Bundeskartellamt

9th Decision Division

File Number: B9-67/21

Determination of the status as addressee
of Section 19a (1) GWB

- Public version -

This translation is provided for information purposes only (CONVENIENCE TRANSLATION). It is based on a translation that has been made available by Apple.

Only the German version of the decision is authentic.

Decision

In the administrative proceedings
against

1. Apple Inc.
   One Apple Park Way
   Cupertino, CA 95014
   USA

2. Apple GmbH
   Katharina-von-Bora Str. 3
   80333 Munich

- Parties 1 and 2 -

Representatives of Parties 1 and 2:

RA Dr. Ingo Brinker
RA Dr. Christian von Köckritz
Gleiss Lutz Hootz Hirsch
PartmbB Rechtsanwälte Steuerberater
Karl-Scharnagl-Ring 6

80539 Munich

the 9th Decision Division rendered the following decision on 3 April 2023:

1. It is hereby determined that Party 1, including all its affiliated companies pursuant to Section 36 (2) of the German Competition Act (GWB), is of paramount significance for competition across markets within the meaning of Section 19a (1) GWB.

2. The validity of the determination under 1 is limited to 5 years from the date on which the decision becomes final.

3. The fee for the proceedings including this decision is set at

EUR […]

(in words: […] euros)

and imposed on Parties 1 and 2 as joint and several debtors.

Reasons

A. Summary

(1) In the overall consideration of all circumstances relevant in the individual case, Apple has a position of economic power across markets, which gives the company a scope of action across markets that is not sufficiently controlled by competition. The company operates a wide-ranging digital ecosystem which is of great importance to competition not only in Germany, but also throughout Europe and the world. Based on its central hardware products Apple operates this ecosystem through the vertically integrated levels of its own proprietary operating systems, the Apple App Store, which is the only digital software distribution platform so far available on the devices, as well as through a large number of other products and services. In this system, the company holds key positions across markets for the interaction and use of digital business models and offers while specifically tying its users to Apple across all levels of the company's

system.

(2) The company's focus is not at all limited to the development of high-quality and innovative hardware products. Apple is also one of the companies focusing on digital business models, which, according to the legislator's intention, are to be norm addressees of Section 19a (1) GWB. With its operating systems, above all iOS, and the Apple App Store as well as various other services, the company is active to a significant extent on multi-sided markets within the meaning of Section 18 (3a) GWB.

(3) In an overall assessment of all relevant circumstances, the Bundeskartellamt examined whether Apple is of paramount significance for competition across markets and whether this finding can be formally determined. To determine such a status as norm addressee particular account had to be taken of the criteria set out in Section 19a (1) sentence 2 GWB without these criteria having to be fulfilled cumulatively. The results of an overall assessment of all relevant circumstances in the present case show that Apple has the characteristics of a company which the legislator intended to address with the concept of special abuse control pursuant to Section 19a GWB.

(4) In the Bundeskartellamt's view, Apple has dominant, or at least powerful, market positions at all vertically integrated levels based on its hardware (at least smartphones, tablets and smartwatches), its proprietary operating systems and the Apple App Store, which is the only digital distribution platform for apps and other software products on Apple devices available to both app publishers and users (Section 19a (1) sentence 2 no. 1 GWB). The company is active on a large number of different markets which are related through vertical integration or otherwise (no. 3), and its activities are of considerable relevance for third-party access to supply and sales markets (no. 5). In addition, Apple has excellent access to data relevant for competition (no. 4) and significant financial strength and other resources (no. 2).

(5) In its assessment of market dominance, the Bundeskartellamt took into account that, with its products ranging from hardware and operating systems to its digital distribution platform, the App Store, Apple is active in several separate markets which are vertically interrelated. However, dominance on the hardware markets exists irrespective of whether the operating systems for smartphones, tablets and

smartwatches represent separate relevant product markets that are distinguished from their respective hardware or whether, at least with regard to the opposite market side, the end users, there is a uniform market for hardware and the respective operating system. Apple's market shares in the relevant markets for smartphones, tablets, and smartwatches based on revenues remain well above the presumption threshold for single market dominance, and have tended to increase over the last few years. This applies largely irrespective of whether the assessment is based on German, European or worldwide market structure data. At the same time, Apple enjoys a continuously strong market share lead over all other providers of smartphones, tablets, and smartwatches in all three hardware markets. According to the Bundeskartellamt's investigations, customers wishing to switch provider face considerable barriers; hardware products based on other operating systems, like the widely used Android operating system, are at best distant competitors and cannot exert sufficient competitive pressure, or in any case not on Apple.

(6) One of the reasons why these barriers exist is the fact that users bundle the different products and services of the Apple system, which leads to significant lock-in effects. Users can benefit from even greater synergy effects when using the hardware due to the smooth interconnectivity of the different products and services and because functions are standardised by uniform user identification within the ecosystem. Multi-homing involving several providers of services such as those provided by Apple is less attractive and rarely used. The structure of a closed ecosystem increases the potential to counteract third-parties' options for attracting Apple users and offering them their own hardware products, services and a combination of both. Largely irrespective of the pricing and product policies of its competitors, Apple can enforce substantial, continuously increasing price differences compared to competing products on the market. Even if these price increases are accompanied by improved products and better quality, they are proof of Apple's significant competitive advantages and show that the company's scope of action is not sufficiently controlled by competition.

(7) From the perspective of both end users and the opposite market side, the app publishers, Apple's operating systems and its App Store have a monopoly position as platforms within Apple's ecosystem. Apple's operating systems and

its App Store are proprietary systems which, in contrast to Google's Android operating system and the widely used Google Play Store, are not licensed to third parties. To date, the App Store is the only digital software distribution platform on Apple devices. Apple's dominant position with regard to its operating systems and the distribution of apps on its devices can be determined irrespective of whether their vertical integration with end devices is already taken into account in the context of defining the market as a uniform market or within the context of assessing market power.

(8) Apple has a worldwide installed base of more than 2 billion actively used devices at its disposal. Its operating systems and the App Store, i.e. platforms that are vertically related to its hardware, generate network effects which are not only relevant in terms of platforms, but also have additional effects across products, services and markets. These effects strengthen Apple's scope of action which is not sufficiently controlled by competition, both vis-à-vis third-party providers, such as app publishers, and also vis-à-vis advertisers, mobile telecommunications providers and the users themselves. The network effects resulting from this continuously improving access to customers extend to the entire ecosystem, which leads to self-reinforcing effects. Apple's already widely used offers are becoming ever more attractive while Google Android and the Google Play Store are not in a position to challenge this appeal. This applies both with regard to end customers who must switch to another mobile device if they want to use an alternative option, and app publishers who in any case generally programme apps both for Apple's and Google's mobile operating systems due to economic considerations. In this respect, the Bundeskartellamt considers Apple to be dominant on these platform markets as well.

(9) For the purposes of determining whether Apple is of paramount significance for competition across markets within the meaning of Section 19a (1) GWB, it may ultimately be left open whether Apple is dominant on the above markets within the meaning of Section 18 (1) GWB. Even if Apple were not dominant on these markets within the meaning of Section 18 (1) GWB, there would be no reason to doubt that, in view of the market structures described above, Apple at least has a strong market position or position of power on these markets. Such a market position or position of power – located in the "grey area" of the classic concept of

market dominance – can also be examined under Section 19a (1) sentence 2 no. 1 GWB. Moreover, this position can in any case be taken into account as part of the necessary overall assessment under Section 19a (1) GWB.

(10) In the present case, the structural assessment as part of the examination of Section 19a (1) sentence 2 no. 1 GWB, which by itself is a market-related examination, already illustrates that the strategy used by Apple to offer its products and services is based on a deep, vertical integration of and strategic connection between products and services (Section 19a (1) sentence 2 no. 3 GWB). This results in competitive advantages for Apple, either in the business areas it already occupies and dominates or in the expansion of its activities into new business areas. From the outset Apple's strong position is first of all based on the tight vertical integration of its mobile devices through the respective proprietary operating systems and Apple's own mobile software distribution platform. With its range of products and services the company is in many cases active on upstream or downstream market levels or in conglomerate, integrated business areas within the meaning of Section 19a (1) sentence 2 no. 3 GWB and can thus benefit from economies of scope or occupy key positions.

(11) On the one hand, Apple covers the entire value chain relating to high-quality mobile digital end devices, partly also developing its own central components, such as processors. As a well-resourced company Apple has repeatedly carried out this backward integration by means of external acquisitions and by acquiring key technologies. Although the hardware devices – in particular smartphones, tablets or smartwatches – cater to different markets and user needs, their areas of use often complement each other within Apple's ecosystem. The seamless integration of the devices under the "continuity" concept serves many different areas of application from the combination of data, joint clipboards and storage spaces to the integral control of devices and digital cross-device payment systems (Apple Pay), in particular where the devices are registered to a single Apple ID. On the other hand, Apple is also very much integrated forward, in particular with regard to software distribution, the App Store, services financed by subscriptions and (pre-installed) apps in the area of application software. The Siri voice control software is just one example which currently records high growth rates.

(12) The combination between key positions held in a largely proprietary, comprehensively integrated conglomerate with vertical integration combined with special user retention across all levels of the Apple system's value chain establishes the basis for the relevance of Apple's activities for third-party access to supply and sales markets and the company's related influence on the business activities of third parties (Section 19a (1) sentence 2 no. 5 GWB). Due to the lack of alternative options, third parties wishing to access this ecosystem are faced with a strong position of economic power at the levels of mobile operating systems and app stores, which are indispensable for the distribution of apps. According to the Bundeskartellamt's investigations, app publishers generate more than 60% of their total revenue achieved in app stores through Apple's App Store. The remaining 40% are accounted for by the Google's Play Store. Apple widely controls third-party access to Apple customers and structures this access based on its rules and economic framework conditions. Access to Apple users is equally important for advertisers. The widespread use of smartphones, tablets and computers as well as the intensity of their use has given digital advertising, in particular targeted advertising, a decisive boost. Advertisers can hardly reach Apple users outside the Apple ecosystem, although they constitute a very important group of customers. In-app advertising plays a major role when mobile end devices are used. According to user surveys, smartphone users spend more than 90% of their screen time within apps. Whenever Apple customers use a web browser, the vast majority of them prefer Apple's own browser, Safari. This illustrates how Apple acts as a bottleneck for access to customers from the perspective of service providers placing advertisements, content providers which do not have their own apps or search engine providers.

(13) The fact that Apple fulfils a hybrid function with its iOS and App Store platforms also contributes to the company's paramount significance across markets. On the one hand, Apple operates proprietary mobile operating systems and its software distribution platform, including the related technical and operational intermediary services. On the other hand, the company also provides software and services. This opens up the possibility to use self-preferencing and leveraging strategies, which could give rise to the dangers associated with such practices. The App Store includes 1.7 million apps. Although Apple only offers a

few dozen of these apps, users spend 30 to 40% of their total usage time (depending on which calculation method and data survey is used) in and with Apple apps. At the same time, the company has sole control over how third-party providers of apps, devices or advertising and their users interact with this ecosystem and how they interact with one another within the system. The conditions for access to the App Store, which is a digital distribution platform on which users and app publishers meet, thus represent a crucial element of Apple's power to act as an intermediary or to set rules for access to a large number of supply and sales markets.

(14) For example, by setting rules for data transfer and by influencing the range and quality of third-party app functionalities, Apple at least holds the potential within the meaning of Section 19a (1) GWB to favour its own products while competing for the sale of apps to users. The contractual obligation to solely use the IAP in-app payment system contributes to establishing Apple's position as an intermediary between app publishers and end users and to strengthening the App Store's current position as the sole distribution channel for apps and other software products within the ecosystem. Another example is the configuration of the algorithms developed by Apple, which determine the order in which generic search results are displayed in the App Store. This can influence the visibility and marketing of third-party apps, for example when users download ad-funded apps for free or purchase paid apps.

(15) Access to user data for advertising purposes is another example of Apple's possibilities and power to set rules. With its App Tracking Transparency Framework (ATTF), Apple has unilaterally set rules which all app publishers have to comply with in order to be admitted to the Apple App Store. For third-party app publishers, Apple makes access to the data of app users dependent on obtaining the users' additional and express consent. In May 2022, the Decision Division initiated a proceeding under Section 19a (2) GWB to examine Apple's tracking rules and the ATTF. In particular, the authority is looking into the issue of whether the tracking rules could favour Apple's own offers and/or impede other companies. Moreover, in its examination under Section 19a (1) sentence 2 no. 5 GWB, the authority established that Apple has the power to set rules for the access to technical interfaces and for the distribution of its own devices via mobile

telecommunications providers.

(16) Apple's significance for third-party access to markets across several vertically integrated levels of its value chain and Apple's power to set rules are secured and underpinned by its outstanding financial strength and access to resources (Section 19a (1) sentence 2 no. 2 GBW) as well as by privileged access to data relevant for competition (Section 19a (1) sentence 2 no. 4 GWB).

(17) All financial indicators and developments based on revenues, increases in revenue, profits and increases in profits that can be observed as well as a cash flow exceeding USD 100 billion and very substantial liquid funds, all of which result in a top rating for Apple, show a picture of paramount financial strength. Based on its stock market value, Apple is the most valuable company in the world. Its strong resources are not only based on the company's access to great financial means. Apple can also use its wide user base and the strong market value of the "Apple" brand. The company can and does in fact make specific use of its resources to expand its ecosystem, either by investing heavily in R&D, continuously increasing its number of staff in pioneering business areas or acquiring companies with a particular focus on technologies for the expansion of business areas or improvement of existing services or products.

(18) Moreover, Apple has privileged access to data relevant for competition, which the company obtains in particular from app publishers as well as users of the ecosystem. Apple's business model allows users to enjoy uninterrupted, comfortable and easy access to user profiles and data as they are exchanged between hardware devices. Irrespective of how these data are processed, Apple potentially has access to a wide range of personal and non-personal data. These range from address data and information on personal interests to users' location and usage data. In the App Store itself, information is available in particular on the exchange between app developers and users, payments and the economic success of apps.

(19) Apple has the potential to draw additional information from this to be used as "sharable input" for developing new products, optimising existing products and penetrating additional markets. Such information would not be available if the different data sets were analysed separately, or not to the same extent or quality. It was found that there are tendencies to make more commercial use of data that

are relevant for competition, for example in marketing personalised advertising. In this context, Apple points out that its business model is based on the protection and minimisation of data. However, for the determination of a paramount significance for competition across markets in terms of scope of action, it is irrelevant whether, within the framework of Apple's actual data processing activities, the company is currently using its potential for data access established by the Bundeskartellamt to the full extent. The decision does not address the issue of Apple's actual data processing and use of data.

(20) Ultimately, when all relevant circumstances are considered, Apple has a position of economic power across markets which allows for a scope of action across markets that is not sufficiently controlled by competition. The particular risk potential associated with this scenario of a company being able to further consolidate, expand or otherwise use its position to its own advantage without sufficient control by competition may make it necessary to intervene quickly with the measures set out in Section 19a (2) GWB to effectively prevent damage to competition which cannot be remedied or is difficult to remedy.

B. Facts

I. Company affected

1. Overview – the Apple corporation

(21) Apple is one of the largest multinational technology companies in the world. The company is based in Cupertino, California, and employs 147,000 people worldwide. Sales in the most recently completed fiscal year 2022[1] were around USD 394.3 billion.

(22) Apple was founded in 1976 by Steve Jobs, Steve Wozniak and Ron Wayne. At the beginning of the 1980s, Apple was one of the first companies in the world to develop and sell personal computers for private users (Apple I+II, Macintosh).

(23) Steve Jobs, who had since left the company, returned to Apple in 1997. The introduction of the iMac – a compact computer with a colourful plastic casing – became a great success in 1998. Since then, Apple has developed several different devices, some of which have become the industry standard in their respective segments.

(24) These include, for example, the iPod mobile music player in 2001, the iPhone in 2007, the Apple TV set-top box in 2007, the iPad tablet computer in 2010, the Apple Watch in 2015, and the AirPods wireless Bluetooth earphones in late 2016.

(25) Apple provides five proprietary operating systems for its devices – iOS, iPad OS, macOS, watchOS and tvOS. In addition, Apple offers several online services; these include the Apple Music music streaming service, the Apple TV+ video streaming service, the Arcade games service, the iCloud cloud service, and the Apple Fitness+ fitness service. Apple also operates the App Store, the central distribution infrastructure for the sale of third-party apps.

(26) Apple also offers a variety of software products, including the Safari web browser, the FaceTime chat service, the Mail email program, the Pages word processing program, the Numbers spreadsheet, and the Quicktime video player, which are

---

[1] Apple's fiscal year begins in October of the previous year and ends in September of the current year.

usually pre-installed on the delivered devices.

(27) The Apple Group's organisational structure is based on functions. This means that the business units are not defined by product (e.g. iPhone, iPad, Apple Watch, etc.). Instead, the structure is based on overarching functions such as "services" and "hardware" and is also managed and staffed accordingly. As a result, Apple has established a single profit and loss responsibility for the entire company and not for individual business areas, products or services. [redacted]

Figure 1 Organisational structure Apple[3]

(28) The majority of Apple's shares are in free float. The three largest shareholders, each with a stake of more than 5%, are the financial companies Vanguard Group, BlackRock and Berkshire Hathaway.

(29) Apple is the most valuable company in the world. Its market capitalisation

---

2 Apple's response of 22 September 2021 to the Division of Decision's request for information dated 10 August 2021, p. 6, folio 249 of the case file.

3 Annex 2 of the response of 22 September 2021 to the Decision Division's request for information of 10 August 2021, folio 341 of the case file.

exceeded USD 3 trillion for the first time in January 2022. It was only in 2019 that Apple became the first company to exceed the USD 1 trillion mark. Apple's balance sheet shows cash and cash equivalents of more than USD 180 billion for the fiscal year 2022.[4]

(30) Apple generates by far the largest share of its revenue from iPhone sales. In the fiscal years 2022, the smartphone accounted for more than 50% of the total revenue of USD 394.3 billion. The iPad accounted for another 7.5% (USD 29.3 billion), and the Mac for about 10% (USD 40.2 billion). Apple also generated just under one-fifth of its revenue with its Services division (USD 78.1 billion). This division bundles the App Store activities and the company's other services such as Apple Music, Apple TV+ and Apple Arcade.

(31) Apple generates around 40% of its revenue in the Americas (USD 169.5 billion), with Europe accounting for around 25% (USD 95.1 billion). The rest of the revenue is generated in Asia, with the Greater China region[5] being the strongest in terms of revenue within Asia (USD 74.2 billion). In Germany, Apple generated well over USD [5-15] billion in revenue in the past fiscal year 2021.

(32) In a comparison of the 2020 and 2021 financial years, Apple's revenue grew by a third overall, from 2021 to 2022 by a further 7.5%. The iPhone again made a significant contribution to this with an overall growth of almost 50%. In regional terms, revenue growth was strongest in China, where an overall increase of more than 80% was recorded in the last two fiscal years.

(33) Apple has acquired well over [50-100] companies in the last ten years. Tim Cook, the CEO, has stated in an interview that Apple takes over another company on average every 2-3 weeks[6]. This often involves the acquisition of technology and patents as well as the integration of the target product into the Apple product range.[7]

---

4 On this and the following information see Apple's stock exchange reporting materials (Form 10-K), https://investor.apple.com/investor-relations/default.aspx [15 March 2023].

5 Greater China informally refers to a geographic area that encompasses and considers commercial and cultural linkages between mainland China, Hong Kong, Macau and Taiwan in East Asia. Where applicable, the term also includes Singapore. (https://en.wikipedia.org/wiki/Greater_China) [1 December 2021].

6 https://www.cnbc.com/2019/05/06/applebuys-a-company-every-few-weeks-says-ceo-tim-cook.html [8 December 2021].

7 https://www.cnbc.com/2020/07/31/tim-cook-contrasts-apple-ma-with-other-big-tech.html [8 December 2021]

(34) Apple closely vertically integrates its products at the hardware, software and service levels and is active in a wide range of areas. The figure below graphically illustrates Apple's vertically integrated activities. The figure is taken from the Majority Staff Report Investigation of Competition in Digital Markets released by the Subcommittee on Antitrust, Commercial, and Administrative Law of the Committee on the Judiciary of the House of Representatives. The inner circle represents the hardware activities, the middle circle the software infrastructure products, and the outer circle the applications and services.[8]

Figure 2 Apple's activities[9]

[8] The right part of the outer circle represents third-party services and applications. However, these are distributed via Apple's App Store.

[9] https://judiciary.house.gov/uploadedfiles/competition_in_digital_markets.pdf, p. 331 [8 December 2021].

2. Hardware products

(35) Apple produces and sells a number of different, mainly mobile, hardware products. These include, first and foremost, the smartphone iPhone (see a)), the tablet computer iPad (b)), the personal computer Mac (c)), and various wearables such as the Apple Watch smartwatch and the Air Pods headphones (d)). The first three categories alone accounted for around USD 275 billion in global sales in the fiscal year 2022. That is more than two-thirds of the Group's total revenue.

a) iPhone

(36) The iPhone was launched by Apple in 2007 after three years of development. So far, a total of 34 different models in 13 generations have been introduced.[10] The operating concept of the iPhone with its extensive control via the multi-touch screen and the associated user-friendliness is considered to be decisive for the product's success. It has also had and continues to have a significant influence on the design of smartphones from other manufacturers.[11] The US news magazine Time named the iPhone the "Invention of the Year 2007".[12]

(37) Apple generated sales of more than USD 205 billion with the iPhone in the fiscal year 2022. It is by far the company's most successful product. By 2021, more than 2 billion devices had been sold.[13] More than one billion iPhones are currently in use worldwide.[14] In terms of the number of units sold, Apple occupies second place worldwide behind Samsung with a share of around 15-20%. In terms of revenue, Apple has a considerable lead over its competitors with a share of 40-45%.[15]

(38) In Germany, Apple sold around [<10] million iPhones in the fiscal year 2020, generating sales of around USD [<5] billion[16]. Compared to the previous year,

---

10 As at 1 August 2022: https://www.knowyourmobile.com/de/phones/every-single-iphone-released-to-date-a-complete-list-updated/ [3 August 2022]

11 https://de.wikipedia.org/wiki/IPhone#:~:text=Tilllong%20were%20overall%2029%20shifted-dene,the%20iPhone%2013%20Pro%20bzw [3 January 2022]

12 http://content.time.com/time/specials/2007/article/0,28804,1677329_1678542_1677891,00.html

13 https://de.statista.com/statistik/daten/studie/203584/umfrage/absatz-von-apple-iphones-seit-dem-geschaeftsjahr-2007/ [7 December 2021].

14 https://www.faz.net/aktuell/wirtschaft/digitec/apple-feiert-ein-rekordquartal-dank-des-iphone-17457684.html

15 For details on the market definition as well as on the market structure, please refer to paras. (262) et seqq.

16 Where sales-related figures are given with reference to Europe and/or Germany, these have been

sales grew by around [20-30]% and revenue by around [10-20]%. In total, around [30-35] million iPhones were in use in Germany at the end of June 2021.[17]

(39) Apple sells the iPhone both directly – offline in Apple's flagship stores and online – and via third parties. [redacted]

b) iPad

(40) The iPad tablet computer was first introduced by Apple in January 2010. Like the iPhone, the (much larger) iPad is essentially controlled via a touch-sensitive screen. The iPad is now in its 9th generation, the (particularly lightweight) iPad Air already in its 5th generation, the smaller iPad mini in its 6th generation and the particularly large iPad Pro in its 5th generation.[18]

(41) Apple generated almost USD 30 billion in global sales with the iPad in the fiscal year 2022. This means that the iPad accounted for around 7.5% of Apple's revenue. By 2021, Apple had sold a total of nearly 600 million iPads.[19] More than [300-350] million devices are currently in use worldwide.[20]

(42) Apple is the world leader in tablets. [40-45]% of the devices sold in 2020 are from Apple. In terms of the value of devices sold, Apple accounts for [60-65]%.[21]

(43) In Germany, Apple sold around [<5] million iPads in the financial year 2020, generating revenue of around USD [<5] billion. Compared to the previous year, sales had grown by around [40-50]% and revenue by around [30-40]%.[22]

---

converted on the basis of USD values using the annual average reference rate for the euro. https://de.statista.com/statistik/daten/studie/200194/umfrage/wechselkurs-des-euro-gegenueber-us-dollar-seit-2001/ [8 February 2022].

17 Apple's response of 5 November to the Decision Division's request for information dated 10 August 2021, sheet 8, folio 1,499 of the case file.

18 As at March 2022.

19 https://de.statista.com/statistik/daten/studie/216440/umfrage/weltweiter-absatz-von-apple-ipads-since-2010/ [8 February 2022]

20 Apple's response of 22 January 2022 to the Decision Division's request for information dated 10 August 2021, internal document Financial Update Nov. 21, file 00001543, slide 33, folio 2,228 of the case file.

21 For details on the market definition as well as on the market structure, please refer to paras. (364) et seqq.

22 Apple's response of 22 September 2021 to the Decision Division's request for information dated 10 August 2021, sheet 2.1, folio 210 of the case file.

c) Mac computer

(44) Apple's personal computers bear the product name Mac. The Macintosh was the first microcomputer with a graphical user interface in the early 1980s.

(45) The Mac designation includes desktop PCs such as the iMac, Mac mini and Mac Pro as well as notebooks such as the MacBook Pro and the MacBook Air, which is designed with a focus on low weight and mobility.

(46) Apple generated around USD 40 billion in revenue from the Mac product category in the fiscal year 2022, 14% more than in the previous year. The share of the company's total revenue is around 10%. According to market studies, Apple was able to sell around 23 million devices in 2020, thus increasing its overall low share of all PCs sold. This is now around 8%.[23]

(47) In Germany, Apple sold around [750,000-850,000] devices in the financial year 2020, generating sales of around USD [<5] billion. Compared to the previous year, sales thus had grown by around [10-20]% and revenue by around [15-25]%.[24]

d) Wearables, Home & Accessories

(48) In its financial market reporting, Apple groups together a number of products under the term Wearables, Home & Accessories. These include the Apple Watch smartwatch, Air Pods headphones and the Apple TV set-top box.

(49) Apple generated total global sales of around USD 41 billion with these products in the fiscal year 2022. The revenue share of this collective category in total revenue is therefore around 10%. It had increased by 7.5% compared to the previous year.[25]

---

23 https://de.statista.com/statistik/daten/studie/163767/umfrage/marktanteil-fuehrender-pc-hersteller-since-1-quarter-2009-worldwide/ [7 March 2022].

24 See Apple's response of 22 September 2021 to the Decision Division's request for information dated 10 August 2021, sheet 2.1, folio 210 of the case file.

25 https://d18rn0p25nwr6d.cloudfront.net/CIK-0000320193/42ede86f-6518-450f-bc88-60211bf39c6d.pdf (p. 24) [3 January 2022].

(1) Apple Watch

(50) Apple sells its smartwatch series under the name Apple Watch. The first Apple Watch was launched in 2015. It is now available in its 7th generation.

(51) The Apple Watch accounted for USD [5-15] billion in the company's global sales volume in the fiscal year 2020.[26]

(52) Apple is the global leader in smartwatches. [15-20]% of the devices sold in 2020 were made by Apple. In terms of revenue, Apple's share is [40-45]%.[27]

(53) In the fiscal year 2020, Apple sold around [<5] million smartwatches in Germany, generating around USD [300-400] million in revenue. Compared to the previous year, sales thus had grown by more than [40-50]% and revenue by around [15-25]%.[28]

(2) AirPods

(54) Apple sells its wireless Bluetooth headphones under the name AirPods. The headphones were introduced in 2016 and have since been launched in a third generation.

(55) Apple also introduced the AirPods Pro in 2019. These are a high-end version of the AirPods that feature active noise cancelling (ANC). The AirPods Max were also introduced to the market at the end of 2020. Unlike the AirPods (Pro), which are designed as "in ear" headphones, the AirPods max are "over ear" products.

(56) The Air Pods accounted for USD [5-15] billion in the company's global sales volume in the fiscal year 2020.[29] Apple is the global market leader in wireless headphones. Apple accounts for approximately 40% of units sold and more than 60% of revenue. [30]

(57) In the fiscal year 2020, Apple sold around [<5] million AirPods in Germany, generating around USD [400-500] million in revenue. Compared to the previous

---

26 See Apple's response of 22 September 2021 to the Decision Division's request for information dated 10 August 2021, sheet 2.3., folio 212 of the case file.

27 For details on the market definition and the market structure, please refer to paras. (393) et seqq.

28 See Apple's response of 22 September 2021 to the Decision Division's request for information dated 10 August 2021, sheet 2.1, folio 210 of the case file.

29 See Apple's response of 22 September 2021 to the Decision Division's request for information dated 10 August 2021, sheet 2.3., folio 212 of the case file.

30 https://www.counterpointresearch.com/tru-wireless-hearables-market-beats-expectations-2019-apple-continue-dominating-2020/ [8 February 2022].

year, sales and revenue had more than [redacted].[31]

(3) Apple TV

(58) Apple TV is a set-top box that connects to a TV or screen and can play various media content that it receives via a local network or the Internet. The first generation of Apple TV was released in March 2007, and the product is now in its 6th generation under the name Apple TV 4K.

(59) Apple TV accounted for around USD 727 million in the company's global sales volume in the fiscal years 2020. In the fiscal year 2020, Apple sold around [150,000-250,000] devices in Germany and generated sales of around EUR [25-35] million. [redacted].[32]

3. Software

(60) In addition to hardware, Apple also develops most of the software for its devices itself. This applies exclusively to the proprietary operating systems pre-installed on mobile devices (see a)). In addition, Apple has developed Siri, a voice recognition software that runs exclusively on Apple's operating systems (b)). Finally, Apple develops a wide range of application software for all of its hardware, i.e., for both mobile devices and the Mac product line (c)).

(61) Apple does not directly monetise most of its software products. They are generally made available to users of hardware products "free of charge" when they purchase them.

a) Operating systems

(62) Like all other computers, Apple's hardware products require an operating system. An operating system (OS) is a set of computer programs that manages the system resources of a computer, such as RAM, hard disks, input and output devices, and makes them available to application programs. The operating system thus forms the interface between the hardware components and the

---

31 See Apple's response of 22 September 2021 to the Decision Division's request for information dated 10 August 2021, sheet 2.1, folio 210 of the case file.

32 See Apple's response of 22 September 2021 to the Decision Division's request for information dated 10 August 2021, sheets 2.1. and 2.3. respectively, folios 210 and 212 of the case file.

application software. Operating systems usually consist of a kernel (German: Kern), which manages the hardware of the computer, as well as special programs, which take over different tasks when starting the computer. These tasks include, among other things, loading device drivers. Operating systems are found in almost all types of computers.[33]

(63) All Apple devices run exclusively on the company's own proprietary operating systems. "Proprietary" refers to manufacturer-specific technologies whose use is restricted by legal provisions such as patents or licensing regulations and/or the unavailability of the source code. Apple's operating systems are specially adapted to the hardware used and are generally not compatible with the hardware of other manufacturers.

