

# The Case For & Against an American Digital Markets Act (DMA)

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# Introduction

Competition or antitrust law across jurisdictions is governed by some combination of ex-ante rules and ex-post enforcement.<sup>1</sup> In the United States, antitrust law is primarily administered through ex-post enforcement of the Sherman Act, Clayton Act, and Federal Trade Commission Act.<sup>2</sup> These statutes are interpreted by enforcement agencies and courts on a largely case-by-case basis under the rule of reason, producing a substantial body of common law focused on assessing competitive effects within defined product and geographic markets.<sup>3</sup> Because U.S. antitrust law has historically functioned as a substitute for sector-specific economic regulation<sup>4</sup>, competition in digital platform markets has largely remained within the domain of general antitrust enforcement rather than being governed by prescriptive competition rules.

Conversely, under the European Union (EU)'s civil law system, antitrust law complements sector-specific ex-ante competition regulations and rules. These regulations impose outright prohibitions on a broader range of conduct than U.S. antitrust law, thereby dispensing with the need to demonstrate anticompetitive effects or consumer harm in particular markets<sup>5</sup>. Such rules are underpinned by the notion that state intervention in markets is necessary to facilitate competition and uphold values other than consumer welfare by providing guardrails within which competition can occur.<sup>6</sup> Competition rulemaking is also motivated by wanting to reduce the time, uncertainty, and resource expenditure that executive and judicial bodies, as well as private plaintiffs, incur relative to administering and enforcing laws on a case-by-case basis.<sup>7</sup> Even assuming that these benefits for enforcers materialize, the tradeoff is that outright prohibitions enshrined in rules increase costs and limit the ability of businesses to experiment with practices that may foster innovation and improve consumer welfare.<sup>8</sup> They may thus amount to state enforcers and policymakers supplanting the process of competition, experimentation and innovation in business practices and models with their own designs, whilst inadvertently or even intentionally favoring some market participants over others, rather than upholding vigorous market competition to determine outcomes. This is especially true for high-tech sectors, which are characterized by “frequent innovation, short life cycles, and noticeable dynamic competition.”<sup>9</sup>

The European approach to rules-based competition regulation is exemplified by the EU's Digital Markets Act (DMA),<sup>10</sup> which regulates competition within “gatekeeper” digital platforms. The DMA classifies firms as “gatekeepers” based on their size, rather than the market power they hold or abuse within a product or geographic market. Designated “gatekeepers” are mostly American technology firms, including Microsoft, Google, Amazon, Apple and Meta, as well as China's Bytedance.<sup>11</sup> The DMA prohibits these firms from engaging in various business practices, such as preferential listings for their own products on their proprietary platforms (commonly referred to as “self-preferencing”).<sup>12</sup> Gatekeepers must also undertake positive obligations, including making their proprietary platforms more accessible to third parties,<sup>13</sup> for example by allowing Android or iOS-enabled mobile phone users to “sideload” third-party applications.<sup>14</sup> Gatekeepers can violate the DMA without any finding that they monopolized a specific market or harmed consumers. Violations may result in fines as well as the possibility of structural remedies.<sup>15</sup> The DMA aims to promote “fairness” and “market contestability” for European firms,<sup>16</sup> including those that rely on “gatekeeper” platforms to reach customers.



The DMA's approach to competition regulation is largely unprecedented in modern U.S. antitrust law. Since the 1970s, U.S. courts, influenced by the research and ideas of Chicago School economists, have interpreted the antitrust statutes as a consumer welfare prescription.<sup>17</sup> This entails applying quantitative and qualitative tools of economic analysis to specific product or geographic markets to identify and proscribe conduct that is likely to reduce competition and leave consumers worse off,<sup>18</sup> rather than being concerned with whether a firm's conduct merely leaves its competitors worse off. The longstanding consumer welfare standard has shifted antitrust enforcement away from penalizing firms based on their size, market concentration, or perceived political, social or economic influence<sup>19</sup>. Despite this, a number of U.S. bills in recent years have called for DMA-style ex-ante regulation to be applied to digital platforms out of concern that existing antitrust law is insufficient for holding large technology companies accountable or for checking their ability to restrict competition<sup>20</sup>. Proponents of antitrust rulemaking in the United States, much like supporters of the European DMA, also argue that rulemaking would promote commercial certainty and predictability whilst lowering exorbitant costs faced by government enforcers and plaintiffs in case-by-case rule-of-reason adjudication<sup>21</sup>.

This article analyzes competition in digital platform markets by comparing the treatment of conduct covered by the DMA's ex-ante rules with ex-post enforcement of U.S. antitrust law.

Section I argues that the ambiguous welfare and competitive effects of the vertical restraints policed or prohibited by the DMA, the mixed competitive implications of the remedies the DMA mandates, and the rapidly evolving and disruptive nature of digital platform markets, make these markets an inappropriate target for ex-ante regulations. Even when some anticompetitive effects in consolidated markets are observed or plausible, they may still be consistent with increased consumer welfare due to offsetting benefits. Thus, case-by-case ex-post antitrust enforcement with remedies tailored to the circumstances is a more appropriate tool for regulating these markets than ex-ante DMA-style rules. Section II examines the pro- and anticompetitive effects and implications of the business practices prohibited by the DMA, and the mandates that the DMA imposes on gatekeeper firms. Section III uses real-life evidence and examples to analyze the DMA and ex-ante rules' effects on the very goals that are cited to justify these rules. These include (1) fairness and market contestability; (2) certainty and predictability; enforcement and litigation costs; and (3) technological innovation and diffusion, including around artificial intelligence (AI). Section IV analyzes two high-profile U.S. antitrust law cases, the Google Search verdict and remedies decision and *Apple v. Epic Games*, to demonstrate how the flexibility and adaptability of ex-post antitrust law enforcement can better achieve the stated goals of the DMA and other ex-ante regulatory proposals with regard to digital platforms. Section V concludes that the benefits of the flexible common law ex-post enforcement approach of the United States for consumer welfare and innovation outweigh the higher costs of enforcement. It further argues that evidence from the EU's experience with DMA enforcement shows that ex-ante rules generate comparable costs and uncertainty, calling their benefits into question. The article concludes that ex-ante regulatory prohibitions are an inappropriate means for addressing anticompetitive concerns in digital platform markets.

# Section I:

## The DMA & Vertical Restraints

The DMA primarily prohibits vertical restraints initiated by gatekeeper firms,<sup>22</sup> including exclusivity agreements with third parties that restrict market entry, and restrictions on the use of third-party services, such as third-party apps on mobile phone operating systems, on digital platforms. It also restricts the ability of gatekeeper platforms to discriminate between third-party service providers on their platforms, and between third-party product providers and the platform's own competing products, commonly referred to as self-preferencing.

The term “vertical restraint” in antitrust law normally refers to agreements between parties at different levels of a supply chain to limit some aspect of the downstream provision of that good or service.<sup>23</sup> The restraints, conditions and costs that a digital platform with market power imposes on businesses competing to provide goods or services on its platform operate in a similar way and can carry similar implications. Although self-preferencing may not technically constrain the operations of competing providers of the product on the platform in terms of what they can do, or burden them directly with costs, it can still impact the third party's product's standing on the platform relative to its competitor.

It is certainly true that large, consolidated firms that serve as both marketplace platforms and competitors on their own platforms can choose to restrict entry, burden competitors, or favor their own products against competitors' products on these platforms. However, vertical restraints can also benefit competition by enhancing efficiency, thereby benefiting end consumers or even the business users of the platform.<sup>24</sup>

A platform, or indeed, any other firm, may choose to pass or not pass on the benefits of these efficiencies to consumers based on its economic incentives under prevailing market conditions rather than due to any legal requirement to do so. Research thus finds that there are only a few situations where vertical restraints are used for anticompetitive reasons.<sup>25</sup>

Platform operators do not necessarily have the incentive to impose vertical restraints that degrade competition, as doing so may cede market share to competitor platforms by reducing the quality of the platform as a service for users seeking to efficiently find the best products that meet their needs. Vertical restraints within a platform may enhance competition and benefit consumers through curated product packages and user experiences, investment in platform refinement, and lower search costs. The ability to “vertically restrain” or self-preference on a platform may also provide an incentive for pro-competitive vertical integration that enhances competition and benefits consumers in the first place. This, in turn, contributes to the creation and development of the platforms themselves, thereby benefiting all platform users.

For instance, the ability to impose conditions or costs on firms selling apps on its App Store complements Apple's investments in iOS security and user experience features. By imposing different restrictions, Apple is able to differentiate its ecosystem and platform from Google's Android operating system and its Google Play store. Google, in turn, attracts consumers by providing a different product and user experience than Apple's, such as by offering greater interoperability and a wider range of apps through a more open ecosystem and less restrictive conditions for third-party developers to reach Google Play.<sup>26</sup> Using vertical restraints to create distinct user experiences may be a driving factor in attracting users to the platform, thus enhancing the platform's network effects and hence its value to sellers or service providers on the platform that can more efficiently reach a larger customer base. By contrast, prohibiting such vertical restraints may degrade the user experience and drive consumers to competing platforms. While this may benefit competing platforms, it may also result in a more fragmented customer base that is costlier for businesses to reach as additional resources may be required to develop and implement distinct marketing, sales, product launch, and other strategies across platforms. These increased costs could ultimately harm consumers through less choice due to reduced market entry, or if they are passed on through higher prices or reduced investment in product quality and innovation.

By providing platforms for third parties to operate at different levels of the supply chain, digital platforms facilitate vertical integration. Where a platform simultaneously competes as a seller or service provider within its own ecosystem, it is vertically integrated. Vertical mergers and integration are generally procompetitive practices, as vertical mergers, unlike horizontal mergers, do not reduce the number of competitors in a market.<sup>27</sup> Where a platform enters the intra-platform market as a seller competing against other sellers, it may even increase the number of competitors. Vertical mergers also eliminate double marginalization, meaning the need to levy a profit at multiple levels of the supply chain, which can otherwise result in higher downstream costs to consumers.<sup>28</sup> They can also improve efficiency by integrating complementary business assets, reducing the costs associated with repeated contracting between asset owners.<sup>29</sup>



Realizing these efficiencies necessarily requires that an upstream business either founds from scratch, or gains control over, the downstream business. This may deny other firms access to downstream entities or resources they previously used. However, the efficiencies created by integration may still yield net benefits to consumers while increasing competitive pressure in upstream or downstream markets.

Similarly, vertical restraints on a platform may have anticompetitive effects where they foreclose businesses from entering a market, raise their costs of competing,<sup>30</sup> or shift demand toward higher-margin products.<sup>31</sup> However, even where sellers are burdened, consumers may still benefit from increased efficiency that leads to product innovation or lower prices.<sup>32</sup> Empirical reviews of the data underlying vertical mergers, for example, have found that "efficiency considerations overwhelm anticompetitive motives in most contexts."<sup>33</sup> The most recent meta-analysis of the empirical literature on vertical integration and welfare effects, published in October 2025, identifies many instances of procompetitive effects, some instances of neutral effects, and few instances of anticompetitive effects.<sup>34</sup> Studies employing the most reliable methodologies largely find procompetitive effects and no net anticompetitive outcomes. The authors attribute this pattern primarily to efficiency gains from eliminating double marginalization and improving the productivity of business assets and resources through integration.

This is why the U.S. Supreme Court applies the rule of reason analysis to vertical restraints,<sup>36</sup> consistent with Chicago School scholarship emphasizing the generally procompetitive or benign nature of such practices.<sup>37</sup> This approach allows courts to assess the net competitive effects of a business practice. U.S. antitrust judges likewise apply case-by-case analysis when tailoring remedies after finding a vertical restraint unlawful. This evolution did not represent a departure from antitrust statutes prohibiting restraints of trade. Rather, it aligns with the intent of the Sherman Act's framer, Senator Sherman, who believed judges should determine which combinations or restraints are uncompetitive based on the economic evidence before them.<sup>38</sup> That evidence evolves over time with advances in economic understanding, including insights into emerging technologies, markets, industries, and business practices that can only be observed through experience. Moreover, a practice that is anticompetitive in many contexts may still be procompetitive in specific settings. U.S. Federal Trade Commission economists have therefore observed that "[e]mpirically, vertical restraints appear to reduce price and/or increase output." Thus, "absent a good natural experiment to evaluate a particular restraint's effect, an optimal policy places a heavy burden on plaintiffs to show that a restraint is anticompetitive."<sup>39</sup> This is why U.S. antitrust courts consider natural experiments and other evidence of likely or real-world consumer behavior in assessing the anticompetitive effects of a firm's conduct.<sup>40</sup> By contrast, ex-ante rules that prohibit entire categories of vertical restraints or mandate specific remedies against them, such as the DMA, reject this case-by-case approach and inevitably prohibit practices even where they enhance competition and consumer welfare. Such rules sideline economic learning derived from experience by fixing both prohibitions and remedies in advance. The DMA does so without requiring any determination that a firm possesses market power in a relevant market or has abused that power.

The following section appraises the potential pro- and anticompetitive effects of specific categories of gatekeeper vertical restraints prohibited by the DMA, as well as the mandates the DMA imposes on gatekeepers.



# Section II: Specific DMA Prohibitions & Mandates

## Self-Preferencing

Article 6(5) of the DMA prohibits self-preferencing by banning gatekeeper platforms from giving more favorable treatment or placement of their products in ranking, indexing and crawling relative to similar products and services offered by third-party platform users.<sup>41</sup> Platforms must also not use non-public data gleaned from third-party sellers on the platform to modify their own product offerings.<sup>42</sup> The DMA also requires that gatekeeper platforms provide third-party businesses on their platform with access to the ranking and indexing data they use under “transparent, fair and non-discriminatory conditions.”<sup>43</sup> The American Innovation and Choice Online Act (AICOA) would impose analogous ex-ante prohibitions in the United States.<sup>44</sup>

Proponents of prohibitions against digital platforms preferencing their own services argue that large platforms with durable market power are analogous to “common carrier” infrastructure utilized by businesses to reach customers.<sup>45</sup> They assert that without mandated “neutrality” within the platform, the platforms are inevitably incentivized to entrench their market power and raise their profit margins through favoring their own offerings over those of competitors, thereby restricting output and thus harming consumers and competition.<sup>46</sup> As summed up by U.S. Senator Elizabeth Warren (D-MA), “[y]ou can be the umpire, or you can be a player, but you can’t be both at the same time.”<sup>47</sup> Weakening the visibility of third-party service providers on a platform relative to their competitors (including the platform itself) can lower the incentive of these sellers to enter the market in the first place, or to improve their products. Additional costs to compete that a platform imposes on a third-party service provider can also offset any cost reductions that seller provides, thereby reducing incentives for them to compete vigorously on price to attract and benefit consumers. This would also undermine market contestability and fairness for the third-party sellers.

Conversely, self-preferencing is not a new or novel business practice and has historically been widely accepted as fostering rather than hindering competition in a range of digital and non-digital markets. Supermarkets have long provided home brand alternatives to competing products in their stores and even resorted to providing such products with favorable shelf space and using non-public sales data from their stores to modify or improve product offerings.<sup>48</sup> Like digital platforms, these supermarkets serve as both competitors and providers of the necessary infrastructure for manufacturers and distributors to reach end consumers. Though supermarkets technically and generally purchase and resell third-party products rather than providing the “service” of consumer access to third-party sellers as platforms do, this is merely a difference in form (contracting) rather than substance. The Cato Institute noted in 2022 that “[p]rivate Label Manufacturers Association data for 2020 [shows] that 18.1 percent of the dollar value of goods bought in supermarkets and 15.9 percent bought in drug stores were [supermarket home brand] goods. This vastly exceeds the share of Amazon’s own product sales on its marketplace—despite the company’s conduct being heavily criticized for this practice.”<sup>49</sup>

Anticompetitive foreclosure effects are possible in individual cases of self-preferencing by a platform with monopoly power. However, the ability to improve and introduce their own products into the market based on data from the marketplace enables digital platforms and supermarkets alike to increase competition for the benefit of consumers by filling gaps in market demand and by forcing competing sellers to lower prices or improve their own products. And the ability to “prefer” these products through favorable listing placement, which is analogous to favorable supermarket shelf space, can also benefit consumers and competition.

For instance, it can incentivize the platform or supermarket's entry into the market as a competitor against incumbents. It can also increase sales volumes, which helps to lower overall shipping costs and thus facilitate price reductions for consumers.<sup>50</sup> Third-party market incumbents who compete against the platform's own offerings are thus also incentivized to regularly update or improve their own products to remain competitive against the platform and others. In such cases, consumers benefit and "market contestability" is only undermined to the degree that a vigorously competitive market is viewed as hard to contest by would-be entrants.

Moreover, research finds that platforms are incentivized to preference their own products against competing third-party sellers on the platform where the expected margin from selling the home brand product outweighs the expected commissions they would gain from third-party sales, or when consumers are likely to leave the platform to obtain the third-party seller's product directly from them once they discover it.<sup>51</sup> This is because platforms that attempt to direct consumers to inferior product offerings or away from products that better suit their preferences risk harming their own business by undermining the platform's value as a trusted and reliable marketplace. This would create an opportunity for competitor platforms to provide a better product or marketplace. These factors could explain why more than 60 percent of sales on Amazon's U.S. marketplace are for products where Amazon does not compete with its own offering, with the platform competing with third-party sellers for only around 8 percent of sold products over the study period.<sup>52</sup> And where consumers may genuinely prefer the platform's offering, preventing them from promoting said offering to other customers can undermine rather than improve competition and the user experience. By diminishing the platform's utility to users, this may also risk diverting users from the platform.

The resultant consumer fragmentation could also harm market contestability for third-party sellers who will inevitably have to expend more resources to reach the same number of customers as they could previously reach through one platform. Notably, the EU has long recognized that fragmented consumer markets in the digital economy act as a barrier to competition and innovation, and a key goal of the EU's formation and creation of the single market was reducing or eliminating market fragmentation between member states.<sup>53</sup>



## Default Services & "Choice Screens"

Defaults are a similar concept to self-preferencing. A digital platform, ecosystem or service (such as a mobile phone or web browser application) that provides an embedded service (such as a web browser or web browser's search function) may come pre-loaded with a default version of that service. Users of the platform or ecosystem may be prevented from choosing an alternative provider's embedded service (such as another web browser or search engine) or they may have to manually switch from the pre-loaded default.

The DMA requires that gatekeeper computer and mobile operating systems provide users with a "choice screen" of options for default search engine,<sup>54</sup> web browser, and virtual assistant, as well as for default software applications and app store.<sup>55</sup> This effectively prevents providers of search engines, web browsers, or virtual assistants from contracting with gatekeeper platform owners to make their service the pre-loaded or exclusive default. It also prevents gatekeeper platform owners, be they operating system owners or web browser owners, from making their own versions of the above services the default on their own ecosystem, thereby banning a form of self-preferencing.

Although the user may theoretically be able to choose the provider or version of the default service, many will be deterred from switching due to the cognitive effort that the switching entails.<sup>57</sup> This concept is known as a "switching cost" and can make markets harder to contest for the embedded service's competitors.<sup>58</sup>

Thus, the provider of the embedded default, be it the platform or a third-party that contracts with the platform for default status, has a competitive advantage against its rivals due to the placement of its product that is potentially independent of the product's quality or popularity with users. In situations where the embedded service's nature is impacted by network effects and scale, that is where its quality and efficiency depends on the number of users, this advantage may become "unassailable" over time as competitors are unable to even improve their own offerings of the service to remain competitive. This is especially true where the default status in a dominant ecosystem or platform becomes the primary means by which any provider of the embedded service can reach consumers.

The default search engine (embedded service) in a mobile or computer web browser or operating system (platform/ecosystem) is the clearest example of the above. Search engine algorithms are refined to increase their accuracy and efficiency in presenting results that users are looking for based on data gleaned from the search and clickthrough patterns of the users.<sup>59</sup> Thus, the greater the number of users and queries, the more representative data (of its target sample/audience) the search engine can use to improve its algorithm, and thus its results. And since the default search engine's competitors lack default placement status within the primary means by which search engines reach users, they may simply be unable to reach "minimum efficient scale" by accumulating a critical mass of users necessary to refine their algorithms to provide a viable competitor service. Thus, even partial foreclosure from the market (through granting default status to a competitor) can have significant anticompetitive effects. The default engine's "unassailable advantage" can thus theoretically harm consumers and competition in the long run as it may be able to degrade (or not increase) its service's quality over time without fear of losing a significant enough number of users to potential rivals to make it rethink its decisions.

