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Epic Games: Nineteen Eighty-Fortnite

At the most basic level, we're fighting for the freedom of people who brought smartphones to install apps from sources of their choosing, the freedom for creators of apps to distribute them as they choose, and the freedom of both groups to do business directly.

— Tim Sweeney, Founder and CEO of Epic Games¹

The guiding principle of the App Store is to provide a safe, secure and reliable experience for users and a great opportunity for all developers to be successful but, to be clear, when it comes to striking the balance, Apple errs on the side of the customer.

— Douglas G. Vetter, VP & Associate General Counsel of Apple Inc.²

Epic Games took the video gaming world by storm with its hit title *Fortnite*, a blockbuster success that could be played across multiple platforms, from PC to console and eventually to mobile devices. Since Epic Games launched the “battle royale” game on the Apple iOS App Store and the Google Android Play Store in 2018, *Fortnite* had been installed nearly 150 million times, generating global in-app spending of over \$1.2 billion. On the back of *Fortnite*'s cross-platform success, Epic landed a private valuation of \$17.3 billion after raising nearly \$1.8 billion from strategic investors such as Sony and financial investors such as BlackRock, Fidelity, and T. Rowe Price in August 2020.³ *Fortnite*'s underlying technology Unreal Engine, the infrastructure software that Epic licensed to third parties, powered more than 7.5 million user enterprises inside and outside the gaming industry. Despite its success, Epic Games founder and CEO Tim Sweeney had long complained about the dominance of Apple and Google in mobile app distribution. Sweeney frequently called for a revolutionary change.⁴

On August 13, 2020, amid heightened tension between the tech giants and global regulatory authorities, Sweeney initiated a battle royale with Apple (and Google) that would likely last for years and that stood to change the gaming and app-distribution industries. Using a hotfix concealed in an earlier release, early that morning Epic introduced a direct payment system in its game *Fortnite* for both iOS and Android mobile devices. The unauthorized payment processing circumvented the 30% revenue share agreement mandated by iOS App Store and Google Play policies. Later that morning, Apple and Google promptly removed *Fortnite* from their storefronts, citing Epic's violation of their developer guidelines. By that afternoon, Epic had filed a lawsuit, clearly prepared in advance, alleging

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that Apple and Google engaged in monopolistic practices in the mobile app distribution and in-app payment processing markets.⁵

Most observers, along with Sweeney and Epic, focused their attention on the case against Apple, with the Google case continuing as a relative sideshow. Did Sweeney make the right move by challenging Apple in this way? Would Epic prevail in court against Apple? And would the publicity from Epic's battle royale with Apple drive change in the mobile application ecosystem? What, if anything, would Apple be willing to concede? And what would all this mean for the future of gaming, cloud technology, and digital marketplaces?

Epic Games

Origin Story

Tim Sweeney founded Epic Games in 1991 from his childhood bedroom.⁶ Sweeney sold games he developed to players he found online and published his first commercial video game *ZZT* in 1991. Since then, Sweeney and Epic developed and published the iconic games *Doom* (1993), *Quake* (1996), the *Unreal* franchise (launched in 1998), the *Gears of War* franchise (launched in 2006), the *Infinity Blade* series (launched in 2010), and *Fortnite* (2017).

Unreal Engine

Following the growing popularity of the first-person shooter (FPS) genre, Epic published a series of games after the release of *Unreal* in 1998. It then began to license *Unreal's* underlying game engine, Unreal Engine, to other game developers. The game engine continued to evolve and improve with the releases of Unreal Engines 2 (2002), 3 (2006), 4 (2014), and 5 (2021), as did Epic's business model for opening the engine to outside game developers. Epic did not charge a subscription fee for Unreal Engine and made it free for non-commercial use in 2015, charging a 5% royalty on commercial applications that generated at least \$3,000 quarterly revenue. In 2020, Unreal Engine became free-to-use until a game earned \$1 million in gross revenue. Sweeney underscored its importance to Epic: "If we didn't have the engine, we would have died. We would have died three times."⁷

A game engine was the core technology that acts as the backbone for video game development. Developers used the software packages in a game engine to generate complex video effects, animations, scenes, environments, and other visual content. The two most popular game engines were the Unreal and Unity Engines. They both evolved to offer more comprehensive tools across multiple platforms, including PC, console, mobile, and VR/AR (see **Exhibit 1** for platform ecosystems for video gaming). Outside of gaming, industries such as film, television, architecture, sports, and automotive had all used Unreal Engine for 3D rendering and special effects generation.

As of 2018, Unreal Engine led in market share among triple-A game developers/publishers with its leading real-time 3D rendering and high graphics capabilities.⁸ Besides Epic's own games like *Fortnite*, other developers like Ubisoft used Unreal Engine to develop franchises such as *Brothers in Arms* (2005) and *Tom Clancy* (2002–2013) before it began building its own engine in-house. More recent games developed on Unreal Engine included *PlayerUnknown's Battlegrounds* (*PUBG*) (2017), *Gears 5* (2019), *Kingdom Hearts 3* (2019), and *Minecraft: Dungeons* (2020).

Fortnite

Epic originally released *Fortnite* as a player-versus-environment genre game but reached widespread success with the release of the “battle royale” game mode in July 2017. *Fortnite*’s popularity rose meteorically with the user count reaching 30 million by the end of 2017. *Fortnite* was playable across platforms: iOS, Android, PC, Microsoft Xbox, Nintendo Switch, and Sony PlayStation (after reaching an agreement with Sony in September 2018) (see **Exhibit 2** for *Fortnite*’s registered user count by platform). As of August 2020, *Fortnite* had more than 350 million players and 144 million downloads, and it generated over \$1.2 billion from mobile users since its initial launch on the Apple and Google Play app stores.⁹ *Fortnite* streaming and e-sports also thrived. More than 7 million people viewed an October 2019 live event. *Fortnite* was the most-viewed game on YouTube and the second-most on Twitch. The aggregate prize pools in the 2018 and 2019 seasons of *Fortnite* competitions were \$100 million with the victor of Epic’s own *Fortnite* World Cup taking home \$30 million.

Fortnite’s “battle royale” mode featured survival gameplay in which up to 100 players were dropped on a map with players fighting to be the last one standing. The game was free to download and play, but with Epic’s “V-bucks” in-game virtual currency, users could purchase aesthetic in-game digital items (that did not provide any competitive advantage): costumes, avatars, tools, dance moves, and special game modes. *Fortnite* later introduced another monetization feature called the “Battle Pass,” a once-per-major-update payment that enabled players to complete tasks in exchange for exclusive in-game items.¹⁰ *Fortnite* brought in an estimated \$2.4 billion in 2018 through in-game microtransactions (MTX) according to SuperData, a game-industry research group owned by Nielsen.¹¹ Mobile platforms contributed a modest portion of Epic’s revenue (see **Exhibit 3** for *Fortnite* mobile revenue compared to total revenue). However, *Fortnite*’s dominance on the iOS platform remained impressive: in December 2018 alone, it generated over \$40 million in revenue, far surpassing rival games, and was frequently the App Store’s top-earning game (see **Exhibit 4** for *Fortnite*’s iOS revenue compared to other games). *Fortnite*’s popularity remained strong into the summer of 2020: gamers spent over \$46 million on mobile in the month prior to its removal from the Apple and Google’s Play app stores.¹² *Fortnite* was rumored to have generated \$400 million in sales during April 2020 alone. While Epic does not publicly report financials, documents internal documents revealed in litigation later showed that Epic made more than \$5 billion from *Fortnite* in 2018¹³, following a reported \$4.2 billion in 2019.¹⁴

Epic Games Store

Following *Fortnite*’s meteoric success, Epic launched its own PC game storefront, the Epic Games Store, in December 2018 to compete primarily with Valve’s Steam store. Epic Games Store charged a 12% commission from revenue generated by external developers through first-time game sales and in-game transactions. For developers using Unreal, Epic waived the engine royalty fee, making Epic Games Store more lucrative than Valve’s Steam to developers. Steam, on the other hand, employed a 30%, 25%, or 20% split, depending on a game’s gross revenue. Sweeney justified the entrance of the Epic Games Store into the PC games store marketplace as a way to facilitate competition and drive value for developers. “Stores charging 30 percent are marking up their costs by 300 percent to 400 percent,” Sweeney claimed, and “[Epic] aims to give developers a better deal.”¹⁵ In a 2020 interview, Sweeney explained how they came up with the 12% commission rate:

We know the costs of operating a store... [it’s] 5-7% of revenue for Epic, and Apple and Google have way, way higher economies of scale... you can break down the cost by component... payment processing is 2.5-3% in major developed economies, as much as 6-8% in developing economies, bandwidth is 1-1.5%, customer service 1-1.5%... so we’re

able to charge 12% and make a 5-7% profit margin for ourselves. It's not altruistic, this is a great business.¹⁶

The Epic Games Store embodied two principles of Sweeney and Epic. First, there should be competition between marketplaces to lead to "fair" pricing for developers. In 2019, Valve's Steam storefront had an estimated 75% market share in global PC games distribution.¹⁷ The introduction of Epic Games Store and its 12% fee compelled Valve to replace its flat 30% fee with a tiered revenue sharing system just days afterward.¹⁸ The competition provided by Epic Games Store could push Valve's fees, however marginal, in the desired direction.

Second, platforms should exist to serve third-party developers and content creators. With origins as a game developer, Sweeney defined a true content platform as one through which content creators and developers generated most of the profit earned across a given platform.¹⁹ In other words, if the owner of the digital games storefront or app store itself earned more profits than the developers of a store's content, then it was not a true platform. By introducing a 12% take rate where 30% was the norm, Epic Games Store's fee was also a step in the right direction for Sweeney.

Metaverse

For many years, Sweeney advocated for his vision of a Metaverse encompassing all virtual worlds, augmented reality, the Internet's social networks, and digital economies. Some believed video gaming was the ideal starting point and the closest manifestation of the vision, with games such as *Fortnite*, *Roblox*, and *Minecraft* at the forefront: virtual environments that prioritized the creation of an economic infrastructure supporting user-generated content. As venture capitalist Matthew Ball described, the Metaverse was "the newest macro-goal for many of the world's tech giants... the express goal of Epic Games... the driver behind Facebook's purchase of Oculus VR" and the reason for the "tens of billions that will be spent on cloud gaming over the next decade... [because] such technologies will underpin our online-offline future."²⁰ While no one could predict what a Metaverse would eventually look like, advocates agreed on its fundamental characteristics: the Metaverse would be persistent, participatory, synchronous, and interoperable. In 2020, Sweeney described his vision:

No one knows exactly what the Metaverse will be... the Metaverse is going to be a real-time 3D social medium, where instead of sending messages and pictures to each other asynchronously, you're together with them in a virtual world and interacting and having fun experiences which may span from purely games to purely social experiences. Another critical element of the Metaverse, it is not just built by one mega corporation. It's going to be the creative work of millions of people who can each add their own elements to it through content creation, programming and design... it will be a massively participatory medium of a type we haven't really seen yet.²¹

Antitrust Challenges to Apple and Google

As lawmakers and regulators in both the United States and Europe probed the matter of whether the tech giants unfairly used their market power, Epic publicly spoke out against Apple and Google. Early on, Sweeney criticized the App and Play Stores at the Devcom Developer Conference in 2017. He described the app economy as "a market failure" and described the app stores' high fees to developers as "a parasitic loss."²² Since June 2019, the U.S. Justice Department has increasingly scrutinized the owners of "market-leading online platforms" such as Facebook, Apple, Amazon, and Google.²³ Within the mobile operating systems (OS) marketplace, the debate focused on three topics: whether competing application marketplaces were allowed, whether alternative payment systems were allowed, and

whether fees of the original payment system or marketplace were fair. To be eligible for app distribution on Apple's App Store and Google's Play Store, developers were required to participate in their corresponding Developer Programs and abide by various developer account policies. Developers needed to agree to these policies to distribute their apps on iOS/Android devices and use Apple/Google developer tools. Over the years, Apple had safeguarded the App Store by enforcing strict policies and removing apps it deemed offensive or legally questionable. This included apps that violated data collection rules (Onavo Protect/Facebook Research), spammed users with ads and non-reliable information (Corona 100m), or helped users evade law enforcement (PhantomALERT).