(64) Apple's personal computers, the Mac line of laptops and desktops, run on the company's own macOS operating system. Apple's best-selling product, the iPhone, runs on the iOS operating system. iOS is a modification of the macOS operating system developed for PCs and, like macOS, it is based on Darwin, a Unix operating system.[34] The first version, iPhone OS1, was introduced on the occasion of launching the iPhone in 2007; iOS 15 is now available. Unlike Google's Android, which is also licensed to other hardware manufacturers, iOS is only used on Apple hardware and is not licensed out to third parties.

(65) The other Apple devices also run on the company's own proprietary operating systems, which in turn are based on iOS. In September 2019, the variant for the iPad was separated from iOS again as an independent iPadOS. The Apple TV software, which was renamed tvOS with the fourth generation of the Apple TV, and watchOS for the Apple Watch are also based on iOS.

b) Siri

(66) Siri (Speech Interpretation and Recognition Interface) is a software program for the recognition and processing of spoken language, thus fulfilling the functions of an intelligent personal assistant.[35] Siri runs on Apple's iOS, macOS, watchOS, tvOS and iPadOS operating systems.

---

33 https://de.wikipedia.org/wiki/Betriebssystem [12 January 2022].

34 For more details on Unix operating systems see: https://de.wikipedia.org/wiki/Unix [1 March 2022].

35 https://www.apple.com/de/siri/ [1 February 2022] and https://de.wikipedia.org/wiki/Siri_(software) [1 February 2022].

(67) Siri was introduced in 2011 as part of the product presentation of the iPhone 4s and was first available under iOS 5. With iOS 6, Siri was also introduced on iPads of the 3rd generation and newer, the iPhone 5, and also on the iPad mini and the 5th generation of iPod touch. Siri can also be used on the Apple Watch. In addition, Siri controls the HomePod speaker. In 2015, the 4th generation Apple TV set-top box was released, which also supports Siri. With the release of the macOS Sierra operating system, the voice assistant also found its way into the Mac product line.[36]

(68) Siri was used on more than [50-150] million Apple devices worldwide between May and August 2021. More than [5-15] billion entries were made during this period.[37]

c) Other (application) software

(69) Apple develops a wide range of application software for all its hardware, i.e. for both mobile devices and the Mac product line.

(70) On the iPhone/iPad, these include the Safari browser, the Messages app, Maps, Weather, Music, Mail, Calendar, the FaceTime audio and video conferencing program, Contacts and Podcasts, to name just a few. Apple's own apps are always pre-installed when the devices are delivered.

(71) Apple also offers many software products for the Mac. These include the office software components of the iWork package, consisting of the spreadsheet Numbers, the word processor Pages and the presentation program Keynote. Apple also offers software for (semi-) professional photo and video editing (iPhoto, iMovie, Motion, Final Cut Pro).

(72) In the area of file management, the Finder program is just as much a part of Apple's own repertoire as the backup solution Time Machine.

4. Services

(73) Apple offers a number of services. These include the music streaming service Apple Music (see a)), the video streaming service Apple TV+ (b)), the games

---

36 https://de.wikipedia.org/wiki/Siri_(Software) [8 December 2021]

37 See Apple's response of 5 November 2021 to the Decision Division's request for information dated 10 August 2021, sheet 10.1, folio 1501 of the case file.

service Apple Arcade (c)) and the data storage and synchronisation service iCloud (d)).

(74) The Services segment, which includes the App Store[38] in addition to these services, accounted for around USD 78 billion in the fiscal year 2022. After the iPhone, this is the second-strongest category in terms of revenue.

(75) The sector is growing both in absolute and relative terms. Ten years ago, the services segment "only" accounted for around USD 10 billion, which corresponded to a share of around 10%. In the financial year 2020, this share was already around 20%.[39]

a) Apple Music

(76) Apple Music[40] is Apple's music streaming service. Since 30 June 2015, it has been available in 100 countries, including Germany, for iOS, watchOS, macOS, tvOS, and Windows; an Android version followed in autumn 2015. In addition, Apple Music is now also available on individual TV devices, such as LG[41] and Samsung devices[42].

(77) Apple Music offers access to a catalogue of around 90 million songs for a monthly fee of EUR 10.99[43] (single subscription) or EUR 5.99 for students or EUR 16.99 for a family subscription that is handled via family sharing (up to 6 users). Apple Music Voice is also available for EUR 4.99 per month. In this case, Apple Music is controlled exclusively by means of the voice recognition software Siri. The number of available songs has increased by more than [65-75]% since 2017.[44]

(78) By the end of 2021, Apple Music had around [80-90] million users worldwide and

---

38 See paras. (105) et seqq.

39 Tim Cook emphasised back in 2013 that Apple was not a "hardware company": ttps://techcrunch.com/2013/02/12/tim-cook-talks-up-apple-software-and-services-we-are-not-a-hardware-company/ [22 February 2022].

40 https://www.apple.com/de/apple-music/ [22 February 2022]

41 https://www.lg.com/at/ueber-lg/presse-medien/lg-smart-tvs-bieten-jetzt-apple-music [1 April 2022]

42 https://news.samsung.com/de/samsung-bringt-ab-heute-apple-music-auf-seine-smart-tvs [1 April 2022]

43 Apparently, a yearly subscription for EUR 99 is also available, but Apple does not actively advertise it. https://www.giga.de/tipp/apple-music-jahres-abo-buchen-und-sparen/#:~:text=Die%20Kosten%20f%C3%BCr%20das%20Monats,8%2C25%20Euro%20pro%20Mo- nat. [22 March 2022]

44 See Apple's response of 22 September 2021 to the Decision Division's request for information of 10 August 2021, sheet 4.1., folio 220 of the case file.

had generated revenues of around USD [<10] billion.[45] According to studies, Apple Music ranks second among music streaming providers behind Spotify with a market share of 18%, measured by the number of paying subscribers.[46] Global streaming revenue was approximately USD 13.4 billion in 2020, according to the International Federation of the Phonographic Industry.[47] In this respect, Apple's market share in terms of revenue is likely to be significantly higher.

(79) Apple's music streaming service generated revenues of around EUR [100-200] million in Germany in the financial year 2020, with the segment growing by around [<10]% year-on-year. Apple Music had around [<5] million customers in Germany in 2020, around [80-90]% of whom were paying subscribers. Compared to the previous year, the subscription figures had grown by [10-20]% and [10-20]%, respectively.[48]

b) Apple TV+

(80) Apple TV+ is a video streaming service[49] offered by Apple since November 2019. The service offers series and films produced by Apple itself for EUR 6.99 per month. Currently, 85 productions are available. This number has increased [<10]-fold since the market launch.[50]

(81) Apple TV+ is available via the Apple TV app as an app for iOS, tvOS, iPadOS, as well as for the operating systems macOS, Windows, Android, and Chrome OS. In addition, Apple TV+ is available on some smart TVs, on PlayStation, on Xbox, on Amazon Fire TV and Chromecast. In the Apple TV app, Apple also offers the video-on-demand service of the same name (as a successor to video content from the iTunes Store, which has not been developed further), where users can buy or rent films, series and documentaries. Unlike the Apple TV+ streaming service, this service is not charged at a flat monthly rate, but

---

45 Apple's response of 22 January 2022 to the Decision Division's request for information dated 10 August 2021, internal document Financial Update Nov. 21, file 00001543, slides 42 and 66, folios 2237 and 2261 of the case file.

46 https://de.statista.com/statistik/daten/studie/671214/umfrage/marktanteile-der-musikstreaming-an-bidder-worldwide/ [22 February 2022]

47 https://www.ifpi.org/ifpi-issues-annual-global-music-report-2021/ [22 February 2022]

48 See Apple's response of 22 September 2021 to the Decision Division's request for information of 10 August 2021, sheet 4.1., folio 220 of the case file.

49 https://www.apple.com/de/appletv-plus/

50 See Apple's response of 22 September 2021 to the Decision Division's request for information of 10 August 2021, sheet 4.3., folio 222 of the case file.

individually for individual purchases and rentals. The content purchased in this way can then be watched in the Apple TV app. Unlike Apple TV+, which provides access to content produced by Apple, Apple TV essentially offers content from third parties.

(82) At launch, Apple provided customers with Apple TV+ free of charge for one year when they purchased a new iPhone, iPad, iPodtouch, AppleTV or Mac. The promotion was extended twice and ended in July 2021.

(83) In the 2020 fiscal year, Apple generated around USD [700-800] million in global sales with Apple TV+. In the first three quarters of the fiscal year 2021, the figure was already more than USD [<5] billion.[51]

(84) In Germany, the number of Apple TV+ subscribers was around [<5] million in the third quarter of the fiscal year 2021, of which only around [200,000-300,000] were paying customers.[52]

c) Apple Arcade

(85) Apple Arcade[53] is a subscription service for computer games that has been available since September 2019. Currently, over 300 titles are available and new games are added regularly. Since launch, the number of games has increased by more than 50%. The service costs EUR 4.99 per month, with an initial free trial month.

(86) The service is only available for iOS, iPadOS, macOS and tvOS. Scores are synced to all devices linked via iCloud (see below). The subscription can be shared with up to six family members using Apple Family Sharing.

(87) In the financial year 2020, Apple generated around USD [60-70] million with Arcade. In the first three quarters of the financial year 2021, the figure was already just under USD [100-200] million.[54]

(88) In Germany, the number of Apple Arcade subscribers was around [100,000-

---

51 See Apple's response of 22 September 2021 to the Decision Division's request for information dated 10 August 2021, sheet 2.3., folio 212 of the case file.

52 See Apple's response of 22 September 2021 to the Decision Division's request for information dated 10 August 2021, sheet 4.3., folio 222 of the case file.

53 https://www.apple.com/de/apple-arcade/ [22 February 2022].

54 See Apple's response of 22 September 2021 to the Decision Division's request for information dated 10 August 2021 sheet 2.3., folio 212 of the case file.

200,000] in the third quarter of the fiscal year 2021, of which only around [50,000-60,000] were paying customers. However, compared to the previous year's reporting date in 2020, the number of subscribers had more than [redacted]. [55]

d) iCloud

(89) iCloud is an online service that can be used to store and synchronise data.[56] The service was launched in 2011 and replaced Apple's previous online service MobileMe.

(90) iCloud enables the synchronisation of data on a maximum of ten Apple devices and Microsoft Windows computers. This includes data from Apple's own programs/apps Mail, Contacts, Calendar, and Photos, as well as Documents and Settings. For iOS devices, iCloud also serves as a backup.

(91) Every user has 5 GB of storage space available in iCloud for free. Users' own photos in Photostream as well as content purchased from Apple such as music, apps or books are not counted towards this storage space. Additional storage space can be purchased for a fee. 50 GB costs EUR 0.99 per month, 200 GB costs EUR 2.99, and 2 TB is billed at EUR 9.99 per month.

(92) Apple generated around USD [<5] billion in revenue from iCloud in the fiscal year 2021; compared with the previous year, this corresponds to a revenue growth of around [35-45]%.[57]

(93) In Germany, iCloud was used by around [40-50] million customers in July 2021, with around [<10] million customers using the paid upgrade versions.[58]

(94) With iCloud Apple's own applications Photos, Mail, Contacts, Calendar, Reminders, Notes, Messages, Safari, Home, Health, Wallet, Game Center, Siri, Keychain, and others, can be synchronised.

e) Apple One

(95) Apple One is a bundled offering available since October 2020 and bundles the

---

55 See Apple's response of 22 September 2021 to the Decision Division's request for information dated 10 August 2021, sheet 4.2., folio 221 of the case file.

56 On this and the following see: https://www.apple.com/de/icloud/ [8 January 2022].

57 See Apple's response of 22 September 2021 to the Decision Division's request for information dated 10 August 2021, sheet 2.3., folio 212 of the case file.

58 See Apple's response of 2 October 2021 to the Division of Decision's request for information dated 10 August 2021, sheet 4.4., folio 400 of the case file.

otherwise separate services Apple Music, Apple TV+, Apple Arcade and iCloud+ in a subscription for a total price that is lower than the sum of prices for the four individual services. For individuals, this is EUR 14.95 per month, for families EUR 19.95.

(96) Since November 2021, Apple Fitness+ can also be added as part of the "Premium" membership. The monthly price then is EUR 28.95.

(97) At the end of July 2021, there were around [<10] million Apple One memberships worldwide, almost [100,000-200,000] of them in Germany. Since the beginning of the year, the number of memberships has increased by [40-50]%.[59]

f) Apple Books

(98) Apple Books allows the user to purchase and download electronic books. Electronic books can be read and, depending on the file format, bookmarked, marked up and annotated. Via iCloud, the currently opened pages, annotations and the arrangement of the books in the digital bookshelf are synchronised between several end devices. Books can be purchased from the iBooks Store with an iTunes account or added from an email or, on macOS only, from the file system.

(99) Technically, Apple Books/iBooks is the management software for electronic books (e-books) for iOS, iPadOS and macOS. Apple introduced iBooks to the public on 27 January 2010 as part of the presentation of the iPad. iBooks supports PDF, EPUB and the company's own iBooks file format (file name extension .ibooks).

(100) At the end of September 2021, around 5.8 million titles (books and audiobooks) were available in the Book Store in Germany. In the past fiscal year 2020, Apple customers in Germany purchased a total of just under [<10] million titles[60], which resulted in net revenue for Apple of around USD [<10] million. In 2020 the revenue was at around USD [100-200] million worldwide, up by more than [5-10]% compared with the previous year.[61]

---

59 See Apple's response of 22 September 2021 to the Decision Division's request for information dated 10 August 2021, sheet 4.5., folio 224 of the case file.

60 See Apple's response of 22 September 2021 to the Decision Division's request for information dated 10 August 2021, sheet 4.6., folio 225 of the case file.

61 See Apple's response of 22 September 2021 to the Decision Division's request for information dated 10 August 2021, sheet 2.3., folio 212 of the case file.

g) Apple Pay and Apple Wallet

(101) Apple Pay is Apple's payment system exclusively for the company's own, predominantly mobile devices. It was launched in October 2014 in the United States for the iPhone 6 and 6 Plus. The payment system works via Near Field Communication (NFC) in combination with the "digital wallet" Apple Wallet. Payments are also possible via the Apple Watch. The system can also be used to make payments online in designated apps or in the Safari browser (iOS, iPadOS and macOS).[62]

(102) Starting in the United Kingdom in July 2015, the service was gradually made available in other countries, and in Germany in December 2018.

(103) In Germany, around [<10] million customers were using Apple Pay at the end of July 2021. In the first three quarters of the fiscal year 2021 alone, these customers processed around [100-200] million offline and around]10-20] million online transactions with an equivalent value of around USD [<10] billion and around USD [800-900] million, respectively, using Apple Pay. Meanwhile, more than [1,000-2,000] credit institutions in Germany are connected to Apple Pay through the cards they issue.[63]

(104) Apple's revenue from Apple Pay was around USD [200-300] million worldwide in the first three quarters of 2021, around USD [5-15] million of which was in Germany.[64]

5. Digital software distribution – the App Store

(105) The App Store (App as in "application software" and Store as in "shop") is Apple's digital distribution platform for application software. Launched in 2008, the platform offers mobile apps for iOS devices and software for tvOS and watchOS.

(106) At the time of the iPhone's launch in 2007, only a handful of Apple's own apps were pre-installed on the smartphone. When the App Store was launched shortly thereafter in July 2008, around 500 apps were available. In September 2008, just

---

62 https://de.wikipedia.org/wiki/Apple_Pay [22 January 2023]

63 See Apple's response of 22 September 2021 to the Decision Division's request for information dated 10 August 2021, sheet 4.7., folio 225 of the case file.

64 See Apple's response of 22 September 2021 to the Decision Division's request for information dated 10 August 2021, sheet 4.7., folio 226 of the case file.

two months after the launch of the App Store, Apple announced that 3,000 applications were already available, which had been downloaded a total of around 100 million times.[65]

(107) This dynamic growth continued. In the fiscal year 2020, around 1.7 million apps were available in Apple's App Store, which were downloaded around [30-40] billion times in 2020; compared to the previous year, this represents a growth rate of almost [15-25]%.[66] The App Store is available in 175 countries and over 40 languages, and supports more than 180 local payment methods and 45 currencies.[67]

(108) Within just a few years, an "app economy" of considerable economic significance has developed around the App Store. According to a report commissioned by Apple, the apps and services available in the App Store generated total revenues of more than USD 640 billion in 2020.[68] Compared to the previous year, this represents an increase of 24%. The majority of this (around USD 511 billion) was accounted for by physical goods and services sold via the App Store. Digital goods and services account for around USD 86 billion, while advertising revenues account for around USD 46 billion.[69]

(109) For Germany, the report estimates that the total revenues generated by the App Store amount to around EUR 9.8 billion, of which EUR 1.3 billion was generated by digital products and services, EUR 8.2 billion by physical products and services, and around EUR 350 million by advertising revenues.

(110) In order to be listed in the App Store, app publishers sign the so-called License

---

65 https://www.apple.com/de/newsroom/2008/09/09AppStore-Downloads-Top-100-Million-Worldwide/ [7 January 2022]

66 See Apple's response of 22 September 2021 to the Decision Division's request for information dated 10 August 2021, sheet 3.3., folio 217 of the case file.

67 https://www.apple.com/de/newsroom/2020/11/apple-announces-app-store-small-business-program/

68 https://www.apple.com/newsroom/pdfs/apple-app-store-study-2020.pdf [1 April 2022]

69 The study is based on a broad understanding of Apple's and third parties' revenues associated with the App Store. It includes not only the products and services monetised directly via the App Store, such as the sale of a gaming app, but also estimates the economic magnitude of the goods and services monetised outside the respective app, e.g. a grocery purchase made online via the app of a grocery retailer or the ad-financed provision of a social media app. Apple does not charge a commission in either of these situations.

Agreement[70] and pay an annual "basic fee" of USD 99[71] in order to participate in the Apple Developer Program. The fee can be waived under certain circumstances for non-profit organisations, educational institutions and public authorities. This gives them access to the iOS Development Software Tool Kit (SDK)[72], which can be used to create and upload iOS-compatible native apps[73].

(111) In addition, app publishers must agree to adhere to the "App Store Guidelines" and to exclusively use Apple's "In-App Purchase" (IAP) program for billing purposes when offering digital goods or services or goods or services consumed within the app.[74]

(112) Apple retains a 30% commission on every purchase made through IAP. This does not apply to sales in connection with subscriptions that run for longer than 12 months, where the commission is 15%.[75] Since 1 January 2021, Apple's "App Store Small Business Program" has also been in effect, which reduces the commission for all app developers whose revenue in the previous calendar year was less than USD 1 million to 15%.[76]

(113) Apple generated about USD [15-25] billion in net proceeds from the App Store in the fiscal year 2021, up about [15-25]% as compared to the previous year.

6. Apple ID and Family Sharing

(114) The Apple ID is an authentication method used by Apple for devices, such as the

---

70 https://developer.apple.com/support/downloads/terms/apple-developer-program/Apple-Developer-Program-License-Agreement-20210607-English.pdf [1 June 2022]

71 For the Apple Developer Enterprise Program the cost is USD 299.

72 https://developer.apple.com/develop/ [1 June 2022]

73 Native apps are applications on mobile devices that have been designed and developed specifically for the operating system of the respective device. They are usually distributed via the app stores which are linked to the operating system as free and/or paid applications, see https://de.ryte.com/wiki/Native_App [1 April 2022].

74 https://developer.apple.com/app-store/review/guidelines/#in-app-purchase, Section 3.1.1: "If you want to unlock features or functionality within your app, (by way of example: subscriptions, in-game currencies, game levels, access to premium content, or unlocking a full version), you must use in-app purchase. Apps may not use their own mechanisms to unlock content or functionality, such as license keys, augmented reality markers, QR codes, etc. Apps and their metadata may not include buttons, external links, or other calls to action that direct customers to purchasing mechanisms other than in-app purchase."

75 Fee-based Apps Agreement (Schedule 2 of the Apple Developer Program License Agreement), Section 3.4 a) https://developer.apple.com/support/downloads/terms/schedules/Schedule-2-and-3-20220225-English.pdf [1 June 2022]

76 https://de.wikipedia.org/wiki/IPhone#:~:text=Tilllong%20were%20overall%2029%20shifted-dene,the%20iPhone%2013%20Pro%20bzw [8 February 2022]

iPhone, iPad and iMac, as well as for various services, such as the use of software, as well as the linking of these areas and their billing. Apple IDs are used to store the user's personal information and settings. When an Apple ID is used to sign in to an Apple device, the device automatically uses the settings associated with the Apple ID. Device or service login is not possible without an Apple ID.

(115) An Apple ID can be created free of charge via the Apple website or via any Apple mobile device. An Apple ID represents a user account and is protected by a password set by the user. During setup, users must provide their full name, date of birth, an email address, and phone number. Apple recommends that users use the same Apple ID for all Apple services.[77]

(116) In Germany, around [20-30] million Apple IDs are currently active, and [redacted] the ID was created more than 5 years ago.[78]

(117) The technical linking of Apple IDs also enables so-called family sharing within the Apple ecosystem. With family sharing, up to six family members can share music, films, TV shows, apps, books, an iCloud storage plan, subscriptions, and more at no additional cost.[79] In Germany, around [<5] million Apple customers were using family sharing for a total of almost [5-15] million additional people at the end of July 2021.[80]

II. Course of the proceedings

(118) In a letter initiating the proceedings dated 21 June 2021[81], Apple's authorised representatives were informed, after prior announcement by telephone,[82] that the Decision Division had decided to initiate proceedings under Section 19a (1) GWB in order to determine whether the company was of paramount significance for completion across markets.[83]

---

77 https://support.apple.com/de-de/HT204316 [1 June 2022]

78 See Apple's response of 5 November 2021 to the Decision Division's request for information dated 10 August 2021, sheet 5, folio 1489 of the case file.

79 https://www.apple.com/de/family-sharing/ [15 December 2021]

80 See Apple's response of 5 November 2021 to the Decision Division's request for information dated 10 August, sheet 5, folio 1,489 of the case file.

81 Folios 18 et seqq. of the case file.

82 Folio 3 of the case file.

83 https://www.bundeskartellamt.de/SharedDocs/Meldung/DE/Pressemittei-

(119) By means of its request for information of 10 August 2021, the Decision Division collected structural data from Apple for the corporation's various activities. In addition, information was obtained on their interconnection and, in particular, on the topics of resources available, vertical and conglomerate integration and data access.[84] The preparation of the request for information was preceded by intensive consultation with the authorised representatives and with the employees responsible at Apple.[85] The preliminary talks served to prepare the request for information based on the knowledge about the data structure available in the company.

(120) Apple answered the request for information in several partial responses. After a timely response to a first part of the questions on 23 September 2021[86], the Decision Division granted several extensions to the deadline, most recently until mid-December 2021, so that Apple was ultimately granted more than four months to respond to the request for information.

(121) Nevertheless, Apple did not answer all of the questions contained in the request for information. In several meetings, the authorised representatives and the employees dealing with the request for information at Apple pointed out data availability and calculation capacity problems regarding some parts of the questions, with regard to which, according to the company, there was no sign of an end at the time of the preliminary discussions regarding the request for information.[87] With regard to individual questions, the Decision Division then decided that these questions could be left unanswered and agreed to an adjustment of the questions. With additional written submissions following the extensions to the deadline requested and granted (in part) on 2 October 2021[88],

---

lungs/2021/21_06_2021_Apple.html [8 November 2021]

84 See request for information dated 10 August 2021, folios 63 et seqq. of the case file.

85 See emails dated 15 June 2021 (folio 5 of the case file) and 7 July 2021 (folios 40 et seqq. of the case file), minutes of the conversation dated 24 June 2021 (folios 31 et seq. of the case file).

86 Folios 207 et seqq. of the case file.

87 Minutes of the meeting of 30 September 2021 (folios 346 et seqq. of the case file) as well as the corresponding explanations and additional information in the mails of 24 September 2021 (folio 342 of the case file), 4 October 2021 (folio 1,353 of the case file), 12 October 2021 (folio 1,374 of the case file), 20 October 2021 (folio 1,443 of the case file).

88 Folios 351 et seqq. of the case file.

14 October 2021[89], 5 November 2021[90], 15 December 2021[91] and 18 January 2022[92], Apple complied with its obligation to respond to the official request for information.

(122) Some passages of the internal documents submitted by Apple were blackened. The Decision Division had these passages read out to it on the phone and ultimately decided not to insist on their provision in writing due to lack of relevance.[93]

(123) On the basis of a complete list of app publishers represented in the App Store[94] provided by Apple in advance on 25 August 2021 and based on the request for information of 21 September 2021, the Decision Division surveyed a total of 184 app publishers based in Germany and chosen by random sampling on the importance of the Apple App Store and other app stores for their business, their economic alternative options, and Apple's possible power to set rules.[95]

(124) At the time of sampling, Apple's App Store contained around [<5] million apps that could be accessed from Germany and were distributed by around [500,000-600,000] app publishers. Around [80-90]% of app publishers only offer free apps (i.e., mostly ad-financed), while around [10-20]% offer user-funded apps.

(125) In view of these orders of magnitude, a full survey would have involved a disproportionately high effort. The Decision Division therefore conducted the survey on the basis of a representative and unbiased sample with regard to different business models and company sizes.

(126) First, app publishers with particularly few downloads were excluded from the population from which the sample was drawn. This is because revenue from paid, user-funded apps is just as unevenly distributed as downloads from apps funded by advertising. Only [10-20]% of app publishers with user-funded offerings account for [90-100]% of revenues. The distribution of ad-financed apps is similarly

89 Folios 1,378 et seqq. of the case file.
90 Folios 1,454 et seqq. of the case file.
91 Folios 1,589 et seqq. of the case file.
92 Later provision of internal board documents due to readability and completeness. Folios 1,640 et seqq. of the case file.
93 Folios 1,585 et seqq. of the case file.
94 Folios 140 et seqq. of the case file.
95 See request for information of 21 September 2021sent to App publishers, folios 157 et seqq. of the case file.

asymmetrical: [10-20]% of app publishers with ad-financed offerings account for [90-100]% of downloads.

(127) As a first step, the Decision Division therefore established “de minimis” thresholds for both advertising-funded and user-funded apps, which resulted in the exclusion of 88% and 86.9% of app publishers, respectively. The degree to which the sample covered the population was still 99.5% in terms of revenue for user-funded apps and 97% of downloads for non-user-funded apps.

(128) The associated thresholds were USD 73,887 for user-funded apps and 13,567 downloads for non-user-funded apps, in each case aggregated over a period of 31 months. In other words, app publishers were sorted out who were able to attract less than an average of USD 28,608 per year (including commissions of 15% and 30%, respectively, which had to be paid to Apple) or 5,252 downloads. In these cases, the business activity is usually so small that it falls below the threshold of the small business regulation under the Turnover Tax Act (Section 19 UStG).

(129) The two remaining populations of approx. 12,000 publishers (user-funded apps) and 63,000 publishers (ad-funded apps) were then further divided by the Decision Division into the subgroups “large” and “small” turnovers as well as “many” and “few” downloads. From each of these four groups, 60 app publishers were drawn at random. Of these, the first 50 companies in the random order were surveyed.[96]

(130) For reasons of procedural economy, the Decision Division limited its survey to app publishers based in Germany. There are no discernible systematic reasons why structural distortions would have had to be accepted as a result of this restriction. The response rate with regard to the requests for information was 97%. For details on the sampling procedure, please refer to the evaluation note on sampling.[97]

(131) In its comments of 5 January 2023, Apple criticises the validity of the app publisher survey. In the company’s view, the sample consisted of only 0.05% of all app publishers, the sampling was arbitrary, had several technical deficiencies

---

96 A further 10 companies were drawn as potential “successors” in the event that the response rate in one group turned out to be significantly limited. In the “many downloads” group, there were only 36 app publishers, so that a full survey of all publishers with a declared address in Germany was conducted in this group. As a result, 186 companies were drawn (3 times 50 + 36).

97 See note “Documentation of sampling for survey of app publishers in the Apple App Store.” (investigation file app publishers).

and was therefore neither robust nor representative.[98]

(132) To the extent that Apple or Apple's private experts claim that the responses of app publishers based in Germany are of no informative value with regard to foreign app publishers because statistical significance tests for sample comparisons indicate significant differences[99], this claim must be rejected on the grounds of fundamental methodological errors.

(133) In a comparison between all app publishers with headquarters in Germany who are active in Apple's App Store and all foreign app publishers, the Decision Division determined that the two groups do not differ significantly from each other with regard to the business characteristics that are (at least potentially) relevant for the response behaviour, such as size and app category. The related general transferability of the survey results to foreign app publishers therefore results from the comparison of two populations. These populations are not subject to any statistical uncertainty, as is the case with a sample. Therefore, the use of statistical significance tests for samples that compare two groups of app publishers under the assumption of statistical uncertainty is methodologically unsuitable.

(134) Apple's private experts further argue that the survey contains too many small app publishers[100] because large foreign app publishers were not surveyed. On the other hand, they hold that it contains too few small app publishers by excluding companies with trivial activities.[101] Finally, the survey in their view weights large/revenue-generating apps too heavily through group surveys while they are also weighted too low through unused size-based weighting.[102] These admissions are inherently contradictory.

(135) In detail: The Decision Division surveyed all those app publishers who could be

---

98 See Apple's comments on the Decision Division's draft decision of 5 January (para. 210, 3rd bullet point, folio 3,272 of the case file with reference to the expert opinion of E.CA Economics "Market share and survey methodology" (pp. 16-24) of 23 December 2022, folios 3,159-3,167 of the case file.

99 E.CA Economics "Market share and survey methodology" (p. 19) dated 23 December 2022, folio 3,162 of the case file.

100 E.CA Economics "Market share and survey methodology" (p. 18) dated 23 December 2022, folio. 3,161 of the case file.

101 E.CA Economics "Market share and survey methodology" (p. 22) dated 23 December 2022, folio 3,163 of the case file.

102 E.CA Economics "Market share and survey methodology" (p. 24) dated 23 December 2022, folio 3,165 of the case file.

expected to provide substantiated statements on economic and competitive issues based on at least an appreciable activity in the App Store. There are no indications, either on the basis of the actual response behaviour, which is largely the same across the groups, or on the basis of other observations, that the sample design influences the findings drawn from the survey to the detriment of the validity of the information.

