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**IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF NEW JERSEY**

JACQUELINE WATSON,  
individually and on behalf of all others  
similarly situated,

Plaintiff,

v.

APPLE INC.,

Defendant.

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Case No. \_\_\_\_\_

**CLASS ACTION COMPLAINT FOR  
DAMAGES AND INJUNCTIVE  
RELIEF**

**JURY TRIAL DEMANDED**

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## I. INTRODUCTION

1. Apple Inc.—the largest smartphone manufacturer in the United States—has employed anticompetitive practices to illegally maintain monopoly power over the smartphone market. Apple’s goal, as summarized by Steve Jobs in 2010, has been to “lock customers into [Apple’s] ecosystem” and make Apple[’s] ecosystem even more sticky”<sup>1</sup> by erecting technological and other barriers that make it difficult for consumers to switch to other mobile devices. Instead of competing on the merits through innovation and price, Apple sought to trap consumers on its platform, locking them into iPhone usage and forestalling competing products.<sup>2</sup>

2. On March 21, 2024, the Antitrust Division of the United States Department of Justice and sixteen States sued Apple for violations of Section 2 of the Sherman Act, citing internal documents that detail Apple’s anticompetitive conduct. In functioning markets, firms innovate to win business against competitive threats by making their own products better, cheaper, and more secure. Apple’s strategy, in contrast, erects artificial barriers to keep users from purchasing competing devices. The central pillar of Apple’s strategy to “get people hooked to the ecosystem,” as one Apple executive put it, was to suppress technologies and innovation that would make it easier for consumers to switch device ecosystems (*i.e.*,

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<sup>1</sup> *United States v. Apple Inc.*, No. 2:24-cv-04055 (D.N.J. filed Mar. 21, 2024) (“DOJ Complaint”), ¶ 3.

<sup>2</sup> DOJ Complaint, page 3.

replace an iPhone with another manufacturer's device). By locking in its customer base, Apple cripples competition from actual and would-be smartphone manufacturers, resulting in higher prices, lower quality, reduced innovation, reduced choice, and lower quality output.

3. Apple maintained a smartphone monopoly by suppressing five key technologies that otherwise would have stimulated competition:

- **Super Apps:** Super apps can host an array of programs and device features and thereby serve as a gateway to accessing the functionality of a smartphone. The problem for Apple is that super apps facilitate switching devices by allowing users to switch to other devices (manufactured by Apple competitors) with the same super apps. Recognizing that super apps reduce costs and barriers to switching, Apple has blocked them through an array of technological and contractual restraints.
- **Cloud Streaming Game Apps:** Apple blocked cloud streaming gaming apps for similar reasons. Cloud streaming game apps allow users to play games in the cloud, decreasing the importance of expensive hardware like Apple's. To prevent cross-platform competition, Apple constrained cloud streaming game apps on its smartphones.
- **Messaging Apps:** Recognizing that high-quality messaging apps with cross-platform functionality would threaten its monopoly, Apple degrades the functionality of third-party messaging apps. Apple restricts cross-platform messaging in part to reinforce "obstacle[s] to iPhone families giving their kids Android phones."
- **Smartwatches:** Apple also has made the Apple Watch incompatible with non-Apple smartphone devices, such as Android phones, while strategically degrading the functionality of third-party cross-platform smartwatches. By making the Apple Watch incompatible with other smartphones, Apple makes switching even more cost prohibitive; an

Apple user would not only need to purchase a new phone, but a new smartwatch as well.

- **Digital Wallets:** Digital wallets store payment information and permit users to pay by “tapping” their smartphone on a payment terminal. Apple has blocked third-party digital wallets from accessing the technologies needed to perform tap payments using Apple’s devices. Apple has thus ensured that only its own proprietary and Apple-specific app—Apple Pay—can provide this functionality.

4. Apple’s conduct stifles new paradigms that threaten its smartphone dominance. The cloud, if unrestrained by Apple’s anticompetitive tactics, could enable high-end functionality on a lower-priced smartphone, or make users device-agnostic. As one Apple manager recently observed, “Imagine buying a [expletive] Android for 25 bux at a garage sale and it works fine . . . . And you have a solid cloud computing device. Imagine how many cases like that there are.” By trapping consumers within its proprietary ecosystem, Apple has suppressed competition from other manufacturers to maintain a durable monopoly over the smartphone market. And Apple has exploited its monopoly power to overcharge hundreds of millions of consumers on smartphones, resulting in historic returns.

5. Today, Apple charges as much as \$1,599 for an iPhone, earning a high margin on each sale. Further, when developers invent a new product or service for iPhone users, Apple demands up to 30% of the price of an app it did not create. Then, when a consumer purchases an additional product or service within that app, Apple extracts up to *another* 30%, again for something Apple did not create or develop.

The result is higher prices for American consumers and reduced innovation for smartphone apps.

6. Apple protects its monopoly with a series of restraints that it could not impose in a competitive market. When customers buy coffee or pay for groceries, Apple charges a fee for every “tap-to-pay” transaction, imposing its own costly interchange fee on financial institutions. When an iPhone user runs an internet search, Google shares some of the advertising revenue generated by the search with Apple. Consumers like Plaintiff, who purchased iPhones at supracompetitive prices and have been deprived of innovation in a competitive smartphone market, suffered harm from Apple’s anticompetitive practices.

7. Plaintiff accordingly seeks to represent a Class of individuals who purchased iPhones directly from Apple. Plaintiff demands a trial by jury and treble damages, injunctive relief, and other appropriate relief based on Apple’s illicit monopolization.

## **II. PARTIES**

### **A. Plaintiff**

8. Plaintiff Jacqueline Watson is a resident of the State of New York. Plaintiff Watson purchased an iPhone 11 Pro Max directly from Defendant Apple.

**B. Defendant**

9. Apple Inc. is a corporation incorporated under the laws of California with its principal place of business at One Apple Park Way, Cupertino, California 95014. Apple is a global technology company and one of the world's most valuable public companies with a market capitalization of over \$2.5 trillion. In fiscal year 2023, Apple generated annual net revenues of \$383 billion and net income of \$97 billion. Apple's net income exceeds any other company in the Fortune 500 and the gross domestic products of more than 100 countries.

10. The iPhone is the primary driver of Apple's growth and profitability. Apple gains profit margins of more than 30% on devices alone—significantly higher than its smartphone competitors. iPhone sales have made up a majority of Apple's annual revenue every year since 2012.

11. Apple increasingly extracts revenue from iPhone users beyond the initial smartphone sale. For example, Apple offers iPhone upgrades, apps and in-app payments, paid digital subscription services (*e.g.*, Apple's music streaming, TV, news, gaming, fitness, and cloud storage subscriptions), accessories (*e.g.*, tracking devices, headphones, chargers, iPhone cases), and more. Apple refers to these offerings as "Services" and "Wearables, Home, and Accessories," respectively. In fiscal year 2023, these offerings accounted for nearly one-third of Apple's total revenue, or four times what Apple earned from selling its computers. Some of the



largest drivers of revenue within these categories are Apple's smartwatch, the Apple Watch, and Apple's App Store, where iPhone users purchase and download apps. In recent years, Services have accounted for an increasing share of Apple's revenues, even as U.S. consumers continue to access these services primarily through the iPhone. In fiscal year 2023, Apple spent \$30 billion on research and development—and \$77 billion on stock buybacks.

### **III. JURISDICTION AND VENUE**

12. The Court has federal subject matter jurisdiction over this action pursuant to 15 U.S.C. § 26 and 28 U.S.C. §§ 1331 and 1337, as the action alleges violations of section 2 of the Sherman Act, 15 U.S.C. § 2, that are actionable under sections 4 and 16 of the Clayton Act, 15 U.S.C. §§ 15(a) and 26.

13. The Court also has subject matter jurisdiction pursuant to 28 U.S.C. § 1332(d) because this is a class action in which the aggregate amount in controversy exceeds \$5,000,000 and at least one member of the putative class is a citizen of a state different from that of Apple.

14. This Court has personal jurisdiction over Apple, and venue is proper in this District under Section 12 of the Clayton Act, 15 U.S.C. § 22 and under 28 U.S.C. §§ 1391 because it purposefully directed its business activity toward this jurisdiction and had substantial contacts with this jurisdiction.

15. Apple engages in, and its activities substantially affect, interstate trade and commerce. Apple provides a range of products and services that are marketed, distributed, and offered to consumers throughout the United States, including the states in which Plaintiff and the Classes reside, across state lines, and internationally.

#### **IV. TRADE AND COMMERCE**

16. Apple's conduct alleged herein occurred within the flow of interstate commerce, including in this District, and was intended to and did have a direct and substantial effect upon such commerce.

17. Apple designed, manufactured, sold, and shipped iPhones in a continuous and uninterrupted flow of interstate commerce throughout the United States, which included sales of iPhones in this District, advertisement of iPhones in media in this District, and employment of sales personnel in this District. Apple's conduct had and continues to have a direct, substantial, and reasonably foreseeable effect on interstate commerce throughout the United States, including commerce within this District.

#### **V. THE MOBILE PHONE INDUSTRY**

##### **A. Background**

18. Mobile phones are portable devices that enable communication over radio frequencies instead of telephone landlines. These signals are transmitted by equipment covering distinct geographic areas, or "cells," which is why mobile

phones were originally called cell phones. Over time, mobile phones began to offer a wider array of features, and more and more people bought a mobile phone. Today, nearly every American adult owns a mobile phone.

19. Smartphones combine the functionality of a traditional mobile phone with advanced hardware and software components. Smartphones not only can make phone calls but allow users to listen to music, send text messages, take pictures, play games, access software for work, manage their finances, and browse the internet. Consumers choose between smartphones based, in part, on their functionality. In a competitive market, smartphone manufacturers would vigorously compete and innovate to provide the best functionality, for both hardware and software components.

#### **B. Smartphone Hardware**

20. A smartphone's hardware includes any element that is physical, such as the screen, the battery, the camera, the processor, the memory, etc. Hardware provides the basic functions and capabilities of the phone, such as displaying images, storing data, capturing photos, making calls, and so on. Higher performing smartphones typically contain better materials like glass and metal instead of plastic, are manufactured to higher standards that make them more durable, and have higher quality displays.

21. Semiconductor chipsets are hardware that run the smartphone and provide central processing of software instructions, graphics, video, display, memory, data storage, and connection to wireless networks. Chipsets that offer superior performance—faster processing and network connections, better graphics, more storage—are costly and therefore included only in more expensive performance smartphones. Superior smartphones typically have higher quality cameras, longer battery life, and advanced biometrics, such as face scanning.

22. Smartphones also contain several antennas that allow the phone to communicate with other smartphones, accessories, or other devices using standard communication protocols such as Wi-Fi, Bluetooth, and Near-Field Communications (“NFC”).

➤ Wi-Fi, a wireless networking technology, uses radio waves to provide wireless high-speed Internet access through mobile devices, computers, printers, and other equipment. “Wi-Fi” refers to IEEE 802.11 standards that define the protocols enabling communications with current Wi-Fi-enabled wireless devices.

➤ Bluetooth allows smartphones to use shortwave radios to communicate with accessories like headphones and smartwatches. An industry-wide Bluetooth standard specifies technological requirements so that all Bluetooth devices can recognize and interact with each other.

➤ NFC allows smartphones to interact with NFC-enabled devices, such as a credit card terminal. NFC relies on short-range wireless technologies, including radio signals, to communicate and share information.

**C. Smartphone Operating Systems, Applications, and Other Software**

23. Software drives the non-physical workings of a smartphone, such as the operating system, apps, games, settings, etc. Software is responsible for telling the hardware what to do and how to do it, such as launching apps, playing games, adjusting brightness, connecting to Wi-Fi, and so forth.

24. A smartphone's operating system is key software that manages both the hardware and other software programs on the device. All iPhones are preloaded with Apple's proprietary, exclusive iPhone operating system called iOS. The only other significant mobile operating system in the United States is Google's Android, which works with smartphones manufactured by Samsung, Google, Motorola, and smaller players.

25. Software applications ("apps") are programs that perform specific tasks at the user's request, such as sending messages, playing music, or web browsing. Apps rely on the operating system to function. More specifically, apps communicate with a smartphone's operating system through application programming interfaces ("APIs").

26. “Native” apps work with a particular smartphone operating system. Apple’s native iOS apps work with iPhone, and native Android apps work with Android smartphones.

27. Most app developers do not regard Android as a substitute for iOS or iOS as a substitute for Android. Virtually all consumers use a single smartphone and do not “multi-home” by carrying an Android phone and the iPhone at the same time. Consequently, a developer cannot reach iPhone users on Android or Android users on iPhones. Most developers therefore create native apps for both iOS and Android to reach the greatest number of smartphone users.

