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27 UNITED STATES DISTRICT COURT  
28 NORTHERN DISTRICT OF CALIFORNIA  
SAN JOSE DIVISION

AFFINITY CREDIT UNION,

Plaintiff,

v.

APPLE INC., a California corporation,

Defendant.

No. 22-cv-4174

**CLASS ACTION COMPLAINT FOR  
VIOLATION OF THE SHERMAN ACT  
AND CLAYTON ACT**

**DEMAND FOR JURY TRIAL**

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1 For its suit against Defendant Apple Inc., Plaintiff Affinity Credit Union, on its own behalf  
2 and that of all similarly situated payment card issuers, alleges as follows:

3 **I. INTRODUCTION**

4 1. Smart mobile devices have transformed the way people interact with the world around  
5 them. This transformation launched an array of digital products and services that, while  
6 unfathomable two decades ago, are now ubiquitous in daily life. Among these services are mobile  
7 wallets that allow consumers to make payments with just their mobile device. Using mobile wallets,  
8 consumers can store credit and other payment cards on their mobile devices and, with just a tap at the  
9 point-of-sale, send a secure payment to the merchant. This is accomplished through a technology  
10 known as “Near Field Communication” or “NFC.” With an NFC chip, any smart device can send a  
11 wireless signal to an NFC-enabled payment terminal from close proximity. More than 90 percent of  
12 U.S. retailers accept mobile wallets, and at least 70% of Americans use them.<sup>1</sup> It is a trillion dollar  
13 industry, and it is growing exponentially.

14 2. Apple is the leading manufacturer of smartphones, tablets and smart watches. But  
15 Apple is not content to dominate these mobile device markets. Instead, it exercises its market power  
16 in the device markets by requiring that consumers of its mobile devices also acquire its mobile  
17 wallet—Apple Pay—and prevents consumers from using competing mobile wallets capable of  
18 offering competing tap and pay solutions.

19 3. In comparison, on Android devices, consumers have a selection of competing wallets  
20 to choose from. Google Pay and Samsung Pay are the leaders. Google, the owner of Android, does  
21 not restrict access to NFC technology on Android devices—it is available for use to all comers,  
22 including digital wallets that compete with Google’s digital wallet, Google Pay.

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<sup>1</sup> See Alex Clere, “75% of consumers now using mobile wallets – survey,” FINTECH (May 27,  
28 2022) <https://fintechmagazine.com/digital-payments/75-of-consumers-now-using-mobile-wallets-survey>.

1           4.       In contrast to the Android ecosystem, there is only one tap and pay mobile wallet that  
2 can be used on Apple’s iOS devices (iPhone, iPad and Apple Watch).<sup>2</sup> The only option is Apple  
3 Pay, Apple’s own proprietary service. Apple did not secure preeminence for Apple Pay by building  
4 a better product. Apple Pay is mostly indistinguishable from Google Pay and Samsung Pay from a  
5 functionality standpoint. Rather, Apple propped up Apple Pay by requiring iOS users to use its  
6 Apple Pay service exclusively for tap and pay mobile wallet transactions, barring all would-be and  
7 free competitors from accessing the NFC interface needed to compete.

8           5.       Having barred all competitors from its devices, Apple charges payment card issuers  
9 fees that no other mobile wallet ventures to impose. Whenever an Apple Pay transaction is  
10 completed on a U.S. issuer’s payment card, the issuer must pay Apple a fee—15 basis points on  
11 credit (.15%) and a flat 0.5 cents (\$0.005) on debit. These fees generated a reported \$1 billion for  
12 Apple in 2019, and this revenue stream—earned from card issuers—is predicted to quadruple by  
13 2023.

14           6.       Apple’s issuer fees are manifestly supracompetitive and the result of the  
15 anticompetitive conduct alleged herein. In the Android ecosystem, where multiple digital wallets  
16 compete, there are no issuer fees whatsoever. The upshot is that card issuers—the proposed class  
17 here—pay a reported \$1 billion annually in fees on Apple Pay and \$0 for accessing functionally  
18 identical Android wallets. If Apple faced competition, it could not sustain these substantial fees.  
19 Alternative mobile wallets, including Google Pay, would be downloaded onto iOS devices, and card  
20 issuers would agree to make their cards available on those substitute mobile wallets at zero cost and  
21 would not agree to make their cards available on Apple Pay unless and until Apple reduced its price  
22 to the competitive level.

23           7.       Apple has further cemented its market power by preventing all US-based card issuers  
24 from passing on Apple Pay’s fees to consumers. That is, to participate in Apple Pay, an issuer must  
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26           <sup>2</sup> The operating systems for iPad and Apple Watch have been branded iPad OS and watchOS,  
27 respectively, but they are both derived from iOS and share many of the same core features. For ease  
28 of reference, the term “iOS” in this complaint refers to the operating systems for iPhone, iPad and  
Apple Watch collectively.

1 agree not to impose a surcharge on a cardholder’s Apple Pay transactions. This rule prevents issuers  
2 from using differential pricing to drive cardholders to lower cost alternative modes of payment.

3 8. Apple Pay can also be used to make e-commerce payments online and within apps.  
4 But critically, issuers cannot disable the e-commerce function, nor negotiate a different fee on those  
5 transactions. Apple bundles the “e-commerce” functionality with the “tap and pay” service and  
6 requires that issuers who accept the latter also accept the former. As with tap and pay, when a user  
7 completes an Apple Pay transaction in e-commerce, members of the class must pay the same  
8 supracompetitive fees to Apple. Thus, even though Apple’s exclusionary conduct—i.e., the  
9 restriction on the use of NFC technology—operates on point-of-sale transactions, Apple, by bundling  
10 its tap and pay and e-commerce services, can extract the same monopoly rents on transactions in e-  
11 commerce. This compounds the injury card issuers suffer.

12 9. Apple Pay’s practices have drawn increased scrutiny from antitrust authorities. After  
13 completing a preliminary investigation, the European Commission issued Apple a statement of  
14 objections on May 2, 2022. Targeting the same practices challenged by this complaint, the European  
15 Commission stated that it “takes issue with the decision by Apple to prevent mobile wallets app  
16 developers, from accessing the necessary hardware and software (‘NFC input’) on its devices, to  
17 benefit its own solution, Apple Pay.” The European Commission announced its preliminary view  
18 that Apple Pay’s restrictions on NFC likely violate European competition law and have “an  
19 exclusionary effect on competitors and lead[] to less innovation and less choice for consumers for  
20 mobile wallets on iPhones.” This same loss of innovation and choice is present here in the United  
21 States as well.

22 10. Here in the United States, Apple Pay violates the Sherman Act in two ways. *First*,  
23 Apple has unlawfully “tied” two of its products together—namely, its mobile devices and its mobile  
24 wallet—by compelling iOS users to use its mobile wallet product exclusively and foreclosing rival  
25 iOS tap and pay solutions. Apple has market power in each of the device markets for smartphones,  
26 tablets and smart watches. If a consumer purchases an iOS device in any of these markets, that  
27 consumer also receives the Apple Pay service and must agree to Apple Pay’s terms and conditions.  
28 Furthermore, if that consumer wishes to use a tap and pay mobile wallet, that consumer must

1 exclusively use Apple Pay to fulfill its requirement. While this tie negates consumer choice, the  
2 economic injury is suffered by Plaintiff and other payment card issuers (the class here), because  
3 Apple forces issuers to pay its supracompetitive fee on each transaction. Apple's tie is per se  
4 unlawful under the Sherman Act.

5 11. **Second**, by foreclosing all competitors, Apple unlawfully monopolizes (and has  
6 attempted to monopolize) the market for tap and pay mobile wallets on iOS (hereafter, the "Tap and  
7 Pay iOS Mobile Wallets Market"). This is a relevant antitrust market. Apple Pay charges a  
8 substantial premium over all conceivable substitutes and yet demand remains inelastic. As noted,  
9 issuers pay \$0 to Google when their cardholders use Android wallets, but the issuers cannot switch to  
10 iOS versions of Google Pay or Samsung Pay to reach iOS device owners. Furthermore, issuers pay  
11 \$0 when their cardholders use contactless cards. If these or other payment forms were substitutes,  
12 without significant quality differentiation, demand would have shifted to them in response to Apple  
13 Pay's fees. It has not. Instead, issuer acceptance of Apple Pay increases every year. That Apple has  
14 profitably sustained its significant issuer fees, despite other free forms of payment, demonstrates that  
15 a hypothetical monopolist can (and has been able to) profitably impose a small but significant non-  
16 transitory increase in price (a SSNIP).<sup>3</sup> Those alternative payment forms are therefore not in the  
17 same relevant antitrust market.

18 12. As a result of Apple's exclusionary conduct, Plaintiff and other issuers pay, and have  
19 paid, fees they would not have incurred in a competitive market. But that is not the extent of the  
20 harm. If there were multiple Tap and Pay iOS Mobile Wallets, the competing firms would need to  
21 innovate to differentiate their offerings, for example by improving the security of transactions.  
22 Consumers and issuers have been deprived of that innovation and differentiated choice among  
23 market alternatives. Competition would also increase output, because even more issuers would  
24 enroll in Tap and Pay iOS Mobile Wallets if the cost of doing so were lower, thus increasing the  
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27 <sup>3</sup> See U.S. DEPARTMENT OF JUSTICE, HORIZONTAL MERGER GUIDELINES (2010),  
28 <https://www.justice.gov/atr/horizontal-merger-guidelines-08192010> (last accessed July 14, 2022).

1 number of cards enabled for the service, the number of merchants that accept those cards, and the  
2 number of transactions within the market.

3 13. With this action, Plaintiff seeks to hold Apple accountable. On behalf of a proposed  
4 class of issuers—including banks, credit unions, and other institutions offering payment cards  
5 enabled for Apple Pay—Plaintiff seeks monetary relief, injunctive relief, and all other relief  
6 available to stop Apple’s ongoing exclusionary practices and redress the harm they have caused.

## 7 II. JURISDICTION AND VENUE

8 14. This Court has subject matter jurisdiction over this action under 28 U.S.C. § 1331  
9 because Plaintiff alleges violations of federal law, namely, the Sherman Act.

10 15. This Court has personal jurisdiction over the Defendant Apple, which is  
11 headquartered in this District. Apple has engaged in sufficient minimum contacts with the United  
12 States, this judicial district, and this State, and it has intentionally availed itself of the laws of the  
13 United States and this State by conducting a substantial amount of business throughout the State.

