencerådet* EU:C:2012:172, para 21 and the case law referenced there.

166. For the theory and its application, see THOMAS LAMBERT, *HOW TO REGULATE: A GUIDE FOR POLICYMAKERS* (Cambridge University Press 2017) and JONATHAN BAKER, *THE ANTITRUST PARADIGM: RESTORING A COMPETITIVE ECONOMY* (Harvard University Press 2019). For a decision-theoretic analysis supporting the DMA, see Elias Deutscher, *Reshaping Digital Competition: The New Platform Regulations and the Future of Modern Antitrust*, 67 *ANTITRUST BULL.* 302 (2022).

167. In cases with an SO, there is at least a preliminary assessment; the simple opening of an investigation is less convincing as precedent. The in-depth nature of market studies and investigations makes them useful to identify competition issues and, especially in the case of investigations, ways to remedy them.

168. For example, the obligation not to impose anti-steering measures is also supported by an investigation from the JFTC and the U.S. judgment in *Epic v Apple*, see further *infra*, Section VIC.

169. For the list of cases that the EC relied on, see DMA Impact Assessment—Annexes, 120–27. For a broader list of evidence relied on, see DMA Impact Assessment, 53–60.

**Table 3.** Gatekeeper Obligations and Their Precedents.

Article	Obligation <sup>170</sup>	Goal	Precedents
Negative obligations			
5(2)(a)	Not process personal data from third parties	Inter-platform	Bundeskartellamt (BKA), <i>Facebook</i> <sup>171</sup> Competition and Markets Authority (CMA), Digital advertising market study <sup>172</sup>
5(2)(b), (d)	Not combine personal data from CPS with data from third parties and other services gatekeeper	Inter-platform	BKA, <i>Facebook</i> and <i>Facebook/Oculus</i> <sup>173</sup> Autorità Garante della Concorrenza e del Mercato (AGCM), <i>Facebook</i> <sup>174</sup> CMA, Digital advertising market study
5(2)(c)	Not cross-use personal data from CPS in other services gatekeeper	—	Belgian Competition Authority, <i>Nationale Loterij</i> <sup>175</sup> Autorité de la concurrence (AdIC), <i>Engie</i> <sup>176</sup> AGCM, <i>Enel</i> <sup>177</sup>
5(3)	Not impose narrow and wide most favored nation clauses (MFNs)	Respectively intra- and inter-platform	EC, <i>E-books [Apple]</i> <sup>178</sup> and <i>E-book MFNs (Amazon)</i> <sup>179</sup> CMA, <i>Amazon</i> <sup>180</sup> BKA, <i>Amazon</i> , <sup>181</sup> <i>HRS</i> , <sup>182</sup> <i>Booking</i> , <sup>183</sup> <i>Verivox</i> <sup>184</sup> and <i>Amazon</i> <sup>185</sup> AdIC, AGCM and Konkurrensverket, <i>Booking</i> <sup>186</sup> Paris Commercial Court, <i>Amazon</i> <sup>187</sup>
5(4), 5(5)	Not impose anti-steering and supporting measures (cross-platform access to content)	Intra-platform	EC, <i>Apple App Store Practices</i> <sup>188</sup> Dutch Competition Authority (ACM), <i>Apple</i> <sup>189</sup>
5(7), 5(8)	Not require use of certain secondary services or registration with other CPS	Intra-platform	ID service: BKA, <i>Facebook/Oculus</i> Web browser: CMA, Mobile ecosystems market study <sup>190</sup> and subsequent Mobile browsers market investigation <sup>191</sup> Payment: EC, <i>Apple App Store Practices</i> ; ACM, <i>Apple</i> and CMA, Mobile ecosystems market study Other CPS: EC, <i>Google Android</i> <sup>192</sup> and <i>Facebook Marketplace</i> <sup>193</sup>
6(2)	Not use business users' data to compete with them	Intra-platform	EC, <i>Amazon Marketplace</i> <sup>194</sup> and <i>Facebook Marketplace</i>
6(5)	Not self-preference in ranking	Intra-platform	EC, <i>Google Search (Shopping)</i> <sup>195</sup> and <i>Amazon Buy Box</i> <sup>196</sup> AGCM, <i>Amazon</i> <sup>197</sup>
6(6)	Not restrict switching between secondary services	Intra-platform	—
Positive obligations			
6(3)	Allow un-installation and prompt default selection (search, browser, assistant)	Intra-platform	EC, <i>Microsoft I</i> (tying abuse), <sup>198</sup> <i>Microsoft II</i> <sup>199</sup> and <i>Google Android</i> CMA, Mobile ecosystems market study
6(4)	Allow installation and default selection of third-party apps, app stores	Inter-platform	—
6(7)	Allow equal interoperability with hardware and software features	Intra-platform	EC, <i>Microsoft I</i> (refusal to supply abuse) and <i>Apple Mobile Payments</i> <sup>200</sup> ACM, Big Techs in the payment system (report), <sup>201</sup> see also the subsequent investigation <sup>202</sup> AdIC, <i>Google (online advertising)</i> <sup>203</sup> AGCM, <i>Android Auto</i> <sup>204</sup> See also the German "Lex Apple Pay" <sup>205</sup>
6(9)	Provide end-users data portability	Inter-platform	—, but see GDPR, art 20
6(10)	Provide business users access to self-generated data	Intra-platform	—
6(11)	Provide FRAND access to search data	Inter-platform	—, but see CMA, Retail banking market investigation <sup>206</sup> and PSD2 <sup>207</sup>

(continued)

**Table 3. (continued)**

Article	Obligation <sup>170</sup>	Goal	Precedents
6(12)	Provide FRAND access to app stores, search and social	Intra-platform	App stores: Paris Commercial Court, <i>Google</i> <sup>208</sup> ; ACM, Mobile app stores market study <sup>209</sup> and CMA, Mobile ecosystems market study Search: EC, <i>Google Search (Shopping)</i>
6(13)	Maintain proportionate CPS termination terms	Inter-platform	—
7	interoperability of NIICS	Inter-platform	—, but see Communications Code <sup>210</sup>

170. DMA, art. 14 also contains an “obligation to inform about concentrations,” not mentioned in the table, which seems designed to work in tandem with EC, “Commission Guidance on the application of the referral mechanism set out in Article 22 of the Merger Regulation to certain categories of cases” (Communication) C(2021)1959 final. The information obligation combined with the referral mechanism could significantly enlarge the EC’s jurisdiction over gatekeeper acquisitions.

171. Bundeskartellamt, Case B6-22/16, *Facebook*, Feb. 7, 2019.

172. CMA, “Online platforms and digital advertising” (Market Study) July 2020.

173. Bundeskartellamt, Case B6-55/20, *Linkage of Meta Quest (formerly Oculus) with the Facebook Network*, Nov. 23, 2022 (Case Summary).

174. AGCM, *WhatsApp Fined for 3 Million Euro for Having Forced Its Users to Share Their Personal Data with Facebook* (press release, May 12, 2017), <https://en.agcm.it/en/media/detail?id=a6c51399-33ee-45c2-9019-8f4a3ae09aa1>.

175. Belgian Competition Authority, Decision BMA-2015-P/K-27-AUD, *Stanleybet et al./Nationale Loterij*, Sept. 22, 2015.

176. AdIC, Decision 17-D-06, *Engie*, Mar. 21, 2017.

177. AGCM, Case A511, *Enel*, Jan. 8, 2019.

178. *E-books* (Case COMP/AT.39847) Commission Decision of Dec. 12, 2012.

179. *E-book MFNs and related matters (Amazon)* (Case AT.40153) Commission Decision of May 4, 2017.

180. Competition and Markets Authority, *OFT Welcomes Amazon’s Decision to End Price Parity Policy* (press release, Aug. 29, 2013).

181. Bundeskartellamt, Case B6-46/12, *Amazon Removes Price Parity Obligation for Retailers on its Marketplace Platform* (Case Report), Dec. 9, 2013.

182. Bundeskartellamt, Case B9-66/10, *HRS-Hotel Reservation Service*, Dec. 20, 2013.

183. Bundeskartellamt, Case B 9-121/13, *Booking.com*, Dec. 23, 2015.

184. Bundeskartellamt, *Verivox Vows to Stop using “Best Price” Clauses* (press release, June 3, 2015), [https://www.bundeskartellamt.de/SharedDocs/Meldung/EN/Pressemitteilungen/2015/03\\_06\\_2015\\_Verivox.html](https://www.bundeskartellamt.de/SharedDocs/Meldung/EN/Pressemitteilungen/2015/03_06_2015_Verivox.html).

185. Bundeskartellamt, Case B2-88/18, *Amazon*, July 17, 2019.

186. AdIC, Decision 15-D-06, *Booking.com*, Apr. 21, 2015; AGCM, *Commitments Offered by Booking.com: Closed the Investigation in Italy, France and Sweden* (press release, Apr. 21, 2015), <https://en.agcm.it/en/media/detail?id=42f88c3c-d668-409f-b604-40581a05c97b>.

187. Tribunal de commerce de Paris, Case 2017050625, *Ministre de L’Economie et des Finances v Amazon*, Sept. 2, 2019 (one of the seven clauses found illegal relates to parity).

188. EC, *Commission Sends Statement of Objections to Apple on App Store Rules for Music Streaming Providers* (press release, Apr. 30, 2021), IP/21/2061.

189. Autoriteit Consument & Markt, Case ACM/19/035630, *Apple*, Aug. 24, 2021 (Summary of Decision).

190. CMA, *Mobile Ecosystems Market Study* (Final Report) June 2022.

191. CMA, *Mobile Browsers and Cloud Gaming Market Investigation* (Issues Statement), Dec. 2022.

192. *Google Android* (Case AT.40099) Commission Decision of July 18, 2018.

193. EC, *Commission Sends Statement of Objections to Meta over Abusive Practices Benefiting Facebook Marketplace* (press release, Dec. 19, 2022), IP/22/7728.

194. EC, *Commission Accepts Commitments by Amazon Barring it from Using Marketplace Seller Data, and Ensuring Equal Access to Buy Box and Prime* (press release, Dec. 20, 2022), IP/22/7777.

195. *Google Search (Shopping)* (Case AT.39740) Commission Decision of June 27, 2017.

196. EC, *Commission Accepts Commitments by Amazon Barring it from Using Marketplace Seller Data, and Ensuring Equal Access to Buy Box and Prime* (press release, Dec. 20, 2022), IP/22/7777.

197. AGCM, *Amazon Fined over € 1,128 Billion for Abusing its Dominant Position* (press release, Dec. 9, 2021), <https://en.agcm.it/en/media/press-releases/2021/12/A528>.

The table shows that the DMA's obligations are founded in enforcement experience to varying degrees. For some, such as Article 5(3)'s prohibition of most favored nation clauses (MFNs), abundant precedent is available. Even then, however, most of the cases concerned *wide* MFNs (which prevent sellers from offering the same product at different conditions via other platforms) and not *narrow* MFNs (which prevent the seller from offering the same product at different conditions via their own sales channel),<sup>211</sup> while the DMA prohibits both. Generally, and unsurprisingly, there is more (though not necessarily abundant) precedent for the negative obligations that hew closer to competition law.

For many of the positive obligations, there is little to no precedent. Where there is precedent, it is often provided by cases that sought out the boundaries of competition law in terms of type of abuse (refusal to supply, excessive pricing) or remedy (choice screens in tying cases).<sup>212</sup> Market studies and investigations, which go beyond infringement proceedings, also make a showing, illustrating once more how the positive obligations tend to exceed traditional competition law. Interestingly, while case law is often in short supply, several of the obligations find precedent in previous, more sectoral regulation: the DMA's data portability obligation extends that of the GDPR, access to data has been regulated in banking by the 2<sup>nd</sup> Payment Services Directive, and the Communications Code includes interoperability obligations. These regulatory precedents show, once more, that the DMA goes beyond competition law where it seeks to promote inter-platform competition—the goal most of its positive obligations pursue.

Even where there is precedent, the DMA sometimes reinterprets it. Consider the obligations of Article 5(2) that restrict gatekeepers from processing third-party data, and combining data from their CPS with data from their other services and from third parties. These obligations are inspired by the

198. *Microsoft* (Case COMP/C-3/37.792) Commission Decision of Mar. 24, 2004.

199. *Microsoft (Tying)* (Case AT.39530) Commission Decision of Dec. 16, 2009.

200. EC, *Commission Sends Statement of Objections to Apple over Practices Regarding Apple Pay* (press release, May 2, 2022), IP/22/2764. Near-field-communication (NFC) technology, the subject of the case, is specifically mentioned in DMA, recital 56.

201. ACM, *Big Techs in the Payment System* (Report), Nov. 2020.

202. The ACM investigated payment apps' access to NFC but did so based not on competition law but on the Interchange Fee Regulation, which it found lacking, which is why it closed its investigation. See ACM, *Closure of the Investigation into Payment Apps Confirms Need for New Rules* (press release, July 2, 2021), <https://www.acm.nl/en/publications/closure-investigation-payment-apps-confirms-need-new-rules>.