28. Developing apps for the iPhone and for other smartphone platforms enables users on one platform to reach users on the other. For example, a dating app developer must ensure that users on iPhones can meet users on Android, and vice-versa. A money-sharing app must ensure that Android device users can send money to iPhone users, and vice versa.

29. To minimize the risks and costs of maintaining different features across different smartphones, app developers typically provide a similar user experience for native apps on iPhones and Android smartphones. Developers nonetheless must program native apps to work with a specific operating system, and apps may not interoperate or synchronize across different operating systems.

30. “Middleware” software provides similar APIs and functionality across different operating systems and devices. Developers thus can create cross-platform applications without needing to write separate code for individual operating systems or devices—developers can rely on the APIs exposed by the middleware rather than APIs that only work on specific operating systems or devices. Apple has long understood how, by increasing scale and interoperability, such middleware can help promote competition.

31. Examples of middleware include internet browsers, internet or cloud-based apps, super apps, and smartwatches. While not meeting the technical definition of middleware, certain other products and services may have the same economic effect as middleware, such as eliminating the added expense of adapting a product or experience across different hardware or operating systems. Middleware, as used herein, refers both to technical middleware and to products and services that, while not technically middleware, have the same economic effect.

32. Cloud-based technologies run on hardware and software in remote computing centers (“the cloud”). Although the user experiences the technology on their smartphone, the complex computing that produces the experience and that carries out user commands happens in the cloud. Thus, cloud apps can deliver rich experiences on smartphones with less capable hardware than iPhones currently contain.

**D. Smartphones Are Unique Platforms That Benefit from Being Open**

33. Smartphones create a product platform through the cluster of services and features that they offer. Smartphones not only make phone calls but also allow users to listen to music, send text messages, take pictures, play games, access software, manage their finances, and browse the internet.

34. Platforms like smartphones bring together different groups that benefit from each other's shared involvement. For example, a food delivery app brings together restaurants, delivery people, and consumers.

35. The technology and economics of a smartphone platform differ from that of a simultaneous transaction platform, such as a credit card. Smartphone platforms compete on pricing and features independently of app store transactions. Unlike with credit card transactions—where a single simultaneous action depends on both sides of the transaction—consumers value smartphone platforms for a variety of reasons other than facilitation of simultaneous transactions. Consumers care about non-transactional smartphone components, such as its camera, and they care about non-transactional app components, such as their features and functionality.

36. A platform's value to users—and to the platform operator—increases with new apps and new features. To create these economic benefits for itself and its users, Apple has opened its smartphone platform to third-party developers. Apple



did so to capture the value produced by their inventions and innovations. No extensive regulatory framework mandates that Apple allow third-party developers, or oversees its interaction with them. In this way, smartphone platforms are distinct from other platforms, like landline telephone networks, whose value-adding features were built primarily by the platform operator, and which were only opened to third parties as a result of regulation. When a third-party developer creates a valuable new iPhone feature, consumers benefit and consumer demand for Apple's products increases. Thus, the iPhone smartphone platform has enormous value, derived in part from the contributions of millions of developers. Absent the features and functionality created by third-party developers, the iPhone would be less functional for consumers and less profitable for Apple.

## **VI. RISE OF APPLE'S MONOPOLY**

37. In January 2001, Apple introduced iTunes, software built on Apple's QuickTime architecture, and advertised it as "Jukebox Software" for organizing and listening to music. The initial version of iTunes was only compatible with Apple's Mac computers. Later that year, Apple debuted the iPod, a portable digital audio player that worked alongside iTunes to "let[] you put your entire music collection in your pocket and listen to it wherever you go." Like iTunes, the initial iPod was only compatible with Mac computers.

38. In October 2003, partly enabled by the outcome of the Microsoft antitrust litigation, Apple launched a cross-platform version of iTunes that was compatible with the Windows operating system. As a result, a much larger group of users could use the iPod and iTunes. The iTunes Store allowed users to buy and download music and play it on their iTunes computer application or on the iPod. Apple benefited substantially from this new customer base, selling hundreds of millions of iPod devices over the next two decades.

39. The iPod business line established a blueprint for Apple: a premium device, a large number of platform participants, and a digital storefront. Apple sought to induce as many consumers and third-party participants to the iTunes platform as possible and offer consumers a wide selection of content, products, and services created by those third parties. With this structure, Apple profited from device sales in the first instance and then from the fees that Apple charged consumers who purchased the products and services it made available.

40. In 2007, Apple launched the iPhone, offering high-end hardware and software applications, called “apps,” on a mobile operating system that mimicked the functionality and ease of use of a computer. The pricing for the original iPhone started at \$499, or approximately \$733 when adjusted for inflation. After the novelty of the device subsided, for the following two models—the iPhone 3G (released in 2008) and the iPhone 3GS (released in 2009)—Apple charged \$199 for a base model

(or approximately \$291 and \$293, respectively, adjusting for inflation). While Apple initially offered only a small number of iPhone apps, Apple soon realized how a broader set of entrepreneurial, innovative developers could increase iPhone revenue. Apple therefore invited third parties to offer iPhone users additional features, which Apple itself controlled and monetized.

41. Apple invited third-party developers to create native iPhone apps. Apple released a software development kit enabling native apps to be built for Apple's operating system ("iOS"). Apple also offered developers ways to earn money through apps sales and subscriptions and other app features. By 2009, Apple highlighted the value of third-party apps to iPhone users, with the trademarked slogan: "There's an app for that."

42. In 2010, then-CEO Steve Jobs discussed how to "further lock customers into our ecosystem" and "make Apple['s] ecosystem even more sticky." In 2014, Apple executives continued to strategize about how to "get people hooked to the ecosystem."<sup>3</sup>

43. Since the iPhone's inception, Apple has built and sustained the most dominant U.S. smartphone ecosystem, including by attracting third-party developers to create apps that users could download using the App Store, a digital storefront.

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<sup>3</sup> DOJ Complaint, ¶ 3.

As developers created improved products, content, apps, and services, more people bought iPhones, motivating still more third-party app developers.

## **VII. APPLE HAS MONOPOLY POWER IN THE RELEVANT MARKETS**

44. Apple has monopoly power in the market for performance smartphones. All smartphones compete against each other in a broad relevant market. But industry participants, including Apple, assess competition among smartphones in narrower markets that amount to submarkets of the larger all-smartphone market.

45. The market for performance smartphones is the appropriate market. Market participants, including Apple, do not consider entry-level smartphones competitors to be a reasonable substitute for performance smartphones. Apple chooses not to compete to sell new smartphones in the entry-level tier. The most relevant market to assess its conduct therefore excludes this tier.

46. Regardless how the relevant market is framed, as set forth below, Apple holds monopoly power.

### **A. The Relevant Markets Are Performance Smartphones and Smartphones**

#### **1. Performance Smartphones Are a Relevant Product Market**

47. Performance smartphones are a relevant product market within the broader smartphone market. This narrower market includes those smartphones that

compete with most iPhones and excludes the lowest-end smartphones, which industry participants sometimes refer to as “entry-level” smartphones.

48. Industry participants recognize performance smartphones as distinct. They frequently group smartphones into tiers that include entry-level smartphones and higher tiers such as “premium” or “flagship.” Apple has long recognized a distinction between these higher-end smartphones and lower-end, entry-level smartphones. Apple’s own documents demonstrate it does not consider entry-level smartphones as competing with the iPhone and other performance smartphones.<sup>4</sup>

49. Performance smartphones have distinct characteristics and uses as compared to other smartphones. For example, entry-level smartphones are generally made with lower-quality materials and are less durable (*e.g.*, plastic instead of metal and glass). They have lower-performance components, such as slower processors and lower-capacity storage, which prevent users from running more intensive applications or storing large volumes of pictures and data. Entry-level smartphones often lack features such as an NFC antenna allowing consumers to use their phone to make payments or access passes for public transit.

50. Because of these differences, among others, between entry-level smartphones and performance smartphones, entry-level smartphones are not reasonable substitutes for performance smartphones. Moreover, competition from

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<sup>4</sup> See DOJ Complaint, ¶ 167.

non-performance smartphones is not sufficient today to prevent Apple from exercising monopoly power in the performance smartphone market.

## **2. Smartphones Are a Broader, Alternative Relevant Product Market**

51. Smartphones also are a relevant product market, and are distinct from mobile phones that offer less capable hardware and software options than smartphones. These other phones, sometimes called “feature phones,” may offer basic web browsing in addition to calling and messaging options, but do not offer the breadth of access to the internet or third-party apps as smartphones. Similarly, these phones often have lower-quality hardware, such as poorer displays or cameras, and rely on physical keyboards instead of smartphone touch screens. Thus, these phones are not reasonable substitutes for smartphones.

52. Smartphones are also distinct from other portable devices, such as tablets, smartwatches, and laptop computers. These devices lack the combination of portability, size, and function that consumers rely on in a smartphone, even if they offer some similar capabilities. As such, none of these other products are reasonable substitutes for smartphones.

53. Apple, other participants in the market, and the public recognize that smartphones are distinct from feature phones and other portable devices.

54. Competition from feature phones, or other alternatives, is not sufficient to prevent Apple from exercising monopoly power in the smartphone market.

**B. The United States Is a Relevant Geographic Market**

55. The United States is a relevant geographic market for the sale of performance smartphones and smartphones. Users in the United States demand services offered by U.S. telecommunications companies when they purchase a smartphone. While Apple sells smartphones worldwide, its users remain geographically limited. Most U.S. consumers in the market for performance smartphones use their phones in the United States. U.S. consumers who purchase a smartphone require a service plan with a U.S. telecommunications company to connect the phone to cellular and mobile networks.

56. In addition, potential new smartphone entrants to the U.S. market must comply with telecommunications regulations and other legal requirements. Some international smartphone makers are effectively barred from offering their smartphones to U.S. consumers.

57. Consumers in the United States could not avoid or defeat an increase in the price of performance smartphones or smartphones by purchasing and importing smartphones from abroad. As a result, Apple sets prices for a smartphone in the United States separately from the same smartphone in other countries. For example, Apple reduced the price of the iPhone 11 in China relative to the United States because Apple faced greater competition in China. The added competition derived in part from a popular super app placing competitive pressure on Apple and making

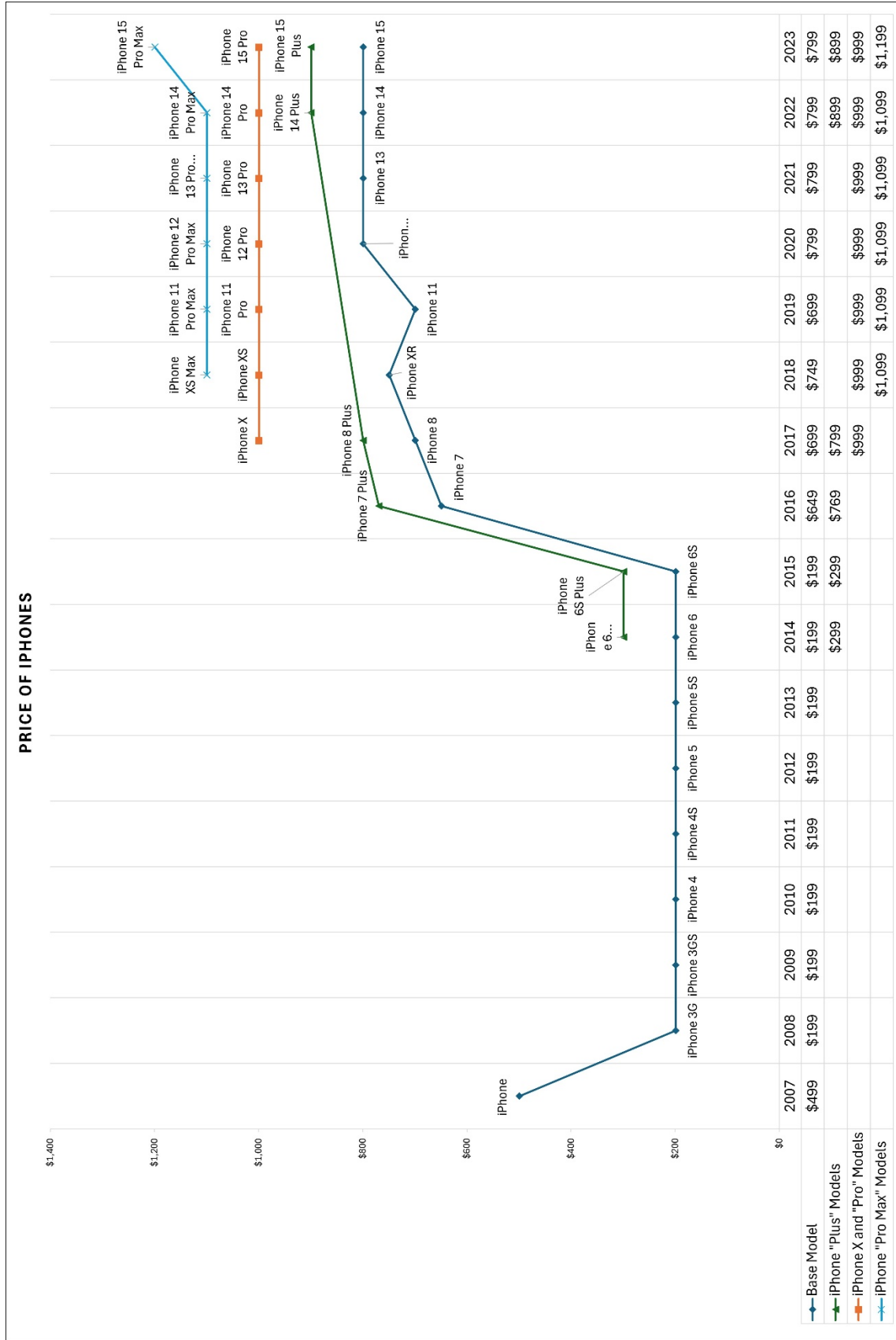
it easier for users to switch from an iPhone to a rival smartphone. Hence, competition in China prevents Apple from commanding the same prices for the iPhone in China than it does in the United States.