14 16. This judicial district is a proper venue because Apple resides in this District and  
15 transacts affairs in this District. A substantial part of the events giving rise to Plaintiff’s claims  
16 occurred in this District.

## 17 III. DIVISIONAL ASSIGNMENT

18 17. Intra-district assignment to the San Jose division of the Court is proper under Local  
19 Rule 3-2(e) because a substantial number of the events giving rise to the claims arose in Santa Clara  
20 County.

## 21 IV. PARTIES

22 18. **Plaintiff Affinity Credit Union** (“Affinity”) is an Iowa chartered credit union with its  
23 principal place of business in Des Moines, Iowa. Affinity issues payment cards and is an Apple Pay  
24 participating financial institution. As a participating financial institution, Affinity is required to pay  
25 Apple’s supracompetitive issuer transaction fees on each Apple Pay transaction processed using an  
26 Affinity issued payment card. Affinity has paid and continues to pay Apple’s supracompetitive  
27 issuer transaction fees.





1           24. Apple enjoys market power in the U.S. smartphone market. The iPhone, first  
2 launched in 2007, is the leading smartphone in the U.S. As of June 2022, iPhones had a 57% market  
3 share. The next closest competitor—Samsung—has a 29% share and after that, competitor shares  
4 dip into the single digits.<sup>5</sup>

5           25. Apple’s market power is reinforced by substantial barriers to entry. Developing the  
6 hardware and software needed to market a smartphone requires a substantial outlay of capital and  
7 expertise. The iPhone also benefits from significant indirect network effects generated by its sizable  
8 user base and large community of developers creating iOS apps. To succeed, new entrants would  
9 need to convince users to switch to a new smartphone operating system without the catalog of apps  
10 available on iOS, while simultaneously convincing developers to incur the costs of writing apps for a  
11 new operating system without iOS’ sizable user base. These are substantial hurdles. Brand loyalty  
12 to existing manufacturers, and high switching costs, compound the difficulty of entry.<sup>6</sup> Highly  
13 sophisticated and resourced companies—e.g., Amazon—have sought to market smartphones and  
14 failed to gain traction.

## 15           **2. The Tablet Market**

16           26. Tablets share certain features of smartphones, and other features of laptops, but they  
17 are a distinct product. Apple introduced the first tablet—the iPad—in 2010, marketing it as “a third  
18 category of device.”<sup>7</sup> Tablets do not replace smartphones, and were never intended to.

19           27. One fundamental difference between tablets and smartphones is the screen size. The  
20 screen on a smartphone ranges from 4 to 6 inches, making the device small enough to fit into a  
21 pocket.<sup>8</sup> Tablets have screens ranging from 7 to 17 inches, making them far less mobile or  
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24 <sup>5</sup> See “Mobile Vendor Market Share United States of America” STATCOUNTER (June 2022),  
<https://gs.statcounter.com/vendor-market-share/mobile/united-states-of-america>.

25 <sup>6</sup> See *infra* at Section VII.A.1.

26 <sup>7</sup> See William Gallagher, “Apple got tablets right, and created a whole new market with the iPad  
12 years ago today” APPLEINSIDER (Jan. 27, 2022), <https://appleinsider.com/articles/19/01/27/apple-got-tablets-right-and-created-a-whole-new-market-with-the-ipad>.

27 <sup>8</sup> See “Smartphone sales market share in the United States from 2017 to 2019, by display size,”  
28 STATISTA (Apr. 21, 2022), <https://www.statista.com/statistics/1042669/us-smartphone-sales-by-display-size/>.

1 stowable.<sup>9</sup> The screen size differential also means that certain apps are developed solely for either  
2 tablets, or smartphones, and are not available on both.

3 28. While some tablets have cellular connectivity, and can be used to make and receive  
4 telephone calls, this is not a core functionality. Rather, with the larger screen, tablets provide more  
5 immersive internet connectivity. And they can be used to perform a range of productivity tasks like  
6 a laptop or desktop computer. With keyboard accessories, tablets can, for example, be used as word  
7 processors. They are also marketed as creativity tools that can be used to create and edit music and  
8 video.

9 29. Apple's iPad exercises market power in the tablet market. As of June 2022, iPad's  
10 U.S. market share in the tablet market was 54%, more than double the 20% share of its closest  
11 competitor, Samsung.<sup>10</sup> There are also substantial barriers to entry into the tablet market, bolstering  
12 Apple's market power. Beyond the significant startup costs of developing and marketing a tablet  
13 device, indirect network effects, brand loyalty and high switching costs, impose a substantial  
14 impediment to new entrants.

### 15 3. The Smart Watch Market

16 30. Smart watches are wearable devices that, like smartphones, offer apps and  
17 connectivity. But they are a distinct product with distinct demand. As Apple promotes, a smart  
18 watch "can do what your other devices can't because it's on your wrist."<sup>11</sup>

19 31. Because they are wearable, smart watches feature an array of functions tracking the  
20 user's activity and monitoring fitness-related metrics. For example, they can track the user's sleep  
21 patterns, blood oxygen, and heart rate, and they can make emergency calls after a hard fall.<sup>12</sup> Many  
22 (but not all) smart watches also have text, phone, and email functionality. Some, but not all, store  
23 and play music. Web browsing on a smart watches is limited or non-existent.

24 \_\_\_\_\_  
25 <sup>9</sup> See "Tablet Comparison Chart: List Of Tablets In 2022," TABLETMONKEYS (June 2022),  
<https://tabletmonkeys.com/tablet-comparison/> (last accessed July 14, 2022).

26 <sup>10</sup> See "Tablet Vendor Market Share United States Of America," STATCOUNTER,  
<https://gs.statcounter.com/vendor-market-share/tablet/united-states-of-america> (last accessed July 14,  
27 2022).

28 <sup>11</sup> See <https://www.apple.com/watch/why-apple-watch/> (last accessed July 14, 2022).

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

1           32. Smart watches are not a replacement for smartphones or tablets. Their small interface  
2 allows for only limited functionality and features. For certain features—*e.g.*, texting and calling—  
3 many smart watches must be paired with another device. Even smart watches with cellular can  
4 require a smartphone to be enabled. For example, to set up an Apple Watch, the user must have an  
5 iPhone 6s or later.<sup>13</sup>

6           33. Apple Watch, launched in 2015, leads the Smart Watch market. Even including  
7 fitness trackers<sup>14</sup> in the smart watch market, Apple Watch has an approximately 46% market share in  
8 the United States, besting all rivals.<sup>15</sup> And as with smartphones and tablets, there are significant  
9 barriers to entry in the smartphone market, including startup costs, indirect network effects, brand  
10 loyalty, and switching costs. These barriers reinforce Apple’s market power.

11 **B. NFC Tap and Pay Technology Predates Apple Pay and is Available to All Competitors**  
12 **Offering Payment Solutions on Android.**

13           34. Tap and pay mobile wallets are enabled by NFC chips installed in mobile devices.  
14 NFC technology allows two electronic devices to exchange information when brought into near  
15 proximity. Apple did not invent NFC. NFC evolved from radio frequency identification (RFID)  
16 technology that has been around for decades. The first RFID patent was issued in 1983, and NFC  
17 was standardized in 2003 through the efforts of Sony and Phillips.<sup>16</sup>

18           35. Both RFID and NFC rely on inductive coupling between a “reader” device and a  
19 “tag.” The reader creates a magnetic field by passing an electric current through a coil. That field  
20 induces an electric current within the tag, and once this match has been made, the two devices can

21 \_\_\_\_\_  
22 <sup>13</sup> See <https://support.apple.com/en-us/HT204505#:~:text=To%20set%20up%20and%20use,with%20iOS%2015%20or%20later> (last  
23 accessed July 14, 2022).

24 <sup>14</sup> Fitness tracking watches like Fitbit allow users to track fitness related metrics, including steps  
25 taken in a day and calories burned. But they generally lack many of the features and functionality of  
26 smartwatches. There is also a substantial cost differential, with the most popular fitness tracking  
27 watches retailing for less than \$100 and the Apple Watch ranging from \$200 to more than \$1000.  
28 Apple has market power in the smartphone market whether or not fitness tracking watches are part of  
that market.

<sup>15</sup> See Katharina Buchholz, “Apple Watch Leads U.S. Market,” STATISTIA (Oct. 15, 2021),  
<https://www.statista.com/chart/25982/smartwatch-market-by-brand-us/>.

<sup>16</sup> See “The History of NFC,” PARAGON ID, <https://www.paragon-rfid.com/en/the-history-of-nfc/>  
(last accessed July 14, 2022).

1 wirelessly exchange data. The principal difference between RFID and NFC is the transmission  
2 range. RFID can cover longer distances, whereas NFC can span only a few centimeters.<sup>17</sup>

3 36. RFID and NFC enabled devices are everywhere today. If you have ever entered a  
4 hotel room by tapping a key card, or paid a toll with a device attached to your windshield, you have  
5 used RFID, NFC, or both.

6 37. To set up Apple Pay, users need to load a payment card (or cards) onto the wallet.  
7 Apple Pay can support all manner of payment cards, including credit, debit, prepaid, transit, and  
8 other cards linked to an account from which funds can be accessed (provided the user agrees to  
9 Apple's terms). Users can then toggle between enabled payment cards, and set a default option.



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20 38. When an Apple Pay user approaches an NFC terminal compatible with Apple Pay, the  
21 mobile wallet automatically opens and the user can make a payment by holding his or her device  
22 within close proximity to the terminal.

23 39. Payment networks—Visa or MasterCard—handle most of the processing work for  
24 Apple Pay transactions. Like Google Pay, Apple Pay transactions are tokenized, meaning that the  
25 actual card number is not used by Apple or provided to the merchant. Rather, Visa or MasterCard  
26

27  
28 <sup>17</sup> See Calvin Wankhede, “What is NFC and how does it work? Everything you need to know,”  
ANDROID AUTHORITY (Apr. 15, 2022), <https://www.androidauthority.com/what-is-nfc-270730/>.