On the other hand, the practice of seeking default or even exclusive status can also be fully consistent with, and even a form of, market competition that benefits consumers. For instance, and with regard to utilities regulation, the eminent economist Harold Demsetz noted that even where a single firm controls the utility infrastructure for a particular area by the nature of that market (a "natural monopoly"), a competitive outcome can still emerge so long as "natural monopoly" status is achieved through a competitive process.<sup>60</sup> An example would be where the opportunity to build, control, and levy usage fees from customers of that part of the grid is achieved through a competitive tender process based on cost efficiency and quality considerations. This represents a form of "competition for the market" rather than "in the market."

Notably, default status of a service on a digital platform, even if it is held by a monopolist firm or where the platform itself is a monopolist, does not imply any "natural monopoly" since there is only partial foreclosure of the non-default competitors. This is because users are typically free to change defaults or to manually use another service.



Regardless, the contracting process by which service providers obtain default status in a digital platform is a kind of competition “for the market.” Platform/ecosystem operators will decide which service to accord default status based on both monetary and/or in-kind incentives offered by the seeker of default status, and the quality of the would-be default service. This is because any monetary or in-kind incentive provided to grant default status must be weighed against any degradation of the user experience on the platform caused by implementing a lower quality service, as the default can deter users from utilizing the platform/ecosystem in favor of its competitors systems. For instance, if the default search engine on Mozilla Firefox were perceived to be lower quality, then at least some users might switch to competitor browsers that are perceived to provide a better and more efficient search experience, such as Chrome or Opera. Similarly, decisions on whether to purchase an Android or iOS mobile phone would be influenced at least partly by the quality of the pre-loaded web browser, as this affects the perception of the ecosystem/platform’s service quality as a whole. A low-quality default virtual assistant would also weigh against users relying on the particular platform/ecosystem, and this effect is likely to be especially strong given that virtual assistants typically integrate or facilitate user interaction with the range of other applications that the platform provides. Similarly, a default app store will deter users from using the platform and from accessing applications through it if it is perceived as being less secure than a competitor platform’s app stores. It is thus unlikely that a web browser or mobile phone operating system’s operator would necessarily grant default or pre-loaded status to a company’s search engine, app store, or web browser simply because that company offered the biggest payment.

Moreover, the payments in this context may also serve a pro-competitive function that benefits consumers. Platform/ecosystem, web browser, operating system, and virtual assistant development require resources that are contingent on raising revenue through services that consumers access for free. Default or even exclusivity status payments serve as a revenue channel for funding product improvements. But they also present a viable alternative to in-ecosystem/platform advertising. In-browser/OS advertising constitutes a potentially greater degradation of the user experience

than an embedded default since defaults are a feature that typically increases convenience and reduces time expenditure for users. And both options present an alternative to charging users for the use of a web browser or operating system as this would significantly lower the number of users of the platform/ecosystem,<sup>61</sup> and thus the value of the platform/ecosystem to users since these technologies are characterized by network effects.<sup>62</sup> Notably, the default contracts between search engines and web browsers provide a means by which browsers can gain a share of the advertising revenue raised by the search engine.<sup>63</sup> Thus, by allowing a product whose user experience would typically be degraded by in-product advertising (web browser) to benefit from revenue raised by an in-product service that raises revenue through advertising (promoted links in search engines) without the same level of degradation in the service/user experience, the default contracts can align competitive incentives between parties operating in two separate markets. This benefits consumers in both markets. Broad prohibitions on default or pre-loaded status may thus be characterized as restricting a form of competition rather than prohibiting a restraint on competition.

Even where the default service is provided by the platform owner itself (rather than by a third-party company that contracts with it), this can have procompetitive effects by facilitating the aggregation of users (and thus accumulation of network effects) for products that are better integrated with the ecosystem/platform’s other services. This is a form of vertical integration that may, for instance, facilitate consistent and predictable security and privacy standards within the platform/ecosystem, and can also help facilitate data transfer between services in the ecosystem. This improves the ecosystem/platform experience and its value to consumers. By reducing the number of separately-owned entities that user data must pass through, it can also uphold data security and privacy whilst lowering the costs of securing the same.



Conversely, even though “choice screens” would reduce the cognitive effort (switching costs) for users to pick alternative services, this would only be the case where users would not have chosen the would-be default provider of that service anyway, or where they would not have perceived the default as equivalent to its competitors for their individual purposes. In all other cases, the choice screen would only serve to increase the number of clicks (and thus, cognitive effort) entailed in performing the same task. Research from Mozilla Firefox shows that when it comes to displaying choice screens for in-browser services, consumers consistently prefer familiar and streamlined experiences with minimal friction over the burden of making additional choices.<sup>64</sup> This is attested by consumers routinely closing or ignoring pop-ups that interrupt their intended workflow. This indicates that more choice screens of the kind mandated by the DMA are likely to degrade the user experience for most consumers. Thus, the decision to choose the default service over potential alternatives is not the result of bias against non-defaults, but rather a rational choice based on consumers valuing efficiency and functional equivalence.

In cases where the choice screen is applied once for users to pick a default rather than appearing every time the user wants to use the embedded service, the increase in cognitive effort is likely to be insignificant as this is a one-time choice. However, the choice screen can still lead to anticompetitive outcomes since some potentially arbitrary process dictated by either the platform owner or a government agency (or both in collusion with one-another) will have to determine which of the competitors should be featured on the choice screen.

A limited number of options may decrease the time and cognitive effort burden placed on users to find and pick a default. However, it would also foreclose any other actual or potential competitors to those that make it to the choice screen. In other words, the choice screen necessarily undermines market contestability for some firms while increasing it for others. Conversely, an extensive or practically unlimited range of options may also hurt consumer welfare by not increasing the number of “meaningful” choices, that is, options that make a meaningful difference in catering to the user’s needs. Simultaneously, choice screens with extensive options would increase the time and effort involved in perusing options to pick a default. Research in other platform markets, such as cable TV networks that serve as platforms for programs and channels, has found that consumers seek and benefit from a smaller range of more meaningfully diverse choices than a superficially larger number of options that may not vary substantially in the particular utility they provide to consumers.<sup>65</sup> Choice screens may also compromise network effects that enhance service quality by fragmenting users between various options for default, thereby degrading rather than increasing the utility and quality of the platform/ecosystem.

None of these outcomes are necessarily better for consumers or competition than allowing for the continuation of competition for default status, and in many cases, are likely to be worse. In the case of services impacted significantly by network effects, they also assume that competitors to the would-be default could realistically produce a comparable product but-for the default status of their competitor. This assumption is not always (indeed, it may seldom be) correct. The likelihood of it being true can only be inferred on a case-by-case basis.

Notably, search engine choice screens that EU competition authorities previously imposed on Android phones were found to be ineffective, with most consumers reverting back to Google even where they initially experimented with alternatives despite the increased complexity and choice burden.<sup>66</sup> The web browser choice screen that the EU imposed on Microsoft was similarly ineffective and barely engaged with by users.<sup>67</sup> A review of the impacts of previous choice screen mandates have found that they result in market share shifts of 2 percent or less.<sup>68</sup> Though some increased user switching between search engines and browsers has been reported since the DMA took effect,<sup>69</sup> it is unclear, and unlikely based on previous experience, that this is due to the choice screen itself rather than a combination of the DMA's many mandates. However, even assuming the DMA's effectiveness in diverting users to different options, it is evident that fragmenting users between various products through a choice screen is likely to undermine beneficial network effects of any competitor that may otherwise have gained a critical mass of users by competing for default status. It is also evident that obviating default or exclusivity contracts through choice screen mandates results in one less revenue source for web browser and platform/ecosystem development. This could lead to reduced competition and innovation in those markets, including through degraded user experiences or increased costs to users to compensate for some of the revenue loss from inability to accept payments for offering default status.

## Interoperability

Horizontal interoperability refers to “the ability of products and services at the *same level* [of the digital value chain] to work together,” while vertical interoperability “allows services that are at *different levels* of a digital value chain to work together.”<sup>70</sup> The DMA contains ex-ante rules mandating both.<sup>71</sup> By allowing for more seamless integration of inter-ecosystem and intra-ecosystem services through lower cost of entry and data transfers, the mandates are intended to foster competition for the benefit of consumers and third-party businesses reliant on digital platforms.

In terms of vertical interoperability, DMA Art. 6(4) mandates that gatekeeper mobile phone platforms, including Google's Android and Apple's iOS, must allow for the “side-loading” of third-party applications and app stores. Art. 6(7) additionally stipulates that they must grant these third parties access to the operating system's essential software and hardware features. Gatekeepers may take “necessary and proportionate” measures to prevent third-party apps or app stores from undermining the operating system's hardware, or to enable users to protect security with relation to third-party apps and app stores. However, they must provide justification for doing so or risk penalties. These mandates are motivated by concern that dominant operating system operators, including Apple and Google, may restrict access to their ecosystem for third-party apps and app stores for anticompetitive reasons rather than to address legitimate security, privacy, or technical concerns.<sup>72</sup> This would undermine market contestability for those firms while favoring the platform operator's own proprietary apps and app stores. More third-party entry and competition between app stores and among apps within app stores also benefits consumers by providing more choices and intensifying competitive pressure to lower costs or increase the quality of the apps or app stores. Simultaneously, third-party app stores and apps benefit from lower access barriers to the platform's user base and network effects,<sup>73</sup> which would further assist many in developing better products.



Conversely, it is unclear that these mandates necessarily provide net competitive benefits. They are inspired by “common carrier” neutrality rules in sectors like telecommunications, whereby dominant platforms are treated like a public utility or essential facility for third parties to do business or enter certain markets. It is unclear that such regulatory treatment of mobile phone operating systems is justified given the intense inter-platform/ecosystem competition between Android and iOS, with each product differentiating itself through offering users differing levels of interoperability for app stores and apps. Mandating similar interoperability levels for these players, or imposing such conditions on some competitors over others, reduces inter-platform competition and innovation by limiting product differentiation. Android and iOS compete through intra-platform service curation, which leads to different user experiences. The United States District Court for the Northern District of California recognized this in its 2021 *Epic Games v. Apple* ruling,<sup>74</sup> whereby it considered the restrictions and conditions that Apple places on third-party apps in its app store and declined to hold Apple liable for monopolization, as it does not possess a monopoly in the relevant market.

Even where the relevant gatekeeper platform is a monopolist, such vertical interoperability mandates bring about pro- and anticompetitive effects that must be weighed against each other on a case-by-case basis to infer net competitive effects. Digital systems are more complicated and face more dynamic competition than the telecommunications industry. Under the DMA, platforms must design processes and interfaces that provide equivalent access conditions to their own and various third-party apps and app stores while attempting to uphold the technical, privacy, and security standards that users expect from them. The interoperability mandate raises technical complexity and brings about costs entailed in investigations, audits, and compliance reports that may be passed on to end users and the apps or app stores themselves. Platforms must also design interoperability interfaces and access application processes for third-party apps and app stores under uncertainty that even a well-intentioned or well-designed system or interface will not attract prosecution or penalties from enforcers, or lawsuits from unsatisfied third parties themselves.



Regulatory oversight from enforcement agencies also carries public costs and the DMA’s ex-ante nature means that firms remain at risk of retrospective penalties and prosecution even while they develop processes under cooperative oversight. Digital platform markets and services are rapidly evolving markets characterized by rapid technological changes and innovation in AI and other emerging tools leading to new applications and previously unforeseen improvements to existing functionalities in digital ecosystems. It is thus likely that interoperability interfaces will also need to be continuously updated under regular oversight. This will further raise costs for enforcers and platforms alike.

The DMA permits “necessary and proportionate” measures that may restrict interoperability in order to address technical, security, or privacy concerns, or concerns about the platform service’s integrity. However, parties bear the burden of justifying such measures without clarity about what would constitute sufficient justification. This will likely deter platforms from prioritizing security and privacy features that may benefit or even be demanded by consumers due to potential litigation and compliance costs even if these eventually may be deemed sufficient to meet DMA standards. The narrow exceptions to interoperability limits provided by the DMA also do not permit standards or restrictions on third-party apps or app stores that merely foster a curated or more frictionless ecosystem for users that allows for the same functionalities to be achieved through fewer clicks or a shorter timeframe in perusing apps or app store menus.

The combination of mandated vertical interoperability, anti-default, and anti-self-preferencing rules under the DMA would further increase these costs to consumers while reducing the ability of platforms to provide differentiated products.

Mandated interoperability also supplants potential voluntary interoperability arrangements between third-party apps/app stores and platform operators, thereby deterring third parties from competing with each other to offer better security or privacy protections, or a simply more seamless and user-friendly experience. This is because third parties would no longer need to expend as many resources on such features in order to secure operating system/app store access. It is thus clear that the vertical interoperability mandate would provide procompetitive benefits to some consumers and third parties, while harming others. It is thus inappropriate for ex-ante competition rules and ought to be imposed on a case-by-case basis since the alternative entails governments and regulators inadvertently “picking winners” rather than winners being chosen through economic competition on the merits.

Mandated horizontal interoperability comes with similarly ambiguous net competitive effects and benefits for consumers, including similar technical challenges and challenges in maintaining security and privacy standards whilst designing, maintaining, and monitoring the interoperability interfaces and access processes. Art. 7 of the DMA mandates horizontal interoperability for gatekeeper platforms that provide “number-independent interpersonal communications services (NI-ICS).” In other words, interoperability is mandated between a gatekeeper’s proprietary messenger applications and those of other gatekeepers or third parties.

In theory, mandates on allowing users to more seamlessly communicate between platforms can boost competition by undermining the ability of dominant platforms to “lock in” users or increase their switching costs. It can thus foster innovation and competition by allowing for interactions between services on different platforms and the outputs of those services that otherwise may not occur without voluntary agreements or contracts between different platforms or ecosystems. It can also theoretically allow for the benefits of collective network effects between multiple platforms by reducing the degree to which the network effects and scale economies of any particular platform can deter entry from smaller competitors.

Conversely, horizontal interoperability deters product differentiation between platforms and services as firms that compete on this margin won’t be rewarded for “bidding away” users from other platforms/services. It can similarly deter a platform or service from investing in internal innovation as they can “free-ride” to a greater extent off their competitors without necessarily losing their own users. By reducing the need to hold multiple accounts on multiple platforms or services, it can also reduce rather than create incentives for users to “multi-home.” Instead of challenging market power, it may also allow dominant services to assert and entrench this power across multiple platforms. This can ultimately deter entry from newer, smaller competitor service providers.

Smaller messenger service providers may also be unable to grow and form a stronger competitive threat to larger platforms since the reduced incentive for users to “multi-home” would prevent them from building a large enough dedicated user base to benefit from network effects. Simultaneously, the larger competitor or gatekeeper’s existing network effects advantage and the advantage that this provides to improving functionality for users would only become less assailable, even where the smaller competitor has a better product or is more innovative or efficient in other ways.

Moreover, since data security and privacy, through varying levels of encryption and by other means, is one of the major metrics of competition between different messenger services that seek to attract users, mandated interoperability between the services and the associated implementation challenges are likely to degrade competition and security/privacy improvement within individual messenger applications. This perverse outcome could result from both the reduced ability for a messenger application to attract and build an exclusive user base (which lowers incentives to innovate or improve the product) or from the technical challenges and uncertainty around building in-app interoperability features that are sufficient for authorities and enforcers to certify DMA compliance. This is consistent with economic literature finding that “all else equal, much greater competition exists among platforms to attract the single-homing users than those on the multi-homing side.”<sup>75</sup> Thus, horizontal interoperability provides a short-term boost in competition through lowering entry barriers for services between platforms, but also reduces competitive pressure between service providers and platforms in the long term. Such mandates should thus be implemented carefully on a case-by-case basis after analyzing market power and competitive conditions in one or more markets.

### **FRAND (Fair, Reasonable and Non-Discriminatory) or Free Access**

FRAND mandates, whereby gatekeepers must provide third parties or even competitors with access to products, functionality, or features of their platform for free or at a low price, also carry ambiguous competition implications to interoperability. Article 6(11) of the DMA requires gatekeeper search engines to provide their rivals with access to search ranking, query, click, and view data on FRAND terms. Article 6(12) requires app stores, online search engines, and social media sites operated by gatekeepers to provide business users with access on FRAND terms. Elsewhere, the DMA requires that gatekeepers provide users and/or rivals with *free* access to various tools, resources, data, and interfaces for facilitating analytics, interoperability, and data portability.<sup>76</sup> These rules prevent gatekeepers from passing on all or even some of the costs of providing those tools, resources, and data to the firms that request them or benefit from them. DMA Recital 62 stipulates that price or other general conditions of access will be deemed unfair if they cause an “imbalance of rights and obligations” for business users, or if they give the gatekeeper a “disproportionate advantage.” Recital 62 also provides some benchmarks as guidance for what kinds of conditions would meet the obligations. However, the precise content of the obligations will vary and depend on the circumstances of each case, gatekeeper, and service.



FRAND and free access mandates are designed to facilitate competition and innovation by allowing competitors in various markets to access tools or resources that are necessary or important for improving their products for the benefit of consumers.<sup>77</sup> They can constrain the market power of entities that are capable of restricting access to these resources at the expense of consumers and competition. Thus, the firm that is capable of restricting input or resource access for rivals or firms in other markets may be incentivized to compete more vigorously through innovation or efficiency as it cannot shore up its profit margins by raising costs to rivals or firms in downstream markets.

FRAND obligations are most commonly known from the voluntary public commitments and contracts between holders of standard-essential patents (SEPs) and the standards-setting organizations (SSOs) for those standards, to which standards users/SEP licensees are a third party beneficiary.<sup>78</sup> Where technological standards, which are consensus protocols, are administered by SSOs, the SSO's participants may incorporate patented technologies.<sup>79</sup> Standards can maintain product performance and quality, codify knowledge, assure interoperability and compatibility, articulate a vision for the relevant industry, and maintain environmental, sustainability, health, and safety standards.<sup>80</sup> Once a standard for technologies, such as 5G telecommunications infrastructure, is finalized, practicing or implementing the standard (and therefore achieving licensing agreements with the holders SEP holders) becomes a condition for entering any market defined by the standard. This can place SEP holders in a dominant position in that market since the standard cannot be implemented without infringing the SEP.<sup>81</sup> Where this is the case, the SEP holder can abuse their dominant position and unduly raise costs (typically, licensing fees) or restrict access for firms attempting to practice the standard.<sup>82</sup>

To address this possibility, SSOs typically require those volunteering to contribute patents to a standards process to (1) declare that their contribution contains patents and identify the same; and (2) to commit to licensing these SEPs to any other firms on FRAND terms as a condition of incorporating their patent into the standard as an SEP. Thus, the voluntary FRAND commitment SEP holders make ensures FRAND compensation across a higher volume of licensees (any party implementing the standard) while also guaranteeing that any party that needs to use the standard can get the FRAND licenses they need in order to do so. Businesses that want to practice the standard must still negotiate SEP licenses with the SEP holder; however, the SEP holder's FRAND commitment limits the terms of that license and also constrains exclusionary practices typically available to non-SEP patent holders (namely, the ability to seek or attain prohibitive orders),<sup>83</sup> thus facilitating standards users'/licensees' ability to use the SEP and associated resources on competitive terms.<sup>84</sup>

Unlike contractual FRAND commitments, ex-ante FRAND mandates are characterized by different competitive dynamics and imbalances in bargaining power. Like patents, the tools, resources, and user interaction data to which the DMA mandates FRAND access to are either not costless for the gatekeeper to generate, or require substantial investment and resources to generate. For instance, it costs Google relatively little every time a user utilizes its free search tool. However, the search tool/algorithm that gives rise to the index, query, and point-and-click data requires substantial investment, resources, and continuous refinement and maintenance. Mandating the provision of competitors with free access (or access at suppressed cost) to the resources generated by the tool for refining their own products can thus deter innovation by deterring them from investing in the development and refinement of their own tools, and by deterring Google from developing similar resources in the future.<sup>85</sup>



Unlike SEPs that may be part of a technological standard necessary to enter a certain product market, it is unclear that the tools and resources that the DMA requires gatekeepers to share with rivals are necessarily “essential” for doing business and remaining competitive. Additionally, the tools and resources to which DMA requires open access are generally not subject to public commitments made by owners of core platform services to provide access to them on FRAND terms. In fact, the representations they do make tend to signal that only businesses that meet certain security, privacy, or other standards may interoperate with a given functionality. In many cases, they can be substituted with in-house resources/tools or those obtained on commercial terms from other providers. This is why U.S. antitrust courts impose a high bar in granting plaintiffs or a firm’s rivals free, FRAND, or even mandated access on commercial terms to a competitor or other firm’s proprietary resources.<sup>86</sup>

Notably, such determinations about genuine market power due to a gatekeeper’s possession of an alleged “essential facility” are not required or possible under the DMA. Instead, the DMA requires neither a finding of market power before a company is designated as a gatekeeper, nor even the definition of a relevant product or geographic market within which the gatekeeper may hold market power, let alone a finding that a failure to grant rivals access to the resource on FRAND terms entrenches or abuses alleged market power.