**C. Apple Has Monopoly Power in the Performance Smartphone and Smartphone Markets in the United States**

58. Apple has monopoly power in the smartphone and performance smartphone markets because in each of these markets, Apple has the power to control prices or exclude competition. Further, Apple holds substantial and durable market shares in these markets. Apple’s market shares likely underestimate Apple’s power as they are protected by significant barriers to entry, network effects, and switching costs. Apple recognizes and exploits these barriers to entry, network effects, and switching costs to repel competition from rival platforms and innovations, products, and services that may diminish consumer reliance on the iPhone. Apple’s power likely will increase.

59. Apple has the ability to set prices without regard to competition. The price of an iPhone has increased significantly over the years. When released in June 2010, an iPhone 4 cost \$199. The iPhone 15—released in 2023—started at \$799 for a base model, \$899 for a Plus model, \$999 for “X” and “Pro” models, and \$1,199 for a “Pro Max” model. The chart below shows the pricing of various iPhone models from 2007 to the present.





60. Apple’s profits and profit margins, for nearly every aspect of the iPhone, further evidence Apple’s monopoly power. Apple’s per-unit smartphone profit margins far exceed those of its next most profitable rival. Apple charges cellular carriers considerably more than its rivals to buy and resell its smartphones to the public, and employs contract clauses that may impede the ability of carriers to promote rival smartphones, a harmful exercise of monopoly power that is mostly concealed from view. Apple also extracts fees from developers—as much as 30% when users buy apps or make in-app payments. Apple also increasingly charges developers additional fees to promote their apps in the App Store. This is one of the fastest-growing parts of Apple’s services business, with revenue “increasing by more than a third to \$4.4B in FY 2022.”

61. Apple extracts a 0.15% commission from banks on credit card transactions through its digital wallet; none of its smartphone competitors with digital wallets, however, charge any fee. Apple predicts that it will collect nearly \$1 billion in worldwide revenue from Apple Pay fees by 2025. A recent report by the U.S. Consumer Financial Protection Bureau suggests these revenues will only increase, as “analysts expect the value of digital wallet tap-to-pay transactions will grow by over 150 percent by 2028.”

62. These indicia of Apple’s monopoly power are direct evidence of its monopoly power in the relevant markets.

63. Apple's market shares in the smartphone and performance smartphone markets are durable. Apple's U.S. market share by revenue is over 70% in the performance smartphone market and over 65% for all smartphones. Over the past decade these market shares stabilized.

64. Apple's smartphone market shares understate Apple's dominance and probable growth in key demographics, including among younger American consumers. One-third of all American iPhone users were born after 1996, as compared to just 10% for Samsung, Apple's closest smartphone competitor.<sup>5</sup> Surveys show that up to 88% of U.S. teenagers expect to purchase an iPhone for their next smartphone.<sup>6</sup> In addition, iPhone users tend to come from higher income households.<sup>7</sup> Because smartphone users generally use a single smartphone to access related products and services, Apple's key user groups enable it to capture greater spending on iPhone-related products and services, realize higher margins per user as compared to rivals, and exercise more control over developers and other market participants.

65. The vast majority of app developers consider iPhones and Android devices as complements, not substitutes, because developers must build apps that

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<sup>5</sup> <https://www.tomsguide.com/news/the-iphone-is-no-1-with-gen-z-by-far-and-social-fear-is-a-big-reason-why>

<sup>6</sup> <https://www.pipersandler.com/teens>

<sup>7</sup> <https://www.marketingdive.com/news/survey-iphone-owners-spend-more-have-higher-incomes-than-android-users/541008/>

run on both platforms for single-homing consumers. In effect, the lack of multi-homing among users necessitates multi-homing among developers. This market reality enhances Apple's power over developers that seek to reach users on smartphones—especially performance smartphones running sophisticated apps.

66. Apple's power over developers, in turn, further binds iPhone purchasers to Apple's ecosystem by limiting users' ability to transfer their apps and data to non-Apple devices, making it difficult if not impossible for users to switch away from Apple devices. And as existing iPhone users commit to Apple, new smartphone buyers are less likely to buy a non-Apple smartphone as a substitute for an iPhone because buying an iPhone allows them to interact more seamlessly with friends and family who already have iPhones. For these and other reasons, any potential demand cross-elasticity between iPhones and other smartphones does not prevent Apple from imposing monopolistic prices on iPhone purchasers.

67. Apple's monopoly power in the relevant markets is protected by substantial barriers to entry and expansion. With fewer than 10% of smartphone purchasers in the United States buying their first smartphone,<sup>8</sup> fewer new customers are available for Apple's rivals. Instead, rivals must encourage existing iPhone users to switch to another smartphone when they replace or upgrade their phone. Hence, switching costs—many of which Apple creates or exacerbates—impose substantial

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<sup>8</sup> <https://www.pewresearch.org/internet/fact-sheet/mobile/>

barriers to entry and expansion for rival smartphone manufacturers. These barriers are growing increasingly impenetrable. Nearly 94% of iPhone owners in the United States replace their iPhone with another iPhone.<sup>9</sup> According to the DOJ Complaint, one U.S. cellular carrier estimates that in a given quarter, as many as 98% of iPhone users on its network replace or upgrade their iPhone with another iPhone. These exceedingly high retention rates stem from the increased switching costs for consumers due to Apple's monopoly power and anticompetitive conduct.

68. Apple's monopoly power in the relevant markets is protected by other barriers to entry, expansion, or repositioning as well. For example, launching a new smartphone requires significant investments in acquiring expensive and scarce components such as mobile chips and specialized glass for screens. In addition to supply, other major barriers to entry include product design, software development, regulatory approval, manufacturing, marketing, and customer service. Also, because consumers often buy smartphones through mobile carriers, new entrants or those seeking to expand or reposition must meet the carriers' technical requirements to access the major carrier networks in the United States. New entrants and smaller rivals also must negotiate distribution agreements and induce carriers and other retailers to promote their products to consumers.

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<sup>9</sup> <https://www.nytimes.com/2023/09/11/technology/apple-iphone-17.html#:~:text=The%20gap%20between%20the%20two,Partners%2C%20a%20technology%20research%20firm.>

69. Apple's iPhone platform is protected by several additional barriers to entry and expansion, including strong network and scale effects and high switching costs and frictions. An iPhone user who changes to an Android smartphone faces significant financial, technological, and behavioral obstacles to switching. The user may need to transfer large amounts of data (e.g., contacts), purchase new apps, transfer or buy new subscriptions and accessories, and re-learn how to operate their smartphone using a new interface. These switching costs and frictions are even higher when the different devices and operating systems cannot communicate and interoperate using software applications, APIs, and other functionality.

70. These entry barriers thwarted many large, well-financed companies from entering the relevant markets. Amazon released its Fire mobile phone in 2014 but could not profitably sustain its business and exited the following year. Microsoft discontinued its mobile business in 2017. HTC exited the market by selling its smartphone business to Google in September 2017. Even LG exited the smartphone market in 2021. Today, only Samsung and Google remain as non-Apple participants in the U.S. performance smartphone market. Barriers are so high that Google is a distant third to Apple and Samsung despite the fact that Google controls development of the Android operating system.

71. Direct indicia confirm Apple's monopoly power. For instance, Apple can and does profitably forgo innovation without fear of losing customers to

competitors. In February 2020, Apple’s vice president of iPhone marketing stated: “In looking at it with hindsight, I think going forward we need to set a stake in the ground for what features we think are ‘good enough’ for the consumer. I would argue were [sic] already doing \*more\* than what would have been good enough.” After identifying old features that “would have been good enough today if we hadn’t introduced [updated features] already,” she explained, “anything new and especially expensive needs to be rigorously challenged before it’s allowed into the consumer phone.” In other words, because of Apple’s monopoly, American consumers receive smartphone innovation that is only “good enough,” instead of the best possible innovation as vigorous competition would require.

#### **VIII. APPLE UNLAWFULLY MAINTAINS ITS MONOPOLY POWER**

72. While indispensable to the success of the iPhone, developers and accessory makers also pose an existential threat to Apple’s extraordinary profits by empowering consumers to “think different” and choose perfectly functional, more affordable, and potentially more innovative and attractive alternative smartphones. Apple’s smartphone business model, at its core, invites as many participants as possible, including iPhone users and third-party developers, to join its platform and insists on contractual terms that impose a significant tax. At the same time, Apple restricts its platform participants’ ability to negotiate or compete on price through alternative app stores, in-app payment processors, and more. Apple delays, degrades,

or outright blocks technologies that would facilitate competition in the smartphone markets, including by decreasing barriers to switching to another smartphone. The suppressed technologies would provide a high-quality user experience on any smartphone, which in turn would require smartphones to compete on their merits, and on price.

73. Apple suppresses innovation through contractual restrictions that it selectively enforces through its control of app distribution and its “app review” process. Moreover, Apple denies access to key points of connection between apps and the iPhone’s operating system (called Application Programming Interfaces or “APIs”). Apple can enforce these restrictions due to its position as an incumbent intermediary between product creators such as developers, on the one hand, and users on the other.

74. To protect its smartphone monopoly—and the extraordinary profits that monopoly generates—Apple repeatedly chooses to make its products worse for consumers to prevent competition from emerging. The non-exhaustive examples summarized below, individually and collectively, have contributed to Apple’s ability to acquire and maintain its smartphone monopoly, including by increasing switching costs for users, leading to higher prices, fewer choices, reduced output, and less innovation for users and developers alike. Apple has used one or both mechanisms



(control of app distribution or control of APIs) to suppress the following technologies, among others:

➤ **Super apps** provide a user with broad functionality in a single app. Super apps can improve smartphone competition by providing a consistent user experience that can be ported across devices. A single application can provide multiple services including payment and instant messaging services, effectively becoming an all-encompassing, self-contained commerce and communication platform that embraces many aspects of personal and commercial life. Notable examples of super apps include Alipay, Tencent’s WeChat in China, Tata Neu in India and Grab in Southeast Asia. Apple’s suppression of super apps harms all smartphone users—including Apple users—by denying them access to higher-quality experiences, and harms developers by preventing them from innovating and selling more products.

➤ **Cloud streaming game apps** provide users with a way to play computing intensive games in the cloud. Cloud streaming games (and cloud streaming in general) can prompt smartphone competition by decreasing the importance of expensive hardware for accomplishing high-compute tasks on a smartphone. Suppressing cloud streaming games harms users by denying them the ability to play high-compute games, and it harms developers by preventing them from selling such games to users.

➤ **Messaging apps** allow users to communicate with friends, family, and other contacts. Messaging apps that work equally well across all smartphones can improve competition among smartphones by allowing users to switch phones without changing how they communicate. Apple makes third-party messaging apps on the iPhone worse, both generally and relative, to Apple Messages, Apple's own messaging app, including by prohibiting third-party apps from sending or receiving carrier-based messages. By doing so, Apple intentionally degrades quality, privacy, and security for its users and others without iPhones. Apple also harms developers by artificially constraining the size of their user base.

➤ **Smartwatches** are an expensive accessory that typically must be paired with a smartphone. Smartwatches that can be paired with different smartphones permit users to retain their investment in a smartwatch when switching phones, decreasing costs of switching from one smartphone to another. By suppressing key functions of third-party smartwatches—including the ability to respond to notifications and messages and to maintain consistent connections with iPhone—Apple denies users access to high-performing smartwatches with preferred styling, better user interfaces and services, or superior batteries. Apple likewise harms smartwatch developers by decreasing their ability to innovate and sell products.