1 provide Apple with a token number (sometimes known as the Device Account Number or “DAN”),  
 2 and when an Apple Pay transaction is initiated, the payment network verifies the token and  
 3 communicates with the card issuing bank to authorize or deny payment. The entire process can be  
 4 depicted as follows:



16 40. Before the iPhone launched in 2007, mobile phones were already using NFC  
 17 technology and promoting it as a means of sharing information and making purchases, effectively  
 18 transforming the cellphone into a digital wallet.<sup>18</sup> The first digital wallet with NFC technology to  
 19 gain traction was Google Pay (formerly Google Wallet and Android Pay), introduced for Android in  
 20 2011. Among other features, Google Pay allows users to store and toggle between payment cards  
 21 within a digital wallet on their mobile device, and then make payments with those cards by holding  
 22 the device within proximity of a payment terminal. The cards themselves do not need to be in the  
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27 <sup>18</sup> See Kent German, “Nokia's 6131 offers NFC technology,” CNET (Jan. 7, 2007),  
 28 <https://www.cnet.com/culture/nokias-6131-offers-nfc-technology/>; “The History of NFC,” PARAGON ID, <https://www.paragon-rfid.com/en/the-history-of-nfc/> (last accessed July 14, 2022).

1 user's possession at the time of payment. All the user needs to do is tap the mobile device on the  
2 terminal, and the payment information is transmitted via NFC.<sup>19</sup>

3 41. Google does not prevent third-party app developers or device manufacturers from  
4 accessing NFC technology to create tap and pay Android payment solutions that might compete with  
5 Google Pay. For example, in 2013, carriers AT&T, T-Mobile and Verizon launched the Softcard  
6 Android app, which enabled NFC tap and pay on a range of Android devices.

7 42. Softcard folded in 2015 after selling certain assets to Google, but with no Android  
8 prohibition on utilizing NFC technology, other competitors emerged in the Android space to offer  
9 tap and pay functionality. For example, Barclays has created an Android solution. The app allows  
10 Barclays customers to store their Barclays-issued cards (using a secure account ID rather than the  
11 card number) and complete tap and pay payments through an Android device's NFC interface.<sup>20</sup>

12 43. After announcing a partnership with Visa in 2013 to support NFC payments on its  
13 devices, Samsung launched Samsung Pay in 2015.<sup>21</sup> Like Google Pay, Samsung Pay allows users to  
14 store payment card information on their devices and make payments by placing the mobile device  
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19 <sup>19</sup> Google Pay was rebranded several times between launch in 2011 and today. It was initially  
20 known as Google Wallet. In 2015, Google Wallet was renamed Android Pay with new functionality  
21 being introduced. Google Wallet continued as a peer-to-peer payments app. In 2018, Google  
22 merged Android Pay and Google Wallet to create Google Pay. Google most recently announced that  
23 in certain countries Google Pay will automatically become Google Wallet (again) through an app  
24 update in summer 2022, and feature new functionality, including the ability to store vaccine cards  
25 and digital car keys. In the United States, Google Pay and Google Wallet will coexist for at least  
26 some period of time. See "The History of NFC," PARAGON ID, [https://www.paragon-  
rfid.com/en/the-history-of-nfc/](https://www.paragon-rfid.com/en/the-history-of-nfc/) (last accessed July 14, 2022); Nelson Aguilar, "Is Google Wallet the  
Same as Google Pay? We'll Explain," CNET (May 16, 2022), [https://www.cnet.com/tech/mobile/is-  
google-wallet-the-same-as-google-pay-well-explain/](https://www.cnet.com/tech/mobile/is-google-wallet-the-same-as-google-pay-well-explain/). For ease of reference, this complaint uses  
"Google Pay" to refer to the Google service providing tap and pay payments on Android devices  
through an NFC interface, however that service has been branded.

<sup>20</sup> See <https://www.barclays.co.uk/ways-to-bank/mobile-banking-services/contactless-mobile/>  
(last accessed July 14, 2022).

<sup>21</sup> See Martha DeGrasse, "MWC 2013: Samsung, Visa team up for mobile payments,"  
RCRWIRELESSNEWS (Feb. 25, 2013), [https://rcrwireless.com/20130225/devices/samsung-visa-  
mobile-payments](https://rcrwireless.com/20130225/devices/samsung-visa-mobile-payments); "Top Manufacturers," APPBRAIN, [https://www.appbrain.com/stats/top-  
manufacturers](https://www.appbrain.com/stats/top-manufacturers) (last accessed July 14, 2022).

1 near an NFC-equipped payments terminal. By 2018, there were 51 million Samsung Pay users  
2 worldwide, compared to 39 million Google Pay users.<sup>22</sup>

3 44. None of these Android tap and pay solutions charges transaction fees to either users or  
4 card issuers.

5 **C. Apple Ties Apple Pay to Its Mobile Devices By Excluding Any Rival Tap and Pay iOS**  
6 **Mobile Wallet.**

7 45. In terms of functionality, Apple Pay is substantially identical to Google Pay.<sup>23</sup>  
8 Launched in 2014 with the introduction of iPhone 6, Apple Pay comes preinstalled on Apple's  
9 iPhones, iPads and Watches. Consumers cannot purchase one of these devices without also  
10 acquiring Apple Pay, which they enable by loading a payment card (or cards) onto the platform.  
11 Apple's standard software license agreement requires users to accept supplemental terms and  
12 conditions governing their use of Apple Pay.<sup>24</sup>

13 46. But iOS consumers never agree that they will exclusively use Apple Pay as their tap  
14 and pay mobile wallet. Instead, as discussed herein, Apple coerces consumers to use Apple Pay by  
15 barring all would-be Apple Pay rivals from accessing the NFC interface installed on the mobile  
16 devices Apple already sold to the iOS consumers.

17 47. NFC functionality on iOS devices is provided by an NFC chip and associated  
18 software within the device. Apple typically allows third-party app developers to access and integrate  
19 their apps with various device hardware and software—e.g., the iPhone's camera, speakers,  
20 microphone, Siri, and navigation—because this enhances the functionality of apps and, thus, Apple's

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23 <sup>22</sup> “Number of Apple Pay, Samsung Pay and Google Pay contactless payment users in 2018, with  
24 a forecast for 2020,” STATISTA, [https://www.statista.com/statistics/722213/user-base-of-leading-  
25 digital-wallets-nfc/](https://www.statista.com/statistics/722213/user-base-of-leading-digital-wallets-nfc/) (last accessed July 14, 2022); Lexi Savvides, “Samsung Pay FAQ: Everything  
26 you need to know,” CNET (July 21, 2021), [https://www.cnet.com/tech/services-and-  
27 software/samsung-pay-faq-everything-you-need-to-know-mobile-wallet/](https://www.cnet.com/tech/services-and-software/samsung-pay-faq-everything-you-need-to-know-mobile-wallet/); “Samsung Pay,”  
28 WIKIPEDIA, [https://en.wikipedia.org/wiki/Samsung\\_Pay](https://en.wikipedia.org/wiki/Samsung_Pay) (last accessed July 14, 2022).

<sup>23</sup> See Karthik Ravagan, “Apple Pay vs. Google Pay: How They Work,” INVESTOPEDIA (Apr. 27,  
2022), [https://www.investopedia.com/articles/personal-finance/010215/apple-pay-vs-google-wallet-  
how-they-work.asp](https://www.investopedia.com/articles/personal-finance/010215/apple-pay-vs-google-wallet-how-they-work.asp) (“Apple Pay and Google Pay are largely identical offerings”).

<sup>24</sup> See Apple Inc. iOS Software License Agreement  
<https://www.apple.com/legal/sla/docs/iOS12.pdf> (last accessed July 14, 2022).



1 products. In this way, Apple can leverage the labor and creativity of third-party app developers to  
2 make its products more versatile, functional and desirable.

3 48. But Apple has taken a distinctly exclusionary approach with NFC technology. Apple  
4 currently allows developers to use the NFC interface, but *only* to provide functionality that does *not*  
5 compete with Apple Pay. For example, developers can utilize the NFC interface to allow users to  
6 “scan a toy to connect it with a video game,” or “an in-store sign to access coupons,” among other  
7 things.<sup>25</sup> Apple also recently announced technology that will “empower millions of merchants” to  
8 *accept* Apple Pay payments from an iPhone.<sup>26</sup> But what developers cannot do is use NFC to create  
9 apps that, like Apple Pay, allow users to *make* tap and pay payments. Only Apple Pay can use NFC  
10 for that function.

11 49. This restriction is implemented through Apple’s developer guidelines. To develop an  
12 app for Apple’s iOS devices, developers must accept Apple’s Developer Program License  
13 Agreement. That agreement provides that only apps meeting “Apple’s Documentation and Program  
14 Requirements may be submitted for consideration by Apple for distribution via the App Store.”<sup>27</sup>  
15 Among other documentation developers must accept are Apple’s guidelines governing NFC  
16 technology. Those NFC guidelines provide that NFC can be used “to give users more information  
17 about their physical environment and the real-world objects in it.”<sup>28</sup> But developers are not  
18 permitted to use NFC for payment apps that might compete with Apple Pay. The guidelines state<sup>29</sup>  
19 in this regard:

22 \_\_\_\_\_  
23 <sup>25</sup> See [https://developer.apple.com/design/human-interface-guidelines/technologies/nfc/#:~:text=Near%2Dfield%20communication%20\(NFC\),attached%20to%20real%2Dworld%20objects](https://developer.apple.com/design/human-interface-guidelines/technologies/nfc/#:~:text=Near%2Dfield%20communication%20(NFC),attached%20to%20real%2Dworld%20objects) (last accessed July 14, 2022).

24 <sup>26</sup> See “Apple empowers businesses to accept contactless payments through Tap to Pay on  
25 iPhone,” (Feb. 8, 2022), <https://www.apple.com/newsroom/2022/02/apple-unveils-contactless-payments-via-tap-to-pay-on-iphone/>.

26 <sup>27</sup> See Apple Developer Program License Agreement  
27 <https://developer.apple.com/support/downloads/terms/apple-developer-program/Apple-Developer-Program-License-Agreement-20220606-English.pdf> (last accessed July 14, 2022).

28 <sup>28</sup> See <https://developer.apple.com/documentation/corenfc> (last accessed July 14, 2022).

29 <sup>29</sup> *Id.*

**Important**

Core NFC doesn't support payment-related Application IDs.

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3  
4       50.     This restriction forecloses all potential Apple Pay rivals, making Apple Pay the only  
5 tap and pay mobile wallet on iOS. By barring competitor solutions in this fashion, Apple has  
6 imposed what is known as a “requirements tie.” That is, consumers who purchase Apple mobile  
7 devices do not need to use a tap and pay wallet. But if they do—and many do—Apple has made  
8 Apple Pay the only option for fulfilling that requirement.