Unlike mandates for free access, FRAND access mandates ostensibly allow gatekeepers to charge reasonable fees for access to resources for those who stand to benefit. However, in practice, such mandates impact private, commercial negotiations that may otherwise take place by shifting the balance of power in favor of those seeking access. For instance, FRAND mandates provide those seeking access with grounds to take legal action against the owner of the resource if they are unsatisfied with the rate offered to them. Thus, a platform that charges different rates to those seeking access to its resources based on genuine differences in the cost of providing that resource to different purchasers may still face lawsuits for “discriminatory” prices even if courts later determine that the price isn’t discriminatory, with the lawsuit serving as leverage to pressure the platform to lower its price.

Since litigation is expensive and time-consuming, with courts being left with the difficult task of determining a “reasonable” rate, such lawsuits entail substantial costs and uncertainty for those who own the resource even if they are ultimately defeated and the rate offered by the gatekeeper is deemed to be fair and reasonable. Thus, the FRAND obligation still acts as a disincentive for innovation and investment in resource development by the gatekeeper as it increases the uncertainty that it can recoup its upfront investment costs.

The innovation disincentives of FRAND obligations have precedent. In 1995, the U.S. government’s National Institutes of Health (NIH) rescinded a 1989 mandate that companies making and/or selling drugs developed with its research charge a “reasonable” price for them. They did this after finding that the reasonable price clause had led to a decline in “potentially beneficial scientific collaborations” between government scientists and private sector partners “without providing an offsetting benefit to the public.” Instead of benefiting the public through lower drug prices as it was intended to do, the reasonable pricing clause (which is analogous to a FRAND mandate) reduced benefits to the public by deterring partnerships that could have brought more drugs to market. Such public-private partnerships involving the NIH increased significantly after the reasonable pricing clause was abolished, leading to more drugs coming to market, and thus more competition and diffusion of medical innovations than when the NIH’s FRAND mandate was in effect.<sup>88</sup>

Examples of failed FRAND policies illustrate the importance of imposing FRAND or free access mandates on a case-by-case basis rather than through blanket rules that arbitrarily single out firms that may not even possess market power, or that may not be abusing their market power over the resource even if they are in a position where they could.

## Price Parity or “Most Favored Nation” (MFN) Clauses

DMA Art. 5(3) prohibits gatekeepers from imposing price parity or MFN clauses upon sellers competing on their platform. Gatekeepers are banned from requiring that sellers do not offer more favorable prices or other conditions for their goods and services on other platforms, or through direct-to-consumer channels. The prohibitions aim to foster inter-platform and inter-seller competition by allowing different platforms and the sellers themselves to compete to offer consumers the lowest prices and best purchase conditions for the same goods and services. In so doing, the MFN clause prohibition intends to prevent gatekeepers from using their market position and user base as leverage to deny competitor platforms an opportunity to contest platform markets. It also limits the gatekeepers' ability to extract commissions from sellers, thereby benefiting sellers by placing downward pressure on such commissions.

Conversely, however, MFN clauses enhance the platform's value to consumers (and thus, indirectly, to sellers) by lowering the time and resources that consumers face in finding the best deals for the same product, and by facilitating consumers' ability to make reliable and instant comparisons between competing products on one platform.<sup>89</sup> By aggregating users on the platform, they can lower user fragmentation, which also lowers the costs that sellers face in targeting as many potential customers as possible in one place. Such aggregation of user and order volumes for the same product on one platform can also benefit consumers by lowering shipping costs through economies of scale. Net anticompetitive effects, such as through a restriction of competition on price or other conditions between platforms, are still possible where platforms with market power impose broad MFN clauses that preclude better conditions and prices from being offered for the same products on other platforms. However, this will not necessarily hold true in every case. This is why the European Commission (EC) has traditionally emphasized a rule of reason assessment of net competitive effects in cases concerning MFN clauses.<sup>90</sup>

Narrower MFN clauses, such as those prohibiting sellers from offering better prices or other conditions through direct-to-consumer channels, are more likely to be justified by the platform's desire to prevent freeriding. This occurs where a seller takes advantage of the platform and its features to reach customers, only to steer them to its own website or proprietary channels through various incentives, thus denying the platform the ability to levy commissions. These clauses are necessary to prevent sellers from avoiding payment of commissions to platforms entirely, rather than simply and theoretically encouraging different platforms to compete for sellers by lowering their commissions. Freeriding reduces competition and innovation by reducing the platform's incentive and ability to invest in platform features, such as security and user experience, which benefit consumers and sellers alike. Narrow MFN clauses can also encourage sellers to put downward pressure on their own prices since they can no longer steer consumers to their direct channels by raising their prices on the platform. The ambiguous and potentially procompetitive implications of clauses that preclude or restrict sellers on the platform from offering lower prices or other conditions in their direct-to-consumer channels are also acknowledged in the EC's most recent guidelines on vertical restraints.<sup>91</sup>

Given the potentially (and generally) procompetitive effects and consumer welfare improvements that flow from these practices, blanket ex-ante prohibitions on such conduct are unwarranted. Instances of these practices on digital platforms should thus be judged on a case-by-case basis that provides opportunity for economic data and evidence to inform inferences of net competitive effects. Enforcement officials and agencies who face constraints due to their limited resources and time should prioritize bringing cases and pursuing instances of these types of conduct only where there is substantial prima facie evidence of anticompetitive harm.

# Section III: Evidence of the DMA's Impact

This section will canvass the DMA's impact in relation to its goals of promoting market contestability and fairness, providing certainty and predictability, reducing costs, and promoting innovation and technological diffusion. The experience of the DMA provides insight into the potential impact of similar ex-ante rule proposals with regard to competition in digital markets proposed in the U.S. and other jurisdictions.

## **Fairness & Market Contestability**

"Fairness" is an amorphous term that is difficult to delineate and define, and that therefore lends itself to subjective, emotive, and sometimes contradictory interpretations.<sup>92</sup> This is why many law and economics scholars argue that it is unadministrable and unsuitable as a standalone legal standard,<sup>93</sup> noting that attempts to use and understand the term in economics have proven to be "muddled, at best."<sup>94</sup> "Fairness" is a particularly, and ironically, "unfair" standard to incorporate into an ex-ante rule as the concept's subjective nature makes it difficult for actors to know ahead of time whether their conduct is a violation, thus creating substantial uncertainty and opportunities for enforcers and other stakeholders to arbitrarily prosecute the rule. And since "fairness" is "an unmeasurable goal," it "will tend to be irresistibly attractive to enforcement agencies, as it can mean anything they want it to."<sup>95</sup> Indeed, "the revival of fairness considerations in competition law functions primarily to offer policymakers greater latitude to intervene" by "relieving [them] of the burden of economic analysis and allowing them to pursue political ends."<sup>96</sup> Even proponents of "fairness" as a general guiding principle for competition policy acknowledge that "it is not an instrument that competition enforcers can use off the shelf to go about their work in detail," arguing that in each case, enforcers "must dig for evidence; conduct rigorous economic analysis; and check findings against the law and the guidance provided by [courts]."<sup>97</sup> Market competition can be ruthless, with firms

often losing market share or even going out of business or exiting markets due to challenges from new competitors with new products, more efficient processes, greater economies of scale, better technology, or any number of other factors. This is why the U.S. Supreme Court has long interpreted the antitrust statutes as protecting competition and not competitors from competition.<sup>98</sup>

The DMA provides some guidance on and examples of how it defines market contestability and fairness. However, this guidance does not override the specific obligations that it otherwise outlines and imposes ex-ante. Notably, "because the DMA does not index the obligations based on the specific goal they purportedly advance, it also does not clarify which obligations are intended to safeguard contestability and/or promote fairness."<sup>99</sup> The DMA's concept of "fairness" pertains to addressing imbalances between business users' rights and obligations on gatekeeper platforms to prevent gatekeepers from appropriating benefits created by these market participants.<sup>100</sup> Market contestability pertains to helping business users "effectively overcome barriers to entry and expansion" in order to "challenge the gatekeeper on the merits of their products and services."<sup>101</sup> The DMA's mandates thus aim to lower and equalize barriers of entry for competitors that rely on gatekeeper platforms to reach consumers. Such businesses include, for instance, application developers who use or seek access to Apple's iPhone or its app store, service providers that rely on Google search for potential consumers to find them, or sellers on Amazon's digital marketplace.

## Inter-platform Competition

At least equally important to intra-platform competition is the DMA's potential and existing impact on inter-platform competition, including upon potential and current competitors to the “gatekeepers.” Tech markets are highly unpredictable. Dominant businesses and platforms with seemingly durable market share won't necessarily be in that position tomorrow. This is due to entry from future competitors with better products and technology, or simply due to shifting consumer preferences and societal change. This phenomenon has been documented in digital platform and media markets even relatively recently, and persists despite the advantages that incumbent platforms have due to their existing user base, scale economies, data advantages, and network effects.<sup>102</sup>

Most recently, in the U.S. case of *Google Search*, U.S. District Judge Amit Mehta acknowledged that in the months between his August 2024 holding finding Google liable for monopolization and his September 2025 remedies decision, generative AI tools such as ChatGPT had developed and presented themselves as potential “game changers” capable of disrupting search engine markets.<sup>103</sup> Although Google remained the dominant firm in the relevant product markets and no competitor had displaced its market share yet at the time of the decision, Judge Mehta noted that the changes in market conditions had necessarily influenced his tailoring of appropriate remedies. Even prior to the remedies decision, ChatGPT's search tool, which it launched in late 2024, was making exponential gains in search engine market share as of February 2025 without the imposition of any antitrust remedy or penalty to reduce Google's monopoly.<sup>104</sup> And prior to this, ChatGPT's entry into the generative AI market had spurred Google to rapidly launch its own Gemini AI tools despite ChatGPT lacking Google's incumbent platform advantages.<sup>105</sup>

These dynamics and market realities indicate that the imposition of ex-ante antitrust rules upon digital platforms that may currently be dominant, such as under the DMA, can inhibit rather than enhance market contestability and fairness by artificially advantaging current and future competitors that are not subject to similar requirements.



Rather than challenging dominant platforms through superior products, innovation, or responsiveness to changing consumer preferences, such competitors could gain market share while maintaining or even degrading their existing products. These competitors would also be disincentivized from procompetitive growth and innovation beyond a certain point, as success could eventually result in “gatekeeper” designation and exposure to onerous compliance requirements, litigation risk, and mandated resource and technology sharing.

A digital platform's dominant market position will also be less vulnerable to challenge if mandates and restrictions reduce the degree to which platforms can differentiate user experiences on dimensions such as security or privacy.<sup>106</sup> This would reduce competition between platforms and service ecosystems by undermining market contestability and fairness, since product differentiation is a key mechanism through which entrants challenge incumbents. If the unique features that make a platform attractive to users are degraded, the platform's value to sellers and service providers will also decline, reducing rather than enhancing contestability even at the intra-platform level.

## Market Contestability Without Market Definition?

There is also a contradiction between the DMA's stated goal of promoting “market contestability” and its classification of gatekeepers for certain “core platform services”<sup>107</sup> without any requirement to demonstrate market power, anticompetitive effects or to even define a relevant market for a specific service. Although some commentators claim that digital markets for some of the core platform services do also demonstrate high degrees of concentration, they acknowledge that the same does not hold true for others.<sup>108</sup>

Market concentration also does not equate to market power and the latter can only be inferred through evidence that the platform with a dominant market share in the inter-platform market can raise quality-adjusted prices or exclude businesses from competing without ceding market share to current or new competitors.

Antitrust scholars note that even though market definition is usually a critical evidentiary element in antitrust litigation for conduct that is not per se illegal, it is not an end in itself. Rather, it is a tool for aiding the assessment of market power and a practice's potential anticompetitive effects.<sup>109</sup> The U.S. Supreme Court has thus recognized that direct evidence of anticompetitive effects, such as a reduction in output (supply, product quality, innovation, and related factors) relative to price, can obviate a formal requirement for defining a market and establishing market power within it to show anticompetitive effects.<sup>110</sup> Economists have also proposed alternative tools to market definition analysis for assessing anticompetitive effects,<sup>111</sup> including econometric studies.<sup>112</sup>

However, it is noted that ex-ante rules such as the DMA do not require a finding or assessment of anticompetitive effects *at all* and instead proscribe business practices with ambiguous or mixed implications for competition, consumer welfare, and market contestability alike as illegal. In any case, it is further noted that direct evidence of anticompetitive effects is usually consistent with the exercise of market power and that alternative tools to market definition analysis are typically a proxy for abuse of market power rather than an attempt to render a finding of market definition and market power as irrelevant to ascertaining anticompetitive effects.<sup>113</sup> For instance, in the 2003 case of *United States v. Visa U.S.A., Inc.*,<sup>114</sup> Visa U.S.A. and MasterCard were found liable for illegal anticompetitive conduct after evidence that they had successfully stopped “their largest competitor from successfully soliciting any bank as a customer for its network services and brand” was used to demonstrate that they held market power in the network services market.

Other commentators have argued that requiring a “formal market definition ... results in a binary judgment of whether firms fall inside or outside of the market,” positing that “[s]

such a rigid approach would fail to recognize the nuanced and interconnected nature of digital products and services and underemphasize the importance of dynamic competition.”<sup>115</sup> However, the argument that formal market definitions could fail to account for dynamic competition in digital markets, which are often multi-sided, applies even more strongly against rigid and potentially subjective classifications of “gatekeepers” for specific “core platform services.” Such services are subject to technological and product design shifts, including in response to consumer tastes and future or potential nascent competitors.

For instance, the recent U.S. federal court ruling in the FTC's monopolization lawsuit based on Meta's acquisition of Instagram found that although the narrow product market for “personal social networking” services alleged by the FTC may have held true when Meta acquired Instagram in 2012 and WhatsApp in 2014, it no longer makes sense as social networking has become integrated with other services.<sup>116</sup> This has changed the nature of the “core platform service” itself. A “preponderance of controlled and natural experiments” showed that modern users of Facebook frequently switch between it and YouTube, TikTok, Snapchat, and other services that fall outside “personal social networking” in order to access social networking, messaging, and video streaming on multiple platforms.<sup>117</sup> Given the integration of these services on each platform, the DMA's attempt to designate gatekeeper firms for individual classes of “core platform services” does not prevent the regulatory burdens imposed on an integrated platform from affecting integrated services that fall outside the alleged core service. It could thus deter long-term innovation in developing and integrating new features into the “core platform service.” Evidence of consumer multi-homing on different platforms that provide multiple, integrated services without significant switching costs and without any DMA-style mandates, further calls into question the designation of specific platforms as “gatekeepers” for individual “core services” rather than assessing dynamic competition within a market based on real-world consumer behavior. Dynamic competition that can rapidly change the nature of a “core platform service” may render gatekeeper classifications obsolete even where the strongest case for such classification exists at a given time.



Such dynamic competition led Taiwan’s Federal Trade Commission to conclude that “as the digital economy features frequent innovation, short life cycles, and noticeable dynamic competition, the best enforcement principle at this stage is ‘issue driven,’” with an eye toward ex-post efforts [as opposed to ex-ante rules] to “[resolve] problems based on each case.”<sup>118</sup>

Regardless of the merits of requiring defined markets and findings of market power and anticompetitive effects, EU representatives have insisted that this is not necessary for the DMA. They argue that the DMA falls outside competition law, which focuses on market power problems, and is instead intended to regulate platforms to promote market contestability and fairness in cases that competition law does not address.<sup>119</sup> This ignores the fact that market contestability and fairness are also objectives of European competition law.<sup>120</sup> There is also no indication that the DMA’s emphasis on market contestability and fairness differs from that reflected in the scope and substance of EU competition law.<sup>121</sup>

The DMA’s stated rationale for classifying firms as gatekeepers and imposing ex-ante rules upon them is the purported abuse of the alleged market power of these firms. This is demonstrated by the market power language outlined in the qualitative factors that the EC will consider when determining whether a firm that does not meet its strict turnover thresholds is still a gatekeeper, involving terms

such as “network effects,” “data driven advantages,” and “user lock-in.”<sup>122</sup>

“Network effects” and “data driven advantages” are platform features that benefit both consumers and businesses on the platform. They only lead to anticompetitive outcomes where a firm obtains market power through these advantages and *then* engages in subsequent anticompetitive, exclusionary conduct in a particular market. “User lock-in” can equally be evidence of an anticompetitive barrier or barrier to entry as it can demonstrate that a platform has achieved the procompetitive outcome of generating substantial value for the consumers and businesses it serves. Which of the two possibilities is more true can only be ascertained by determining whether the entity in question has market power and then ascertaining any anticompetitive effects attached to its conduct.

Similarly, in describing gatekeepers, the DMA views them as “important gateway[s]” [for other firms to enter markets and reach consumers], characterizing them as possessing an “entrenched and durable position” and “considerable economic power.”<sup>123</sup> The concept of platforms as a “gateway” alludes to the ability to apply anticompetitive foreclosure effects by limiting the ability of firms to reach or compete in markets. “[C]onsiderable economic power” and “entrenched and durable position” are references to market power that are entirely subjective without understanding (and therefore defining) one or more markets in which specific firms operate. However, these factors are only considered in defining firms as gatekeepers where the prospective gatekeeper does not meet the strict quantitative (turnover) thresholds that the DMA uses, meaning that firms classified as gatekeepers at the time of this writing have not received that designation due to findings of market power.

Moreover, using these factors to classify a firm as a gatekeeper gives competition enforcers strong arbitrary discretion to deem politically disfavored firms as gatekeepers unless their judgments are to be supported by a definition and analysis of a relevant product and/or geographic market and the competitive conditions therein.<sup>124</sup>

This is why competition law in the United States, the EU, and elsewhere typically defines markets by identifying potential and current product substitutes, ascertaining market shares, and considering any other factors and economic indicia relevant to determining whether the firms in question have the power to dictate price over output or foreclose markets.<sup>125</sup>

Furthermore, the claim that formal market definitions may not account for complex, multisided or “interconnected” markets is demonstrably false per the experience of U.S. antitrust law. When it comes to such markets, U.S. antitrust courts take one of two approaches. The single, integrated market approach is used for multisided platforms that facilitate transactions between buyers and sellers of goods or services.<sup>126</sup> Here, the relevant service/product provided by the platform is deemed to be transactions themselves, rather than a separate storefront service for sellers and marketplace service for buyers. This makes pragmatic sense because of the high degree of cross-group network effects between both sides of the transaction market, whereby any price structure changes or business conduct (such as conditions or vertical restraints) imposed on one side of the transaction necessarily impact output (price/quality) on the other side.<sup>127</sup> It also makes sense because it is consistent with the principle of consumer substitution, which is the primary means by which product markets are defined. For instance, on an app store platform where app developers provide apps to users, the service provided to developers cannot be substituted for the service provided to users. However, the service of facilitating developer-user transactions can be substituted with the same service in another app store or app distribution platform.<sup>128</sup> Conversely, for non-transaction multi-side platforms, such as newspapers that provide space for advertisers while providing news for consumers, U.S. courts have defined two separate albeit interdependent product markets.<sup>129</sup> This also makes pragmatic sense because there is no single product (such as a transaction) that the platform is facilitating between both sides of the market. There is thus also no single two-sided net price or pricing structure that can be ascertained or optimized by the platform owner, which makes it difficult to weigh pro- and anticompetitive effects equally between the two sides of the market since conduct affecting one user group won’t necessarily have significant effect on the other.<sup>130</sup> It is also noted that transaction platforms are generally paid based on the value of completed transactions between the two user groups, whereas non-transaction multisided platforms are paid or receive value from user groups for separate services even if the platform facilitates some interaction between the user groups.<sup>131</sup> And though some economists have cautioned against treating two-sided markets differently to one-sided ones on the basis of categorizing them as such,<sup>132</sup> economic literature confirms that multisided markets tend to adopt different pricing structures than one-sided markets due to cross-side network effects.<sup>133</sup> It is noted that current European competition law explicitly considers competition in separate markets for even transactional multisided platforms. For instance, in a 2007 matter involving credit card networks, the EC ruled that “[u]nder the second condition of Article 81(3) of the Treaty, consumers [referring to both merchants as well as cardholders/purchasers] must get a fair share of the benefits which result from [the alleged anticompetitive conduct.]”<sup>134</sup> Thus, harm to consumers on one side of the market cannot be offset by benefits to the other. Importantly, regardless of whether the antitrust case involves multisided transactional or non-transaction platforms, and regardless of whether the relevant market is defined as an integrated one or separate markets for each side, the role of cross-platform network effects, or “feedback” from one market that impacts the other, can be accounted for in assessing pro-competitive or anti-competitive effects within the relevant market.<sup>135</sup>

Conversely, rigid and subjective classifications of firms as gatekeepers without requiring market definition or market power assessments do not allow for the assessment of these effects. And even though U.S. antitrust courts are generally skeptical of “out-of-market” efficiencies, which can prevent a full assessment of competitive dynamics in two-sided markets, these efficiencies and the impact that constraints on conduct in one market have on other markets is still taken into account in the remedies stage to minimize inadvertent negative effects.<sup>136</sup> By contrast, the DMA and other ex-ante regulatory proposals for digital markets either completely exclude or limit efficiency justifications, be they in-market or out-of-market.