➤ **Digital wallets** are an increasingly important smartphone use. Digital wallets that work across smartphone platforms allow users to move from one

smartphone brand to another with decreased friction, among other benefits. Apple has denied users access to digital wallets with enhanced features and denied digital wallet developers—often banks but also other smartphone manufacturers—the opportunity to deliver advanced digital payments services for their customers.

75. By maintaining its monopoly over smartphones, Apple harms consumers in a wide variety of additional ways. For example, by denying iPhone users the ability to choose a trusted banking app as their digital wallet, and instead forcing users to use only Apple-authorized products in the digital wallet, Apple keeps control over both the consumer and the stream of income generated. Apple also prohibits the creation and use of alternative app stores curated to reflect a consumer's preferences with respect to security, privacy, or other values. These and numerous other features, subject to competing innovation, would benefit consumers and free them to decide what smartphone to buy and what apps and products to patronize. Allowing consumers to make these choices, however, is an obstacle to Apple's ability to maintain its monopoly.

**A. Apple Harms Competition by Imposing Contractual Restrictions, Fees, and Taxes on App Creation and Distribution**

76. Soon after the iPhone's introduction, Apple executives began to fear that "disintermediation" of (activity that sidestepped) its platform and the commoditization of the iPhone would threaten Apple's substantial profits from iPhone sales and related revenue streams. Apple exercised its control of app creation

and app distribution in key cases to cement the iPhone and App Store as the primary gateway to apps, products, and services. Apple often claims these rules and restrictions are necessary to protect user privacy or security, but Apple's documents show otherwise: Apple imposes restrictions to benefit its bottom line by thwarting direct, disruptive competition for its iPhone platform fees and for the importance of the iPhone platform itself.

77. According to the co-founder and chief technology officer of the Basecamp app:

It's complete tyranny, and the rules are often interpreted differently by different reviewers because they're intentionally left vague. So we live in constant fear we may have violated these vague rules, and that the next update to our applications will be blocked by Apple. There are countless examples where developers large and small have been denied access to publish their applications without explanation for days or even weeks at a time.

78. Three aspects of Apple's efforts to protect and exploit its smartphone monopoly are worth noting. First, Apple exercises its control over app distribution and app creation to dictate how developers innovate for the iPhone, enforcing rules and contractual restrictions that prevent or delay developers from innovating in ways that would threaten Apple's power. Apple thereby influences and restrains the course of digital innovation both on and off the iPhone.

79. Second, Apple dissuades iPhone users from using products and services that compete with or threaten Apple's monopoly. In doing so, Apple increases the

cost and friction of switching away from the iPhone and generates extraordinary profits through subscription services (like Apple's proprietary music, gaming, cloud storage, and news services), advertisements within the App Store, and accessories like headphones and smartwatches.

80. Third, Apple extracts monopoly rents, including in the form of app fees and revenue-share requirements, from third parties. Apple has long collected a tax in the form of a 30% commission on the price of any app downloaded from the App Store, a 30% tax on in-app purchases, and fees to access the tools needed to develop an iPhone native app. While Apple has reduced the tax it collects in certain instances, Apple still extracts 30% from many app transactions.

81. As Apple exercised its control of app distribution and app creation, Apple slowed its own iPhone innovation and extracted more revenue and profit from its existing customers through subscriptions, advertising, and cloud services. These services have served to increase the cost of switching from the iPhone to another smartphone. Many of these services—including Apple's proprietary gaming, cloud storage, and news service—are exclusive to the Apple ecosystem, causing significant friction for iPhone users who try to use alternative services on another smartphone. Apple's conduct further shows that Apple recognized the importance of digital products and services for the success of the iPhone, even as it restricted the

development and growth of non-iPhone products and services—especially those that might make it easier for iPhone users to switch to another smartphone.

82. Each step in Apple’s course of conduct built and reinforced its smartphone monopoly. The cumulative effect of this course of conduct has been to maintain and entrench Apple’s smartphone monopoly at the expense of consumers such as Plaintiff. Despite major technological changes over several years, Apple’s power to control app creation and distribution and extract supracompetitive rents has remained largely the same, unconstrained by competitive pressures or market forces. That this conduct—and the high prices it reifies—has been impervious to competition reflects the success of Apple’s acquisition and maintenance of its smartphone monopoly, the strength of that monopoly, and the extended durability of Apple’s power.

83. Although Apple’s monopoly maintenance has taken many forms and continues to evolve, Apple’s anticompetitive conduct is exemplified by its contractual rules and restrictions for several products and services: super apps, cloud streaming apps, messaging apps, smartwatches, and digital wallets. By stifling these technologies, among others, Apple reinforces its smartphone monopoly not by making its products more attractive to users, but by discouraging innovation that threatens Apple’s monopoly and competitive disruption to the iPhone. The

cumulative anticompetitive effect of Apple’s continuing course of exclusionary conduct is even more powerful than that exerted by each act standing alone.

1. **Super Apps: Apple prevented apps from threatening its smartphone monopoly by undermining programs that reduce user dependence on the iPhone**

84. For years, Apple denied its users access to super apps because it viewed them as “fundamentally disruptive” to “existing app distribution and development paradigms” and Apple’s monopoly power.<sup>10</sup> Apple feared super apps because it recognized that as they become popular, “demand for iPhone is reduced.” Apple consequently used its control over app distribution and app creation to effectively prohibit developers from offering super apps, instead of competing on the merits.

85. A super app is an app that can serve as a platform for smaller “mini” programs. By using standard web programming languages, mini programs are cross platform, meaning they work the same on any web browser and on any device. Developers can therefore write a single mini program that works whether users have an iPhone or another smartphone.

86. Super apps can provide significant benefits to users. For example, a super app with an array of mini programs might allow users to easily discover and access a wide variety of content and services without setting up and logging into multiple apps, not unlike how Netflix allows users to find and watch thousands of

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<sup>10</sup> DOJ Complaint, ¶ 60.

movies and television shows in a single app. As one Apple executive put it, “who doesn’t want faster, easier to discover apps that do everything a full app does?” Restricting super apps makes users worse off and sacrifices the short-term profitability of iPhones for Apple.

87. Super apps reduce user dependence on the iPhone, including the iOS operating system and Apple’s App Store. A super app is a form of middleware that can host apps, services, and experiences without requiring developers to use the iPhone’s APIs or code.

88. As users interact with a super app, they rely less on the smartphone’s proprietary software and more on the app itself. Eventually, users become more willing to choose a different smartphone because they can access the same interface, apps, and content they desire on any smartphone that has the same super app. Developers can also write mini programs that run on the super app itself, without the need for separate apps for iPhones and other smartphones. These dynamics lower barriers to entry for smartphone rivals, decrease Apple’s control over third-party developers, and reduce switching costs.

89. Apple recognizes that super apps with mini programs would threaten its monopoly. According to the DOJ Complaint, as one Apple manager put it, allowing super apps to become “the main gateway where people play games, book a car, make payments, etc.” would “let the barbarians in at the gate.” When a super



app offers popular mini programs, “iOS stickiness goes down” with the result of eroding Apple’s monopoly.

90. Apple’s fear of super apps arises from first-hand experience with popular super apps in Asia. Apple does not want U.S. users to benefit from similar innovations. For example, in a Board of Directors presentation, Apple highlighted the “[u]ndifferentiated user experience on [a] super platform” as a “major headwind” to growing iPhone sales in countries with popular super apps due to the “[l]ow stickiness” and “[l]ow switching cost.”<sup>11</sup> Similarly, a super app created by a U.S. company would threaten Apple’s smartphone dominance in the United States. Apple noted as a risk in 2017 that a potential super app created by a specific U.S. company would “replace[] usage of native OS and apps resulting in commoditization of smartphone hardware.”<sup>12</sup>

91. Apple did not respond to the risk—that super apps might disrupt its monopoly—by innovating. Instead, Apple used its control over app distribution to stifle others’ innovation. Apple created, strategically broadened, and aggressively enforced its App Store Guidelines to effectively block apps from hosting mini programs. Apple’s conduct discouraged investments in mini program development

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<sup>11</sup> DOJ Complaint, ¶ 66.

<sup>12</sup> *Id.*

and caused U.S. companies to abandon or limit support for the technology in the United States.

92. Part of what makes a super app valuable to consumers is that finding and using mini programs within a super app is easier than navigating many separate apps, passwords, and set-up processes using an app store like Apple's. But instead of making discovery and use of mini programs easy for users, Apple made it nearly impossible.

93. Since at least 2017, Apple has arbitrarily imposed exclusionary requirements that restrict mini programs and super apps without justification or need. For example, Apple required apps in the United States to display mini programs using a flat, text-only list of mini programs. Apple also banned displaying mini programs with icons or tiles, such as descriptive pictures of the content or service offered by the mini program. Apple even banned apps from categorizing mini programs, such as by displaying recently played games or more games by the same developer. These restrictions throttle use of mini programs and ultimately degrade the iPhone by discouraging developers from creating apps and other content that would be attractive to users.

94. Apple also selectively enforced its contractual rules with developers to prevent them from monetizing mini programs. For example, even for developers willing to pay Apple's monopoly tax, Apple blocked mini programs from accessing

the APIs needed to implement Apple’s in-app payment (“IAP”) system. Similarly, Apple blocked developers’ ability to use in-app payment methods other than directly using IAP. While Apple allows other, less-threatening apps to use a virtual currency, Apple blocked super apps from creating a convenient virtual currency for consumers to use in mini programs. Apple thus squelched super adds in their infancy in service of its U.S. monopoly.

**2. Cloud Streaming Apps: Apple prevented developers from offering cloud gaming apps that reduce dependence on the iPhone**

95. For years, Apple blocked cloud gaming apps that would have given users access to desirable apps and content without need to pay for expensive iPhones. In Apple’s words, it feared a world where “all that matters is who has the cheapest hardware” and consumers could “buy[] a [expletive] Android for 25 bux at a garage sale and ... have a solid cloud computing device” that “works fine.”<sup>13</sup> Apple’s conduct made its own product worse because consumers missed out on cloud-based apps and content. This conduct also cost Apple substantial revenues from third-party developers. At the same time, Apple also stifled the growth of these cross-platform apps on *other* smartphones. And Apple prevented the emergence of technologies that could reduce what consumers pay for iPhones.

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<sup>13</sup> DOJ Complaint, ¶ 71.

96. Cloud streaming apps let users run a computationally intensive program without needing to process or store the program on the smartphone itself. Instead, a user’s smartphone relies on the computing power of a remote server, which runs the program and streams the result back to the phone. Cloud streaming allows developers to bring cutting-edge technologies and services to smartphone consumers—including gaming and interactive artificial intelligence services—even if their smartphone includes hardware that is less powerful than an iPhone.

97. Cloud streaming has significant benefits for users. Apple has promoted the iPhone 15 by promising that its hardware is powerful enough to enable “next-level performance and mobile gaming.”<sup>14</sup> Yet powerful hardware is unnecessary if games can be played via cloud streaming apps. With a cloud game, the user still experiences and plays the game on the smartphone, but the game is run by hardware and software in remote computing centers (“the cloud”). Thus, cloud gaming apps allow gaming on smartphones without the need for users to purchase powerful, expensive hardware. And, where different smartphones run desirable games equally well, users with access to cloud streamed games may be more willing to switch from an iPhone to a smartphone with less expensive hardware.

98. Cloud streaming also aids developers. For example, instead of re-writing the same game for multiple operating systems, cloud platforms can act as

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<sup>14</sup> DOJ Complaint, ¶ 73.

middleware that allows developers to create a single app that works across iOS, Android, and other operating systems. Cloud streaming also provides more and simpler options for offering subscriptions, collecting payments, and distributing software updates. All of this helps game developers achieve economies of scale and profitability they might not otherwise reach and reduces their dependence on iOS and Apple's App Store.

99. Apple wielded its power over app distribution to effectively prevent third-party developers from offering cloud gaming subscription services as a native app on the iPhone. Even today, the iPhone does not allow cloud gaming subscriptions.

100. For years, Apple imposed the onerous requirement that any cloud streaming game—or any update to a cloud streaming game—be submitted as a stand-alone app for approval by Apple. The need to submit individual cloud games for review by Apple increased the cost of releasing games on the iPhone and limited the number of games a developer could make available to iPhone users. The highest quality games, referred to as AAA games, typically require daily or even hourly software updates across different platforms. If these updates need to be individually approved by Apple, developers must either delay their updates across all platforms or only update their games on non-iOS platforms, potentially making the iOS version

of the game inferior to or incompatible with non-iOS versions until Apple approves the update.

101. Until recently, Apple would have required users to download cloud streaming software separately for each individual game, install identical app updates for each game individually, and make repeat visits to Apple's App Store to find and download games. Apple's conduct made cloud streaming apps so unattractive to users that no developer designed one for the iPhone.