203. AdIC, Decision 21-D-11, *Publishers v Google (online advertising)*, June 7, 2021.

204. Autorità Garante della Concorrenza e del Mercato, *Google Fined Over 100 Million for Abuse of Dominant Position* (press release, May 13, 2021), <https://en.agcm.it/en/media/press-releases/2021/5/a529>.

205. Gesetz über die Beaufsichtigung von Zahlungsdiensten, §58a, forcing Apple to provide access to its NFC technology to facilitate mobile payments.

206. CMA, *Retail Banking Market Investigation* (Order) 2017.

207. Directive (EU) 2015/2366 of the European Parliament and of the Council of 25 November 2015 on payment services in the internal market [2015] OJ L337/35, arts 66 sq.

208. Tribunal de commerce de Paris, Case 2018017655, *Ministère de l'économie et des finances v Google*, Mar. 28, 2022. See similarly, but without finding the commission fees themselves unbalanced, Tribunal de commerce de Paris, Case 2017040626, *Ministère de l'économie et des finances v Apple*, Dec. 19, 2022.

209. ACM, *Market Study into Mobile App Stores* (Report), ACM/18/032693.

210. Communications Code, arts 59–61 (before, see Directive 2002/19/EC of the European Parliament and of the Council on access to, and interconnection of, electronic communications networks and associated facilities [2002] OJ L108/7).

211. See Friso Bostoen, *Most Nation Clauses: an Assessment Framework under EU Competition Law*, 1 EUR. COMPET. REGUL. LAW REV. 223 (2017).

212. See footnote 161 on how *de novo* refusal to supply and excessive pricing cases require a proactive remedy. *Microsoft II* might not have strictly required a proactive remedy but got one with its choice screen. Some authors have seized upon this point to argue *Microsoft II* was actually a refusal to supply case, see Nicolas Petit & Norman Neyrinck, *Back to Microsoft I and II: Tying and the Art of Secret Magic*, 2 EUR. COMPET. LAW. PRACT. J 117 (2011).

Bundeskartellamt's *Facebook* case, which concerned the way in which Facebook combines data from its main platform with data collected via its other platforms (Instagram, WhatsApp) and via third parties (that integrate its application programming interfaces [APIs] such as "like" buttons).<sup>213</sup> Given that users have no choice but to consent to such data processing and combination, the Bundeskartellamt found Facebook's T&Cs exploitative under German (not EU) competition law, in combination with the GDPR. Commissioner Vestager suggested that the case could not be replicated at EU level.<sup>214</sup> The DMA, however, does prohibit such conduct, although it does so not out of the Bundeskartellamt's concern for fairness (specifically, end-user exploitation) but with a view to contestability.<sup>215</sup> This explains while these negative obligations from Article 5, which are usually aimed at protecting intra-platform competition, are nevertheless categorized as promoting inter-platform competition.

Next, it must be noted that the DMA's obligations are quite targeted. Its U.S. counterpart, the American Choice and Innovation Online Act, contains a general prohibition of self-preferencing.<sup>216</sup> The DMA, by contrast, only prohibits self-preferencing *in ranking* (Article 6(5)), while also targeting some other conduct that can be framed as self-preferencing (e.g., the selection of default search engine, web browser and virtual assistant in Article 6(3)). There is no *general* interoperability mandate, but just one service that needs to be horizontally interoperable, that is, NIICS (Article 7), as well as an equality obligation when it comes to vertical interoperability with hardware/software features—another prohibition of self-preferencing, really (Article 6(7)). The data access obligation is also limited to one type of platform, that is, search engines (Article 6(11)), while business users should also get access to the data they generate themselves (Article 6(10)). Even obligations where the type of platform is not specified tend to apply only to some platforms. MFNs, for example, tend to be imposed by marketplace or price comparison websites—not other platforms. The specific scope of obligations is a consequence of the targeted nature of the competition law precedents that inspired the DMA. At the same time, that scope limits decision (in particular compliance) costs, all the more so because the obligations only apply to a few gatekeepers (see *supra*, Section II).

To return to our earlier question, do the DMA's obligations find sufficient support in competition law? Most of the negative obligations, which can be expected to have a basis in competition law, do find support in previous enforcement, although that support may not reach the threshold usually required for the adoption of a *per se* rule. The positive obligations find far less support in previous enforcement (only some cases at competition law's boundary are relevant), which is to be expected given that the contestability goal goes beyond competition law. Precedent is not the only source for obligations though; economic research is also relevant. While there are too many papers to list, there

213. This case has gone through appeals and is currently awaiting clarification by the European Court of Justice, see Case C-252/21 *Facebook Inc. and Others v Bundeskartellamt* (Request for a preliminary ruling from the Oberlandesgericht Düsseldorf lodged on Apr. 22, 2021), OJ C320/16.

214. Jorge Valero, *Vestager: "I'd Like a Facebook That I Pay, with Full Privacy"*, EURACTIV (June 27, 2018), <https://www.euractiv.com/section/competition/interview/vestager-id-like-a-facebook-that-i-pay-with-full-privacy/> (to the question "Are you looking into the German case to see whether you could replicate it at the European level?" she answered: "It is not a given. It depends on the legislation. The Germans are doing this case through the lens of German legislation. . . . So far we think that if Facebook lives up to our new privacy rules then it cannot happen.").

215. See DMA, recital 36 on how advantages in terms of accumulation of data raise barriers to entry (see also recital 72 on user profiling and contestability). The Bundeskartellamt also noted how Facebook's data combination practices raise barriers to entry, thus securing its market power, but only secondarily, see Bundeskartellamt, Case B6-22/16, *Facebook*, Feb. 7, 2019 (Case Summary), 11.

216. H.R.3816—American Choice and Innovation Online Act, 117th Congress (2021–2022), s3(a)(1) (declaring it unlawful to engage in conduct "preference the products, services, or lines of business of the covered platform operator over those of another business user on the covered platform," but—in contrast to the DMA—requiring "material harm to competition").

has been important formal and empirical work providing support for certain DMA obligations over the last few years.<sup>217</sup> The economists that authored the aforementioned reports on digital competition policy (see *supra*, Section IA) also tend to support the DMA, as do a large share of the economists consulted in its preparation (although there might be selection bias there).<sup>218</sup>

In the end, it must be recognized that there is a significant element of uncertainty to the DMA obligations. Despite a body of precedent and economic findings, there are many unknowns. But focusing only on precedent misses the point that the DMA is also—perhaps largely—a matter of the underlying assumptions, touched upon earlier, that are more difficult to test. The idea is that the EC has been missing too much anticompetitive conduct, not necessarily because the tools are defunct, but rather because their application takes so much time that for every concluded investigation, it cannot pursue a number of other anticompetitive practices. And those long investigations lead to little change when the market has meanwhile tipped, which remedies based on a mandate to protect competition are not suited to change. Hence the new philosophy, according to which competition is not only protected within a platform ecosystem but also promoted across ecosystems. The idea is clearly to do something differently. Accordingly, no analogy—either with competition law or sectoral regulation—is perfect, and anyone claiming to know where this regulatory shift will lead with any degree of certainty should be regarded with skepticism, not in the least because a great deal will depend on how the EC uses its considerable discretion. It is fair to ask, though, whether there are enough fail-safes built into the system for those cases where the obligations lead the EC in the wrong direction, which leads us to the possibility to justify conduct that infringes the DMA's obligations.

#### IV. Justifications: Flexible Enough to Avoid Unintended Consequences?

The DMA is clear about the fact that a typical efficiency defense is unavailable: “Any justification on economic grounds seeking . . . to demonstrate efficiencies deriving from a specific type of behavior by the undertaking providing core platform services should be discarded.”<sup>219</sup> This is where the difference between a presumption and a per se rule is made: if an efficiency defense was available, the DMA's obligations would be presumptions that put the burden of proof on the gatekeeper; without such a defense, the obligations amount to per se rules. To explain the omission of an efficiency defense, the EC argues that gatekeepers often plead offsetting efficiencies but do so in a one-sided way that does not match the evidence, which is also why they have been rejected by courts.<sup>220</sup> Another reason, implicit in

217. On the empirical side, see, e.g., Feng Zhu & Qihong Liu, *Competing with Complementors: An Empirical Look at Amazon.com*, 39 STRATEG. MANAG. J. 2618 (2018); Wen Wen & Feng Zhu, *Threat of Platform-Owner Entry and Complementor Responses? Evidence from the Mobile App Market*, 40 STRATEG. MANAG. J. 1336 (2019); Hyunjin Kim & Michael Luca, *Product Quality and Entering through Tying: Experimental Evidence*, 65 MANAG. SCI. 596 (2019). On the formal side, see, e.g., Andrei Hagiu, Tat-How Teh & Julian Wright, *Should Platforms Be Allowed to Sell on Their Own Marketplaces?*, 53 RAND J. ECON. 297 (2022); Simon Anderson & Özlem Bedre-Defolie, *Hybrid Platform Model*, (2022) CEPR Discussion Paper No. DP16243, <https://ssrn.com/abstract=3886686>; Erik Madsen & Nikhil Vellodi, *Insider Imitation*, (2022), <https://fass.nus.edu.sg/ecs/wp-content/uploads/sites/4/2022/05/Insider-Imitation.pdf>. Of course, these papers often conclude that there are trade-offs; thus, whether one views the paper as supporting the DMA may depend on how one views the trade-offs in question.

218. See in particular Luís Cabral, Justus Haucap, Geoffrey Parker, Georgios Petropoulos, Tommaso Valletti & Marshall Van Alstyne, *The EU Digital Markets Act* (A Report from a Panel of Economic Experts) 2021. For a list of other reports, see DMA Impact Assessment—Annexes, 2–4 and 9–14.

219. DMA, recital 23. Given that the recital concerns gatekeeper *designation*, it could be argued that this statement only applies to that exercise—not to gatekeeper *obligations*. But in any case, an overall reading of the DMA (including recital 10, *a contrario*) shows that the statement can be transposed to gatekeeper obligations. Efficiencies could play a role when invoking the principle of proportionality with regard to gatekeeper obligations.

220. DMA Impact Assessment, 61, referencing Case T-201/04 *Microsoft v Commission* EU:T:2007:289, para 1091 *sq.*



the foregoing, relates to the DMA's main driver, that is, procedural efficiency. Including an efficiency defense would risk bringing in effects analysis through the backdoor. The burden would be on the gatekeeper rather than the EC, but gatekeepers would be motivated to come up with plausible arguments to shift the burden back to the EC, which would then be forced into an effects analysis. This inability to escape an effects analysis could undo much of the gains in enforcement speed.

There are, however, some defenses available to gatekeepers, although they do not relate (directly) to efficiency. First, the EC can suspend obligations when the gatekeeper demonstrates that they “endanger, due to exceptional circumstances beyond the gatekeeper’s control, the economic viability of its operation in the Union.”<sup>221</sup> Although the bar seems high, there is thus a limit to how much the DMA can disrupt the gatekeeper’s business model. In fact, the suspension option embodies the broader principle of proportionality that the EC has to abide by when enforcing the DMA.<sup>222</sup> Second, the EC can exempt the gatekeeper from specific obligations on grounds of public health or public security.<sup>223</sup> These grounds, too, are quite restrictive and allow for little efficiency considerations to creep into the analysis.<sup>224</sup> Third, a number of obligations contain a circumscribed possibility to justify based on the integrity, security and/or privacy of the service in question. The obligation to allow effective installation of third-party apps and app stores, for example, specifies that the gatekeeper can take measures to ensure that those apps/stores “do not endanger the integrity of the hardware or operating system provided by the gatekeeper.”<sup>225</sup> The same goes for the equal interoperability and NIICS interoperability obligations.<sup>226</sup> In each case, the burden to justify is on the gatekeeper, which has to prove that the measures are strictly necessary and proportionate. Finally, the EC can further specify the obligations of Articles 6–7—a tailoring process in which it can (and hopefully does) consider efficiency.<sup>227</sup>

All in all, the options to justify conduct that infringes the DMA, based on efficiency or otherwise, are very limited. This can lead to welfare losses, given that different types of platform conduct prohibited by the DMA can result in efficiencies (e.g., a reduction in transaction costs). In other words, they will not *always* be “net” anticompetitive or unfair. Even if they were in the past cases that inspired the DMA’s targeted provisions, they might not be in future cases covered by the same obligation. Moreover, it is important to recognize that platform operators manage their ecosystems as “private regulators,” limiting access to new users and interactions between existing users.<sup>228</sup> The power that comes with this function can be a reason for regulation like the DMA,<sup>229</sup> but it must also be accounted for when drafting such regulation. Platform operators must safeguard the health of their ecosystem, which includes excluding low-quality or even dangerous users (“bad actors”).<sup>230</sup> If they do not, such users will diminish the platform’s value to other users, whose departure can set off a death spiral ending in the

221. DMA, art. 9(1).

222. DMA, art. 8(7); making the connection with suspensions, see recital 66.

223. DMA, art. 10.

224. Especially when it comes to software ecosystems (built around an OS), public security may leave room for cybersecurity-related measures, but the obligations themselves already do so.

225. DMA, art. 6(4). The gatekeeper can also apply measures and settings *other than default settings* enabling end-users to effectively protect security in relation to third-party software applications or software application stores.