(136) Apple and Apple's private experts also criticise individual formulations in the legal justification in the request for information sent to the app publishers, as well as the failure to take into account "neutral" answer options not leaning towards a certain direction in the questionnaire.[103] This criticism is ultimately not sustainable either. The Decision Division is legally obligated to justify the request for information. The criticised passages are an unbiased statement of facts. Among other things, the Decision Division had stated in the request for information to the app publishers that "Apple monopolises the distribution of software on its devices". Apple is displeased by the wording and is of the opinion that this already informed the addressees of the Bundeskartellamt's previously established opinion. This criticism is surprising, because it is a description of the state of affairs, not a view, as Apple suggests. Apple itself mentions in its statement that "[...] the App Store is and always was the only distribution channel for native iOS apps."[104]

(137) In addition, Apple's private experts accuse the Decision Division of generally having structured the multi-level response scales in the questionnaires without the so-called "middle answer" and thus of having "forced" an answer in one direction or the other. This is true to the extent that the chosen approach is intended to counteract the so-called "tendency towards the middle". The tendency towards the middle is a phenomenon recognised in the empirical social sciences. This systematic measurement error is countered by an even number of response options. However, contrary to what Apple suggests, this does not lead to a systematic distortion of the answers, as the app publishers are equally able

---

103 E.CA Economics "Market share and survey methodology" (pp. 20 et seqq.) dated 23 December 2022, folios 3,163 et seqq. of the case file.

104 Apple's comments on the Decision Division's draft decision of 5 January (para. 122, folio 3,235 of the case file.

to answer in both symmetrically designed answer directions.

(138) In its request for information of 9 November 2021, the Decision Division also surveyed a total of 27 companies that manufacture and/or distribute smartphones, tablets and smartwatches.[105] To the knowledge of the Decision Division, these are all companies that are active in these areas nationwide. The companies were essentially asked about their sales and revenue figures, product market definition and the role of the two mobile operating systems iOS and Android. The response rate was 100%.

(139) Apple or Apple's private experts also criticise this survey, pointing out that hardware manufacturers were deliberately excluded from the survey and that some questions were asked in a biased manner.[106] These accusations are also unfounded.

(140) The Decision Division surveyed all major hardware manufacturers operating in Germany and Europe and therefore achieves market coverage rates of between 95% and close to 100% for these regions. Any (minor) gaps in coverage were taken into account by means of safety margins. The companies mentioned by Apple as an example, which the Decision Division could not question by way of a request for information due to the companies not having their registered seat in Germany, are limited to those that have since exited the market or – as far as can be ascertained from public sources – have sold between 1,000 and 100,000 units per year. In view of the fact that more than 1 billion smartphones are sold worldwide, these are not significant gaps in coverage that cannot be addressed with the described safety margins. With regard to the criticism of the questioning technique used by the Decision Division, reference is made to paras. (136) seq. to avoid repetition.

(141) In its request for information of 16 November 2021, the Decision Division surveyed the five leading mobile telecommunications companies operating in Germany.[107]These companies account for around one-third of smartphone sales in Germany and cover 99% of the German mobile telecommunications market in

---

105 See request for information dated 9 November 2021, folios 1,511 et seqq. of the case file.

106 See Apple's comments on the Decision Division's draft decision of 5 January with reference to the expert opinion by E.CA Economics "Market share and survey methodology" of 23 December 2022 (pp. 26-28), folios 3,169 et seqq.

107 See request for information dated 16 November 2021 addressed to Deutsche Telekom, Vodafone, Telefónica, 1&1 Versatel and the freenet group, folios 1,559 et seqq. of the case file.

terms of revenue. The companies were mainly asked about their sales and revenue figures for smartphones and tablets, the competitive pressure among smartphone manufacturers, the barriers to switching, and the importance of Apple and the other smartphone manufacturers for the mobile telecommunications business in Germany. The response rate was 100%.

(142) Apple and Apple's private experts also criticise the survey of the mobile telecommunications companies, citing biased questioning techniques.[108] With regard to the criticism of the Decision Division's questioning techniques, reference is made to paras. (136) seq. to avoid repetition.

(143) By mail dated 31 October 2022, the Decision Division sent Apple the draft decision.[109] On 2 November 2022, Apple was granted full access via the BSCW server to the entire case file as well as to the market research data mentioned in the decision.[110] In addition, Apple was granted access to the investigation results drawn from the surveys of the app publishers, the hardware manufacturers and the mobile telecommunications companies. For this purpose, the respective evaluation reports and the corresponding documentation reports on sampling, data analysis, plausibility checks and individual calculation steps were made available. With regard to the qualitative responses of the companies surveyed, the results were presented in anonymous and randomised form in separate evaluation notes.

(144) Apple's representatives are of the opinion that this form of access to the files is not sufficient for their client to be able to effectively exercise its rights of defence. In their view, their client is prevented from making sufficient use of its constitutionally guaranteed right to be heard. Therefore, in a letter dated 21 November 2022, they requested further access to the investigation files, to the data on which the Decision Division's evaluations were based, to the consulted file of the "Mobile Virtual Network Operator" and to other files.[111] The Decision Division rejected this request on 1 December 2022, referring to the established,

---

108 See Apple's statement on the Decision Division's draft decision of 5 January with reference to the expert opinion by E.CA Economics "Market share and survey methodology" of 23 December 2022 (pp. 28-30), folios 3,171 et seqq. of the case file.

109 See email dated 31 October 2022, folio 2,295 of the case file.

110 See email dated 2 November 2022, folios 2,298 et seqq. of the case file.

111 See Apple's letter of 21 November 2022, folios 2,981 et seqq. of the case file.

court-approved official practice on the disclosure of information regarding investigations and investigation results.[112]

(145) Upon sending the draft resolution and subsequently granting access to the files, Apple was given the opportunity to comment by 5 December 2022; this deadline was extended to 23 December 2022, at Apple's request.

(146) In its letter dated 23 December 2022[113], and the German translation of this letter dated 5 January 2023, Apple commented on all points under review and on the concept of review of Section 19a (1) GWB in general. The Decision Division additionally allowed the company to be heard orally in a meeting at the Bundeskartellamt on 12 January 2023.[114]

(147) Following this, an exchange took place between Apple and the Decision Division concerning the possibilities of terminating the proceedings, including Apple's waiver of legal remedies. Subsequently, the Decision Division and Apple explored the possibilities of a corresponding settlement in several steps. Ultimately, however, no agreement was reached.[115]

(148) Apple also criticises in general and overall terms that the Decision Division failed to conduct sufficient investigations. This criticism refers, on the one hand, to what Apple considers to be an insufficient number of questionnaires sent to Apple, the hardware manufacturers, the mobile telecommunications companies, and the app publishers as the Decision Division had sent out only one questionnaire each. In addition, Apple states that it had difficulties responding to the Bundeskartellamt's data requests because Apple does not collect and store the requested data in the normal course of business. The company further criticised that there had been no state of play meeting prior to the Decision Division's draft decision.[116]

---

112 See letter of the Decision Division dated 1 December 2022, folios 2,986 et seqq. of the case file.

113 See Apple's statement on the Decision Division's draft decision of 23 December 2022 in English (folios 2,999 et seqq. of the case file) and of 5 January 2023 in German (folios 3,192 et seqq. of the case file).

114 See notes on the conversation dated 13 January 2023, folios 3,282 et seqq. of the case file.

115 See Apple's statement of 20 January 2023, folios 3,285 et seqq. of the case file, the Decision Division's reply of 16 February 2023, folios 3,362 et seqq. of the case file, Apple's statement of 3 March 2023, folios 3,430 et seqq. of the case file as well as the telephone notes of 27 February 2023 (folios 3,423 et seq. of the case file) and 28 February 2023 (folio 3,426 of the case file) as well as of 6 March and 9 March 2023 (folios 3,606 and 3,608 of the case file).

116 See Apple's comments on the Decision Division's draft decision of 5 January 2023, pp. 79-82 (folios 3,270-3,273 of the case file).

(149) The circumstances criticised in detail do not support the allegation of inadequate investigations. The fact that Apple does not collect and store certain data in the normal course of business is irrelevant to the question of the quality and adequacy of the investigations conducted. Moreover, there is no discernible connection between the sheer number of questionnaires and the quality or adequacy of the investigations. Apple's line of argument is simply not comprehensible to the Decision Division.

(150) The reference to the chronological sequence of the draft decision and the state-of-play meeting also remains unclear with regard to its intended legal classification. In any case, the right to be heard under Section 56 (1) GWB was not restricted. The right to be heard is intended to give the parties concerned the opportunity to comment on the course, subject matter and outcome of administrative proceedings. In the present case, the parties were not only given the opportunity to comment in writing, but the period for commenting was even extended to more than 7 weeks at Apple's request. In addition, the Decision Division gave Apple the opportunity to be heard orally in the knowledge of the results of the investigation and its preliminary assessment under competition law. The opportunity to comment on the matter granted by the Decision Division thus goes far beyond the legal requirements of Section 56 (1) GWB.

(151) However, Apple's comment that the Decision Division did not conduct a consumer survey is correct. In general, a whole series of further investigations would certainly have been desirable, as in any antitrust proceedings, but must always be weighed against the interests of procedural economy. Such a survey is extremely time-consuming and would hardly have been compatible with the goal of efficiently and expeditiously conducting the proceedings. Moreover, it is the party itself that criticises the length of the proceedings, which it considers to be excessive at 18 months, even without such a complex consumer survey.[117] In view of the investigations carried out, their informative value for determining a paramount significance for competition across markets within the meaning of Section 19a (1) GWB and the market knowledge of the panel members rendering the decision, who belong to the circle of the public addressed here, a consumer

[117] Apple's comments on the Decision Division's draft decision of 5 January 2023, para. 204 (folio 3,270 of the case file).

survey was also not necessary in the present case. The necessity to carry out a consumer survey for the application of Section 19a (1) GWB as claimed by Apple is also not suggested by a cross-comparison with other proceedings conducted by the Bundeskartellamt. No consumer survey was carried out in any of the proceedings under Section 19a (1) GWB.

C. Legal assessment

(152) Apple, which is active to a considerable extent on markets within the meaning of Section 18 (3a) GWB, including all its affiliated companies pursuant to Section 36 (2) GWB, is of paramount significance for competition across markets (Section 19a (1) sentence 1 GWB).

I. Principles of Section 19a (1) GWB

(153) Section 19a GWB was introduced together with other provisions on abuse control with the so-called "GWB Digitalisation Act" (10th Amendment to the GWB)[118] and essentially aims to capture special positions of power and their possible anti-competitive effects on and threats to competition in the area of "digital ecosystems" in which individual companies may have a so-called gatekeeper function.[119]

(154) Large digital companies which offer a wide variety of products and services can hold a position of economic power across markets that is difficult for competitors to challenge and gives rise to a scope of action for the relevant company to further consolidate, expand or otherwise exploit this position to its own advantage without sufficient control by competition. Such positions of power and their expansion are enhanced by the dynamics of the digital and Internet economy, which especially in markets within the meaning of Section 18 (3a) GWB leads to accelerated and increased concentration and produces conglomerate or vertically integrated business structures[120] in which cross-market systems of products and services, which often are scalable and – through the bundling of the data collected, for example – connected in various ways, can be operated and expanded.[121]

---

118 "Act Amending the Competition Act for a Focused, Pro-active and Digital Competition Law 4.0 and Other Provisions" (GWB Digitalisation Act), Federal Law Gazette 2021, Part 1 no. 1, 18 January 2021.

119 See explanatory memorandum to the 10th amendment to the GWB, Bundestag printed paper 19/23492, p. 73.

120 See explanatory memorandum to the 10th amendment to the GWB, Bundestag printed paper 19/23492, p. 73.

121 See explanatory memorandum to the 10th amendment to the GWB, Bundestag printed paper 19/23492, p. 73.

(155) By basing the rule on significance “across markets”, the provision also takes into account the fact that the tendency to form ecosystems may lead to blurred market boundaries in the digital economy and that markets are constantly expanded through expansion strategies.[122] Competition from alternative providers in relation to already existing positions of power can often take place – at least initially – only at the fringes of an ecosystem, since competitors offer, for example, individual services which cover only a subarea of the portfolio of offerings or which, for their part, can be offered only as part of the ecosystem – on its technical platform, for example. Ecosystem operators are regularly well equipped to fend off competition from other providers (e.g. in the form of innovation competition in subareas) and the expansion of competitors’ activities. As far as expansion into a new service and into new markets is concerned, this is also easy for such companies, e.g., because they organise the markets, their access conditions and thus the competitive opportunities themselves within their ecosystem and/or high switching costs for users may exist due to the breadth and characteristics of the ecosystem. In addition, large digital corporations regularly have a particularly large amount of resources that can be deployed in a variety of different areas, such as a large user base, access to data and data sources, know-how, technology, their own computing capacities or financial resources (“sharable inputs”).

(156) Whether a company in the digital economy is in a position of economic power across markets in this sense is determined by an overall assessment of all circumstances relevant in the individual case.[123] Section 19a (1) GWB lists several factors that can contribute to a company’s competitive potential for the purpose of characterising paramount significance across markets. According to the explanatory memorandum, these factors are neither cumulative nor exhaustive, nor is any weighting intended by their order.[124] The individual factors to determine the status as norm addressee are to be interpreted taking into account the objective of Section 19a GWB, which is aimed at capturing the scope of action resulting from a company’s *significance across markets*. Adopting a schematic

---

122 See explanatory memorandum to the 10th amendment to the GWB, Bundestag printed paper 19/23492, pp. 73 et seq.

123 See explanatory memorandum to the 10th amendment to the GWB, Bundestag printed paper 19/23492, p. 75.

124 See explanatory memorandum to the 10th amendment to the GWB, Bundestag printed paper 19/23492, pp. 74 et seq.

interpretation of identical market-related factors to establish the existence of a dominant position, e.g. pursuant to Section 18 (3), (3a) or (3b) GWB, therefore cannot be used. However, the principles developed for market-related positions of power can be applied accordingly for the purposes of Section 19a GWB.

(157) Apple, on the other hand, believes that the conceptual purpose of Section 19a GWB is (exclusively) aimed at protecting the competitive process in (multi-sided) "tipping-inclined" markets[125], that the focus of the application of Section 19a GWB should not be on hardware markets[126] and that the declaratory decision must already refer to individual, precisely defined markets.[127]

(158) This cannot be accepted. The legislators describe the protective purpose of the provision as having the goal of "[...] limiting economic power, keeping markets open and protecting opportunities arising in the competitive process."[128] This means that the multidimensional objective associated with the law is much broader than Apple suggests and does not only consist of protecting potentially "tipping-inclined" markets. In this respect, Apple deliberately narrows the legislators' set of objectives.

(159) This also applies to the argument that Apple is not covered by the provision due to its predominant activity as a hardware provider. The Decision Division does not fail to recognise that hardware products, above all the iPhone, are of great importance to Apple's product portfolio (see paras. (36) et seqq.). Nevertheless, Apple's argument that these products are simple "physical goods" which, in the context of Section 19a (1) GWB are "in principle irrelevant" must be rejected. On the one hand, Apple itself assumes that its hardware products are inseparably linked to its proprietary operating system and, where applicable, also to the App Store. In the Decision Division's opinion, both are multi-sided digital platform products (see in detail paras. (178) seqq.).

(160) On the other hand, Apple operates a large integrated digital ecosystem – based

---

125 See Apple's comments on the Decision Division's draft decision of 5 January 2023, paras. 15 et seqq., folios 3,202 et seqq. of the case file.

126 See Apple's comments on the Decision Division's draft decision of 5 January 2023, para. 14, folio 3,201 of the case file.

127 See Apple's comments on the Decision Division's draft decision of 5 January 2023, paras. 22 et seq., folios 3,205 et seq. of the case file.

128 See explanatory memorandum to the 10th amendment to the GWB, Bundestag printed paper 19/23492, p. 75.

on its central hardware products via the vertically integrated levels of its own proprietary iOS operating systems, the Apple App Store and numerous other products and services. Within this system, the company occupies key positions across markets for the interaction and use of digital business models and offers while specifically tying its users to Apple across all stages of the value chain. Contrary to Apple's statement, the company's focus is thus far from being limited to the development of high-quality and innovative hardware products that are only to be systemically linked with the operating system and the App Store to create an integrated user experience.

(161) The importance of these digital products and services is also clearly reflected in the distribution of resources within the company. In the third quarter of 2021, Apple employed around [10-20]% of all employees in the areas of "Hardware Technologies" and "Hardware Engineering", while around [10-20]% of employees were assigned to the areas of "Software Engineering" and "Internet Software & Services".[129] This distribution obviously corresponds to the ideas of company founder Steve Jobs, who, on the occasion of launching the iPhone in 2007, quoted the US computer scientist Alan Kay and thus clearly emphasised the primacy of software: "People who are really serious about software should make their own hardware."[130]

(162) In addition, and thus in conclusion, the explanatory memorandum explicitly opens up the provision's scope of application to companies that are also active to a significant extent in the area of digital products and services, but do not offer these on markets within the meaning of Section 18 (3a) GWB:

> *"In particular, the provision also covers companies that are active to a significant extent in markets as defined in Section 18(3a), but whose paramount significance for competition across markets is* ***also fed to a substantial extent by other activities in digital markets."***[131] *[emphasis added]*

129 Apple's response of 2 October 2021 to the request for information dated 10 August 2021, sheet 6.2, folio 415 of the case file.

130 https://www.youtube.com/watch?v=XAfTXYa36f4 [17 January 2023]

131 See explanatory memorandum to the 10th amendment to the GWB, Bundestag printed paper 19/23492, p. 74.

(163) Apple's idea that Section 19a (1) GWB, similar to the abuse provisions of Sections 19, 20 GWB, must in principle refer to individual, precisely defined markets is not convincing either. It is correct that Section 19a (1) no. 1 GWB requires one or more market definitions within the framework of one criterion, namely the examination of market dominance scenarios. The Decision Division complies with this requirement with regard to the five markets on which Apple is dominant or at least has a strong market position from the Decision Division's point of view (see paras (262) et seqq., (364) et seqq., (393) et seqq., (435) et seqq., (478) et seqq.). In all other respects, the continuous link to one market as called for by Apple generally contradicts the cross-market approach of Section 19a GWB. In particular, the identification and definition of target markets on which Apple's conduct may have an impact is not necessary and contradicts the structure of Section 19a GWB.

(164) This is because Section 19a GWB is supplementary to the abuse provisions of Sections 19 and 20 GWB, which are not superseded by Section 19a GWB and remain applicable in parallel insofar as their requirements are met (Section 19a (3) GWB).[132] In its basic approach, Section 19a GWB does not pursue any other objectives than general abuse control under competition law[133]; however, Section 19a GWB goes beyond this by not considering concrete markets[134], taking into account the special risk situations resulting from positions of power reaching across markets and extending abuse control to markets that are not (yet) dominated.[135] The provision is based on the idea that, particularly in the digital economy, there are companies that have a central strategic position that extends across various markets and is therefore difficult for competitors to contest (Section 19a (1) GWB) and that these companies can secure or further expand this position relatively easily through certain types of conduct (Section 19a (2) GWB).[136]

---

132 See explanatory memorandum to the 10th amendment to the GWB, Bundestag printed paper 19/23492, p. 74.

133 Explanatory memorandum to the 10th amendment to the GWB, Bundestag printed paper 19/23492, p. 75.

134 Recommended resolution on the 10th amendment to the GWB, Bundestag printed paper 19/25868, p. 113.

135 Explanatory memorandum to the 10th amendment to the GWB, Bundestag printed paper 19/23492, p. 73

136 Explanatory memorandum to the 10th amendment to the GWB, Bundestag printed paper 19/23492, p. 73.

(165) Apple fails to recognise the systematic two-step nature of the provisions, which, particularly in connection with the first step, the declaratory decision, is designed to focus on several markets and not on a specific market. This approach – which in the view of the Decision Division is misguided – affects all individual points to be considered in the assessment under Section 19a (1) GWB. Thus, also in connection with the criteria vertical integration, financial strength and access to resources, access to data and power to set rules, Apple demands a strict, target market specific approach in connection with a competitive analysis in the individual case, which is based on the abuse control provisions under general competition law.

(166) Apple also points out that a restrictive interpretation of Section 19a GWB as a whole (i.e., subsection (1) and subsection(2)) is warranted for reasons of constitutional law, in particular with regard to the principles of normative precision and predictability of state action as well as the principle of proportionality, which the Decision Division fails to meet in its draft decision.[137] This line of argument cannot be accepted either for several reasons.

(167) First of all, Apple's statement is too unspecific. It does not explain which different possible interpretations of Section 19a (1) GWB can be considered by applying the traditional principles of interpretation.

(168) Furthermore, an "overall view" of subsection (1) and subsection (2), as requested by Apple, is not helpful for the declaratory decision under subsection (1). The legislators have chosen not to include any specific ex lege obligations to act or to refrain from acting in Section 19a (1) GWB. Instead, the legislators have implemented the norm in the form of a two-stage process to be carried out by the authority: First, according to Section 19a (1) GWB, the competition authority has to establish the company's status as norm addressee in a constitutive declaratory act. Only then, in a second step under Section 19a (2) GWB, the authority can establish obligations to act and to refrain from acting by means of another constitutive administrative act. The decision pursuant to subsection (1) would therefore exclusively establish Apple's status as norm addressee. This also applies

137 See Apple's comments on the Decision Division's draft decision of 5 January 2023, paras. 24 et seqq. (folios 3,206 et seq. of the case file) and Annex 1 to the statement: "Constitutional considerations on Section 19a GWB and on its interpretation in conformity with the constitution" (folios 3,072 et seqq. of the case file).

if the decision were to be issued at the same time as a decision under subsection (2). In this case, too, the decision pursuant to subsection (1) would not impose any specific obligations on Apple to act or to refrain from acting.

(169) The parallels cited by Apple in this context to the pre-effect of planning approval decisions under the laws governing expropriation are also not convincing. In addition to the legal protection available to the party concerned against a decision under subsection (1), the party concerned would also be free to oppose a subsequent decision under subsection (2) and, for example, claim that the reversal of the burden of proof contained in Section 19a (2) sentence 3 GWB was unconstitutional in its view.

(170) The Decision Division also considers Apple's argument that Section 19a (1) GWB represents a particularly severe encroachment on fundamental rights (Article 12, Article 14 GG) to be unfounded. In the context of the proceedings under subsection (1) relevant in the present case, no specific obligations to act or to refrain from acting have been imposed on the party by way of the official decision (see above).

(171) Finally, in the Decision Division's view the parallel drawn by Apple to pre-emptive measures under police laws does not seem convincing. While these measures can be directed against a large number of persons, Section 19a (1) GWB addresses a competition problem in the form of a position of significant economic power across markets that only occurs with regard to a very small number of very large corporations in the digital economy. To date, the authority has initiated or conducted only five proceedings on the basis of Section 19a (1) GWB.

(172) In the Decision Division's opinion, the application of Section 19a GWB is also not precluded by Regulation (EU) 2022/1925 on the Digital Markets Act, which has been adopted in the meantime. This applies all the more to the present determination of a paramount significance for competition across markets under Section 19a (1) GWB. This finding will not be changed by the coming into force of the majority of the DMA's provisions on 2 May 2023, which also includes the conflict-of-law provisions in Article 1 (5) and Article 1 (6) and (7) DMA (see Article 54 DMA).

(173) Contrary to Apple's opinion, Article 1 (5) DMA is clearly not relevant here.[138] This is because Section 19a GWB is a national competition provision that is not blocked per se by Article 1 (5) DMA, but for which Article 1 (6) DMA provides a more specific conflict-of-law rule.

(174) The Decision Division is also of the opinion that Section 19a GWB prohibits unilateral conduct and "gatekeepers" within the meaning of the DMA may be subject to "further obligations", so that in this respect its application under Article 1 (6) sentence 2 (b) DMA remains unaffected. The coherence of the application of the law is ensured by the obligations of cooperation and coordination under Article 1 (7), Article 37 and Article 38 DMA.

(175) A possible blocking effect of Article 1 (6) sentence 2 (b) DMA can therefore only occur with regard to designated core platform services ("CPS") in the context of separate proceedings regarding certain conduct pursuant to Section 19a (2) GWB. The question of whether any obligations in the context of proceedings pursuant to Section 19a (2) GWB are "further obligations" within the meaning of the DMA has to be examined on a case-by-case basis, which does not block the entire provision. With the concept of "further obligations", the DMA rather explicitly recognises the complementarity of the DMA and competition law.[139] Incidentally, this is also supported by the "potential area of overlap" between Section 19a (2) GWB and Articles 5-7 DMA mentioned by Apple itself.[140]

(176) A decision pursuant to Section 19a (1) GWB, however, does not impose behavioural obligations on the company and therefore does not have to be notified pursuant to Article 38 (3) DMA, as Apple believes.[141] Moreover, a notification obligation would only exist from the time the respective designation decision becomes known. So far, however, Apple has not been designated, and the extent as well as the time of a possible designation of Apple under the DMA cannot be foreseen at the time of this decision (see para. (941)).

---

138 See Apple's comments on the Decision Division's draft decision of 5 January, paras. 219, 222, folios 3,276 et seq. of the case file.

139 See also recital 11 DMA – Regulation (EU) 2022/1925.

140 See Apple's comments on the Decision Division's draft decision of 5 January, paras. 218, 225 folios 3,275, 3,278 et seqq. of the case file.

141 See Apple's comments on the Decision Division's draft decision of 5 January, para. 226, folio 3,278 of the case file.

(177) Moreover, a blocking effect does not result – as Apple believes – from the fact that the present decision under subsection (1) addresses and deals with, among other things, individual presumed CPSs as defined under the DMA.[142] This is because the declaratory decision pursuant to Section 19a (1) GWB applies to the entire company, not just to individual products or services. The fact that the term "gatekeeper" is used both in the draft decision of the Decision Division and in the DMA is also irrelevant in this respect.[143]

II. Significant activity on markets within the meaning of Section 18 (3a) GWB

(178) With its operating systems, first and foremost iOS, and its digital software distribution platform App Store as well as various services, Apple is active to a significant extent on markets within the meaning of Section 18 (3a) GWB.

1. Function of the criterion

(179) The criterion of being active on markets within the meaning of Section 18 (3a) GWB to a significant extent is a mandatory component of the status as norm addressee under Section 19a GWB. The criterion is intended to ensure that only companies with a focus on digital business models are subject to the provision.[144] With the 9th amendment to the GWB and the provisions introduced in Section 18 (2a) and (3a) GWB, the legislators have identified multi-sided markets and networks as the core of the frequently Internet and data-based business models characterised by recognisable concentration tendencies in certain business areas, which go hand in hand with the increasing digitalisation of markets.[145] In addition, the criterion takes up the above-mentioned facilitation of power positions across markets through the concentration and self-reinforcement dynamics of multi-sided markets and networks, which poses the risk of further consolidation and the

142 See Apple's comments on the Decision Division's draft decision of 5 January, paras. 220 et seqq., folios 3,276 et seq. of the case file.

143 See Apple's comments on the Decision Division's draft decision of 5 January, paras. 217 et seqq., folio 3,275 et seqq. of the case file.

144 Explanatory memorandum to the 10th amendment to the GWB, Bundestag printed paper 19/23492, p. 74.

145 Explanatory memorandum to the 9th amendment to the GWB, Bundestag printed paper. 18/10207, pp. 1, 39.

expansion of the power position to further business areas and markets.[146]

(180) In this context, it is irrelevant whether the paramount significance for competition across markets is attributable precisely to such products or whether it has also been made possible on the basis of other activities. In particular, the provision also covers companies that are active to a significant extent on markets as defined in Section 18 (3a) GWB, but whose paramount significance for competition across markets is also fed to a substantial extent by other activities on digital markets.[147] In this respect, the legislators have found the potential competitive threat posed by such business models to be a sufficient starting point for the legal assessment of a company's status as norm addressee of Section 19a GWB.

(181) This does not cover companies whose activity in a multi-sided market or network either plays only a completely subordinate role for the company itself – compared to its other activities – or which play only a subordinate role on the relevant markets compared to their competitors.[148] Accordingly, an exclusive or predominant activity on markets within the meaning of Section 18 (3a) GWB is not required to establish that a company's activity is of significant extent. According to the purpose of the criterion, which is to capture an essential element of the potential competitive threat arising from the significance of a company in the digital economy across markets, it does not matter whether dominant positions or even monopolies also exist in such markets pursuant to Section 18 (3a) GWB.[149] In the case of Apple, however, this is at any rate the case with regard to the company's core activities in relation to the proprietary operating systems[150] (iOS) on its end devices as well as in connection with the software distribution platform[151] (App Store) on its devices.

---

146 Explanatory memorandum to the 10th amendment to the GWB, Bundestag printed paper 19/23492, p. 73.

147 Government explanatory memorandum to the 10th amendment to the GWB, Bundestag printed paper 19/23492, p. 7.

148 Explanatory memorandum to the 10th amendment to the GWB, Bundestag printed paper 19/23492, p. 74.

149 According to the explanatory memorandum to the GWB, market dominance is not a prerequisite for the status as addressee of Section 19a GWB, see explanatory memorandum to the 10th amendment to the GWB, Bundestag printed paper 19/23492, p. 73, and resolution recommendation on the 10th amendment to the GWB, Bundestag printed paper 19/25868, p. 113.

150 For details, see paras. (434) et seqq.

151 For details, see paras. (476) et seqq.

2. Multi-sided markets within the meaning of Section 18 (3a) GWB

(182) In multi-sided markets, at least two distinguishable user groups come together; such markets can take many forms. These include shopping centres (stores and customers), advertising-financed media (advertisers and consumers), e-commerce platforms (retailers and consumers), technical standards (in the case of Blu-Ray, for example, providers of content on Blu-Ray discs and owners of Blu-Ray players), game consoles (game developers and players), credit card systems (credit card-accepting shops and credit card owners), operating systems (program developers and end customers of the operating system), and app stores (app developers and end device users).

(183) Multi-sided markets are typically services which, as intermediaries, enable direct interaction between two or more user groups. Indirect network effects are a key characteristic of multi-sided markets. Indirect network effects occur when the benefit of a platform for at least one user group depends on the presence and size of the other user group. As a rule, in the case of positive indirect network effects, each group benefits from the fact that the other group uses the platform. For example, the attractiveness of an operating system for end users increases if many programs are available for the system. At the same time, the attractiveness of the operating system increases for program developers if it is used by many end users and thus potential customers. It is crucial for the platform operator and its business model's market success to persuade all user groups to use the platform, e.g., the operating system.[152]

3. With the mobile operating systems and the App Stores, Apple is active on multi-sided markets

(184) Apple is active on markets within the meaning of Section 18 (3a) GWB. This relates in particular to its mobile operating systems, above all iOS, and the operation of the software distribution platform on Apple's mobile devices, the App Store.

---

[152] Explanatory memorandum to the 9th amendment to the GWB of 7 November 2016, Bundestag printed paper 18/10207, pp. 49 f., https://dipbt.bundestag.de/doc/btd/18/102/1810207.pdf

(185) By operating the two platform products, Apple acts as an intermediary between end users/consumers on the one hand and app publishers on the other. In terms of technology, this intermediation takes place through the provision of the operating systems (see a)) and in economic/commercial terms through the operation of the App Store as a sales platform for software (see b)). Both offerings constitute a market within the meaning of Section 18 (2a) GWB (see c)).

a) Mobile operating systems

(186) With its mobile operating systems iOS, iPadOS, watchOS and tvOS, which are platform products, Apple is active on multi-sided markets within the meaning of Section 18 (3a) GWB. A platform in the competition-law sense is characterised in particular by its capacity as an intermediary that enables direct interaction between two or more user groups with indirect network effects.[153]

(187) Apple's operating systems fulfil these intermediary criteria because they enable direct interaction between the group of users on the one hand and the group of software developers/app publishers on the other, with positive indirect network effects between the respective groups. The more users iOS has, for example, the more attractive it becomes for app publishers to develop apps for and publish them on iOS. At the same time, the more apps are available for iOS, the more attractive the iOS operating system becomes for users.[154] This is because the operating system creates the technical system connection that makes it possible for third parties to distribute apps to end customers via the App Store (see below).