102. Apple further undermines cloud gaming apps by requiring cloud games to use Apple's proprietary payment system and requiring game overhauls and payment redesigns specifically for the iPhone. Apple's rules and restrictions effectively force developers to create a separate iOS-specific version of their app instead of creating a single cloud-based version that is compatible with several operating systems, including iOS. As a result, developers expend substantial time and resources re-engineering apps to bring cross-platform apps like multi-player games to the iPhone.

103. Cloud streaming apps in general, not limited to gaming, could force Apple to compete vigorously against rivals. As one Apple manager recognized, cloud streaming eliminates "a big reason for high-performance local compute" and thus eliminates one of the iPhone's advantages over other smartphones because "all

that matters is who has the cheapest hardware.”<sup>15</sup> The result is a lessened need for users to buy expensive phones with advanced hardware. This problem does not “stop at high-end gaming,” but applies to “a number of high-compute requirement applications.”<sup>16</sup>

**B. Apple Uses Application Programming Interfaces and Other Critical Access Points in the Smartphone Ecosystem to Control the Behavior of Third Parties to Insulate Itself from Competition**

104. Allied to its anticompetitive restrictions on super apps and cloud streaming apps, Apple uses APIs and other critical access points in the smartphone ecosystem, particularly in messaging, smartwatches, and digital wallets, to control the behavior of third parties and further insulate itself from competition.

**1. Messaging: Apple protects its smartphone monopoly by degrading and undermining cross-platform messaging apps and rival smartphones**

105. Apple undermines cross-platform text messaging to cement “obstacle[s] to iPhone families giving their kids Android phones.”<sup>17</sup> Apple could have made a better cross-platform messaging experience by creating iMessage for Android but concluded that doing so “will hurt us more than help us.”<sup>18</sup> Apple therefore continues to impede innovation in smartphone messaging, for the purpose

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<sup>15</sup> DOJ Complaint, ¶ 79.

<sup>16</sup> *Id.*

<sup>17</sup> *Id.* at ¶ 80.

<sup>18</sup> *Id.*

of maintaining its monopoly power, even though doing so sacrifices profits Apple would earn from increasing the value of the iPhone to users.

106. Messaging apps allow smartphone users to communicate with friends, family, and other contacts and often account for the primary way users interact with their smartphones. In Apple’s own words, messaging apps are “a central artery through which the full range of customer experience flows.”<sup>19</sup>

107. Smartphone messaging apps operate using “protocols”—the systems that enable communication and determine the features available when users interact with each other via messaging apps.

108. One important protocol used by messaging apps is SMS. SMS offers a broad user network, but limited functionality. For example, all mobile phones can receive SMS messages, but SMS does not support modern messaging features, such as large files, edited messages, or reactions like an emoji.

109. Many messaging apps—such as WhatsApp, Facebook Messenger, and Signal—use proprietary, internet-based protocols, which are sometimes referred to as OTT (“over the top”) protocols. OTT messaging typically involves more secure and advanced features, such as encryption, typing indicators, read receipts, the ability to share rich media, and disappearing messages. While all mobile phones can send and receive SMS messages, OTT only works between users who sign up for

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<sup>19</sup> *Id.* at ¶ 81.



and communicate through the same messaging app. Thus, a user cannot send an OTT message to someone who does not also use the same messaging app.

110. Apple makes third-party messaging apps on the iPhone worse generally and relative to iMessage, Apple's own messaging app. By doing so, Apple intentionally degrades quality, privacy, and security for its users. For example, Apple designates the APIs needed to implement SMS as "private," meaning third-party developers have no technical means of accessing the APIs and are prohibited from doing so under their contracts with Apple. As a result, third-party messaging apps cannot combine the "text to anyone" functionality of SMS with the advanced features of OTT messaging. Instead, if a user wants to send a message to someone in a third-party messaging app, they must first confirm whether the person has the same messaging app and, if not, ask that person to download and use a new messaging app. By contrast, if an iMessage user wants to send somebody a message, they just type their phone number into the "To:" field and send the message because iMessage incorporates SMS and OTT messaging.

111. Apple prohibits third-party developers from incorporating other important features into their messaging apps as well. For example, third-party messaging apps cannot continue operating in the background when the app is closed, which impairs functionality like message delivery confirmation. And when users receive video calls, third-party messaging apps cannot access the iPhone camera to

allow users to preview their appearance on video before answering a call. iMessage incorporates these features.

112. If third-party messaging apps could use these features, they would be more valuable and attractive to users, and the iPhone would be more valuable to Apple in the short term. For example, by incorporating SMS, users would avoid the hassle of convincing someone to download a separate app before sending them a message. Third-party messaging apps could also offer the ability to schedule SMS messages to be sent in the future, suggest replies, and support robust multi-device use on smartphones, tablets, and computers—features these apps have already incorporated on Android.

113. Moreover, messaging apps benefit from significant network effects—as more people use the app, there are more people to communicate with through the app, which makes the app more valuable and in turn attracts more users. Incorporating SMS would help third-party messaging apps increase their network and gain more users. Instead, Apple limits the reach of third-party messaging apps and reinforces network effects that benefit Apple’s smartphone monopoly.

114. Recently, Apple has stated that it plans to incorporate more advanced features for cross-platform messaging in iMessage by adopting a 2019 version of the RCS protocol (which combines aspects of SMS and OTT). Apple has not done so yet, and even if it did, the RCS protocol would not reverse Apple’s efforts to

undermine third-party messaging apps because third-party messaging apps still will be prohibited from incorporating RCS, just as they are prohibited from incorporating SMS. The RCS standard also will continue to improve over time, and if Apple does not support later versions, cross-platform messaging using RCS could become ineffective on iPhones.

115. In addition to degrading the quality of third-party messaging apps, Apple affirmatively undermines the quality of rival smartphones. For example, if an iPhone user messages a non-iPhone user in iMessage—the default messaging app on an iPhone—the message text appears to the iPhone user as a green bubble and has limited functionality: the conversation is not encrypted, videos are pixelated and grainy, and users cannot edit messages or see typing indicators. These flaws signal to users that rival smartphones are lower quality because the experience of messaging friends and family who do not own iPhones is worse—even though Apple, not the rival smartphone, accounts for the degraded user experience. Many non-iPhone users also experience social stigma, exclusion, and blame for “breaking” chats where other participants own iPhones. This effect is particularly powerful for certain demographics, like teenagers, for whom the iPhone’s share exceeds 85%, according to one survey. The result is to reinforce switching costs and lead users to continue buying iPhones, not because Apple made its smartphone better, but because it made communicating with other smartphones worse.

116. Apple recognizes that its conduct harms users and makes it more difficult to switch smartphones. As early as 2013, Apple’s Senior Vice President of Software Engineering explained that supporting cross-platform OTT messaging in iMessage “would simply serve to remove [an] obstacle to iPhone families giving their kids Android phones.”<sup>20</sup> In March 2016, Apple’s Senior Vice President of Worldwide Marketing forwarded an email to CEO Tim Cook making the same point: “moving iMessage to Android will hurt us more than help us.”<sup>21</sup>

117. In 2022, Mr. Cook was asked whether Apple would fix iPhone-to-Android messaging. The questioner said, “It’s tough not to make it personal but I can’t send my mom certain videos.” Mr. Cook responded: “Buy your mom an iPhone.”<sup>22</sup>

118. Apple’s conduct in furtherance of its smartphone monopoly includes naked, uninhibited restraints. It recently blocked a third-party developer from fixing the cross-platform messaging experience in iMessage and providing end-to-end encryption for messages between iMessage and Android users. By rejecting solutions that would allow for cross-platform encryption, Apple continues to make iPhone users’ less secure than they otherwise could be.

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<sup>20</sup> DOJ Complaint, ¶ 91.

<sup>21</sup> *Id.*

<sup>22</sup> *Id.* at ¶ 92.

**2. Smartwatches: Apple protects its smartphone monopoly by impeding the development of cross-platform smartwatches**

119. Apple deploys smartwatches, an expensive accessory, to prevent iPhone customers from choosing other phones. After copying the idea of a smartwatch from third-party developers, Apple now prevents those developers from innovating and limits the Apple Watch to the iPhone to prevent reduced iPhone sales.

120. Smartwatches are wrist-worn devices with an interactive display and related apps that let users perform various functions besides telling the time, including monitoring health data, responding to messages and notifications, and performing mobile payments. Smartwatches generally must be paired with a smartphone to operate and use their full functionality, such as receiving and responding to emails and text messages or answering phone calls. Because a smartwatch is costly, users are less willing to choose a smartphone if it is not compatible with their smartwatch.

121. Apple makes its Apple Watch compatible only with the iPhone. If, therefore, Apple can steer a user toward buying an Apple Watch, it becomes costlier for that user to purchase a different kind of smartphone because doing so would inhibit use of their Apple Watch.

122. Cross-platform smartwatches, in contrast, can reduce iPhone users' dependence on Apple's proprietary hardware and software. If a user purchases a third-party smartwatch that is compatible with the iPhone as well as other

smartphones, they can switch from the iPhone to another smartphone (or vice versa) simply by downloading the companion app on their new phone and connecting to their smartwatch via Bluetooth. Furthermore, as users interact with a smartwatch, including by accessing apps from their smartwatch instead of their smartphone, users rely less on a smartphone's proprietary software and more on the smartwatch itself. This shift also makes it easier for users to switch from an iPhone to a different smartphone.

123. Apple recognizes that marketing and selling an Apple Watch, rather than a third-party cross-platform smartwatch, helps drive iPhone sales and reinforce its smartphone monopoly. In a 2019 email, the Vice President of Product Marketing for Apple Watch acknowledged that Apple Watch “may help prevent iPhone customers from switching.”<sup>23</sup> Surveys have reached similar conclusions: many users say that other devices linked to their iPhone are the reason they do not switch to Android.

124. Apple also recognizes that making Apple Watch compatible with Android would “remove [an] iPhone differentiator.”<sup>24</sup>

125. Apple uses its control of the iPhone, including its technical and contractual control of APIs, to degrade the functionality of third-party cross-

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<sup>23</sup> *Id.* at ¶ 98.

<sup>24</sup> *Id.* at ¶ 99.

platform smartwatches. First, Apple does not permit iPhone users with third-party smartwatches to respond to notifications. Second, Apple inhibits third-party smartwatches from maintaining a reliable connection with the iPhone. And third, Apple undermines the performance of third-party smartwatches that connect directly with a cellular network. Apple thereby constrains user choice and crushes innovation that might fill in the moat around Apple's smartphone monopoly.

126. The ability to respond to notifications, such as new messages or app alerts, directly from a smartwatch is a top consideration for smartwatch purchasers—and one of the most used product features where it is available. According to Apple's own market research, the ability to “[s]end and receive text messages from social and messaging apps” is a core smartwatch feature.<sup>25</sup> In 2013, when Apple started offering users the ability to connect their iPhones with third-party smartwatches, Apple gave third-party smartwatch developers access to various APIs related to the Apple Notification Center Service, Calendar, Contacts, and Geolocation. But, after introducing the Apple Watch the next year, Apple began limiting third-party access to new and improved APIs for smartwatch functionality. For instance, Apple prevents third-party smartwatches from accessing APIs related to more advanced Actionable Notifications, such that iPhone users cannot use a third-party smartwatch to respond to notifications. Instead, Apple limits third-party smartwatches to APIs

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<sup>25</sup> *Id.* at ¶ 101.

that do not let users respond to a message, accept a calendar invite, or take other actions available on Apple Watch.

127. A reliable Bluetooth connection is essential for a smartwatch to connect wirelessly with a smartphone, and thereby function as a companion to the smartphone and unlock its full functionality. But Apple prohibits third-party smartwatch developers from maintaining a connection, even if a user accidentally turns off Bluetooth in the iPhone's control center. In the same scenario, Apple allows an Apple Watch to maintain a connection because Apple understands that users sometimes disable Bluetooth without realizing that doing so disconnects their watch. iPhone users thus have a worse experience when they try to use a third-party smartwatch with their iPhone. Apple also requires third-party smartwatch users to turn on "Background App Refresh" and disable the battery-saving "Low Power Mode" in their iPhone settings to remain consistently connected to their companion app, which is necessary for the iPhone and smartwatch to update and share data (*e.g.*, exercise tracking data), even though Apple does not impose similar requirements for Apple Watch.

128. Cellular-enabled smartwatches allow the user to connect directly to a cellular network to make calls, send messages, and download data even if their smartwatch is not paired to a smartphone. Cellular-enabled smartwatches are popular with consumers, making up approximately 20% of Apple Watch sales.



Apple Watch users can use the same phone number for their smartphone and smartwatch when connected to the cellular network. Messages then are delivered to both the user's smartphone and smartwatch, providing an integrated messaging experience. Although Apple has the technological means to permit the same functionality for an iPhone user with a third-party smartwatch, Apple instead requires these users to disable Apple's iMessage service on the iPhone before they can use the same phone number for both devices. The centrality of text messaging, however, makes this option highly inconvenient. In practice, an iPhone user with a third-party smartwatch must maintain separate phone numbers for the two devices, worsening their user experience, and may miss out on receiving messages sent to their primary iPhone number.