226. DMA, art. 6(7) on measures to ensure that equal interoperability does not compromise the integrity of the gatekeeper’s operating system, virtual assistant, and hardware or software features. DMA, art. 7(9) on measures to prevent third-party NIICS providers from endangering the integrity, security and privacy of the gatekeeper’s services. See also DMA, art. 6(3) on the gatekeeper’s ability to restrict uninstallation of apps that are essential to the functioning of the OS or the device and that cannot be offered on a standalone basis by third parties.

227. DMA, art. 8(2).

228. KEVIN BOUDREAU & ANDREI HAGIU, *Platforms Rules: Multi-Sided Platforms as Regulators*, in ANNABELLE GAWER (ed.), *PLATFORMS, MARKETS AND INNOVATION* (Edward Elgar 2009), 163–91.

229. See Niamh Dunne, *Platforms as Regulators*, 9 ANTITRUST ENFORC.J 244 (2021).

230. David Evans, *Governing Bad Behavior by Users of Multi-Sided Platforms*, 27 BERKELEY TECH. L.J. 1201 (2012).

platform's demise. Therefore, regulation must leave sufficient leeway for effective (but not opportunistic) platform governance/management.

The absence of platform justifications is perhaps the DMA's weakest point. Indeed, even those who generally support the DMA have recommended introducing an efficiency defense, although it need not be as broad as the defense available under competition law.<sup>231</sup> One option, supported by a significant number of economists and lawyers, would be to work with a gray list and a blacklist of practices.<sup>232</sup> Blacklisted practices would be unjustifiable, but the gray list would contain those practices where efficiencies are plausible and would be open to an efficiency defense. In other words, the gray list would not contain per se rules but rebuttable presumptions against certain types of conduct. Another option, suggested by the German Monopolies Commission, would be to generalize the efficiency defense, that is, to make it available for every obligation, but also to put in strict time limits.<sup>233</sup> After application by the gatekeeper, the EC would have six months to decide on it; in the absence of a decision within that time, the defense is deemed to be rejected.<sup>234</sup> Under either option, the efficiency defense would be inspired by competition law while also considering the DMA's specific goals of fairness and contestability.

Even though nothing resembling an efficiency defense made it into the DMA, a concern for efficiency can and should still make its way into its enforcement. The regulatory dialogue that is foreseen for the obligations that are susceptible of being further specified is one entry point for efficiency considerations.<sup>235</sup> However, the EC has discretion as to whether and when to provide such specification.<sup>236</sup> Much will thus depend on how the EC chooses to use that discretion. There remains a real risk of unintended consequences, for example, when it comes content moderation, which is further explored in the App Store case study (see *infra*, Section VI).

## V. Remedy Problem: At Best Partially Resolved

The DMA's enforcement trajectory is modeled on competition law's, although it puts a larger burden on gatekeepers and runs on an expedited timeline. Gatekeepers must not just ensure compliance with the obligations, they must also periodically report on the measures taken to do so.<sup>237</sup> The EC has broad investigatory powers to check such compliance, and when it is in question, the EC can open proceedings and adopt implementing acts to specify the measures.<sup>238</sup> Such implementing acts are to be adopted within six months after opening the proceedings; after three months, the EC must already communicate

231. On Article 102 TFEU's efficiency defense, see Case C-23/14 *Post Danmark v Konkurrencerådet* EU:C:2015:651, para 49 and EC, "Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings" (Communication) OJ C45/7, paras 28 and 30–31.

232. Luís Cabral, Justus Haucap, Geoffrey Parker, Georgios Petropoulos, Tommaso Valletti & Marshall Van Alstyne, *The EU Digital Markets Act* (A Report from a Panel of Economic Experts) 2021, 10–11; Alexandre de Streel, Bruno Liebhberg, Amelia Fletcher, Richard Feasey, Jan Krämer & Giorgio Monti, *The European Proposal for a Digital Markets Act: A First Assessment*, (2021) CERRE Assessment Paper, 22–23.

233. Monopolkommission, *Recommendations for an Effective and Efficient Digital Markets Act* (Special Report 82) 2021, 43–55.

234. When exemption is granted following an application, the gatekeeper must demonstrate that the conditions continue to be fulfilled at least every two years.

235. See DMA, recital 65 (in contrast to the obligations of Articles 6–7, the "self-executing" obligations of Article 5 are only subject to regulatory dialogue in the event of circumvention, see Footnote 238).

236. *Id.*

237. DMA, arts 8(1) and 11. They must do so for the first time six months after designation and update at least annually after that.

238. DMA, arts 8(2) and 20. The EC can open such regulatory dialogue for the obligations of Articles 6–7; it can only do so with regard to the obligations of Article 5 obligations in case of circumvention. Gatekeepers may request the EC to open this dialogue, see art. 8(3). See chapter V for the investigatory powers.

and publicize preliminary findings on which third parties can provide comments.<sup>239</sup> There should be a final decision within twelve months after opening proceedings<sup>240</sup>—at least three times faster than the average infringement decision under Article 102 TFEU (see *supra*, Section IB). To move even faster, there is also the option of interim measures in case of *prima facie* non-compliance.<sup>241</sup>

What if the EC finds the gatekeeper non-compliant? The remedy toolbox is a beefed-up version of its competition law equivalent. In addition to the typical cease-and-desist order, the EC can impose fines of up to 10 percent of the gatekeeper’s worldwide turnover during the last financial year (and daily penalty payments of 5% of daily turnover)<sup>242</sup>—just like under competition law.<sup>243</sup> In case of a *second* same or similar infringement of an obligation in relation to the same CPS within eight years the DMA allows for fines up to 20 percent of said turnover.<sup>244</sup> If the EC issues *three* non-compliance decisions—not necessarily concerning the same CPS or obligation—within eight years (“systematic non-compliance”), it can impose “any behavioral or structural remedies which are proportionate and necessary to ensure effective compliance.”<sup>245</sup> In principle, these remedies include breaking up the gatekeeper, although breakups will not easily qualify as proportionate and necessary. Before it comes to that “third strike,” though, the gatekeeper can offer commitments, which the EC can make binding.<sup>246</sup>

Does this remedial structure solve the issues associated with competition law remedies (see *supra*, Section IB)? Let us start by looking at the potential improvements. First, the DMA’s obligations are more precise than those under competition law; accordingly, the measures necessary to comply should be clearer as well.<sup>247</sup> Moreover, the EC can specify the measures needed to ensure compliance *before* an infringement decision is taken. Overall, the DMA’s compliance process seems to be based more on a continuing dialogue with the gatekeepers, in contrast to the more one-off procedure under competition law. The EC can, for example, reopen proceedings when the remedies are not effective.<sup>248</sup> And of course, all of this is to proceed according to a much shorter timeline than under competition law (six months to specify measures, twelve months to adopt an infringement decision). This may allow for intervention *before* a market has tipped, after which point it becomes very difficult to reverse that process. Plus, the obligations relating to inter-platform competition seek to make the incumbent’s position in tipped markets more challengeable, which can help make tipping a more reversible process. Finally, the higher fines for “second strikes” and the remedies in case of systematic non-compliance (that are formulated similarly to competition law<sup>249</sup> but seem to come with a greater threat) should increase deterrence.

239. DMA, art. 8(2) and (5)–(6).

240. DMA, art. 29.

241. DMA, art. 24.

242. DMA, arts. 30(1) and 31. For procedural violations, the fine can amount to 1% of worldwide turnover during the last financial year, see art. 30(3).

243. Council Regulation (EC) No 1/2003 on the implementation of the rules on competition laid down in Articles 81 and 82 of the Treaty [2003] OJ L1/1, arts 23(2) and 24. See further EC, Guidelines on the method of setting fines imposed pursuant to Article 23(2)(a) of Regulation No 1/2003 [2006] OJ C210/2.

244. DMA, art. 30(2).

245. DMA, art. 18(1) and (3) and recital 75. The EC can also prohibit concentrations, see art. 18(2).

246. DMA, art. 25.

247. Although those measures may not be more precise than the remedies in cases that inspired the DMA’s obligations, e.g., non-discrimination in *Google Search (Shopping)* (Case AT.39740) Commission Decision of June 27, 2017.

248. DMA, art. 8(9). It remains to be seen how readily the EC will do so, but it need not be with the caution it shows once a competition law remedy has been imposed. Acknowledging that caution, some have called for “review clauses” in competition law decisions that allow for adjustment, see BEUC, “Remedies and commitments in abuse cases” (Contribution to the OECD Global Forum on Competition) DAF/COMP/GF/WD(2022)29, 8.

249. Council Regulation (EC) No 1/2003 on the implementation of the rules on competition laid down in Articles 81 and 82 of the Treaty [2003] OJ L1/1, art. 7 also allows the EC to impose “any behavioural or structural remedies which are proportionate to the infringement committed and necessary to bring the infringement effectively to an end.”

Other remedial issues, however, have not been resolved—and perhaps cannot be. The difficulty is that, following a trend in competition law enforcement, many of the DMA’s obligations relate to the gatekeepers’ business models or product design.<sup>250</sup> This is especially true for the positive obligations, but even for some of the negative obligations a cease-and-desist order will require the gatekeeper to reorient their monetization strategy or architectural choices. Underlying this difficulty is a fundamental tension between remedy effectiveness and a dominant firm or gatekeeper’s freedom to conduct their business. When compromises have catered too much to the latter, remedy effectiveness has suffered. Take the Google remedies discussed above (Section IB), both of which involved auctions at some point. Such auctions may seem like a fair way to ensure equality for business users while allowing for monetization by the gatekeeper. But when business users have to pay for inclusion, this shifts their incentives toward extracting as much revenue as possible from consumers.<sup>251</sup> This played out in the choice screen auctions of *Google Android*: low-quality search engines relying on invasive data collection and an overload of ads were willing and able to pay a higher price than more qualitative, privacy-focused alternatives; therefore, they tended to win the auction.<sup>252</sup> This was clearly not in line with the objective of the case, which was to give consumers choice between qualitative search alternatives, which is why the switch to a free, popularity-based choice screen selection was an improvement. Moreover, the business model implications can be overstated. Google, for example, initially threatened to start charging for Android if it could no longer tie its search engine to its mobile OS given that search ads were *the* monetization strategy.<sup>253</sup> In reality, any decline in search ad revenue should be limited<sup>254</sup> and Google is in any case rewarded for its OS development through the commissions levied in its Play Store.<sup>255</sup> Another complicating factor when designing a consumer-facing remedy is the behavioral biases that those consumers are subject to, such as their tendency to stick to the *status quo*. Even when consumers are faced with a choice screen, for example, that choice may be guided by the familiarity that the dominant firm or gatekeeper’s default has previously bred.<sup>256</sup>

In practice, these difficulties encountered in shaping competition law remedies will similarly haunt the DMA’s compliance process.<sup>257</sup> To achieve the DMA’s goals, there is no way for the EC to avoid engaging with gatekeeper’s business model decisions and product design choices—a challenge that should be duly recognized. There are, however, two factors that may help the EC tackle the difficulties in a slightly more satisfactory way. First, the EC acts akin to a sectoral regulator when enforcing the DMA, and such regulators have been more adept at (and comfortable with) engaging deeply with the firms they are supervising. As noted above, the DMA’s compliance process facilitates such engagement. Second, there is a philosophical difference between competition law and the DMA. Competition law aims to maximize the pie for consumers, based on the belief that protecting the competitive process is the best way to do so. Remedy processes, however, have shown that it can be difficult to maximize the pie without also making choices, explicitly or implicitly, about the size of everyone’s slice.

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250. See Pablo Ibáñez Colomo, *Product Design and Business Models in EU Antitrust Law*, (2021), <https://ssrn.com/abstract=3925396>, on how this has been increasingly the case for EU competition law.

251. See Michael Ostrovsky, *Choice Screen Auctions*, (2021), <https://web.stanford.edu/~ost/papers/csa.pdf>.

252. Natasha Lomas, *Europe’s Android “Choice” Screen Keeps Burying Better Options*, TECHCRUNCH (Mar. 8, 2021), <https://techcrunch.com/2021/03/08/europes-android-choice-screen-keeps-burying-better-options/>.

253. Hiroshi Lockheimer, *Complying with the EC’s Android Decision*, THE KEYWORD—GOOGLE BLOG (Oct. 16, 2018), <https://www.blog.google/around-the-globe/google-europe/complying-ecs-android-decision/> (“Since the pre-installation of Google Search and Chrome together with our other apps helped us fund the development and free distribution of Android, we will introduce a new paid licensing agreement for smartphones and tablets shipped into the EEA.”).

254. Most consumers will choose Google, for which there are competing explanations: (i) Google Search is simply superior, as Google claims; or (ii) consumers are familiar with Google, which they have been using.

255. *Google Android* (Case AT.40099) Commission Decision of July 18, 2018, paras 995–999.

256. See CMA, *Mobile Ecosystems Market Study* (Final Report) June 2022, 144–45 on how in practice, almost all UK consumers (90–100%) choose Google Search from the choice screen.