(188) It is precisely because of the indirect network effects that operating systems are explicitly mentioned as platforms within the meaning of Section 18 (3a) GWB in the recommendation resolution on the 10th amendment to the GWB.[155]

---

153 See with further references Bundeskartellamt, Working paper – Market power of platforms and networks, June 2016, pp. 14 et seqq.

154 See European Commission, decision of 24 May 2004, AT.37792 – Microsoft para. 16 and decision of 16 December 2009, AT.39530 – Microsoft (Tying), para. 26.

155 Mobile operating systems are explicitly mentioned as a platform within the meaning of Section 18 (3a) GWB in the recommendation resolution on the 10th amendment to the GWB, see recommendation resolution, Bundestag printed paper 19/25868, pp. 114 et seq.*; Nothdurft*, Bunte KartIIR, § 19a GWB, para. 24, in detail.

b) App Store

(189) Apple's App Store is the digital distribution platform for third-party apps programmed for Apple's mobile operating systems, first and foremost iOS. With regard to the App Store, which is linked to iOS, a distinction must also be drawn between app users who purchase apps via the App Store or obtain them free of charge and app publishers[156] who distribute third-party apps to users under their own name via the App Store. In addition, advertisers can also be involved as a third market side, insofar as advertising is placed in the App Store and/or the third-party apps purchased via it.

(190) The App Store is also characterised by positive indirect network effects. As a digital distribution platform for application software, the App Store brings together the publishers' supply and the demand of the customers, who own and use an iOS device. The more publishers can be found with their products in the App Store, the more attractive the iOS device or the App Store pre-installed on this device is for customers/users. Conversely, the more customers own an iOS device and the greater their willingness to pay, the more attractive the App Store sales channel and access to Apple customers is for app publishers.

(191) Apple co-founder Steve Jobs recognised precisely this connection as early as 2008, shortly after the introduction of the App Store, which was aimed at increasing the attractiveness of the device depending on the number of apps available in the App Store: *"We expect it [author's note: the App Store] to add value to the iPhone. We'll sell more iPhones because of it."*[157]

c) Market quality

(192) Both the iOS[158] mobile operating system and the App Store qualify as a market within the meaning of Section 18 (2a) GWB.

(193) For a market to be assumed to exist in the present context, it is not required that the market be defined or that the good or service be provided in return for monetary

---

156 A legal or natural person that distributes an app under its name (usually indirectly), see also BKartA, Sector Inquiry Mobile Apps, July 2021, p. 19 fn. 44.

157 https://www.wsj.com/articles/the-mobile-industrys-never-seen-anything-like-this-an-interview-with-steve-jobs-at-the-app-stores-launch-1532527201

158 The following statements apply equally to the mobile operating systems iPadOS, watchOS and tvOS as well as to all Apple App Stores.

compensation (see Section 18 (2a) GWB). In the context of Section 19a (1) in conjunction with Section 18 (3a) GWB, the only decisive factor is whether the multi-sided platform exhibits the qualities of a market, whereby the absence of monetary compensation does not rule out the market quality of one side, see Section 18 (2a) GWB. Not relevant, however, is the question (which is to be distinguished from this, goes beyond this and is to be answered when defining the market) as to which other services could specifically be considered alternative options for the users of the intermediary service.[159]

(194) The fact that Apple does not license its operating system to third parties does not run counter to its status as a platform or as a market in the competition-law sense. This also applies to the actual or presumed gratuitousness of iOS. In this respect, only the relevant exchange relationships between supply and demand are decisive for fulfilling the characteristics of a market.

(195) In formal terms, such an exchange relationship already exists on the user side in that with every end device the end user consents to a corresponding software licence agreement by using the device or by updating the software.[160] This licence is limited to a single Apple device in each case.

(196) The same applies to app publishers who accept the corresponding "Apple Developer Program License Agreement".[161] Here, too, it is stipulated that the iOS operating system software is made available to developers by Apple for use in connection with the development and testing of the respective application(s).

(197) The way in which the operating system is monetised is irrelevant in this context. Although no externally quantifiable monetary consideration for the provision of the mobile operating system exists on either side of the market, the product qualifies as a market. Even the fact that one side of the market is free of charge would not prevent this. It is true that the finding of a gratuitous exchange relationship does not always justify the assumption that there is a market relevant under competition law. This applies in particular outside of multi-sided markets. If services are offered free of charge for non-economic reasons without being part of a strategy that is

159 *Nothdurft*, Bunte KartellR, §19a GWB, para. 24, in detail.

160 https://www.apple.com/legal/sla/docs/iOS15_iPadOS15.pdf [28 December 2021]

161 https://developer.apple.com/support/downloads/terms/apple-developer-program/Apple-Developer-Program-License-Agreement-20210607-German.pdf [28 November 2021]

designed at least indirectly or in the longer term for profit-making purposes, the corresponding relevance to competition is missing.[162]

(198) However, this cannot be assumed in the present case. This is because licensing the iOS operating system on both sides of the platform is in a material respect part of a business activity designed for profit-making purposes. On the one hand, this business activity for profit is carried out on the end-user side through the transfer of the Apple device including the iOS licence against payment, without exactly breaking down the purchase price into the costs for hardware and software. On the other hand, iOS is also indirectly monetised on the developer side in that Apple charges a commission, at least for user-funded apps offered by publishers in the App Store. Third parties can also place advertisements in the App Store.

(199) Apple is of the opinion that iOS and the App Store do not represent separate multi-sided markets, since Apple, in its own view, is active on an overall ecosystem market and competes with other system providers due to the inseparable combination of device, operating system and App Store on the supply side. In the company's view, the mobile operating system in particular cannot be considered an independent market, as there is no independent supply of and demand for iOS.[163]

(200) The Decision Division agrees with Apple that iOS and other operating systems are not licensed by Apple to device manufacturers and that Apple is therefore not active on the market for operating systems as far as the opposite market side of device manufacturers is concerned (see in more detail paras. (443) et seqq.). However, for the reasons mentioned above, this applies neither to the market side of the app publishers nor to the market side of the end customers. As for the question of the (potential) combination of device and operating system in relation to the end customer, even such a combination of both products (see in detail paras. (241) seqq., (266) seqq., (435) seqq.) cannot change the fact that the mobile operating systems and the App Store are multi-sided.

---

162 See explanatory memorandum to the 9th amendment to the GWB, Bundestag printed paper 18/10207, p. 48 as well as Federal Court of Justice, decision of 23 June 2021, *Facebook* (KVR-69/19), para. 28.

163 See Apple's comments on the Decision Division's draft decision of 5 January 2023, paras 33-37 (folios 3,209 et seq. of the case file).

4. Significant extent of Apple's activities

(201) Apple is active to a significant extent at least[164] on the aforementioned multi-sided markets for mobile operating systems and for software distribution on its mobile devices (App Store).

(202) The condition of "significant extent" limits the scope of application of Section 19a GWB to companies that focus on digital business models.[165] This does not cover companies whose activity in a multi-sided market or network either plays only a completely subordinate role for the company itself, compared to its other activities, or which play only a subordinate role on the relevant markets compared to their competitors.[166]

(203) An exclusive or predominant activity on markets within the meaning of Section 18 (3a) GWB is not required to establish that a company's activity is significant. It is sufficient that the company focuses on one (of possibly several) activity(ies) in such markets, but may also pursue other activities.[167]

(204) Apple is active to a significant extent on multi-sided markets, both in terms of the importance of its activities compared to Apple's other business areas (see a)) and in relation to other comparable companies (see b)).

a) Significance of the activity on multi-sided markets for Apple's business

(205) The extent of Apple's activities with the iOS, iPadOS, tvOS, watchOS, and macOS operating systems and the associated App Stores is significant in relation to the company's overall activities. It is also of considerable significance for the company's business activities from a strategic point of view.

---

164 It can be left open whether Apple is also active on other markets within the meaning of Section 18 (3a) GWB. These may include Apple Pay, FaceTime or other services whose network and/or platform properties will not be considered further here.

165 Government bill of the 10th amendment to the GWB, see Bundestag printed paper 19/23492, p. 74 (para. 1).

166 Government bill of the 10th amendment to the GWB, see Bundestag printed paper 19/23492, p. 74 (para. 1).

167 See also the explanatory memorandum to the GWB, according to which it is irrelevant whether the paramount significance for competition across markets is attributable precisely to products that are characterised by network effects or whether it has also been made possible on the basis of other activities. Government bill of the 10th amendment to the GWB, see Bundestag printed paper 19/23492, p. 74 (para. 1).

(206) This results first of all from the wide distribution of the proprietary operating systems due to their connection with Apple's digital end devices and the associated exclusive access to Apple users.

(207) Apple sells a large number of digital devices. Apple's own operating system is installed on each of these devices. The devices cannot be used without the operating system. The devices are always sold with the operating system installed on them, and the price of the devices includes the operating system. The user agrees to a corresponding software licence agreement when setting up the device and subsequently every time an update is installed.[168] The combination of a digital device with a proprietary and non-exchangeable operating system is a key feature of Apple's business strategy.

(208) In the fiscal year 2020 alone, Apple sold a total of 197 million iPhones including iOS worldwide, [<10] million of them in Germany. Between 2017 and 2021, more than 1 billion iPhones were sold worldwide, more than [20-30] million of them in Germany. In addition, around 250 million iPads incl. iPadOS (Germany: just under [5-15] million), just under 100 million Macs incl. MacOS (Germany: around [<10] million), more than 100 million Apple Watches incl. watchOS (D: [<10] million) and approx. 25 million Apple TVs incl. tvOS (D: approx. [<5] million) were sold.[169]

(209) At the beginning of 2023, Apple recorded a total of 2 billion active devices worldwide, the majority of which were iPhones.[170] This corresponds to around one quarter of the world's population.

(210) These high volumes guarantee Apple an extraordinarily high reach and access to a very high number of users.

(211) Apple's activities on markets within the meaning of Section 18 (3a) GWB are to be regarded as significant not only in terms of reach and access to Apple users. Apple's activities on these markets are also significant in terms of the company's revenue.

(212) Even if Apple does not explicitly specify prices for operating systems such as iOS, the revenue from devices on which iOS is pre-installed is considerable. With the

168 https://www.apple.com/legal/sla/docs/iOS15_iPadOS15.pdf [8 December 2021]

169 Apple's response of 22 September 2021 to the Decision Division's request for information dated10 August 2021, sheets 2.1., 2.2. and 2.3., folios 210-212 of the case file.

170 https://www.apple.com/newsroom/2023/02/apple-reports-first-quarter-results/ [1 March 2023]

iPhone alone, i.e. including iOS, Apple generated almost USD 205 billion in revenue in the past fiscal year 2022, which was more than 50% of the company's total revenue. Part of the sales, customer acquisition and the devices' pricing is also the associated operating system in each case. For example, Apple provides iOS updates for its high-priced devices for a much longer period than is generally the case for device manufacturers using Google's Android.[171]

(213) However, iOS is not only monetised by Apple through the sale of its devices; there are also significant revenues from the App Store, another multi-sided market. These revenues were around USD [15-20] billion in the fiscal year 2021.

(214) The App Store is part of the Services division. Apple's balance sheet shows an annual revenue of USD 78.1 billion for the fiscal year 2022. In addition to the App Store revenue, this also includes revenue from the other services mentioned above, such as Apple Music, Apple TV+, Apple Arcade and iCloud.

(215) After the iPhone, the Services segment contributes the second-highest share of revenue to the technology company's balance sheet. The table below is taken from Apples 10-K form for the US Securities and Exchange Commission (SEC)[172] and shows the distribution of revenue within the company:

Note 2 – Revenue

Net sales disaggregated by significant products and services for 2022, 2021 and 2020 were as follows (in millions):

	2022	2021	2020
iPhone [1]	$ 205,489	$ 191,973	$ 137,781
Mac [1]	40,177	35,190	28,622
iPad [1]	29,292	31,862	23,724
Wearables, Home and Accessories [1][2]	41,241	38,367	30,620
Services [3]	78,129	68,425	53,768
Total net sales [4]	$ 394,328	$ 365,817	$ 274,515

(1) Products net sales include amortization of the deferred value of unspecified software upgrade rights, which are bundled in the sales price of the respective product.

(2) Wearables, Home and Accessories net sales include sales of AirPods, Apple TV, Apple Watch, Beats products, HomePod mini and accessories.

(3) Services net sales include sales from the Company's advertising, AppleCare, cloud, digital content, payment and other services. Services net sales also include amortization of the deferred value of services bundled in the sales price of certain products.

(4) Includes $7.5 billion of revenue recognized in 2022 that was included in deferred revenue as of September 25, 2021, $6.7 billion of revenue recognized in 2021 that was included in deferred revenue as of September 26, 2020, and $5.0 billion of revenue recognized in 2020 that was included in deferred revenue as of September 28, 2019.

Figure 3 – Apple's sales distribution in fiscal year 2022

(216) The Services segment not only accounts for around 20% of the company's total revenue, it has also been growing continuously for years in both absolute and relative terms. Apple is aware of the dynamic importance of this segment. At the

171 https://www.nextpit.de/warum-android-nie-5-jahre-updates-bekommen-wird [1 June 2022]
172 https://investor.apple.com/investor-relations/default.aspx (p. 40) [6 March 2023]

beginning of 2017, Tim Cook set the target for Apple's services revenue to double by 2020[173] – a target that was already achieved in 2019.

(217) In addition, the Services segment contributes a disproportionately high share to the company's profit due to its extraordinarily high margin. While Apple's overall margin of around 35% on its entire business can be regarded as more than adequate, even by industry standards, the margin in the Services segment is significantly higher at around 70%. So, while the division delivers just under one in five dollars of sales, it contributes just under one in three dollars to profits.[174]

(218) As a result, Apple is already active to a significant extent on markets within the meaning of Section 18 (3a) GWB with its core activities of mobile operating systems, above all iOS, and the App Store, measured in terms of its overall activities.

(219) Apple points out that the revenue of USD [15-25] billion from the App Store, in its own view, is relatively insignificant compared to its overall activities and represents only around [<10]% of the company's total revenue. In this respect, the company holds that it cannot be assumed that its activities are of a significant extent on markets within the meaning of Section 18 (3a) GWB.[175]

(220) This approach is not convincing. It already fails due to its exclusive focus on sales, even if this, as presented, in itself already fulfils the required condition of significant activities in the Decision Division's view. Moreover, the App Store connects millions of app publishers with billions of Apple customers. In the fiscal year 2020, approximately [<5] million apps were available in Apple's App Store, which were downloaded approximately [30-40] billion times in 2020; compared to the previous year, this represents a growth rate of nearly [10-20]%.[176]

b) Market significance of Apple's activities on multi-sided markets compared to other companies

(221) Also in comparison with other companies, Apple's activities on multi-sided markets within the meaning of Section 18 (3a) GWB are significant.

---

173 https://www.cnbc.com/2017/01/31/timcook-on-apple-earnings-call-double-services-revenue-by-2020.html [6 September 2021]

174 https://investor.apple.com/investor-relations/default.aspx [20 February 2022]

175 See Apple's comments on the Decision Division's draft decision dated 5 January 2023, paras. 38 et seq. (folio 3,210 et seq. of the case file).

176 See Apple's response of 22 September 2021 to the Decision Division's request for information dated 10 August 2021, sheet 3.3., folio 217 of the case file.

(222) This is already suggested when looking at the area of mobile operating systems for smartphones, because iOS, as described, forms the core of Apple's activity on multi-sided markets. Besides Apple's iOS, practically only Google's Android is relevant as an operating system for mobile devices. Other providers have disappeared from the market or are largely insignificant. The statistics below illustrate the spread of mobile operating systems over the last ten years. While iOS and Android accounted for only around 40% of the operating systems on all smartphones/mobile phones in 2011, it was already more than 80% in 2015. Since 2016, the value has been above 90%, and since 2020 it has even been continuously above 99%.

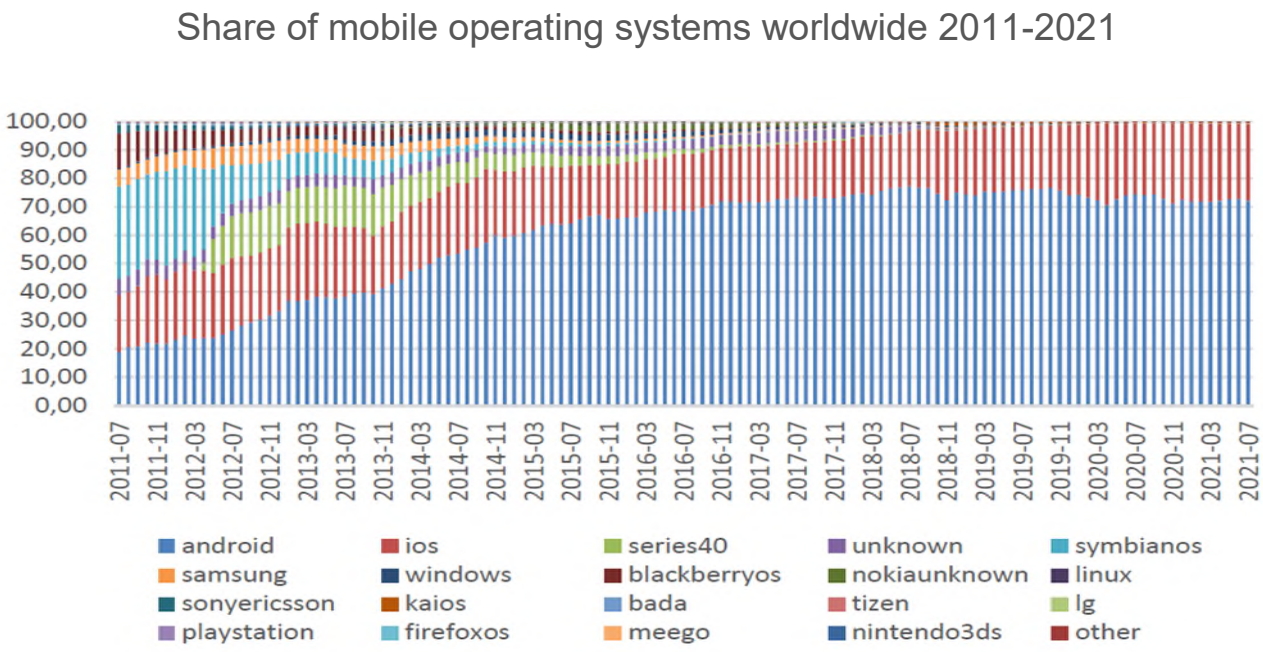

Figure 4 Mobile operating systems, source: statcounter.com[177]

(223) The largely exclusive prevalence of these two mobile operating systems already makes it clear that Apple's activities on these multi-sided markets within the meaning of Section 18 (3a) GWB are also significant in comparison with other companies. Apart from Google, no other provider is active to any significant extent as a provider of mobile operating systems. Both providers each reach billions of users at a continuously high level.

(224) Apple's activity with regard to the App Store is also considerable compared to other

177 https://gs.statcounter.com/os-market-share/mobile/worldwide [1 June 2022]

companies. As already outlined in connection with mobile operating systems, there is also an extensive dichotomy in the area of digital software distribution on mobile devices between Google's Play Store on the one hand and Apple's App Store on the other. Other options for (legal) software distribution on mobile devices are of no practical relevance.[178]

(225) Apple doubts the dominance of Apple's and Google's app stores on the respective devices and refers in this context – with regard to the Android operating system – to the Google Android decision of the European Commission. According to this decision, several app stores (some of them from third-party providers) are pre-installed and usable on Android-based devices, such as the Samsung Galaxy App Store, the Amazon AppStore, Aptoide, the Opera Mobile Store and others.[179] Although this reference is correct, the Commission also indicates in this decision the respective market share of these app stores, measured in terms of downloads made through the respective app stores. Accordingly, Google's Play Store has a market share of 90-100%, while all other app stores share the remaining <10% of the market among them. The Commission concludes that "*The market share of pre-installed app stores other than the Play Store is insignificant compared to the Play Store* [...]."

(226) The industry service Sensor Tower states that end customers spent around USD 41.5 billion in Apple's App Store in the first half of 2021. This compares with consumer spending of around USD 23.4 billion in Google's Playstore. It is worth noting in this context that Apple achieved this consumer spending, which was almost twice as high, with far fewer app installations and downloads than Google. While 56.2 billion apps were installed via the Google Play Store in the first half of 2021, the App Store only accounted for around 16.3 billion downloads.[180] In other words, according to Sensor Tower the Apple App Store generates an average of USD 2.54 per download, while the Google Play Store only generates just under 42 cents.

(227) These orders of magnitude essentially correspond to the calculated or known net

---

178 See already for 2016: European Commission, decision of 18 July 2018, *Google/Android* (AT.40099), paras. 446 et seqq.

179 See Apple's comments on the Decision Division's draft decision of 5 January 2023, para. 41 (folio 3,211 of the case file).

180 https://sensortower.com/blog/app-revenue-and-downloads-1h-2021 [8 December 2021].

revenues of the companies' two mobile app stores. In the fiscal year 2021, Apple's revenue generated with the App Store was around USD [15-25] billion.[181] Google's Playstore revenue was approximately USD 11.2 billion in 2019, according to public sources.[182]

(228) Apple is of the opinion that the App Store is only of minor importance compared to Google's Play Store, as the number of downloads there is significantly higher.[183] It can be left open whether a comparison by revenue or by downloads between the two leading app store operators Apple and Google is better suited to fulfil the criterion of significant extent within the meaning of Section 19a (1) no. 1 GWB. In any case, the two app store operators Apple and Google are by far the leading companies. The fact that (only) one other company besides Apple operates an app store with a very high reach and turnover is in any case not suitable to consider the criterion of significant activity on markets within the meaning of Section 18 (3a) GWB inapplicable in the present case. In this regard, it is not important whether Apple is weaker than Google in terms of downloads or stronger than Google in terms of revenue.

(229) As a result, Apple is already active to a significant extent on markets within the meaning of Section 18 (3a) GWB with its mobile operating systems, first and foremost iOS, and with the App Store, even measured against the activities of other companies.

---

181 Apple's response of 22 January 2022 to the Decision Division's request for information dated 10 August 2021, internal document Financial Update Nov. 21, file 00001543, slide 66, folio 2,261 of the case file.

182 https://www.reuters.com/technology/google-play-app-store-revenue-reached-112-bln-2019-lawsuitsays-2021-08-28/ [1 May 2022]

183 See Apple's comments on the Decision Division's draft decision of 5 January 2023, paras. 42 et seq. (folio 3,212 et seq. of the case file).

III. Paramount significance for competition across markets

(230) Apple is of paramount significance for competition across markets because, when all relevant circumstances in the individual case are considered together, it has a position of economic power across markets that allows for a scope or action across markets that is not sufficiently controlled by competition.

(231) Whether an undertaking is of paramount significance for competition across markets in an individual case and can be designated accordingly must be decided on the basis of an overall assessment – guided by the purpose of the law – of all circumstances relevant to the individual case.[184] In particular, the criteria set out in Section 19a (1) sentence 2 GWB must be taken into account; they can be used to assess the competitive potential of the company.[185] Section 19a (1) sentence 2 GWB does not, however, contain an exhaustive list of the criteria to be taken into account in the context of an overall assessment, nor do the criteria mentioned have to be met cumulatively or each have to be present to a certain extent or in a certain quality. Nor is any weighting of the criteria intended based on the listing or the order selected. In the context of an overall assessment of the findings on the individual criteria examined, it must finally be examined whether – taking into account all circumstances relevant in the individual case[186] – the company in question, in this case Apple, is of paramount significance for competition.

(232) In the present case, after consideration of the criteria to be taken into account pursuant to Section 19a (1) sentence 2 nos. 1 to 5 GWB (see 1. to 5.), and taking into account all the circumstances (see 6.), it is clear that Apple is of such paramount significance for competition across markets within the meaning of Section 19a (1) GWB.

---

184 See explanatory memorandum to the 10th amendment to the GWB, Bundestag printed paper 19/23492, p. 75.

185 See explanatory memorandum to the 10th amendment to the GWB, Bundestag printed paper 19/23492, pp. 74 et seq.

186 See explanatory memorandum to the 10th amendment to the GWB, Bundestag printed paper 19/23492, p. 75.

1. Market dominance on one or several markets (Section 19a (1) sentence 2 no. 1 GWB)

(233) Apple is dominant in the markets for mobile hardware, specifically the markets for smartphones, tablets and smartwatches. Apple is not exposed to any substantial competition there within the meaning of Section 18 (1) no. 2 GWB or has a paramount market position in relation to its competitors (Section 18 (1) no. 3 GWB). Even if there was no market dominance within the meaning of Section 18 GWB in the above-mentioned markets, Apple has a strong position of power on these markets which cannot be effectively challenged either by other hardware manufacturers or by end consumers on the opposite side of the market. Such a position of power must also be taken into account in the context of Section 19a (1) sentence 2 no. 1 GWB, but in any case in the context of the overall assessment.

(234) In addition, Apple has in terms of technology excluded any alternative offer on the platform markets for mobile operating systems as well as for software distribution on its mobile devices, which are central to its significance across markets. It is not possible to use an alternative operating system or another app store. Apple also dominates these markets with iOS and the App Store; the company has no competitors on these markets within the meaning of Section 18 (1) no. 1 GWB. On these markets, too, Apple would in any case have a strong market position even if no market dominance was shown to exist.

a) Function of the criterion

(235) The criterion of market dominance in Section 19a (1) sentence 2 no. 1 GWB is, according to the meaning and purpose of the provision, not a mandatory requirement for the determination as an addressee of the provision.[187] This is also in line with the government's explanatory memorandum which clarifies that the criteria in Section 19a (1) sentence 2 GWB do not have to be present cumulatively.[188] If the criterion of market dominance is fulfilled, this circumstance

[187] Explicitly, resolution recommendation on the 10th amendment to the GWB, Bundestag printed paper 19/25868, p. 113.

[188] Explanatory memorandum to the 10th amendment to the GWB, see Bundestag printed paper 19/23492, pp. 74 (at the very end.) and 75.

can nevertheless carry considerable weight.[189] Thus, in its assessment in the present case, the Decision Division attaches particular importance to the fact that Apple is not exposed to any or no substantial competition on all three vertically integrated levels of the central elements of its ecosystem, i.e. on the hardware markets, first and foremost the smartphones (iPhone), the mobile operating systems (iOS) as well as the software distribution (App Store), because the market sides of multi-sided markets within the meaning of Section 18 (3a) GWB are affected by iOS and the App Store.

(236) Irrespective of the fact that, in the opinion of the Decision Division, the condition of Section 19a (1) sentence 2 no. 1 GWB is fulfilled on several markets in this case, strong market positions or positions of power of the company concerned can also be taken into account when applying Section 19a (1) sentence 2 no. 1 GWB, or at any rate within the framework of the necessary overall consideration when determining a company's paramount significance across markets; such strong market positions or positions of power of the company concerned are difficult to capture with the concept of market dominance, in particular due to the difficulties of defining the market in the area of digital markets.

(237) The explanatory memorandum to the GWB makes it clear in several places that the threshold for intervention under Section 19a GWB can be lower than the threshold for market dominance.[190] In view of the purpose[191] of Section 19a GWB to accelerate proceedings and the strong market positions or positions of power that are sufficient for the overall assessment, an exact market definition or a determination of a dominant position is not required. Even those market positions or positions of power – located in the "grey area" of the classic concept of market dominance – can also be taken into account within the scope of the examination under Section 19a (1) sentence 2 no. 1 GWB.

---

189 Bundeskartellamt, 7th Decision Division, decision of 30 December 2021, *Google/Determination of status as addressee of Section 19a (1) GWB* (B7-61/21)*, para.* 232. https://www.bundeskartellamt.de/SharedDocs/Entscheidung/DE/Entscheidungen/Missbrauchsaufsicht/2021/B7-61- 21.pdf? blob=publicationFile&v=3 [15 July 2022].

190 See resolution recommendation on the 10th amendment to the GWB, Bundestag printed paper 19/25868, p. 113 at the end, where it is again explicitly stated that market dominance is not a prerequisite for the applicability of Section 19a.

191 See resolution recommendation on the 10th amendment to the GWB, Bundestag printed paper 19/25868, p. 113 second paragraph at the end.

(238) In particular, Apple's mobile operating systems on its devices, which are designed as proprietary products, and the associated sales platform for software distribution are multi-sided markets within the meaning of Section 18 (3a) GWB.[192] Apple's scope of conduct on these markets, which is not sufficiently controlled by competition, demonstrates the company's potency and the potential risk to competition posed by it, particularly in view of the specific protective purpose of Section 19a GWB. Both in the explanatory memorandum and in the Economic Committee's recommendation for a resolution, the legislative materials concerning the provision strongly point out the particular threat posed by platform and network markets with regard to entrenched market positions.[193]

b) Market dominance in the affected markets

(239) Apple is active with its products on several markets which, according to the Decision Division, are in a vertical or primary/secondary market relationship to each other (see (1) below). The starting point and economic focus of the company's activities are the primary markets for (mobile) hardware products. These include in particular the markets for smartphones (see (2) below), for tablets (3) and for smartwatches (4). The hardware products are sold by Apple to end customers with the integrated corresponding proprietary operating systems (iOS, iPadOS, watchOS). In this respect, Apple's activities extend beyond pure hardware and the company is also active in the area of mobile operating systems (see (5) below), although the company does not sell or license operating systems to third-party device manufacturers, but only uses them in combination with its own hardware. In addition, apps from independent app publishers and Apple's own apps (insofar as they are not pre-installed on the devices) are sold via the App Store, which is also a proprietary platform (see (6) below). Just like the mobile operating system the App Store is already pre-installed on the devices when the hardware is purchased. Both software products – mobile operating system and App Store – are secondary market products in the opinion of the Decision Division.

(240) However, the question of whether hardware and operating system are offered to

192 See also subsections (5) and (6).

193 Explanatory memorandum to the 10th amendment to the GWB, see Bundestag printed paper 19/23492, pp. 74 (at the very end.) and 75, recommended resolution on the 10th amendment to the GWB, Bundestag printed paper 19/25868, p. 113.

end customers separately or as an inseparable bundle can ultimately be left open. Even if the respective hardware products with their associated operating systems were to be regarded as uniform markets in each case, because the end customers – in contrast to the app publishers – are not looking for operating system services separately from the purchased hardware or Apple does not offer them, this would not change the competitive assessment of Apple's market position. Apple dominates the hardware markets irrespective of whether the operating system is to be included or forms its own downstream market as a proprietary system.