Google

Public criticism and regulatory scrutiny over Google's app distribution market had been less intense than that against Apple. Whereas Apple's iOS ecosystem forbade the installation of apps distributed through avenues other than the App Store itself, Google had a more open mobile app distribution platform that made alternative app stores available and sideloading apps possible. Epic initially released *Fortnite* for Android devices as an installer app downloadable outside of the Play Store in 2018, effectively bypassing Google Play's 30% cut of in-app transactions. Netflix and Spotify also previously skirted Google's cut by using their own in-app direct payment system.²⁴

Epic and Google were once in a disagreement similar to the one between Epic and Apple. In 2018, Google rejected Epic's intent to distribute *Fortnite* through the Google Play Store without Google's own payment system. In response, Epic decided to go around the Play Store; Android had enabled non-Play Store app marketplaces in its ecosystem, but the user experience was significantly worse than on the Play Store. To Epic, the compromised user-experience for external app installs seemed intentional. According to Sweeney, "Google puts software downloadable outside of Google Play at a disadvantage, through technical and business measures such as scary, repetitive security pop-ups for downloaded and updated software..."²⁵ Eighteen months later, Epic eventually yielded and launched the app through the Google Play Store. Sweeney further commented, "We hope that Google will revise its policies and business dealings in the near future, so that all developers are free to reach and engage in commerce with customers on Android and in the Play Store through open services, including payment services, that can compete on a level playing field."²⁶

Google had been fending off antitrust scrutiny from the European Union (EU) since at least 2009, but investigations took years to complete and generally resulted in fines that did little to change the market power dynamics. In 2017, a \$2.7 billion fine on Google's online shopping practices was issued after a seven-year-long investigation, contributing to total fines of over \$9 billion across three antitrust cases. U.S. antitrust authorities occasionally raised concerns with Android's policies, but the most serious investigations aimed at Google focused on its dominance of advertising, search, and data collection, rather than on the platform dominance of Android or the policies of the Google Play Store. Android and the Google Play Store were less of a market power liability for Google than iOS and the App Store were for Apple. At Congressional hearings on the market power of online platforms in 2020, most of the complaints against Google focused on its dominance in search and advertising; meanwhile, lawmakers grilled Apple CEO Tim Cook on iOS market share and iOS App Store policies.

Apple

The App Store became a priority business segment for Apple under CEO Tim Cook, who succeeded Steve Jobs in 2011.²⁷ On the company's earnings call in early 2016, Cook said,

We started breaking out services [which contained App Store revenue], as you know, in the beginning of fiscal year 2015. And as that business has grown and as it became clear

to us that the investors wanted—investors and analysts wanted—more visibility into that business, we’ve now elected to break it out and show the full size, scope, growth, and make comments on the profitability of it from a transparency point of view.

I do think that the assets that we have in this area are huge, and I do think that it’s probably something that the investment community would want to and should focus more on.²⁸

Cook’s vision of transitioning Apple from a hardware company to a services company coincided with signs of slowing iPhone sales growth. Over the last decade, Apple’s services category saw the most significant growth. Services revenue grew 33% to nearly \$40 billion during fiscal year 2018, consolidating its position as the company’s primary growth driver. Compared to the gross margin of just under 30% in Apple’s products business which included the iPhone, the services division enjoyed gross margin in excess of 60% in the first quarter of 2019.²⁹ With the coronavirus lockdown as a tailwind, services revenue hit a record high for the first quarter of 2020.³⁰ The App Store proved to be a major source of services’ profits; one analyst described it as a “cash cow” generating an estimated \$13.8 billion in revenue in 2018 and \$18.3 billion in 2019, accounting for nearly 40% of Apple’s total services revenue^{a, 31}. Gaming applications reportedly made up three-quarters of App Store revenue (see **Exhibit 5** for average iOS in-app spending per user by category).³²

Apple generated direct revenue from paid downloads since launching the App Store in 2008. A year later, Apple added the “in-app purchase” (IAP) feature for paid apps and started taking a 30% cut for upfront app sales while “free apps remain[ed] free.”³³ In 2010, as part of an effort to communicate more clearly with third-party developers, Apple released the first edition of its App Store Review Guidelines. By restricting the App Store’s payment processing to its own in-app purchase system, a new monetization model prevailed: all in-app digital goods and services purchased went through Apple. The application of Apple’s in-app purchase rules to subscriptions was contentious for both app developers. Back in 2008, the 30% commission introduced at the beginning of the App Store era caused little dissent.³⁴ Some suspected that Apple chose the 30% fee based on the precedent of the iTunes Store, which shared revenue 70/30 with both major and independent music labels. One analyst postulated that Apple settled on 30% to compete against the 35% commission charged for movie views by cable TV companies at the time.³⁵ Many platforms eventually mimicked Apple’s 30% fee structure on upfront and in-app transactions, including Google Play, Samsung Galaxy Store, and other video game digital marketplaces.³⁶ In contrast, Sweeney launched the PC-based Epic Games Store with a unique 88/12 revenue-sharing scheme: “It’s time for change. In the early days of Steam, 70/30 [percent cut] was a revolutionary split because you could compare it to 70/30 in favor of the retailer.”³⁷

Early Complaints An early antitrust complaint against the App Store came from consumers in 2011 who filed a class-action lawsuit on the basis of Apple’s monopolistic power over the iOS app distribution platform and pricing structure. The lawsuit alleged that the 30% commission from developers resulted in inflated app prices. A U.S. Supreme Court ruling in May 2019 granted consumers the right to sue Apple for its practices over the distribution of apps and the potential effects on app developers’ pricing decisions.³⁸ The case was sent to lower courts for further investigation.³⁹

Major companies had been reluctant to pay the 30% “Apple tax” on in-app purchases. Netflix and Spotify initially complied with the 30% fees Apple collected on subscriptions initiated on iOS, but later adjusted their new-user sign-up flows to avoid it. Spotify stopped supporting Apple’s in-app payment

^a Apple only disclosed how much it paid to developers but not the total amount of revenue it generated from the App Store. The estimated figure here assumed that *all* developers received 70% of app sales.

system for new users in 2016, and Netflix made a similar decision in 2019.⁴⁰ In the same year, Spotify filed a formal antitrust complaint to the EU, accusing Apple of purposely promoting its own competing music streaming service and limiting consumer choice.⁴¹ Apple defended its operations:

The App Store is a safe, secure platform where users can have faith in the apps they discover and the transactions they make, and developers, from first-time engineers to larger companies, can rest assured that everyone is playing by the same set of rules.⁴²

Some apps, like Amazon's Prime Video and Audible apps, got around the 30% fees by removing the sign-up and in-app purchase capability from their apps entirely. While many companies sought to bypass Apple's in-app purchase rules, blatant confrontations were rare. The CEO of ProtonMail, an encrypted email service app restricted by Apple, commented, "If you're not in the App Store today, you're not online. Your business cannot function. So they're the gatekeepers of something that every single company wants..."⁴³ Epic also paid the commission fees required by Apple's App Store since March 2018 to make *Fortnite* available on iOS devices. Sweeney said it only did so because of the App Store's strictly closed system. "It's time for change... Visa and Mastercard process transactions for 3 percent on average," Sweeney said, "Apple, Google, and Android manufacturers make vast, vast profits from the sale of their devices and do not in any way justify the 30 percent cut."⁴⁴

Rising Attention in 2020 In January 2020, a diverse set of companies including Tile, Sonos, PopSockets, and Basecamp testified before the U.S. House Committee on the Judiciary, citing Apple's bullying tactics and dominance over online marketplaces.⁴⁵ In the EU, complaints from Spotify, Rakuten, and others accumulated over the years, and the EC launched a formal investigation over the App Store's allegedly anticompetitive practices. The complaints charged that Apple's commission provided an unfair advantage, privileging Apple's own products and services such as Apple Music.⁴⁶ Apple responded with its previous argument: "At the end of the day, our goal is simple: for our customer to have access to the best app or service of their choice, in a safe and secure environment."⁴⁷

Companies such as Match Group (the owner of dating apps like Tinder and Hinge) and Basecamp became more outspoken in their frustrations with the App Store.⁴⁸ Match Group criticized Apple for "squeeze[ing] industries like e-books, music and video streaming, cloud storage, gaming and online dating," and added, "We're acutely aware of their power over us."⁴⁹ Basecamp CEO Jason Fried joined other executives in complaining about the Apple fee: "We don't pay Apple 30% and never will... the whole thing is ridiculous. It's very anticompetitive."⁵⁰ Hey.com, a Basecamp service, created a website page titled "Apple vs. Hey" to feature the company's disagreements with Apple. The website featured tweets that logged the story of Apple's rejection of an update of Hey.com which required users to purchase subscriptions through a webpage external to the app. David Hansson, the co-founder of Basecamp, concluded, "We can't run a business wrestling Google with one arm and Apple with the other. It's just too much."⁵¹

As tensions heightened between Apple, App Store customers, developers, and regulatory authorities throughout 2020, Sweeney became more outspoken on Twitter. In response to Apple's defensive claim that its services safeguarded user security, Sweeney said, "The iOS App Store's monopoly protects only Apple profit, not device security."⁵² In response to Apple's summer 2020 changes to the App Store's guidelines, Sweeney observed, "Apple just moved a few of the mazes they trap developers in."⁵³ He urged that iOS and Android open up "as truly open platforms... to ensure a competitive, healthy, and fair app economy."⁵⁴ Sweeney challenged Apple's rule on behalf of all developers in his response to Apple's claim of maintaining "a level ground field":

To me, this means: All iOS developers are free to process payments directly, all users are free to install software from any source. In this endeavor, Epic won't seek nor accept a special deal just for ourselves.⁵⁵

Congressional Hearing On July 29, 2020, the 116th Congress's House Judiciary Committee subcommittee on Antitrust, Commercial, and Administrative Law opened a hearing on market power in the technology industry, summoning the CEOs of Apple, Amazon, Facebook, and Google. Conducted remotely during the height of pandemic, the event marked the culmination of years of growing discontent with U.S. tech giants. The day before the hearing, Sweeney quoted a small game developer's tweet, citing Apple and Google's 30% app store commission as part of the platforms' "terribly unfair and exploitative" business model: "They come off the top, before funding any developer costs. As a result, Apple and Google make more profit from most developers' games than the developers themselves."⁵⁶

At the hearing, CEO Tim Cook defended the App Store's locked-down system and the fee it charged by claiming it ensured "a safe and trusted place."⁵⁷ His opening statement compared the rates across other stores and video game marketplaces and found the App Store to be comparable.⁵⁸ He cited the enormous opportunities provided to developers by the App Store's growth and noted, "If Apple is a gatekeeper, what we have done is open the gate wider."⁵⁹ He claimed that the App Store protected its users and treated developers equally: "The App Store guidelines ensure a high-quality, reliable, and secure user experience. They are transparent and applied equally to developers of all sizes and in all categories." However, members of the committee cast doubt on these claims at the antitrust hearing, citing Apple's unfair treatment of apps to shut out competition and retaliate against developers who publicly objected to its policies (see **Exhibit 6** for a summary of Cook's testimony).⁶⁰

Blue and Green Bubbles In 2011, Apple introduced the proprietary iMessage instant messaging protocol that automatically routed messages between iOS users through Apple's own servers, circumventing the cellular-network-dependent SMS protocol for communications between iOS devices. While iMessage was a technical improvement for iPhone users, it had a dual-protocol design that discriminated between iOS and non-iOS users: messages sent between iOS devices appeared as blue bubbles, while messages between iOS and non-iOS devices appeared as green bubbles and were sent over SMS. Group texting between iOS and non-iOS users sometimes caused messages to be lost, delayed, or delivered out of sequence. Android users bore the brunt of this inconvenience.