257. For example, the DMA’s obligations also entail choice screens, see art. 6(3) and recital 49.

In *Google Android*, for example, a better outcome for consumers required a transfer from Google to other search engines (by making inclusion in the choice screen free). The DMA is straightforward about the fact that it seeks to divide the pie differently, with a larger slice going to business users, which may prevent mistakes such as auction-based remedies. Of course, there is a risk that the EC ends up adjudicating simple profit margin disputes (e.g., based on the DMA's obligations regarding access on FRAND terms). This should be avoided, as discussed in the App Store case study.

## VI. Case Study: The App Store

A theoretical account of the DMA leaves many questions unanswered. And even a look at its closest comparators—competition law and sectoral regulation—cannot tell us how the DMA will play out in practice. The fact that the DMA is truly something new means that any predictions about its eventual effects come with a high degree of uncertainty. Predictions are further complicated by the relatively large discretion granted to the EC, which means that any effects will depend in large part on how it uses that discretion. Nevertheless, it is useful to try to envisage a world where the DMA is enforced *before* that actually happens. This allows us to revisit the answers to previous questions around the gatekeeper concept (“big is bad” or market power proxy?) and the obligations (are they likely to result in more benefits than costs, especially given the limited room for justifications?). It also helps assess the underlying assumptions of the DMA, namely that the digital economy has not been delivering the desired innovation outcomes, or that the rents from those outcomes have not been distributed fairly. That is why this section examines how the DMA will apply to Apple's App Store, the most important innovation platform to arise in the digital economy. To carry out this case study, it is necessary to first understand the App Store, and there is no better way to do so than to shortly review its history (Section VIA). Then we turn to the DMA, examining the App Store's gatekeeper status (Section VIB) and the obligations Apple will have to contend with (Section VIC).<sup>258</sup>

### A. A Short History of the App Store

In 2006, even though Apple has been making computers for thirty years, it was not the Mac company—it was really the iPod company. That year, the iPod was responsible for almost half of Apple's revenue.<sup>259</sup> But Steve Jobs had internalized the Silicon Valley mantra that “only the paranoid survive.”<sup>260</sup> He saw mobile phones decimating camera sales and was afraid that the same would happen to the iPod.<sup>261</sup> That is why, already one year earlier, he had tasked a team with designing the device that would disrupt the mobile phone market—and cannibalize Apple's iPod sales in the process.

On January 9, 2007, the result was revealed. Jobs introduced the iPhone in a presentation that has become marketing legend:

Every once in a while, a product comes along that changes everything. . . . Today we're introducing three revolutionary products of this class. The first one is a wide-screen iPod with touch controls. The second is a revolutionary mobile phone. And the third is a breakthrough internet communications device. . . . Are you getting it? These are not three separate devices; this is one device, and we are calling it “iPhone.”<sup>262</sup>

258. These sections draw on the author's earlier work on app stores, in particular Friso Bostoen & Daniel Mândrescu, *Abuse of Dominance in the Platform Economy: A Case Study of App Stores*, 16 EUR. COMPET. J. 431 (2020) and Friso Bostoen, *The ACM's Apple Decision: To Boldly Go Where No Enforcer Has Gone before*, 10 ANTITRUST ENFORC. J 583 (2022).

259. See Apple, Form 10-K for the fiscal year ended Sept. 30, 2006 (U.S. Securities and Exchange Commission) 54, <https://investor.apple.com/sec-filings/default.aspx>.

260. ANDREW GROVE, *ONLY THE PARANOID SURVIVE: HOW TO EXPLOIT THE CRISIS POINTS THAT CHALLENGE EVERY COMPANY* (Penguin 1999). Steve Jobs called the point of the book “super-important.”

261. WALTER ISAACSON, *STEVE JOBS* (Abacus 2011), 429.

262. STEVE JOBS, *IPHONE INTRODUCTION* (Macworld, Jan. 9, 2007), <https://www.youtube.com/watch?v=vN4U5FqrOdQ>.

Apple did not invent the technologies (e.g., multi-touch) that make the iPhone possible; at most, it refined them.<sup>263</sup> But Apple did put them together in a way that was aesthetically appealing and intuitive to use. Not everyone was impressed though. With the iPhone priced at \$499–599, then-Microsoft CEO Steve Ballmer called it “the most expensive phone in the world,” which doesn’t even “appeal to business customers because it doesn’t have a keyboard.”<sup>264</sup> He predicted, “There’s no chance that the iPhone is going to get any significant market share.”<sup>265</sup> Ballmer was, of course, wrong—but it did not immediately seem that way. Sales took off slowly, for which there are many possible reasons. For one, the original iPhone was missing many basic functionalities, such as the ability to search your address book, copy–paste text, or use your camera to record video.<sup>266</sup> The most likely reason, though, was apps.

The original iPhone did not come with an app store. It came with sixteen apps, two of which were developed by Google (Google Maps and YouTube).<sup>267</sup> Consumers that wanted to do more than what those apps allowed for were out of luck. The iPhone was fundamentally closed, in contrast to earlier products such as the Apple II computer, which led critics to call it “sterile.”<sup>268</sup> The reason? Jobs—not often wrong by this order of magnitude—misjudged what would propel the iPhone to success, believing that making uninterrupted calls was the “killer app.”<sup>269</sup> The software environment had to safeguard that ability:

“We define everything that is on the phone,” he said. “You don’t want your phone to be like a PC. The last thing you want is to have loaded three apps on your phone and then you go to make a call and it doesn’t work anymore. These are more like iPods than they are like computers.”<sup>270</sup>

To be fair, consumers were not *completely* restricted to the iPhone’s sixteen apps, because one of those apps was Apple’s web browser Safari. Six months after introducing the iPhone (but still two weeks before it went on sale), Jobs told developers that they *could* build apps for the iPhone, they would just have to go through the browser.<sup>271</sup> According to Apple, those web apps would “look and behave just like the applications built into iPhone,”<sup>272</sup> but that was a gross overstatement. Noted Apple commentator John Gruber even called it “insulting”: among others, web apps are only accessible over a network, do not get an app icon, and do not have local data storage, which means that “there are a ton of great ideas for iPhone software that can’t be done as web apps.”<sup>273</sup>

263. MARIANA MAZZUCATO, *THE ENTREPRENEURIAL STATE: DEBUNKING PUBLIC VS PRIVATE SECTOR MYTHS* (Anthem Press 2013) argues many crucial iPhone technologies originated from State funding, see Chapter 5, titled “The State Behind the iPhone.”

264. *Microsoft’s Ballmer Not Impressed with Apple iPhone*, CNBC (Jan. 17, 2007) <https://www.cnbc.com/id/16671712>.

265. David Lieberman, *CEO Forum: Microsoft’s Ballmer Having a “Great Time”*, USA TODAY (Apr. 29, 2007), [https://usatoday30.usatoday.com/money/companies/management/2007-04-29-ballmer-ceo-forum-usat\\_N.htm](https://usatoday30.usatoday.com/money/companies/management/2007-04-29-ballmer-ceo-forum-usat_N.htm). Ballmer later recognized his mistake, see Berkeley Lovelace, *Steve Ballmer Explains His Biggest Mistake When It Came to the iPhone*, CNBC (Nov. 4, 2016), <https://www.cnbc.com/2016/11/04/steve-ballmer-explains-his-biggest-mistake-when-it-came-to-the-iphone.html>.

266. FRED VOGELSTEIN, *BATTLE OF THE TITANS: HOW THE FIGHT TO THE DEATH BETWEEN APPLE AND GOOGLE IS TRANSFORMING OUR LIVES* (William Collins 2014), 78.

267. BRIAN MERCHANT, *THE ONE DEVICE: THE SECRET HISTORY OF THE IPHONE* (Corgi 2017), 189.

268. JONATHAN ZITTRAIN, *THE FUTURE OF THE INTERNET—AND HOW TO STOP IT* (Yale University Press 2008), 2.

269. STEVE JOBS, *IPHONE INTRODUCTION* (Macworld, Jan. 9, 2007) (“What’s the killer app? The killer app is making calls! It’s amazing how hard it is to make calls on most phones.”).

270. John Markoff, *Steve Jobs Walks the Tightrope Again*, N.Y. TIMES (Jan. 12, 2007), <https://www.nytimes.com/2007/01/12/technology/12apple.html>.

271. Steve Jobs, keynote (Worldwide Developers Conference, June 11, 2007), [https://allaboutstevejobs.com/videos/keynotes/wwdc\\_2007](https://allaboutstevejobs.com/videos/keynotes/wwdc_2007).

272. *iPhone to Support Third-Party Web 2.0 Applications*, APPLE NEWSROOM (June 11, 2007), <https://www.apple.com/newsroom/2007/06/11/iPhone-to-Support-Third-Party-Web-2-0-Applications/>.

273. John Gruber, *WWDC 2007 Keynote News*, DARING FIREBALL (June 11, 2007), [https://daringfireball.net/2007/06/wwdc\\_2007\\_keynote](https://daringfireball.net/2007/06/wwdc_2007_keynote).

Once the iPhone finally hit stores, on June 29, sales took off so slowly that Brett Bilbrey, a senior manager at Apple at the time, said the iPhone was almost a failure. Why? “There were no apps.”<sup>274</sup> There was clearly a desire for apps though. Immediately following its launch, hackers started jailbreaking iPhones, after which users could download apps onto their device.<sup>275</sup> Four months later, Steve Jobs had come around and announced native third-party apps. His tone suggested an admission of previous mistakes:

Let me just say it: We want native third party applications on the iPhone, and we plan to have [a software development kit (SDK)] in developers’ hands in February [2008]. It will take until February to release an SDK because we’re trying to do two diametrically opposed things at once—provide an advanced and open platform to developers while at the same time protect iPhone users from viruses, malware, privacy attacks, etc.<sup>276</sup>

On March 6, 2008, Apple executives introduced the iPhone SDK—the set of tools and APIs that third-party developers could use to write native apps.<sup>277</sup> First though, they could not help celebrating the success of web apps, pointing to Facebook as an example. (With hindsight, that choice was a poor one, given how Mark Zuckerberg called betting on web apps one of his greatest mistakes.<sup>278</sup>) Now, however, third-party developers were given the tools to build, debug and optimize apps that *actually* look and behave like Apple’s first-party apps. Contrary to Jobs’s initial announcement, the iPhone became more like a Mac computer than an iPod. Scott Forestell, who was introducing the SDK’s technical aspects, said the pivot fits well with the company’s essence because “Apple is a platform company.”<sup>279</sup>

Jobs took over from Forestell to introduce the way in which apps would be distributed: the App Store.<sup>280</sup> The App Store would not be one way to distribute apps—it would be “the exclusive way.”<sup>281</sup> To run the App Store, Apple would take a 30 percent cut from the sale of every app. This would help pay for human app review, among other things. During question time, one perceptive audience member asked, “Isn’t the fact that Apple is going to be the exclusive distributor for all these applications raise some questions about monopolies and so forth? What if a developer doesn’t want to distribute through the App Store?”<sup>282</sup> In that case, the answer went, they cannot distribute their app, although a web app remains an option. In an apparent attempt to assuage monopoly pricing concerns, Jobs said that “we do not intend to make money off the App Store”—the only goal is to “create a very efficient channel for developers to reach every single iPhone user.”<sup>283</sup>

On June 9, 2008, Apple launched the second iteration of the iPhone: the iPhone 3G. It came with faster internet speeds, a more affordable price point (subsidized by carriers), and—most importantly—the

274. BRIAN MERCHANT, *THE ONE DEVICE: THE SECRET HISTORY OF THE IPHONE* (Corgi 2017), 193.

275. See *Id.* 292–301 on how “hackers helped push the phone toward adopting its most successful feature, the App Store.”

276. Steve Jobs, *Third Party Applications on the iPhone*, APPLE HOT NEWS (Oct. 17, 2007). The Hot News feed is no longer online, but you can revisit the post at <https://web.archive.org/web/20071018221832/http://www.apple.com/hotnews/>.

277. iPhone SDK Launch (Apple Special Event, Mar. 6, 2008). For the transcript, see Exhibit DX-3177 of U.S. District Court for the District of Northern California, Case 4:20-cv-05640-YGR, *Epic Games, Inc. v. Apple, Inc.* (hereafter: Exhibit DX-3177). In Apr. 2010, Apple restricted developers to native programming tools and approved languages when writing iPhone apps, to the detriment of third-party layers (e.g., Flash). The EC opened a probe but closed it when Apple removed the restriction, see EC, *Statement on Apple’s iPhone Policy Changes* (press release, Sept. 25, 2010), IP/10/1175.

278. Draw Olanoff, *Mark Zuckerberg: Our Biggest Mistake Was Betting Too Much on HTML5*, TECHCRUNCH (Sept. 11, 2012), <https://techcrunch.com/2012/09/11/mark-zuckerberg-our-biggest-mistake-with-mobile-was-betting-too-much-on-html5/>.

279. Exhibit DX-3177, 7.

280. He immediately stressed one benefit of native apps over web apps: “the App Store will tell you automatically that there is an update available,” see *Id.* 21.

281. *Id.* 22.

282. *Id.* 27.