(1) Primary/secondary market configuration

(241) As explained, with its devices, operating systems and software distribution platform on its devices Apple is active on several vertically arranged market levels which, in the Decision Division's opinion, are in a primary/secondary market relation to each other.

(242) Primary and secondary market configurations and their implications for competition policy have been discussed for some time primarily with regard to maintenance and repair service markets in terms of denying access to spare parts or technical information. They have also been distinguished in the past in connection with durable goods and consumables associated with them, such as printers and toners,[194] wet shave razors and razor blades[195] as well as carbonation systems and CO2 cartridges[196], to name just a few.

(243) At the core of these concepts for assessing market power is usually the question of whether competition in upstream (primary) markets has a disciplining effect and is able to limit potential competitive problems in secondary markets, which may have to be narrowly defined, by effectively limiting the scope of action enjoyed by (potential) market dominators.

(244) For European competition law, the Commission has outlined a catalogue of requirements in its notice on the definition of the relevant market:

> *"[...] A narrow definition of the market for secondary products, for instance, spare parts, may result when compatibility with*

194 European Commission, decision of 22 September 1999, *Pelikan/Kyocera* (IV/34.330).
195 European Commission, decision of 10 November 1992, *Warner-Lambert/Gillette* (IV/33.440).
196 Federal Court of Justice, decision of 4 March 2008, *Sodastream II* (KVR 21/07).

the primary product is important. Problems of finding compatible secondary products together with the existence of high prices and a long lifetime of the primary products may render relative price increases of secondary products profitable. A different market definition may result if significant substitution between secondary products is possible or if the characteristics of the primary products make quick and direct consumer responses to relative price increases of the secondary products feasible." [197]

(245) In the Decision Division's opinion, these characteristics of a primary/secondary market configuration are fulfilled in the present case. In this respect, the compatibility of the operating system and software distribution platform (secondary markets in each case) with the mobile device (primary market in each case) is decisive. Apple rules out the possibility of technically linking the iPhone, the iPad or a smartwatch from Apple with secondary products other than its own operating system as the technological platform and interface between the hardware components and the application software, as well as its own App Store as the digital sales platform for application software. The primary products are not under sufficient competitive pressure because they are long-lived and expensive and because switching from one primary product to another is associated with high barriers; the switching rates are correspondingly low.[198]

(246) The OECD's summary on the topic of "Competition Issues in Aftermarkets" goes in a similar direction. It points out that antitrust and economic practice has shown that a number of factors facilitate the emergence of market power in primary/secondary market configurations with a scope of action that is not sufficiently controlled by competition.[199] In the primary market, insufficient competitive pressure plays an important role. In addition, the longevity of the respective products on the primary market as well as high switching barriers and lock-in effects play a role. For the relevant secondary markets, the lack of or limited interchangeability of the products

197 https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:31997Y1209(01), para. 56 [5 February 2022]

198 See in detail paras. (291) et seqq.

199 See on this and in the following: https://one.oecd.org/document/DAF/COMP(2017)2/en/pdf [26 December 2021]

or services and the lack of transparency regarding the consequential costs have to be examined. The financial insignificance of the individual expenses on the market compared to the expenses on the primary market can also be a relevant factor.

(247) In this respect, hardware products on the one hand and operating systems or software distribution platforms on the other hand do not, in the Decision Division's opinion, form part of a uniform system market. In the Decision Division's view, these (additional) requirements are fulfilled in the present case, in particular with regard to the App Store. Thus, at the time the main product is purchased there is no transparency as regards (potential) consequential costs. In addition, the costs for individual apps are hardly significant compared to the costs for the mobile device – each taken separately.

(248) This assessment corresponds to the generally cautious approach in administrative practice and case law in Germany. The courts tend to be sceptical with regard to defining uniform system markets or defining broad downstream markets that also include competing systems, and instead tend to define downstream markets that are specifically tailored to the selected system. This is based on the consideration that for a customer who has chosen a certain system on the upstream market, the equipment belonging to the chosen system is usually not interchangeable with another system or equipment (or spare parts, maintenance services, etc.) belonging to another system on the downstream "supply market". As early as 2002, the Federal Court of Justice ruled in the "Fernwärme Börnsen" case with regard to heating systems and fuels:

> *"A uniform market for heat energy – if the defendant were active in such a market – does not exist, because for the opposite market side, i.e., the homeowners who have opted either for district heating or for oil heating, the two forms of heat energy are not interchangeable."*[200]

200 Federal Court of Justice, decision of 9 July 2002, *Fernwärme für Börnsen* (KZR 30/00), pp. 12 et seq. The line of argument followed by the Federal Court of Justice in the cases Stadtwerke Uelzen (Federal Court of Justice, decision of 10 December 2008, *Stadtwerke Uelzen* (KVR 2/08), para. 8.) and Total/OMV (Federal Court of Justice, decision of 6 December 2011, *Total/OMV (*KVR 95/10), paras. 27 et seq.) – also rulings regarding the energy sector – goes in the same direction.

(249) With regard to CO2 cartridges for water carbonators, the Federal Court of Justice states in the “Soda Club II” case:

> *“If different systems are available to buyers to meet a particular need, this does not mean, however, that when it comes to defining the market on which the equipment for such a system is offered, the other system is to be readily regarded as a supply alternative. If choosing a system designed for long-term use creates a specific need for equipment, it is much more decisive which alternatives are available to the customer, who has already opted for a system, when choosing the equipment (see BGHZ 77, 279, 287 et seq. – Mannesmann-Brueninghaus; 151, 274, 282 – Fernwärme für Börnsen; Möschel in Immenga/Mestmäcker, Wettbewerbsrecht: GWB, 4th ed, § 19 para. 28 with further references)”*[201]

(250) This is also the case here. In the Decision Division’s opinion, the primary/secondary market configuration applies to Apple’s operating systems as well as the App Store, as both systems are vertically related to the mobile devices. Even if one were to assume for the operating system that there is no demand for services on this multi-sided market which is separate from the hardware, at least Apple’s software distribution platform, the App Store, constitutes an independent downstream market from the user’s point of view. This is because – in the words of the Federal Court of Justice – the customer has already chosen a system, in this case an Apple device. With regard to any subsequent products in demand, such as a digital platform for software distribution, the customer therefore has no choice between different offers due to having opted for one main product. In this respect, end customers can only cover their specific demand for application software derived from this via Apple’s App Store.

(251) Apple believes that the case law handed down by the highest courts on primary/secondary market configurations is not applicable to the relationship between the device and the operating system or App Store. In this context, Apple

---

201 Federal Court of Justice, decision of 4 March 2008, *Soda Club II (*KVR 21/07*)*, para. 15.

rejects the applicability of the case law of the Federal Court of Justice in the "Sodastream II" case, arguing that in this case the focus was not on the CO2 cartridges themselves, but on their refilling.[202] When comparing the two configurations, it is the Decision Division's view, on the other hand, that the focus is on the fact that in both cases the suppliers of the primary products (iPhone here and water carbonator there) are trying to eliminate competition on downstream markets (operating system and App Store here, CO2 cartridges there). While Sodastream, as Apple explains, tried to protect the CO2 cartridges under property and trademark law, Apple already technically excludes the installation of other operating systems and app stores and thus also the distribution of apps via other sales channels on its devices.

(252) Also with regard to the cases decided by the Federal Court of Justice in the energy sector, Apple does not see a sufficient basis for transferability to the case at hand.[203] Apple justifies this by stating that "once a consumer buys a smart device, there is no need for additional operating systems or app stores." It is precisely this circumstance that makes the above-cited case law suitable for comparison in the Decision Division's view. Apple offers a durable, expensive product (iPhone), pre-installs its operating system, and updates it at regular intervals. From the Decision Division's perspective, it is important in this context that the iPhone user cannot switch to another operating system or another app store, just as owners of an oil heating system cannot use pellets or gas in their heating system. Switching to a different heating system (primary product) is therefore equivalent to changing the device. In conclusion, this suggests that the primary/secondary market configuration outlined above also exists in the present case, but it does not suggest that there is competition between systems which from the users' point of view are equivalent. This is because the purchase of a mobile device is intended for long-term use; the subsequent need necessarily relates to the proprietary operating systems and app stores installed on these mobile devices.

(253) In connection with primary and secondary market configurations, Apple also refers to the "EFIM case law" of the European Court, which established a few criteria

---

202 See Apple's comments on the Decision Division's draft decision of 5 January 2023, paras. 115 et seqq. (folios 3,232 et seq. of the case file).

203 See Apple's comments on the Decision Division's draft decision of 5 January 2023, paras. 118 et seqq. (folios 3,233 et seq. of the case file).

("EFIM test") regarding the question of whether the risk of sales losses on the primary market can restrict conduct on the relevant secondary markets. According to Apple, however, the case law is not even applicable in this respect because the present case does not involve such a primary/secondary market configuration. On the one hand, according to Apple, there are no separate offers and thus no separate pricing for iOS and the App Store. On the other hand, in the company's view the App Store is not necessary to use the essential functions of the device. According to Apple, this also clearly distinguishes the configuration from the cases addressed in the case law. Finally, Apple holds that the subsequent purchases do not relate to the App Store as such, but only to the apps distributed via the App Store. The latter argument is consistent with the submission regarding the inapplicability of the case law handed down by the Federal Court of Justice in the "Sodastream II" case (see para. (251)).[204]

(254) The first two arguments mentioned above are also not sustainable. On the one hand, it was clarified with the 9th amendment to the GWB at the latest that a market within the meaning of the GWB can also exist for goods and services that are provided free of charge (Section 18 (2a) GWB). On the other hand, the investigations and the information provided by Apple to date do not provide any indications that Apple users, to a considerable extent, do not use the central distribution platform, the App Store, for app applications and services. Apple itself places the App Store at the centre of what it sees as an integrated system and a unique user experience around its own hardware products. Apple has not made any statements on this beyond its assertions. In addition, if users theoretically choose not to use the App Store, this does not represent a relevant alternative for the purposes of the market definition.

(255) Apple's economic experts also point out that a primary/secondary market configuration does not exist for two further reasons. They hold that, on the one hand, consumers regularly buy smartphones with a view to the entire associated ecosystem. In their view, past experiences with the ecosystem as well as experiences gained in their social environment lead to the fact that consumers are informed about the ecosystem. In their opinion, it can therefore be assumed that

[204] See Apple's comments on the Decision Division's draft decision of 5 January 2023, paras. 107 et seqq. (folios 3,229 et seqq. of the case file).

consumers are able to make informed decisions about the life cycle costs of the primary product (note by the Decision Division: in this case the smartphone). Apple's experts also point out that, on the other hand, there are no lock-in effects in the secondary markets, as consumers can regularly purchase new smartphones and sell old devices on second-hand markets. In their view, it is therefore to be expected that consumers will quickly refrain from using Apple devices, for example, if the quality of the App Store deteriorates.[205]

(256) The experts' submissions are not convincing. New purchases of a device and the possibility of being able to sell this device later on second-hand markets do not prevent users from being locked-in on the secondary markets. This is because the often substantial expenses of Apple customers, e.g., in the App Store for apps (see para. (296)), are sunk costs outside of subscriptions; they cannot be reversed by selling the device when switching ecosystems. Moreover, sales of used devices are generally associated with considerable losses in value, which increase with the age and degree of use of the device. In addition, at least some Apple products cannot be used with Android devices, or only to a limited extent. This can additionally increase the loss of value due to switching ecosystems. Furthermore, past experience with regard to the device and thus the *primary market* is not suitable for estimating *future* expenses, for example for apps, in the *secondary market.* This is true not only because it is not to be expected that users can anticipate, for example, app purchases for two years into the future. Rather, the future quality of the App Store and the pricing of access to it (especially via the commissions to be paid to Apple for app purchases) are not within the users' sphere of influence. Thus, since in the past the system market logic was usually rejected for comparatively simple "follow-up needs" such as razor blades or CO2 cartridges, it is not evident that this logic should be applied to follow-up expenses that are more complex in terms of forecast.

(257) It is true, as Apple also states, that the operating system is not available separately and that the device cannot be used without the respective operating system. However, another argument against regarding Apple's activities as being pooled in a system market could be, in addition to the above-mentioned case law and

---

205 E.CA Economics "User perspective in mobile ecosystems' competition" (pp. 10 et seq.) dated 23 December 2022, folios 3,104 et seqq. of the case file.

administrative practice, is the fact that the relevant demand sides of the market also differ. For example, the end customers' demand may relate to the device including the operating system, but the app publishers' demand relates to access to the operating system's essential elements and not to the purchase of the mobile device. Thus, the operating system and app store are platform products that serve multiple sides of the market. Both address at least end users on the one hand and app publishers on the other. However, this does not apply to the mobile device markets. They are aimed exclusively at end users.

(258) Ultimately, however, it can be left open whether Apple's proprietary mobile operating systems (iOS, iPadOS, watchOS) belong to the relevant device market from the end customer's point of view or whether they also form independent product markets. This is because Apple has dominant, or at least strong, market positions in the markets for mobile devices as well as for proprietary operating systems and the App Store, regardless of whether one assumes that there are separate markets with regard to operating systems or a uniform market consisting of mobile devices and operating systems.

(259) The markets in detail:

(2) Smartphones

(260) Apple is not exposed to any substantial competition within the meaning of Section 18 (1) no. 2 GWB on the market for smartphones, which is at least Europe-wide (on the market definition see i.), or has a paramount market position in relation to its competitors pursuant to Section 18 (1) no. 3 GWB.

(261) This is based first and foremost on market structure considerations. Apple's market share remains stable above the presumption threshold for single market dominance, and there is also a considerable and continuous gap to all other market participants (see ii.). This circumstance is all the more serious because the market for smartphones is characterised by considerable price differences and the associated strong segmentation (see iii.). In addition, there are stable customer preferences and high barriers to switching in the smartphone market (see iv.). Empirical evidence also shows hardly any switching between the iPhone on the one hand and Android-based smartphones on the other hand (see v.). The market result, which is characterised by Apple achieving extraordinarily high margins,

supports this finding (see vi.). Apple's dominant position is supported by considerable resources (see vii.) and privileged access to data (see viii.). As a result (see interim result ix.)), Apple dominates the at least Europe-wide market for smartphones. Even if Apple does not dominate the smartphone market, it certainly occupies a strong market position or position of power in this market (see x.).

i. Market definition

(262) Smartphones are mobile phones with an extended range of functions. What smartphones and basic mobile phones have in common is that they are mobile devices with which users can make phone calls and send short messages (SMS); some mobile phones are also equipped with a camera. Unlike mobile phones, however, smartphones are equipped with a range of additional services such as electronic mail (email), World Wide Web (WWW), appointment calendars, navigation as well as recording and playback of audiovisual content. Compared to conventional mobile phones, smartphones run complex operating systems such as Android or Apple iOS. The extensive possibility created by this for end users to install further applications (apps) gives smartphones a significantly expandable and customisable range of functions. In the Decision Division's opinion, they are therefore not interchangeable with simple mobile phones and belong to a separate relevant product market. However, this question of delimitation is ultimately not relevant to the decision. The share of simple mobile phones in total sales in Germany was only around 5% in the year 2021, the revenue share associated with this was only around 0.5% (see the GfK figure below[206]).

206 Excerpt from [redacted] response (investigation file hardware manufacturer) to the Decision Division's request for information of 9 November 2021, (folios 1,511 et seqq. of the case file).

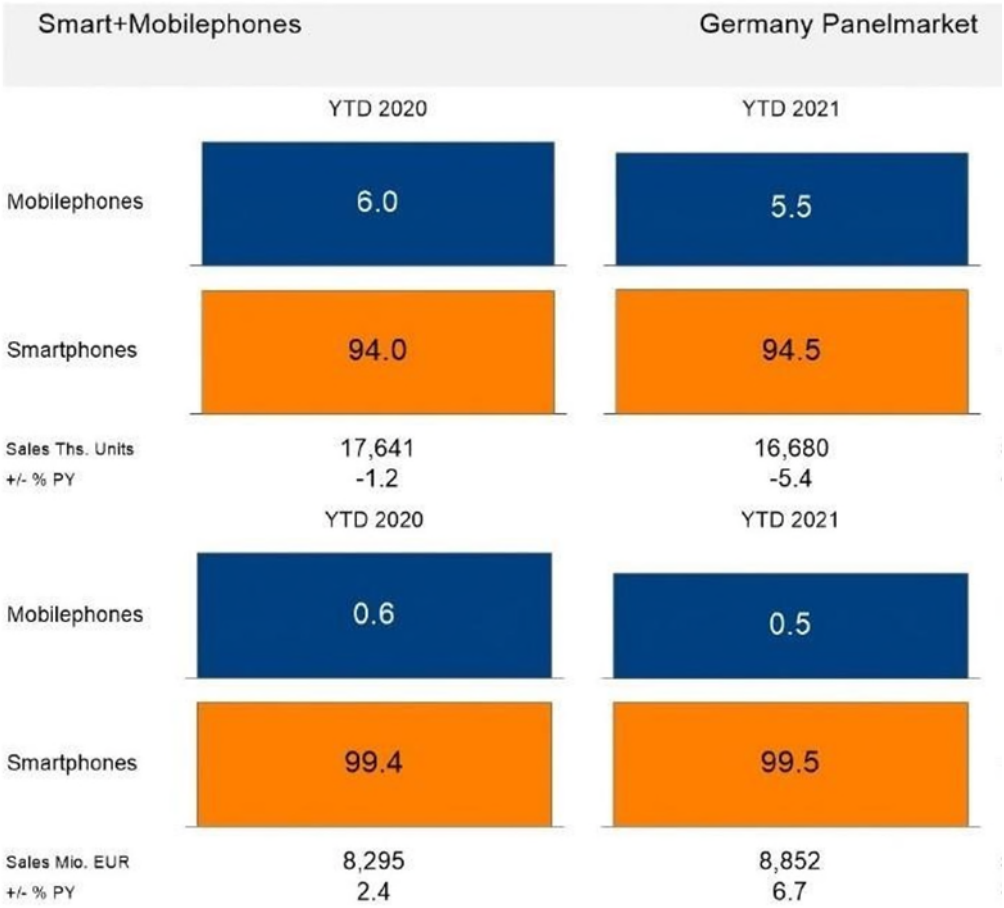

Figure 5 – GfK smartphones vs. mobile phones 2020/21

(263) The question also arises as to whether tablet computers also belong to the market for smartphones – in which case they are more likely to be referred to collectively as "smart mobile devices". In 2012, for example, the European Commission combined both device categories within a single relevant product market in the *Google/Motorola*[207] proceedings.

(264) In the present case, on the other hand, the investigations have shown that smartphones and tablets belong to separate product markets due to their different intended purposes of use and range of functions. This is true despite a certain degree of supply-side substitutability. This view is held by almost all the

207 European Commission, decision of 13 February 2012, *Google/Motorola* (M.6381), paras. 37 et seqq.

manufacturers of smartphones and other mobile hardware surveyed (around 90%).[208] In this context, the companies surveyed frequently point to the two products' different purposes of use intended by end consumers. While smartphones have an extremely broad range of applications and have become a "constant companion in all situations," the (somewhat) larger tablets are often delivered without a mobile telecommunications chip and are used for more immobile media use. According to GfK data, around 80% of tablets are shipped without a mobile telecommunications chip.[209] Accordingly, mobile use is dependent on an external data connection, for example via WLAN, and the conventional telephone function is not possible via a mobile network. In addition, according to publicly available data, the average daily usage time for smartphones is many times higher than for tablets.[210]

(265) As a result, the Decision Division has come to the conclusion that smartphones and tablets each form independent product markets due to their different purposes and device characteristics. Nevertheless, this distinction is not relevant for the purpose of examining market dominance. For even if tablets and smartphones formed a common market for "smart mobile devices", Apple would not be exposed to any substantial competition in this market either, and would in any case occupy a strong position of power.

(266) Apple is of the opinion that the relevant product market cannot be limited to the respective devices. Instead, from Apple's point of view, a market for ecosystems is to be taken as a basis, consisting of device, operating system and App Store. The arguments Apple puts forward in favour of this view coincide with the arguments against defining the market on the basis of primary and secondary markets. To avoid repetition, reference can therefore be made at this point to para.s (241), (250) et seqq.

(267) Apple's economic experts also argue that there is only a demand for access to the "mobile ecosystem", which is based on an informed purchase decision on the basis

---

208 See note "Evaluation of the survey of hardware manufacturers" – Annex 1 "Results of the quantitative evaluation", p. 24 (investigation file hardware manufacturers).

209 Excerpt from [redacted] response (investigation file hardware manufacturer) to the Decision Division's request for information of 9 November 2021, (folio 1,511 et seqq. of the case file).

210 https://de.statista.com/statistik/daten/studie/715026/umfrage/nutzungsdauer-von-smartphone-tablet- laptop-und-tv-in-deutschland/ [1 May 2022]

of *all* components of the ecosystem, including a uniform demand for iPhone, iOS and App Store. In their view, such bundling into a single ecosystem market also results from the European Commission's Guidelines on Vertical Restraints if different product ranges from a company's portfolio represent substitutes from the customer's point of view.[211]

(268) These arguments are ultimately not convincing either. First, it should be noted that such a market definition of "access to the ecosystem" is not compatible with the concept of demand-side substitutability. In a bundled offer such as an ecosystem, different markets, whether one-sided or multi-sided, can be affected. For one, Apple's ecosystem includes multiple offers based on different mobile devices. Users can gain mobile access to Apple's ecosystem via iPhones, iPads, the Apple Watch, or even MacBooks. Apple's ecosystem consists of a variety of hardware products, apps and services, as described in paras. (35) et seq., and is neither vertically nor horizontally limited to the iPhone, iOS and the App Store. For example, according to data provided by Apple, as at 31 July 2021, [60-70]% of apps published in the iPhone and iPad App Stores were available for both devices.[212] Both apps for iPhones and iPads can be downloaded from the Mac Store on Macs and Macbooks with Apple M-series processors.

(269) However, due to their differentiated functionalities, there is no evidence to suggest that the mobile devices mentioned above, based solely on the access to the Apple ecosystem, are substitutes for each other from the customer's point of view. For details, please refer to the corresponding remarks on market definition.

(270) The reference to the European Commission's Guidelines on Vertical Restraints, which in the context of the assessment of selective distribution systems under competition law point out that in markets in which "generally a bundle of products or services is offered", such a combination may be appropriate, does not change this. In the present case, the necessary consideration of different market counterparts is already an argument against such an interpretation. It is not evident that conclusions or analogies with regard to the special configuration at hand are

---

211 E.CA Economics "User perspective in mobile ecosystems' competition" (pp. 6 et seqq.) dated 23 December 2022, folios 3,100 et seqq. of the case file

212 Evaluation of the data set provided by Apple by mail of 26 August 2021 in response to question 4.4 of the Decision Division's request for information of 10 August 2021, folio 140 et seqq. of the case file.

warranted or even obvious based on the reference to the European Commission's Guidelines on Vertical Restraints with a direct B-2-B relation, according to which it is possible to take into consideration entire "product ranges" of a portfolio-like nature, for example in the cosmetics sector.

(271) The findings are also independent of the regional structure of the markets, i.e. the geographic market definition. First of all, there are no indications from the investigations that Apple pursues a fundamentally different product policy with differentiated products and services or different investment decisions depending on the sales region.

(272) However, it cannot be assumed that competitive conditions are homogeneous worldwide. The share of higher-priced devices in Africa and India, for example, is very low. Transsion leads the African market by a wide margin.[213] This is a Chinese supplier whose products focus on the needs of the African market. The devices have multiple SIM card slots to compensate for possible regional deficiencies in network coverage, as well as powerful batteries, since the power grid in many African countries is also comparatively unstable. Transsion is expanding its activities into other regions that are comparable in this respect, such as India and the Middle East, but does not play a role in North America or Europe, for example. In this respect, the conditions of competition are not throughout homogeneous.

(273) In the Google/Motorola proceedings, the European Commission based its findings on markets that encompass at least the European Economic Area (EEA). In the following, the Decision Division also bases its market structure analysis on Europe-wide markets, but always supplements the data with domestic (German) and worldwide market structure data. However, the latter also include the regions mentioned above and are therefore of limited informative value. But since according to the data available neither the identified market structure nor the qualitative elements underlying the finding of market dominance, such as customer preferences and the associated switching behaviour, the company's access to resources and the extent of its access to data, depend on the geographic market definition, the issue of exactly defining the geographic market is not relevant to the decision.

213 https://www.theafricareport.com/73472/chinastranssion-dominates-smartphone-market-in-africa/[1 April 2022]

ii. Market structure and concentration

(274) Apple's consistently high market share as well as its considerable market share lead over all other smartphone manufacturers are important indications that Apple dominates the market for smartphones (Section 18 (3) no. 1 GWB).[214]

(275) On a Europe-wide basis[215], Apple had a market share of 50-55% in 2020 and in the first three quarters of 2021, measured in terms of smartphone sales. This share is well above the presumption threshold for single market dominance under Section 18 (4) GWB.[216] In addition, the market share lead over the next largest competitor, Samsung, is considerable. Apple's market share is more than twice as high. Samsung only has a share of 25-30%.[217]

(276) Against this background, the market is highly concentrated, as expected. Next to the two companies Apple and Samsung, there are only a few providers that have any significant market share at all. In Europe, besides Apple and Samsung, only Huawei and Xiaomi achieved market shares of just above 5% in 2020 and the first three quarters of 2021.[218] The Herfindahl-Hirschman Index (HHI) was above 3,800 points in 2020 and the first three quarters of 2021.

(277) The HHI adds up the squared market shares of the suppliers in the relevant market. In this respect, it also provides aggregate information on the market importance of other competitors in the relevant markets and thus on the degree of concentration

---

214 See Bundeskartellamt "Guidance on Substantive Merger Control", March 2012, paras. 32 et seq. with reference to Federal Court of Justice, decision of 21 December 2004, WuW/E DE-R 1419, 1424 – *Deutsche Post/trans-o-flex*, para. 25 (juris) (market share of 65%); Federal Court of Justice, decision of 13 July 2004, WuW/E DE-R, 1301, 1303 – *Sanacorp/ANZAG*, para. 18 (juris) (market shares of more than 55%) and, with regard to European case law, ECJ, decision of 6 July, 2010, Case T-342/07 – *Ryanair/Commission*, para. 41 with further references (market shares of more than 50%); and previously, inter alia, ECJ, decision of 25 March, 1999, Case T-102/96 – *Gencor/Commission*, paras. 205 et seqq. (market shares of 60-89%); ECJ, decision of 28 April 1999, Case T-221/95 – *Endemol/Commission*, paras. 133 et seq. (market shares of well over 50% with a clear lead over other competitors).

215 Defined as EEA + Switzerland + UK. This means: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Liechtenstein, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, United Kingdom.

216 Apple's market share in terms of value is also above 40-45% on a global basis. In Germany, Apple's market share is 45-50%. See note "Evaluation of the survey of hardware manufacturers" – Annex 1 "Results of the quantitative evaluation", pp. 7 et seqq.

217 Samsung's market share in 2020 was 10-20% worldwide and 30-35% in Germany, ibid.

218 In 2021, Huawei almost completely disappeared from the European market due to trade restrictions on the purchase of components for the Android operating system provided by Google, such as the Google Play Store, as well as other apps and important system components that are not part of the "core" Android operating system published under an open source licence.

overall.[219] The HHI theoretically takes on values between 0 (atomistic market structure) and 10,000 (monopoly).

(278) The HHI on the market for smartphones can therefore be regarded as high. The degree of concentration plays an important role both in abuse control and in merger control. In merger control proceedings, for example, the European Commission considers only very small increases, such as a merger-related delta of less than 150 points, to be generally unobjectionable in constellations above 2,000 points.[220] According to the US guidelines of the DoJ and the FTC, a market with an HHI above 2,500 points is characterised as a "highly concentrated market". In merger control cases, a merger-related delta of 200 points or more in such concentrated markets gives rise to a presumption that the conditions for prohibition are met.[221]

---

219 Röller, Strohn, Economic Analysis of the Concept of "significant impediment to effective competition," paras. 46 et seqq. (available at http://ec.europa.eu/dgs/competition/economist/muenchner_kommentar.pdf [10 December 2019])

220 See Guidelines on the Assessment of Horizontal Mergers under the Council Regulation on the Control of Concentrations between Undertakings (2004 /C 31/03) of 5 February 2004, para. 19 (argumentum a contrario).

221 Department of Justice & Federal Trade Commission, Horizontal Merger Guidelines of 19 August 2010, para. 20.

	2017	2018	2019	2020	Q1-Q3 2021
Apple	[45-50]%	[45-50]%	[45-50]%	[50-55]%	[50-55]%
Samsung	[30-35]%	[25-30]%	[25-30]%	[25-30]%	[25-30]%
Xiaomi	[0-1]%	.	[1-5]%	[5-10]%	[5-10]%
Oppo	.	[0-1]%	[0-1]%	.	[1-5]%
Sicherheitszuschlag	[1-5]%	[1-5]%	[1-5]%	[1-5]%	[1-5]%
ZTE	[0-1]%	[0-1]%	[0-1]%	[0-1]%	[0-1]%
Google	[0-1]%	[0-1]%	[0-1]%	[0-1]%	[0-1]%
Sony	[1-5]%	.	[0-1]%	[0-1]%	[0-1]%
Microsoft	.	.	.	.	[0-1]%
TCL	[0-1]%	[0-1]%	[0-1]%	[0-1]%	[0-1]%
Huawei	[5-10]%	[10-15]%	[10-15]%	[5-10]%	[0-1]%
Vivo	.	.	.	[0-1]%	[0-1]%
LG	.	[0-1]%	[0-1]%	[0-1]%	[0-1]%
ASUS	[0-1]%	[0-1]%	[0-1]%	[0-1]%	[0-1]%
Acer	[0-1]%	.	.	.	.
HP	[0-1]%	.	.	.	.
Lenovo	.	[0-1]%	[0-1]%	[0-1]%	.
Summe	100%	100%	100%	100%	100%
HHI	3.670	3.663	3.609	3.805	4.030
Marktvolumen in Mrd. €	42,9	48,9	45,3	43,0	33,1

Figure 6 Market structure smartphones Europe 2017-2021[222]

(279) The market share structure is also stable. Apple's market share, measured in terms of smartphone sales, also lies within a range of 45-50% over a five-year period between 2017 and 2021; since 2020, it has continued to increase further. Figure 6 summarises the main elements of the market structure for the European market as determined by the Decision Division.