9       51.     The application of this restriction is made possible in part by Apple Pay’s market  
10 power in the market for its iOS mobile devices. Market power provides Apple with the credibility to  
11 implicitly threaten banks with the prospect of their customers not being able to use Apple Pay.  
12 Apple can deploy such a threat because of the significant number of users that would switch issuers  
13 rather than smartphones to retain tap and pay functionality. This helps to explain why card issuers  
14 have chosen to agree to Apple’s terms. They risk more by refusing Apple Pay’s terms than they do  
15 by paying Apple the fees that it demands.

16 **D.     Apple Unlawfully Monopolizes the Tap and Pay iOS Mobile Wallets Market.**

17 **1.     The Tap and Pay iOS Mobile Wallets Market is a Distinct, Relevant Antitrust**  
18 **Market.**

19       52.     Tap and Pay iOS Mobile Wallets are a distinct product for which there is distinct  
20 demand. More than 1 billion people use Apple’s mobile iOS devices, and about half of them have  
21 enabled the Apple Pay Mobile Wallet to make tap and pay payments.<sup>30</sup>

22       53.     The tap and pay functionality offered by Apple Pay is distinct from other payment  
23 forms. Apple promotes the service as being “[f]aster and easier than using cards.”<sup>31</sup> When Apple  
24 launched Apple Pay, it announced that the service “will change the way you pay.”<sup>32</sup> Without having

25  
26 <sup>30</sup> See Gene Munster, David Stokman, “Apple Pay Availability Growing 20% Plus,” LOUP (Nov. 5, 2020), <https://loupfunds.com/apple-pay-availability-growing-20-plus/>.

27 <sup>31</sup> See <https://www.apple.com/apple-pay/> (last accessed July 14, 2022).

28 <sup>32</sup> See “Apple Announces Apple Pay,” (Sep. 9, 2014), <https://www.apple.com/newsroom/2014/09/09Apple-Announces-Apple-Pay/>.

1 to handle cash, or change, or cards, Apple Pay users can complete transactions by simply tapping  
2 their iOS device on any participating payment terminal. There is no need to touch buttons on the  
3 terminal itself, or handle cards, which according to Apple makes it less likely to “pick up – and  
4 spread – germs.”<sup>33</sup>

5 54. Tap and Pay iOS Mobile Wallets also provide distinct security advantages. When a  
6 payment card is used at checkout, the card number is shared with the merchant and sometimes the  
7 card itself is handled by the clerk. If intercepted, the card number can be used to make unauthorized  
8 purchases. Tap and pay functionality eliminates this particular security risk because, as addressed  
9 above, card numbers can be “tokenized” such that the actual card number is never shared with  
10 merchants. According to Apple, this makes Apple Pay a “more secure way to pay than using your  
11 physical credit, debit, and prepaid cards.”<sup>34</sup>

12 55. Tap and Pay iOS Mobile Wallets are a multi-sided platform that exhibits what  
13 economists call “indirect network effects,” meaning participation on one side of the platform affects  
14 demand on another side. The more users a Tap and Pay iOS Mobile Wallet has, the more appealing  
15 it is to card issuers considering whether to enable their cards on the wallet, and for merchants (and  
16 hence card acquiring banks) to enable their terminals to accept the wallet’s payments. The more  
17 consumers using the platform, the more attractive the platform is to merchants and to card acquiring  
18 banks. And the more merchants processing a wallet’s payments, the more likely users and issuers  
19 will want to participate in the platform.

20 56. Apple has pointed to Android mobile wallets and contactless payment cards as  
21 competitors, but these forms of payment are not reasonably close substitutes for Apple Pay and do  
22 not constrain Apple Pay’s pricing power.

23 **a. Android Wallets Are Not Reasonable Substitutes For Apple Pay.**

24 57. There are no tap and pay Android mobile wallets available on Apple’s iOS devices  
25 because Apple has barred those wallets from accessing the NFC interface on iOS devices. Thus,  
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27 <sup>33</sup> See <https://www.apple.com/apple-pay/> (last accessed July 14, 2022).

28 <sup>34</sup> See Apple Pay security and privacy overview, <https://support.apple.com/en-us/HT203027> (last accessed July 14, 2022).

1 while an iOS user can download an iOS version of Google Pay from Apple’s App Store, the iOS  
2 Google Pay app cannot be used to make tap and pay payments. The app cannot even be used at the  
3 point-of-sale at all. Lacking Apple Pay’s core functionality on an iOS device, Google Pay and other  
4 Android wallets are not a substitute for Apple Pay.

5 58. Android mobile wallets are also not in the same relevant market as Tap and Pay iOS  
6 Mobile Wallets because a Tap and Pay iOS Mobile Wallet is not constrained by substitution in the  
7 market for smartphones. To be more precise, a small but significant and non-transitory increase in  
8 the price of a Tap and Pay iOS Mobile Wallet transaction would not trigger switching by users to  
9 mobile wallets on Android-based devices.

10 59. Switching costs from iOS to Android mobile devices are high. As one Apple  
11 executive stated internally, “Who’s going to buy a Samsung phone if they have apps, movies, etc  
12 already purchased? They now need to spend hundreds more to get where they are today.”<sup>35</sup> Even if  
13 consumers might be induced to switch to Android mobile devices in response to a change in Apple  
14 Pay fees, Apple has assured this will not happen. As addressed further below, Apple bars issuers  
15 from charging their cardholders additional fees for their participation in Apple Pay. In other words,  
16 issuers cannot pass through the cost of Apple Pay. Shielded from Apple Pay’s fees, consumers have  
17 no reason to switch in response to a change in the level at which Apple Pay’s fees are set. Apple can  
18 (and has) set those fees above the competitive level knowing that, from consumers’ perspective,  
19 Apple Pay is, and has always been, available free of charge.

20 60. It is also apparent that at the time a mobile device purchaser makes a decision as to  
21 whether to purchase an Apple device or an Android device or another brand of device, the purchaser  
22 has no ability to take into consideration the additional cost imposed on the market by Apple’s  
23 anticompetitive conduct. In fact, the added cost is unseen by the purchaser, who is not even aware of  
24 the fees that Apple imposes on card issuers. As a result, the consumer has no incentive when  
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26 <sup>35</sup> See “Apple’s Past Sideloaded Plans, Ecosystem Lock-in Strategy, and More Revealed in  
27 Internal Documents,” MACRUMORS (Aug. 20, 2021),  
28 <https://forums.macrumors.com/threads/apples-past-sideloaded-plans-ecosystem-lock-in-strategy-and-more-revealed-in-internal-documents.2308143/>.

1 purchasing a mobile device to switch to a competing device that does not charge anticompetitive  
2 fees. Apple’s pricing power in the Tap and Pay iOS Mobile Wallet Market is thus not constrained by  
3 consumer decisions at the time of purchasing a mobile device.

4 61. The only party with the incentive to substitute, or encourage substitution to Android  
5 wallets, is therefore the card issuer. Apple has, however, barred issuers from encouraging consumers  
6 to switch through surcharges, and so issuers can encourage switching only by ceasing to participate  
7 in Apple Pay. This is demonstrably not a viable option for nearly all issuers.

8 62. As of September 2020, approximately 51% of iPhone users had activated Apple Pay.  
9 Given the substantial population of Apple Pay users, issuers cannot profitably (and generally have  
10 not) disabled Apple Pay in an effort to shift demand to Android wallets. Indeed, the number of Apple  
11 Pay issuers has increased steadily since Apple Pay’s launch, reaching a reported 5,480 banks  
12 worldwide by 2020 (20% increase over 2019).<sup>36</sup> This reveals that issuers do not expect that removing  
13 Apple Pay would result in consumers switching to Android wallets, rather they fear consumers  
14 would switch to cards issued by other banks instead.

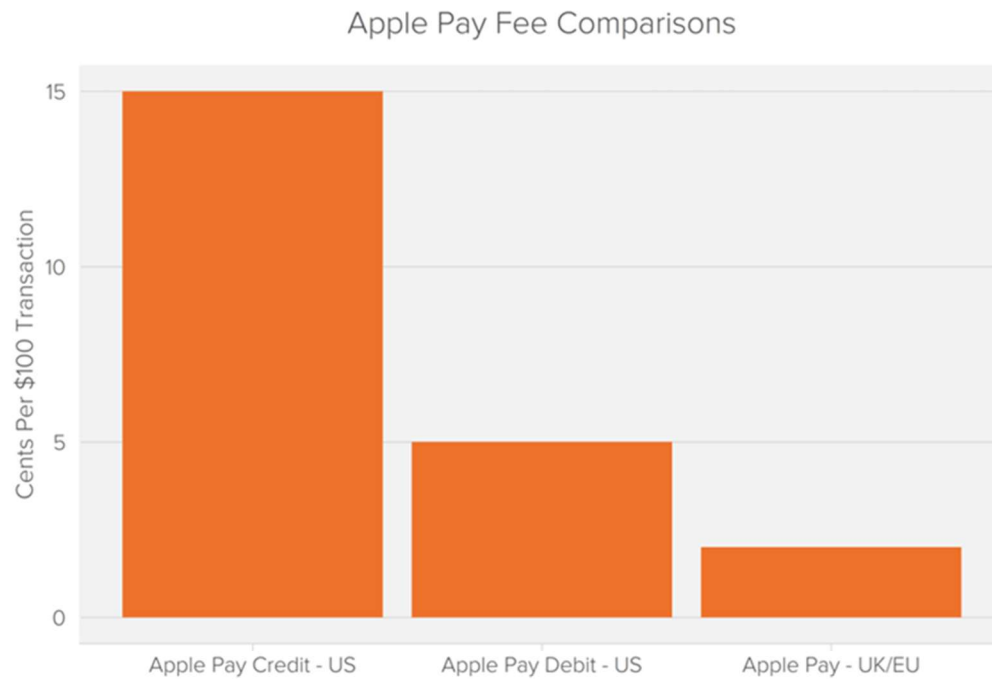
15 63. It is also apparent from historic pricing that Android tap and pay mobile wallets do  
16 not impose any constraint on the price of Tap and Pay iOS Mobile Wallets. For years, Apple Pay  
17 has found it profitable to impose a significant issuer fee above the \$0.0 fee imposed by Android apps  
18 providing virtually the same service on Android devices—namely, Google Pay and Samsung Pay. If  
19 these Android products were in fact substitutes for Apple Pay, demand would have shifted to Google  
20 Pay and Samsung Pay. But this has not happened, as just noted. That issuers have absorbed Apple  
21 Pay fees demonstrates issuers’ inability to drive consumers to Android wallets. Imposing no  
22 restraint on Apple Pay’s pricing, and hence on the ability of a hypothetical monopolist’s ability to  
23 profitably impose a small but significant and non-transitory increase in price (SSNIP), those Android  
24 wallets cannot be in the same antitrust market as Apple Pay.