The DMA's lack of market definition or market power analysis in classifying firms as "gatekeepers" has already led to perverse results by exempting firms that compete vigorously or exhibit even greater dominance in specific European geographic and product markets from regulations that burden their foreign gatekeeper competitors. For instance, American e-commerce giant Amazon is classified as a gatekeeper in the EU under the DMA. However, its market share for ecommerce in Poland and the Czech Republic is less than that of European digital marketplace Allegro.<sup>137</sup> Similarly, European digital marketplace Zalando is the number one marketplace for fashion products in Germany, Poland, Italy, and the Netherlands.<sup>138</sup>

To this end, the DMA's "gatekeeper" definition, and similar standards under DMA-like ex-ante proposals in other jurisdictions, may be viewed as protectionist, discriminatory non-tariff barriers to international competition that discourage European firms from innovating and providing internationally competitive platform experiences to challenge their rivals that originate overseas.<sup>139</sup> And even if a European-origin digital platform reached sufficient size and global turnover to qualify as a "gatekeeper" under the DMA, the DMA would only serve to inhibit its ability to compete internationally. This is because the DMA would impose disproportionate costs upon it in its primary geographic market that are not borne by foreign competitor platforms that fall under the "gatekeeper" threshold, or that meet the threshold but have a relatively smaller presence in the European market. Thus, the lack of a market definition requirement and lack of need to find market power serve to limit rather than enhance fairness and market contestability.

## Intra-platform Competition

Finally, the DMA's goals of fairness and market contestability are thwarted if they improve intra-platform market contestability for some firms while degrading it for their competitors, as this amounts to the DMA effectively crowning winners and losers, thereby supplanting rather than promoting competition.

For instance, degradation or limitation of services on digital platforms as an inadvertent result of DMA compliance harms businesses reliant on the platform to reach consumers, thereby advantaging established incumbents over smaller or newer competitors. This is because these firms are less reliant on the platforms themselves to establish brand awareness and build trust, and because incumbents are more likely to have and make the most of access to alternative channels.



## Search

Since the DMA took effect, Google has been unable to integrate its search and service aggregator tools due to mandates around linking to third-party booking sites for flights, hotels, and other services. This may have made the market more contestable in the short run for those specific booking sites that have experienced an increase in traffic. However, this also means that hotel and flight bookings now take far more clicks than they previously did. One study quantifies the time wasted by consumers at over 3.3 million euros annually.<sup>140</sup> Degraded experiences in booking hotels due to the absence of direct booking options integrated into Google search have also helped drive a 36 percent reduction in direct bookings on Google Hotel Ads, with the service's European web traffic dropping by 30 percent.<sup>141</sup> Smaller businesses that rely more on Google search to drive traffic to their services face disproportionate harm from the degraded user experience and resulting decline in platform patronage, losing rather than improving their ability to contest for market share, and indicating an unfair competitive outcome in addition to harm to consumers.

## App Stores

Similarly, mandates around allowing third-party app stores and “sideloading” of apps on mobile systems like Apple’s iOS may have made the market more contestable for some developers and app store operators. However, they also represent a degradation in user experience for many amidst heightened security and privacy risks that drive a loss in user trust in the platform. For instance, some alternative app stores, by reason of deliberate business models or lower ability or desire to police content on their stores, are distribution hubs for pirated<sup>142</sup> and adult<sup>143</sup> content. Increased proliferation of pirated content due to Apple’s reduced ability to control its devices’ service ecosystem undermines fairness and market contestability for European IP owners, as well as increased costs for them to enforce their IP rights. And a perceived loss in security features and increased ability to access adult content makes it more difficult for parents to shield their teenagers from inappropriate and harmful material on their phones, driving a loss of confidence that would reduce their willingness to allow their children to use the devices or apps with which they are unfamiliar with in the first place. This leads to a decline in fairness and market contestability for European app developers who produce age-appropriate content aimed at younger audiences, including educational content.

## Costs, Uncertainty, and Arbitrariness

Early evidence within the first year of DMA enforcement indicates that costs borne by enforcement agencies and costs and uncertainty imposed upon parties may even exceed those seen in ex-post antitrust law enforcement. In 2024, the EC opened DMA compliance investigations against Google, Meta, and Apple.<sup>144</sup> Since then, Apple has been fined 500 million euros (\$570 million) and Meta has been fined €200 million (\$230 million) despite working with and making proposals to the EC to ensure compliance.<sup>145</sup> Despite the DMA’s retrospective application of fines for non-compliance, the EC has not provided either party with clarity about what would ensure compliance.

It has instead refused to confirm whether the remedies proposed by Meta and Apple will be sufficient, stating that it is waiting to observe how the market responds to the proposed changes, and has solicited or asked parties to solicit feedback from competitors and other external stakeholders on the proposals.<sup>146</sup> All the while, the EC continues to maintain that compliance remains the defendant parties’ “sole responsibility.”

This ongoing uncertainty, even after a year of the DMA remaining in force, stands in stark contrast to both the verdicts and settlements typically seen in antitrust litigation cases under ex-post enforcement regimes. Settlements of such litigation between enforcement agencies and defendant firms generally arrive at specific remedies proposed and accepted by the parties at the conclusion of the litigation, thereby giving parties a greater degree of certainty and clarity about their obligations. For instance, in the recent Google Search case, the court imposed a remedy whereby Google must share proprietary search indexing and depersonalized user data with “qualified competitors” on commercial terms.<sup>147</sup> The judge stipulated the creation of a technical committee that would ensure compliance and provide oversight to assist the court and Google in enforcing the remedies, including data-sharing, for a six year period.<sup>148</sup> “Qualified competitors” that meet specific security criteria will be given a “one-time snapshot of the relevant data containing Google Search Index” and syndication, which includes Google’s search advertising and search result inventory.<sup>149</sup> Google ultimately bears the responsibility for working with the technical committee to implement compliance and handle any technical issues that arise. However, it has more clarity about the standards it must meet than it does with respect to the data-sharing obligations under the DMA, as no further stakeholder consultations or assessment of market responses are required.

Some commentators have noted that since Google has appealed the verdict and remedies decision, the case is likely to ultimately be resolved through a consent agreement between the U.S. Department of Justice (DOJ) and Google.<sup>150</sup> Since such decrees are binding on both parties, Google would have greater clarity and certainty about its obligations than under the DMA, under which it bears sole responsibility for compliance but does not have binding assurances from competition enforcers about what would be sufficient to comply, and under which its proposed solutions remain subject to further stakeholder consultations with the EC and retrospectively applied fines.

Moreover, although behavioral remedies imposed by antitrust courts and consent agreements achieved by antitrust enforcers to settle litigation require time and expense for monitoring compliance, the EC has taken on an even greater monitoring and compliance assurance burden in this regard, because the DMA imposes obligations on *all* gatekeeper firms rather than only those found liable for anticompetitive conduct. The specific content of obligations under Art. 6 in particular requires ongoing cooperation between the gatekeepers and DMA enforcers to even determine their content with regard to each firm.

Given the dynamic competition and rapid innovation in business models seen in high tech and digital platform markets, these specific obligations are also likely to require constant updating, further raising costs. And unlike behavioral remedies imposed by an antitrust court or litigation settlement, since DMA obligations are blanket proscriptions and not tailored to specific and proven anticompetitive harms, they are more likely to remain in place and require compliance monitoring even after they become functionally obsolete for promoting market contestability and fairness. The arbitrary nature of rules that produce retrospectively applied punitive penalties such as fines, without any clarity from enforcement officials about what compliance means, and with such clarity supposedly being contingent upon future input from competitor firms with their own interests, also contravenes the rule of law.

## AI & Technological Diffusion

Potential security risks related to complying with the DMA's interoperability mandate have resulted in delayed rollout of Google and Apple's AI features to EU consumers. For instance, when Apple's iOS 26 became available, European consumers were not initially able to auto-translate audio through their AirPods due to delays tied to ensuring or attempting to ensure DMA compliance.<sup>151</sup> Three other AI-related features on Apple products, Phone Mirroring, SharePlay Screen Sharing enhancements, and Apple Intelligence, were not offered to EU consumers until March-April 2025 despite being rolled out elsewhere in 2024.<sup>152</sup> Similarly, Google attributed uncertainty around regulations, including compliance with the DMA, to the delayed rollout of AI overviews for Google search in Europe.<sup>153</sup> This feature was launched in other countries in May 2024,<sup>154</sup> but did not become available in European regions until March 2025.<sup>155</sup> The rapid evolution and dynamic nature of new technologies and their features, including AI, which is increasingly being applied in new ways and to address new issues, means that DMA compliance and uncertainty-related delays are likely to continue rather than diminish over time. Delayed rollout of features and products in dynamic and innovative digital sectors risk putting European businesses at a competitive disadvantage to foreign competitors who can access them sooner. It thus harms European firms' ability to innovate and keep up with innovative competitors overseas, making these lucrative global markets less contestable for them.

# Section IV: Case Studies

This section will use two significant U.S. antitrust law cases to demonstrate how ex-post enforcement can hold platforms accountable for anticompetitive conduct while reducing the costs and uncertainty through flexible, adaptable frameworks that are suited to digital markets and dynamic competition. This would avoid many of the negative consequences for competition and innovation that are associated with ex-ante rules like the DMA that are discussed in the preceding two sections. Notably, U.S. antitrust law focuses on harm to consumers and the competitive process rather than concepts like market contestability, though there is overlap between the two concepts. The outcomes of these cases may also not be those desired by EC competition enforcers and policymakers. However, the cases still illustrate what antitrust enforcement with tightened legal constraints, designed to achieve the DMA's policy goals can look like. The cases are *Google Search* and its remedies decision, and *Epic Games v. Apple*.



## Google Search & Google Search Remedies



In 2020, the first Trump Administration Department of Justice (DOJ) Antitrust Division sued Google in the United States District Court for the District of Columbia, alleging violations of Section 2 of the Sherman Act through anticompetitive tying arrangements used to maintain its 90 percent-plus monopoly share in the search engine market.<sup>156</sup> Google had paid owners of computer and smartphone web browsers, including Firefox's Mozilla and Safari's Apple, millions of dollars to make its search engine the browser's built-in default. Users could still change the default search engine to one of Google's competitors, such as DuckDuckGo or Microsoft's Bing. However, they had to do so manually, which entails time and a little cognitive effort sufficient to deter at least some from switching.<sup>157</sup>

In his 2024 ruling against Google,<sup>158</sup> Judge Mehta conceded that Google had achieved its market share by producing a superior search engine, a feat that U.S. antitrust law has long recognized as legal and pro-competitive.<sup>159</sup> However, he ruled that Google had still illegally maintained its monopoly by excluding its rivals from reaching minimum efficient scale to compete effectively. Judge Mehta noted that browsers are the main channel for search engines to reach and serve users.

By partially “foreclosing” competition, the default agreements were found to prevent other search engines from reaching enough users to obtain data for refining their search engine algorithms to be competitive against Google. Judge Mehta found that, in doing so, the agreements had lowered the incentives of actual and potential rivals to invest and innovate in internet search. He also rejected Google's efficiency justifications for why its conduct should still be deemed legal. Google has appealed the verdict.<sup>160</sup>

In September 2025, Judge Mehta issued his decision on remedies to address Google's exclusionary conduct.<sup>161</sup> The DOJ had requested a structural breakup of Google, including the divestiture of Google Chrome and the Android mobile operating system, prohibitions on Google's default search engine agreements with the web browsers, and mandated data sharing with Google's competitors.<sup>162</sup> However, U.S. antitrust courts in Section 2 monopolization and exclusionary conduct cases must keep the “scope of the remedy ... proportional to the scope of the violation,”<sup>163</sup> while ensuring that it is narrowly “tailored to the harm suffered.”<sup>164</sup>

They are only obliged to issue remedies that “terminate the illegal monopoly, deny to the defendant the fruits of its statutory violation, and ensure that there remain no practices likely to result in monopolization in the future.”<sup>165</sup> The goal of the remedy is to restore competitive conditions while ensuring that the market functions competitively going forward.<sup>166</sup> Thus, remedies ought to target specific anticompetitive practices without deterring the competitive process that benefits consumers.<sup>167</sup> This necessarily requires courts to “balance the benefit to competition against the hardship or competitive disadvantage the remedy may cause.”<sup>168</sup> No comparable harm-minimization exercise, or even any consideration of inadvertent harms, is required for enforcers under the DMA’s hardline rules.

Consistent with this approach, Judge Mehta evaluated proposed remedies using the same cost-benefit logic that underlies the rule of reason to ascertain liability for anticompetitive exclusionary conduct. Applying the principles of *Microsoft*,<sup>169</sup> he recognized that where a defendant has invested substantially in pro-competitive innovation and efficiency-enhancing practices, the appropriate remedy targets and removes the anticompetitive effects linked to the practice while minimizing damage to innovation and investment, including incentives for the defendant’s competitors to compete on the merits.<sup>170</sup> In other words, remedies should avoid or minimize the risk of causing inadvertent anticompetitive injury or deterring competition on the merits.

Judge Mehta therefore declined to order a structural breakup of Google, or the divestiture of the Chrome browser or Android mobile operating system, reasoning that such divestitures would destroy substantial consumer benefits from integrating these services with Google’s other services and data.<sup>171</sup> The DOJ’s proposed divestitures were also deemed inappropriate because they were weakly connected to the illegal conduct and the harm attributed to the default agreements.<sup>172</sup> Judge Mehta instead opted for limits on the search engine default contracts that Google can have with web browsers and in generative AI markets, noting that generative AI tools like ChatGPT represent a nascent competitive threat to search that could reduce the durability of Google’s monopoly. Most importantly, he ordered Google to share its cache of web scraping and search index data with rivals to address the harm he found from Google’s exclusionary default contracts, which had denied competitors the ability to reach minimum efficient scale through user acquisition.<sup>173</sup> To maintain incentives for firms to invest in building data and scale rather than free riding on Google’s existing trove, he required the data to be shared on commercial terms rather than for free.<sup>174</sup> For these reasons, he deemed search data sharing on commercial terms to be “a reasonable method of eliminating the consequences of the illegal conduct.”<sup>175</sup>





## Market Contestability and Fairness

Judge Mehta ruled that Google search engine's exclusive default contracts with web browsers and operating systems made search and search advertising markets uncontestable for competitors as they are unable to reach "minimum efficient scale" through reaching an adequate volume of users for refining their algorithms into a competitive product. Critics of the remedies decision have noted that it allows Google to continue contracting for default status so long as the agreements do not cover 100 percent of devices or browsers,<sup>176</sup> thereby leaving room for similar conduct. However, this narrow fencing-in must be read alongside the complementary remedy requiring Google to make search query and indexing data available to competitors on commercial terms. If the default contracts were illegal because they denied rivals access to user-generated indexing and query data needed to improve search quality, then making that data available for sale addresses the alleged bottleneck without drastic restrictions on default contracting. And because the data must be purchased rather than obtained for free, at cost, or on FRAND terms, incentives remain for Google and others to invest in developing and refining search quality and data assets.

The remedies tailored by Judge Mehta thus acknowledge that the effects of a particular business practice on competition and market contestability can vary significantly based on the circumstances of the market and how they change over time, a factor that the DMA's blanket mandates and prohibitions do not account for. The careful "balancing act" and bespoke, narrowly tailored combination of remedies to directly address issues such as restrictions on the competitive process, market contestability and fairness, is also not possible or difficult under an ex-ante rule-based approach such as the DMA. This is because ex-ante approaches mandate "remedies" without a finding of anticompetitive conduct in a market and thus obviate any adjustment of the "remedy" to address its own potential inadvertent harms to competition, market contestability or fairness.

Although Judge Mehta rejected Google's competitive efficiencies justification for its default contracts, namely that they fostered investment and innovation in device, operating system and web browsers, he nonetheless considered these factors in narrowly tailoring remedies to minimize inadvertent harm to market contestability and fairness. The fencing provision, coupled with mandatory data sharing on commercial terms, preserves competition for default status through non-exclusive contracting and preserves incentives for browsers and operating systems to compete for funding and search-related revenue sharing by offering default status. This undercuts claims that ex-ante rules that bypass market definition are necessary to account for dynamic competition in multisided markets.

Instead of promoting market contestability and fair competition in multiple markets, as antitrust judges may seek to attempt through tailored remedies, ex-ante rules under the DMA entirely proscribe conduct that allows for forms of dynamic competition. For instance, the DMA bans search engine default contracts and mandates choice screens, eliminating a key channel of revenue sharing between search engines and web browsers and devices, and eliminating competition among browsers and devices for a share of search engine revenues through default arrangements.



## Certainty, Predictability, and Cost

The interface and process Google must develop to comply with data sharing on commercial terms will require ongoing oversight, similar to compliance processes under Art. 6 of the DMA. The key difference is that in the United States, disputes over compliance are resolved by courts applying precedent, rather than through a unilateral and open-ended administrative process that can impose fines without binding assurances of what compliance requires. Under the DMA, even after a year in force and non-compliance rulings against Apple and Google, the EC has not provided clear guidance on what specific measures will satisfy its obligations. That uncertainty increases costs and can deter innovation, including the rollout of new product features that bear on data sharing, interoperability, or privacy.

Proponents of ex-ante digital competition rules argue that antitrust rulings bind only the parties to a case. But antitrust decisions also generate precedent that guides similarly situated firms, creating predictable compliance baselines. Firms not party to the litigation can infer that similar conduct is likely to trigger costly enforcement, and that adopting measures consistent with judicial remedies reduces risk. In this way, legal standards can apply more even-handedly across firms with similar power, reducing arbitrariness and strengthening the rule of law.

It is also noteworthy that even though the *Google Search* decision was a ruling applicable to the dynamic search engine and search advertising markets that have undergone and continue to undergo rapid change, such as through the emergence and proliferation of search-adjacent AI tools, it was decided based on general principles articulated in the 2001 *Microsoft* DC Circuit Court case. This suggests that flexible antitrust principles can deliver greater consistency and predictability than rigid ex-ante rules that must be continually revised as technology and markets change. *Microsoft*, which is the most relevant U.S. antitrust precedent for monopolization cases involving digital service ecosystems such as the platforms targeted by the DMA, also addresses key difficulties that judges face in such cases relative to those involving standard single-sided and less dynamic markets. For instance, the precedent acknowledges that dynamic competition makes it impossible for courts, plaintiffs, and antitrust enforcers to construct a hypothetical world without the prohibited business practice in order to know with relative certainty or probability whether a competitive threat would have challenged the offending firm. *Microsoft* and *Google Search* thus affirm that a relatively more flexible causation standard than the standard “but for” test may be appropriate for plaintiffs in such cases, whereby they need only show that the prohibited practice was “reasonably capable of significantly contributing” to the maintenance of the offending firm’s monopoly.<sup>177</sup> This contradicts the claim that ex-ante rules are necessary to resolve the difficulties that enforcers face in holding firms that abuse market power or engage in anticompetitive foreclosure accountable in digital markets.