Apple executives considered making iMessage available for Android but decided against it. In a 2013 email, Apple's chief software executive at the time wrote, "I am concerned the iMessage on Android would simply serve to remove [an] obstacle to iPhone families giving their kids Android phones." Another internal email recommended against opening iMessage to other devices and stated what Apple executives wouldn't say in public: "iMessage amounts to serious lock-in."⁶¹

Epic Declares War

In an email to Apple's executives at 2:08 AM Pacific Time on August 13, 2020, Sweeney announced Epic's plan to introduce a new direct payment option to *Fortnite* users that would skirt the App Store's 30% cut of in-game transactions. With the hotfix update on *Fortnite*'s in-app purchase system, users did not have to update their application to have access to the change, and Apple's App Store review team did not have to approve the update.⁶² The new payment option offered players across all iOS and Android devices a permanent 20% discount on the game's virtual currency (V-bucks) if they opted to transact with Epic directly. Otherwise, they could pay the original price through either the Apple App Store or Google Play Store (see **Exhibit 7** for *Fortnite*'s direct payment option). Epic's direct payment

system directly violated Section 3.1.3 of Apple's App Store Review guidelines, the section that mandated that only Apple's IAP could be used for payment processing of digital goods and services and contained the anti-steering provision about directing iOS users to other avenues of purchase from within the app (**Exhibit 8** for App Store Review Guidelines Section 3.1).⁶³

Banned

At 11:22 AM PDT on August 13, Apple removed *Fortnite* from the App Store. Google followed suit later that afternoon. Both companies issued statements condemning Epic's actions, but at the same time said they would welcome *Fortnite* back if Epic reverted to the original payment system. New users could no longer download *Fortnite* from the App and Play Stores, and existing users could no longer receive version updates.^b That afternoon, Apple described the situation to the public:

Today, Epic Games took the unfortunate step of violating the App Store guidelines that are applied equally to every developer and designed to keep the store safe for our users. As a result, their *Fortnite* app has been removed from the store. Epic enabled a feature in its app which was not reviewed or approved by Apple, and they did so with the express intent of violating the App Store guidelines regarding in-app payments that apply to every developer who sells digital goods or services.

Epic has had apps on the App Store for a decade, and have benefited from the App Store ecosystem—including its tools, testing, and distribution that Apple provides to all developers. Epic agreed to the App Store terms and guidelines freely and we're glad they've built such a successful business on the App Store. The fact that their business interests now lead them to push for a special arrangement does not change the fact that these guidelines create a level playing field for all developers and make the store safe for all users. We will make every effort to work with Epic to resolve these violations so they can return *Fortnite* to the App Store.⁶⁴

Anticipating the ban, Epic was ready to go with lawsuits and a public relations campaign.

Lawsuit: Epic Games v. Apple Inc.

Within hours of removal from the App Store, Epic filed a 56-page complaint against Apple in the U.S. District Court for the Northern District of California (*Epic Games v. Apple Inc.*). Later that day, Epic filed a similar complaint against Google. As its legal counsel, Epic retained the law firm Cravath Swaine & Moore, a surprise to some observers. Cravath was previously famous for successfully defending companies facing antitrust allegations, like AT&T, Qualcomm, and American Express. Having generally represented the side of consolidation and market power, this time Cravath represented a plaintiff challenging market power.⁶⁵

Epic's complaint accused Apple of anticompetitive practices in the distribution of apps and of monopolizing payment processing on the App Store. The full complaint became publicly available via *Fortnite*'s Twitter account at 1:33 PM PDT, almost immediately after the ban.⁶⁶ Though the claims Epic made against Apple's and Google's allegedly anticompetitive behaviors were similar, Epic emphasized that Apple's "unreasonable restraints," "total monopoly," and "unlawful contractual restrictions... foreclosed all direct competition."⁶⁷ In the lawsuit against Google, Epic highlighted Google's deliberate

^b *Fortnite* rolled out more than forty updates in 2019 alone, averaging over three per month. Gamers valued frequent refreshed content from game developers.

actions that disadvantageded non-Play Store apps, restricting competition and functionally making Android less of the open system that Google touted.⁶⁸ Before *Fortnite*'s ban, Epic generated a monthly average of \$40 million in sales from Apple's App Store, compared to \$3 million from Google Play.⁶⁹

Epic did not seek monetary compensation from Apple and Google but rather an overhaul of the mobile platform infrastructure that enabled Apple and Google to dominate their complementors. The filing extensively referenced the Sherman Antitrust Act of 1890^c, the foundation of U.S. antitrust law. It alleged that Apple had unlawful, monopolistic control over the iOS app distribution market and forced developers to abide by the App Store's technical and contractual restrictions. The lawsuit condemned the role of IAP as the sole digital content payment processing tool allowed by Apple for iOS apps. Finally, it claimed that the tying of the App Store and IAP was a *per se* violation of antitrust laws. As opposed to *rule of reason* violation, which most anticompetitive actions fell under, Epic alleged that the "tying arrangement" itself was almost always illegal such that no further anticompetitive actions or market contexts were needed for a court to rule in Epic's favor.⁷⁰ The complaint argued:

Apple is able to unlawfully condition access to the App Store on the developer's use of a second product—In-App Purchase—for in-app sales of in-app content. Through its Developer Agreement and unlawful policies, Apple expressly conditions the use of its App Store on the use of its In-App Purchase to the exclusion of alternative solutions in a *per se* unlawful tying arrangement.⁷¹

Public Relations: Nineteen Eighty-Fortnite and #FreeFortnite

In its fight against Apple, Epic Games also employed its massive user base with a marketing campaign that portrayed Apple as an all-powerful monopolist. At 1:22 PM PDT on August 13, shortly before the lawsuit went public, Epic released a video depicting *Fortnite* characters that burlesqued Apple's famous "1984" television commercial (see **Exhibit 9** for *Fortnite*'s parody video and Apple's original "1984" ad). The video ends with Epic's message about its "fight" with Apple and a call to arms for the 350 million registered *Fortnite* players.⁷² Sweeney later tweeted: "If we don't fight for our rights where we stand, we'll eventually run out of places to retreat to, and by then we'll be too weak and divided to win. This is why developers need to fight the store monopolies HERE and NOW!"⁷³

On August 23, Epic launched a "#FreeFortnite Cup" tournament with prizes and physical giveaways to gather users to "play one last battle royale across all platforms."⁷⁴ Epic encouraged broad use of the "FreeFortnite" hashtag and released digital assets parodying Apple's "Think Different" ad campaign for players to make their own virtual anti-Apple gear. On August 26, Epic published a blog post titled "#FreeFortnite" that explained the mission of its fight with Apple.⁷⁵ An FAQ section updated players on the ban with direct links to its initial filings of the legal dispute.⁷⁶

Many players were surprised and confused by the rapid turn of events. Some expressed disappointment in Epic, and others supported Epic's actions.⁷⁷ Two weeks in, there were nearly 200,000 posts across Facebook and Twitter mentioning the campaign, with YouTubers, Twitch streamers, and other *Fortnite* enthusiasts contributing.⁷⁸ Sweeney continued his public awareness campaign, describing Epic as leading a fight not only for itself but also for consumers and the entire creative

^c The Sherman Antitrust Act of 1890 is a federal statute which prohibits activities that restrict interstate commerce and competition in the marketplace. Amended by the Clayton Act in 1914, §1 of the Act states that "[e]very contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States, or with foreign nations, is declared to be illegal." §2 of the Act prohibits monopolization or attempts at monopolizing any aspect of interstate trade or commerce and makes the act a felony.

industry, protecting the freedom of consumers to download apps and the freedom of developers to distribute apps.⁷⁹

Apple Returns Fire

On August 14, Apple sent Epic a formal notice that Epic's membership in the Apple Developer Program was to be terminated and warned that Epic had until August 28 to take actions accordingly. Terminating Epic's membership in the Program would prevent Epic from accessing its software-developer accounts associated with Unreal Engine and also block its third-party developer users from publishing any app using the Unreal Engine to the App Store.⁸⁰ While Epic long prepared for *Fortnite's* removal, it was unclear whether Epic anticipated that Apple would try to block its developer engine access as well. On August 17, Epic filed for a temporary restraining order that accused Apple of disproportionate retaliation. Epic claimed that such a move would cause "unquantifiable and irreparable" damage to its own business as well as its customers;⁸¹ if Epic's access to these accounts were revoked, the larger developer community using Unreal Engine would also suffer.

On August 21, Apple urged the Court not to grant Epic the temporary restraining order. It rejected Epic's definition of the market as limited to "iOS apps" and then opposed the claim of IAP's being a separate "tied" product. Apple also denied Epic's notion of "single-brand iOS Mobile App Distribution and iOS In-App Payment Processing Markets." Instead, it defined a competitive market to "include services 'reasonably interchangeable by [developers] for the same purposes'" and commented on the "multiple distribution channels available to [*Fortnite*] games, including other mobile app marketplaces, video game consoles, and personal and laptop computers." Apple concluded, "There is substantial evidence of competition among platforms on which *Fortnite* is played."⁸²

IAP, in Apple's view, was not a separate product or market but "functions as Apple's digital checkout for the App Store—a payment gateway through which all purchases of digital content made within iOS apps and on the App Store are channeled and logged." Apple further claimed the App Store qualified as a "two-sided" transactional platform and IAP was "the fundamental mechanism" also implemented by other transaction platforms as part of the monetization process. "If developers can avoid the digital checkout, it is the same as if a customer leaves an Apple retail store without paying for shoplifted products." Finally, Apple emphasized that Epic's move was part of a deliberate, avoidable plan, as *Fortnite* grew into a highly profitable gaming app inside the App Store.⁸³

Apple Fellow Philip Schiller, who formerly oversaw Apple's App Store business, also filed a separate statement expressing his concern:

If every developer is free to breach its contracts with Apple and allowed to circumvent the App review process, then Apple's App Store cannot deliver the many benefits to consumers and developers that it currently does... And if developers can circumvent [in-app purchases] and avoid paying Apple the commissions it is contractually due, Apple will be unable to continue its on-going investment in it.⁸⁴

Additional details emerged about a series of emails between Sweeney and Apple executives prior to *Fortnite's* ban. On June 30, upon Epic's last renewal of its Developer Program License Agreement, Sweeney initially requested permission from Apple for alternative payment processing and app installation options within *Fortnite*. Apple refused Sweeney's demands on July 10 with arguments citing its own guidelines as well as Sweeney's tweets. Sweeney followed up a week later expressing his firm disagreement, before eventually going rogue on August 13.⁸⁵

Court Response

Epic soon filed a preliminary injunction that asked the Court for a temporary restraining order against Apple's "overbroad retaliation" towards Fortnite and Unreal Engine in an "unlawful effort to maintain its monopoly" that would cause "irreparable harms" to Epic itself and the broader ecosystem of game developers as the case awaited trial.⁸⁶ Epic also requested that its other developer tools be considered separate from the lawsuit. On August 24, a court granted Epic's request to maintain its Apple developer credentials for Unreal Engine,⁸⁷ but the court denied Epic's request to bring *Fortnite* back to the App Store, citing its deliberate breach of the App Store guidelines.⁸⁸ Thus, the temporary restraining order was settled in partial favor of both parties: *Fortnite* remained off the App Store, but the apps of developers using Unreal Engine would remain available and supported by Epic.⁸⁹ The Court decided:

The Court finds that with respect to Epic Games' motion as to its games, including *Fortnite*, Epic Games has not yet demonstrated irreparable harm. The current predicament appears of its own making...

By contrast, Epic Games has made a preliminary showing of irreparable harm as to Apple's actions related to the revocation of the developer tools (SDKs) [e.g., Unreal Engine]. The relevant agreement, the Apple Xcode and Apple SDKs Agreement, is a fully integrated document that explicitly walls off the developer program license agreement... For now, Epic International appears to have separate developer program license agreements with Apple and those agreements have not been breached...