**3. Digital Wallets: Apple restricts cross-platform digital wallets on the iPhone, reinforcing barriers to consumers switching to rival smartphones**

129. According to Apple, using a digital wallet will eventually become “something people do every day of their lives.”<sup>26</sup> But Apple has used its control over app creation, including its technical and contractual control over API access, to effectively block third-party developers from creating digital wallets for iPhone with tap-to-pay functionality. Apple maintains complete control over how users make tap-to-pay payments with their iPhone. Apple deprives users of the benefits and

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<sup>26</sup> *Id.* at ¶ 104.

innovations third-party wallets would provide for the express purpose of protecting “Apple’s most important and successful business, iPhone.”<sup>27</sup>

130. Digital wallets are apps that allow a user to store and use passes and credentials, such as credit cards, personal identification, movie tickets, and car keys. For example, with a digital wallet, someone can make an in-person payment by tapping their device on a payment terminal. Digital wallets also can be used for transactions in mobile apps and mobile websites. And, but for Apple’s restrictive conduct, cross-platform digital wallets could also be used to manage and pay for subscriptions and in-app purchases.

131. Apple Wallet, Apple’s proprietary digital wallet on the iPhone, incorporates Apple’s proprietary payment system Apple Pay, which processes digital payments on the web, in apps, and at merchant points of sale.

132. Apple Wallet currently offers users a way to make these payments using their iPhone. Apple envisions that Apple Wallet will eventually replace several functions of physical wallets to become a single app for shopping, digital keys, transit, identification, travel, entertainment, and more. Apple believes that, as users rely on Apple Wallet for payments and other functions, it “drive[s] more sales of iPhone and increase[s] stickiness to the Apple ecosystem” because Apple Wallet is

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<sup>27</sup> *Id.*

only available on the iPhone.<sup>28</sup> Switching to a different smartphone would thus mean abandoning the familiarity of an everyday app, setting up a new digital wallet, and potentially losing access to data or credentials stored in Apple Wallet.

133. The absence of cross-platform digital wallets with tap-to-pay capability on the iPhone makes it harder for iPhone users to purchase a different smartphone. Cross-platform digital wallets could provide an easier and potentially more secure way for users to switch from the iPhone to another smartphone. If third-party developers could create cross-platform wallets available for use on the iPhone, users transitioning away from the iPhone could continue to use the same wallet, with the same cards, IDs, payment histories, peer-to-peer payment contacts, and other information, making it easier to change smartphones. And because many users already use apps created by their preferred banks, if banks offered digital wallets or the ability to use their banking services through a third-party digital wallet, users could access new apps and technologies without needing to share their private financial data with Apple and other third parties. In the short term, these improved features would make the iPhone more attractive to users and profitable for Apple.

134. Tap-to-pay—*i.e.*, the ability to make in-person payments by tapping your smartphone on a payment terminal—is the most important function attracting users to a digital wallet for smartphones. Apple uses its control over app creation

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<sup>28</sup> *Id.* at ¶ 108.

and API access to selectively prohibit developers from accessing the near-field communication (“NFC”) hardware needed to provide tap-to-pay via an app.

135. Apple Wallet is the only app on the iPhone that can use NFC to facilitate tap-to-pay. Apple encourages banks, merchants, and other parties to participate in Apple Wallet, yet blocks these same partners from developing new payment products for iPhone users.

136. Apple also uses its smartphone monopoly to extract payments from banks, whose customers use digital wallets on iPhones. Since Apple first launched Apple Pay, it has charged issuing banks 15 basis points (0.15%) for each credit card transaction mediated by Apple Pay. In contrast, smartphone payment apps from Samsung and Google are free to issuing banks. Apple’s fees create a significant expense for issuing banks and drain funding for features and benefits that banks might otherwise offer smartphone users. The volume of transactions affected by Apple Pay and its fee regime is large and growing. A U.S. Consumer Financial Protection Bureau report estimates that Apple Pay in 2022 facilitated nearly \$200 billion in U.S. transactions, and notes that “analysts estimate that the value of digital wallet tap-to-pay transactions will grow by over 150 percent by 2028.”<sup>29</sup>

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<sup>29</sup> <https://www.consumerfinance.gov/data-research/research-reports/big-techs-role-in-contactless-payments-analysis-of-mobile-device-operating-systems-and-tap-to-pay-practices/full-report/>

137. App developers have sought direct NFC access for their payment or wallet apps. Apple prohibits developers from using tap-to-pay functionality in their apps, as that would “be one way to disable [A]pple [P]ay trivially,” leading to the “proliferation of other payment apps” that might operate cross-platform and end up undermining Apple’s smartphone monopoly.<sup>30</sup>

138. Apple allows merchants to use the iPhone’s NFC antenna to accept consumers’ tap-to-pay payments. Nor is there a technical limitation on permitting developers NFC access for third-party wallets. Apple has acknowledged it is feasible to allow an iPhone user to set another app (*e.g.*, a bank’s app) as the default payment app; Apple has announced its intention to allow this functionality in Europe.

139. Apple undermines the viability of third-party wallets by limiting their ability to furnish a simple, fast, and comprehensive solution to online purchasing. Apple further impedes the adoption of alternative digital wallets by restricting third parties from offering the same ability to authenticate digital payments on checkout pages online.

140. Apple also blocks other digital wallets from replacing Apple’s in-app payment (“IAP”). This restriction prevents these wallets from increasing their attractiveness, and improving the overall iPhone user experience, by offering consumer experiences such as rewards points in purchasing, digital receipts, returns,

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<sup>30</sup> DOJ Complaint, ¶ 114.

loyalty programs, and digital coupons for purchases of relevant app subscriptions or products. Apple explicitly prohibits developers on its App Store from notifying users in the developer's app that alternative digital wallets or direct payments may permit more affordable prices for services.

141. Apple intentionally degrades the experience of its own users by blocking them from accessing wallets with better or different features. In so doing, Apple furthers reliance on the iPhone and imposes fees on a large slice of all digital wallet NFC transactions—which the U.S. Consumer Financial Protection Bureau estimates will grow to \$451 billion by 2028.

**C. Apple Uses a Similar Playbook to Maintain Its Monopoly Through Many Other Products and Services**

142. The exclusionary and anticompetitive acts described above are part of Apple's ongoing course of conduct to build and maintain its smartphone monopoly. They are illustrative and non-exhaustive, and reflect Apple's overall strategy of using its power over app distribution and app creation to selectively block threatening innovations.

143. Apple has deployed a similar playbook for a broader range of third-party apps and services as well, many of which present technologies that function as middleware, facilitate switching, reduce the need for expensive hardware, or disintermediate Apple's iPhone by enabling the development of cross-platform technologies. Apple has undermined third-party location trackable devices that fully

function across platforms. Apple has impaired third-party, cross-platform video communication apps while steering users to its own video communication app, FaceTime. Apple has limited the capabilities of third-party iOS web browsers, including by requiring that they use Apple's browser engine, WebKit. Apple has impeded cross-platform cloud storage apps for the purpose of steering iPhone users into iCloud, making it harder to transfer data between different devices. Protocols that Apple has placed around new "eSIM" technology may make it even harder for consumers to switch to a different phone while maintaining the same phone number. Apple has used restrictions in sales channels to impede the sale and distribution of rival smartphones. And Apple has worsened its users' experience by making it difficult for iPhone users to use superior voice and AI assistants, steering them to use Siri as a voice assistant.

144. In the wake of its rapid growth, Apple has been repeatedly accused of anticompetitive conduct by private citizens, U.S. enforcers, and international regulators including the following:

- Apple has been the subject of investigations by a variety of international competition authorities for antitrust violations and anticompetitive practices;<sup>31</sup>

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<sup>31</sup> See, e.g., Press Release, Eur. Comm'n, Antitrust: Commission Opens Investigation into Apple Practices Regarding Apple Pay (June 16, 2020), [https://ec.europa.eu/commission/presscorner/detail/en/ip\\_20\\_1075](https://ec.europa.eu/commission/presscorner/detail/en/ip_20_1075); Foo Yun Chee, Apple in Dutch Antitrust Spotlight for Allegedly Promoting Own Apps, Reuters (Apr. 11, 2019), <https://www.reuters.com/article/usapple-antitrust-netherlands/apple-in-dutch-antitrust-spotlight-for->

- Apple has faced a variety of private antitrust lawsuits in the United States, including relating to its practices with respect to offering apps in the app store;<sup>32</sup>
- In 2010, Apple resolved an antitrust action with the DOJ involving allegations that it conspired with other technology companies to reduce or eliminate competition for employees through non-solicitation or “no poach” agreements—Apple later agreed to pay \$415 million in a joint settlement agreement to resolve a class action filed by impacted employees;
- In 2012, the DOJ and attorneys general of 33 state sued Apple for an alleged conspiracy to fix prices in the eBooks market—Apple was ultimately found to have violated state and federal antitrust laws and paid \$450 million as a consequence; and

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allegedly-promoting-own-appsidUSKCN1RN215; Italy Antitrust Opens Inquiry into Google, Apple, Dropbox on Cloud Computing, Reuters (Sept. 7, 2020), <https://www.reuters.com/article/us-google-italy-antitrust/italyantitrust-opens-inquiry-into-google-apple-dropbox-on-cloud-computing-idUSKBN25Y0YM>; Tim Hardwick, Apple and Amazon Under Investigation by Italian Watchdog for Alleged Price Fixing, Apple Insider (July 22, 2020), <https://www.macrumors.com/2020/07/22/apple-amazon-italyalleged-price-fixing/>.

<sup>32</sup> See, e.g., Nick Statt, Epic Games Is Suing Apple, Verge (Aug. 13, 2020), <https://www.theverge.com/2020/8/13/21367963/epic-fortnite-legal-complaint-apple-ios-app-store-removal-injunctive-relief>; Reed Albergotti, Apple Suppressed Competitors in Its App Store—Until It Got Caught, a Lawsuit Alleges, Wash. Post (Dec. 20, 2019), <https://www.washingtonpost.com/technology/2019/12/20/apple-suppressed-competitors-its-app-store-until-it-got-caught-lawsuit-alleges/>; Bob Van Voris & Peter Blumberg, Apple App Developers Jump on Silicon Valley Antitrust Bandwagon, Bloomberg (June 4, 2019), <https://www.bloomberg.com/news/articles/2019-06-04/apple-inc-sued-by-app-developers-claiming-antitrust-violations>; David G. Savage & Suhauna Hussain, Supreme Court Rules Apple Can Face Antitrust Suits from iPhone Owners over App Store Sales, L.A. Times (May 13, 2019), <https://www.latimes.com/politics/la-na-pol-supreme-court-apple-smart-phone-20190513-story.html>.



- In 2021, Apple agreed to pay \$100 million to resolve claims by certain software developers who accused the company of monopolizing the market for app development and charging developers excessive commissions on app sales.

145. The strategies Apple has employed to date are not the only ones Apple can use to achieve its anticompetitive and lucrative ends. As technology evolves, Apple continues to evolve and shift its anticompetitive behavior to protect its monopoly power. For example, in recent years, Apple has increasingly offered its own subscription services, including news, games, video, music, cloud storage, and fitness subscriptions that help keep users tethered to the iPhone platform. These subscription services and other ancillary fees form a considerable part of Apple's net revenue and add to the cost of an iPhone. These subscriptions services can increase switching costs among iPhone users. If an Apple user can only access their subscription service on an iPhone, they may experience costs, lost time, lost content, and other frictions or difficulties if they try to switch to a non-Apple smartphone or subscription service.

146. These subscription services also increase Apple's power over content creators and newspapers, among others, by exerting control over how audiences access their work, decreasing traffic to their websites and apps, and positioning Apple as default broker in the relationship between creators and users. In so doing,

Apple takes on outsized importance and control in the creative economy, which may lessen incentives to fund, make, and distribute artistic content, harming the public at large.

## **IX. ANTICOMPETITIVE EFFECTS**

### **A. Apple's Conduct Harms Competition**

147. Apple protects its monopoly power in smartphones and performance smartphones by using its control over app distribution and app creation to suppress or delay apps, innovations, and technologies that would reduce user switching costs or simply allow users to discover, purchase, and use their own apps and content without having to rely on Apple. As a result, Apple faces less competition from rival smartphones and less competitive pressure from innovative, cross-platform technologies, not because Apple makes its own products better but because it makes other products worse. Fueled by the absence of competition, Apple extracts extraordinary profits and regulates innovation to serve its interests. These monopoly dynamics leave all smartphone users worse off, with fewer choices, higher prices and fees, lower quality smartphones, apps, and accessories, and less innovation from Apple and others. Left unchallenged, Apple will continue to use and strengthen its longstanding smartphone monopoly to dictate how companies can create and distribute apps in the future so that they cannot threaten Apple's dominant competitive position.