(280) Apple believes that the revenue-based market structure is not informative. In Apple's view, the significant differences in average prices are due to differences in quality and equipment and not to the scope of action not controlled by competition. In addition, Apple believes that in the context of Apple's significance for competition across markets, market structure analyses based on sales volumes

222 See Annex 1 "Results of the quantitative evaluation", pp. 9 et seq. for the note "Evaluation of the survey of hardware manufacturers". This also includes detailed information on the calculation of the safety margins, insofar as their consideration is necessary (pp. 4 et seqq.) (investigation file hardware manufacturer).

are better suited to grasp the lower degree of importance of Apple's devices as an access channel to users in downstream markets compared to devices with an Android operating system.[223]

(281) Apple's criticism of the value-based approach is not convincing. It is standard practice in the application of competition law to resort to value-based approaches when the prices of the products differ significantly. The authority's guidelines on market dominance in merger control explicitly refer to price and quality differences in the case of heterogeneous products:

> *"As a rule, the Bundeskartellamt calculates market shares according to the turnover or sales which the companies achieve on the relevant market affected. A calculation based on either turnover or sales can be more appropriate, depending on the nature and characteristics of the products concerned; possibly a comparison between the two approaches can also be informative. Turnover-based market shares often better reflect the relative competitive position and importance of suppliers because they automatically take account of price and quality differences between heterogeneous products. An assessment based on volume can suffice if this provides an (equally) reliable picture of the market structure, e.g. on account of fewer differences in price and quality."*[224]

(282) To the extent that issues relating to the purely quantitative consideration of Apple's sales figures in the analysis of the market penetration of Apple's mobile devices and the Apple ecosystem as a whole are actually relevant in this decision, they are also addressed and raised in this sense. This applies, for example, to the number of globally active devices or similar facts. However, it is not obvious why these configurations should affect the pure market share representation of a heterogeneous product (the characterisation of mobile devices as heteregeneous products is also stated by Apple itself).

---

223 See Apple's comments on the Decision Division's draft decision of 5 January (paras. 56 et seqq. (folio 3,216 of the case file) with reference to the expert opinion of E.CA Economics "Market share and survey methodology" (pp. 6-11, folios 3,149-3,154) dated 23 December 2022.

224 Bundeskartellamt, Guidance on Substantive Merger Control, March 2012, para. 28.

(283) Apple's economic experts further criticise the exchange rates used in the preparation of the revenue-based market structure and the method of taking into account Apple's quarterly figures for 2021, which overstate Apple's market share.[225] The Decision Division took this information into account without further review and modified the respective market share calculations as far as possible on the basis of these assumptions preferred by Apple.[226] There were no substantial changes compared to the original draft decision; the effects partially neutralise each other.

iii. Price differences and segmentation

(284) In terms of units sold, Apple's market share is lower than in terms of revenue. The reason for these diverging market shares in terms of volume and revenue is the high average price that Apple's iPhones achieve compared with other smartphones. According to publicly available statistics, the average retail price of an iPhone in 2021 is around USD 825, whereas Android-based smartphones are sold for significantly less than USD 300 on average. The average retail price for Samsung was USD 263, for Xiaomi around USD 250, for Oppo around USD 259 and for Vivo around USD 259.[227]

(285) [redacted] Over time, both Apple's price for the iPhone and the difference in price compared with the other smartphone manufacturers have increased. Incidentally, the CMA also notes in its "Mobile

225 See Apple's comments on the Decision Division's draft decision of 5 January (para. 55 with reference to the expert opinion of E.CA Economics "Market share and survey methodology" (pg. 6-11) dated 23 December 2022.

226 The Decision Division has fully considered and implemented Apple's comment regarding exchange rates. The effects of the fact that Apple's 1st quarter of the financial year corresponds to the 4th quarter of the calendar year was reviewed on the basis of Apple's quarterly reports for the iPhone and iPad products and the "wearables" product category, based on global revenue figures. In 2021, Apple's global smartphone market share declined by just under 4 pp. In Apple's favour, this approach was also applied to the European market relevant here.

227 https://www.counterpointresearch.com/global-smartphone-revenue-hits-record-450-billion-2021-apple-captures-highest-ever-share-q4-2021/ [1 May 2022]

228 Apple's response 2 October 2021 to the Decision Division's request for information dated 10 August 2021, financial update March 2021, file no. 00000395, sheet 28, folio 922 of the case file.

Ecosystems" market investigation that the "price gap" between Apple's iPhone on the one hand and Android smartphones on the other has increased since 2017.[229]

(286) The Decision Division's investigations confirm these substantial differences in prices as well as their rising trend for the overall European market. For example, the percentage markup in net selling price that Apple earned between 2017 and 2021 compared to the average of all other smartphone manufacturers in Europe was on average more than 150%.[230] In other words, an iPhone is on average significantly more than twice as expensive as all other smartphones. In addition, the annual rates of increase in the price gap rose by an average of 9.5% between 2017 and 2021.[231]

(287) The considerable, permanent and increasing price differences between Android and Apple smartphones alone are not in themselves sufficient evidence of an independent intended purpose of use and thus an independent market for high-priced smartphones. Independent submarkets exist at best when expensive goods create a special benefit, such as in the case of luxury and exclusive products. According to the Bundeskartellamt's previous decisions, cosmetics in the upper price range, for example, form a separate market. Similarly, the market for watches is to be segmented into submarkets for normal, high-priced and luxury watches on the basis of special and clearly definable quality characteristics.[232] However, in the Decision Division's opinion, the luxury and prestige image in the present case is in any case not so essential for customers that it becomes a separate product characteristic with the consequence of segmenting the market.

(288) Apple is of the opinion that Apple's higher average prices are not the result of a scope of action not controlled by competition, but rather reflect technical leads in development and an expanded range of functionalities.[233] However, if these leads

---

229 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1048746/MobileEcosystems_InterimReport.pdf , p. 175 [8 February 2022].

230 On a global basis, the price differences are even more pronounced. Here, the net selling price for the iPhone is continuously three to four times higher than the average price of an Android smartphone.

231 See note "Evaluation of the survey of hardware manufacturers" – Annex 1 "Results of the quantitative evaluation", p. 9. (investigation file hardware manufacturer).

232 See Bardong in Langen/Bunte, 13th ed., § 18 GWB, para. 34 with reference to KG, judgment of 4 April 1978 *Rama-Mädchen,* WuW/E OLG 1983 et seq., KG judgment of 24 April1985 *Hussel/Mara,* WuW/E OLG 3577, 3584 and BKartA, 1 December 2000 *Richemont/LMH,* WuW/E DE-V 385 et seq.

233 See Apple's comments on the Decision Division's draft decision of 5 January 2023, paras. 81 et seqq. (folios 3,223 et seq. of the case file).

in development were so significant and if deviations in the scope of functionalities were as pronounced as Apple suggests, it would be more appropriate to look at the smartphones of the upper-range segment (also in terms of price).

(289) However, such a segmentation of the overall market by price ranges in combination with a volume-based analysis would result in an even higher market share for Apple. For October 2021, GfK (Figure 7) estimates Apple's market share in terms of volume for the German market to be around 75% for upper-range smartphones costing more than EUR 700, whereas Apple is not represented at all in the entry-level segment with a price below EUR 350.

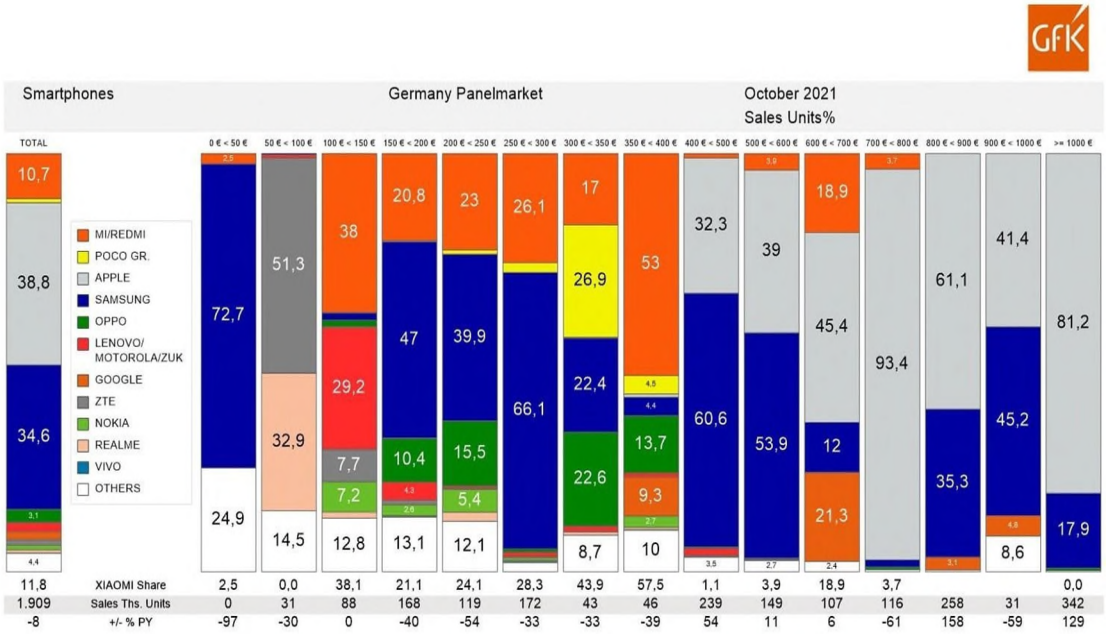

Figure 7 Market share smartphones (volume) Germany October 2021[234]

(290) Smartphones costing more than EUR 700 still represented 40% of all devices sold in Germany in October 2021. For smartphones costing more than EUR 1,000, Apple's market share was even over 80%. Apple is in principle right in pointing out that the price difference between Apple and the other device manufacturers for high-priced smartphones above EUR 500 is smaller. In Apple's view, the Decision Division therefore fails to recognise that Apple's competitive scope of action with regard to the price is controlled by the existence of these high-priced smartphones.[235] However, in view of the dominance in the upper-range described

234 Excerpt from [redacted] response (investigation file hardware manufacturers) to the Decision Division's request for information of 9 November 2021 (folios 1,511 et seqq. of the case file).

235 E.CA Economics "User perspective in mobile ecosystems' competition" (p. 20, folio 3,114 of the case file) dated 23 December 2022.

above, the reference by Apple and its experts to the fact that Android manufacturers also offer high-priced smartphones is ineffective.

iv. Customer preferences and barriers to switching

(291) The reason for the low competitive pressure, which allows Apple to pursue an independent pricing policy that is largely separate from other smartphone providers, is customer preferences on the one hand and switching-related barriers or costs on the other. Customer preferences and switching costs are important for assessing a company's market position, especially in the case of differentiated products. This is because both have a significant influence on the interchangeability of products from the customers' point of view and thus the competitive pressure exerted on one another by the individual suppliers (Section 18 (3) no. 9 GWB).[236]

(292) Customer preferences play an important role, especially in connection with established brands. If a branded product is regarded as a "must have" by customers or retailers, this can give the supplier a competitive scope of action which is not adequately reflected by its market share alone. The aspect of switching costs captures (consequential) costs and the considerable (time) effort that may be involved for customers in switching providers. If, due to these costs, providers do not have to fear that even a small price increase or deterioration in the service will cause a significant number of customers to switch, this strengthens the market position of the companies in question.

(293) With regard to Apple's position on the markets, both aspects, customer preferences and switching costs, play an important role. As a result, both extremely high customer loyalty and high systemic switching costs mean that there is hardly any switching between Apple customers on the one hand and customers of smartphones running on the Android operating system on the other.

(294) [redacted] Apple is also a very strong premium

236 Bundeskartellamt, Guidance on Substantive Merger Control, March 2012, paras. 42 et seqq.

237 Apple's response of 22 January 2022 to the Decision Division's request for information dated 10 August 2021, internal documents Financial Update Nov. 21, file 00001543, slide 66, folio 2,261 of the case file.

brand[238] which, according to market research institutes, has extraordinarily high emotional values. For example, GfK produced the figure below on behalf of a smartphone manufacturer, which shows that Apple is undisputedly perceived as a high-priced premium brand.[239] Apple itself points out in this context that its customers expect outstanding quality, innovative design, ease of use and high data protection.[240]

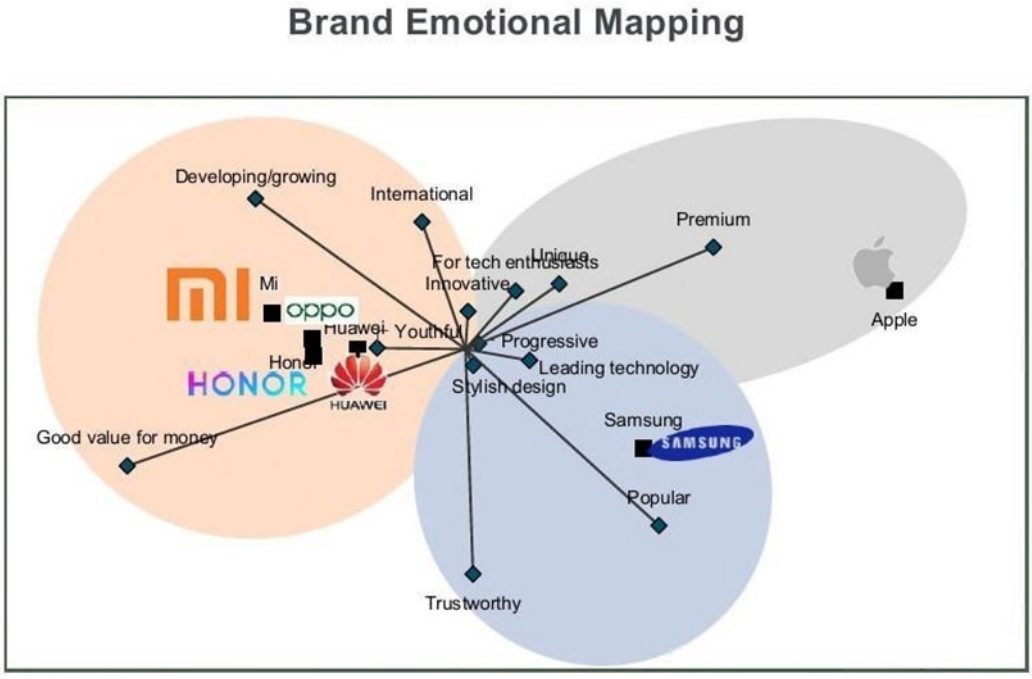

Figure 8 GfK Brand Emotional Mapping

(295) In addition, switching smartphones, i.e. switching out of the Apple ecosystem, is likely to involve extraordinarily high monetary and non-monetary switching costs.

(296) In addition to the cost of purchasing a new smartphone, the monetary costs also include the renewed purchase of paid apps and in-app content that cannot be migrated when switching the system. Apple has indicated that the cumulative average expenses spent on apps and in-app purchases (here excluding generally portable subscriptions) from January 2019 to June 2021 per active Apple ID

238 Apple is currently the second most valuable brand in the world, with a valued USD 612 billion (https://de.statista.com/statistics/data/study/6003/survey/the-most-valuable-brands-worldwide/ [28 December 2021]).

239 Excerpt from [redacted] response (investigation file hardware manufacturers) to the Decision Division's request for information of 9 November 2021 (folios 1,511 et seqq. of the case file).

240 See, for example, Tim Cook's testimony before the House of Representatives subcommittee on 29 July 2020, https://docs.house.gov/meetings/JU/JU05/20200729/110883/HHRG-116-JU05-Wstate-CookT-20200729.pdf [1 May 2022].

worldwide was on average USD [600-700].[241] In addition, many consumers have been Apple customers for years, so that the total cumulative expense amounts are likely to be significantly higher in many cases if more distant periods are taken into account.

(297) Huawei was accused of espionage by the US in the course of the trade dispute between China and the US. As a result, Huawei lost its Android licence and developed its own operating system. In this context, Apple's economic experts argue that the migration of Huawei customers to other smartphone manufacturers as a result of the sanction-related removal of Google products from Huawei's end devices in 2020 is the result of a high willingness to switch (and thus low switching barriers or hardly pronounced lock-in effects) as a result of a deterioration in quality.[242]

(298) This view cannot be accepted. Instead, the Decision Division is of the opinion that Huawei's dwindling market significance in Europe and the USA is a strong indication of an app store-related lock-in of consumers. The ban on Google products on Huawei end devices makes them largely worthless for users who bought this phone as an Android phone with the corresponding Google services. The declining sales figures prove and show the success of the sanction aimed at this effect. If the users had purchased a new Huawei device without the Google Play Store, they would have lost access to their previously purchased app store content and access to other Google services. This led to a migration to other device manufacturers, such as Oppo and Xiaomi in particular (see para. (324)), which are also equipped with the Android operating system but also the full range of Google products and Google services. After logging into the Google Play Store, users could download their previously purchased content without incurring new costs.

(299) In addition, there is the possible new acquisition of supplementary hardware that is integrated into the iOS ecosystem. Many Apple users do not only own an Apple

---

241 Apple's response of 5 November 2021 (sheet 5.5, folio 1,490 of the case file) to the Decision Division's request for information dated 10 August 2021. For European customers, the median spend is USD [400-500]; for German customers, the median spend is USD [400-500]. The median of the expenditure amount is significantly below the mean at around USD [100-200], but this does not change the general assessment of further "sunk costs" exceeding the device price.

242 E.CA Economics "User perspective in mobile ecosystems' competition" (p. 10, folio 3,104 of the case file) dated 23 December 2022

device, but a whole range of products that are manufactured either by Apple itself or by third-party suppliers and are specially tailored to iOS. In addition to products from the "classic" areas of office and consumer electronics, these increasingly include products from the area of the "Internet of Things" or "Smart Home".[243] It remains unclear what Apple's reference to the fact that customers were presumably already aware of the associated incompatibilities with the Android system when purchasing the additional hardware[244] can do to change this circumstance and the associated switching barriers.

(300) In addition, costs that are not directly monetary but are nevertheless significant, such as the loss of access to Apple's functionalities such as the app "Where is?"[245], the device-connecting integration function "Continuity"[246] and the messaging app iMessage[247] should be taken into account when evaluating high switching costs or lock-in effects. Apple justifies the iOS-specific functionalities and connection-specific services, which ensure seamless connectivity between Apple devices, for example, with considerable corporate effort and significant investments. In Apple's view, they serve to improve the user experience, but are not lock-in factors.[248] This may be true, but it hardly relativises the existence of significant switching barriers for users that result from these functionalities and services. Switching barriers exist not only in connection with or as a result of active obstruction measures that make it difficult to switch devices, but can also occur as a result of incentive effects and interconnectivity, as in this case.

(301) Apple also points out that interoperability problems in connection with Apple's iMessage are significant not only for potential customers switching from Apple to

---

243 https://www.apple.com/de/ios/home/ [1 June 2022].

244 See Apple's comments on the Decision Division's draft decision of 5 January 2023, para. 76 (folio 3,222 of the case file).

245 https://www.apple.com/de/icloud/find-my/ [22 May 2022].

246 https://support.apple.com/de-de/guide/mac-help/mchl732d3c0a/mac [22 May 2022].

247 According to internal emails of high-ranking Apple employees, which were disclosed in the context of the lawsuit that the Fortnite developer Epic filed against Apple, Apple is very aware of the importance of iMessage as a barrier to switching. For example, Craig Federighi (SVP Software Development) wrote in connection with a discussion within the corporation regarding the potential opening of iMessage to Android: "iMessage on Android would simply serve to remove [an] obstacle to iPhone families giving their kids Android phones." See https://www.independent.co.uk/tech/apple-imessage-android-reason-b1828958.html [1 June 2022].

248 See Apple's comments on the Decision Division's draft decision of 5 January 2023, para. 75 (folio 3,222 of the case file).

Android, but also for customers switching in the other direction.[249] First of all, it should be generally emphasised in this context that barriers to switching from one system to another are not relativised by barriers to switching in the opposite direction. Specifically with regard to iMessage, however, it is neither evident nor was it stated how iMessage can act as a barrier to switching from Android to iOS. Apple's messaging service not only includes the display of iMessages between iOS devices, which are shown in blue, but also simple text messages involving at least one Android device, which are displayed in green. Android users do not experience any deterioration in quality when switching to iOS.

(302) In addition, the transfer of data and apps can be difficult, the use of a new smartphone system must be learned, data in apps and the cloud may not be portable or only to a limited extent, and shared family services are no longer available.

(303) Apple, on the other hand, denies difficulties in the migration process when transferring data, apps and subscriptions across devices and points to the corresponding migration tools, such as apps like "Samsung Switch" or "Switch to Android".[250] The Decision Division does not deny that manufacturers of Android-based devices in particular offer such apps. However, despite such offers, it cannot be assumed that there is a lack of switching barriers. For example, contact data and calendar entries stored in the iCloud cannot be transferred easily and without time-consuming intermediary steps via switching apps. In addition, paid apps and in-app content that cannot be migrated when switching systems must be purchased again.

(304) These requirements for switching to Android are countered by a conceivable simple device change (upgrade) within the Apple ecosystem. The entire Apple-internal device change is easily and intuitively possible via a wireless connection of the devices, which only requires their spatial proximity to each other and a screen and camera-controlled identification process (see figure below). Thus, with just a few clicks, a simple "mirror" of the old device is formed on the new device.

---

249 See Apple's comments on the Decision Division's draft decision of 5 January 2023, paras. 77 et seqq. (folios 3,222 et seq. of the case file).

250 See Apple's comments on the Decision Division's draft decision of 5 January 2023, paras. 70 et seqq. (folios 3,220 et seq. of the case file).

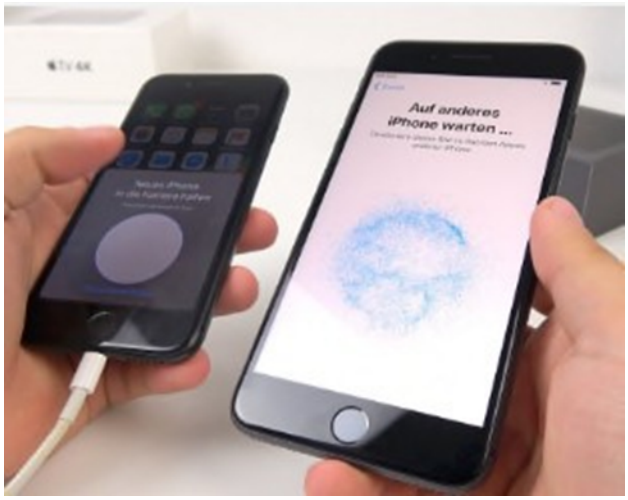

Figure 9 - iOS device upgrade

(305) To support the argument of low switching barriers, Apple's private experts cite a consumer survey conducted by the market research institute YouGov on behalf of the consulting firm Charles River Associates for Apple in the "Apple Pay" proceedings before the European Commission (AT.40452 Apple – Mobile Payments). This showed that between 37% and 73% of the German participants in the study, who had previously switched from an iOS device to an Android-based device according to their own statements, rated the switching process as "Easy" or "Very easy" with regard to various criteria such as data transfer and reinstallation of apps, depending on the criterion. The experts conclude from this that switching to another ecosystem is generally considered easy from the users' point of view and that this finding contradicts the Decision Division's assessment of the switching barriers.[251]

(306) The submissions by Apple's economic experts are not convincing. First of all, it must be noted that the aspects covered only address part of the switching barriers, such as usage restrictions as a result of learning effects and the difficulties in setting up a new smartphone. Significant aspects such as additional costs for the renewed acquisition of apps, data loss associated with the switch or compatibility problems with the device portfolio already purchased are not taken into account. It should also be noted that the answers are likely to be systematically distorted by self-selection. This is because the statements only come from the small proportion

251 E.CA Economics "User perspective in mobile ecosystems' competition" (pp. 26 et seqq. folio 3,120 of the case file) dated 23 December 2022.

of users who have actually switched ecosystems. The responses of these consumers – who may have an above-average affinity for technology – are clearly not representative of the much larger mass of consumers who have not switched ecosystems due to switching barriers (see also paras. (311) et seqq.). In addition, the answers of this small group of respondents are likely to be systematically distorted by the so-called prestige bias[252] known in the social sciences. It is known that respondents often strive in their answering behaviour to appear in a positive light. Therefore, they tend, consciously or unconsciously, to give answers that correspond to their self-image. Admitting to others that their own switching process was associated with difficulties could have been interpreted from the point of view of these respondents as an inability to cope with technical problems.

(307) Apple and its economic experts further argue that the low actual switching rates are not due to switching barriers, but to the high level of user satisfaction.[253] The private economic experts point out that this also results from the aforementioned YouGov consumer survey. According to this, both Apple customers and customers of other manufacturers are generally satisfied with their smartphones, with Apple customers being even more satisfied in a cross-comparison. The experts state that it could also be assumed that switches between ecosystems are particularly driven by dissatisfied customers. The survey results would show that consumers who switch from an iOS device to another iOS device (usually an upgrade) are considerably more satisfied than consumers who switch from an iOS device to an Android device. The experts conclude from this that no significant switching costs could exist, since otherwise the iOS-internal switchers would have to be significantly less satisfied.[254]

(308) In the Decision Division's view, this line of argument is not valid. Nor is it able to refute the technically and economically sound findings on switching barriers. First, it should be noted that consumer satisfaction ratings can be influenced by a variety of factors that are unrelated to switching costs. For example, in Europe, iPhones were on average about 150% more expensive than Android-based phones

252 See e.g. https://www.formpl.us/blog/prestige-bias-in-surveys-how-to-correct-it [30 January 2022].

253 See Apple's comments on the Decision Division's draft decision of 5 January 2023, paras. 79 et seq. (folio 3,223 et seq. of the case file) with reference to E.CA Economics "User perspective in mobile ecosystems' competition" (pp. 26 et seq. folios 3,120 et seq. of the case file) of 23 December 2022.

254 E.CA Economics "User perspective in mobile ecosystems' competition" (pp. 30 et seqq. folios 3,124 et seqq. of the case file) of 23 December 2022.

between 2017 and 2021. Higher satisfaction ratings for Apple devices may thus also be explained by the use of technically higher-quality devices in combination with the operating system and app store.

(309) The higher satisfaction of iOS-to-iOS switchers compared to iOS-to-Android switchers can, however, suggest from the Decision Division's point of view that high switching costs and consequently high switching barriers exist. In particular, users who decide to upgrade their iPhone do not incur any switching costs due to the new acquisition of apps, data loss or data transfer effort. Consequently, the users who decide to buy a new iPhone again, are expected to be more satisfied than users who had to bear substantial monetary and non-monetary costs when switching from iOS to Android.

(310) Finally, Apple's reference to parallel access to both ecosystems (multi-homing) or the fact that access to another ecosystem does not mean losing access to the "old" system is hardly convincing.[255] Multi-homing, i.e. the parallel use of both ecosystems by users, is understandably not widespread (see para. (455)). It is also not economically expedient due to the associated costs; in this respect, it is a largely theoretical consideration without significant practical relevance.

v. Hardly any switching between iPhone and Android-based smartphones

(311) Customers rarely switch between Apple's iPhone and Android-based smartphones. According to publicly available statistics over 90% of US Apple customers purchase an iPhone again when making a repeat purchase.[256]

[redacted]Apple's internal [redacted]

255 See Apple's comments on the Decision Division's draft decision of 5 January 2023, para. 78 (folios 3,222 et seq. of the case file).

256 https://www.gsmarena.com/cirp_over_90_of_apple_users_in_the_us_remain_loyal_to_the_company-news-51637.php [22 May 2022]

257 Apple's response of 22 January 2022 to the Decision Division's request for information dated 10 August 2021, Financial Update Feb.2021, file no. 00001142, slide 23, folio 1,991 of the case file.

[redacted]

(313) The Decision Division's investigations confirm these figures for the German market as well. In response to the Decision Division's request for information, the mobile telecommunications companies that account for at least one-third of the market volume of smartphone sales in Germany indicated that, in the consumer segment in Germany, an average of 89% of iPhone sales in the context of contract extensions were made by customers who had also opted for an iPhone in the previous contract period. For business customers, this figure was as high as 94% in Germany.[258]

(314) By contrast, switching between smartphone manufacturers which equip their devices with Google's Android is much more common (intra-brand switching). According to the survey, only 54% (consumers) and 59% (business customers) were loyal to their manufacturer brand. At 32% (consumers) and 30% (business customers), churn within Android smartphones was around three times more frequent than between Apple and an Android brand (13% and 12%).

[258] See the note "Quantitative analysis of the survey of telecommunications providers" (investigation file telecommunications providers).

(315) What is actually significant for the competitive pressure that is (potentially) exerted on Apple is not the number of switchers that Apple has gained, but above all the customers that Apple has lost to other smartphone manufacturers. According to the market research institute Kantar, only around 6.5% of the customers acquired by Samsung in Germany switched from Apple to Samsung in the first three quarters of 2021.[259] On the one hand, this order of magnitude has been stable over time, going back to 2018. It has also been stable in geographic terms. This is because it applies not only to Germany as a whole, but also to the five important European economies of Germany, Spain, France, the United Kingdom and Italy. In other words, far more than 90% of the customers Samsung gains come from another smartphone manufacturer that also uses Google's Android mobile operating system, and far less than 10% from Apple. Even Samsung, the second strongest manufacturer of high-end phones, is unable to persuade a relevant number of Apple customers to switch to Android.

(316) The findings of very low switching rates between Android-based smartphones and iPhones, which are supported by the investigations, are in line with the findings of other competition authorities. For example, the Dutch ACM found that only around 9% of customers in the Netherlands who purchased a smartphone in 2018 were switchers.[260]

(317) The British CMA assumes a similar order of magnitude in its "Market study final report – Mobile ecosystems" (5% in relation to new Android customers who were previously Apple customers and 8% in relation to new Apple customers who were previously Android customers).[261] The former figure is relevant for the present proceedings, as it sheds a light on the control of Apple's competitive scope of action.

(318) The investigative report of the responsible subcommittee in the US House of Representatives also addresses the very low switching rates with reference to a number of relevant studies and a survey of mobile telecommunications companies and app publishers:

---

259 Excerpt from [redacted] response (investigation file hardware manufacturers) to the Decision Division's request for information dated 9 November 2021 (folios 1,511 et seqq. of the case file).

260 https://www.acm.nl/sites/default/files/documents/marketstudy-into-mobile-app-stores.pdf, p. 53 [24 January 2022]

261 https://assets.publishing.service.gov.uk/media/62a22d5bd3bf7f036750b0d8/AppendixD002.pdf para. 1 [14 July 2022].