Thus, in focusing on the status quo, the Court observes that Epic Games strategically chose to breach its agreements with Apple which changed the status quo. No equities have been identified suggesting that the Court should impose a *new* status quo in favor of Epic Games. By contrast, with respect to the Unreal Engine and the developer tools, the Court finds the opposite result. In this regard, the contracts related to those applications were not breached. Apple does not persuade that it will be harmed based on any restraint on removing the developer tools. The parties' dispute is easily cabined on the antitrust allegations with respect to the App Store. It need not go farther. Apple has chosen to act severely, and by doing so, has impacted non-parties, and a third-party developer ecosystem. In this regard, the equities do weigh against Apple.⁹⁰

More Shots

On August 28, Epic's developer account associated with *Fortnite* was officially terminated from the App Store. Sweeney retweeted Apple's promotion of *Fortnite*-competitor *PUBG Mobile*: "While waiting for Apple to #FreeFortnite on iOS and Mac, here's another awesome battle royale game powered by Unreal Engine!"⁹¹ On September 4, Epic filed another preliminary injunction to reiterate Apple's unlawful behavior regarding the iOS distribution market and in-app payment processing along with four separate declarations in support of Epic's claim of Apple's monopolistic control of the iOS App Distribution Market (see **Exhibit 10** for a summary of arguments from Epic expert opinion on Apple). It also revealed that iOS users made up the largest segment of the *Fortnite* community, noting that, "Daily active users on iOS have declined by over 60% since *Fortnite's* removal from the App Store" (see **Exhibit 11** for *Fortnite's* monthly downloads and revenue before and after the ban).⁹²

Epic directly opposed Apple's standard defense of its closed ecosystem, that the App Store ensured safety, alleging that Apple's "requiring all in-app purchases to go through IAP is facially pretextual."

Epic also claimed it would be “ideally situated to challenge Apple’s restrictions” as a “would-be direct competitor of Apple in the relevant markets, ready to offer competitive app distribution and competitive payment processing on iOS.”⁹³ Apple countersued Epic on September 8 and responded to Epic’s preliminary injunction on September 15, now arguing that Epic took calculated steps to “invigorate interest” in Epic’s games and services. It also cast doubt on Epic’s demonstration of “irreparable harm” by arguing iOS users did not make up the majority of *Fortnite*’s revenue.⁹⁴ On September 11, Epic shut down Apple’s sign-in system for Epic’s accounts and encouraged users to change credentials.⁹⁵ On September 28, the Google Play Store updated its developer guidelines to emphasize and enforce the requirement to use its in-app purchase system.⁹⁶

Following *Fortnite*’s ban, Epic’s lawsuit, Apple’s countersuit, and a failed motion for the temporary restraining order to bring *Fortnite* back into the App Store, Epic still had a long road ahead. On September 24, Epic and Apple filed statements outlining their respective positions in an initial bench trial, scheduled to take place in May 2021.⁹⁷ On October 11, Judge Yvonne Gonzalez Rogers reaffirmed her split decision on Epic’s preliminary injunction: developers using Unreal Engine would be able to list their apps on the App Store, but Apple had no obligation to bring back *Fortnite*.

Industry Reaction

Epic’s conflict drew a new level of public attention beyond previous feuds between app developers and the mobile platforms. Spotify commended Epic’s move, agreeing that “Apple’s unfair practices have disadvantaged competitors and deprived consumers for far too long.”⁹⁸ Match Group also sided with Epic: “We fully support Epic Games’ efforts... to show how Apple uses its dominant position and unfair policies to hurt consumers, app developers and entrepreneurs.”⁹⁹ News publishers such as the *New York Times*, *Wall Street Journal*, and *Washington Post* joined in, condemning the App Store’s share of their subscriptions revenue.¹⁰⁰ Epic’s battle against Apple’s stewardship received other companies’ sympathy: some publicly sided with Epic, while others remained reluctant to form a coalition.¹⁰¹

Facebook

Facebook and Apple openly criticized each other multiple times prior to 2020. Back in 2011, Apple banned a competing Facebook store for web games through its built-in mobile website. Apple had an interest in guarding IAP from third-party games distribution, one of the App Store’s most lucrative verticals. Consumer spending on mobile games reached \$61.7 billion in 2019, of which 68% came from the App Store (see **Exhibit 12** for worldwide mobile game revenue).¹⁰² Though historically known for setting strict rules for listing gaming apps or apps featuring games on the App Store, Apple launched its own premium subscription-based gaming service Apple Arcade in 2019. In August 2020, Apple forced Facebook to launch its gaming app without its gaming feature after rejecting release for months. Facebook complained, “[Apple’s restriction] is shared pain across the game industry, which ultimately hurts players and devs and severely hamstrings innovation on mobile for other types of formats, like cloud gaming.”¹⁰³

Tension between Apple and Facebook continued escalating amidst conflict between Epic and Apple. Facebook joined the cohort of companies criticizing the App Store’s payment processing policy. On August 14, one day after *Fortnite*’s ban, Facebook rolled out a paid event feature that allowed small business owners to charge users for accessing their live video streams.¹⁰⁴ It openly spoke of how the “Apple tax” stifled its effort to help struggling small businesses during the pandemic by not waiving its 30% fee.¹⁰⁵ As the anti-App Store sentiment expanded, on September 25, Apple decided to make exceptions for Facebook online events along with teaching apps by allowing their own payment

systems until the end of 2020. Games were left off the exception list. Facebook was not satisfied with the partial reprieve.¹⁰⁶ Furthermore, Facebook expected that its conflict with Apple would intensify with the impending iOS 14 software launch would drastically hurt its advertising network revenue.¹⁰⁷ In December 2020, Facebook announced that it would assist Epic in its battle with Apple.¹⁰⁸

Microsoft

After Apple threatened to disable Epic's developer accounts in August 2020, Microsoft filed a declaration in support of Epic's petition. As an Unreal Engine user for its mobile game *Forza Street*, Microsoft warned that restrictions on Epic could harm the greater game development community.¹⁰⁹ The statement pointed out that the ability to update and improve the game engine was of vital importance for the functionality of the projects running on it; uncertainty around Unreal's continuous support could cause an exodus of gamers and creators with a constant need for updates and bug fixes.

For Microsoft, the conflict bore existential implications for the future cloud gaming apps, which themselves contained and offered access to games through their own marketplaces for distribution of digital goods. Apple's arguments against *Fortnite's* payment system and any external distribution platform were similar to its justification in restricting cloud gaming services such as Microsoft xCloud, Google Stadia, Nvidia GeForce Now, and Amazon Luna from the iOS ecosystem.¹¹⁰ Microsoft had been forced to cut the testing of xCloud on iOS:

Our testing period for the Project xCloud preview app for iOS has expired. Unfortunately, we do not have a path to bring our vision of cloud gaming with Xbox Game Pass Ultimate to gamers on iOS via the Apple App Store. Apple stands alone as the only general purpose platform to deny consumers from cloud gaming and game subscription services like Xbox Game Pass. And it consistently treats gaming apps differently, applying more lenient rules to non-gaming apps even when they include interactive content.¹¹¹

In 2011, Apple banned OnLive, a high-profile startup offering games running in cloud data centers. Reportedly, Apple was originally excited by OnLive's cloud streaming and even encouraged a version of the app for Apple TV, but senior executives later abruptly rejected the release without clarification.¹¹² Apple justified the restrictions by explaining it could not individually review each game within a cloud gaming service's library and reiterated that standard screening processes were important for user security and privacy.¹¹³ However, security researchers reported that even top-rated VPN apps on iOS leaked user information and misleadingly overcharged subscribers.¹¹⁴

While others had focused on Section 3.1 of the App Store Review Guidelines, "Payments," Sweeney was now interested in contesting the restrictions created by the language of Section 4.9, "Streaming Games" (**Exhibit 13**) in a battle he framed as central to the future of gaming. Epic disclosed that it felt Apple thwarted its efforts to create a Metaverse, "a multi-purpose, persistent, interactive virtual space [that] fosters deep community [with] the communal experience of the *Fortnite* platform, the free flow of thoughts and ideas within the game's many virtual spaces, and the game's utility as an outlet for social connection..."¹¹⁵ Sweeney commented, "Apple has outlawed the Metaverse. The principle they state, taken literally, would rule out all cross-platform ecosystems and games with user created modes: not just xCloud, Stadia, and GeForce Now, but also *Fortnite*, *Minecraft*, and *Roblox*."¹¹⁶ Additionally, the imminent arrival of 5G telecommunications would reduce the latency on mobile networks enough to enable the next generation of cloud-based game services. Early in 2020, Apple filed a patent in Europe to enable on-demand cloud game services.

Coalition for App Fairness

On September 24, 2020, Epic Games, Match Group, Spotify, and ten other companies teamed up to launch the Coalition for App Fairness, a nonprofit that advocated for legal and regulatory changes to digital platform app stores. These app developers had all publicly criticized Apple's App Store practices. The Coalition argued that Apple and other app marketplaces exploited developers with high commissions, stifled competition, and prioritized their own products and services. The Coalition website listed ten demands for the App Store to act upon. Their ambitious effort against Apple and other app store operators explicitly sought to gain support from a wider community: they pleaded to companies of all sizes to join.¹¹⁷

Going to Trial

On May 3, 2021, Epic Games Inc. v. Apple Inc. went to trial in the U.S. District Court for the Northern District of California in Oakland before Judge Yvonne Gonzalez Rogers. Arguments were heard over the course of three weeks; the trial concluded on May 24, 2021.

On September 10, 2021, the court ruled in favor of Apple on nine out of ten counts. The court defined the market as "digital mobile gaming transactions, not gaming generally and not Apple's own internal operating systems related to the App Store." On the issue of monopoly power *in the market for digital mobile gaming transactions*, the court ruled in favor of Apple: "Given the trial record, the Court cannot ultimately conclude that Apple is a monopolist under either federal or state antitrust laws. While the Court finds that Apple enjoys considerable market share of over 55% and extraordinarily high profit margins, these factors alone do not show antitrust conduct. Success is not illegal."

On the issue of anticompetitive conduct, the court ruled that Apple's anti-steering provision violated California's Unfair Competition Law, handing Epic a narrow win and ordering Apple to remove the anti-steering provision within 90 days. Explaining that ruling, Judge Gonzales Rogers wrote: "Nonetheless, the trial did show that Apple is engaging in anticompetitive conduct under California's competition laws. The Court concludes that Apple's anti-steering provisions hide critical information from consumers and illegally stifle consumer choice. When coupled with Apple's incipient antitrust violations, these anti-steering provisions are anticompetitive and a nationwide remedy to eliminate those provisions is warranted."

Though Apple called the outcome a "resounding victory," neither side was fully satisfied with the outcome. Epic filed an initial appeal on September 13, 2021, three days after the ruling. In the days after the ruling, Apple celebrated the decision as a win, but the court-ordered removal of the anti-steering provision rankled senior leaders who worried that the sudden removal of the provision would destabilize the App Store ecosystem in the short term and open the door to other concessions to courts in the long term. On October 9, 2021, Apple appealed the order to remove the anti-steering provision within 90 days, arguing that it needed time to implement the changes pending the outcome of the Epic case. Judge Gonzales Rogers initially denied Apple's request, but Apple won a last-minute stay of the order from Court of Appeals for the Ninth Circuit, allowing the App Store ban on directing users to other methods of purchase to remain in place until the litigation was resolved.

On January 20, 2022, Epic's lawyers filed the opening brief for an appeal of the Northern District of California's September 10 decision, returning forcefully to the argument that Apple was a monopolist under both Section 1 (contracts restraining trade) and Section 2 (maintenance of a monopoly) of the Sherman Antitrust Act (see **Appendix**). Seven days later, on January 27, Microsoft, the Electronic

Frontier Foundation, a group of law professors, and 35 U.S. states filed amicus briefs in support of Epic Games, largely endorsing Epic's arguments and interpretation of competition law.