148. Apple's conduct has resulted in less choice for smartphone users. Today, only two companies (Google and Samsung) remain as meaningful competitors to Apple's monopoly share of the premium smartphone market. And Apple's conduct has increased the technical, behavioral, monetary, and other costs of switching from an iPhone to an alternative smartphone. This undermines competition and entrenches Apple's monopoly power.

149. According to user surveys, one of the biggest reasons iPhone users today do not switch to rival smartphones is to avoid the problems Apple has created for cross-platform messaging.<sup>33</sup> Likewise, Apple exercised its control over app distribution and app creation to impede the development and growth of super apps, depriving users of technology that would have facilitated switching by decreasing user's dependence on the iPhone platform. Apple took a similarly restrictive approach to cloud streaming apps, suppressing technology that would have made it easier for users to switch to more affordable smartphones. Apple also used its control over app creation, including its control over critical APIs, to impose technical and contractual restrictions on messaging apps, third-party smartwatches, and digital wallets, heading off cross-platform technologies that would have helped users overcome switching costs and friction in a more competitive market.

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<sup>33</sup> See <https://www.wsj.com/articles/why-apples-imessage-is-winning-teens-dread-the-green-text-bubble-11641618009>.

150. Apple also has delayed or suppressed the emergence of cross-platform technologies that would limit Apple's ability to extract extraordinary profits from users and developers. For example, if developers could distribute their programs through super apps or cloud streaming apps, rather than the App Store, Apple's ability to control app distribution and app creation would be limited, and it could not impose the same exorbitant taxes on developers wishing to distribute apps to iPhone users. Similarly, third-party digital wallets, or other apps with tap-to-pay functionality, would benefit users and developers by putting more competitive pressure on Apple. Digital wallets eventually could provide developers an alternative way to process payments and manage customer relationships, forcing Apple to compete more aggressively by lowering fees and improving quality, ultimately benefiting users. Instead, when users pay for something with their phone, Apple continues to exert its power over customers and financial institutions.

151. Apple's conduct has harmed users in other ways. For example, third-party digital wallets could provide smartphone users better rewards (*e.g.*, cash back), as well as a more private, secure payment experience from a user's preferred financial institution as opposed to a payment mediated by Apple. But because of Apple's anticompetitive activity, these tap-to-pay digital wallet products and services do not exist today.

152. Apple's conduct has made its own products worse, sacrificing the short-term profits Apple could earn from improving the iPhone to preserve the long-term value of maintaining its monopoly. In a competitive market, Apple would compete aggressively to support the development of popular apps and accessories for iPhone users, which in turn would make iPhones more attractive and more valuable to users. But as set forth above, Apple takes steps to delay or suppress cross-platform technologies that it recognizes would be popular with users, such as super apps and cloud streaming apps, because they threaten Apple's smartphone monopolies. As a result, several developers have abandoned plans to develop super apps and cloud-based gaming apps even after investing in bringing them to market. Similarly, Apple degrades third-party messaging apps, even though doing so makes cross-platform messaging less private and less secure for iPhone users, because the seamless and reliable use of these third-party apps would reduce switching costs for users interested in a non-iPhone smartphone. Apple has also impeded innovation by third-party smartwatches, causing manufacturers to limit the functionality of their smartwatches for iPhone users. These third-party firms have suspended support for iPhone compatibility because of Apple's restrictions or canceled development of cross-platform smartwatches altogether. At least one company's canceled smartwatch formed part of its overall wearables strategy, including future development of virtual-reality technology. Apple's conduct may have also slowed

the development of innovative apps related to education, artificial intelligence, and productivity.

153. Apple's conduct has harmed other smartphone users, too. Because of the resources and risks required to maintain different features across different smartphones, many potential super app, mini program, and other developers do not implement features prohibited by Apple even on other smartphones. For example, restrained by Apple Wallet and its various limitations, prospective digital wallet providers, including U.S. banks, have abandoned the development of digital-wallet apps for either Apple or other smartphones.<sup>34</sup> Another company decided not to offer users an innovative digital car key in part because Apple required that company to add any features related to the key in Apple Wallet rather than allowing the key to be placed solely in the company's own app.<sup>35</sup> Other developers have discontinued plans to launch super apps, cloud-streamed gaming apps, smartwatches, and other apps. As a result, all smartphone users find themselves with lower quality smartphones, less innovation, decreased quality, lower output, and less choice.

154. Apple's documents and conduct show that Apple is motivated by the anticompetitive purpose of building and maintaining monopoly power in the relevant markets. For example, Apple sacrificed substantial revenues it could have earned

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<sup>34</sup> DOJ Complaint, ¶ 132.

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

from super apps, mini programs, cloud streaming apps, and other third-party apps and accessories. In particular, mobile gaming already accounts for a large and growing portion of Apple's revenue. Popular cloud streamed gaming apps would offer iPhone users access to popular services (including games) and in turn generate significant revenue for Apple through subscriptions and in-app purchases. Instead, Apple preferred the long-term benefit of reduced smartphone competition to the revenue it would generate from cloud gaming, super apps, and mini programs or the increases in quality (and consumer demand) that would flow from this innovation. Apple has also used its control over app distribution and app creation to selectively undermine cross-platform technologies, not because this helps protect users but because it helps protect Apple.

155. The harms to smartphone competition caused by Apple's conduct are amplified by Apple's decision to grant itself exclusive distribution rights to iPhone users through the Apple App Store. If Apple allowed users to access apps in other ways, users could choose an app store that did not restrict super apps or mini programs, even if Apple otherwise ran its App Store as it does today. Apple does not allow that choice, however, because if it did, developers could write their programs for any smartphone rather than specifically for iOS—just as internet browsers and Apple's QuickTime allowed developers to write programs that worked on a variety of operating systems, not just Windows. If Apple were to permit access to apps other

than through the App Store, the result would be lower switching costs for users and less dependence by users and developers upon Apple and the iPhone.

156. Apple's smartphone monopoly gives it many levers to maintain its power even in the face of interventions designed to curtail specific anticompetitive practices. This is because Apple's iPhone monopoly, secured by its anticompetitive conduct, grants it the power to set the rules by which most smartphone users buy digital and hardware products, and by which developers are allowed to sell these same products to users. If Apple is forced to change some of these rules, it has the power to adopt new rules, restrictions, or features that reinforce Apple's monopoly and harm competition in other ways. For example, Apple has stated plans to adopt RCS due to market and international regulatory pressure. But Apple continues to contractually restrict third parties from accessing other APIs and features that would enable cross-platform messaging apps. In another instance, Apple was enjoined from enforcing certain anti-steering provisions in its agreements with developers. In response, Apple simply created a different set of onerous restrictions on app developers to achieve a similar result. In other cases, Apple has used its control over app distribution to force companies to comply with Apple's policies that may contradict local laws by delaying the review of the offending companies' apps.



**B. Apple Has Every Incentive to Use Its Monopoly Playbook Indefinitely**

157. Apple's conduct poses significant risk to the development of new innovations. Absent court intervention, Apple may use its smartphone monopoly playbook to acquire or maintain power over next-frontier devices and technologies. As Apple increases its dominance, it may continue delaying or stifling the innovations of cross-platform companies to lock users into Apple devices.

158. Apple has countless products and services—AirPods, iPads, Music, Apple TV, photos, maps, iTunes, CarPlay, AirDrop, Apple Card, and Cash. These provide future avenues for Apple to engage in anticompetitive conduct and the ability to circumvent remedies. Appropriate forward-looking remedies are necessary to ensure that Apple cannot use these products and services to further entrench its monopoly power.

**X. PRIVACY, SECURITY, AND OTHER ALLEGED COUNTERVAILING FACTORS DO NOT JUSTIFY APPLE'S ANTICOMPETITIVE CONDUCT**

159. There is no valid, procompetitive benefit of Apple's exclusionary conduct that would outweigh its anticompetitive effects. Apple's conduct has not resulted in lower prices, higher quality-adjusted output, improved innovation, or a better user experience for smartphone users.

160. Apple markets itself by invoking user privacy and security to differentiate itself from what limited competition exists in the smartphone market.

Neither privacy nor security justifications provide a legitimate excuse for Apple's monopolistic and anticompetitive conduct. Apple imposes contractual restraints on app creation and distribution, imposes hefty fees on many types of smartphone interactions, and conditionally restricts API access on its smartphone platform simply because it can. There are limited if any competitive constraints on this conduct. Apple's control over app distribution and creation on the iPhone is substantially more restrictive than necessary to protect user privacy and security. By way of comparison, Apple does not engage in such conduct on its Mac laptops and computers. It instead gives developers the freedom to distribute software directly to consumers on Mac without using an Apple-controlled app store and without paying Apple app store fees. Mac users still enjoy a safe and secure experience.

161. In fact, many alternative technologies that Apple's conduct suppresses could or would enhance user security and privacy. For example, Apple's conduct targeting digital wallets forces users to share information with Apple even if they would prefer to share that information solely with their bank, medical provider, or other trusted third party. When an iPhone user provides a credit or debit card in Apple Wallet, Apple intervenes in a process that could otherwise occur directly between the user and card issuer, introducing an additional point of failure for privacy and security. Likewise, super apps or alternative app stores could offer users and their families a more curated selection of apps that better protect user privacy

and security. Apple, in fact, allows enterprise and public sector customers to offer more curated app stores on employee iPhones because this better protects privacy and security.

162. Apple is also willing to make the iPhone less secure and less private if that helps maintain its monopoly power. For example, text messages sent from iPhones to Android phones are unencrypted as a result of Apple's conduct. If Apple wanted to, Apple could allow iPhone users to send encrypted messages to Android users while still using iMessage on their iPhone, which would instantly improve the privacy and security of iPhone and other smartphone users. Apple's intentional failure to encrypt cross-platform text messaging reveals Apple's privacy justification as a thinly veiled effort to provide cover for its true business imperative of holding onto its monopoly over U.S. smartphones.

163. Apple is willing to sacrifice user privacy and security where doing so benefits Apple. For example, Apple allows developers to distribute apps through its App Store that collects vast amounts of personal and sensitive data about users—including children—at the expense of its users' privacy and security. Apple also enters agreements to share in the revenue generated from advertising that relies on harvesting users' personal data. For example, Apple accepts massive payments from Google to set its search engine as the default in the Safari web browser even though other search engines better protect user privacy.

164. Apple also selectively enforces its rules and contractual restrictions for app distribution and app creation. For example, when it benefits Apple to do so, Apple permits developers to introduce mini programs, stream content from the cloud, use virtual currency, and receive special permissions or access APIs not automatically available to everyone.

165. Apple chooses to make the iPhone private and secure when doing so benefits Apple but follows alternative courses when they help Apple protect its monopoly power. Apple's conduct underscores the pretextual nature of any claim that its market share or restrictions could be justified by protecting user privacy or security.

## **XI. CLASS ALLEGATIONS**

166. Plaintiff brings this action for damages and injunctive relief on behalf of themselves and a class of similarly situated persons and entities pursuant to Federal Rules of Civil Procedure, Rule 23(a), (b)(1), (b)(2) and (b)(3), with the class initially defined to include:

**Class:** All persons or entities that purchased an iPhone directly from Apple.

167. The class definition excludes the following persons or entities: (a) Apple; (b) any of Apple's parent companies, subsidiaries, and affiliates; (c) any of Apple's officers, directors, management, employees, subsidiaries, affiliates or

agents; (d) all governmental entities; (e) the judges and staff in this case, as well as any members of their immediate families; and (f) all jurors assigned to this case.

168. While Plaintiff does not know the exact number of class members, the nature of the trade and commerce at issue makes clear that there are millions of class members geographically dispersed throughout the United States, such that joinder of all class members in the prosecution of this action is impracticable.

169. Plaintiff's claims are typical of the claims of the other class members because Plaintiff purchased an iPhone directly from Apple.

170. Numerous questions of law or fact common to the entire class arise from Apple's anticompetitive and unlawful conduct, including, without limitation:

- a. Whether there is a relevant antitrust product market for smartphones;
- b. Whether there is a relevant antitrust product market (or submarket) for performance smartphones;
- c. Whether Apple has unlawfully monopolized the smartphone and/or performance smartphone markets;
- d. Whether purchasers and users of smartphones have been harmed, including by having paid more for smartphones than they would have, but for Apple's anticompetitive conduct;

- e. Whether Apple committed unfair practices in the conduct of its business;
- f. Whether Plaintiff and class members are entitled to injunctive and corresponding declaratory relief to halt Apple's unlawful practices; and
- g. Whether Plaintiff and class members are entitled to damages or restitution.