"There are significant barriers to switching between the dominant mobile operating systems. As a general matter, consumers rarely switch mobile operating systems. SellCell's 2019 survey found that more than 90% of users with iPhones tend to stick with Apple when they replace their current device. In 2018, Consumer Intelligence Research Partners reported that more than 85% of iOS users who purchased a new device purchased another iOS device, and more than 90% of Android users who bought a new device purchased a new Android device. A 2017 study from Morgan Stanley found that 92% of iPhone owners intending to buy a new mobile device planned to buy another iPhone. Mobile carriers – a main retail distribution channel for mobile devices – agreed that it is rare for customers to switch from one mobile OS because once customers are used to the mobile OS they generally do not switch. App developers also said in interviews with Subcommittee staff that they observed minimal customer switching between iOS and Android."[262]

vi. Market result supports finding of scope of action not sufficiently controlled by competition

(319) The market result clearly expresses this lack of customer switching and the resulting low competitive pressure from other smartphone manufacturers who use Google's Android on Apple's product and pricing policy as well as it´s market position. Despite the described price increases by Apple, there are no corresponding volume effects in the sense of customers migrating to smartphones with the Android operating system. This applies both to the absolute sales figures and to Apple's market share of all smartphones sold. While the average selling price is continuously increasing, iPhone sales have recently even risen significantly again after a significant decline in 2019. In the fiscal year 2021, Apple even

262 https://judiciary.house.gov/uploadedfiles/competition_in_digital_markets.pdf, pp. 102 et seq. [11 February 2022].

recorded an “all-time high”.[263]

(320) Against this backdrop, Apple’s market share in terms of unit sales has largely remained very stable. Apple consistently accounts for around 15-20% of smartphones sold worldwide and 25-30% of smartphones sold in Germany.[264] In Europe, the company continuously accounts for at least 25-30%.[265] Market entries and exits of various manufacturers using Google’s Android operating system do not affect Apple’s market position in the long term. This suggests that there is a close competitive relationship between Android smartphones, whereas Android devices are at best distant competitors from the perspective of Apple and its customers.

(321) This extraordinarily stable development is also a clear indication of high barriers to market entry (Section 18 (3) no. 6 GWB) in the market, at least as far as Apple’s market position is concerned. For example, the market entries of companies with ample resources at their disposal, such as Microsoft or Amazon, show on the one hand that, in case of doubt, traditional barriers to market entry, such as high development and research costs and economies of scale in production, can be overcome by companies with ample resources. On the other hand, however, they make it clear that these market entries do not represent a sufficient threat to Apple’s market position.

(322) Apple believes that the market is not characterised by “insurmountable barriers to market entry” and that new and successful entrants such as Xiaomi and OnePlus/OPPO may very well pose a threat to Apple’s market position.[266]

(323) As described above, it is to be agreed with Apple that there have been market entries despite the existing high barriers to market entry. Contrary to Apple’s view, however, market entries are not sufficient in themselves to limit the scope of action of a dominant company. Rather, market entries must be observable or expected to occur soon and to a sufficient extent to counterbalance a strong current market

---

263 https://de.statista.com/statistik/daten/studie/203584/umfrage/absatz-von-apple-iphones-seit-demgeschaeftsjahr-2007/#professional [29 December 2021]

264 https://de.statista.com/statistik/daten/studie/173056/umfrage/weltweite-marktanteile-der-smartphone-hersteller-seit-4-quartal-2009/ [27 December 2021]

265 See note “Evaluation of the survey of hardware manufacturers” – Annex 1 “Results of the quantitative evaluation”, p. 10 (investigation file hardware manufacturer).

266 See Apple’s comments on the Decision Division’s draft decision of 5 January 2023, paras. 91-93 (folios 3,225 et. seq. of the case file)

position. Thus, in Section 18 (3) no. 6 GWB, the legislators also take into account "legal or factual barriers to the market entry of other undertakings"; the adjective "insurmountable" added by Apple in the sense of "there is no market entry at all" is not found there.

(324) Therefore, the examples of the companies Xiaomi and OnePlus/OPPO cited by Apple are also not suitable to refute a market position of Apple that cannot be challenged by market entries. These companies gradually occupied Huawei's market position in the USA and Europe from 2020 onwards due to the trade dispute issue described above (see para. (297)). Their combined market share is below 5%. The blog entry[267] cited by Apple in this context, according to which OnePlus (2% sales share) has now overtaken Google's hardware division (1% sales share) in the USA, is based on the following US sales share distribution in the fourth quarter of 2021, which is also presented in this blog entry and therefore requires no further explanation.

US Smartphone Market Share (%)	Q4 2021
Apple	57%
Samsung	24%
Motorola	9%
Alcatel	2%
OnePlus	2%
Google	1%
Others	5%
TOTAL	100%

Counterpoint

Image: Counterpoint

(325) In addition, Apple's high device prices are accompanied by significant profit margins, which also point to a scope of action not controlled by competition. The industry service Counterpoint Research reports for the second quarter of 2021[268] (see Figure 11 below) that Apple, due to its high customer loyalty, manages to generate a revenue share of around 40% and even around three quarters of the total industry profit with a global volume share of only around 13%, whereas

267 https://www.gizmochina.com/2022/01/29/oneplus-grows-524-in-us-beats-google/ [17 January 2023]
268 https://www.counterpointresearch.com/global-handset-market-operating-profit-q2-2021/[28 December 2021]

Samsung, with a comparable volume share, only accounts for 15% of revenue and profit. The Chinese providers (Huawei, Oppo, Vivo, Xiaomi) also operate with very low prices and generate only low profits. This proves Apple's strong and unchallenged position in terms of revenue and profit development, which is practically independent of the development of volumes sold.

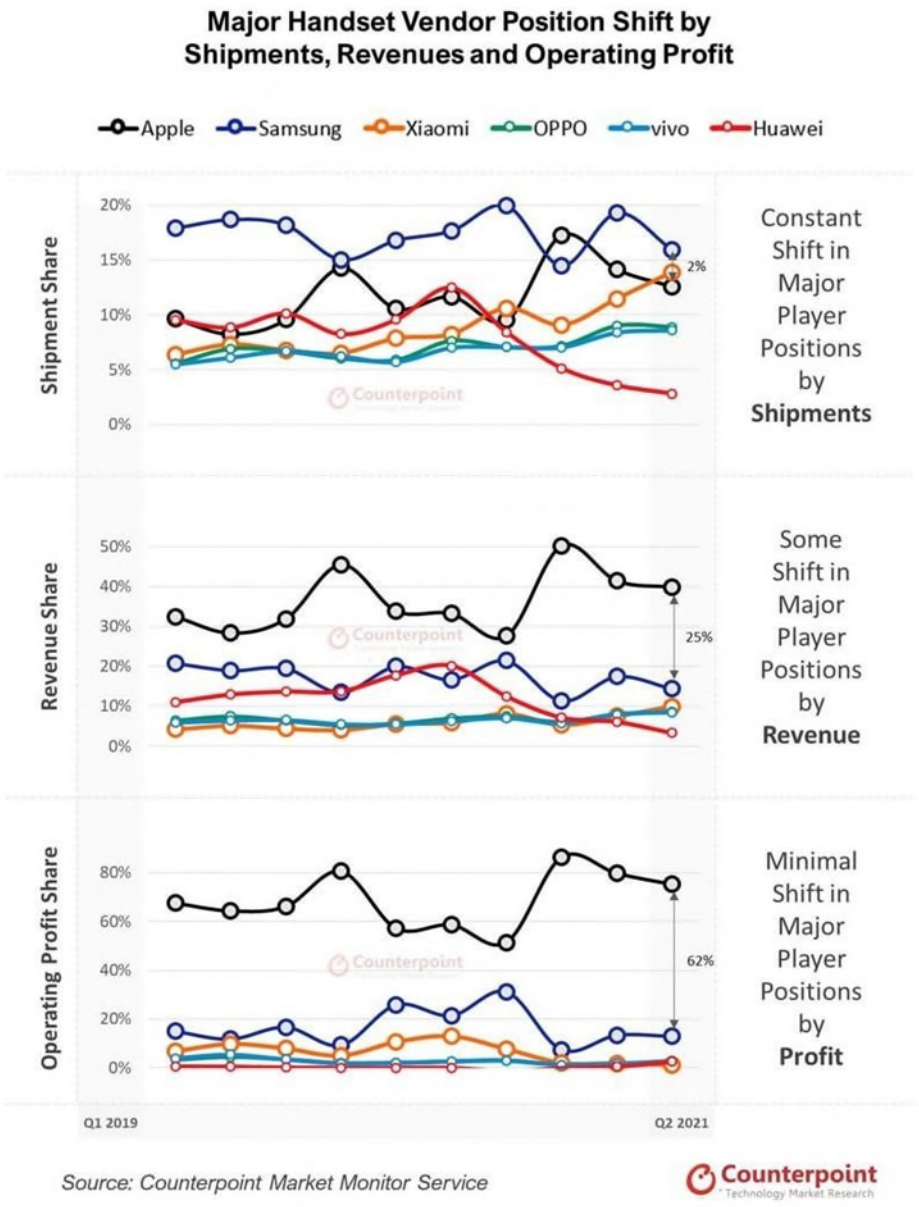

Figure 11 Sales, revenue & profit smartphones 2019-2021

(326) Apple's published financial figures also support this finding. Apple reports a gross

margin of 35.3% for its entire hardware division for 2021.[269] Even though the iPhone is not reported individually here, it accounts for around two-thirds of total sales and is therefore likely to have a significant impact on the gross margin.

vii. Apple's significant financial strength/resources

(327) Apple's considerable financial strength contributes to its dominant position in the smartphone market. The term financial strength covers the entirety of a company's financial resources and possibilities.[270] In this respect, a broad concept of resources must be assumed.

(328) Apple has significant financial strength within the meaning of Section 18 (3) no. 2 GWB. The company is one of the world's leading companies with regard to all established key figures that can reflect financial resources, such as revenue, profit and cash flow. Apple can also be regarded as extremely rich in resources with regard to the (correctly) extended concept of resources; this applies, for example, to the entire personnel area. The range and cross-market significance of Apple's strong resources is discussed in section 3.; to avoid repetition, we refer to this section for descriptive details.

(329) However, financial strength and strong resources also represent a relevant competitive factor in relation to the market relevant here. Apple's amount of resources available is significant in the present case in connection with Section 18 (3) no. 2 GWB because, particularly with regard to innovation-driven hardware markets[271] such as that for smartphones, the amount of resources available plays an important role in the competition for innovation and technology leadership.

(330) Apple's staffing levels in the "Hardware Technologies" division, for example, have [redacted] over the past five years. Apple now employs around [10,000-20,000] people there.

(331) Apple also specifically uses its financial strength to acquire companies that accelerate and in some cases enable key development steps for hardware in general and the iPhone in particular. Here, Apple can draw, among other things,

269 https://d18rn0p25nwr6d.cloudfront.net/CIK-0000320193/42ede86f-6518-450f-bc88-60211bf39c6d.pdf, p. 26 [28 December 2021]
270 *Becker/Knebel/Christiansen* in Münchener Kommentar GWB § 36 para. 147.
271 *Kühnen* in Loewenheim, Meessen, Riesenkampff GWB § 18 para. 88.

on its very high cash and cash equivalents, which amounted to around USD 183 billion at the end of the fiscal year 2022 (see also Section C.III.3. “Financial strength and access to other resources”).

(332) In recent years, Apple has acquired a number of companies whose technology has subsequently been integrated into several Apple devices, most notably the iPhone. This applies, for example, to the camera and security technology in connection with access rights to mobile devices.

(333) While mobile devices such as smartphones and tablets could initially be unlocked using a security code, biometric methods such as the fingerprint scanner (Touch ID at Apple) and later facial recognition (Face ID at Apple) became more popular over time. Apple used Touch ID for the first time on the iPhone 5s in 2013. This was preceded by the acquisition of the company AuthenTec in 2012 for USD 356 million.[272] AuthenTec was a company that specialised in security systems such as fingerprint recognition. Subsequently, Apple used the technology not only on iPhones but also on iPads and the Mac.

(334) Only a few years later, Apple introduced Face ID facial recognition with the iPhone X in autumn 2017. In 2010, Apple had already acquired the Swedish company Polar Rose, a specialist in facial recognition software.[273] In 2013, Apple also bought the Israeli company Primesense, a provider of 3D sensors. In 2015, it added Faceshift, a virtual reality startup that had developed technology to capture people’s facial expressions in real time.[274] Face ID is used not only on the iPhone but also on the iPad Pro.

(335) As a result, these examples make it clear that Apple has built up its strong resources through predominantly incremental innovation activity on a largely saturated market to continuously develop and safeguard its market position and technology leadership.

(336) Apple believes that the Decision Division does not take into account the intense competition in innovation on the hardware markets in this context. According to

---

272 https://www.reuters.com/article/usauthentec-acquisition-apple-idUSBRE86Q0KD20120727 [24 January 2022]

273 https://techcrunch.com/2010/09/20/apple-buys-polar-rose-for-a-rumoured-22-million/ [22 January 2022]

274 https://www.businessinsider.com/applereportedly-acquires-virtual-reality-startup-faceshift-star-wars-2015-11 [25 January 2022]

Apple, it is engaged in an “innovation-driven arms race” with regard to high-end models. With each new generation of smartphones, numerous new features are introduced. Apple holds that it must always remain innovative, otherwise it will lose customers to its highly motivated competitors.[275]

(337) Irrespective of the fact that Apple explicitly bases competition in innovation (insofar erroneously) on Section 18 (3a) no. 5 GWB and thus in particular on multi-sided markets and thus arguably not on the hardware markets concerned here, the Decision Division reaches a different conclusion in this respect, which is predominantly based on the following circumstances or observations.

(338) The Decision Division does not dispute that Apple is an innovative company. This certainly includes the examples cited by Apple, such as the Face ID and Touch ID security features, the material research aspects and other innovations.[276] In the smartphone industry, it has been discussed for years whether Apple has merely improved innovations from other companies and/or only brought them to market maturity. The semiconductor manufacturer Qualcomm published a list [277] containing a number of innovations that Apple only introduced after they were already available on other devices. The list also includes the features Face ID (Samsung Galaxy S8), Touch ID (Qualcomm Reference Design Headset) and high-resolution OLED screens (LG Flex 2, Sony Experia), which Apple explicitly refers to as its own innovations. To the extent that Apple takes up innovations from other companies, improves them and brings them to market, its broad, loyal user base and its considerable resources certainly contribute to this.

(339) However, from the Decision Division’s point of view, it is decisive that Apple, even as an innovative company, can be dominant in the market. The very stable high market shares and market share leads already described above indicate that neither technical upheavals nor competitive moves by competitors have so far led to successful pressure on Apple’s market position through innovations. Apple’s closed ecosystem with its low customer churn pressure also contributes to this, which means that the revenues from Apple’s innovation expenditures can be kept

---

275 See Apple’s comments on the Decision Division’s draft decision of 5 January 2023, paras. 85 et. seqq. (folios 3,224 et. seq. of the case file).

276 See Apple’s comments on the Decision Division draft decision of 5 January 2023, para. 87 (folios 3,224 et. seq. of the case file).

277 https://www.n-tv.de/technik/Das-gab-s-vorm-iPhone-schon-bei-Android-article20028901.html

within the company.

(340) In view of the only minor innovation-driven competitive pressure faced by Apple, as well as Apple's own considerable innovative strength, it is as a result not to be assumed that Apple's market position could be significantly weakened in the foreseeable future.

viii. Apple's access to data

(341) Apple's access to data relevant for competition contributes to the company's dominant position on the market for smartphones (Section 18 (3) no. 3 GWB).

(342) The 10th amendment to the GWB clarified that access to data relevant for competition is a relevant criterion in the assessment of market power in all economic sectors and is not only relevant in connection with multi-sided markets and networks within the meaning of Section 18 (3a) no. 4 GWB.[278]

(343) Apple's access to data and its significance across markets are discussed in detail in section 4. To avoid repetition, we refer to this section for descriptive details. As in the context of resources, however, access to data is not only related to the ecosystem as a whole, but also to Apple's market position as a provider of smartphones (the iPhone).

(344) Through its control of the iOS operating system pre-installed on all iPhones and as the operator of the App Store in its own ecosystem, Apple has exclusive access to a large number of data streams that can be shaped by the company and are of great importance for the further development and improvement of the iPhone.

(345) For the assessment of Apple's market position in the context of the examination under Section 19a (1) sentence 2 no. 1 GWB, it is also significant that the iPhone's market success benefits from the fact that Apple not only has exclusive access to data in its ecosystem, but also that its access to that data is broad and deep, and that it is able to constantly expand this access by growing its market position and user basis. This is fed by the breadth and depth of services offered to users and the enormous size of the ecosystem with regard to the devices and users involved. As the depth and breadth of data access increases, so does the competitive potential of the data for the realisation of further or improved products and

278 *Töllner* in Bunte – Kartellrecht, Kommentar, § 18 Abs. 3 Nr. 3 GWB, para. 131.

functionalities. This supports the expansion of the iPhone's market leadership and leads to self-reinforcing effects, since the already large ecosystem and the seamless integration of services and hardware products continues to grow with each additional user.

(346) As a vertically integrated company, Apple is in principle in a position to collect user data on a considerable scale and to use such data for the smooth running and synchronisation of its hardware products and the apps and services installed on them (see Section 2.) by deeply integrating the identification code, which uniquely identifies users or their devices, into its operating system, apps and services.

(347) In addition, the analytics, diagnostics, and usage data shared by the user with Apple, and the exclusive access to these data, enable Apple to continuously improve its products.[279] If the user has consented to transfer the data as part of the choice granted by Apple, Apple regularly receives device analytics data that include information about hardware and operating system specifications, performance statistics, and device and software usage data.

(348) In particular, this tells Apple how users use iPhones and which apps from Apple and other app publishers have high usage intensity. These data continuously help Apple to detect and fix bugs, identify highly used apps, and enhance existing apps or later release its own apps to extend the functionality of iPhones.

(349) Apples is of the opinion that the Decision Division has not examined and substantiated Apple's privileged access to data and its role with regard to the iPhone's product improvement.[280] From the Decision Division's point of view, this remark is not comprehensible, because Apple itself publishes the following information on its website:

279 https://www.apple.com/de/legal/privacy/data/en/device-analytics/ [1 March 2022]

280 See Apple's comments on the Decision Division's draft decision of 5 January 2023, paras. 94, 96 (folio 3,226 of the case file).

> *"iPhone Analytics data may include details about hardware and operating system specifications, performance statistics, and data about how you use your devices and applications.* ***This information is used to help Apple improve and develop its products and services.****"*
> *(emphasis added)*

(350) Moreover, according to Apple, manufacturers such as Samsung and/or Google, as operating system providers, have more extensive and better access to data than Apple.[281] This claim is neither substantiated nor is it plausible. While Google may have similarly broad access to data on the software side on the basis of its operating system, the hardware market share of Google's smartphone (pixel) is only around 5-10% in terms of number of devices, according to the Decision Division's investigations. Samsung has a much higher smartphone market share (35-40% by number of devices), but does not have its own mobile operating system. As a vertically integrated provider, Apple is therefore the only significant manufacturer with broad and deep access to a system which on the one hand consists of hardware products with a high market penetration and on the other is linked to the operating system and other services and products that generate user data and data from other companies that interact with the system.

(351) The ability to create a significant amount of data access for its own purposes or to use the broad and deep data access thus enables Apple to realise new products and features on the iPhone and to improve existing features that enhance the device's attractiveness from the user's perspective. One example is the far-reaching integration of the various devices with each other, which is based on Apple's deep and broad data access. Apple's "continuity" concept (see in detail paras. (561) et seqq.) enables the iPhone to function simply, seamlessly and without media discontinuity in interaction with various other Apple devices and services. This contributes not least to the added value of the iPhone and to securing its dominant position in the market.

(352) As an app store operator, Apple can also collect the download figures and sales

---

281 See Apple's comments on the Decision Division's draft decision of 5 January 2023, para. 95 (folios 3,226 et seq. of the case file).

of certain apps, for example, and thus identify which apps and services are popular with users or commercially successful. Apple can then create its own offerings for successful apps and services and pre-install them on the iPhone or integrate functionalities into the operating system. The result is an expansion of the iPhone's range of functions, which in turn is likely to further increase the iPhone's market success.[282]

ix. Interim result: Market dominance regarding smartphones

(353) As a result, the Decision Division therefore assumes that Apple is not exposed to any substantial competition within the meaning of Section 18 (1) no. 2 GWB on the market for smartphones and has a paramount market position in relation to its competitors (Section 18 (1) no. 3 GWB).

(354) Apple's competitive scope of action is not effectively limited either by other smartphone manufacturers or by the end consumers on the opposite market side. From a structural point of view, this is indicated by the persistently high market share in terms of value, which remains stable above the presumption threshold for single market dominance and has still been increasing over time. Apple also has a continuous, substantial market share lead over all other smartphone manufacturers. Customer churn is rare due to strong brand loyalty and high barriers to switching. The high and steadily widening price gap to all other smartphone manufacturers, combined with a high level of resources and innovation, are an expression of Apple's outstanding market position and the fact that its scope of action is not sufficiently controlled by competition.

(355) In this respect, Android-based smartphones are rather distant competitors which may exert competitive pressure on each other due to the different hardware solutions, but which, according to the investigations, cannot exert sufficient competitive pressure on Apple. Apple's outstanding market position is secured in

---

282 This approach is given its own verb in the developer industry – in connection with Apple, the expression "to sherlock" is used. The term comes from the fact that Apple updated its desktop search, then called "Sherlock", in 2002. The new functions had previously been part of the free third-party application with the fitting name "Watson". Since then, presumed imitations or introductions of new functionalities that are similar to popular third-party applications by Apple on its devices have been observed several dozen times. Therefore, it is common in developer circles to use the expression "to have been sherlocked" by Apple when Apple adopts a function from a third-party application directly into its own operating system. See https://www.economist.com/babbage/2012/07/13/youve- been-sherlocked [1 March 2022]

the long term by considerable resources and privileged access to data, as Apple is able to use the associated potential on the market for smartphones to its own advantage and not only secure but also expand its market position and profits.

(356) This finding applies regardless of whether the relevant market from the end customer's point of view comprises only smartphones or smartphones including operating systems. Even when device and operating system are considered in an integrated manner, it is not apparent that Apple's competitive scope is effectively limited by other smartphone manufacturers or by the end consumers on the opposite market side.

x. By way of alternative: strong market position or position of power regarding smartphones

(357) Even if Apple did not dominate the smartphone market within the meaning of Section 18 (1) nos. 2 or 3 GWB, there would in any case be no grounds to doubt that Apple has a strong market position or position of power on the market for smartphones. As already explained, such a market position or position of power – located in the "grey area" of the classic concept of market dominance – can also be examined under Section 19a (1) sentence 2 no. 1 GWB. In addition, it can be taken into account in any case as part of the necessary overall assessment within the scope of the examination under Section 19a (1) GWB (see in this respect in more detail paras. (236) et seqq. above). The criteria used by the Decision Division to examine Apple's dominant position on the market for smartphones are all equally relevant.

(358) The market position can at least be assumed to be strong because Apple has been by far the leading and uncontested smartphone producer in terms of value for years (see paras. (274) et seqq.). This is true for the world, Europe and Germany as a whole. As shown, smartphones are differentiated products with a wide range of prices. Therefore, Apple's market position is accurately reflected by the market shares in terms of value. But even in terms of unit sales, Apple is one of the world's leading manufacturers. Only Samsung sells more smartphones in most years.

(359) All of the features discussed in the context of the market dominance analysis (significant price differences and market segmentation, customer preferences and barriers to switching, hardly observable switching behaviour, high profit margin,

resources, access to data) support not only the finding of market dominance, but even more so the finding of a strong market position (which in normative terms is below dominance).

(360) Therefore, at least Apple's strong market position or position of power in the smartphone market must be taken into account within the framework of the criterion of Section 19a (1) sentence 2 no. 1 GWB, but at any rate within the framework of the necessary overall assessment when determining a paramount significance across markets.

(361) Incidentally, this finding does not depend on whether the relevant market from the end customer's point of view comprises only smartphones or smartphones including the operating system.

(3) Tablets

(362) Apple is not exposed to any substantial competition within the meaning of Section 18 (1) no. 2 GWB on the market for tablets, which is at least Europe-wide (on the market definition see i.), or has a paramount market position in relation to its competitors (Section 18 (1) no. 3 GWB).

(363) This is based first and foremost on market structure considerations. Apple's market share remains stable above the presumption threshold for single market dominance, and it also displays a considerable and continuous gap to all other market players (see ii.). This circumstance is all the more significant because the market for tablets is also characterised by considerable price differences and the associated strong segmentation (see iii.). The other considerations underlying this assessment (see iv) also show clear parallels with the comments made with regard to the smartphone markets, to which general reference is made in this respect. In conclusion (see interim result under v.) Apple dominates the at least Europe-wide market for tablets. Even if Apple does not dominate the tablet market, it certainly has a strong market position and position of power in this market (see vi.).

i. Market definition

(364) As with smartphones, there is no generally applicable industry definition for tablets. A tablet is a small, thin, lightweight computer with a touchscreen. It usually has cameras, a microphone and speakers, as well as a virtual or mechanical keyboard

(which can be added or removed, but is rarely permanently installed). Services and functions are made available by means of pre-installed programs and downloaded apps. In contrast to smartphones, tablets, which are generally larger, are often supplied without a mobile telecommunications chip and are mainly used for immobile media use.

(365) In the Decision Division's opinion, smartphones do not belong to the tablet market; in this respect, reference is made to paras. (262) et seqq. However, the product market definition is not relevant to the decision, because even if tablets and smartphones were to form a uniform market for "smart mobile devices", Apple is not exposed to any significant competition on this hypothetical market or has a strong position of power.

(366) As in the case of smartphones, Apple is also of the opinion with regard to tablets that the relevant product market cannot be limited to the respective devices. Apple bases its arguments in connection with smartphones on the fact that Apple operates an integrated and proprietary ecosystem consisting of hardware devices, iOS and the App Store. In the line of argument this then applies not only to iPhones, but also to iPads. The arguments that Apple puts forward for this view have already been discussed by the Decision Division in the context of the basic mechanics of primary and secondary markets (paras. 241 et seqq.) and the market definition of smartphones (paras. 262 et seqq.). In order to avoid repetition, reference can therefore be made here to the corresponding explanations.

(367) From a geographic perspective, the Decision Division bases its decision – as in the case of smartphones – on markets which are at least Europe-wide in scope. However, the regional market definition is not relevant here either, as neither the market structure considerations, nor the other circumstances underlying market dominance depend on the geographic scope of the markets.

ii. Market structure and concentration

(368) Apple has a market share of around 55-65% in terms of tablet sales, globally, in Europe and in Germany.[283] For Europe, Apple's market share in 2020 is 55-60%.

[283] Apple's market share in 2020 was 60-65% in Germany, and 55-60% both in Europe and worldwide. See note "Evaluation of the survey of hardware manufacturers" – Annex 1 "Results of the quantitative evaluation", pp. 13 et seqq.

This market share is therefore well above the presumption threshold for single market dominance under Section 18 (4) GWB, irrespective of the geographic structure of the markets. In addition, the market share lead over the next largest competitor, Samsung, is considerable. Samsung has a share of 15-25%, depending on the geographic delineation.[284]The market is highly concentrated; other than the two companies Apple and Samsung, there are no providers that have market shares above 10%. The table below summarises the key elements of the market structure for the European market based on the Decision Division's findings:

	2017	**2018**	**2019**	**2020**	**Q1-Q3 2021**
Apple	[55-60]%	[55-60]%	[60-65]%	[50-55]%	[65-70]%
Samsung	[25-30]%	[20-25]%	[20-25]%	[25-30]%	[15-20]%
Lenovo	[5-10]%	[5-10]%	[5-10]%	[5-10]%	[5-10]%
Dell	[0-1]%	[0-1]%	[0-1]%	[0-1]%	[0-1]%
Xiaomi	.	.	.	.	[0-1]%
Google	[0-1]%	[0-1]%	[0-1]%	[0-1]%	[0-1]%
TCL	.	[0-1]%	[0-1]%	[0-1]%	[0-1]%
ASUS	[1-5]%	[0-1]%	[0-1]%	[0-1]%	[0-1]%
Sony	[0-1]%	[0-1]%	.	[0-1]%	.
Huawei	.	[5-10]%	[5-10]%	[5-10]%	.
Acer	.	[0-1]%	[0-1]%	.	.
Amazon	[1-5]%	[1-5]%	[1-5]%	[1-5]%	.
HP	[0-1]%	.	.	.	.
Total	100%	100%	100%	100%	100%
HHI	3,921	4,038	4,538	3,811	5,079
Market volume in € billion	5.4	5.7	6.0	6.6	7.0

Figure 12 Market structure tablets Europe 2017-2021[285]

(369) In 2020, the HHI in Europe was above 3,900 points. For information on the classification of these concentration values as indications of a dominant or at least powerful market position, please refer to paras. (277) et seqq.

284 Samsung's market share in 2020 was 20-25% in Germany, 25-30% in Europe, and 15-20% worldwide, ibid.

285 See Annex 1 "Results of the quantitative evaluation", pp. 15 et seq. to the note "Evaluation of the survey of hardware manufacturers". This also includes detailed information on the calculation of the safety margins, insofar as their consideration is necessary (pp. 4 et seqq.). For tablets, the Decision Division refrained from this to Apple's advantage, since a comparison of the investigation results with the relevant market research data showed that the unit numbers determined by the request for information were higher than the unit numbers determined in the context of market research statistics.

(370) The market share structure is also extraordinarily stable. Apple's market share has been consistently above 55% over a five-year period between 2017 and 2021. In the first three quarters of 2022, Apple's market share was even above 65%. This fundamental finding is also independent of the geographic delineation of the markets.

(371) Apple believes – as already mentioned in connection with the market for smartphones – that the revenue-based market structure is not significant. For the reasons already described, the Decision Division maintains its approach of representing the market structure based on revenue. Reference can be made in general to paras. (280) et seqq.

(372) Also with reference to the reasons discussed in connection with the market for smartphones, the Decision Division has taken account of Apple's information regarding exchange rates and quarterly allocations as far as possible in the market structure table contained in Figure 12 without further review. Again, there are no significant changes.

iii. Price differences and segmentation

(373) The Decision Division's investigations also confirm high price gaps between iPad and Android tablets. For example, the percentage additional charge in the net selling price that Apple earned between 2017 and 2021 compared to the average of all other tablet manufacturers in Europe was on average more than 150%.[286] In other words, iPads are on average significantly more than twice as expensive as all other (Android) tablets.

(374) If – as in the case with smartphones (see paras. (284) et seqq.) – Apple holds that its higher average prices on the market for tablets are not the result of a scope of action not controlled by competition, but according to Apple's submissions rather reflect a lead in the company's technical development and an expanded range of functionalities[287], a segment analysis of the high-end (also in terms of price) tablet

---

286 On a global basis, the price differences are even more pronounced. Here, the net retail price for the iPad is continuously three to four times higher than the average price of an Android tablet. See note "Evaluation of the survey of hardware manufacturers" – Annex 1 "Results of the quantitative evaluation", p. 14 et seq.

287 See Apple's comments on the Decision Division's draft decision of 5 January 2023, paras. 81 et seqq. (folios 3,2232 et seq. of the case file).

segment would also be necessary in the area of tablets.

(375) As in the case of smartphones, Apple dominates the higher-priced segments of the market in question to an even greater extent than the market as a whole. While the company hardly offers any devices below EUR 300, Apple's market share in the price categories above that is generally above 80% according to GfK data for the German market (see the figure below).