283. *Id.*

App Store.<sup>284</sup> It was only after Jobs announced native third-party apps that *Time* declared the iPhone its product of the year.<sup>285</sup> And it was only after the introduction of the App Store that iPhone sales really took off.<sup>286</sup> Now that iPhone was a proper computing device, it could truly take on PC market. It did not destroy that market in the way that smartphones decimated camera sales, but it did change the paradigm. Microsoft continues to dominate the PC market, but the center of gravity in tech has shifted from desktop to mobile.<sup>287</sup>

The iPhone and App Store have propelled Apple to unseen heights. Currently valued at over \$2T, Apple boasted the highest market cap of any publicly traded company in almost every quarter of the last decade (2012–2022).<sup>288</sup> The iPhone is responsible for more than half of Apple’s revenue.<sup>289</sup> In many ways, it is miles ahead of the competition: even though Apple ships only 16 percent of smartphones, the iPhone’s share of mobile phone revenue is 40 percent and its share of profits an eye-watering 80 percent.<sup>290</sup> Jobs did not think of the App Store itself as being a business (remember he said he did not even intend to make money off it); rather, the goal was to “sell more iPhones.”<sup>291</sup> But the App Store did more than that. Apple does not break out App Store billings in financial statements, but the “services” category that encompasses it is the second-largest driver of revenue.<sup>292</sup> And we know from an internal Apple presentation that App Store revenue started surpassing Mac and iPad revenue in 2016.<sup>293</sup>

Apple has faced some competition from Android.<sup>294</sup> Google’s mobile operating system (OS) followed a very different trajectory than Apple’s iOS, which runs the iPhone. It is open not only to app developers, but also to smartphone makers, which can freely license Android to run on their devices. This business model, which focuses on broad distribution rather than Apple’s premium price point, is driven by strategy.<sup>295</sup> While the iPhone was in development, Google saw the shift to mobile as an existential risk. It had built a thriving search (ads) business on desktop PCs, but this would not necessarily transfer to mobile browsers and especially apps. To avoid missing this shift, Google acquired and then further developed a mobile OS with broad buy-in from the mobile community

284. *Apple Introduces the New iPhone 3G*, APPLE NEWSROOM (June 9, 2008), <https://www.apple.com/newsroom/2008/06/09/Apple-Introduces-the-New-iPhone-3G/>.

285. Lev Grossman, *Invention of the Year: The iPhone*, TIME (Nov. 1, 2007), [https://content.time.com/time/specials/2007/article/0,28804,1677329\\_1678542\\_1677891,00.html](https://content.time.com/time/specials/2007/article/0,28804,1677329_1678542_1677891,00.html) (see reason 4, out of 5: “It’s not a phone, it’s a platform”).

286. FRED VOGELSTEIN, *BATTLE OF THE TITANS: HOW THE FIGHT TO THE DEATH BETWEEN APPLE AND GOOGLE IS TRANSFORMING OUR LIVES* (William Collins 2014), 185 (“iPhone sales didn’t really take off before Jobs introduced the App Store”); BRIAN MERCHANT, *THE ONE DEVICE: THE SECRET HISTORY OF THE IPHONE* (Corgi 2017), 195 (quoting Bilbrey: “When apps started showing up on the phone, that was when the sales number took off . . . It was a one-to-one correlation.”).

287. Perceptively on this shift, see Benedict Evans, *How to Lose a Monopoly* (personal blog, Jan. 1, 2020), <https://www.benevans.com/benedictevans/2020/01/01/microsoft-monopoly-and-dominance>.

288. Apple entered the top 10 of largest firms by market cap for the first time after the introduction of the iPhone, in Q4 2009, and was part of the top 5 the next year, see [https://en.wikipedia.org/wiki/List\\_of\\_public\\_corporations\\_by\\_market\\_capitalization](https://en.wikipedia.org/wiki/List_of_public_corporations_by_market_capitalization).

289. Apple, Form 10-K for the fiscal year ended Sept. 24, 2022 (U.S. Securities and Exchange Commission), 37.

290. Andrew Orr, *Apple Continuing Command of Global Smartphone Profits, and the Lead Is Growing*, APPLE INSIDER (Sept. 29, 2022), <https://appleinsider.com/articles/22/09/29/apple-continuing-command-of-global-smartphone-profits-and-the-lead-is-growing> (relying on Counterpoint Research data for 2022 Q2).

291. John Markoff & Laura Holson, *Apple’s Latest Opens a Developers’ Playground*, N.Y. TIMES (July 10, 2008), <https://www.nytimes.com/2008/07/10/technology/personaltech/10apps.html>.

292. Apple, Form 10-K for the fiscal year ended Sept. 24, 2022 (U.S. Securities and Exchange Commission), 37 (services account for about 20% of revenue).

293. Exhibit DX-4526 of U.S. District Court for the District of Northern California, Case 4:20-cv-05640-YGR, *Epic Games, Inc. v. Apple, Inc.*

294. Chronicled extensively in FRED VOGELSTEIN, *BATTLE OF THE TITANS: HOW THE FIGHT TO THE DEATH BETWEEN APPLE AND GOOGLE IS TRANSFORMING OUR LIVES* (William Collins 2014). On Android as a moat around Google’s search business, see Bill Gurley, *The Freight Train That Is Android*, ABOVE THE CROWD (Mar. 24, 2011), <https://abovethecrowd.com/2011/03/24/freight-train-that-is-android/>.

295. As also detailed in *Google Android* (Case AT.40099) Commission Decision of July 18, 2018, paras 112–30.



and device makers in particular.<sup>296</sup> Android would have Google's browser and search app pre-installed, and include its own app store: the Play Store. Google's strategy was successful, and Android and iOS ended up dividing the mobile OS market between them (with a combined share of over 99%).<sup>297</sup> And Google even found a solution for the iOS users it might not be able to reach otherwise: it pays Apple \$8–12B yearly to be the default search engine on Safari.<sup>298</sup>

Despite the higher global share of Android phones, the App Store is still the preferred destination for app developers. First of all, two thirds of spending on apps passes through the App Store rather than Google Play.<sup>299</sup> Considering that Android has a larger installed base, individual App Store customers are much more valuable than their Google Play counterparts. This explained by the fact that the Apple's user base is concentrated in more affluent regions (in the United States, for example, the iPhone's share exceeds 50%).<sup>300</sup> To grow their business, developers want their apps on both stores, but limited resources often force them to concentrate initial development efforts on one ecosystem. Developers tend to choose iOS, after which it can take months for the Android app to appear.<sup>301</sup>

As the App Store grew, Apple was not the only one to do well—developers did too. A study commissioned by Apple found that the App Store ecosystem facilitated \$643B in commerce in 2020.<sup>302</sup> On 90 percent of that commerce, developers did not have to pay Apple a fee. That is because Apple does not levy its 30 percent commission on the sale of physical goods or services (e.g., an Uber ride or Airbnb stay).<sup>303</sup> Only developers of digital goods and services (e.g., videogames or music streaming) are subject to Apple's fee, and those developers have grown increasingly dissatisfied over the years. This happened without a radical change in billing policies. When the App Store complemented app purchases with new features such as in-app purchases (IAP; 2009) and subscriptions (2011), Apple simply extended the 30 percent fee.<sup>304</sup> More recently, it even made some concessions. After the first year of subscription, for example, the fee decreases to 15 percent.<sup>305</sup> The fee for small developers (with less than \$1 million of sales) was similarly decreased to 15 percent.<sup>306</sup>

At the same time, even the consistent application of a rule can discriminate against certain types of app-mediated commerce, up to the point of making them economically infeasible. Discussing the extension of the 30 percent cut to e-book sales, for example, Jobs told executives to go ahead even while acknowledging the fee is "prohibitive for many things."<sup>307</sup> This is the case for any service with high marginal costs (often due to royalty payments to rightsholders), as they simply do not have 30

296. Grouped together in the Open Handset Alliance, see <https://www.openhandsetalliance.com/>.

297. See *Mobile Operating System Market Share Worldwide—December 2022*, STATCOUNTER, <https://gs.statcounter.com/os-market-share/mobile/worldwide>.

298. See U.S. District Court for the District of Columbia, Case 1:20-cv-03010, *U.S. and others v. Google, LLC*, Dec. 10, 2020 (Complaint), 37–39.

299. Stephanie Chan, *Global Consumer Spending in Mobile Apps Reached \$133 Billion in 2021, Up Nearly 20% from 2020*, SENSORTOWER (Dec. 2021), <https://sensortower.com/blog/app-revenue-and-downloads-2021>.

300. *US Smartphone Shipments Market Share*, COUNTERPOINT (Dec. 23, 2022), <https://www.counterpointresearch.com/us-market-smartphone-share/>.

301. The momentarily popular app Clubhouse, for example, was released for Android more than a year after its iOS launch, see Kim Lyons & Jon Porter, *Clubhouse Comes to Android after More Than a Year of iOS Exclusivity*, THE VERGE (May 9, 2021), <https://www.theverge.com/2021/5/9/22424399/>.

302. Jonathan Borck, Juliette Caminade & Markus von Wartburg, *A Global Perspective on the Apple App Store Ecosystem*, ANALYSIS GROUP STUDY (June 2021).

303. Developers that monetize through in-app advertising pay no fee either. See App Store Review Guidelines, Section 3.1 for the current payment rules <https://developer.apple.com/app-store/review/guidelines>.

304. See *The App Store turns 10*, APPLE NEWSROOM (July 5, 2018), <https://www.apple.com/newsroom/2018/07/app-store-turns-10/>.

305. See <https://developer.apple.com/app-store/subscriptions/>.

306. See <https://developer.apple.com/app-store/small-business-program/>.

307. U.S. House of Representatives—Judiciary Subcommittee on Antitrust, "Investigation of competition in digital markets" (Majority Staff Report and Recommendations) 2020, 353.

percent margin left to pay Apple. This goes not only for e-books (e.g., Amazon’s Kindle) but also for music streaming (e.g., Spotify) and video services (e.g., Netflix). The App Store’s “reader app” exception does allow customers to purchase/subscribe to such services elsewhere (via the web) and then access their content in-app, but developers could not let those customers know that option exists (the “anti-steering” rule).<sup>308</sup> And Apple happens to operate services that compete with those that have difficulty bearing its 30 percent fee (iBooks, Apple Music, Apple TV+).

Being the monopoly distributor of apps can also inhibit innovation—even outside of app distribution. In the first place, the app store ban protects Apple’s 30 percent fee: in its absence, competing app stores could enter the market charging lower fees. Epic Games and Microsoft, for example, seem ready to do so with a fee of 12 percent.<sup>309</sup> But Apple’s ban on competing app stores is phrased broadly: it is unacceptable to create “an interface for displaying third-party apps, extensions, or plug-ins similar to the App Store.”<sup>310</sup> That is why, in addition to app stores, it also obstructs cloud gaming apps, which offer users a catalog of games.<sup>311</sup> Looking further into the future, the app store ban may outlaw the metaverse. After all, the idea is for the metaverse to be an interactive environment where users can create experiences accessible by others. As these experiences can qualify as apps or games in their own right, an app providing them goes against Apple policy.<sup>312</sup>

Finally, even if the App Store rules have been fairly consistent for a decade, the very fact that little has changed can be seen as a problem. Before the App Store, carriers had to approve apps, and there was no standard deal for what the developer had to pay for the privilege of being hosted. Therefore, the App Store was initially seen as limiting “the phone company’s power as gatekeeper.”<sup>313</sup> By now, carriers have left the picture and Apple has become the dominant force. Borrowing one of Jobs’s favorite metaphors, Apple is no longer the pirates fighting the established order. It has become the navy enforcing the order, and the toll levied by its customs house is under pressure.<sup>314</sup> That pressure also has to do with technological development since 2008. As Philip Shoemaker, a former App Store executive, explained: When Apple introduced the App Store, its easy-to-use, trusted billing system was innovative because the alternatives were complicated and potentially unsafe. Now, however, “those kinds of tools are a dime a dozen” and they charge fees closer to the 3 percent commission on credit card transactions, which is why developers are no longer willing to surrender 30 percent.<sup>315</sup>

308. App Store Review Guidelines, Section 3.1.1 (“Apps and their metadata may not include buttons, external links, or other calls to action that direct customers to purchasing mechanisms other than in-app purchase.”). In response to an investigation by the JFTC, Apple removed the anti-steering rule for reader apps, see further *infra*, Section VIC.

309. Both firms have stores on PCs, where they charge 12% on game sales, and plans to expand to other platforms. See Ian Carlos Campbell & Julia Alexander, *A Guide to Platform Fees*, THE VERGE (Aug. 24, 2021), <https://www.theverge.com/21445923/>.

310. App Store Review Guidelines, Section 3.2. The app store ban has been specified for cloud gaming services, see Section 4.9.

311. CMA, *Mobile Browsers and Cloud Gaming Market Investigation* (Issues Statement) June 2022, para 22.

312. Roblox offers such an app, and its CEO has called it a metaverse. To fit within Apple’s rules, it had to rebrand its games as “experiences.” Should Roblox—or an app like it—need to be approved for inclusion in the App Store today, it might not be. See Adi Robertson, *Apple Said Roblox Developers Don’t Make Games, and Now Roblox Agrees*, THE VERGE (May 14, 2021), <https://www.theverge.com/2021/5/14/22436014/>. The level of App Store fees also obstructs metaverse development, see MATTHEW BALL, *THE METAVERSE—AND HOW IT WILL REVOLUTIONIZE EVERYTHING* (Liveright Publishing 2022), chapter 10.