Changes in Global Regulatory Landscape

Inspired in part by the publicity the Epic case had brought to Apple's App Store policies, global regulators turned their antitrust attention toward Apple and Google in the second half of 2021. In June 2021, the UK's Competition and Markets Authority announced an investigation into Apple and Google's dominance in mobile ecosystems.¹¹⁸ The Japan Fair Trade Commission¹¹⁹ and Germany's Federal Cartel Office also announced investigations into Apple's digital ecosystem.¹²⁰ In August 2021, South Korea's National Assembly passed an update to its Telecommunications Business Act that forced Apple to remove the anti-steering provision from its developer agreements, allowing app developers to refer their users to outside websites and payment options outside the app.¹²¹ In September 2021, Apple reached a settlement with the Japan Fair Trade Commission that extended the anti-steering exception for reader apps to more categories of reader apps (though still excluding gaming).¹²² In December 2021, the Dutch Authority for Consumers and Markets ruled that Apple must allow dating apps to offer alternative, off-platform payment options to users in the Netherlands' App Store, fulfilling one of the major ideological aims of Epic's lawsuit.¹²³

Path Forward for Epic and Apple

By the summer of 2022, Sweeney and Epic had already seen major ups and downs in the fight against Apple (see **Exhibit 14** for a timeline of Epic's and Apple's legal actions). It was time to take stock. Was Sweeney right to challenge Apple? And did he play the right strategy so far to affect the change in the iOS ecosystem that he long sought? Would Epic ultimately prevail, either in the court of law or the court of public opinion? And what if any changes should he expect Apple to make, either on its own volition or by court order, and would those changes lead to the future of gaming, cloud technology, and digital marketplaces that he envisioned? One thing was certain: Sweeney and his allies were ready to continue the fight against Apple for years to come.

Exhibit 1 Platform Ecosystems for Video Gaming

Platform	Users (mm)	Description
Mobile		
Google Android (2008–)	1,700	Partially open-source platform.
Apple iOS (2008–)	500	Exclusively for Apple hardware.
PC		
Microsoft Windows (1985–)	25.1	OS for PCs, tablets, and embedded devices.
Apple Mac OS (1984–)	0.6	Exclusive for Apple hardware.
Console		
Microsoft Xbox One (2013–)	51	Supports broad set of home entertainment applications.
Nintendo Switch (2017–)	77	Both an at-home console and portable device.
Sony PlayStation 4 (2013–)	115	Largest share of console market.
Virtual Reality		
Sony PS VR (2016–)	6.7	Add-on for PlayStation 4 and 5 consoles.
Meta Oculus Rift (2016–)	3.6	PC-tethered and standalone, primarily for gaming.
HTC Vive (2016–)	2.3	PC-tethered and standalone, primarily for enterprise.

Source: Compiled by casewriter from:

Teodora Dobrilova, “23+ mobile gaming statistics for 2020 – insights into a \$76B games market,” Tech Jury, July 19, 2020, <https://techjury.net/blog/mobile-gaming-statistics/#gref>, accessed September 2020;

Thomas Alsop, “Xbox 360 and Xbox One gaming consoles unit sales worldwide from 2005 to 2021,” Statista, February 8, 2021, <https://www.statista.com/statistics/680526/global-xbox-gaming-consoles-unit-sales/>, accessed July 2022;

Thomas Alsop, “Cumulative unit sales of Sony PlayStation 4 consoles worldwide from August 2014 to November 2021,” Statista, February 8, 2022, <https://www.statista.com/statistics/651576/global-ps4-console-unit-sales/>, accessed July 2022;

Thomas Alsop, “Global virtual reality device shipments by vendor 2017–2019,” Statista, February 8, 2022, <https://www.statista.com/statistics/671403/global-virtual-reality-device-shipments-by-vendor/#statisticContainer>, accessed July 2022;

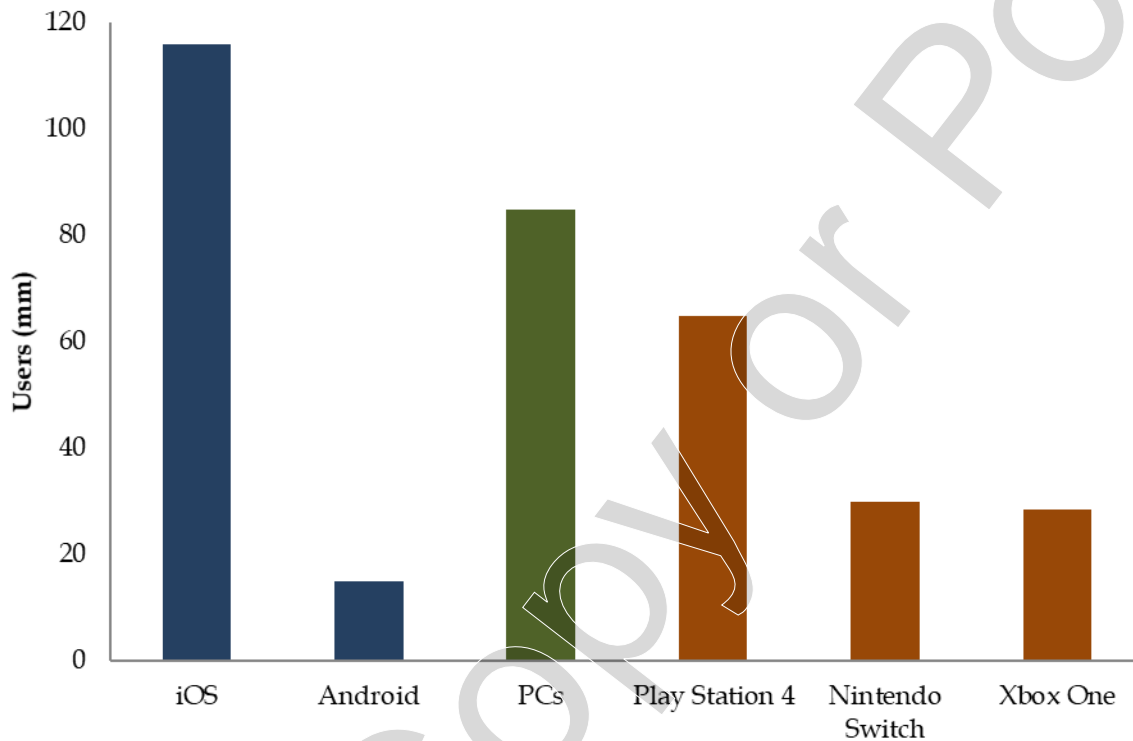
Thomas Alsop, “Virtual reality headset shipments worldwide 2016–2017, by brand,” Statista, February 8, 2022, <https://www.statista.com/statistics/752110/global-vr-headset-sales-by-brand/>, accessed July 2022;

“Mobile Operating System Market Share Worldwide,” Statcounter, <https://gs.statcounter.com/os-market-share/mobile/worldwide>, accessed July 2022;

J. Clement, “Number of peak concurrent Steam users 2013–2021,” Statista, May 9, 2022, <https://www.statista.com/statistics/308330/number-stream-users/>, accessed July 2022; and

Thomas Alsop, “Distribution of Steam gaming platform users in June 2021, by operating system used,” July 15, 2021, <https://www.statista.com/statistics/265033/proportion-of-operating-systems-used-on-the-online-gaming-platform-steam/>, accessed July 2022.

Note: Mobile OS data is for 2022. PC OS data is for 2021. Console data is for 2020. VR data is for 2019.

Exhibit 2 *Fortnite* Registered User Count by Platform

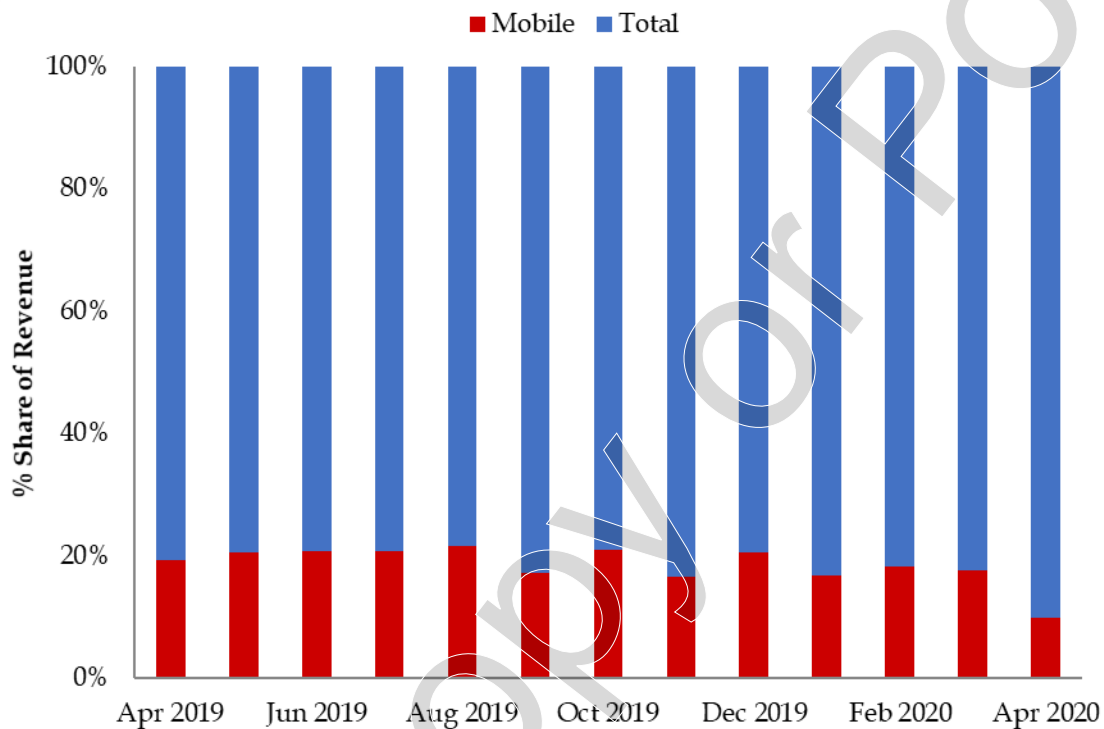
Source: Casewriter estimates based on:

Motion for Preliminary Injunction, *Epic Games, Inc. v. Apple Inc.*, Document #61, District Court, N.D. California, filed September 4, 2020, <https://www.courtlistener.com/docket/17442392/61/epic-games-inc-v-apple-inc/>, accessed September 2020;

Emma Kidwell, “*Fortnite* on Android reaches 15 million downloads sans Google Play,” *Gamasutra*, September 7, 2018, https://www.gamasutra.com/view/news/326087/Fortnite_on_Android_reaches_15_million_downloads_sans_Google_Play.php, accessed September 2020;

Omri Petite, “How many people are playing *Fortnite*?” *PC Gamer*, May 3, 2019, <https://www.pcgamer.com/how-many-people-are-playing-fortnite/>, accessed September 2020; and

Matthew Handrahan, “*Fortnite* has been downloaded by half of all Nintendo Switch owners,” *gamesindustry.biz*, November 1, 2018, <https://www.gamesindustry.biz/articles/2018-11-01-fortnite-has-been-downloaded-by-half-of-all-nintendo-switch-owners>, accessed September 2020.