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<sup>36</sup> See Gene Munster, David Stokman, “Apple Pay Availability Growing 20% Plus,” LOUP (Nov. 5, 2020), <https://loupfunds.com/apple-pay-availability-growing-20-plus/>.

64. One further indication that Tap and Pay iOS Mobile Wallets are a distinct relevant market is the ability of Apple to price discriminate in order to extract a higher fee for transactions on which the banks are able to charge a higher interchange fee. That is, issuers command higher interchange fees on credit transactions than they do on debit. Without any cost-based justification, Apple charges higher fees on credit than debit (15 basis points (.15%) vs. 0.5 cents (\$0.005)). The fact that Apple can price discriminate despite providing precisely the same service to debit and credit card transactions shows that it can, and indeed has imposed a small but significant, non-transitory increase in price when the opportunity to do so arises. The same can be seen in the fees Apple sets across different geographic markets where interchange fees are lower and Apple Pay fees are accordingly reduced. In the UK, for example it is reported that issuers pay Apple “only a few pence [on a] £100 transaction.”<sup>37</sup>



**b. Contactless Cards are Not Reasonable Substitutes For Apple Pay.**

65. Contactless payments can also be conducted using contactless payment cards. But as with Android wallets, Apple Pay’s ability to profitably maintain a substantial fee premium above the

<sup>37</sup> See Graham Spencer, “The State of Apple Pay,” MACSTORIES (Oct. 8, 2015), <https://www.macstories.net/stories/the-state-of-apple-pay/>.

1 competitive level for mobile wallet payments (up to 15 basis points), without Apple Pay transactions  
2 moving to contactless cards in greater numbers than Samsung Pay and Google Pay transactions,  
3 demonstrates that contactless payment cards (and other cards for that matter) are outside the relevant  
4 market.

5 66. Issuers are better off when their cardholders tap their cards rather than an iOS device  
6 that enables those cards through Apple Pay. When Apple Pay is used, the issuer pays Apple a  
7 significant transaction fee. When the card is used by itself, the issuer pays no such fee. Given this  
8 stark difference in price, if issuers were confident that consumers saw the cards as reasonable  
9 substitutes for Apple Pay, issuers would disable Apple Pay (but not Google Pay or Samsung Pay)  
10 and demand from iOS users would shift to cards. But as noted, this has not happened. Issuers are  
11 adopting Apple Pay in greater numbers every year.

12 67. As issuers recognize, there are differences between Apple Pay and contactless (or  
13 other) cards that matter to many consumers. Mobile wallets can offer greater convenience and  
14 enhanced security through tokenization of the card number and the use of passwords, biometrics or  
15 other authentication protocols to confirm that the individual making the purchase is the cardholder.  
16 Many consumers value these features, and some would switch banks to retain them. This prevents  
17 issuers from disabling Apple Pay in an effort to shift demand to contactless cards. As with Android  
18 wallets, the application of a SSNIP test would demonstrate that contactless cards would not constrain  
19 a hypothetical monopolist from increasing prices by a small but significant amount over and above a  
20 competitive level.

21 **2. Having Barred All Competitors, Apple Pay Exercises Monopoly Power in the**  
22 **Market for Tap and Pay iOS Mobile Wallets and Imposes Supracompetitive**  
**Fees.**

23 68. By blocking rivals from accessing the NFC interface on iOS devices, Apple has  
24 secured for Apple Pay a 100% monopoly in the market for Tap and Pay iOS Mobile Wallets. There  
25 is not one competitor with even a sliver of this market. And this is despite the existence of multiple  
26 tap and pay wallets in the Android space, and many other digital wallets who—absent Apple’s  
27 conduct—would be incentivized to compete with Apple Pay.





1 Pay generated approximately \$1 billion in revenues in 2019, and predict that number will grow to \$4  
2 billion by 2023.<sup>39</sup>

3 **E. Apple Protects its Monopoly By Preventing Issuers From Driving Cardholders Away**  
4 **from Apple Pay.**

5 73. Although Apple’s transaction fees impose a substantial tax on issuers, issuers are  
6 barred from charging cardholders additional fees for Apple Pay transactions.

7 74. Without this prohibition, card issuers could accept Apple Pay, but promote cheaper  
8 alternatives by passing on all or some portion of the transaction fees only Apple charges. For  
9 example, an issuer could impose a surcharge on Apple Pay transactions that covers Apple’s fees,  
10 while informing cardholders that this fee is needed to cover Apple fees and will not be charged if the  
11 cardholder makes contactless payments with the card itself, or through Google Pay or Samsung Pay.

12 75. By preventing this type of differential pricing, Apple has ensured that the price  
13 mechanism is disabled and consumers are perfectly inelastic to Apple Pay fees. That is, even if  
14 consumers might shift transactions to other platforms in response to an Apple Pay surcharge, Apple’s  
15 rules prevent this from ever happening. Apple can charge issuers whatever it wants, knowing that  
16 consumers will never feel the pain and that issuers’ only countermeasure is to disable Apple Pay  
17 entirely. This is evidently not a viable option for most issuers. As of September 2020,  
18 approximately 51% of iPhone users had activated Apple Pay.<sup>40</sup> Despite Apple’s industry high fees,  
19 banks continue to support Apple Pay to serve their iOS cardholders, as noted above.

20 **F. Apple Leverages its Monopoly By Bundling Tap and Pay Payments with E-Commerce**  
21 **Payments.**

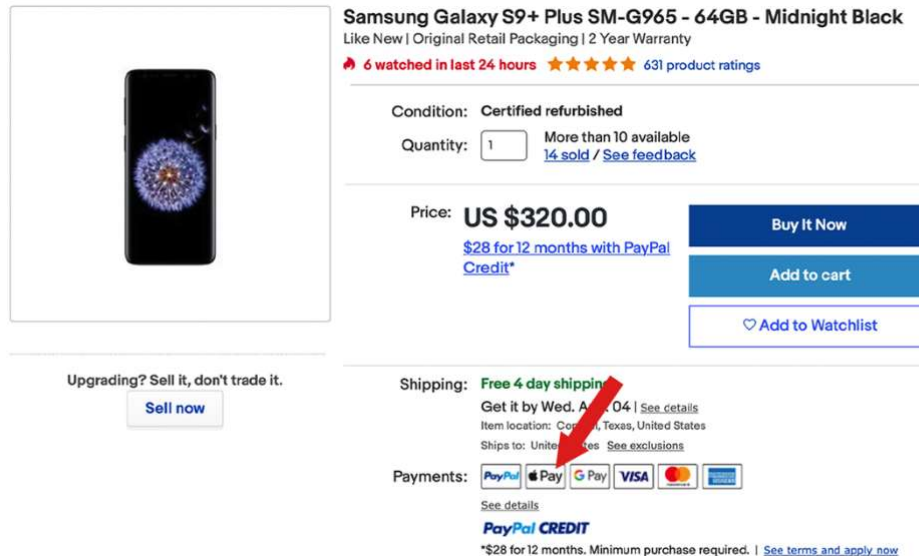
22 76. While Apple excludes competitors in the Tap and Pay iOS Mobile Wallet Market, that  
23 is not the only market in which Apple Pay operates. Apple Pay can also be used to make purchases  
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26 <sup>39</sup> See Gene Munster, Will Thompson, “Apple Pay Card Creates New Payments User  
27 Experience,” LOUP (Feb. 21, 2019), <https://loupfunds.com/apple-pay-card-creates-new-payments-user-experience/>.

28 <sup>40</sup> See Gene Munster, David Stokman, “Apple Pay Availability Growing 20% Plus,” LOUP (Nov. 5, 2020), <https://loupfunds.com/apple-pay-availability-growing-20-plus/>.

1 online, both on websites and for physical goods or services sold within apps.<sup>41</sup> For example, if a  
 2 consumer wishes to buy a good from eBay on an iOS device,<sup>42</sup> the purchase page (in both the eBay  
 3 app and on its website) will provide the consumer with the option of using Apple Pay to complete the  
 4 transaction.



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77. If the consumer selects Apple Pay to complete the transaction, the issuer of the card is required to pay Apple Pay's transaction fees. But if the user were to select a Google Pay or PayPal digital wallet equipped with the same card, or pay with the card itself, that same issuer would pay no such transaction fee. Because of this disparity, many issuers that enable their cards for tap and pay payments would find it economically beneficial to disable Apple Pay for online or in-app transactions on the same cards.

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78. Apple deprives issuers of this choice. If issuers want to enable their cards for Tap and Pay iOS Mobile Wallets—where Apple has foreclosed competition to secure a monopoly—they must also enable their cards for Apple Pay e-commerce transactions (both online and in-app). In short,

<sup>41</sup> Apple requires that digital goods purchased within an app be processed through Apple's in-app billing service, with Apple retaining a fee. Apple's in-app billing service for digital goods is, to Plaintiff's knowledge, separate from Apple Pay.

<sup>42</sup> Apple Pay can also be used on a Mac, provided it has Apple's fingerprint recognition feature known as Touch ID.

1 Apple is using its monopoly in one market—the Tap and Pay iOS Mobile Wallet market—to extract  
2 rents in another.

3 79. Absent this bundling of services, issuers would still be harmed by Apple’s monopoly  
4 and supracompetitive fees in the Tap and Pay iOS Mobile Wallets Market, but they could evade  
5 those fees in the separate e-commerce market by disabling Apple Pay for e-commerce transactions.  
6 Exercising its monopoly power, Apple closed that door.