313. John Markoff & Laura Holson, *Apple’s Latest Opens a Developers’ Playground*, N.Y. TIMES (July 10, 2008) <https://www.nytimes.com/2008/07/10/technology/personaltech/10apps.html>.

314. On the metaphor, see Sarah Todd, *The Steve Jobs Speech That Made Silicon Valley Obsessed with Pirates*, QUARTZ (Oct. 22, 2019), <https://qz.com/1719898/steve-jobs-speech-that-made-silicon-valley-obsessed-with-pirates>. Extending the metaphor to the App Store, see Benedict Evans, *App Stores, Trust and Anti-Trust* (personal blog, Aug. 18, 2020), <https://www.benevans.com/benedictevans/2020/8/18/app-stores>.

315. Jack Nicas, *How Apple’s 30% App Store Cut Became a Boon and a Headache*, N.Y. TIMES (Aug. 14, 2020), <https://www.nytimes.com/2020/08/14/technology/apple-app-store-epic-games-fortnite.html>.

## B. The App Store as Gatekeeper

In the list of CPS, app stores qualify as “online intermediation services.”<sup>316</sup> To avoid any doubt, the DMA separately defines “software application stores” as “a type of online intermediation services, which is focused on software applications as the intermediated product or service.”<sup>317</sup> The operating systems app stores are embedded in are also captured.<sup>318</sup> And, because different obligations relate to it, the DMA also takes care to define “payment system for in-app purchases,” that is, “a software application, service or user interface which facilitates purchases of digital content or digital services within a software application, including content, subscriptions, features or functionality, and the payments for such purchases.”<sup>319</sup> The system Apple uses to levy its fee is called IAP.

The App Store certainly meets the thresholds for gatekeeper status under the DMA. The first criterion of having a significant impact on the internal market depends on market cap *or* EU revenue. As mentioned, Apple’s market cap exceeds \$2T, which is well above the €75B required for such an impact to be presumed. Apple also has no trouble reaching the alternative threshold of €7.5B+EU revenue, as it reported close to \$100B in net sales in Europe.<sup>320</sup> Meeting the second criterion of providing an important gateway for business users to reach end-users depends on the number of those users, but the App Store surely has 45M monthly active end-users and 10,000 yearly active business users in the EU.<sup>321</sup> The third criterion of enjoying an entrenched and durable position hinges on whether the user numbers thresholds were met in each of the last three years. Given Apple’s continued success, that threshold is also met.

The App Store qualifies as gatekeeper under the DMA, but is that status deserved? We can start by looking at the competition it faces. As discussed, Google is the only other firm that was able to carve out a position in the mobile OS market. There are more Android phones than iPhones and given that they come with the Play Store pre-installed, the installed base of the Play Store is actually larger than the App Store. But consumer spending is a better measure of competitive significance and on that front, the App Store beats Google two to one. Largely in line with that two-to-one ratio, the U.S. judge in *Epic v Apple* put the App Store’s market share at around 60 percent for 2020.<sup>322</sup>

The competitive situation between the App Store and Google Play is, however, a bit more complex.<sup>323</sup> Developers must be present in both stores (they multi-home), especially if their product is driven by network effects, which means they need to attract a large number of users (e.g., dating apps).<sup>324</sup> Consumers, by contrast, only have access to one app store (they single-home), namely the one that comes with the mobile OS they purchase, which is in turn determined by the smartphone they purchase.

316. DMA, art. 2(2)(a).

317. DMA, art. 2(14); see art. 2(15) for a definition of “software application.”

318. DMA, art. 2(2)(f).

319. DMA, art. 2(18).

320. Apple, Form 10-K for the fiscal year ended Sept. 24, 2022 (U.S. Securities and Exchange Commission) 22. The App Store is also provided in at least three Member States (it is provided in all 27).

321. According to estimates, the iPhone/iOS has a 35% market share in Europe, see *Mobile Operating System Market Share in Europe—December 2022* (Statcounter), <https://gs.statcounter.com/os-market-share/mobile/europe>. Given the EU population, this should translate to at least 100M end-users of iOS, most if not all of which are likely to engage with the App Store. The number of business users, i.e., developers, is harder to estimate, but Apple boasts that it supports 2.2 million jobs in Europe, see *New Research Highlights Job Growth, Success of European Small Businesses and Entrepreneurs on the App Store*, APPLE NEWSROOM (May 25, 2022), <https://www.apple.com/ie/newsroom/2022/05/new-research-highlights-job-growth-of-european-small-businesses-on-the-app-store/>.

322. U.S. District Court for the District of Northern California, Case 4:20-cv-05640-YGR, *Epic Games, Inc. v. Apple, Inc.*, Sept. 10, 2021, 87–88. The judge came to this number examining a subset of mobile transactions (those related to gaming).

323. See also Luís Cabral, Justus Haucap, Geoffrey Parker, Georgios Petropoulos, Tommaso Valletti & Marshall Van Alstyne, *The EU Digital Markets Act* (A Report from a Panel of Economic Experts) 2021, 17–18.

324. ACM, Case ACM/19/035630, *Apple*, Aug. 24, 2021 (Summary of Decision), paras 10–11.

Consumers only purchase a new OS/phone every couple of years, at which point the embedded app store can be a consideration. Consumers are, however, unlikely to fully account for the price they will be paying for apps in their device purchase decision. There is thus a degree of competition, but certainly on the consumer side, that competition is rather indirect. For that reason, different competition authorities have put Google Play and the App Store in different, ecosystem-specific aftermarkets.<sup>325</sup>

In the aftermarket of app distribution on iOS devices (i.e., iPhones), Apple holds a 100 percent market share. Not only does it contractually and technologically ban competing app stores, it also prevents sideloading (i.e., downloading native apps directly from the web). Web apps remain a theoretical possibility. They have gained capabilities since the iPhone's inception (e.g., the possibility to put icons on the home screen), but underinvestment means they still lack the necessary functionality (e.g., in terms of push notifications, data storage, and GPS) to be a viable option for many developers. Thus, the App Store truly has a monopoly—at least over iOS app distribution; even in a wider app distribution market, it has market power.

Disruption, though hard to predict, seems unlikely to change this state of affairs any time soon. Direct competition is difficult, but many candidates to shift the paradigm away from smartphones have sprung up over the years (e.g., voice assistants). All have failed to do so. As David Pierce wrote, “Everybody promised to disrupt the smartphone—and the smartphone outlasted them all.”<sup>326</sup> The metaverse, though still largely hypothetical, is perhaps the best candidate, but its development is hindered by Apple (as noted above). And should augmented or virtual reality headsets instead of smartphones become the preferred device to access that metaverse, Apple is well-placed to provide those.<sup>327</sup>

In conclusion, Apple's position in (iOS) app distribution—a key gateway in the digital economy—is strong and difficult to contest. From the DMA's point of view, that lack of contestability poses a problem. What about the DMA's other goal of fairness? That fairness is mostly sought in platform-to-business relations but let us start with consumers. These consumers benefit from a trusted, easy-to-use transaction process. They also pay for it, as developers tend to pass on at least part of the 30 percent fee to consumers. Without that fee, (in-)app prices would be lower.<sup>328</sup> Be that as it may, Apple should be free to charge a reasonable fee for the app development and distribution system it has set up.

Therefore, the real question is whether that fee is excessive. There are different ways to go about determining whether that is the case. One way is to look at profit margins. The *Epic* judge found an expert's estimate putting the App Store's operating margin at 75 percent credible, noting that such margins are “extraordinarily high” and “strongly show market power.”<sup>329</sup> The Competition and Markets Authority (CMA) came to similar conclusions and also seized upon the fact that App Store fees have barely gone down over the years, even though one would expect them to do so in the face of competition.<sup>330</sup>

325. ACM, Market study into mobile app stores (Report ACM/18/032693) 2019; *Google Android* (Case AT.40099) Commission Decision (where the EC defined an Android-specific app store aftermarket); CMA, “Mobile ecosystems market study” (Final Report) June 2022; ACM, Case ACM/19/035630, *Apple*, Aug. 24, 2021 (Summary of Decision).

326. David Pierce, *Everybody Promised to Disrupt the Smartphone—and the Smartphone Outlasted Them All*, THE VERGE (Nov. 23, 2022), <https://www.theverge.com/2022/11/23/23474090/>.

327. Mark Gurman, *Apple Will Talk Up Its Mixed-Reality Headset in 2023 But Not Much Else*, BLOOMBERG (Jan. 8, 2023), <https://www.bloomberg.com/news/newsletters/2023-01-08/when-will-apple-launch-the-reality-pro-mixed-reality-headset-apple-2023-devices-lcnfzkc7>.

328. This can be observed by comparing App Store prices with web prices. Music streaming apps generally charge \$13 via the App Store and \$10 via the web (at least those that have not disabled IAP and thus made App Store subscriptions impossible, as Spotify did). When Epic shortly bypassed IAP with its “Epic direct payment,” it offered a 20% discount, charging \$7.99 instead of \$9.99 for 1.000 V-Bucks (the in-game currency). Tinder charges \$14.99 for a Gold membership via the App Store compared to \$13.49 via the web—a 10% discount.

329. U.S. District Court for the District of Northern California, Case 4:20-cv-05640-YGR, *Epic Games, Inc. v. Apple, Inc.*, Sept. 10, 2021, 41–43 and 93–94.

330. CMA, “Mobile ecosystems” (Market study—final report) 2022, Appendix C. In addition to gross and operating profit margins, the CMA also analyzed the App Store's return on capital employed (ROCE) as a measure of profitability.

A seemingly excessive fee might be acceptable if the profits had been constantly reinvested to ensure quality and innovation. But the evidence does not point in that direction. Apple spends less on research and development (R&D) than the other platforms making up the GAFAM.<sup>331</sup> Apple spends about 6 percent of revenue on R&D; Google and Microsoft spend double of that, and Facebook more than triple. When it comes to the App Store, experts—including those hired by Apple—have testified that the allocated R&D is especially low.<sup>332</sup> This has innovation implications. Surveys suggest that developers perceive the App Store as lacking features common to other platforms.<sup>333</sup> And Shoemaker, the former Apple executive, described the App Store as “antiquated” with “no radical innovation, only evolution” for the last ten years.<sup>334</sup>

The App Store was an incredible innovation that launched an entire industry. It is no surprise that developers were initially enthusiastic—and for a large part, remains so until this day. It is also unobjectionable that Apple got to profit greatly from its innovation. But after fifteen years, it is fair to ask whether the system it has set up is still the driver of innovation it once was. Given low contestability, there are no other app stores pushing Apple to innovate, which manifests itself in low R&D allocated to the App Store. At the same time, Apple continues to charge an equally high fee on developers selling digital goods and services, even while safe and seamless in-app payment services have become mainstream. This fee can inhibit innovation: as Jobs knew, app offerings without a 30 percent margin become economically difficult if not impossible.<sup>335</sup> Apple’s app store ban limits competition in a more direct way, and its effects are felt in nascent industries from cloud gaming to the metaverse. Competition law cannot reach many of these issues.<sup>336</sup> Underinvestment (e.g., in web browsers) and collateral damage of long-standing policies (e.g., cloud gaming) are difficult targets for enforcement, even when there is competitive harm. Market investigations—not available at EU level—are perhaps the only viable tool.<sup>337</sup> Theoretically, excessive fees fit more easily within competition law’s sphere of competence, but enforcers have been reluctant to take up cases of exploitation, in part due to practical difficulties.<sup>338</sup> Therefore, there might be room for an instrument that tackles these issues head-on. Let us examine how exactly the DMA does so.

### C. App Store Obligations and Unintended Consequences

A significant number of the DMA’s obligations specifically target app stores, and in particular *the App Store*.<sup>339</sup> In the United States, app store issues were even addressed in a separate draft bill, the Open

331. Stone Fox Capital, *Apple: Arms Race Laggard*, SEEKING ALPHA (Jan. 19, 2022), <https://seekingalpha.com/article/4480294-apple-laggard-capex-r-and-d-spending>. For R&D figures of Apple and its GAFAM brethren going back ten years, see ARIEL EZRACHI & MAURICE STUCKE, *HOW BIG-TECH BARONS SMASH INNOVATION—AND HOW TO STRIKE BACK* (Harper Business 2022) 17 (showing Apple’s relatively low R&D spending goes back a decade; it used to be even lower, in the range of 2–3%).

332. U.S. District Court for the District of Northern California, Case 4:20-cv-05640-YGR, *Epic Games, Inc. v. Apple, Inc.*, Sept. 10, 2021, 102.

333. *Id.*, 100–101.

334. *Id.*, 102.

335. In addition to the reader apps discussed above, this may be the case for creator economy apps, see Li Jin, Nathan Baschez & Yash Bagal, *Apple Is Holding Back the Creator Economy*, EVERY (May 10, 2021), <https://every.to/means-of-creation/apple-is-holding-back-the-creator-economy>.