Exhibit 3 *Fortnite Mobile vs. Total Revenue by Month, April 2018–April 2020*

Source: Casewriter estimated based on:

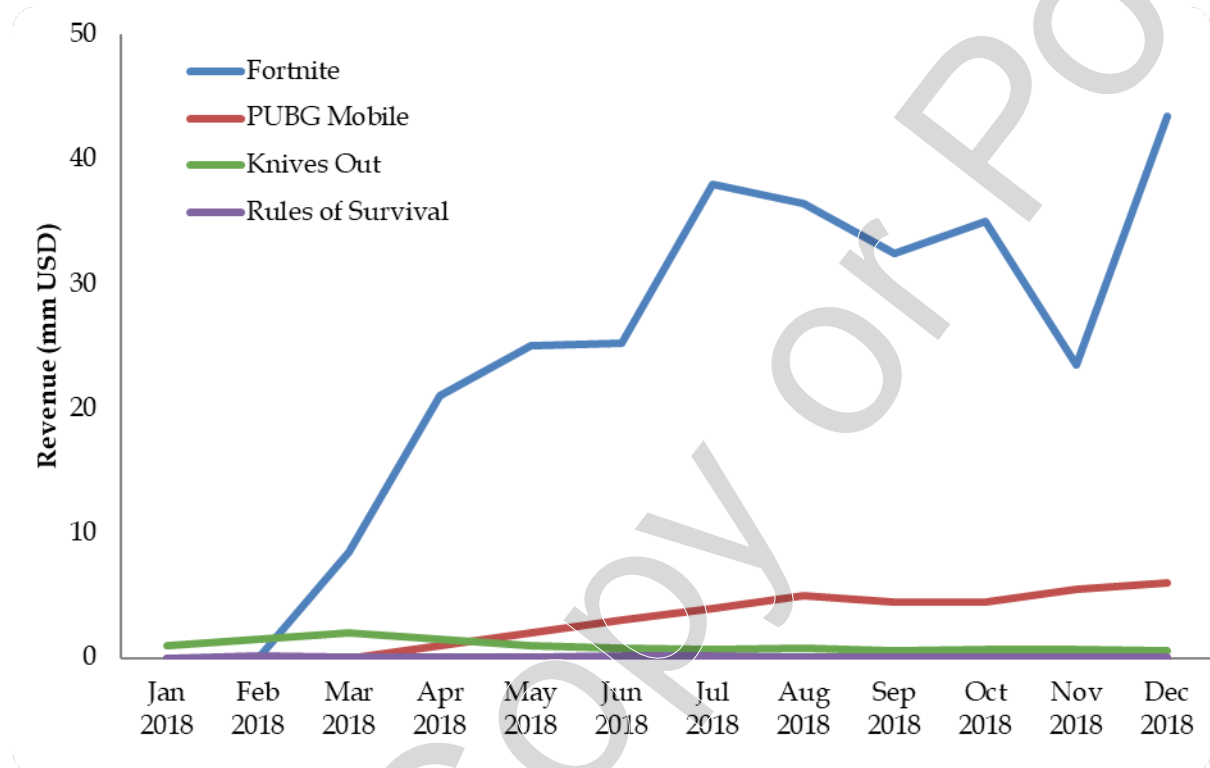
Mansoor Iqbal, "Fortnite usage and revenue statistics (2020)," *Business of Apps*, July 30, 2020, <https://www.businessofapps.com/data/fortnite-statistics/>, accessed September 2020;

Brain Heater, "Fortnite had a \$296 million April," *TechCrunch*, March 25, 2018, <https://techcrunch.com/2018/05/25/fortnite-had-a-296-million-april/>, accessed September 2020;

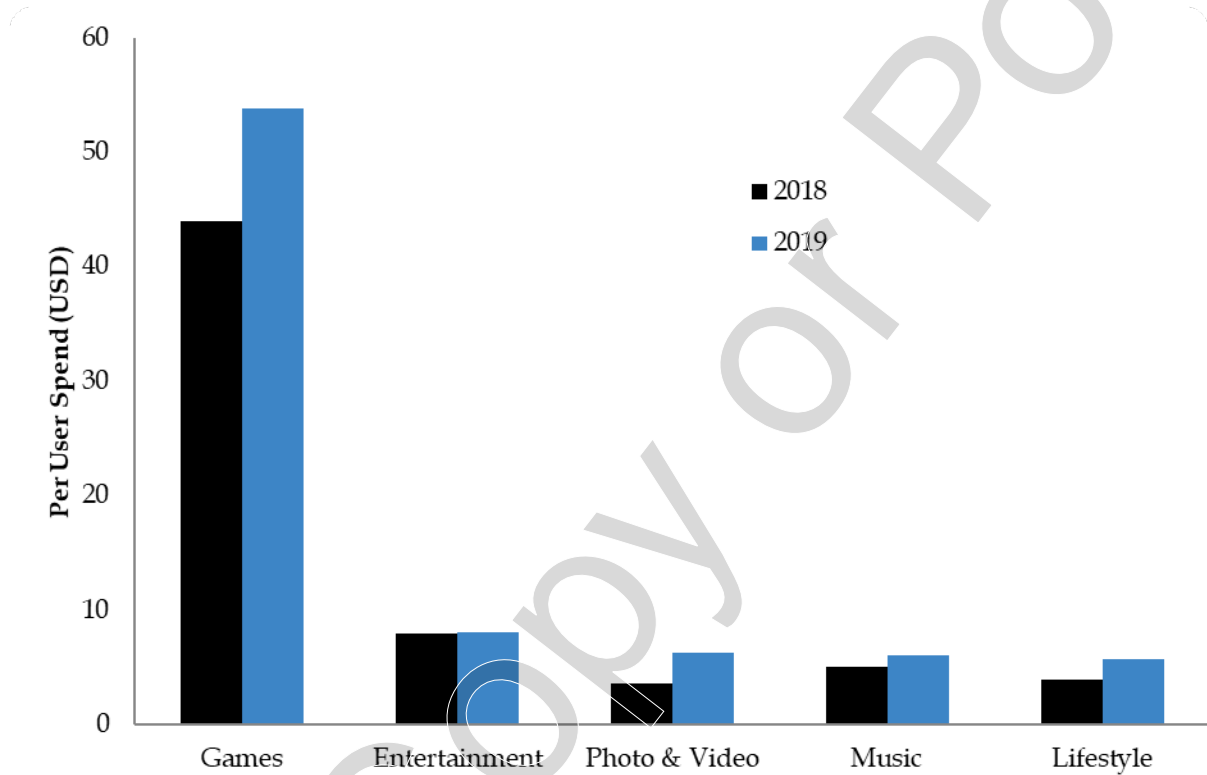
Craig Chapple, "Fortnite mobile revenue hits \$1 billion in two years," *SensorTower*, May 14, 2020, <https://sensortower.com/blog/fortnite-mobile-revenue-1-billion>, accessed September 2020;

Matthew Forde, "Fortnite battle its way to \$1 billion on mobile in two years," *PocketGamer.biz*, March 15, 2020, <https://www.pocketgamer.biz/news/73368/fortnite-1-billion-usd-on-mobile/>, accessed September 2020; and

Dean Takahashi, "Epic Games seeking to sell stake for \$750 million at \$17 billion valuation," *VentureBeat*, June 15, 2020, <https://venturebeat.com/2020/06/15/epic-games-shareholders-seeking-to-sell-stake-for-750-million-at-17-billion-valuation/>, accessed September 2020.

Exhibit 4 *Fortnite iOS Revenue, 2018 (U.S.)*

Source: Adapted by casewriter from: Hardik Shah, "The secret to developing a profitable mobile game," *Gamasutra*, April 10, 2020, https://www.gamasutra.com/blogs/HardikShah/20200410/361033/The_Secret_to_Developing_a_Profitable_Mobile_Game.php, accessed September 2020.

Exhibit 5 Average iOS in-App Spending Per User by Category, 2018–2019 (U.S.)

Source: Adapted by casewriter from: Randy Nelson, "U.S. iPhone user spent an average of \$100 on apps in 2019, up 27% from 2018," *Sensor Tower*, March 25, 2020, <https://sensortower.com/blog/revenue-per-iphone-2019>, accessed September 2020.

Note: Figure based on U.S. consumer spending in iPhone apps for Jan. 1, 2018 through Dec. 31, 2019. Includes premium apps and in-app purchase revenue.

Exhibit 6 Summary of Tim Cook Testimony at Congressional Hearing (July 2020)*Representative Hank Johnson (D-GA)***Apple CEO Tim Cook**

*Apple is the sole decision maker as to whether an app is made available to app users through the App Store, is that correct? **If it's a native app, yes...***

*Throughout our investigation we've heard concerns that rules governing the App Store review process are not available to the app developers. The rules are made up as you go, they are arbitrarily interpreted, enforced, and are subject to change whenever Apple sees fit to change and developers have no choice but to go along with the changes or they must leave the app store – that's an enormous amount of power. Also the rules get changed to benefit Apple at the expense of app developers and the app store is said to also discriminate app developers with similar apps on the Apple platform and also as to small app developers versus large app developers. Does Apple not treat all app developers equally? **Sir, we treat every developer the same. We have open and transparent rules. It's a rigorous process. Because we care so deeply about privacy, security, and quality, we do look at every app before it goes on, but those rules apply evenly to everyone...***

*Some developers are favored over others though. Isn't that correct? **That is not correct, and as you can tell from going...***

*Apple has negotiated exceptions to its typical 30 percent commission for some apps like Amazon Prime, is that a reduced commission, such as the one that Amazon Prime gets, available to other app developers? **It's available to anyone meeting the conditions, yes.***

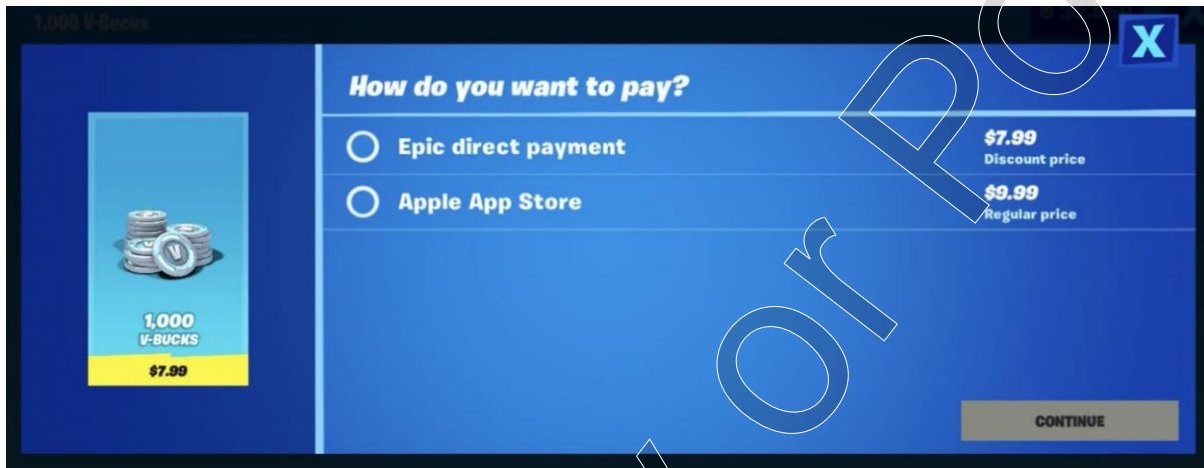
*Apple requires all app developers to use Apple's payment processing system if those developers want to sell their goods or services to Apple users through Apple's App Store, isn't that correct? **That is correct...***

*And by processing payment for apps that you allow into the App Store, you collect their customer data and you use that data to inform Apple as to whether or not it would be profitable for Apple to launch a competing app, isn't that correct? **Sir, 84 percent are charged nothing. The remaining 16 percent either pay 15 or 30 depending on the specifics. If it's a second-year of a subscription, as an example, it only pays 15 percent if you look at the history ...***

*What's to stop Apple from increasing its commission to 50 percent? **[Cook responded that Apple has never charged its commission fee since the App Store started operating in 2008.] There's a competition for developers just like there is a competition for customers. So the competition for developers they can write their apps for Android, Windows, Xbox, PlayStation, so we have years at the developer side and the customer side, which is essentially it's so competitive I would describe it as a street share for market share in the smartphone business.***

*Has Apple ever retaliated against or disadvantaged a developer who went public about their frustrations with the App Store? **Sir, we do not retaliate or bully people. It's strongly against our company culture.***

Source: Adapted and transcribed by the casewriter from: CNBC Television, "Apple CEO Tim Cook: We treat app developers on the App Store equally," YouTube, published July 29, 2020, <https://www.youtube.com/watch?v=4GGiIOckamA>, accessed September 2020.

Exhibit 7 *Fortnite* Direct Payment Option

Source: Epic Games, screen shot, from Ben Gillbert, "Apple and Epic Games are mired in a bitter legal battle," 'Fortnite' is in the middle of it. Here's how Apple found itself in Epic's crosshairs," *Business Insider*, August 26, 2020, <https://www.businessinsider.com/fortnite-epic-games-apple-lawsuit-explained-2020-8#what-started-all-of-this-an-update-to-fortnite-1>, accessed September 2020.

Exhibit 8 Apple App Store Review Guidelines: Excerpt from Section 3.1, “Payments”

3.1.3 Other Purchase Methods: The following apps may use purchase methods other than in-app purchase. Apps in this section cannot, within the app, encourage users to use a purchasing method other than in-app purchase, except as set forth in 3.1.3(a). Developers can send communications outside of the app to their user base about purchasing methods other than in-app purchase.

3.1.3(a) “Reader” Apps: Apps may allow a user to access previously purchased content or content subscriptions (specifically: magazines, newspapers, books, audio, music, and video). Reader apps may offer account creation for free tiers, and account management functionality for existing customers. Reader app developers may apply for the External Link Account Entitlement to provide an informational link in their app to a web site the developer owns or maintains responsibility for in order to create or manage an account...