7 **G. Apple’s Conduct Harms Not Only Issuers, But Also Consumers and Competition as a**  
8 **Whole.**

9 **1. Apple Charges Issuers Supracompetitive Fees on Apple Pay Transactions.**

10 80. Having foreclosed all would-be competitors in the market for Tap and Pay iOS  
11 Mobile Wallets, Apple charges card issuers fifteen basis points (.15%) on credit card transactions,  
12 and 0.5 cents (\$0.005) on debit transactions. Apple charges these fees even though payment  
13 networks handle virtually all aspects of an Apple Pay transaction. The networks verify the account  
14 numbers provided by Apple Pay users, they create a token for the account number and transmit it to  
15 Apple and, when a payment is initiated on Apple Pay, the networks verify the transaction by  
16 communicating with the card issuer. Apple’s role is basically limited to storing account tokens and  
17 transmitting them to the merchant through the NFC interface.

18 81. Facing competition in the Tap and Pay iOS Mobile Wallet Market, Apple would not  
19 be able to sustain its credit or debit transaction fees. The Android tap and pay mobile market is case  
20 in point. There, NFC technology is open to all comers, and Google Pay and Samsung Pay compete  
21 to provide tap and pay solutions. In this more competitive market, neither Google Pay nor Samsung  
22 Pay charge issuers a fee. If either of these solutions (or others) were permitted to access the NFC  
23 interface on iOS, they would attract issuers and users and pose a competitive threat to Apple Pay.  
24 This would drive Apple Pay’s fees down to the competitive level.

25 **2. Apple’s Monopoly Stifles Innovation and Market Alternatives.**

26 82. The absence of competitors in the Tap and Pay iOS Mobile Wallet Market minimizes  
27 Apple’s incentives to innovate Apple Pay to better serve the needs of users, merchants and  
28 participating issuers and acquirers. In a competitive Tap and Pay iOS Mobile Wallet Market,

1 providers would compete across a range of dimensions to differentiate their apps and win market  
2 share.

3 83. We see this in the Android market. There, issuers themselves can create their own tap  
4 and pay digital wallets that, unlike Apple Pay, are directly integrated into the user’s banking app and  
5 all its functionality, including the ability to check account balances and transfer funds. Barclays has  
6 done so. Issuer apps can also offer security advantages, as analysts have observed, because issuers  
7 “are able to tightly manage the security of the solution and the customer experience.”<sup>43</sup>

8 84. Samsung has likewise differentiated its Android tap and pay service by innovating  
9 new functionality. Unlike Google Pay, which relies exclusively on NFC technology, Samsung Pay  
10 also features a Magnetic Secure Transmission (“MST”) technology that mimics a card swipe and can  
11 be used on older terminals without an NFC interface. This has allowed Samsung Pay to be used at  
12 terminals that would not accept either Google Pay or Apple Pay—a benefit to both users and issuers.

13 85. In a more competitive Tap and Pay iOS Mobile Wallet Market, these and other  
14 innovations would be expected to emerge. By foreclosing competition, Apple has stifled that  
15 innovation to the detriment of both Apple Pay users and issuers. Apple has also dampened the  
16 incentives of Google Pay and Samsung Pay to innovate because, without access to the NFC interface  
17 on iOS devices, they do not stand to gain market share from Apple.

18 **3. By Foreclosing Competition, Apple Depresses Output.**

19 86. Apple’s monopolization of the Tap and Pay iOS Mobile Wallet Market also  
20 suppresses output. When a monopolist imposes supracompetitive prices—as here—the quantity that  
21 purchasers are willing to purchase declines, even if there are no available substitutes. This is known  
22 as own-price elasticity of demand. In the context of Apple Pay, the output restriction manifests with  
23 the card issuers that pay the fees. If Apple were to reduce its fees to issuers (or eliminate them, as in  
24 the Android market), even more issuers would enable their cards for a Tap and Pay iOS Mobile  
25 Wallet, thereby increasing output.

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27 <sup>43</sup> See “Payments Security White Paper,” (July 13, 2015), at 24,  
28 <https://cba.ca/Assets/CBA/Documents/Files/Article%20Category/PDF/misc-2015-paymentssecurity-whitepaper-en.pdf>.

1           87. Fewer issuers participating in the Tap and Pay iOS Mobile Wallet Market also means  
2 fewer users—particularly users with accounts at nonparticipating financial institutions. Furthermore,  
3 given the cross-platform network externalities in this multi-sided market, the reduction in the number  
4 of users and issuers also reduce the value of the platform to merchants and acquirers that facilitate  
5 Apple Pay and digital wallets more generally. Fewer issuers and users therefore also reduce the  
6 incentives of merchants to accept Tap and Pay iOS Mobile Wallets. The combined effect is even  
7 fewer transactions overall, that is, less output.

8 **H. Apple Cannot Justify Its Conduct as Serving Any Procompetitive End.**

9           88. Apple also cannot legitimately contend that restricting NFC technology to itself  
10 protects the security of its devices and users. The reality is that Apple already gives third-party app  
11 developers access to NFC for a variety of purposes, as addressed above (*see supra* Section V.C). It  
12 can be integrated into third-party apps to allow users to scan coupons in store, or track inventory, or  
13 view museum tags. Apple only restricts access to NFC to those developers who wish to use it to  
14 create apps that might compete with Apple Pay by providing tap and pay functionality.

15           89. Apple also allows merchants, who do not threaten Apple Pay’s market power, to  
16 access its NFC interface. In February 2022, Apple announced technology that will “empower  
17 millions of merchants” to accept payments on iPhones using Apple’s NFC interface.<sup>44</sup> With this  
18 technology, merchants can prompt customers to hold their iPhone or Apple Watch near the  
19 merchant’s iPhone, and the payment will be made via NFC. Far from claiming that this vast  
20 expansion of NFC access will undermine security, Apple contends that this new functionality will  
21 “provide businesses with a secure, private, and easy way to accept contactless payments and unlock  
22 new checkout experiences using the power, security, and convenience of iPhone.”<sup>45</sup>

23           90. Apple has also championed Apple Pay as being more secure than card payments  
24 because, when a card is accessed through Apple Pay, the card number is tokenized. In other words,  
25

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26 <sup>44</sup> *See* “Apple empowers businesses to accept contactless payments through Tap to Pay on  
27 iPhone,” (Feb. 8, 2022), <https://www.apple.com/newsroom/2022/02/apple-unveils-contactless-payments-via-tap-to-pay-on-iphone/>.

28 <sup>45</sup> *Id.*

1 the card number itself is not used for purposes of clearing the transaction through Apple Pay; rather,  
2 a token number is used that theoretically cannot be traced back to the account holder by any third  
3 party. According to Apple, this means that “your card number is never stored on your device or on  
4 Apple servers . . . [a]nd when you pay, your card numbers are never shared by Apple with  
5 merchants.”<sup>46</sup>

6 91. But these claims, even if true, do not justify restricting NFC technology to Apple Pay  
7 and denying access to all rivals. Both Android wallets—Google Pay and Samsung Pay—already use  
8 tokenization, and the technology is certainly not out of reach to other would-be competitors. Apple  
9 does not create the token numbers. The payment networks do.

10 92. Nor is there any reason to believe that Apple Pay would be more secure than rival Tap  
11 and Pay iOS Digital Wallets in a competitive market. Apple Pay has been the subject of serious  
12 security breaches. In 2015, the New York Times reported “unusually high fraud rates from thieves  
13 using stolen credit numbers on Apple Pay.”<sup>47</sup> This was enabled by Apple Pay’s lax verification  
14 process, which, to facilitate “frictionless” signups, allowed users to enable new cards (including  
15 stolen ones) within Apple Pay while requiring “little beyond basic credit card information about a  
16 user.”<sup>48</sup> This led to a fraud rate on Apple Pay that exceeded traditional credit cards, and a “thriving  
17 black market in which thieves enter stolen credit card numbers into iPhones, essentially turning the  
18 devices into physical credit cards, which they in turn take to stores and walk out with merchandise,”  
19 reported the New York Times.<sup>49</sup> Later in 2021, researchers showed that thieves could trick an  
20 iPhone into believing it was interacting with a transit terminal, and extract a £1000 payment without  
21 the user unlocking the phone or authorizing the charge.<sup>50</sup>

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22  
23 <sup>46</sup> See <https://www.apple.com/apple-pay/> (last accessed July 14, 2022).

24 <sup>47</sup> See “Pointing Fingers in Apple Pay Fraud,” NEW YORK TIMES: DEALBOOK (Mar. 16, 2015),  
25 <https://www.nytimes.com/2015/03/17/business/banks-find-fraud-abounds-in-apple-pay.html>.

26 <sup>48</sup> *Id.*

27 <sup>49</sup> *Id.* Apple’s market power exacerbated this security threat because, as the New York Times  
28 reported, bank executives were concerned that if they raised concerns “they would not be included  
among the initial issuers on Apple Pay.” *Id.*

<sup>50</sup> See “Researchers find Apple Pay, Visa contactless hack,” BBC NEWS (Sep. 30, 2021),  
<https://www.bbc.co.uk/news/technology-58719891>.

1           93.     Competing Tap and Pay iOS Digital Wallets could innovate to prevent these security  
2 breaches, and indeed some already have. For example, the researchers who hacked iPhones to make  
3 unauthorized £1000 payments “also tested Samsung Pay, but found it could not be exploited in this  
4 way.”<sup>51</sup>

5           94.     Even if some security features of Apple Pay were essential to protect the iOS  
6 ecosystem as a whole—something Apple has never shown—that security objective could be met by  
7 other less restrictive means. There is no need to block competitor access to NFC technology entirely,  
8 and thereby eliminate all competition in the market for Tap and Pay iOS Mobile Wallets.

9     **I.     European Regulators Have Preliminarily Concluded That Apple Has Abused Its**  
10     **Dominant Position in the Market for Mobile Wallets on iOS Devices.**

11           95.     In June 2020, the European Commission initiated an investigation into Apple Pay.  
12 The investigation concerned, among other things, “Apple’s limitation of access to Near Field  
13 Communication (‘NFC’) technology embedded on iOS smart mobile devices to Apple Pay only.”<sup>52</sup>  
14 On May 2, 2022, the EC issued a “Statement of Objections,”<sup>53</sup> informing Apple of its preliminary  
15 view that Apple, by restricting the NFC interface, violated European competition law.