336. More generally on Apple’s antitrust immunity, see Nicolas Petit, *Will Antitrust Regulators Please Stand Up—Apple’s Free Pass*, MEDIUM (Mar. 23, 2017), <https://medium.com/@CompetitionProf/will-antitrust-regulators-please-stand-up-apples-free-pass-b97fd3c50e51>.

337. CMA, *Mobile Browsers and Cloud Gaming Market Investigation* (Issues Statement), Dec. 2022.

338. See Friso Bostoën, *The ACM’s Apple Decision: To Boldly Go Where No Enforcer Has Gone before*, 10 ANTITRUST ENFORC.J 583 (2022) on enforcers’ reluctance to rely on theories of exploitative abuse. As a case in point, the EC is challenging the App Store fee for music streaming services on exclusionary grounds, see EC, *Commission Sends Statement of Objections to Apple on App Store Rules for Music Streaming Providers* (press release, Apr. 30, 2021), IP/21/2061.

339. App stores are also the only type of platform with their own section in Luís Cabral, Justus Haucap, Geoffrey Parker, Georgios Petropoulos, Tommaso Valletti & Marshall Van Alstyne, *The EU Digital Markets Act* (A Report from a Panel of Economic Experts) 2021.

App Markets Act.<sup>340</sup> Given the account of the previous sections, it should come as no surprise that most of the DMA's obligations relate to restrictions on app distribution and the price app stores charge for such distribution. Other obligations are not as targeted but have nevertheless been adopted with app stores in mind. One example is the obligation not to rely on data generated by business users to compete with them.<sup>341</sup> Another is the obligation to provide business users with access to the data that their interactions with end-users generate.<sup>342</sup> But let us focus on the obligations directly targeted at app stores.<sup>343</sup>

A first set of obligations targets the price charged for app distribution. This is done through three separate obligations, which target the App Store fee in increasingly direct ways. The most indirect way is the DMA's prohibition of anti-steering measures.<sup>344</sup> Remember that the App Store's anti-steering rule prohibits developers from directing consumers toward payment mechanisms other than Apple's IAP.<sup>345</sup> In 2021, the Japan Fair Trade Commission considered Apple's anti-steering rule anticompetitive for the specific category of reader apps, which tend to face high marginal costs.<sup>346</sup> In response, Apple removed the anti-steering rule for reader apps globally.<sup>347</sup> The judge in *Epic v Apple* also found the anti-steering rule in breach of California's unfair competition law, issuing a U.S.-wide injunction.<sup>348</sup> As a result of the DMA, Apple will have to scrap the anti-steering rule for all apps. A more direct intervention in the App Store fee is found in the DMA's obligation not to require that developers and consumers use the app stores' in-app payment system.<sup>349</sup> In other words, transactions of digital goods and services will not have to use IAP—the practical mechanism through which Apple levies its 30 percent fee. This obligation, too, follows competition law enforcement. The Dutch Competition Authority (ACM) decided that forcing developers of dating apps to use IAP constituted an abuse of dominance, in particular an unfair trading condition.<sup>350</sup> Prohibiting the anti-steering rule and IAP obligation may push Apple to lower fees so that developers and consumers continue to transact within the App Store rather than outside of it. Finally, the DMA targets App Store fees head-on, with an obligation on gatekeepers to “apply fair, reasonable, and non-discriminatory [FRAND] general conditions of access for business users to its software application stores.”<sup>351</sup>

Given how competition authorities focused on the way in which the App Store fee is levied (the IAP obligation and anti-steering rule) rather than the fee in itself, there is no precedent for the FRAND obligation. But there could be role for it. Competition law enforcement has struggled to make a dent in App Store fees, even where that seemed to be the main objective. The ACM decision offers a clear

340. S.2710—Open App Markets Act, 117th Congress (2021–2022).

341. DMA, art. 6(2). App stores are specifically mentioned as a type of platform the obligation would apply to in recital 46. There have been reports of the App Store relying on third-party data for product development, see, e.g., Reed Albergotti, *How Apple Uses Its App Store to Copy the Best Ideas*, WASH. POST (Sept. 5, 2019), <https://www.washingtonpost.com/technology/2019/09/05/how-apple-uses-its-app-store-copy-best-ideas/>.

342. DMA, art. 6(10). DMA Impact Assessment, 59 notes, in support of this obligation, that there have been “many complaints in particular by app developers” about how they “lack access to customer data and are therefore disintermediated from (*sic*) their own customers.”

343. Other obligations are targeted at the mobile ecosystems the app stores are embedded in, but those are not dealt with here.

344. DMA, art. 5(4), with art. 5(5) supporting that obligation.

345. See *supra*, Section VIA.

346. JFTC, *Closing the Investigation on the Suspected Violation of the Antimonopoly Act by Apple Inc.* (press release, Sept. 2, 2021), <https://www.jftc.go.jp/en/pressreleases/yearly-2021/September/210902.html>.

347. See App Store Review Guidelines, Section 3.1.3(a) and Apple, *Japan Fair Trade Commission Closes App Store Investigation* (press release, Sept. 1, 2021), <https://www.apple.com/newsroom/2021/09/japan-fair-trade-commission-closes-app-store-investigation/>.

348. U.S. District Court for the District of Northern California, Case 4:20-cv-05640-YGR, *Epic Games, Inc. v. Apple, Inc.*, Sept. 10, 2021.

349. DMA, art. 5(7). This obligation also appears implicit in arts 5(4)–(5).

350. ACM, Case ACM/19/035630, *Apple*, Aug. 24, 2021 (Summary of Decision).

351. DMA, art. 6(12).

illustration. To implement the remedy, Apple allowed dating app developers to bypass IAP in the Netherlands. Even without IAP, Apple still charged developers a fee of 27 percent, that is, the initial 30 percent fee minus 3 percent to make up for the fee charged by payment processors, which would now be carried by developers rather than Apple.<sup>352</sup> And even then Apple only did so after the ACM imposed a series of ten penalty payments, up to the maximum of €50M.<sup>353</sup> Instead of focusing on the way in which the fee is levied,<sup>354</sup> the DMA's FRAND obligation allows the EC assess and potentially change the fee itself. This would get the EC involved in price-setting, which it is reluctant (and perhaps unable) to do under competition law. It also has another tool at its disposal: the anti-circumvention rule, which prohibits gatekeepers from undermining effective compliance with the DMA's obligations.<sup>355</sup> Commissioner Vestager has suggested that Apple's conduct in the Netherlands could be an example of such circumvention.<sup>356</sup>

A second set of obligations goes a step further and targets the way in which app distribution is organized. The main one is that "gatekeeper shall allow and technically enable the installation and effective use of third-party software applications or software application stores using, or interoperating with, its operating system."<sup>357</sup> In addition, users must be able to download those third-party apps/app stores without using the gatekeeper's CPS, that is, the App Store. This means they should be able to sideload these apps (i.e., download them from the web). Note, however, that there is no FRAND obligation for the access of third-party app stores to iOS, which means Apple could charge a significant fee for hosting these stores.<sup>358</sup> Finally, the DMA also targets web apps. One reason these apps lack functionality is that iOS browsers must use Safari's browser engine WebKit—an engine that has been called "uniquely underpowered."<sup>359</sup> The result is that even browsers competing with Safari (e.g., Chrome) cannot offer the necessary performance for web apps to start rivaling native apps. The DMA may change this, as it prohibits gatekeepers from requiring usage of their browser engine.<sup>360</sup>

Opening up iOS app distribution addresses a contestability concern, while regulating App Store fees relates to fairness. But the two are intimately related: the entry of competing app stores should not only put pressure on Apple to innovate but also drive down commission fees. Even more so than the fee-related obligations, however, doing away with Apple's app distribution monopoly requires a fundamental change to its business model and product design. Apple is duly aware of that. It has warned

352. *Distributing Dating Apps in the Netherlands*, <https://developer.apple.com/support/storekit-external-entitlement/> ("Apple will reduce its commission by 3% on the price paid by the user . . . a reduced rate that excludes value related to payment processing").

353. ACM, *Apple Changes Unfair Conditions, Allows Alternative Payments Methods in Dating Apps* (press release, June 11, 2022), <https://www.acm.nl/en/publications/acm-apple-changes-unfair-conditions-allows-alternative-payments-methods-dating-apps>.

354. This is what the EC appears to be doing in its App Store investigation, see EC, *Commission Sends Statement of Objections to Apple on App Store Rules for Music Streaming Providers* (press release, Apr. 30, 2021), IP/21/2061.

355. DMA, art. 13. In case of circumvention, the EC can open proceedings and open a regulatory dialogue to specify the measures in line with art. 8(2).

356. See Margrethe Vestager, *Shared Objectives for Framing the Tech Economy* (Speech, The Riesenfeld Award ceremony—Berkeley, CA, Feb. 22, 2022) ("Some gatekeepers may be tempted to play for time or try to circumvent the rules. Apple's conduct in the Netherlands these days may be an example.").

357. DMA, art. 6(4). Users must also be able to set those apps/app stores as their default.

358. The limit to that fee is the effectiveness of the DMA obligation on third-party app stores.

359. Alex Russel, *Progress Delayed Is Progress Denied*, INFREQUENTLY NOTED (June 16, 2021), <https://infrequently.org/2021/04/progress-delayed/>. This is part of the CMA's market investigation, see CMA, *Mobile Browsers and Cloud Gaming Market Investigation* (Issues Statement), Dec. 2022.

360. DMA, art. 5(7) and recital 43 ("each browser is built on a web browser engine, which is responsible for key browser functionality such as speed, reliability and web compatibility. When gatekeepers operate and impose web browser engines, they are in a position to determine the functionality and standards that will apply not only to their own web browsers, but also to competing web browsers and, in turn, to web software applications").

investors that DMA-mandated changes to “how and to what extent the Company charges developers for access to its platforms and manages distribution of apps outside of the App Store . . . could reduce the volume of sales, and the commission that the Company earns on those sales.”<sup>361</sup> According to reports, Apple has started working on allowing third-party app stores and sideloading.<sup>362</sup> The reaction to that news tells a story: Apple’s share price was little changed, while developers of major dating apps and music streaming services saw their shares climb as much as 10 percent. This could indicate that the DMA will not only divide the pie differently (with a larger share going to business users), but that it may actually enlarge it.<sup>363</sup>

The ultimate stakeholders of competition law, but also of the DMA, are consumers. Will they benefit? First, experience indicates that when developers face lower fees, they pass-on savings to consumers.<sup>364</sup> Then again, Apple may devise ways to charge developers even when it does not play a central role in distribution. Thus, the extent of the fee decrease is uncertain. Perhaps more important than fees is security—one of the defining features of the iPhone.<sup>365</sup> As a result of the DMA, the iPhone is set to become even more like a PC, where app distribution has always been free. That shift comes with increased security concerns: Apple’s senior vice president Craig Federighi has called sideloading “a cybercriminal’s best friend.”<sup>366</sup> The DMA gives Apple the opportunity to protect the integrity of its hardware/OS and the security of end-users when they download apps outside of the App Store.<sup>367</sup> Apple could do so by taking a page from macOS, where it protects users through a security technology called “Gatekeeper”:

When a user downloads and opens an app, a plug-in or an installer package from outside the App Store, Gatekeeper verifies that the software is from an identified developer, is notarized by Apple to be free of known malicious content and hasn’t been altered. Gatekeeper also requests user approval before opening downloaded software for the first time to make sure the user hasn’t been tricked into running executable code they believed to simply be a data file.<sup>368</sup>

In the end, the iPhone user base may self-select into two groups: on the one side, the more sophisticated and/or more risk-tolerant users, who are happy to venture outside of the App Store to pay lower fees; on the other side, the less tech-savvy and/or more risk-averse users, who take comfort in the App Store (they may not even be aware of alternatives) and put up with its cost.<sup>369</sup> On the developer side, too, different paths may emerge: larger developers (e.g., Netflix, Spotify, Epic) will be motivated to avoid App Store fees, relying on their brand name to overcome consumer hesitancy, while smaller developers will want to continue benefiting from Apple’s system and the concomitant consumer trust.

361. Apple, Form 10-K for the fiscal year ended Sept. 24, 2022 (U.S. Securities and Exchange Commission), 10.

362. Mark Gurman, *Apple to Allow Outside App Stores in Overhaul Spurred by EU Laws*, BLOOMBERG (Dec. 13, 2022), <https://www.bloomberg.com/news/articles/2022-12-13/will-apple-allow-users-to-install-third-party-app-stores-sideload-in-europe>.

363. The alternative explanation is that Apple is so large (in terms of market cap) relative to those developers that even a negligible shift in its stock price could correspond to a fairly large shift in developers’ stock prices.

364. See footnote 328.

365. The iPhone differentiates itself from Android phones on security. In 2018, Android was responsible for more than 50 times more infections than iOS (iOS: 0.85% of mobile infections; Android: 47.15%). “The main reason that the Android platform is targeted, is that once side-loading is enabled, Android applications can be downloaded from just about anywhere. In contrast, iPhone applications are for the most part limited to one source, the Apple Store.” See Nokia, *Threat Intelligence Report 2019* (White Paper), 15–16.