In 2020, Epic Games, the developers of the Fortnite mobile game app, sued Apple in the United States District Court for the Northern District of California. They alleged that Apple had violated Section 1 (unreasonable restraint of trade) and Section 2 (exclusionary conduct/monopolization) of the Sherman Act, as well as California's Unfair Competition Laws (UCL).<sup>178</sup> They asserted that Apple was a monopolist over locked-in iOS users, alleging that it had illegally prevented users from being steered to alternative platforms, had forced them to make in-app payments through Apple's own payment portal (while taking a 30 percent commission on each transaction between users and apps), and had forced developers to distribute apps to iOS users exclusively through Apple's App Store while having to comply with certain conditions and standards. In doing so, Apple had allegedly harmed competition and consumers by excluding developers from competing vigorously and restricting output in the form of quality, innovation, and consumer choice without legitimate business justification.<sup>179</sup> Apple countered that even if it was a monopolist, the practices in question were not anticompetitive and had benefited competition, consumers, and even developers by upholding iOS and app store security and privacy features and funding improvements to them, by promoting intrabrand competition, and by protecting Apple's investments in its intellectual property.<sup>180</sup>

The federal district court found that the relevant market for the case was "digital mobile gaming transactions," which is an integrated two-sided market of mobile platform users and developers.<sup>181</sup> This applies the U.S. Supreme Court's 2018 *Amex* precedent,<sup>182</sup> which found that for multisided transaction platform markets that are characterized by high rates of cross-side network effects, the relevant market integrates all participating groups on the platform.<sup>183</sup> This is because the platform's incentive is to optimize profits across all of them rather than across a single group.<sup>184</sup> Thus, seemingly anticompetitive restrictions on one side may be consistent with competitive equilibrium on the other, and this may still amount to a competitive integrated market

since the benefits delivered to one side of the market can enhance the platform's value to the other.<sup>185</sup> Thus, imposing strong privacy and security standards as a condition for offering an app on the App Store may burden developers and foreclose access to App Store users, but it may also provide net benefits to those users. Simultaneously, many developers will also benefit from this as strong privacy and security standards may be a drawcard that attracts more users to the platform, thereby expanding their potential customer base due to the network effects. Developers that lack their own established brand or reputation also benefit vicariously from user trust in the ecosystem, which makes users more willing to try and trust new apps. The optimal, competitive pricing structure that the platform imposes in such a market must thus weigh tradeoffs for both sides, and anticompetitive effects of a practice, such as a vertical restraint, in such a market are best understood by assessing effects on both sides of the market.<sup>186</sup> This pragmatic approach to market definition that accounts for cross-user group network effects in two-sided transaction markets refutes the claim by proponents of ex-ante rules for platform competition governance that "formal market definition" cannot adequately recognize the dynamic, nuanced, and interconnected nature of digital products.<sup>187</sup>

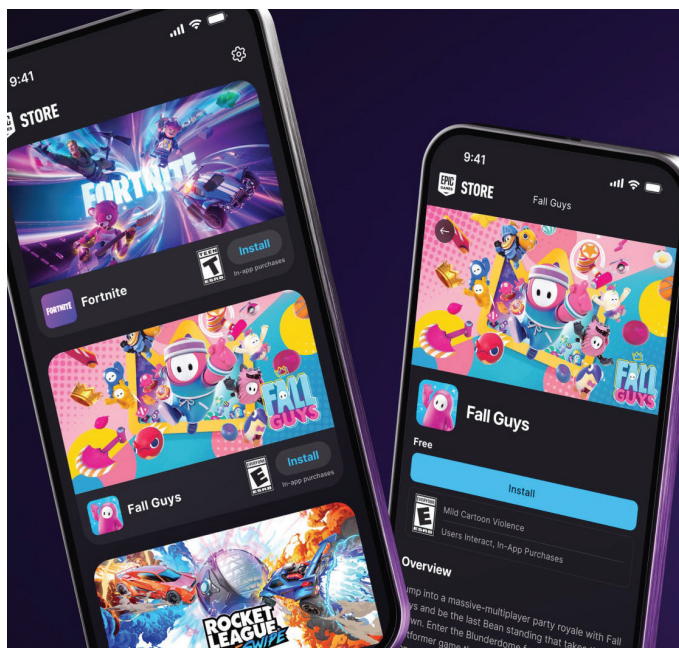
Based on the mobile game app transactions market definition, the district court rejected Epic Games' Section 2 monopolization claims as Apple was not found to hold a monopoly in the relevant market.<sup>188</sup> Rather, Apple and its nearest competition (Alphabet[Google]/Android) were described as a duopoly. On the Section 1 claims about Apple engaging in unreasonable restraints of trade, the court found that Apple's restrictions on app developers, side-loading apps, and app stores, and mandates on using Apple's payment portal for in-app transactions, did have some anticompetitive effects based on indicia such as pricing, output restrictions, and other signs of curbed competition.<sup>189</sup>

Specifically, the court cited as evidence that Apple’s 30 percent commission on in-app purchases had not been reduced despite complaints from developers.<sup>190</sup> They further cited that the commission rate had not reduced even as Apple increased its market share to 55 percent, and that users would pay (and app developers would sacrifice) lower commissions, and users would have a wider choice of apps, in a world where Apple hadn’t imposed the restraints.<sup>191</sup> Ultimately, however, the court concluded that Apple had not engaged in unreasonable restraints on trade as these anticompetitive effects were outweighed by their concomitant procompetitive benefits.<sup>192</sup> These include maintenance of privacy and security features and standards in the ecosystem, promotion of Interbrand competition, and protection of Apple’s intellectual property investments.<sup>193</sup> It found that these benefits could not have been achieved through less restrictive alternatives,<sup>194</sup> and that they had benefited both app users and many app developers.<sup>195</sup> Specifically, a trusted and consistent user experience and payment portal across apps, and restrictions that upheld security and privacy standards, had given users sufficient confidence and trust in iOS to freely spend on in-app transactions and to download and try new apps without safety concerns.<sup>196</sup> By facilitating such user participation in apps, which had driven transactions worth millions in revenue,<sup>197</sup> Apple’s vertical restraints had benefited many developers, especially new and small ones without their own reputations for safety and trustworthiness,<sup>198</sup> even as they were found to have harmed others. The court also found that consumer choice reduction alone is not enough to show anticompetitive effects.<sup>199</sup> This is consistent with economic literature finding that consumers gain more utility from a smaller range of meaningful choices to them than from superficially more choices,<sup>200</sup> and that choice reduction or limitation is necessary for curated experiences and is thus an inherent feature of any ecosystem, even “open” ones.<sup>201</sup>

The court also rejected Epic Games’ claim that Apple had illegally tied its App Store to its in-app payment portal under Sherman Act Section 1, as these were found to be a single, integrated product.<sup>202</sup> Despite these findings in Apple’s favor, Apple was still held liable for violating California’s UCL through its restrictions on steering users away from its in-app payment platform through in-app advertisements and notices under that statute’s “tethering” and “balancing” tests.<sup>203</sup>

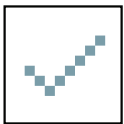
These statutory tests differ to the “rule of reason” anticompetitive effects versus benefits analysis applied under the federal Sherman Act.

Importantly, the court differentiated the case from the Amex precedent, wherein American Express was found not to have violated the federal Sherman Act through an anti-steering provision on its transactional credit card network platform that prevented merchants who accept Amex cards from encouraging consumers to use other cards. The court noted that credit card users, unlike app users, are aware of the other cards that they possess. However, app users are unlikely to be aware of alternative in-app payment options to Apple’s own portal unless they are informed about their existence. The court thus ruled that the net anticompetitive harm of Apple’s anti-steering provision in this case is likely to be greater, since less information about relative quality and price from competitors makes it easier for firms to charge supracompetitive prices or degrade product quality.<sup>204</sup> This attests to the ability of antitrust law courts to appropriately apply liability and tailor remedies based on variations in the anticompetitive effects of a practice in each case, which are likely to differ significantly when it comes to the kind of vertical restraints that the DMA proscribes. Ex-ante rules like the DMA that proscribe the practices entirely preclude such assessments and make no differentiation between conduct based on net competitive benefits or differences in net competitive effects.



The district court verdict was appealed to the Ninth Circuit Court, which affirmed the lower court's findings in favor of Apple and the finding against Apple's anti-steering restraints under California's UCL in 2023.<sup>205</sup> Although the appeals court disagreed with the boundaries of the district court's product market, it found this difference to be harmless and tangential to its verdict affirming the lower court's ruling,<sup>206</sup> and choice of an integrated, multi-sided mobile transactions market definition.<sup>207</sup> The appellate court also overruled the lower court's findings that the app store and in-app purchases were a single product rather than two separate markets,<sup>208</sup> and that a reduction in consumer choice coupled with market power is not *prima facie* (rebuttable) evidence of anticompetitive effect.<sup>209</sup>

However, these errors were also harmless to their decision affirming the lower court's verdicts on all Sherman Act Section 1 claims under the rule of reason as the procompetitive benefits to the multi-sided market still outweighed the anticompetitive effects.<sup>210</sup> The court also found that no less restrictive alternatives identified by the plaintiffs would achieve these benefits,<sup>211</sup> and affirmed the lower court's findings that Apple had not violated the Sherman Act Section 2, as it competed in a duopoly and was thus not a monopolist.<sup>212</sup>



## Market Contestability and Fairness

Unlike current European competition law and jurisprudence, the district court and Ninth Circuit both applied a single, integrated transactions product market that brings together both sides of the transactions on the App Store platform. Notably, however, both courts acknowledged and gave weight to the procompetitive benefits felt by the seller side of the market due to benefits conferred on the buyer side due to conditions imposed on sellers, in other words, due to cross-side feedback/network effects. In so doing, a more complete picture of net competitive harm or benefits to either side of the market was considered than under analysis that solely considered immediate harm to one side of the market. This is possible regardless of whether the relevant market was defined as two separate ones, or as a single integrated one for transactions. Notably, by preventing such a full consideration of the procompetitive benefits of the targeted practice to even just the seller side in isolation, the DMA and similar ex-ante regulation proposals undermine market contestability for sellers that derive net benefits. It is noted that even though U.S. competition law generally upholds the consumer welfare standard, even the DMA and European competition law's goals of promoting market contestability and fairness for sellers independent of end consumer welfare can be upheld through a rule of reason competitive effects analysis that considers sellers as "consumers" of the platform service within a single market. In such a case, market contestability would be one of many possible indicators of consumer welfare as the sellers are deemed to be consumers of an app store's app hosting service. It is further noted that competition law's market definition requirement does not necessarily preclude an assessment of monopolization in duopoly markets as the relevant competition law provision on monopolization can be drafted to recognize duopolies as well. However, this may not be desirable from the standpoint of market contestability, consumer welfare and the competitive process as treating duopoly markets the same as monopoly markets undermines the importance of competition and product differentiation between the platforms. For instance, Apple and Android both apply significantly different policies, conditions of access and vertical restraints to app sellers on their app stores and devices. Mandates that reduce differentiation between the two ecosystem/platform "products" would thus inhibit a form of vigorous competition that caters to different consumer segments.

Even though Apple was not found to be in violation of the federal antitrust laws, its anti-steering app/App Store policies were nonetheless proscribed under California’s UCL. This is because the UCL applies a more expansive test for anticompetitive conduct, the “tethering” and “balancing” tests, than the rule of reason analysis under the Sherman Act.<sup>213</sup> Importantly, however, the UCL still requires a case-by-case assessment of anticompetitive effects that weighs procompetitive justifications against anticompetitive harms even as it allows for redress for injuries to competitors and consumers on either/both sides of the multisided transactions market.

This attests to competition law’s flexibility and adaptability regardless of adjustments to standards for liability or market definition in line with policymakers’ priorities. By contrast, ex-ante rules and regulation allow for the application of different or more expansive standards than competition law may apply, but do not grant sufficient flexibility or adaptability to account for effects on competition, consumer welfare, and market contestability in each case.



## Certainty, Predictability, and Cost

This case illustrates how private rights of action under competition law can reduce costs for enforcement agencies. The court’s nationwide injunction remedy for the anti-steering provision demonstrates that competition litigation need not have effects limited to a single affected plaintiff, and that ex-ante rules are not necessary to ensure relief for all those affected by anticompetitive practices. Importantly, in order to obtain such significant and broad injunctive relief, Epic Games had to establish that (1) it has suffered an irreparable injury; (2) that remedies available at law, such as money damages, are insufficient to compensate for that injury, (3) that, given the balance of hardships between plaintiff and defendant, a remedy in equity is warranted and (4) that a permanent injunction would not be contrary to the public interest.<sup>214</sup> Such tests recognize that remedies against anticompetitive conduct that are too broad risk causing inadvertent harms to competition. By requiring courts to balance hardships and interests between the parties, the test allowed the court to consider the remedy’s effect on both the plaintiff and similarly situated app developers, as well as the Apple ecosystem itself. The court ultimately determined that the anti-steering provision could be severed without significantly impacting other aspects of Apple’s ecosystem and the value it brings to developers and users alike. Ex-ante rules like the DMA preclude such case-by-case analysis and assessment of potential inadvertent consequences of the remedy.

# Section V: Conclusion

Concerns around the perceived market power of large digital platforms, operated by primarily American tech companies, have prompted competition enforcers and policymakers in the United States, EU, and elsewhere to consider ex-ante regulation of these platforms to complement competition law. Unlike U.S. competition law, these proposals, such as the EU's DMA, uphold policy priorities other than consumer welfare, including market contestability and fairness for goods and service sellers on the platforms, with the well-intentioned objective of making markets more accessible and reducing platforms' ability to foreclose or burden competition. Proponents of such ex-ante rules also assert that they will increase certainty, reduce arbitrariness, and lower investigation and litigation costs for enforcers, plaintiffs, and defendants alike. However, by classifying platforms as "gatekeepers" based on somewhat arbitrary criteria that obviate a proper analysis of market definition and market power, rules like the DMA can inhibit rather than promote market contestability, fairness, and the competitive process itself. In so doing, they benefit some competitors at the expense of others and can reduce incentives for platforms and sellers to compete and innovate at consumers' expense.

Platform practices such as self-preferencing, accepting payments for default status, and MFN or price parity clauses carry mixed and potentially procompetitive implications for competition, market contestability, and fairness that can only be ascertained on a case-by-case basis. Similarly, forcing platforms to offer interoperability and data portability, to display "choice screens" in lieu of defaults, and to share proprietary technology and resources with rivals at cost, under FRAND mandates, or even on commercial terms can have mixed and potentially negative competitive effects, including effects on market contestability, fairness, and innovation.

Early and mixed evidence after over a year of the DMA's implementation in the EU supports these findings. It also indicates that DMA enforcement has raised comparable or even greater costs and uncertainty for platforms and competition enforcers alike. By facilitating user fragmentation in digital platform markets, the DMA could also undermine the EU's objective of fostering a single market with lower entry barriers for sellers. Concerningly, evidence indicates that uncertainty and cost around DMA compliance have already slowed the diffusion of cutting-edge technologies and product features, such as AI tools and applications, in Europe, thereby undermining the international competitiveness of EU nations. There is also evidence that DMA "gatekeeper" classification standards, which do not require any finding of market power in a relevant market, render it a discriminatory non-tariff trade barrier against foreign firms.

Examples of high-profile antitrust litigation in the United States, such as the *Google Search* and *Epic Games v. Apple* cases, illustrate how antitrust law rather than ex-ante rules offers a more flexible, adaptable and appropriate approach to regulating competition and tailoring remedies in dynamic digital markets, including multisided transactional platforms. By utilizing general principles established in a growing body of legal precedents to new situations and applying a rule of reason analysis that accounts for the pro- and anticompetitive effects of business conduct in each case, antitrust law minimizes the inadvertent harms to competition, innovation, consumers, market contestability, and fairness that arise through ex-ante mandates and prohibitions on entire classes of conduct.

Such prohibitions and mandates also undermine product/platform differentiation, which can further suppress inter-platform competition and innovation, which is likely to leave consumers and sellers alike worse off. Conversely, antitrust laws and standards can be tailored to more flexibly address issues around market contestability than ex-ante rules, all while minimizing inadvertent harms to consumer welfare. In so doing, it can also preserve important incentives for inter-platform competition while significantly reducing the extent to which competition enforcers and courts, rather than vigorous competition itself, picks “winners.”

Eminent Austrian economist Friedrich Hayek famously wrote that **“the curious task of economics is to demonstrate to men how little they really know about what they imagine they can design,”**<sup>215</sup> and Harold Demsetz similarly cautioned against the fallacy that policymakers and enforcers face a choice **“between an ideal norm and an existing ‘imperfect’ institutional arrangement.”**<sup>216</sup> In reality, the ideal norm for every situation rarely ever exists, and the counterfactual to the existing imperfect institutional arrangement is often worse. Competition law seeks to preserve the conditions for vigorous competition rather than trying to supplant the market process itself. Ex-ante rules, such as the DMA and similar proposals in the United States and abroad, though well-intentioned, typically grant enforcers and policymakers the power to try to design their own version of the competitive process. Evidence indicates that regardless of the imperfections of markets and their institutional arrangements, the competition and innovation that they foster provide a better means of promoting competition and innovation, as well as market contestability. Despite their unique competition challenges, there is no evidence that digital platform markets are any different.



# Endnotes

<sup>1</sup> See Christopher S. Yoo, *Conceptual Frameworks to Guide When to Replace Competition Law with Rules* (Apr. 16, 2024) (Policy Brief) (on file with Mercatus Center at George Mason University).

<sup>2</sup> Alden F. Abbott, *US Antitrust Laws: A Primer* (Mar. 24, 2021) (Policy Brief) (on file with Mercatus Center at George Mason University).

<sup>3</sup> Under US antitrust law, some offenses, such as price fixing, cartel collusion and bid rigging, are considered illegal *per se*. Others are evaluated on a case-by-case basis under the ‘rule of reason,’ which entails an evaluation of anticompetitive effects. See *id.* The US Federal Trade Commission (FTC) also has limited authority to promulgate rules governing unfair methods of competition under the FTC Act Section 5. However, an unfair method of competition is limited to conduct that violates the spirit, letter or public policy of the Sherman Act or Clayton Act, or that would result in a violation of these statutes were it permitted to continue. See Gregory J. Werden, *Unfair Methods of Competition under Section 5 of the Federal Trade Commission Act: What Is the Intelligible Principle?* (May 10, 2023) (Working Paper) (on file with Mercatus Center at George Mason University). Challengers to the FTC’s authority to adopt substantive competition rules have thus argued that the agency’s competition rulemaking authority is limited to procedural rules necessary to carry out the provisions of substantive antitrust law. They also argue that interpreting the FTC Act as conferring substantive competition rulemaking authority upon the agency would be unconstitutional. See Chamber of Com. of the U.S. v. Fed. Trade Comm’n, 732 F. Supp. 3d 674, 677 (E.D. Tex. 2024); see also Complaint at 22, Ryan, LLC v. Fed. Trade Comm’n, 739 F. Supp. 3d. 496 (N.D. Tex. 2024) (No. 3:24-cv-986).

<sup>4</sup> For instance, in the landmark *Trinko* decision, the Supreme Court of the United States (SCOTUS) declined to apply antitrust liability on the basis that the plaintiffs had and were able to apply and seek relief under rules administered by sector-specific executive agencies, namely the Federal Communications Commission (FCC) and New York Public Service Commission. See *Verizon Commc’ns Inv. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 411-13 (2004) [hereinafter *Trinko*]; see also Yoo, *supra* note 1. US antitrust statutes also contain limitations on their own applicability to certain industries or economic sectors that are already regulated. For instance, the FTC Act Section 5 prohibits the FTC from policing unfair methods of competition by certain entities that are highly regulated, such as common carriers under 15 U.S.C. § 45(a)(2).

<sup>5</sup> See Giovanna Massarotto, *Regulating Tech Titans: What American Antitrust Can Learn from Europe*, U. Pa., Inst. for L. & Econ. Rsch. Paper No. 24-33 (2024). The equivalent practice in the United States might involve declaring a wider range of business practices as *per se* illegal for antitrust purposes.

<sup>6</sup> *Id.*

<sup>7</sup> See Yoo, *supra* note 1; Louis Kaplow, *Rules Versus Standards: An Economic Analysis*, 42 DUKE L.J. 557, 570, 577 (1992); Isaac Ehrlich & Richard A. Posner, *An Economic Analysis of Legal Rulemaking*, 3 J. LEGAL STUD. 257, 266-67 (1974).