16           96.     Among other preliminary findings, the EC stated that “Apple enjoys significant  
17 market power in the market for smart mobile devices and a dominant position on mobile wallet  
18 markets.”<sup>54</sup> The EC stated that it “takes issue with the decision by Apple to prevent mobile wallets  
19 app developers, from accessing the necessary hardware and software (‘NFC input’) on its devices, to

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20           <sup>51</sup> *Id.*

21           <sup>52</sup> See “Statement of Objections,” European Commission,  
22 [https://ec.europa.eu/competition/antitrust/cases1/202221/AT\\_40452\\_7174940\\_1000\\_10.pdf](https://ec.europa.eu/competition/antitrust/cases1/202221/AT_40452_7174940_1000_10.pdf) (last  
accessed July 14, 2022).

23           <sup>53</sup> EC guidance provides that “[a] Statement of Objections is a formal step in Commission  
24 investigations into suspected violations of EU antitrust rules. The Commission informs the parties  
25 concerned in writing of the objections raised against them. The addressees can examine the  
26 documents in the Commission's investigation file, reply in writing and request an oral hearing to  
present their comments on the case before representatives of the Commission and national  
27 competition authorities. Sending a Statement of Objections and opening of a formal antitrust  
28 investigation does not prejudice the outcome of the investigations.” See “Antitrust: Commission  
sends Statement of Objections to Apple over practices regarding Apple Pay,” European Commission,  
(May 2, 2022), [https://ec.europa.eu/commission/presscorner/detail/en/ip\\_22\\_2764](https://ec.europa.eu/commission/presscorner/detail/en/ip_22_2764).

29           <sup>54</sup> See “Antitrust: Commission sends Statement of Objections to Apple over practices regarding  
Apple Pay,” European Commission (May 2, 2022),  
[https://ec.europa.eu/commission/presscorner/detail/en/ip\\_22\\_2764](https://ec.europa.eu/commission/presscorner/detail/en/ip_22_2764).

1 the benefit of its own solution, Apple Pay.”<sup>55</sup> The EC’s preliminary conclusion is that Apple’s  
2 restriction of NFC technology “has an exclusionary effect on competitors and leads to less  
3 innovation and less choice for consumers for mobile wallets on iPhones.”<sup>56</sup>

4 97. The EC’s Statement of Objections triggers a formal investigation that will now  
5 proceed.

6 98. The Dutch competition authority—the Netherlands Authority for Consumers and  
7 Markets (“ACM”)—has likewise concluded that because of Apple’s restrictions on the NFC  
8 interface “consumers and retailers have fewer methods of payment to choose from.”<sup>57</sup> The ACM’s  
9 investigation “revealed that access to NFC technology (Near Field Communication) is an important  
10 prerequisite for market participants to invest in the development of payment apps of their own.”<sup>58</sup>  
11 Because Apple has restricted access to NFC, ACM found, market participants “have not started  
12 developing ... payment apps of their own.”<sup>59</sup>

13 99. ACM initiated its investigation under the European Interchange Fee Regulation (IFR)  
14 and ultimately concluded that this regime is not suitable for redressing the agency’s “anticompetitive  
15 concerns.” ACM called for additional European interchange rules and noted the EC’s ongoing  
16 investigation into the same Apple conduct was being conducted under separate “competition rules.”<sup>60</sup>

## 17 VI. INTERSTATE TRADE AND COMMERCE

18 100. The activities of Apple as alleged in this complaint were within the flow of, and  
19 substantially affected, interstate commerce. Apple markets and provides Apple Pay services across,  
20 and without regard to, state lines.

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24 <sup>55</sup> *Id.*

25 <sup>56</sup> *Id.*

26 <sup>57</sup> *See* “Closure of the investigation into payment apps confirms need for new rules,” Netherlands  
27 Authority for Consumers & Markets, [https://www.acm.nl/en/publications/closure-investigation-  
28 payment-apps-confirms-need-new-rules](https://www.acm.nl/en/publications/closure-investigation-payment-apps-confirms-need-new-rules) (last accessed July 14, 2022).

<sup>58</sup> *Id.*

<sup>59</sup> *Id.*

<sup>60</sup> *Id.*



## VII. RELEVANT MARKETS

### A. Relevant Product Markets

#### 1. Relevant Markets For Apple's Mobile Devices (iPhone, iPad, and Watch)

101. As addressed *supra* at Section V.A, there are relevant product markets for smartphones, tablets, and smart watches. Each of these products serves a distinct purpose, and is marketed to serve a distinct purpose.

102. **Smartphone Market.** Smartphones provide phone functionality coupled with on-the-go internet, email, and text capabilities. Smartphones are further enhanced by a range of apps preloaded and loadable onto the devices, which give smartphones enormous versatility. They can be used to navigate a city, buy tickets to the opera, play games, track spending, take and store pictures, read the news, among an almost endless variety of things.

103. Characterized by their small size and portability, smartphones can be used virtually anywhere the user takes it, and stowed away in a pocket. The vast majority of adults in the U.S.—upwards of 85%—own a smartphone. This ubiquitous usage reflects the absence of reasonably close substitutes for smartphones.

104. **Tablet Market.** Tablets bear certain smartphone features, but they function as a complement rather than a substitute for smartphones. Indeed, when the first tablet was launched in 2010—Apple's iPad—it was marketed as a “third category of device,” distinct from smartphones and laptops.”<sup>61</sup>

105. Screen size is a primary differentiator. With a larger screen (up to 17 inches) the tablet is less mobile than a smartphone. It can be ported, but not stowed in a pocket. And because of the larger screen, certain apps are available only for tablets, which provide a more immersive viewing experience. Tablets also do not always have cellular connectivity, and thus the ability to use text and phone on the move. Tablets also offer the user more productivity and office related functionality, particularly with a keyboard add-on allowing the user to edit documents.

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<sup>61</sup> See William Gallagher, “Apple got tablets right, and created a whole new market with the iPad 12 years ago today” AppleInsider, Jan. 27, 2022, <https://appleinsider.com/articles/19/01/27/apple-got-tablets-right-and-created-a-whole-new-market-with-the-ipad>.

1           106.   **Smart Watch Market.** Smart watches are a distinct product with a distinct purposes.  
2 The primary distinguishing trait is that smart watches are wearable, and they provide functionality  
3 derived from their proximity to the body. Most prominently, smart watches offer (and are marketed  
4 to offer) various fitness and health related functions, from tracking steps to the users' heartrate and  
5 sleep patterns.

6           107.   The small interface on smart watches streamlines the functions they can provide.  
7 Web browsing is limited, and sometimes nonexistent, on smart watches. For many smart watches,  
8 texting and phone usage require that the watch be paired with a smartphone or other cellular-enabled  
9 device. Smart watches do not replace smartphones or tablets. They are used for other,  
10 complimentary purposes. There are no reasonably close substitutes for smart watches.

11           **2.       Relevant Market for Tap and Pay iOS Mobile Wallets**

12           108.   As addressed *supra* at Section V.D.1, there is a relevant antitrust market for Tap and  
13 Pay iOS Mobile Wallets. These wallets provide a distinct service and offer distinct features that  
14 differentiate them from other modes of payments.

15           109.   Android wallets cannot offer tap and pay functionality on iOS devices, and the cost of  
16 digital wallet transactions for card issuers is unlikely to induce switching between iOS and Android  
17 devices either by consumers or by card issuers. Contactless cards are less secure than Apple pay  
18 and, for many consumers, less convenient. With a population of consumers loyal to Apple Pay,  
19 issuers cannot drop the service in hopes of shifting demand to payment cards. For these, and other  
20 (*see supra* at Section V.D.1) reasons, none of these payment options is a reasonably close substitute  
21 for Apple Pay.

22           110.   The lack of substitution is evident from the sustained pricing differential across these  
23 payment platforms. That is, other forms of payment manifestly do not constrain Tap and Pay iOS  
24 Mobile Wallets because Apple Pay has imposed and sustained a substantial price premium on issuers  
25 relative to a competitive price for mobile wallet transactions, without any measurable shift in  
26 demand to other payment options. Far from dropping Apple Pay, every year more and more issuers  
27 are enabling their cards for use on the platform, absorbing Apple's supracompetitive fees.  
28

1           111. In addition, by preventing issuers from passing Apple Pay fees on to consumers using  
2 the service, Apple has ensured that consumers are indifferent to the prices Apple Pay charges.  
3 Consumers when they purchase mobile devices therefore do not take into consideration the cost or  
4 amount of using Apple Pay. Apple can charge issuers whatever it wants, knowing that demand on  
5 the consumer side will be perfectly inelastic to the price Apple charges on the issuer side.

6           112. By barring competitors from accessing the NFC interface needed to offer Tap and Pay  
7 functionality on iOS devices, Apple Pay has monopolized the Tap and Pay iOS Mobile Wallet  
8 Market. Apple Pay’s market share is 100 percent.

9 **B. Relevant Geographic Market**

10           113. There is a relevant U.S. geographic market for all products identified in this  
11 complaint—namely (a) Apple’s iOS devices (iPhone, iPad and Apple Watch) and (b) Tap and Pay  
12 iOS Mobile Wallets.

13 **VIII. CLASS ALLEGATIONS**

14           114. Plaintiff brings this proposed class action for damages and injunctive relief pursuant  
15 to Fed. R. Civ. P. 23(b)(1), (2), and (3).

16           115. Plaintiff brings this action on its own behalf and on behalf of the following class:

17                   All U.S. entities that (a) issued any Payment Card enabled for Apple Pay  
18                   and (b) paid Apple a fee for any Apple Pay transaction on that Payment  
19                   Card.

20           116. For purposes of the Class Definition, a “Payment Card” is any physical card, digital  
21 card, virtual card, or other payment device capable of accessing an account from which payments  
22 can be made. The term “Payment Card” includes, without limitation, credit cards, debit cards,  
23 prepaid cards, transit cards, and any other cards linked to a depository account.