3.1.3(b) Multiplatform Services: Apps that operate across multiple platforms may allow users to access content, subscriptions, or features they have acquired in your app on other platforms or your web site, including consumable items in multi-platform games, provided those items are also available as in-app purchases within the app.

3.1.3(c) Enterprise Services: If your app is only sold directly by you to organizations or groups for their employees or students (for example professional databases and classroom management tools), you may allow enterprise users to access previously-purchased content or subscriptions. Consumer, single user, or family sales must use in-app purchase.

3.1.3(d) Person-to-Person Services: If your app enables the purchase of real-time person-to-person services between two individuals (for example tutoring students, medical consultations, real estate tours, or fitness training), you may use purchase methods other than in-app purchase to collect those payments. One-to-few and one-to-many real-time services must use in-app purchase.

3.1.3(e) Goods and Services Outside of the App: If your app enables people to purchase physical goods or services that will be consumed outside of the app, you must use purchase methods other than in-app purchase to collect those payments, such as Apple Pay or traditional credit card entry.

3.1.3(f) Free Stand-alone Apps: Free apps acting as a stand-alone companion to a paid web-based tool (e.g., VOIP, Cloud Storage, Email Services, Web Hosting) do not need to use in-app purchase, provided there is no purchasing inside the app, or calls to action for purchase outside of the app.

3.1.4 Hardware-Specific Content: In limited circumstances, such as when features are dependent upon specific hardware to function, the app may unlock that functionality without using in-app purchase (e.g. an astronomy app that adds features when synced with a telescope). App features that work in combination with an approved physical product (such as a toy) on an *optional* basis may unlock functionality without using in-app purchase, provided that an in-app purchase option is available as well. You may not, however, require users to purchase unrelated products or engage in advertising or marketing activities to unlock app functionality.

Source: Apple, “App Store Review Guidelines,” <https://developer.apple.com/app-store/review/guidelines>, accessed June 2022.

Exhibit 9 Epic Games Nineteen Eighty-Fortnite vs. Apple 1984 Super Bowl Advertisement

Source: Compiled from: Avery Hartmans, "All the Easter eggs hidden in 'Nineteen Eighty-Fortnite,' the clever video Epic Games made to taunt Apple amid their heated battle over App Store rules." *Business Insider*, August 13, 2020, <https://www.businessinsider.com/fortnite-apple-parody-video-easter-eggs-2020-8>, accessed September 2020.

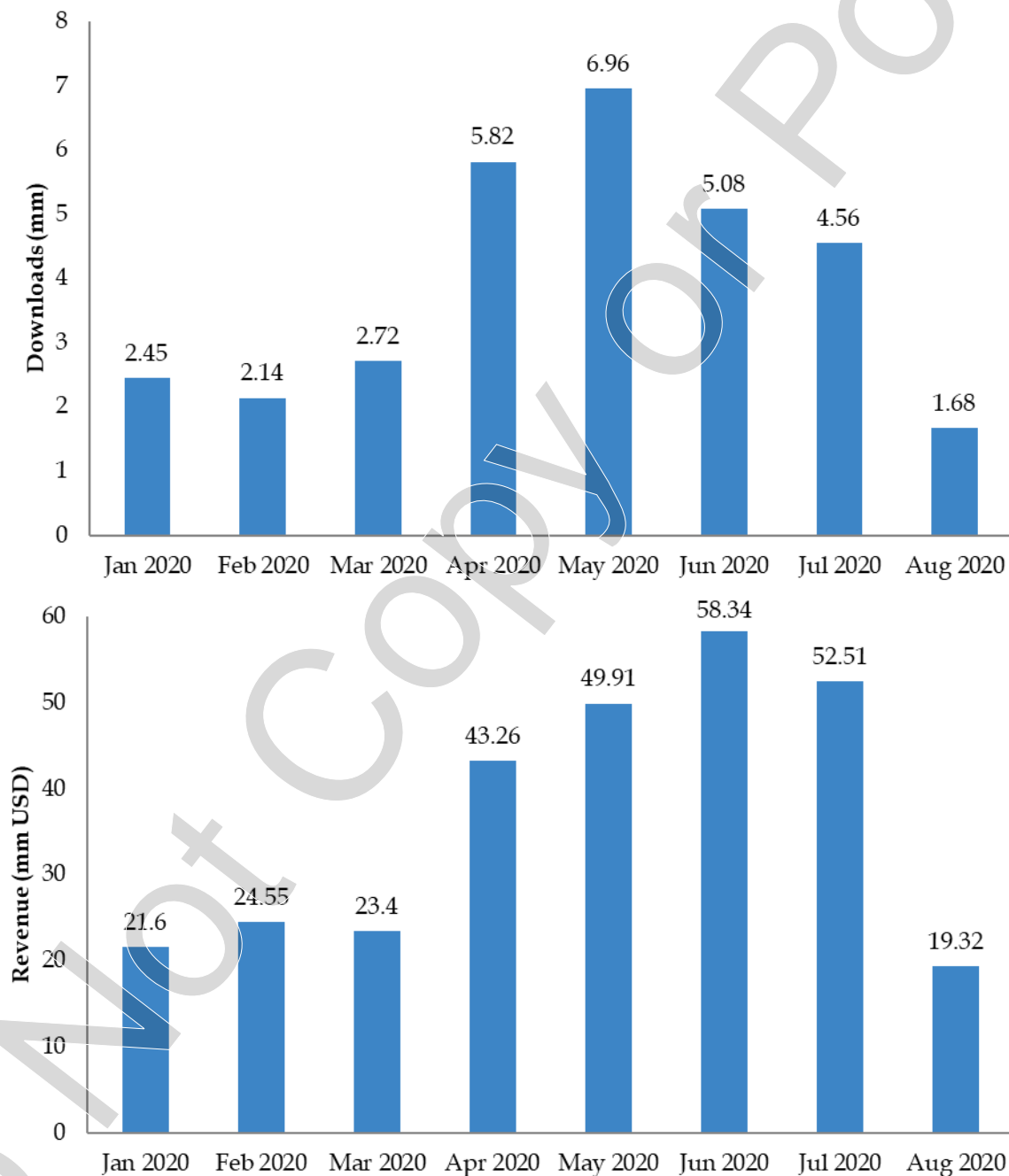
Jack Picone, "Super Bowl Sunday: Innovative ads that have changed the game & what you can learn from them," New York Film Academy, February 2, 2018, <https://www.nyfa.edu/student-resources/super-bowl-sunday-innovative-ads-changed-game-can-learn/>, accessed September 2020.

Note: "Nineteen Eighty-Fortnite – #FreeFortnite" available at <https://www.youtube.com/watch?v=euiSHuaw6Q4>.

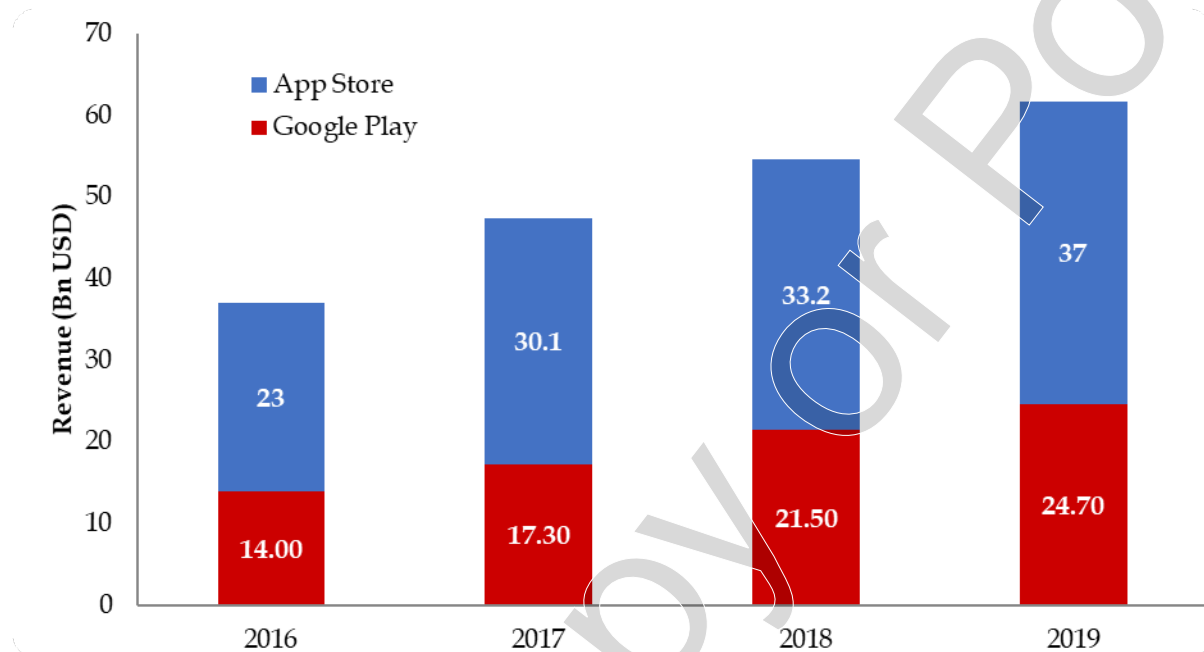
Exhibit 10 Summary of Arguments from Epic Expert Opinion on Apple

Category	Description
Lack of Substitutes	
Users	Phone users often lack good substitutes for using iOS apps.
Developers	Developers do not have meaningful substitutes for making their apps available to iPhone users other than using the iOS platform.
Lock-In	
Mobile Hardware	Consumers invest in purchasing a smartphone that they generally keep for over two years. Apple's annual iPhone sales in 2019 were about one-fifth of its total installed base of iPhone active users.
Learning	Users switching to Android have to learn how to use a new mobile operating system.
Third-Party Apps	Users have paid to download apps in Apple's App Store and would not be able to use those apps on an Android smartphone.
Data	Setting up a new iPhone, including migrating data, is much easier for an existing iPhone user than setting up an Android smartphone.
Network	Many iPhone users have networks of family and friends with whom they communicate using proprietary Apple technologies that would not be available on Android.
First-Party Services	iPhone users who are connected to Apple services, such as iCloud Photos, iCloud Drive, Apple News, and Apple TV+, would effectively lose access to those services if they switched to an Android smartphone.
Hardware Ecosystem	iPhone users who have other Apple devices, such as iPads and MacBooks, use Apple apps and services across their Apple devices, such as iMessage, FaceTime, AirDrop, Find My, iCloud Photos, iCloud Drive, Apple News, and Apple TV+.

Source: Compiled by casewriter from: Declaration in Support, Epic Games, Inc. v. Apple Inc., Document #62, District Court, N.D. California, filed September 4, 2020, <https://www.courtlistener.com/docket/17442392/62/epic-games-inc-v-apple-inc/>, accessed September 2020.

Exhibit 11 *Fortnite's Monthly Downloads and Revenue Before and After the Ban*

Source: Adapted by casewriter from: Sarah E. Needleman, "Fortnite' fans are pushed to choose sides in Epic's legal spat with Apple, Google," *Wall Street Journal*, August 27, 2020, <https://www.wsj.com/articles/fortnite-fans-are-pushed-to-choose-sides-in-epics-legal-spat-with-apple-google-11598545530>, accessed September 2020.

Exhibit 12 Worldwide Mobile Game Revenue

Source: Adapted by casewriter from:

Randy Nelson, "Global app revenue grew 35% in 2017 to nearly \$60 billion," *Sensor Tower*, January 5, 2018, <https://sensortower.com/blog/app-revenue-and-downloads-2017>, accessed September 2020;

Randy Nelson, "Global app revenue grew 23% in 2018 to more than \$71 billion on iOS and Google Play," *Sensor Tower*, January 16, 2019, <https://sensortower.com/blog/app-revenue-and-downloads-2018>, accessed September 2020; and

Randy Nelson, "Consumer spending in mobile apps grew 17% in 2019 to exceed \$83 billion globally," *Sensor Tower*, January 6, 2020, <https://sensortower.com/blog/app-revenue-and-downloads-2019>, accessed September 2020.