<sup>8</sup>Yoo, *supra* note 1 at 3-4.

<sup>9</sup> W. Reinsch and K. Suominen, “Are US Digital Platforms Facing a Growing Wave of Ex Ante Competition Regulation.” CTR. FOR STRATEGIC & INT’L STUD. (2023) (citing TAIWAN FAIR TRADE COMM’N WHITE PAPER ON COMPETITION POLICY IN THE DIGITAL ECONOMY (SUMMARY) (2023)). Taiwan’s Fair Trade Commission (TFTC) issued a white paper on “Competition Policy in the Digital Economy” in December 2022 that struck a more skeptical tone on ex ante regulation. The white paper stated the “controversy of whether it is appropriate for competition authorities to implement ex ante controls,” and counseled that “as the digital economy features frequent innovation, short life cycles, and noticeable dynamic competition, the best enforcement principle at this stage is ‘issue driven,’” with an eye toward ex post efforts to “[resolve] problems based on each case.”

<sup>10</sup> Regulation (EU) 2022/1925 of the European Parliament and of the Council of 14 September 2022 on Contestable and Fair Markets in the Digital Sector (Digital Markets Act), 2022 O.J. (L 265) 1 (hereinafter “DMA”).

<sup>11</sup> European Commission Press Release IP/23/4328, Digital Markets Act: Commission Designates Six Gatekeepers (Sep. 6, 2023).

<sup>12</sup> DMA, *supra* note 10 art. 6(5), (11).

<sup>13</sup> See e.g., DMA, *supra* note 10 art. 6(12), Art. 6(7).

<sup>14</sup> DMA, *supra* note 10 art. 6(4); see Giorgio Monti, *The European Union’s Digital Markets Act: Objectives, Operation and Opportunities*, THE ANN. JAPAN ASS’N ECON. L. (2024).

<sup>15</sup> DMA, *supra* note 10 art. 18(1) allows for structural remedies against violators, including forced asset divestiture. DMA, *supra* note 10 art. 30(2) is an example of an article that allows for fines to be imposed on violators.

<sup>16</sup> DMA, *supra* note 10 recital 7; Jaques Crémer, et al., *Fairness and Contestability in the Digital Markets Act*, 40 YALE J. ON REG. 973, 975 (2023).

<sup>17</sup> *Reiter v. Sonotone Corp.*, 442 U.S. 330, 343 (1979), (describing the Sherman Act as a “consumer welfare prescription” (quoting Robert Bork, *The Antitrust Paradox: A Policy at War with Itself* (New York: Basic Books, 1978), 66)); Alden Abbott & Satya Marar, *The Robinson-Patman Act: A Statute at Odds with Competition and Economic Welfare* (June 6, 2023) (Policy Brief) (on file with Mercatus Center at George Mason University) (citing Reiter). Notably, these ideas have also had some influence on EU competition law. The Court of Justice of the European Union (CJEU) has, for instance, acknowledged that consumer welfare is an ultimate goal of antitrust law, that competition on the merits necessarily means that less-efficient competitors that are less attractive to consumers in terms of choice, price, innovation or quality may be forced to quit the market, and that not every exclusionary effect on a competitor will be anticompetitive. See Case C-377/20, *Servizio Elettrico Nazionale SpA v. Autorità Garante della Concorrenza e del Mercato* (May 12, 2022), ECLI:EU:C:2022:379 at 46; Case C-413/14 P, *Intel v. Comm’n* (Sep. 6, 2017), ECLI:EU:C:2017:632, ¶¶ 73, 173, 174.

<sup>18</sup> Abbott, *supra* note 2.

<sup>19</sup> For instance, empirical research by Chicago school economists like Harold Demsetz questioned conventional assumptions that market concentration or durable profit margins were signs of anticompetitive conduct or an anticompetitive market rather than a potential indication that the prevailing firms are simply more efficient competitors better equipped to serve consumers. See Harold Demsetz, *Two Systems of Belief About Monopoly*, in *INDUSTRIAL CONCENTRATION: THE NEW LEARNING* 164, 166–67 (Harvey J. Goldschmid et al. eds., 1974). It is noted that in the 1960s, a merger was deemed presumptively anticompetitive if the merged entity encapsulated over thirty percent of the relevant market; see *United States v. Philadelphia Nat’l Bank*, 374 U.S. 321 (1963). Conversely, more recent jurisprudence acknowledges that market-concentration figures alone are not dispositive as to whether the post-merger entity will raise prices and restrict output, reduce innovation, or harm consumers in other ways without being undercut by competitors or new market entrants. These factors are best assessed through alternative metrics and understanding the specific features and competitive dynamics of the relevant market. See Douglas H. Ginsburg & Joshua D. Wright, *Philadelphia National Bank: Bad Economics, Bad Law, Good Riddance*, 80 ANTITRUST L. J. 377 (2015); Satya Marar, “Artificial Intelligence and Antitrust Law: A Primer” (2024) (Special Study) (on file with Mercatus Center at George Mason University).

<sup>20</sup> See S. 2992, 117th Cong. (the American Innovation and Choice Online Act); S.2033, 118th Cong. (American Innovation and Choice Online Act); H.R. 3816, 117th Cong., (the American Innovation and Choice Online Act); H.R. 3826, 117th Cong. (the Platform Competition and Opportunity Act of 2021); H.R. 3849, 117th Cong. (the Augmenting Compatibility and Competition Enabling Service Switching (ACCESS) Act of 2021); H.R. 3825, 117th Cong. (the Ending Platform Monopolies Act); H.R. 3460, 117th Cong. (the State Antitrust Enforcement Venue Act of 2021); H.R. 7030, 117th Cong. (the Open App Markets Act). See also, *Reining in Dominant Digital Platforms: Restoring Competition to Our Digital Markets: Hearing Before the Subcomm. on Competition Pol’y, Antitrust, & Consumer Rights of the S. Comm. on the Judiciary*, 118th Cong., 10 (2023) (statement of Fiona Scott Morton); Massarotto, *supra* note 5.

<sup>21</sup> See Rohit Chopra & Lina Khan, *The Case for “Unfair Methods of Competition” Rulemaking*, 87 U. Chi. L. Rev. 357 (2020) (placing emphasis on large costs incurred by agencies and plaintiffs during the discovery process, in hiring economic experts, and simply due to the lengthy duration of antitrust litigation). See Fed. Trade Comm’n Office of Inspector Gen., *Management Challenges Facing the Federal Trade Commission* (Sep. 27, 2019); Fed. Trade Comm’n Office of Inspector Gen., *Audit of Federal Trade Commission Expert Witness Services* \*3 (Nov. 14, 2019); Kevin Caves & Hal Singer, *When the Econometrician Shrugged: Identifying and Plugging Gaps in the Consumer Welfare Standard*, 26 GEO. MASON L. REV. 395, 424 (2019).

<sup>22</sup> Yoo, *supra* note 1.

<sup>23</sup> JOSEPH P. BAUER ET AL., *KINTNER’S FEDERAL ANTITRUST LAW* §14.1 (2024). Where such agreements may undermine competition, US antitrust law normally considers whether they violate the Sherman Act Section 1 prohibition on unreasonable restraints on trade. By contrast, restraints that a platform imposes on the use of its own platform may constitute illegal exclusionary conduct if the platform is deemed to be a monopolist in the relevant market and the practice is found to create or help maintain a monopoly under Sherman Act Section 2. Even if the practice does not violate the Sherman Act, it may still violate the FTC Act Section 5 prohibition on “unfair methods of competition” if it violates the spirit, letter or public policy of the Sherman Act, or if it would lead to a Sherman Act violation if allowed to continue. See Abbott, *supra* note 2; Werden, *supra* note 3. Naked price fixing, collusion and bid rigging aside, US courts apply a rule-of-reason case-by-case analysis to determine whether a business practice violates these laws. All vertical restraints are analyzed under the rule of reason. U.S. states also generally enforce their own state antitrust laws that tend to go beyond the scope of the federal laws by imposing lower standards of liability for similar conduct than under the federal Sherman Act’s rule of reason analysis. This is similar to EU regulations that permit member states to introduce their own competition legislation that proscribes a greater range of conduct than the EU law. See Council Regulation 1/2003, 2003 O.J. (L 1)(EC). Importantly, even U.S. state antitrust laws tend to implement legal tests that assess the pro- and anticompetitive effects of a given practice depending on the circumstances of each case. See E.g., *Epic Games, Inc. v. Apple, Inc.*, 559 F. Supp. 3d 898, 923 (N.D. Cal. 2021), where an anti-steering policy enforced against sellers on the defendant’s digital platform (mobile devices and app store) was deemed a violation of California’s Uniform Competition Law (UCL) after it was found not to violate the federal Sherman Act.

<sup>24</sup> See James C. Cooper et al., *Vertical Antitrust Policy as a Problem of Inference*, 23 INT’L J. INDUS. ORG. 639 (2005). After reviewing extensive economic literature on vertical integration and restraints, the authors conclude that “[m]ost studies find evidence that vertical restraints/vertical integration are procompetitive.”

<sup>25</sup> Daniel O’Brien, *The Antitrust Treatment of Vertical Restraint: Beyond the Possibility Theorems*, in REPORT: THE PROS AND CONS OF VERTICAL RESTRAINTS 40, 76 (2008).

<sup>26</sup> Ajay Chaudhary, *What Is the Difference Between iOS & Android: A Complete Guide?*, APPTCHIES, (April 9, 2025) <https://apptechies.com/difference-between-ios-and-android/> [https://perma.cc/U5J4-4XMF].

<sup>27</sup> In contrast to vertical mergers, a substantial body of research indicates the potential for horizontal mergers to raise prices at the expense of consumer welfare when mergers entail close substitute products. See Orley Ashenfelter et al., *Did Robert Bork Understate the Competitive Impact of Mergers? Evidence from Consummated Mergers*, 57 J. L. AND ECON. S67 (2014); Robert Kulick, Jeffrey Prince & Elena Ramirez Pierce, *Integrating the Literature: Theory and Evidence from a Reassessment of the Empirical Research on Vertical Integration* 27 (Int’l Ctr. for L. & Econ., Working Paper Oct. 2025).

<sup>28</sup> Makan Delrahim, “Harder, Better, Faster, Stronger”: *Evaluating EDM as a Defense in Vertical Mergers*, 26 Geo. Mason L. Rev. 1427 (2019).

<sup>29</sup> See RONALD COASE, *THE NATURE OF THE FIRM* (1937), *reprinted in* RONALD H. COASE, *THE FIRM, THE MARKET, AND THE LAW* (1988).

<sup>30</sup> See Lina M. Khan, *The Separation of Platforms and Commerce*, 119 Colum. L. Rev. 973, 1019 (2019).

<sup>31</sup> Kulick, Prince & Pierce, *supra* note 27 at 3.

<sup>32</sup> See, e.g., Tasneem Chipty, *Vertical Integration, Market Foreclosure, and Consumer Welfare in the Cable Television Industry*, 91 AM. ECON. REV. 428 (2001). Chipty studied the vertical integration of US basic and premium cable networks at an aggregate level and found that vertical integration with basic cable networks lead cable operators to offer a greater number of basic services, while integration with premium services resulted in fewer than average networks carried. Despite the plausible foreclosure effects for networks and content providers, Chipty found empirical evidence that consumer welfare increased due to the vertical integration. An important insight from the study was that market penetration (as attested by consumer subscription rates) increased with an increase in the diversity of different types of programs within a subscription package, as opposed to an increase in programs offered generally. This indicates that consumers prefer a smaller range of diverse choices to a broader range of duplicative options even if some providers of those options are foreclosed from the market due to having fewer outlets that can carry their program.

<sup>33</sup> Francine Lafontaine & Margaret Slade, *Vertical Integration and Firm Boundaries: The Evidence*, 45 J. ECON. LITERATURE 629 (2007).

<sup>34</sup> Kulick, Prince & Pierce, *supra* note 27 at 3.

<sup>35</sup> *Id.*

<sup>36</sup> See *Cont’l Tel., Inc. v. GTE Sylvania, Inc.*, 433 U.S. 36, 57–59 (1977) (applying the rule of reason to a non-price vertical restraint); *Leegin Creative Leather Prods., Inc. v. PSKS, Inc.*, 551 U.S. 877, 882 (2007) (overruling *Dr. Miles Med. Co. v. John D. Park & Sons Co.*, 220 U.S. 373, 408 (1911) and applying rule of reason analysis to retail price maintenance. Since this case, all vertical restraints in US antitrust law have been subject to the rule of reason).

<sup>37</sup> See Richard A. Posner, *The Chicago School of Antitrust Analysis*, 127 U. Penn L. Rev. 925, 925–27 (1979); Daniel Sokol, *The Transformation of Vertical Restraints: Per Se Illegality, The Rule of Reason, and Per Se Legality*, 79 Antitrust L. J. 1003, 1004–05 (2014).

<sup>38</sup> Sherman declared on the senate floor that “it is difficult to define in legal language the precise line between lawful and unlawful combinations. This must be left for the courts to determine in each particular case. All that we, as lawmakers, can do is to declare general principles, and we can be assured that the courts will apply them so as to carry out the meaning of the law, as the courts of England and the United States have done for centuries.” 21 CONG. REC. S2460 (daily ed. Mar. 21, 1890); See Fed. Trade Comm’n Office of Comm’r, *Antitrust Policy for the Conservative* (May 1, 2025).

<sup>39</sup> Fed. Trade Comm’n, James C. Cooper et al., *Vertical Antitrust Policy as a Problem of Inference* (Feb. 18, 2005).

<sup>40</sup> See, e.g., Jack Nicastro, *Meta’s Victory Over the Federal Trade Commission Shows the Market Moves Faster Than Antitrust Enforcement*, REASON.COM, (Nov. 19, 2025 4:03 PM). <https://reason.com/2025/11/19/metas-victory-over-the-federal-trade-commission-shows-the-market-moves-faster-than-antitrust-enforcement/> [<https://perma.cc/3L7U-LKE2>].

<sup>41</sup> DMA, *supra* note 10 art. 6(5); Martin Peitz, *How to Apply the Self-Preferencing Prohibition in the DMA*, 14 J. of European Competition L. & Prac. 310 (2023).

<sup>42</sup> DMA, *supra* note 10 art. 6(2). For the purposes of Art. 6(2), non-public data includes “any aggregated and non-aggregated data generated by business users that can be inferred from, or collected through, the commercial activities of business users or their customers, including click, search, view and voice data, on the relevant core platform services or on services provided together with, or in support of, the relevant core platform services of the gatekeeper.”

<sup>43</sup> *Id.*

<sup>44</sup> S. 2992, 117th Cong., *supra* note 20 at § 2.

<sup>45</sup> For example, Ohio’s Attorney General filed a complaint against Google in 2021, seeking to have Google Search classified as a public utility or common carrier. That case is now before the Court of Appeals. See *Ohio ex rel. Yost v. Google LLC*, No. 21-CV-H-06-0274 (Ohio Ct. Com. Pl. June 8, 2021); *Ohio ex rel. Yost v. Google LLC*, No. 21-CV-H-06-0274 (Ohio Ct. App. Aug. 29, 2025); Giovanna Massarotto, *Algorithmic Remedies for Google’s Data Monopoly*, 3-4 (Working Paper, 2025) [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=5394028](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5394028).

<sup>46</sup> See Peitz, *supra* note 41; Publications Office of the EU, *The EU Digital Markets Act: A Report from a Panel of Economic Experts* JRC122910 (2021).

<sup>47</sup> Elizabeth Warren (@ewarren), X, “You can be the umpire, or you can be a player, but you can’t be both at the same time. We need to #BreakUpBigTech so we can level the playing field.” (Dec. 18, 2020, 16:19) <https://x.com/ewarren/status/1340044102386266124?s=20> [<https://perma.cc/C69E-8XYF>].

<sup>48</sup> Ryan Bourne & Brad Subramaniam, *The “Big Tech” Self-Preferencing Delusion* (Cato Institute Briefing Paper No. 136, 2022).

<sup>49</sup> *Id.* (citing Priv. Label Mfrs. Ass’n, PLMA’s 2021 Private Label Yearbook: A Statistical Guide to Today’s Store Brands, 2021); Tanay Jaipuria, *Private Labels and Antitrust*, TANAY’S NEWSLETTER (June 14, 2021).

<sup>50</sup> Seok-Min Lim, *Economies of Scale in Container Shipping*, 25 Mar. Pol’y & Mgmt. 361 (1998).

<sup>51</sup> Andrei Hagiu, Tat How Teh, & Julian Wright, *Should Platforms be Allowed to Sell on Their Own Marketplaces?*, 53 The RAND J. of Econ. 297 (2022).

<sup>52</sup> Gregory Crawford, et al., *Amazon Entry on Amazon Marketplace* (CEPR Discussion Paper 17531, 2022).

<sup>53</sup> See e.g., European Commission, *A Digital Agenda for Europe*, COM (2010) 245 final, at 5 (2010).

<sup>54</sup> DMA, *supra* note 10 art. 6(3)(iii).

<sup>55</sup> DMA, *supra* note 10 art. 6(4)(i).

<sup>56</sup> Note that in comparison to search engines, web browser competition is not nearly as affected by network effects as the ability to provide a more consumer-preferred user experience is not contingent on how many users a browser has. Virtual assistants (including those powered by artificial intelligence) are similarly not as impacted by network effects. Even though they may be ‘trained’ to better serve consumer preferences through a subset of user or trial user data, a sufficiently representative subset of training data can produce a sufficiently competitive virtual assistant to those trained on an even greater volume of users or user data. In other words, there are diminishing returns in productive improvement based on the number of users or queries beyond a certain tipping point. See Jonathan Barnett, *The Case Against Preemptive Antitrust in the Generative Artificial Intelligence Ecosystem*, in ARTIFICIAL INTELLIGENCE AND COMPETITION POLICY, (eds. A. Abbott and T. Schrepel, 2024); Alden Abbott & Satya Marar, *Is Data Really a Barrier to Entry? Rethinking Competition Regulation in Generative AI* (Mar. 31, 2025) (Working Paper) (on file with Mercatus Center at George Mason University). An exception to this general rule would be where the virtual assistant performs a search or search-like function. This function may or may not be powered by an embedded separate search engine.

<sup>57</sup> See Andreas Ortmann, et al., *Defaults and Cognitive Effort*, 212 J. of Econ. Behav. & Org. 1 (2023).

<sup>58</sup> Jonathan Barnett, *Illusions of Dominance?: Revisiting the Market Power Assumption in Platform Ecosystems*, Revisiting the Market Power Assumption in Platform Ecosystems (USC CLASS Research Paper No. CLASS22-29 2023).

<sup>59</sup> See United States et al., v. Google LLC, case No. 20-cv3010 (APM) (D.D.C. Aug. 5, 2024).

<sup>60</sup> See Harold Demsetz, *Why Regulate Utilities?*, 11 J. of L. and Econ. 55 (1968).

<sup>61</sup> The Neeva search engine was launched in June 2020 through an advertising-free paid subscription model. Despite its quality, Neeva failed to generate sufficient revenue and shut down. See Gregory J. Werden, *Harm to the Competitive Process in the Google Case*, (July 9, 2024) (Working Paper) (on file with Mercatus Center at George Mason University) (citing Def.’s Proposed Findings of Fact at 155–61, ECF No. 910; Pl.’s Proposed Findings of Fact at 12, 25, ECF No. 906, United States v. Google LLC).

<sup>62</sup> For instance, the quality of Google Chrome and the Android operating system (or Safari and the iOS operating system) is influenced by the number of users (“network effects”) since feedback from the large body of users of the embedded search engine, maps and other services is used to refine the products over time. If Google or Apple increased the costs to users of accessing or using these ecosystems, then this would likely result in a significant degradation of the user experience for the remaining users, which would benefit providers of competing ecosystems that do not erect such cost barriers.

<sup>63</sup> See Werden *supra* note 61.

<sup>64</sup> Kristian Stout & Ben Sperry, *Comments of the International Center for Law & Economics: RE: Proposed Rule 15 CSR 60-19.020 Prohibition on Restricting Choice of Content Moderator*, INT’L CTR. FOR L. & ECON. n. 7 (July 14, 2025).

<sup>65</sup> See Chipty and discussion, *supra* note 32.