366. Chaim Gartenberg, “*Sideloading Is a Cyber Criminal’s Best Friend*,” *According to Apple’s Software Chief*, THE VERGE (Nov. 3, 2021), <https://www.theverge.com/2021/11/3/22761724/>.

367. DMA, art. 6(4).

368. *Gatekeeper and Runtime Protection in macOS* (Apple Platform Security), <https://support.apple.com/en-gb/guide/security/sec5599b66df/web>. On applying the notarization model to iOS, see U.S. District Court for the District of Northern California, Case 4:20-cv-05640-YGR, *Epic Games, Inc. v. Apple, Inc.*, Sept. 10, 2021, 111–13.

369. That self-selection can become more difficult if certain developers choose to only provide their apps outside of the App Store, which is not an unrealistic prospect. If Facebook develops an app store, for example, will it keep Instagram in the App Store or move to exclusivity to draw users to its store?



The most difficult cases may concern apps that do not threaten cybersecurity but affect the broader safety of users. Consider, for example, how Apple removed Parler from the App Store after the January 6, insurrection, when the social networking app became a hotbed for calls to violence.<sup>370</sup> Would the DMA's obligation to host apps on FRAND conditions prevent such steps? In a recital, the DMA clarifies that the FRAND obligation relates primarily to prices; it "should not establish an access right and it should be without prejudice to the ability of providers of software application stores . . . to take the required responsibility in the fight against illegal and unwanted content."<sup>371</sup> Still, the greater the avenues for distribution, the more complicated that fight becomes. Insofar Apple requires—and is left free to require—that every app distributed within iOS is notarized via its Gatekeeper system, it may have the tools to prevent distribution of an app like Parler. It seems difficult for individual apps like Parler to fight such *prima facie* reasonable decisions, all the more so because the DMA aims for compliance at a systems level—not necessarily with regard to every individual business user.<sup>372</sup> Nevertheless, the risk of an unintended impact on the cybersecurity and broader safety of users must be acknowledged.

As any case study that looks to the future, this one comes with a high degree of uncertainty, which is not helped by the fact that several of the DMA's obligations are untested in an app store context. Discussing app store regulation, Gruber put it bluntly: "Anyone who claims to know how such a scenario will turn out is full of shit."<sup>373</sup> The foregoing should thus not be taken as more than informed speculation. At the same time, the case study has its value. It has shown that the nebulous concepts of fairness and contestability can effectively be located in the relation between app stores and developers. It also suggests that the DMA can reach fairness and contestability-related issues in a way that competition law cannot. The actual effects remain difficult to predict. They will, however, be assessable *ex post*. The DMA only applies in the EU. Gatekeepers like Apple can—and likely will—uphold their established business model and product design elsewhere. This will allow for a comparison between app developers and consumers in and outside of the EU. The DMA is an experiment, but it is an experiment we will be able to learn from, hopefully without incurring too high a cost in the process.

## VII. Conclusion

Although it is tempting, we should not forcibly fit the DMA into the mold of regulation that came before. In the DMA's uncharted territory, however, it is useful to have reference points. Competition law can serve as such a reference point. With competition law in mind, one can observe that the DMA's goal of fairness relates to intra-platform competition, while contestability refers to inter-platform competition. But even though it addresses issues of competition, the DMA also goes further than competition law. When it comes to intra-platform competition, the DMA adds to the *status quo* in particular where it targets exploitation, which competition authorities are reluctant to address.<sup>374</sup> The DMA also

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370. Jay Peters & Kim Lyons, *Apple Removes Parler from the App Store*, THE VERGE (Jan. 10, 2021), <https://www.theverge.com/2021/1/9/22221730/>.

371. DMA, recital 62.

372. In other words, if Apple has effective processes in place to comply with the DMA, the EC appears unlikely to take up the case of a single app developer that falls through the cracks of that system. Given the DMA's direct effect, a case before a national court remains an option, although national courts are likely to look at the EC-overseen compliance process for guidance.

373. John Gruber, *Let's Consider Some of the Implications of Third-Party Payment Processing for In-App Purchasing on iOS and Android*, DARING FIREBALL (Aug. 31, 2021), [https://daringfireball.net/2021/08/implications\\_of\\_third-party\\_payment\\_processing\\_for\\_iap](https://daringfireball.net/2021/08/implications_of_third-party_payment_processing_for_iap).

374. This is especially apparent at EU level. For example, the EC is challenging the App Store fee for music streaming services on exclusionary grounds, even though the underlying issue is the level of the fee. See EC, *Commission Sends Statement of Objections to Apple on App Store Rules for Music Streaming Providers* (press release, Apr. 30, 2021), IP/21/2061. NCAs are more comfortable with exploitative theories of harm, although they retain an exclusionary bent. For example, the ACM decided the IAP obligation constituted an unfair T&C (an exploitative abuse) but took care to argue that App Store distribution and IAP were separate products as if it were conducting an analysis of tying (an exclusionary abuse). See Autoriteit Consument & Markt, Case ACM/19/035630, *Apple*, Aug. 24, 2021 (Summary of Decision).

goes beyond competition law where it seeks to promote—rather than protect—inter-platform competition. The most persistent limits of competition law, however, have been institutional rather than substantive. They relate to speed of enforcement and remedy design. As to the need for speed, the DMA's strict deadlines can facilitate intervention before it is too late, that is, before a market has irreversibly tipped. Ultimately, the remedy problem may be the most vexing. On the one hand, more speedy intervention gives those remedies a better chance of success. On the other hand, successful remedies have to engage deeply with the platform's business models and product design, which will continue to present difficulties despite the specification procedure/regulatory dialogue foreseen in the DMA.

The DMA's scope and obligations certainly have a “big is bad” appearance. The gatekeeper concept is fixated on size, measured in terms of market cap/revenue and number of users. Obligations related to contestability seek to actively spur inter-platform competition even without objectionable conduct, implying that size is an issue as such. A deeper analysis finds that the DMA stays closer to the competition law concepts of market power and abuse. Gatekeeper status, while arrived at through a different methodology, approximates market power in the GAFAM's core markets, in which competition authorities have established dominance. Outside of these markets, where dominance is not apparent, the DMA is supposed to complement competition law, but it is unclear how exactly. The best answer may be that to capture the complexity of platform ecosystems, the DMA also needs to cover the adjacent markets where those platforms have a presence. Like the DMA's scope, its obligations also find support in competition law, although again only partially. Most of the negative obligations, which hew closer to competition law, are based on enforcement experience. The positive obligations find far less support in enforcement, but that is to be expected given that the contestability goal they pursue goes beyond competition law. Here, the truly regulatory nature of the DMA comes to the fore more clearly, although that does not have to mean that economics leaves the picture.<sup>375</sup>

In the end, it must be recognized that there is a significant element of uncertainty to the DMA obligations. Even where we have a good idea what the obligations would imply for a gatekeeper, as in the App Store case study, the effects remain largely unknown. To limit the potential for unintended consequences, however, it would have made sense to include a possibility to justify in the DMA, at least for some of the obligations. After all, the conduct targeted by the obligations will not always be harmful, and platforms need some leeway to effectively manage the users on their platform and thus ensure the health of their ecosystem. Given that nothing resembling an efficiency defense made it into the DMA, it must be hoped that efficiency considerations enter enforcement in other ways, for example, in the specification process foreseen for certain obligations. The EC chooses when to open and how to conduct that process, however, so much hinges on how the EC uses its discretion—and how the European courts review the EC's use of discretion. Sufficient staff to understand the technical aspects, economic trade-offs and legal framework will be key.<sup>376</sup>

Ideally, enforcement of the DMA ends up enlarging the digital pie, rather than just allocating a larger slice to business users. Reviewing the different parameters of competition, the effects may go in different directions. Choice, perhaps the DMA's main driver, should expand, at least *on* gatekeeper platforms; whether choice *between* platforms expands remains to be seen. Quality may increase with that diversity of choice. At least one could expect more preferences to be satisfied (remember how more

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375. The idea of contestability goes back to William Baumol, John Panzar & Robert Willig, *Contestable Markets and the Theory of Industry Structure* (Harcourt Brace 1982). For a modern revision, see James Bessen, *The New Goliaths: How Corporations Use Software to Dominate Industries, Kill Innovation, and Undermine Regulation* (Yale University Press 2022), 94–95.

376. The staff supporting DMA enforcement will be spread over DG CONNECT (with over 100 full-time staff, although this staff is also responsible for the DSA) and DG COMP (with a much larger staff, although it is responsible for a much larger range of competition issues). See Thierry Breton, *Sneak Peek: How the Commission Will Enforce the DSA & DMA*, COMMISSIONER BLOG (July 5, 2022), STATEMENT/22/4327.

tech-savvy users may seek their apps outside of the App Store, while the less tech-savvy users could stick to it). Should platforms' power to effectively manage their ecosystem suffer, however, quality could decrease across the board. Prices, for example in an App Store context, are more likely than not to decrease. This depends in part on the extent to which business users pass on savings to consumers, but previous experience justifies cautious optimism in that regard. The most important—but also the most difficult to predict—effects relate to innovation. The DMA operates on the not unreasonable assumption that “firms facing more competition from rivals innovate more than monopolies.”<sup>377</sup> To support continuing innovating, the margin of the major platforms should not be excessively eroded either. That risk is more tangible in some cases than others,<sup>378</sup> but there is an undeniable difficulty in setting prices, which is why competition authorities have been reluctant to do so. Nevertheless, as the App Store case study suggests, there is a plausible scenario where competitors are given more opportunity to innovate, which in turn drives innovation by the gatekeeper.

Finally, competition law will remain important, even after the EC starts enforcing the DMA. Commissioner Vestager has stated that she expects “a hybrid approach, in which both ex ante regulation and traditional competition tools will both play their part.”<sup>379</sup> For gatekeeper conduct that is covered by the DMA, it makes little sense for the EC to rely on competition law, given the greater resources required for enforcement. Given their origins in competition law precedent, however, the DMA's obligations are very much aimed at current—not future—practices. While the EC has some power to expand the DMA's obligations through delegated acts, more fundamental additions require it to present a proposal for amendment to the legislative bodies.<sup>380</sup> Faced with a type of conduct not covered by the DMA, the EC thus has to rely on competition law. Consider, for example, the Amazon investigations that were concluded with commitments.<sup>381</sup> They concerned, first, how Amazon relied on data of third-party sellers on its Marketplace to inform its own retail decisions, and second, how Amazon used its Buy Box and Prime label to preference its own retail and logistics operations. The first investigation was translated into Article 6(2) of the DMA. The second investigation did not inspire a specific obligation,<sup>382</sup> so competition law remains the only available tool against the conduct at issue.<sup>383</sup> And of course, competition law remains relevant for enforcement against non-gatekeepers.<sup>384</sup> In short, the DMA is in no way competition law's curtain's call.

377. DMA Impact Assessment—Annexes, 46, referencing, *inter alia*, Philippe Aghion, Nick Bloom, Richard Blundell, Rachel Griffith & Peter Howitt, *Competition and Innovation: An Inverted-U Relationship*, 120 Q. J. ECON. 701 (2005); Giulio Federico, Fiona Scott Morton & Carl Shapiro, *Antitrust and Innovation: Welcoming and Protecting Disruption*, 20 INNOV. POLICY ECON. 125 (2020).

378. Given Apple's high margins and low R&D investment, for example, the risk seems rather hypothetical in that case.

379. Margrethe Vestager, *A New Age of International Cooperation in Competition Policy* (ICN Annual Conference, Berlin, May 5, 2022), SPEECH/22/2822.

380. DMA, arts 12, 19 and 49, and recitals 77–79 and 97.

381. EC, *Commission Accepts Commitments by Amazon Barring it from Using Marketplace Seller Data, and Ensuring Equal Access to Buy Box and Prime* (press release, Dec. 20, 2022), IP/22/7777. At the time of writing, the full decision has not been published. See also AGCM, *Amazon Fined Over € 1,128 Billion for Abusing Its Dominant Position* (press release, Dec. 9, 2021), <https://en.agcm.it/en/media/press-releases/2021/12/A528>.

382. As recognized by the EC, see *Remarks by Executive Vice-President Vestager on the Decision to Make Binding Commitments Offered by Amazon* (Brussels, Dec. 20, 2022), SPEECH/22/7850 (“Part of these changes concern business practices that are covered by the DMA and others that are not. Specifically, the second Buy Box and the Prime commitments address our competition concerns but would not be covered by the DMA.”).

383. The situation is actually a little ambiguous. The conduct at issue consisted in Amazon favoring sellers using its logistics service “Fulfilled by Amazon,” which include both its own retail operation and third-party sellers. Part of that “favouring” concerned placement in the Buy Box, which could qualify as self-preferencing in ranking (DMA, art. 6(5)), although it is not a case of “pure” self-preferencing. The remedy, that is, displaying a second buy box, is also not necessarily compelled by the DMA.

384. The EC can propose to expand the list of CPS (art. 19 and recital 77) and can amend the methodology for the quantitative gatekeeper thresholds (arts 3(6)–(7) and 49, and recital 97).

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