24           117. Excluded from the proposed class are the defendants; defendants’ affiliates and  
25 subsidiaries; defendants’ current or former employees, officers, directors, agents, and  
26 representatives; the district judge or magistrate judge to whom this case is assigned, as well as those  
27 judges’ immediate family members; and all governmental entities.  
28

1           118.   **Numerosity:** The exact number of the members of the proposed class is unknown and  
2 is not available to the Plaintiff at this time, but upon information and belief, the class will consist of  
3 many thousands of members such that individual joinder in this case is impracticable. Apple  
4 publishes a list of financial institutions participating in Apple Pay. That list contains more than  
5 4,000 banks and credit unions.<sup>62</sup>

6           119.   **Commonality:** Numerous questions of law and fact are common to the claims of the  
7 Plaintiff and members of the proposed class. These include, but are not limited to:

8                   a.       Whether Apple unlawfully has unlawfully tied Apple Pay to the purchase of  
9 its mobile devices—including iPhone, iPad and Apple Watch—by precluding third parties from  
10 offering Tap and Pay functionality on those devices with NFC technology, and thereby requiring that  
11 Apple Pay be used Tap and Pay iOS Mobile Wallet transactions;

12                   b.       Whether there is an antitrust market (or submarket or aftermarket) for Tap and  
13 Pay iOS Mobile Wallets;

14                   c.       Whether Apple unlawfully monopolized, or attempted to monopolize, a  
15 market for Tap and Pay iOS Mobile Wallets;

16                   d.       Whether competition in the market for Tap and Pay iOS Mobile Wallets has  
17 been constrained or harmed by Apple’s tying, monopolization, or attempted monopolization conduct  
18 of such markets;

19                   e.       Whether issuers have been harmed, including by way of having paid more for  
20 Tap and Pay iOS Mobile Wallet services than they would have but for Apple’s allegedly  
21 anticompetitive conduct;

22                   f.       Whether Plaintiff and members of the proposed class are entitled to  
23 declaratory or injunctive relief to halt Apple’s unlawful practices, and to their attorney fees, costs,  
24 and expenses; and

25  
26  
27  
28                   <sup>62</sup> See <https://support.apple.com/en-us/HT204916> (last accessed July 14, 2022).

1           g.       Whether Plaintiff and members of the proposed class are entitled to any  
2 damages or restitution incidental to the declaratory or injunctive relief they seek, or otherwise, and to  
3 their attorney fees, costs, and expenses related to any recovery of such monetary relief.

4           120.   **Typicality:** Plaintiff's claims are typical of the claims of the members of the proposed  
5 class. The factual and legal bases of Apple's liability are the same and resulted in injury to Plaintiff  
6 and all of the other members of the proposed class.

7           121.   **Adequate representation:** Plaintiff will represent and protect the interests of the  
8 proposed class both fairly and adequately. Plaintiff has retained counsel competent and experienced  
9 in complex class-action litigation. Plaintiff has no interests that are antagonistic to those of the  
10 proposed class, and its interests do not conflict with the interests of the proposed class members it  
11 seeks to represent. Class counsel have been investigating the claims asserted in this complaint since  
12 August 2021, have invested substantial resources developing these claims, and are qualified and best  
13 positioned to lead the representation of the proposed class.

14           122.   **Prevention of inconsistent or varying adjudications:** If prosecution of myriad  
15 individual actions for the conduct complained of were undertaken, there may be inconsistent or  
16 varying results. This would have the effect of establishing incompatible standards of conduct for the  
17 Defendants. Certification of Plaintiff's proposed class would prevent these undesirable outcomes.

18           123.   **Injunctive and declaratory relief:** By way of its conduct described in this complaint,  
19 Apple has acted on grounds that apply generally to the proposed class. Accordingly, final injunctive  
20 relief or corresponding declaratory relief is appropriate respecting the class as a whole.

21           124.   **Predominance and superiority:** This proposed class action is appropriate for  
22 certification. Class proceedings on these facts and this law are superior to all other available  
23 methods for the fair and efficient adjudication of this controversy, given that joinder of all members  
24 is impracticable. Even if members of the proposed class could sustain individual litigation, that  
25 course would not be preferable to a class action because individual litigation would increase the  
26 delay and expense to the parties due to the complex factual and legal controversies present in this  
27 matter. Here, the class action device will present far fewer management difficulties, and it will  
28

1 provide the benefit of a single adjudication, economies of scale, and comprehensive supervision by  
2 this Court. Further, uniformity of decisions will be ensured.

3 **IX. CLAIMS FOR RELIEF**

4 **FIRST CAUSE OF ACTION:**  
5 **VIOLATION OF THE SHERMAN ACT – TYING THE TAP AND PAY IOS MOBILE**  
6 **WALLET MARKET TO IOS MOBILE DEVICE MARKETS (15 U.S.C. §§ 1, 3)**

7 126. Plaintiff repeats and re-alleges every allegation above as if set forth herein in full.

8 127. Apple has unlawfully tied Apple Pay to its mobile devices, including iPhone, iPad,  
9 and Apple Watch.

10 128. As demonstrated herein, Apple Pay is a product in the Tap and Pay iOS Mobile  
11 Wallets Market. The Tap and Pay iOS Mobile Wallet Market is a multi-sided market. This market  
12 is distinct from the relevant markets for Apple’s mobile devices—the smartphone, tablet and smart  
13 watch markets. Apple’s unlawful tying arrangement thus ties two separate products that are in  
14 separate markets.

15 129. Apple exercises market power in the mobile device markets for smartphones, tablets  
16 and smart watches.

17 130. Apple coerces iOS consumers to purchase Apple Pay’s tap and pay mobile services.  
18 Apples Pay is preinstalled on iOS devices, and Apple conditions consumers’ use of their iOS devices  
19 on their agreement to its Apple Pay terms and conditions. Consumers do not agree to use Apple Pay  
20 exclusively for tap and pay mobile wallet payments. Instead, Apple coerces consumers’ exclusive  
21 use of Apple Pay by excluding would-be Apple Pay rivals from accessing the NFC interface required  
22 for tap and pay functionality on the iOS devices.

23 131. Apple’s conduct forecloses competition in the Tap and Pay iOS Mobile Wallets  
24 Market. Given the volume of transactions and the money at issue, Apple’s conduct affects a  
25 substantial volume of commerce in that market.

26 132. Apple has thus engaged in a *per se* illegal tying arrangement.

27 133. In the alternative only, even if Apple’s tying conduct does not constitute a *per se*  
28 violation of the law, a rule-of-reason analysis of Apple’s tying arrangement also would demonstrate  
that it violates the law.









1 anticompetitive practices described herein; declaratory relief, adjudging such practices unlawful; as  
2 well as monetary relief, whether by way of restitution or damages, including treble damages, or other  
3 multiple or punitive damages, or restitution, where mandated by law or equity or as otherwise  
4 available; together with recovery of the costs of suit, to include reasonable attorneys' fees, costs, and  
5 expenses, together with pre- and post-judgment interest to the maximum levels permitted by law or  
6 equity.

7 C. That the Court grant such additional orders or judgments as may be necessary to  
8 prevent the unlawful practices complained of herein; and

9 D. That the Court award Plaintiff and the proposed class such other, favorable relief as  
10 may be available and appropriate under federal or state law, or at equity.

11 **JURY TRIAL DEMANDED**

12 Plaintiff demands a trial by jury on all claims so triable.

13  
14 DATED: July 18, 2022

Respectfully submitted,

15 **HAGENS BERMAN SOBOL SHAPIRO LLP**

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*Attorneys for Plaintiff and the Proposed Class*

CIVIL COVER SHEET

The JS-CAND 44 civil cover sheet and the information contained herein neither replace nor supplement the filing and service of pleadings or other papers as required by law, except as provided by local rules of court. This form, approved in its original form by the Judicial Conference of the United States in September 1974, is required for the Clerk of Court to initiate the civil docket sheet. (SEE INSTRUCTIONS ON NEXT PAGE OF THIS FORM.)

I. (a) PLAINTIFFS

AFFINITY CREDIT UNION

(b) County of Residence of First Listed Plaintiff Polk County, IA (EXCEPT IN U.S. PLAINTIFF CASES)

(c) Attorneys (Firm Name, Address, and Telephone Number)

Ben M. Harrington (HAGENS BERMAN SOBOL SHAPIRO LLP, 715 Hearst Avenue, Suite 202 Berkeley, CA 94710, (510) 725-3000)

DEFENDANTS

APPLE INC., a California corporation

County of Residence of First Listed Defendant Santa Clara County, CA (IN U.S. PLAINTIFF CASES ONLY)

NOTE: IN LAND CONDEMNATION CASES, USE THE LOCATION OF THE TRACT OF LAND INVOLVED.

Attorneys (If Known)

II. BASIS OF JURISDICTION (Place an "X" in One Box Only)

- 1 U.S. Government Plaintiff
2 U.S. Government Defendant
3 Federal Question (U.S. Government Not a Party)
4 Diversity (Indicate Citizenship of Parties in Item III)

III. CITIZENSHIP OF PRINCIPAL PARTIES (Place an "X" in One Box for Plaintiff and One Box for Defendant)

Table with columns for Plaintiff (PTF) and Defendant (DEF) citizenship: Citizen of This State, Citizen of Another State, Citizen or Subject of a Foreign Country, Incorporated or Principal Place of Business In This State, Incorporated and Principal Place of Business In Another State, Foreign Nation.

IV. NATURE OF SUIT (Place an "X" in One Box Only)

Large table with categories: CONTRACT, REAL PROPERTY, TORTS, CIVIL RIGHTS, PRISONER PETITIONS, HABEAS CORPUS, OTHER, FORFEITURE/PENALTY, LABOR, IMMIGRATION, BANKRUPTCY, SOCIAL SECURITY, FEDERAL TAX SUITS, OTHER STATUTES.

V. ORIGIN (Place an "X" in One Box Only)

- 1 Original Proceeding
2 Removed from State Court
3 Remanded from Appellate Court
4 Reinstated or Reopened
5 Transferred from Another District (specify)
6 Multidistrict Litigation-Transfer
8 Multidistrict Litigation-Direct File

VI. CAUSE OF ACTION

Cite the U.S. Civil Statute under which you are filing (Do not cite jurisdictional statutes unless diversity): 15 U.S.C. §§ 1, 2, 3.

Brief description of cause: Violation of Antitrust Laws

VII. REQUESTED IN COMPLAINT:

CHECK IF THIS IS A CLASS ACTION UNDER RULE 23, Fed. R. Civ. P. DEMAND \$

CHECK YES only if demanded in complaint: JURY DEMAND: Yes No

VIII. RELATED CASE(S), IF ANY (See instructions):

JUDGE DOCKET NUMBER

IX. DIVISIONAL ASSIGNMENT (Civil Local Rule 3-2)

(Place an "X" in One Box Only) SAN FRANCISCO/OAKLAND SAN JOSE EUREKA-MCKINLEYVILLE

DATE 07/18/2022

SIGNATURE OF ATTORNEY OF RECORD

/s/ Ben Harrington