<sup>66</sup> See Spence Purnell, *One of the Flaws in DOJ's Anti-Trust Case: People Overwhelmingly Choose Google*, REASON FOUNDATION (Oct. 4, 2023) <https://reason.org/commentary/one-of-the-flaws-in-doj-s-anti-trust-case-people-overwhelmingly-choose-google/> [<https://perma.cc/F7WU-R7WY>]; Dirk Auer, *The Future of the DMA: Judge Dredd or Juror 8?*, TRUTH ON THE MARKET (Apr. 8, 2024) <https://truthonthemarket.com/2024/04/08/the-future-of-the-dma-judge-dredd-or-juror-8/> [<https://perma.cc/2WE8-JYSS>]; Stout & Sperry, *supra* note 64.

<sup>67</sup> See Stout & Sperry, *supra* note 64 at 6 (“The browser choice screen imposed on Microsoft following antitrust enforcement had such negligible impact that the screen was defunct for months due to a software bug—a lapse that went unnoticed by both regulators and the market, demonstrating the profound lack of user engagement with the remedy.”); Geoffrey Manne & Dirk Auer, *Antitrust Dystopia and Antitrust Nostalgia: Alarmist Theories of Harm in Digital Markets and Their Origins*, 28 *Geo. Mason L. Rev.* 1279, 1385-89 (2020).

<sup>68</sup> OMAR VÁSQUEZ DUQUE, *THE MAGICAL NUMBER 2 (MINUS TWO): AN EMPIRICAL ANALYSIS ON THE EFFICACY OF CHOICE SCREENS TO INCREASE COMPETITION IN DIGITAL MARKETS* (2025).

<sup>69</sup> *Id.*

<sup>70</sup> MARC BOURREAU & JAN KRÄMER, *INTEROPERABILITY IN DIGITAL MARKETS: BOON OR BANE FOR MARKET CONTESTABILITY?* (June 15, 2025).

<sup>71</sup> DMA, *supra* note 10 art. 6(4); 6(7); 7.

<sup>72</sup> See Giuseppe Colangelo & Alba Ribera Martínez, *Vertical interoperability in mobile ecosystems: Will the DMA deliver (what competition law could not)?* 83 *Int'l Rev. of L. and Econ.* (2025).

<sup>73</sup> *Id.*

<sup>74</sup> *Epic Games, Inc. v. Apple, Inc.*, 559 F. Supp. 3d 898, 923 (N.D. Cal. 2021).

<sup>75</sup> Michael Katz & Jonathan Sallet, *Multisided platforms and antitrust enforcement* 127 *YALE L. J.* 2142, 2156 (2018); Mark Armstrong, *Competition in Two-Sided Markets*, 37 *RAND J. ECON.* 668, 677-690 (2006).

<sup>76</sup> See DMA, *supra* note 10 art. 6(7), 6(8), 6(9), and 6(10).

<sup>77</sup> See Lina M. Khan, *The Separation of Platforms and Commerce*, 119 *COLUM. L. REV.* 973 (2019).

<sup>78</sup> See Karga Giritli & Nazli Cansin, *Improving the SEP Licensing Framework by Revising SSOs' IPR Policies 12-13* (2023) (PhD dissertation, University of Glasgow).

<sup>79</sup> See Justus Baron & Daniel F. Spulber, *Technology Standards and Standard Setting Organizations: Introduction to the Searle Center Database*, 27 *J. ECON. & MGMT. STRATEGY* 462 (2018).

<sup>80</sup> *Id.* at 463 (citing PETER SWANN, *THE ECONOMICS OF STANDARDIZATION: AN UPDATE*, (Report for the UK Department of Business, Innovation and Skills (bis)) (Innovative Economics Limited, 2010).

<sup>81</sup> See Anne Layne-Farrar & Koren W. Wong-Ervin, *Standard-Essential Patents and Market Power* 16-47 (2016) (Research Paper) (George Mason Law & Economics). Notably, international competition authorities (such as those in South Korea, China and the United States) acknowledge that mere recognition of a technology as an SEP does not mean that the SEP holder possesses market power and that this can only be ascertained from further examination of an identified relevant product market and its competitive dynamics, potential substitutes etc. This further underscores the inefficacy of ex ante rules that deem a particular resource or technology as essential for doing business and thus mandate a FRAND commitment without identifying and analyzing specific markets. See e.g., Korea Fair Trade Comm'n, *Review Guidelines on Unfair Exercise of Intellectual Property Rights*, § (II)(2)(B) (2014); State Admin. for Indus. & Commerce, *Rules of the Admin. for Indus. and Commerce on the Prohibition of Intellectual Property Rights for the Purposes of Eliminating Or Restricting Competition*, art. 6 (2015); Nat'l Dev. & Reform Comm'n, *Anti-Monopoly Guideline on Intellectual Property Abuse (Draft)*, § (I)(i)(2) (2015); Dep't of Justice & Fed. Trade Comm'n, *Antitrust Guidelines for the Licensing of Intellectual Property (Draft)* § 2.2 (2016).

<sup>82</sup> Layne-Farrar & Wong-Ervin, *supra* note 81. The authors note that market power from holding an SEP can either arise naturally out of the superiority of the technology relative to others (in which case the SSO granting the patent SEP status recognizes market power instead of conferring it), or can less commonly arise from incorporation into the standard. In both cases, the FRAND commitments that the SSO obtains from the SEP holder serve to mitigate market power and promote technological diffusion while preserving incentives to innovate through “crowning” winning technologies with SEP status.

<sup>83</sup> It should be noted that the U.S. Supreme Court's decision in *eBay, Inc. v. MercExchange, LLC*, 547 U.S. 388 (2006) made prohibitive orders significantly more difficult for patent holders to obtain as it overturned the presumption that an injunction would be granted upon a finding of infringement against a valid patent, see Adam Mossoff, "Injunctions for Patent Infringement: Historical Equity Practice Between 1790-1882." *forthcoming in the Harvard Journal of Law & Technology* (2025), 2. This has led to a decline in the granting of injunctions against patent infringement in U.S. courts, see, e.g., Kristina M.L. Acri, *Injunctive Relief in Patent Cases: the Impact of eBay*, 38 HARVARD J. L. & TECH. \_\_ (2025) (finding a statistically significant reduction in courts granting injunctions under the eBay test for infringement of a valid patent during the 2016-2022 timeframe); Kirti Gupta & Jay P. Kesan, *Studying the Impact of eBay on Injunctive Relief in Patent Cases* (2016), <https://ssrn.com/abstract=2816701> (noting a statistically significant reduction in courts granting injunctions under the eBay test for infringement of a valid patent between 2007 and 2015) cited in Adam Mossoff, "Injunctions for Patent Infringement: Historical Equity Practice Between 1790-1882." 3.

<sup>84</sup> Layne-Farrar & Wong-Ervin, *supra* note 81 ( "FRAND royalty rates [for licensing SEPs] are tied to the value the patented technologies contribute to the standard, which inherently accounts for all valuable contributions to the standard. In addition, because licensees know they must license other SEPs to be compliant with a given standard, licensees tend to push back in negotiations if they think an SEP holder is attempting to ask for more than its share. Thus, in contrast to a monopolist, which can set prices without considering the reaction of other firms, an SEP holder cannot act unilaterally and must take into account the value of other SEPs when setting its royalty rates.") (citing Anne Layne-Farrar & Michael Salinger, *The Policy Implications of Licensing Standard Essential FRAND-Committed Patents in Bundles*, 7 (2016)).

<sup>85</sup> Even in the context of patent disputes between licensees and SEP holders over FRAND commitments, research indicates that allowing courts to set FRAND royalty rates directly leads to inefficiently low royalty rates that can cause the "reverse hold up" of SEP-enabled technology when the licensee's best offer is compared to what the court deems to be an adequate FRAND royalty rate. See GREGOR LANGUS, VILEN LIPATOV & DAMIEN NEVEN, *STANDARD ESSENTIAL PATENTS: WHO IS REALLY HOLDING UP (AND WHEN)?* (2013) (based on presentation at World Intellectual Property Organization in March 2013). In order to ensure sufficient innovation incentives to enable optimal technological diffusion, some scholars have suggested that "[FRAND] royalties should be set to maximize the joint surplus stemming from the creation of a standard and the commercial exploitation of the combined contribution of all SEPs" as this kind of methodology "would involve royalty values that reflect 'mutual forbearance from opportunism', allowing implementers to profitably manufacture downstream products that read on SEPs, while enabling SEP holders to obtain royalties sufficient to ensure their continued participation in setting open standards." See Alden F. Abbott, *The Evolving IP-Antitrust Interface in the USA—the Recent Gradual Weakening of Patent Rights*, 2 J. OF ANTITRUST ENF'T 381, 381 (2014); J. Gregory Sidak, *The Meaning of FRAND, Part I: Royalties*, 9 J. COMPETITION L & ECON. 1 (2013). Laws that require companies to provide access to technologies and resources to rivals at "fair and reasonable" cost, including the DMA, do not typically outline or require such a methodology.

<sup>86</sup> See Trinko, *supra* note 4. In the recent Google Search case and remedies verdict, the DC District Court imposed a mandate on Google to provide its search data to rivals on commercial terms, albeit only after a careful assessment of the tradeoffs of this remedy, and as part of narrowly tailoring the appropriate remedies to address the anticompetitive harms. See *United States v. Google LLC*, No. 1:20-cv-3010, at 4, 128 (D.D.C. Sept. 2, 2025). [hereinafter Google Search Remedies Decision].

<sup>87</sup> David Hilzenrath, *NIH DROPS ITS POLICY ON DRUG PRICES*, WASHINGTON POST, (Apr. 11, 1995) <https://www.washingtonpost.com/archive/business/1995/04/12/nih-drops-its-policy-on-drug-prices/319f9152-eb7b-438b-94c0-3740f39feada/> [<https://perma.cc/4JQA-94EB>].

<sup>88</sup> NATIONAL INSTITUTES OF HEALTH (NIH), *THE NIH EXPERIENCE WITH THE REASONABLE PRICING CLAUSE IN CRADAS FY1990-1995* (Nov. 15, 2021).

<sup>89</sup> See Satya Marar & Rishab Sardana, *Putting Amazon in a Box*, DISCOURSE MAG. (Oct. 5, 2023).

<sup>90</sup> Commission to the Council and European Parliament, *Staff Working Document accompanying the Report from the Commission to the Council and the European Parliament Final Report on the E-commerce Sector Inquiry*, SWD/2017/154.

<sup>91</sup> European Commission, *Guidelines on Vertical Restraints*, O.J. C 248/1, ¶¶ 372, 374 (2022).

<sup>92</sup> Giuseppe Colangeo, *Fairness and Ambiguity in EU Competition Policy*, INT'L CTR. L. & ECON. (Feb. 15, 2023) (“The concept of fairness is not foreign to competition law, nor are considerations of fairness new to it. Persistent uncertainty regarding what constitutes fairness has, however, traditionally counseled against its application as a standalone legal standard. Indeed, antitrust enforcers often have been reluctant to define even what constitutes unfair terms and conditions ... policymakers are attracted to “fairness” remedies precisely because the term’s meaning is so ambiguous, thus granting them more discretion and room for intervention.”).

<sup>93</sup> *Id.*; see Harri Kalimo & Klaudia Majcher, *The Concept of Fairness: Linking EU Competition and Data Protection Law in the Digital Marketplace*, 42 EUR. L. REV. 210 (2017); Francesco Ducci & Michael Trebilcock, *The Revival of Fairness Discourse in Competition Policy*, 64 ANTITRUST BULL. 79 (2019); Maurits Dolmans & Wanjie Lin, *How to Avoid a Fairness Paradox in EU Competition Law*, in FAIRNESS IN EU COMPETITION POLICY: SIGNIFICANCE AND IMPLICATIONS 27-76 (Damien Gerard, Assimakis Komninos, & Denis Waelbroeck eds. 2020).

<sup>94</sup> Colangeo, *supra* note 92 at 4; Bart J. Wilson, *Contra Private Fairness*, 71 AM. J. ECON. SOCIOL. 407 (2012).

<sup>95</sup> Colangeo, *supra* note 92.

<sup>96</sup> *Id.*

<sup>97</sup> Johannes Laitenberger, *Fairness in EU Competition Law Enforcement*, EUROPEAN COMM’N (Jun. 20, 2018).

<sup>98</sup> See e.g., *Brown Shoe Co. v. United States*, 370 U.S. 294, 320 (1962); *Brunswick Corp. v. Pueblo Bowl-O-Mat, Inc.*, 429 U.S. 477 (1977).

<sup>99</sup> Colangeo, *supra* note 92.

<sup>100</sup> DMA, *supra* note 10 at Recital 32, 33; DMA, *supra* note 10 art. 12(5).

<sup>101</sup> *Id.*

<sup>102</sup> Dirk Auer & Geoffrey Manne, *From Data Myths to Data Reality: What Generative AI Can Tell Us About Competition Policy (and Vice Versa)*, Competition Pol’y Int’l (2024) (“Google overthrew Yahoo, despite initially having access to far fewer users and far less data; Google and Apple overcame Microsoft in the smartphone OS market despite having comparatively tiny ecosystems (at the time) to leverage; and TikTok rose to prominence despite intense competition from incumbents like Instagram, which had much larger user bases. In each of these cases, important product-design decisions (such as the PageRank algorithm, recognizing the specific needs of mobile users, and TikTok’s clever algorithm) appear to have played a far greater role than initial user and data endowments (or lack thereof,)”); Abbott & Marar, *supra* note 56 at 10.

<sup>103</sup> Ashley Capoot, *Google’s AI Stumbles, ChatGPT’s Emergence ‘Changed the Course’ of Antitrust Case*, CNBC.COM (Sep. 2, 2025 6:25 PM EDT) <https://www.cnbc.com/2025/09/02/google-ai-stumbles-chatgpt-emergence-changed-course-of-antitrust-case.html> [<https://perma.cc/H8UQ-4QNF>].

<sup>104</sup> Abbott & Marar, *supra* note 56 at n. 36.

<sup>105</sup> *Id.*

<sup>106</sup> The analysis provided in this paragraph is adapted from Satya Marar and Alden Abbott’s comments to the Consultation on the first review of the Digital Markets Act Posted by the European Commission Directorate-General for Competition, Directorate-General for Communications Networks, Content and Technology on July 3, 2025.

<sup>107</sup> 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*, (3), 15 (forthcoming, ZEuP, 2021) (“The DMA does away with the need for market definition and replaces it in Art. 2(2) with a list of relevant “core platform services,” namely online intermediation services, online search engines, online social networking services, video-sharing platform services, messenger services, operating systems, cloud computing services and advertising services provided by a core platform service provider.”).

<sup>108</sup> *Id.* at 15 (“With regard to some of the services listed – like search engines, social networking and operating systems – there is strong evidence for a high degree of concentration and a resulting dependency of business users on access to the platform already. In other areas, like messaging, some types of online intermediation and cloud computing, similar dynamics may be possible, although less compelling.”)(citing Damien Geradin, *What Is a Digital Gatekeeper? Which Platforms Should Be Captured by the EC Proposal for a Digital Market Act?* (2021)).

<sup>109</sup> Katz & Sallet, *supra* note 75 at 9.

<sup>110</sup> FTC v. Indiana Federation of Dentists, 476 U.S. 447, 460-461 (1986).

<sup>111</sup> See e.g., Jonathan B. Baker, *Contemporary Empirical Merger Analysis*, 5 GEO. MASON L. REV. 347, 347-351 (1997); Janusz A. Ordover & Daniel M. Wall, *Understanding Econometric Methods of Market Definition*, ANTITRUST 20 (1989); Katz & Sallet, *supra* note 75 at 9, 17.

<sup>112</sup> Timothy F. Bresnahan, *Empirical Studies of Industries with Market Power*, in HANDBOOK OF INDUSTRIAL ORGANIZATION 1011 (Richard Schmalensee & Robert D. Willig eds., 1989).

<sup>113</sup> See e.g., Todd v. Exxon Corp., 275 F.3d 191, 207 (2d Cir. 2001), (recognizing that direct evidence of anticompetitive effects can be used to demonstrate the existence of market power under the rule of reason analysis).

<sup>114</sup> United States v. Visa U.S.A., Inc., 344 F.3d 229, 240 (2d Cir. 2003) (affirming that Visa and Mastercard had violated the Sherman Act Section 1 as their payment networks' rules prohibiting member banks from issuing American Express or Discover cards were an unreasonable restraint of trade).

<sup>115</sup> See CMA, *UK Digital Markets Taskforce, A New Pro-Competition Regime for Digital Markets* (Apr. 4, 2021).

<sup>116</sup> Nicastro, *supra* note 40.

<sup>117</sup> *Id.*

<sup>118</sup> See TAIWAN FAIR TRADE COMM'N WHITE PAPER ON COMPETITION POLICY IN THE DIGITAL ECONOMY (SUMMARY) (2023)

<sup>119</sup> See Margrethe Vestager, *Competition in a Digital Age (2021)*; DMA, *supra* note 10 at Recital 5.

<sup>120</sup> Colangelo *supra* note 92 (“[T]he goal of ensuring equal opportunity in the marketplace by guaranteeing a level playing field among firms has been incorporated in EU antitrust law, reflecting the influence of the philosophy of Ordoliberalism and the Freiburg School of economic thought.”); Niamh Dunne, *Fairness and the Challenge of Making Markets Work Better*, 84 MOD. L. REV. 230, 236 (2021). For example, the Preamble to the Treaty on the Functioning of the European Union (TFEU) references “fair competition,” and TFEU Art. 102 prohibits firms from abusing a dominant market position to impose “unfair trading conditions,” including “unfair purchase or selling prices.” By proscribing such firms from engaging in exclusionary conduct that prevents competitors from entering or expanding in the market, Art. 102 also aims to uphold market contestability.

<sup>121</sup> See Pinar Akman, *Regulating Competition in Digital Platform Markets: A Critical Assessment of the Framework and Approach of the EU Digital Markets Act*, 47 EUROPEAN L. REV. 85 (2022); Schweitzer, *supra* note 107; Giuseppe Colangelo, *DMA Begins*, 11 J. Antitrust Enf't 11, 116-22 (2023); Colangelo, *supra* note 92.

<sup>122</sup> DMA, *supra* note 10 art. 3(6). All of these are factors that may or could enable a firm to raise prices relative to output or quality without losing market share or consumers to rivals. Notably, US antitrust courts determine whether this may be possible by defining relevant markets based on evidence of consumer behavior, specifically product substitution (or lack thereof) in response to an alleged monopolist raising prices or degrading quality. See *United States v. E.I. Du Pont de Nemours & Co.*, 351 U.S. 395 (1956) (finding that a product market is the group of all alternatives which are “reasonably interchangeable by consumers for the same purposes.”)

<sup>123</sup> DMA, *supra* note 10 art. 3(1); Recitals 3, 6.

<sup>124</sup> Nicolas Petit, *The Proposed Digital Markets Act (DMA): A Legal and Policy Review*, 12 J. European Competition L. & Prac. 529-41 (2021) (“While abstract and general standards tend to protect individual freedom more than concrete and individualized rules, the low level of specification of articles 3(1) and 3(6) could raise, rather than limit the Commission’s discretion [to determine gatekeepers] compared to a traditional market power and market definition assessment”).

<sup>125</sup> Robert G. Harris & Thomas M. Jorde, *Antitrust Market Definition: An Integrated Approach*, 72 CALIF. L. REV. 4 (1984).

<sup>126</sup> See *Ohio v. Am. Express Co.*, 585 U.S. 529, 546 (2018) (hereinafter *Amex*).

<sup>127</sup> See e.g., *Id.* at 535 (“A credit card, for example, is more valuable to cardholders when more merchants accept it, and is more valuable to merchants when more cardholders use it.”).

<sup>128</sup> The notion that multisided transaction markets are single, integrated markets for transactions has been criticized because of the non-substitutability of the products that buyers and sellers on the platform are seeking. However, given that services (such as transaction services) are distinct products in their own right, this criticism is largely based on procedural grounds rather than substance. See e.g., Brief of 25 Professors of Antitrust Law as Amici Curiae Supporting Petitioners at 4-5, *Amex*, 585 U.S. 529 (2018) (No. 16- 1454). Another argument against single markets for transactions in transactional multisided platforms is that the interests of the two sides of the transaction may conflict with one another, and that competitive conditions may significantly differ between each side of the transaction on the platform: “[f]or example, for any given credit card transaction, the merchant would rather pay a lower fee to the network, while the consumer would rather receive a higher reward; neither party is interested in the net, two-sided price.” Katz & Sallet, *supra* note 75 at 14-15. However, this only indicates that transactional platforms can compete with and differentiate themselves from each other by adjusting their business models and pricing structure to differently balance buyer and seller interests. For instance, in the absence of market power, a platform that places a ceiling on what sellers on the platform can charge buyers may temporarily lower prices for buyers, but would likely see an exodus of sellers to other platforms, which would also drive an exodus of buyers. Conversely, the price ceiling may attract buyers looking for low prices, which may in-turn attract sellers who cater to these buyers. Thus, ex-ante platform regulations, such as the DMA, risk enhancing the market power of transactional platforms and inhibiting inter-platform competition by limiting the ability of transactional platforms to offer different business models, pricing structures and value propositions that balance buyer and seller interests differently. Importantly, the incentive for competing platforms to optimize pricing structure between the two sides of the market in the manner they deem best is a defining common feature of transactional multisided platforms.