171. These and other questions of fact and law are common to the class and predominate over any questions affecting class members individually.

172. Plaintiff will fairly and adequately represent the interests of the class. Each Plaintiff purchased an iPhone directly from Apple within the United States and has no conflicts with any other member of the class. Plaintiff has retained sophisticated and competent counsel experienced in prosecuting antitrust class actions.

173. Apple has acted on grounds generally applicable to the class, thereby making final injunctive relief and corresponding declaratory relief appropriate with respect to the class as a whole.

174. This class action is superior to other alternatives for the fair and efficient adjudication of this controversy. Prosecuting the claims pleaded herein as a class action will eliminate the possibility of repetitive litigation. There will be no material difficulty in the management of this action as a class action.

175. The prosecution of separate actions by individual class members would create the risk of inconsistent or varying adjudications, establishing incompatible standards of conduct for Apple.

## **XII. STANDING AND ANTITRUST INJURY**

176. Plaintiff purchased iPhones directly from Apple at inflated prices that resulted from Apple's anticompetitive and monopolistic practices, as alleged herein. Apple therefore caused Plaintiff to suffer overcharge damages.

177. Charging supracompetitive prices to direct purchasers like Plaintiff was the purpose and direct effect of Apple's alleged monopolization conduct. Plaintiff has standing as a direct purchaser of products and services sold to her by Apple at inflated prices. Plaintiff is an efficient enforcer of the antitrust laws who suffered injury that flows from what makes Apple's business practices described in this Complaint antitrust violations.

178. Because Apple continues to engage in the anticompetitive practices alleged in this Complaint, Plaintiff is reasonably likely to incur future overcharges when she purchases additional or replacement smartphones.

179. Both the actual harm and the threat of future harm to Plaintiff are cognizable antitrust injuries directly caused by Apple's violations. The full amount of such overcharge damages will be calculated after discovery and upon proof at trial.

### **XIII. TOLLING OF THE STATUTES OF LIMITATIONS**

#### **A. The Statutes of Limitations Did Not Begin to Run Because Plaintiff Did Not and Could Not Discover Her Claims**

180. Prior to the filing of the Department of Justice's complaint against Apple, Plaintiff and class members had no knowledge of Apple's anticompetitive conduct, or of facts sufficient to place them on inquiry notice of the claims asserted herein.

181. Plaintiff and class members paid for iPhones at artificially inflated prices or otherwise suffered economic loss as a result of Apple's wrongful exercise of monopoly power in the relevant markets.

182. Other than dealing directly with Apple when purchasing their iPhones or other Apple products, Plaintiff had no direct contact or interaction with Apple and had no means from which she could have discovered its wrongful conduct.

183. There was no information in the public domain sufficient to put Plaintiff and class members on notice that Apple had wrongfully acquired a monopoly or was using its monopoly power to charge supra-competitive prices for its products.

184. It was reasonable for Plaintiff and class members not to suspect that Apple was engaging in any unlawful anticompetitive behavior.

185. Plaintiff alleges a continuing course of unlawful conduct by Apple, including conduct within the applicable limitations periods. That conduct has inflicted continuing and accumulating harm.



186. For these reasons, the statutes of limitations applicable to Plaintiff's and class members' claims have been tolled with respect to the claims asserted herein.

**B. Apple's Fraudulent Concealment Tolled the Statutes of Limitations**

187. Additionally or alternatively, application of the doctrine of fraudulent concealment tolled the statutes of limitations on Plaintiff's claims. Plaintiff and class members had no knowledge of Apple's wrongful acquisition and maintenance of monopoly power in the relevant markets, or of facts sufficient to place them on inquiry notice of her claims. No information in the public domain or otherwise available to Plaintiff and class members suggested that Apple had wrongfully acquired a monopoly or was using its monopoly power to charge supra-competitive prices for its products.

188. Apple concealed its illicit conduct, both by failing to disclose its wrongful acquisition and maintenance of a monopoly through exclusionary acts in the relevant markets, and by affirmatively denying that it was engaged in such conduct. Apple has (repeatedly) publicly denied allegations by U.S. and foreign regulators that it was abusing its market power and engaging in anticompetitive or other unlawful conduct in the relevant markets. The market for consumer electronic products like iPhones is subject to antitrust regulation, so it was reasonable for Plaintiff and class members to presume that iPhones were sold in a competitive market. A reasonable person under the circumstances would not have suspected

iPhones were being sold at supra-competitive prices at any time before these claims accrued or before the Department of Justice filed its suit on March 21, 2024.

189. Because Apple's antitrust violations were self-concealing and affirmatively concealed by Apple, Plaintiff and class members had no knowledge of Apple's antitrust violations or of any facts or information that would have caused a reasonably diligent person to suspect Apple of having wrongfully acquired and maintained monopoly power. Therefore, by operation of Apple's fraudulent concealment, the statutes of limitations applicable to Plaintiff's and class members' claims were tolled.

#### **XIV. CLAIMS FOR RELIEF**

##### **COUNT ONE**

##### **Monopolization of the Performance Smartphone Market in the United States Sherman Act, 15 U.S.C. § 2**

190. Plaintiff hereby repeats and incorporates by reference each preceding paragraph as though fully set forth herein.

191. Performance smartphones in the United States are a relevant antitrust market, and Apple has monopoly power in that market.

192. Apple has willfully monopolized and illegally maintained such monopoly of the performance smartphone market in the United States through an exclusionary course of conduct and the anticompetitive acts described herein. Each

of Apple's actions individually and collectively increased, maintained, or protected its performance smartphone monopoly.

193. Apple's anticompetitive acts include, but are not limited to, its contractual restrictions against app creation, distribution, and access to APIs that have impeded apps and technologies including, but not limited to, super apps, cloud streaming, messaging, wearables, and digital wallets. The areas identified in this complaint reflect a non-exhaustive list of recent anticompetitive acts; as technology advances, both the technologies impeded and the particular type of impediment may shift in response to technological and regulatory change consistent with Apple's past conduct.

194. While each of Apple's acts is anticompetitive in its own right, Apple's interrelated and interdependent actions have had a cumulative and self-reinforcing effect that has harmed competition and the competitive process. Apple's anticompetitive acts have had harmful effects on competition and consumers.

195. Apple's exclusionary conduct lacks a procompetitive justification that offsets the harm caused by Apple's anticompetitive and unlawful conduct.

196. As a result of Apple's anticompetitive conduct, Plaintiff and the class paid supracompetitive prices for iPhones purchased in the United States.

**COUNT TWO**  
**Attempted Monopolization of the Performance Smartphone Market in the  
United States**  
**Sherman Act, 15 U.S.C. § 2**  
**(In the Alternative)**

197. Plaintiff hereby repeats and incorporates by reference each preceding paragraph as though fully set forth herein.

198. Performance smartphones in the United States are a relevant antitrust market, and Apple has attempted to monopolize that market.

199. Apple has attempted to monopolize the performance smartphone market in the United States through an exclusionary course of conduct and the anticompetitive acts described herein. Each of Apple's actions individually and collectively increased Apple's market power in the performance smartphone market.

200. Apple's anticompetitive acts include, but are not limited to, its contractual restrictions against app creation, distribution, and access to APIs that have impeded apps and technologies including, but not limited to, super apps, cloud streaming, messaging, wearables, and digital wallets. The areas identified in this complaint reflect a non-exhaustive list of recent anticompetitive acts but as technology advances, both the technologies impeded and the particular type of impediment may shift in response to technological and regulatory change consistent with Apple's past conduct.

201. While each of Apple's acts is anticompetitive in its own right, Apple's interrelated and interdependent actions have had a cumulative and self-reinforcing effect that has harmed competition and the competitive process.

202. In undertaking this course of conduct, Apple has acted with specific intent to monopolize, and to destroy effective competition in, the performance smartphone market in the United States. There is a dangerous probability that, unless restrained, Apple will succeed in monopolizing the performance smartphone market in the United States, in violation of Section 2 of the Sherman Act.

203. Plaintiff and the class are entitled to damages for Apple's attempted monopolization in an amount to be proven at trial.

**COUNT THREE**

**Monopolization of the Smartphone Market in the United States  
Sherman Act, 15 U.S.C. § 2**

204. Plaintiff hereby repeats and incorporates by reference each preceding paragraph as though fully set forth herein.

205. Smartphones in the United States are a relevant antitrust market, and Apple has monopoly power in that market.

206. Apple has willfully monopolized and unlawfully maintained such monopoly of the smartphone market in the United States through an exclusionary course of conduct and the anticompetitive acts described herein. Each of Apple's

actions individually and collectively increased, maintained, or protected its smartphone monopoly.

207. Apple's anticompetitive acts include, but are not limited to, its contractual restrictions against app creation, distribution, and access to APIs that have impeded apps and technologies including, but not limited to, super apps, cloud streaming, messaging, wearables, and digital wallets. The areas identified in this complaint reflect a non-exhaustive list of recent anticompetitive acts but as technology advances, both the technologies impeded and the particular type of impediment may shift in response to technological and regulatory change consistent with Apple's past conduct.

208. While each of Apple's acts is anticompetitive in its own right, Apple's interrelated and interdependent actions have had a cumulative and self-reinforcing effect that has harmed competition and the competitive process.

209. Apple's anticompetitive acts have had harmful effects on competition and consumers.

210. Apple's exclusionary conduct lacks a procompetitive justification that offsets the harm caused by Apple's anticompetitive and unlawful conduct.

211. As a result of Apple's anticompetitive conduct, Plaintiff and the class paid supracompetitive prices for iPhones purchased in the United States.

**COUNT FOUR**

**Attempted Monopolization of the Smartphone Market in the United States  
Sherman Act, 15 U.S.C. § 2  
(In the Alternative)**

212. Plaintiff hereby repeats and incorporates by reference each preceding paragraph as though fully set forth herein.

213. Smartphones in the United States are a relevant antitrust market, and Apple has attempted to monopolize that market.

214. Apple has attempted to monopolize the smartphone market in the United States through an exclusionary course of conduct and the anticompetitive acts described herein. Each of Apple's actions individually and collectively increased Apple's market power in the smartphone market.

215. Apple's anticompetitive acts include, but are not limited to, its contractual restrictions against app creation, distribution, and access to APIs that have impeded apps and technologies including, but not limited to, super apps, cloud streaming, messaging, wearables, and digital wallets. The areas identified in this complaint reflect a non-exhaustive list of recent anticompetitive acts but as technology advances, both the technologies impeded and the particular type of impediment may shift in response to technological and regulatory change consistent with Apple's past conduct.

216. While each of Apple's acts is anticompetitive in its own right, Apple's interrelated and interdependent actions have had a cumulative and self-reinforcing effect that has harmed competition and the competitive process.

217. In undertaking this course of conduct, Apple has acted with specific intent to monopolize, and to destroy effective competition in, the smartphone market in the United States. There is a dangerous probability that, unless restrained, Apple will succeed in monopolizing the smartphone market in the United States, in violation of Section 2 of the Sherman Act.

218. Plaintiff and the class are entitled to damages for Apple's attempted monopolization in an amount to be proven at trial.

#### **XV. PRAYER FOR RELIEF**

WHEREFORE, Plaintiff, on behalf of the class, respectfully request that the Court enter judgment by adjudging and decreeing that:

- A. This action may proceed as a class action, with Plaintiff serving as the Class Representatives and his counsel serving as Class Counsel;
- B. Apple has monopolized in violation of the Sherman Act;
- C. Plaintiff and the class have been injured in their business and property as a result of Apple's violations;



D. Plaintiff and the class are entitled to recover three-fold damages, and that judgment in favor of Plaintiff and the class be entered against Apple in an amount subject to proof at trial;

E. Plaintiff and the class are entitled to pre-judgment and post-judgment interest on the damages awarded them, and that such interest be awarded at the highest legal rate;

F. Plaintiff and the class are entitled to equitable relief sufficient to remedy Apple's past and ongoing restraints of trade, including:

i. A judicial declaration of the rights of Plaintiff and the class, and the corresponding responsibilities of Apple; and

ii. Issuance of a permanent injunction against Apple and its parents, subsidiaries, affiliates, successors, transferees, assignees and the respective officers, directors, partners, agents, and employees thereof and all other persons acting or claiming to act on their behalf from violations of the law as alleged herein;

G. Apple is responsible financially for the costs and expenses of a Court-approved notice program designed to give immediate notification of this action and their rights to the class members;

H. Plaintiff and the class recover their costs of this suit, including reasonable attorneys' fees, as provided by law; and

I. Plaintiff and the class receive such other or further relief as may be just and proper.

**XVI. JURY TRIAL DEMANDED**

Plaintiff demands a trial by jury of all claims so triable.

Dated: April 1, 2024

Respectfully submitted,

By: /s/ Jeffrey B. Gittleman

**POGUST GOODHEAD LLC**

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*\* pro hac vice to be filed*