Exhibit 13 Apple App Store Review Guidelines: Selections from Section 4.9, "Streaming Games"

Streaming games are permitted so long as they adhere to all guidelines—for example, each game update must be submitted for review, developers must provide appropriate metadata for search, games must use in-app purchase to unlock features or functionality, etc. Of course, there is always the open Internet and web browser apps to reach all users outside of the App Store.

4.9.1 Each streaming game must be submitted to the App Store as an individual app so that it has an App Store product page, appears in charts and search, has user ratings and review, can be managed with ScreenTime and other parental control apps, appears on the user's device, etc.

4.9.2 Streaming game services may offer a catalog app on the App Store to help users sign up for the service and find the games on the App Store, provided that the app adheres to all guidelines, including offering users the option to pay for a subscription with in-app purchase and use Sign in with Apple. All the games included in the catalog app must link to an individual App Store product page.

Source: Apple, "App Store Review Guidelines," <https://developer.apple.com/app-store/review/guidelines>, accessed June 2022.

Exhibit 14 Timeline of Events in Epic Games Inc. v. Apple Inc.

June 16, 2020 – Epic Games CEO Tim Sweeney is quoted in [The Washington Post](#) saying, “the iOS App Store’s monopoly protects only Apple profit, not device security.” Sweeney continues the critique of Apple in interviews and on Twitter throughout the summer.

August 13, 2020 – Epic Games introduces a direct payment option in the iOS Fortnite app using a hotfix that was concealed in a previous update of the app, circumventing the app review process. The hotfix allowed users to purchase an in-game currency, “V-Bucks,” directly from Epic, rather than using iOS’s IAP, thereby violating Section 3.1.1 (“In-App Purchase”) of the App Review Guidelines (see Exhibit 12). Later that day, Epic Games files a [complaint](#) with the United States District Court for the Northern District of California, accusing Apple of taking anti-competitive actions to maintain a monopoly over iOS payment and distribution. At the same time, Epic releases its Nineteen Eighty-Fortnite ad, parodying Apple’s famous “1984” ad. An Epic [blog post](#) announces the #FreeFortnite campaign. Sweeney tweets that Epic is fighting for open platforms and policy changes that will benefit all developers. Spotify announces its support.

August 17, 2020 – Epic Games asks the court for a [temporary restraining order](#) to protect its access to Apple’s developer tools. Epic states that Apple has threatened to suspend its Developer Program account unless Epic’s Fortnite app is returned to compliance. Epic notes that this would result in the company losing access to *all* of Apple’s software, SDKs, APIs, and developer tools. Epic says this will prevent them from maintaining and updating its infrastructure for the Unreal Engine, which many other game developers (Epic’s clients) depend on to run their games. Epic argues that this is retaliation by Apple and that the restraining order is needed to protect Unreal Engine and the gaming ecosystem it supports while Apple and Epic sort out their Fortnite differences. Epic continues its campaign of speaking out publicly against Apple.

August 23, 2020 – Epic Games argues [in a reply](#) that Apple’s plan to suspend its Developer Program membership would be “overbroad retaliation” and that it would “chill any action by others who might dare oppose Apple.” Microsoft files an amicus brief in support of Epic Games.

August 24, 2020 – Judge Yvonne Gonzalez Rogers [grants a temporary restraining order](#) that will prevent Apple from blocking Epic Games’ access to development tools for its Unreal Engine. Gonzales Rogers rules in favor of Apple on the suspension of the Fortnite developer account, noting that Epic was in violation of the Developer Program License Agreement (DPLA) and noting that “the current predicament appears of its own making.”

August 26, 2020 – Epic Games announces that the upcoming season of Fortnite will not be available to players on iPhone, iPad, or Mac due to the company’s legal battle with Apple.

August 28, 2020 – Apple terminates Epic’s developer account associated with Fortnite.

September 4, 2020 – Epic [asks the court](#) to protect Epic’s continued access to Apple’s developer tools on its Fortnite account by issuing an injunction against Apple.

September 8, 2020 – Apple [countersues](#) Epic Games, requesting damages for breach of contract.

October 9, 2020 - U.S. Judge Yvonne Gonzalez Rogers [denies Epic’s request](#) to restore Fortnite to the App Store; Fortnite will remain unavailable through the App Store.

December 17, 2020 – [Facebook announces](#) it will share information and assist Epic with discovery in its ongoing legal battle with Apple.

May 3, 2021 – Trial of Epic Games Inc. v. Apple Inc. begins in U.S. District Court. Pretrial *Proposed Findings of Fact and Conclusions of Law* outlining legal arguments are filed by both [Epic](#) and [Apple](#).

May 28, 2021 – Case concludes. Epic files [Updated Findings of Fact and Conclusions of Law](#) after the trial.

September 10, 2021 – Judge Gonzales Rogers rules in [Epic Games Inc. v. Apple Inc.](#) On the issue of market definition, “The Court disagrees with both parties’ definition of the relevant market... after evaluating the trial evidence, the Court finds that the relevant market here is *digital mobile gaming transactions*, not gaming generally and not Apple’s own internal operating systems related to the App Store.” On the issue of monopoly power *in the market for digital mobile gaming transactions*, Gonzales Rogers rules in favor of Apple, writing: “Given the trial record, the Court cannot ultimately conclude that Apple is a monopolist under either federal or state antitrust laws. While the Court finds that Apple enjoys considerable market share of over 55% and extraordinarily high profit margins, these factors alone do not show antitrust conduct. Success is not illegal.” On the issue of anticompetitive conduct, Gonzales Rogers ruled that Apple’s anti-steering provision violated California’s Unfair Competition Law, handing Epic a narrow win and [ordering Apple to remove the anti-steering provision](#) by December 9, 2021. Explaining that ruling, Gonzales Rogers writes: “Nonetheless, the trial did show that Apple is engaging in anticompetitive conduct under California’s competition laws. The Court concludes that Apple’s anti-steering provisions hide critical information from consumers and illegally stifle consumer choice. When coupled with Apple’s incipient antitrust violations, these anti-steering provisions are anticompetitive and a nationwide remedy to eliminate those provisions is warranted.”

September 13, 2021 – Epic Games appeals the decision.

October 9, 2021 – Apple appeals the portion of the decision that would require it to remove the anti-steering provision by December 9, 2021, requesting a stay of the order until the litigation is resolved.

November 9, 2021 – Judge Gonzalez Rogers denies Apple’s request for a stay of the order to remove the anti-steering provision by December 9, 2021.

December 8, 2021 – Apple wins an [appeal of](#) Gonzalez Rogers’s denial of [its request for a stay](#) of the injunction that would have required it to make changes to the App Store by December 9, 2021.

January 20, 2022 – Epic files its [Opening Brief](#) in the appeal in Epic Games Inc. v. Apple Inc. with the United States Court of Appeals for the Ninth Circuit.

January 27, 2022 – [Microsoft](#), [Electronic Frontier Foundation](#), [a group of law professors](#), and [35 U.S. States](#) file amicus briefs in support of Epic Games. A range of other companies, organizations, and academics come out in support of Epic in the days that follow.

Source: Compiled by Casewriter from <https://www.macrumors.com/guide/epic-games-vs-apple/>, <https://www.epicgames.com/site/en-US/free-fortnite-faq>, and other media sources, accessed June 2022.

Appendix A

The following excerpts are from the opening brief of Epic’s appeal on January 20, 2022.

Statement of the Issues

1. Whether the district court erred in holding that a contract of adhesion is not a “contract” under Section 1 of the Sherman Act.
2. Whether the court erred in holding Apple Inc.’s (“Apple”) prohibitions on competing software application (“app”) distribution channels and competing in-app payment solutions for the iPhone operating system (“iOS”) survive rule of reason scrutiny.
3. Whether the court erred in finding Apple is not a monopolist in markets for iOS app distribution and payment solutions for the sale of digital content within iOS apps.
4. Whether the court erred in rejecting Epic’s tying claim on the ground that app distribution and in-app payment solutions are not separate products

Introduction

With over a billion users, the iPhone may be the most profitable technology ever, making Apple the largest company in history. The iPhone’s success depends on millions of “apps” created by third-party software developers who labor to make good on Apple’s tagline: “There’s an app for that.” Apps bring the iPhone to life. They enable users to do far more than make phone calls and check email—accessing social media, purchasing goods, playing games, watching movies, listening to music, ordering food, banking, reading the news, tracking exercise, hailing cars, and more.

But apps enable these activities under a dark cloud: contractual and technological restrictions that Apple imposes to maintain its monopoly position and restrain competition. Apple has made itself the exclusive distributor for all apps by prohibiting distribution of apps outside Apple’s proprietary “App Store,” deploying software that blocks any other apps, and threatening to evict developers that fail to comply. Additionally, Apple requires developers to use Apple’s payment solution to sell digital content through their apps, and charges a 30% commission on each sale. These restrictions are unnecessary to further any legitimate procompetitive purpose—Apple does not even impose them on its Mac computers. Rather, Apple documents show it made a “policy decision” to increase its own profits by restricting app distribution and payment solutions for iPhones.

Absent these restrictions, iPhone users and app developers could use alternative app stores, and users could get apps directly from developers. Developers could procure payment mechanisms with additional features and lower costs for their apps. Epic wants to—but cannot—compete with Apple to fulfill that demand by providing an iPhone app store and in-app payment solution. Epic would charge developers much less than Apple’s 30% commission, increasing innovation and reducing costs.

Apple prevents Epic and other potential competitors from offering those choices. That is why Epic brought this antitrust suit. The district court’s factual findings make clear that Apple’s conduct is precisely what antitrust laws prohibit. The court found that Apple’s contracts and policies have allowed it to collect many billions of dollars in “supracompetitive” profits from developers and consumers. Apple has “increased prices,” “reduce[d] innovation,” “reduce[d] quality,” and “foreclos[ed] competition.” The challenged restrictions “unreasonably restrain competition and harm

consumers,” and “Apple employs these policies so that it can extract supracompetitive commissions.” But the court nonetheless found no Sherman Act violation.

The court first erred in holding Section 1 inapplicable on the ground that there is no “contract” in restraint of trade. It reasoned that the “contracts of adhesion” between Apple and app developers that exclude competing app stores and payment solutions are not contracts under Section 1. But a “contract” in restraint of trade is still a “contract,” whether the terms are negotiated or imposed by one party with overwhelming market power. When such a contract is unilaterally imposed, it still unreasonably precludes competition—here, causing billions of dollars in harm.

The district court further erred in holding that Apple’s conduct survives rule of reason scrutiny. The court expressly found that Apple’s scheme causes great harm to competition, innovation, and consumers, yielding years of “extraordinarily high” supracompetitive profits. The court’s own findings demonstrate that Apple’s justifications are largely pretextual, and that there are less restrictive alternatives to achieve any purported benefits. Not only did the court find that Apple successfully employs far less restrictive alternatives on Mac computers, it also found that Apple uses far less restrictive alternatives for certain in-app purchases on the iPhone itself, permitting developers that sell physical goods or services to use any payment solution they want. Inexplicably, the district court ignored its factual findings and failed to conduct the required balancing of competitive harms with any valid competitive benefits. That balancing demonstrates that Apple’s restrictions violate the Sherman Act.

The court also erred in rejecting Epic’s Section 2 monopoly maintenance claims. Apple excludes competitors from iOS app distribution and in-app payment solutions for digital content, giving it a 100% market share. In rejecting Epic’s Section 2 claims on these undisputed facts, the court misapplied settled precedent establishing that in these circumstances, an antitrust market may be defined by reference to a single brand. See *Eastman Kodak Co. v. Image Tech. Servs., Inc.*, 504 U.S. 451 (1992); *Newcal Indus., Inc. v. IKON Off. Sol.*, 513 F.3d 1038 (9th Cir. 2008).

Finally, the court erred in rejecting Epic’s tying claim. Apple ties its app store to its in-app payment solution for digital content; third-party developers who use the former must use the latter. The court’s conclusion that they are a single product was error under the governing legal test because there is separate demand for each.

The judgment accordingly should be reversed.

Endnotes

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