<sup>129</sup> *Times-Picayune Publishing Co. v. United States*, 345 U.S. 594, 610 (1953) (“[E]very newspaper is a dual trader in separate though interdependent markets; it sells the paper’s news and advertising content to its readers; in effect, that readership is in turn sold to the buyers of advertising space.”).

<sup>130</sup> For instance, a newspaper may be more valuable to advertisers based on its readership. But it won’t necessarily be more valuable to subscribers based on the advertisements that it features. By contrast, the value to each user group of a transactional platform is based on the other user group. E.g., an e-commerce marketplace, a mobile app store or a credit card network that facilitates customer-merchant transactions.

<sup>131</sup> See Lapo Filistrucchi et al., *Market Definition in Two-Sided Markets: Theory and Practice*, 10 J. COMPETITION L. & ECON. 293, 301-02 (2014). For instance, newspaper subscribers and advertisers pay newspapers separately for newspapers and advertising space in newspapers respectively. Conversely, e-commerce platforms like Amazon, mobile app stores such as iTunes and Google Play, and credit card networks like Visa and MasterCard, typically receive a commission on each completed transaction between buyer and seller.

<sup>132</sup> Dennis W. Carlton & Ralph A. Winter, *Vertical MFN’s and the Credit Card NoSurcharge Rule*, 40 (2017) (“[C]reating different legal rules for the same economic conduct depending on whether the market can be described as one-sided or two-sided is a mistake that could lead to widespread confusion [in properly evaluating allegedly anticompetitive conduct and effects].”).

<sup>133</sup> See John Yun, “How Epic v. Apple Operationalizes Ohio v. Amex.” 42 JREG BULL. n. 54 (2024).

<sup>134</sup> Comm’n Decision (Summary) of Dec. 19, 2007, Case COMP/34.579—MasterCard, Case COMP/36.518—EuroCommerce, Case COMP/38.580—Commercial Cards, 2009 O.J. (C 264) 8, 10 ¶ 23.

<sup>135</sup> Katz & Sallet, *supra* note 75 at 16 (“One way to do this [where separate markets exist on a multisided platform] is to consider price changes on one side of the platform while holding prices on the other side constant and examining whether there are significant, plausible feedback effects ... if there are feedback effects, then they must be taken into account to avoid reaching misleading conclusions.”). Where two separate product markets, A and B, are defined within a multisided platform, taking *only* the degree to which a business practice’s effect on market A impacts competition in market B is still an assessment of anticompetitive effects in market B. Conversely, weighing the business practice’s overall competitive effects on market A against the effects in market B is *only* appropriate in a single, integrated market. For the purposes of US antitrust law, if this happened in a case that defined two separate markets, A and B, it would be considered an “out of market” effect.

Although the US Supreme Court has not explicitly clarified whether out of market effects are prohibited from consideration in anticompetitive conduct or merger cases, US courts have generally declined to consider out of market effects in such cases. See *Epic Games, Inc.*, *supra* note 74; *United States v. Topco Assocs.* 405 U.S. 596 (1972); JONATHAN B. BAKER, THE ANTITRUST PARADIGM 68, 190 (2019).

<sup>136</sup> See e.g., Google Search Remedies Decision, *supra* note 86.

<sup>137</sup> See Grace Mendez, *The Top 14 European Marketplaces in 2026*, CHANNELENGINE <https://www.channelengine.com/en/blog/top-european-online-marketplaces> [https://perma.cc/Z7K7-HWCU].

<sup>138</sup> *Id.*

<sup>139</sup> Nigel Cory & Robert Holleyman, *Safeguarding U.S. Companies from Unfair South Korean Competition Policies*, NAT'L BUREAU OF ASIAN RSCH. (June 12, 2025) (Pol'y Brief) <https://www.nbr.org/publication/safeguarding-u-s-companies-from-unfair-south-korean-competition-policies/> [https://perma.cc/36PZ-VBHL].

<sup>140</sup> Louis-Daniel Pape & Michelangelo Rossi, *Is Competition Only One Click Away? The Digital Markets Act Impact on Google Maps* (Jul. 2024) (CESifo Working Paper No. 11226).

<sup>141</sup> Javier Delgado, *DMA Implementation Sinks 30% of Clicks and Bookings on Google Hotel Ads*, MIRAI, (May 7, 2025) <https://www.mirai.com/blog/dma-implementation-sinks-30-of-clicks-and-bookings-on-google-hotel-ads/> [https://perma.cc/PBR3-7T77].

<sup>142</sup> Konstancija Gasaitytė, *Apple is expecting a piracy frenzy in Europe*, CYBERNEWS, (Apr. 18, 2025). <https://cybernews.com/tech/apple-anticipating-piracy-frenzy-europe/> [https://perma.cc/ZBF2-EQJW].

<sup>143</sup> BLOOMBERG NEWS, *Apple Blasts EU Laws After First Porn App Comes to iPhones* (Mar. 2, 2025) <https://www.bloomberg.com/news/articles/2025-02-03/apple-blasts-eu-app-laws-after-first-porn-app-comes-to-iphones> [https://perma.cc/XE8H-8FJD].

<sup>144</sup> European Commission Press Release, *Commission Opens Non-Compliance Investigations Against Alphabet, Apple and Meta Under the Digital Markets Act*, (Mar. 25, 2024).

<sup>145</sup> Adam Satariano, *Apple and Meta Are First to Be Hit by E.U. Digital Competition Law*, NEW YORK TIMES, (Apr. 23, 2025) <https://www.nytimes.com/2025/04/23/technology/apple-meta-eu-fines-competition-law.html> [https://perma.cc/48PH-749B].

<sup>146</sup> Jacob Parry, *Apple to Appeal €500M Digital Fine Over EU's Silence in Compliance Talks*, POLITICO, (May 8, 2025 4:27 AM CET) <https://www.politico.eu/article/apple-to-appeal-e500m-digital-fine-over-eus-silence-in-compliance-talks/> [https://perma.cc/5J5J-9XZJ]; Fiona Jackson, *Meta Could Be Fined Every Day If It Does Not Change Ad Model, EU Says*, TECHREPUBLIC (June 27, 2025) <https://www.techrepublic.com/article/news-eu-meta-ad-model-daily-fines/> [https://perma.cc/7YQ7-Y6B4].

<sup>147</sup> Google Search Remedies Decision, *supra* note 86 at 4; Massarotto, *supra* note 45 at 39; Max Gulker, *Consumer Welfare Was Pivotal in the Google Antitrust Remedies Decision*, REASON FOUNDATION (Sept. 23, 2025) <https://reason.org/commentary/consumer-welfare-was-pivotal-in-the-google-antitrust-remedies-decision/> [https://perma.cc/6VSV-P8QV].

<sup>148</sup> Google Search Remedies Decision, *supra* note 86 at 6.

<sup>149</sup> *Id.* at 146; Massarotto, *supra* note 45 at 10.

<sup>150</sup> Douglas H. Ginsburg & Joshua D. Wright, *Antitrust Settlements: The Culture of Consent*, in WILLIAM E. KOVACIC: AN ANTITRUST TRIBUTE – LIBER AMICORUM, 61 (Charbit et al. eds., vol. I, 2013) (“In the U.S., approximately ninety percent of non-merger civil cases are settled by means of consent decrees. Thus, a consent decree could be a likely scenario.”); Massarotto, *supra* note 45 at 11.

<sup>151</sup> Ivan Mehta, *Apple's New Live Translation Feature for AirPods Won't be Available in the EU at Launch*, TECHCRUNCH (Sept. 11, 2025 5:53 AM PDT) <https://techcrunch.com/2025/09/11/apples-new-live-translation-feature-for-airpods-wont-be-available-in-the-eu-at-launch/> [https://perma.cc/53NK-7YCW].

<sup>152</sup> Foo Yun Chee, *Apple to Delay Launch of AI-Powered Features in Europe, Blames EU Tech Rules*, REUTERS (June 21, 2024 1:56 pM EDT) <https://www.reuters.com/technology/artificial-intelligence/apple-delay-launch-ai-powered-features-europe-blames-eu-techrules-2024-06-21/> [https://perma.cc/9GST-QQQT]; Roman Dillet, *Apple Intelligence is Coming to the EU in April 2025*, TECHCRUNCH (Oct. 28, 2024 10:21 AM PDT) <https://techcrunch.com/2024/10/28/apple-intelligence-is-coming-to-the-eu-in-april-2025/> [https://perma.cc/WP5F-XTE4].

<sup>153</sup> Oona Lagercrantz, *Europe's AI Blues: US Companies Slow Deployment*, CEPA (Nov. 1, 2024) <https://cepa.org/article/europes-ai-blues-us-companies-slow-deployment/> [https://perma.cc/36A3-F9N8].

<sup>154</sup> *Id.*

<sup>155</sup> Barry Schwartz, Google Rolls Out AI Overviews in EU regions, SEARCH ENGINE LAND (Mar. 26, 2025 5:56 AM) <https://searchengineland.com/google-rolls-out-ai-overviews-in-eu-regions-453595> [https://perma.cc/RD5Q-NSNJ].

<sup>156</sup> Complaint, United States v. Google, LLC, No. 1:20-cv-03010 (D.DC, 2020) (The DOJ asserted that “Google in recent years has accounted for nearly 90 percent of all general-search-engine queries in the United States, and almost 95 percent of queries on mobile devices.”).

<sup>157</sup> See e.g., Andreas Ortmann, et al., *Defaults and Cognitive Effort*, 212 J. OF ECON. BEHAV. & ORG. 1-19 (2023).

<sup>158</sup> United States, et al. v. Google, LLC, No. 20-cv-3010 (APM) (D.D.C. Aug. 5, 2024), Dkt. No. 1033.

<sup>159</sup> See United States v. Grinnell Corp., 384 U.S. 563, 570–71 (1966) (distinguishing the illegal “willful acquisition or maintenance of [monopoly] power ... from [legal acquisition or maintenance of monopoly power through] growth or development as a consequence of a superior product, business acumen, or historic accident.”).

<sup>160</sup> Jody Godoy, *What Comes Next in Google's Antitrust Case Over Search?*, REUTERS, (Sept. 2, 2025 4:51 PM EDT) <https://www.reuters.com/technology/what-comes-next-googles-antitrust-case-over-search-2025-09-02/> [https://perma.cc/N2GA-MPZC].

<sup>161</sup> Google Search Remedies Decision, *supra* note 86.

<sup>162</sup> United States v. Google LLC, Case No. 20-CV-03010, 7 (D.C. Col. Oct. 8, 2024).

<sup>163</sup> Brown, et al. v. Plata, et al., 563 U.S. 493 (2011).

<sup>164</sup> Ragsdale v. Wolverine World Wide, Inc., 535 U.S. 81 (2002).

<sup>165</sup> United States v. United Shoe Mach. Corp., 391 U.S. 244, 250 (1968).

<sup>166</sup> Christine Tewfik, Zoljargal Osorjamaa & Kazi Ahmed, *Webinar Recap: US v. Google: What Lies Ahead*, A.B.A. ANTITRUST L. SECTION 2 (June 10, 2025).

<sup>167</sup> Herbert J. Hovenkamp, *Structural Antitrust Relief Against Digital Platforms*, 7 J. LAW & INNOVATION 57, 64 (2024); United States v Microsoft Corp 253 F 3d 34, 107 (D.C. Cir. 2001) (hereinafter Microsoft).

<sup>168</sup> Ginsburg v. InBev NV/SA, 623 F.3d 1229, 1235 (8th Cir. 2010).

<sup>169</sup> See Keith N. Hylton, *Remedies, Antitrust Law, and Microsoft: Comment on Shapiro*, 75 ANTITRUST L. J. 773, 783(2009).

<sup>170</sup> Trinko, *supra* note 4 at 407-08 (recognizing that “[c]ompelling [firms like Google] to share the source of their advantage is in some tension with the underlying purpose of antitrust law, since it may lessen the incentive for the monopolist, the rival, or both to invest in those economically beneficial facilities.”).

<sup>171</sup> Erik Hovenkamp & Douglas Melamed, *Appraising the Google Search Antitrust Remedies*, PROMARKET (Sept. 23, 2025) <https://www.promarket.org/2025/09/23/appraising-the-google-search-antitrust-remedies/> [https://perma.cc/8P5T-YYGF] (“Judge Mehta found that Chrome “does not run as a standalone business,” “depends on Google for a host of administrative functions,” and “is deeply reliant on Google’s ‘hyperscale’ technical systems and infrastructure.” A forced divestiture of Chrome would end these synergies.”) (citing the Google Search Remedies Decision, *supra* note 86).

<sup>172</sup> *Id.*

<sup>173</sup> Google Search Remedies Decision, *supra* note 86 at 128-148, 158.

<sup>174</sup> *Id.* Some studies posit that mandatory sharing policies, like unbundling in the telecommunications sector, could lower companies’ incentives to innovate while encouraging opportunistic behavior by rivals. See e.g., Massarotto, *supra* note 45 at n. 81.

<sup>175</sup> Google Search Remedies Decision, *supra* note 86 at 130.

<sup>176</sup> See e.g., *Did Judge Mehta Get Buyer's Remorse After the DOJ's Historic Win?*, COMPETITION ON THE MERITS (Sept. 16, 2025) <https://competitiononthemerits.substack.com/p/did-judge-mehta-get-buyers-remorse> [https://perma.cc/ZWB9-LD82].

<sup>177</sup> See Microsoft, *supra* note 168. Geoffrey Manne of the International Center for Law and Economics argues that Judge Mehta incorrectly applied the causation standard of *Microsoft* by failing to assess whether plaintiffs established that Bing (Google search's closest competitor) *realistically* could have reached efficient scale had Google not entered into the allegedly anticompetitive agreements. Mehta instead found Google liable after concluding that the distribution agreements were "reasonably capable of significantly contributing to maintaining [Google's] monopoly power in the relevant market." Manne notes that "[i]f all that were required to win such a case were the reasonable capability of an agreement to contribute to a dominant firm's competitive position, then no exclusive or quasi-exclusive agreement would ever be legal." [emphasis original]. Geoffrey A. Manne, *A Critical Analysis of the Google Search Antitrust Decision*. (White Paper) (ICLE 2024). Other researchers have argued that the Microsoft causation standard for nascent competition was entirely inappropriate for the Google Search case and the normal 'but for' causation standard for Section 2 monopolization should have been applied instead. They note that "[e]ven potential competition in the counterfactual can be assessed qualitatively in [the Google Search case] because Apple was already operating in the market environment and there is ample evidence on its decision-making process about creating search functionalities." Kai-Uwe Kühn & Miroslava Marinova, *The Battle for Search: United States v. Google LLC and Its Implications for Antitrust Law*, CONCURRENCES REV. 3-4 (2025). These arguments are likely to be raised by Google in its forthcoming appeal of the decision.

<sup>178</sup> Complaint for Injunctive Relief, Epic Games, Inc., *supra* note 74.

<sup>179</sup> See *id.* (Epic Games argued that Apple's restrictions had harmed "(i) app distributors, who are foreclosed from competing with Apple and innovating new methods of distributing iOS apps to users outside the App Store . . . (ii) app developers, who are denied choice on how to distribute their apps . . . and (iii) consumers, who are likewise denied choice and innovation.").

<sup>180</sup> Epic Games, Inc. *supra* note 74 at 1036-1037.

<sup>181</sup> *Id.* at 921.

<sup>182</sup> Amex, *supra* note 126 at 529.

<sup>183</sup> *Id.* at 546.

<sup>184</sup> Amex, *supra* note 126 at 547.

<sup>185</sup> *Id.* at 535.

<sup>186</sup> See Yun, *supra* note 133 at n. 66 (citing Andrei Hagiu, *Proprietary vs. Open Two-Sided Platforms and Social Efficiency* 19 (Working Paper No. 06-12, AEI-Brookings Joint Ctr. Mar. 14, 2006) ("By being able to balance the interests of the two sides through its pricing structure, a proprietary platform may come closer to the socially optimal level of adoption than a platform simply pricing at marginal cost on both sides.")).

<sup>187</sup> See CMA, *supra* note 115.

<sup>188</sup> Epic Games, Inc., *supra* note 74 at 1043-1044.

<sup>189</sup> *Id.* at 1036, 1037.

<sup>190</sup> Epic Games, Inc., *supra* note 74 at 1036, 1037.

<sup>191</sup> *Id.*

<sup>192</sup> Epic Games, Inc., *supra* note 74 at 1040, 1041, 1043.

<sup>193</sup> *Id.* at 1037.

<sup>194</sup> Epic Games, Inc., *supra* note 74 at 1040, 1041.

<sup>195</sup> *Id.* at 1007, 1011.

<sup>196</sup> Epic Games, Inc., *supra* note 74 at 1007, 1011.

<sup>197</sup> *Id.*

<sup>198</sup> Epic Games, Inc., *supra* note 74 at 1007, 1011.

<sup>199</sup> *Id.* at 1038.

<sup>200</sup> See Chipty and discussion, *supra* note 32.

<sup>201</sup> See Hanno Kaiser, *Are "Closed Systems" an Antitrust Problem?*, 7 COMP. POL'Y INT'L 91, 97 (2011); Richard H. Thaler et al., *Choice Architecture*, in THE BEHAVIORAL FOUNDATIONS OF PUBLIC POLICY 428, 430 (2014); Yun, *supra* note 133 at 29.

<sup>202</sup> Epic Games, Inc., *supra* note 74 at 1046.

<sup>203</sup> *Id.* at 1053, 1055.

<sup>204</sup> See Natalia Moreno Bellosso, *Epic Games v. Apple: A Case Summary* (Oct.11, 2021).

<sup>205</sup> See Epic Games, Inc., *supra* note 74 at 994-96.

<sup>206</sup> *Id.* at 973.

<sup>207</sup> Epic Games, Inc., *supra* note 74 at 981.

<sup>208</sup> *Id.* at 994, 996.

<sup>209</sup> Epic Games, Inc., *supra* note 74 at 983, 985.

<sup>210</sup> *Id.* at 997, 998.

<sup>211</sup> Epic Games, Inc., *supra* note 74 at 990.

<sup>212</sup> *Id.* at 999.

<sup>213</sup> Under California's UCL, the plaintiff has standing to bring a claim for an anticompetitive restraint of trade as either a competitor or quasi-consumer. As a competitor, the plaintiff has to show that the defendant's conduct either (1) threatens an incipient violation of an antitrust law; (2) contravenes the spirit or policy of an antitrust law because its effects are comparable to or the same as a violation, or (3) otherwise significantly harms or threatens competition. Any anticompetitive effects are weighed against procompetitive justifications, and both must be 'tethered' to proof of actual or threatened impact on competition or to some legislatively declared policy. If plaintiff brings a suit as a quasi-consumer, then it need not satisfy the 'tethering' requirement, and may instead satisfy a 'balancing' test, whereby the utility of the defendant's conduct is weighed against the gravity of harm to the alleged victim. Epic was deemed to have standing as both a competitor to Apple in terms of its payment service, and as a quasi-consumer of Apple's transactional app store platform. Apple was found liable for its anti-steering provision under both the tethering and balancing tests. Bellosso, *supra* note 205.

<sup>214</sup> *Sonner v. Premier Nutrition Corp.* (Sonner I), 971 F.3d 834 (9th Cir. 2020).

<sup>215</sup> FRIEDRICH A. VON HAYEK, *THE FATAL CONCEIT – THE ERRORS OF SOCIALISM, VOLUME I OF THE COLLECTED WORKS OF F.A. HAYEK* 76 (W. W. Bartley III, ed. 1988).

<sup>216</sup> Harold Demsetz, *Information and Efficiency: Another Viewpoint*, 12 J. L. & Econ. 1 (1969).