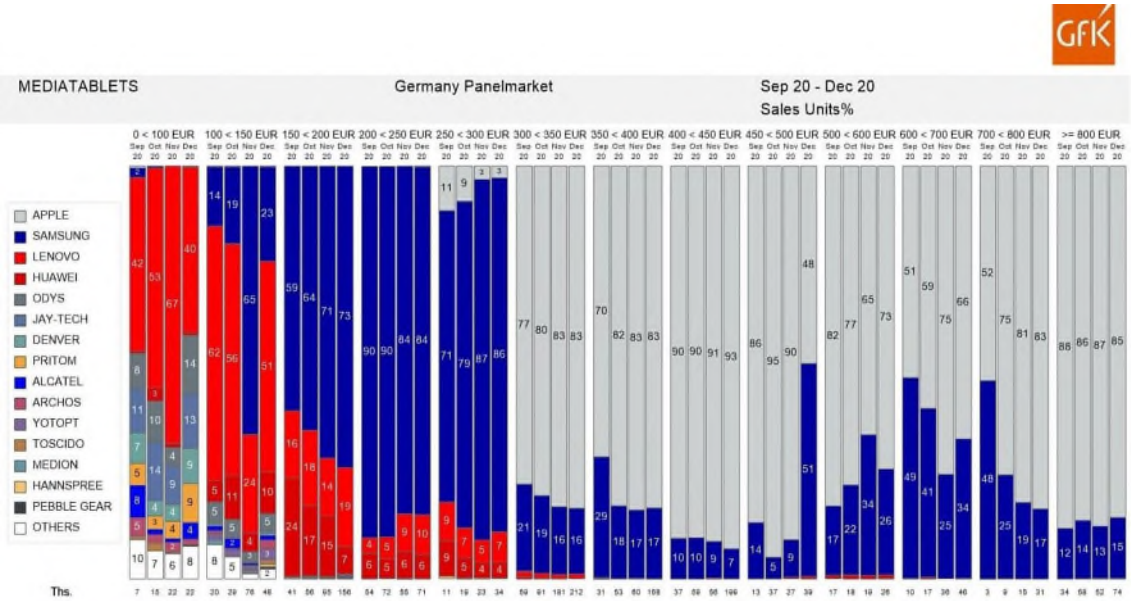

Figure 13 GfK – Tablet market / Germany price classes in late 2020[288]

iv. Other factors

(376) Even beyond market structure considerations, it is not apparent that Apple's competitive scope of action in the tablet market can be effectively limited by competition.

[redacted] As with smartphones, the tablet market also shows high switching barriers and strong customer loyalty in favour of Apple. [redacted]

288 Excerpt from [redacted] response (investigation file hardware manufacturer) to the Decision Division's request for information of 9 November 2021 (folios 1,511 et seqq. of the case file).

[redacted]

(378) Finally, the aspects of ample resources and access to data raised in connection with the market for smartphones also apply to the market for tablets. Here, too, Apple's financial and human resources are an important competitive factor in terms of the market; they facilitate and enhance the optimisation and further development of tablets.

(379) In terms of resources, this also applies, for example, to the tablet market for the acquisition of companies in connection with the development of Face ID and Touch ID (see paras. (332) et seqq.); technologies that are both used on the smartphone and the iPad.

(380) With its deep and broad access to data, Apple can also draw on the distribution and use of the iPad. This applies, for example, to device analysis and diagnostic data (see paras. (341) et seq.), but also to the data-based interaction of various devices and services in the Apple ecosystem, of which the iPad is also a part.

v. Interim result: Market dominance regarding tablets

(381) As a result, the Decision Division therefore assumes that Apple is also not exposed to any substantial competition within the meaning of Section 18 (1) no. 2 GWB on the market for tablets or has a paramount market position in relation to its competitors (Section 18 (1) no. 3 GWB).

(382) Apple's competitive scope of action is not effectively limited either by other tablet manufacturers or by end consumers on the opposite market side. From a structural point of view, this is supported by the persistently high market share in terms of value, which is stable and very clearly above the presumption threshold for single market dominance and tends to increase over time. Apple also continuously has a considerable market share lead over all other tablet manufacturers. Customer churn is rare due to strong brand loyalty and high barriers to switching. The high and steadily widening price gaps to all other competitors are an expression of this

289 Apple's response of 2 October 2021 to the Decision Division's request for information dated 10 August 2021, internal document Financial Update Feb. 20, file 00000900, slide 36, folio 1,181 of the case file.

scope of action which is not sufficiently controlled by competition.

(383) In this respect, Android-based tablets are rather distant competitors, which may exert competitive pressure on each other, but cannot exert this pressure on Apple. Apple's outstanding market position is secured in the long term by substantial resources and privileged access to data, as Apple is able to use the associated potential on the market to its own advantage and not only secure but also to expand its market position and profits.

(384) This finding applies regardless of whether the relevant market from the end customer's perspective comprises only tablets or tablets including operating systems. Even when device and operating system are considered in an integrated manner, it is not apparent that Apple's competitive scope of action is effectively limited by other tablet manufacturers or by the end consumers on the opposite market side.

vi. By way of alternative: strong market position or position of power regarding tablets

(385) Even if Apple did not dominate the tablet market within the meaning of Section 18 (1) no. 2 GWB or did not have a paramount market position in relation to its competitors (Section 18 (1) no. 3 GWB), there would in any case be no grounds to doubt that Apple has a strong market position or position of power on the market for tablets.

(386) As already explained, a market position or position of power – located in the "grey area" of the classic concept of market dominance – can also be examinded under Section 19a (1) sentence 2 no. 1 GWB. Furthermore, it can in any case be taken into account as part of the necessary overall assessment within the scope of the examination under Section 19a (1) GWB (for more details on this see paras. (236) et seqq.). The criteria used by the Decision Division to examine Apple's dominant position on the market for tablets are all equally relevant.

(387) The market position can already be assumed to be at least strong because both in terms of value and in terms of volume Apple has been the by far leading and uncontested tablet producer for years (see paras. (368), (363) et seqq.) This holds true for the world, Europe and also Germany.

(388) All aspects discussed in the context of market dominance support not only the

finding of market dominance, but even more so the finding of a strong market position (which in normative terms is below dominance).

(389) Apple has a strong market position or position of power on the market for tablets, regardless of whether the relevant market from the end customer's point of view comprises only tablets or tablets including the operating system.

(4) Smartwatches

(390) Apple is not exposed to any substantial competition within the meaning of Section 18 (1) no. 2 GWB on the market for smartwatches, which is at least Europe-wide in scope (on the market definition see i.), or has a paramount market position in relation to its competitors (Section 18 (1) no. 3 GWB).

(391) This is based first and foremost on market structure considerations. Apple's market share remains stable above the presumption threshold for single market dominance, and it also shows a considerable and continuous gap to all other market participants (see ii.). This circumstance is all the more significant because the market for smartwatches is also characterised by considerable price differences and the associated strong segmentation (see iii.). The other considerations underlying this assessment (see iv. below) also show clear parallels with the comments made with regard to the smartphone and tablet markets. General reference is made to these considerations. In conclusion (see interim result under v.) Apple dominates the market for smartwatches, which is at least Europe-wide in scope.

(392) Even if Apple does not dominate the market for smartwatches, it certainly occupies a strong market position or position of power in this market (see vi. below).

i. Market definition

(393) Smartwatches are electronic wristwatches that have additional sensors, actuators (e.g. vibration motor) and computer functionalities and connectivity. While the main purpose of conventional wristwatches is to display the current time and, where applicable, also a stopwatch and alarm clock function, the functionalities of a smartwatch extend far beyond this. A key feature of smartwatches is that, in addition to the time, other information can be displayed and the user can

individually compile additional functions via programs ("apps").[290] As with smartphones, Apple and Google offer a large number of apps via their respective app stores to expand the smartwatch's range of functions.

(394) Although a smartwatch can basically be used independently, it is often closely coupled with the functionalities of a smartphone or duplicates them. For example, information and notifications are displayed at the same moment as on the smartphone.

(395) In the Decision Division's opinion, fitness trackers are not part of the product market for smartwatches. In the Google/Fitbit case, the European Commission did not reach a final decision on the question of whether the market for "wrist-worn wearable devices" should be further subdivided into fitness trackers on the one hand and smartwatches on the other, due to the lack of relevance to the decision.[291]

(396) Although both devices are worn on the wrist, they have a clearly different range of functions, which is also reflected in price.

(397) Although both device classes can record body function data such as heart rate, blood pressure, pulse or sleep phases, as well as movement data such as the number of steps or the distance travelled, in principle smartwatches have a significantly wider range of functions than fitness trackers. As shown above, they are often able to take over many of the functions of a smartphone. Equipped with a SIM card, smartwatches can also be used to make phone calls, write and send emails or text messages, and install and run various apps. Although the functionalities of a fitness tracker can also be accessed via a smartwatch, the reverse is not true. This at best one-way substitution suggests that there is no uniform relevant product market.

(398) This expanded range of functions is also noticeable in the devices' external appearance and performance data. As a rule, the displays of fitness trackers are often elongated and narrow, while smartwatches tend to resemble classic watches in their round or angular shape. Smartwatch displays often have higher resolution

---

290 See on this and the following: European Commission, decision of 17 December 2020, *Google/Fitbit* M.9660, paras. 28, 79 et seqq. and the European Commission's sector inquiry "Consumer IoT", Final Report of 20 January 2022, paras. 48 et seq

291 European Commission, decision of 17 December 2020, *Google/Fitbit* M.9660, paras. 74 et seqq.

and brightness values. This is usually associated with a shorter battery life compared with fitness trackers.[292]

(399) There are considerable, lasting price differences between smartwatches on the one hand and fitness trackers on the other, reflecting the differences in the range of functions. While smartwatches have an average retail price of around EUR 300 across all manufacturers, fitness trackers fetch only a fraction of this, averaging around EUR 50 (see GfK chart below).

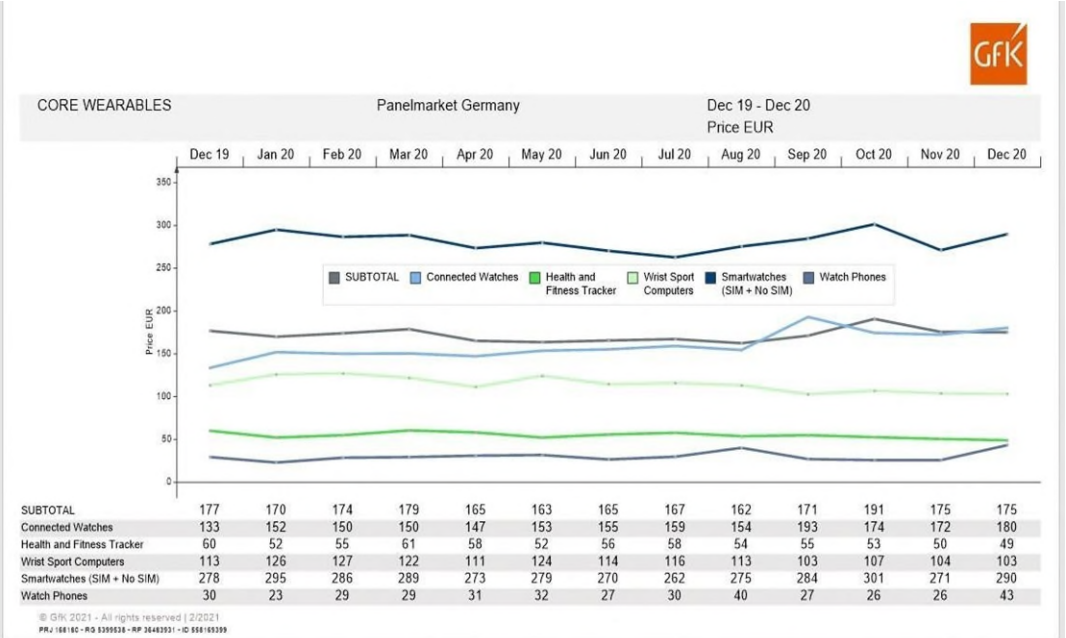

Figure 14 GfK – Price gap smartwatches/fitness trackers[293]

(400) The hardware manufacturers surveyed are divided on the issue of how to define the product market. Of the 23 manufacturers surveyed, 16 companies answered the corresponding question. Of these responding companies, a narrow majority of 9 companies are of the opinion that these are separate product markets, while 7 companies are of the opposite opinion.[294]

292 https://curved.de/tipps/smartwatch-oder-fitnesstracker-wo-liegt-eigentlich-der-unterschied-668668 [22 December 2021]

293 Excerpt from [redacted] response (investigation file hardware manufacturers) to the Decision Division's information request dated 9 November 2021 (folios 1,511 et seqq. of the case file).

294 See note "Evaluation of the survey of hardware manufacturers" – Annex 1 "Results of the quantitative evaluation", p. 25 (investigation file hardware manufacturers).

(401) Apple disputes this finding overall, citing the narrow majority of companies surveyed that favoured separating the markets, and argues for combining smartwatches and fitness trackers into a single market.[295]

[redacted]From the Decision Division's perspective, however, there are justified doubts about Apple's assessment. [redacted]

(403) As a result, against the background of the devices' different catalogue of functions, which is also reflected in a considerable price difference, the Decision Division agrees with the majority of the companies surveyed and in line with [redacted]assumes the existence of a separate market for smartwatches, which does not include fitness trackers.

(404) With regard to the geographic market definition, the Decision Division assumes that the markets are at least Europe-wide in scope in line with the approach taken for smartphones and tablets and in agreement with the European Commission in the Google/Fitbit case. However, this question is not relevant to the decision. Here, too, reference can be made to the relevant explanations on smartphones (paras. (271)

---

295 See Apple's comments on the Decision Division's draft decision of 5 January 2023, footnote 46 on p. 36 (folios 3,227 et seq. of the case file)

296 Apple's response of 2 October 2021 to the Decision Division's request for information dated 10 August 2021, internal document Financial Update March 2019, file 00000395, slide 44, folio 938 of the case file.

297 See Apple's comments on the Decision Division's draft decision of 5 January 2023, footnote 46 on p. 36 (folios 3,227 et seq. of the case file).

298 Apple's response of 2 October 2021 to the Decision Division's request for information dated 10 August 2021, internal document Financial Update Mar. 2019, file 00000395, slides 25, 30 and 36, folios 919, 924 and 930 of the case file.

et seqq.) and tablets (paras. (367)).

ii. Market structure and concentration

(405) Apple had a market share of around 40-55% in terms of smartwatch sales in 2020 as well as in the first three quarters of 2021, globally, in Europe and in Germany.[299] For Europe, Apple's market share was 40-45%, in the first three quarters of 2021 even 50-55%. This market share is therefore also above the presumption threshold for single market dominance under Section 18 (4) GWB, irrespective of the geographic delineation of the markets.

(406) The market is highly concentrated, similar to that for smartphones and tablets. The HHI is continuously around 3,000 points. For the classification of these concentration values, please refer to paras. (277) et seqq.

(407) The market share structure is also extraordinarily stable. Apple's market share has remained stable at above 40% over a five-year period between 2017 and 2021. This finding is also independent of the geographic delineation of the markets. The table below summarises the key elements of the market structure in an overview of the European market for smartwatches:

299 See Annex 1 "Results of the quantitative evaluation", pp. 20 et seq. to the note "Evaluation of the survey of hardware manufacturers". This also includes detailed information on the calculation of the safety margins, insofar as their consideration is necessary (pp. 4 et seqq.). For smartwatches, the Decision Division refrained from this to Apple's advantage, since a comparison of the results of the investigation with the relevant market research data showed that the unit numbers determined by the request for information were higher than the unit numbers determined in the context of market research statistics.

	2017	2018	2019	2020	Q1-Q3 2021
Apple	[45-50]%	[40-45]%	[40-45]%	[40-45]%	[50-55]%
Garmin	[25-30]%	[25-30]%	[25-30]%	[30-35]%	[25-30]%
Samsung	[10-15]%	[15-20]%	[10-15]%	[10-15]%	[10-15]%
Google	[1-5]%	[5-10]%	[1-5]%	[1-5]%	[1-5]%
Huawei	.	.	[1-5]%	[5-10]%	[1-5]%
TCL	[0-1]%	[0-1]%	[0-1]%	[0-1]%	[0-1]%
ZTE	.	.	.	.	[0-1]%
ASUS	[0-1]%	[0-1]%	[0-1]%	[0-1]%	[0-1]%
Xiaomi	[0-1]%	[0-1]%	[0-1]%	[0-1]%	.
Sony	[0-1]%	[0-1]%	[0-1]%	[0-1]%	.
LG	[0-1]%	.	[0-1]%	.	.
Fossil	[5-10]%	[5-10]%	[1-5]%	[1-5]%	.
Total	100%	100%	100%	100%	100%
HHI	3,323	2,914	3,069	2,989	3,434
Market volumein billions of €	1.3	1.8	3.0	3.6	3.2

Figure 15 Market structure smartwatches Europe 2017-2021[300]

(408) As already mentioned in connection with the market for smartphones, Apple is of the opinion that the revenue-based market structure is not sufficiently informative. For the reasons already described, the Decision Division adheres to its approach of representing the market structure based on revenue. Reference can be made in general to paras. (280) et seqq.

(409) Also with reference to the reasons discussed in connection with the market for smartphones, the Decision Division has taken account of Apple's information regarding exchange rates and quarterly allocations in the market structure table in Figure 15 without acknowledging that the submission is correct. Here too there are no significant changes.

iii. Price differences and segmentation

(410) As with smartphones and tablets, Apple strongly dominates the higher-priced segments. While the company hardly offers any smartwatches below EUR 200, Apple's market share in the price ranges above that is generally above 70% (see the GfK chart below). Nine out of ten smartwatches that cost more than EUR 400

300 See note "Evaluation of the survey of hardware manufacturers" – Annex 1 "Results of the quantitative evaluation", pp. 20 et seq.

come from Apple. This is also by far the strongest price segment in terms of unit sales.

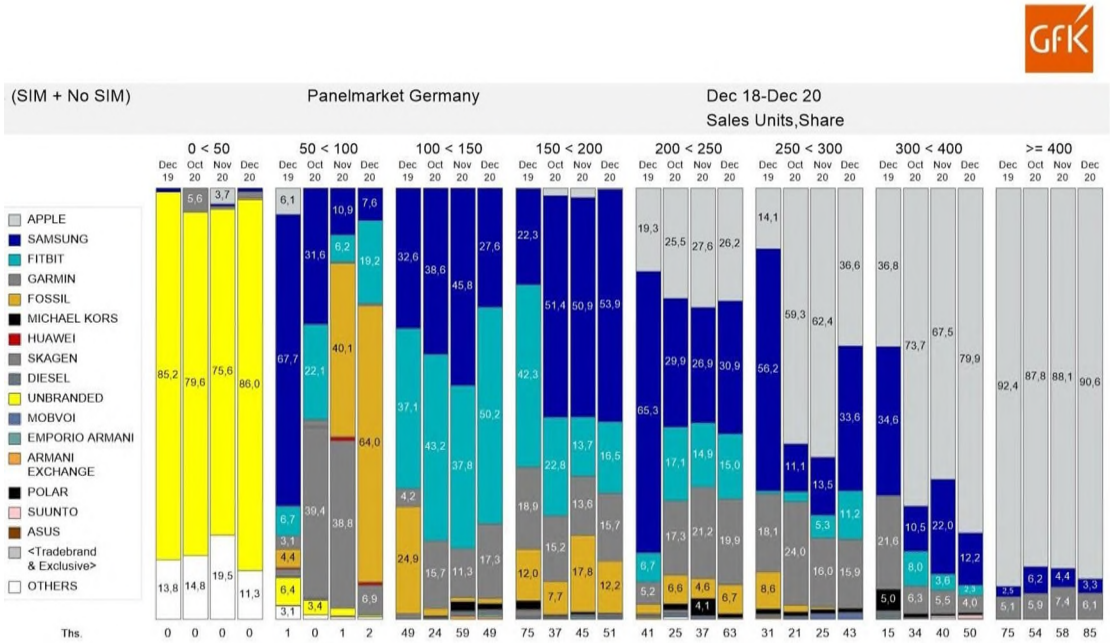

Figure 16 GfK – Smartwatches Germany price categories 2019/20[301]

(411) These price differences confirm the Decision Division's investigations. On average, the Apple Watch is about twice as expensive as smartwatches from other manufacturers.[302]

iv. Other factors

(412) Even beyond market structure considerations, it is not apparent that Apple's competitive scope of action in the smartwatch market is effectively limited by competition.

(413) As with smartphones and tablets, the market for smartwatches is also characterised by high switching barriers and strong customer loyalty in favour of Apple.

(414) It is already foreseeable that the number of switching customers will decrease as the market matures. Compared with tablets and smartphones, smartwatches are a relatively young market. The market penetration is not yet comparable with that

301 Excerpt from [redacted] response (investigation file hardware manufacturers) to the Decision Division's request for information of 9 November 2021 (folios 1,511 et seqq. of the case file).

302 See note "Evaluation of the survey of hardware manufacturers" – Annex 1 "Results of the quantitative evaluation", pp. 19 et seqq.

of tablets and certainly not with that of smartphones. [redacted] t is therefore unlikely that Apple's scope of action and its outstanding market position ahead of the next-strongest competitors can be challenged in a way that is relevant to this decision.

Figure 17 Apple Watch switchers 2015-2019

(415) The product's strong link to the iPhone is partly responsible for this. An Apple Watch cannot be used meaningfully without an iPhone. The Apple Watch was designed in such a way that it basically can only be paired and used with an iPhone. Therefore, it is by default not possible to use the Apple Watch with an Android smartphone. To set up the Apple Watch, you need the Apple Watch app,

303 Apple's response of 22 January 2022 to the Decision Division's request for information dated 10 August 2021, internal document Financial Update Nov. 19, file 000015354, slide 38, folio 1,679 of the case file.

which is only available in the App Store. In addition, the Apple Watch cannot be synchronised with an Android device, or not easily. If a (complicated) setup succeeds with the help of instructions[304] available on the Internet for tech-savvy users, the range of functions of the Apple Watch is considerably limited due to the lack of a connection to an iPhone.

(416) Such circumvention solutions are therefore likely to be of very little significance overall. The lack of relevance is empirically evidenced in the market research institute Kantar's data on Germany with regard to the first quarter of 2022. According to these, almost 90% of Apple Watch owners own an iPhone (see Figure 18 below).[305]

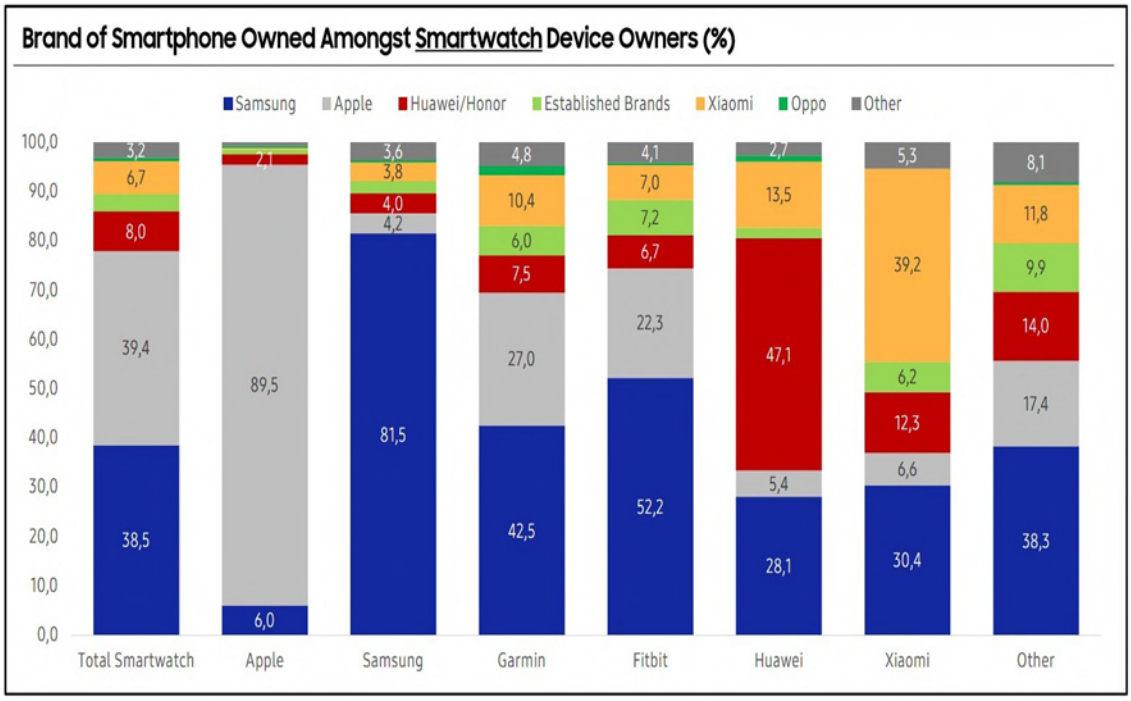

Figure 18 Kantar – smartwatch/smartphone

(417) Conversely iPhone owners are also difficult to reach for other smartwatch manufacturers precisely because of the system-related reduced range of functions compared to the Apple Watch. According to the Kantar data, almost 80% of iPhone owners opt for an Apple Watch as their smartwatch; only 7% or just under 5% of iPhone owners own a smartwatch from Garmin or FitBit; only 2.7% from

304 https://www.giga.de/wearables/appl-watch-series-4/tipps/apple-watch-mit-android-nutzen-geht-das-welche-alternativen-gibt-es/ [22 May 2022]

305 Excerpt from [redacted] response (investigation file hardware manufacturers) to the Decision Division's request for information of 9 November 2021 (folios 1,511 et seqq. of the case file).

Samsung.[306]

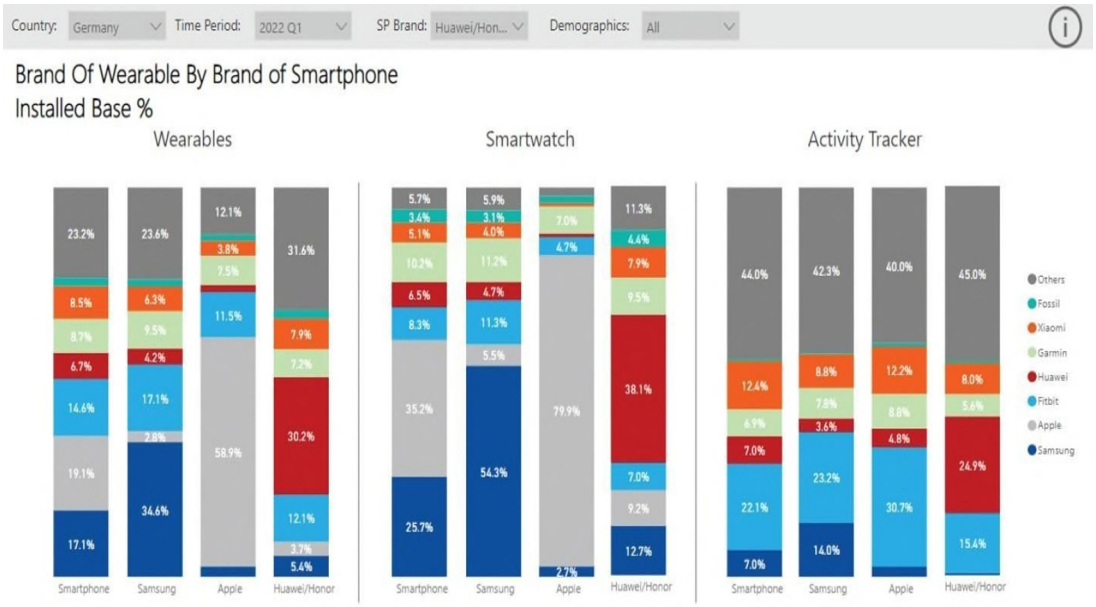

Figure 19 Kantar – smartphone/smartwatch

(418) As a result, it can be said that alternative smartphone manufacturers develop their competitive potential to a large extent only with regard to customers who do not own an iPhone but an Android smartphone.

(419) This circumstance also relativises the comparatively high market share of around 30% in terms of value that Garmin has on the European market. Garmin has admittedly stated that the company appeals to a disproportionately large number of Apple customers due to the high quality and modern functions of its own high-priced smartwatches. As a result, Garmin still generated around half of its sales in 2019 with smartwatches and fitness trackers used in combination with an iPhone.

(420) Nevertheless, Garmin only had significantly more new smartwatch registrations among iOS customers than Android customers until the end of 2015, when the Apple Watch was launched. Since the market launch of the Apple Watch, this share has fallen continuously, so that Garmin now also records significantly more new Android registrations than iOS registrations. Garmin sees the strongly diverging growth rates as a result of the technical disadvantage of third-party vendors, as compared to the Apple Watch, when accessing interfaces to maximise

306 Excerpt from [redacted] response (investigation file hardware manufacturers) to the Decision Division's request for information of 9 November 2021 (folios 1,511 et seqq. of the case file).

functionality and user-friendly interconnectivity in the Apple ecosystem.[307]

(421) Apple, on the other hand, points out that the market for wearables has low barriers to entry and expansion. According to Apple, this is shown by the fact that companies such as Huawei, Garmin, LG, Amazfit, Fossil, Polar, Diesel, Fitbit, Samsung, Suunto and Xiaomi have recently entered the market and expanded.[308] However, the Decision Division surveyed these companies, insofar as they manufacture smartwatches and not other wearables, and takes their market shares into account in the market structure analysis. With the exception of Garmin and Samsung, none of these companies even account for a market share above 5%.

(422) Finally, the aspects of financial strength and data access raised in connection with the markets for smartphones and tablets also apply to the market for smartwatches. Apple can also use its financial and human resources for competitive advances to secure its market position and further develop smartwatches.

(423) In recent years, Apple has repeatedly acquired companies that focus on the healthcare sector, which via the device's sensor technology is closely linked to the Apple Watch and expands the range of functions of the Apple Watch. These include the patient data service Gliimpse[309] (2016), the sleep sensor specialist Beddit[310] (2017) and the digital health start-up Simbionics (2014).

(424) In the area of smartwatches, there is also privileged access to data on the respective user through the measurement of various body functions. As a result, the functions of the Apple Watch can also be improved. Apple points out this fact on its website:

> *"Improve Health & Activity" sends activity, workout, and health-related information from your iOS device and Apple Watch to Apple in order to develop, improve, and*

307 Garmin's response of 1 August 2022 to the Decision Division's request for information dated 8 June 2021 (investigation file hardware manufacturer).

308 See Apple's comments on the Decision Division's draft decision of 5 January 2023, para. 99 (folio 3,227 of the case file)

309 https://time.com/4461047/apple-gliimpse-acquisition/ [21 February 2023]

310 https://www.mobihealthnews.com/content/apple-acquires-sleep-startup-beddit-month-after-sleepexpert-leaves-company [21 February 2023]

understand the effectiveness of health, activity, and fitness features."[311]

(425) In this context, Apple disputes the possibilities of data-based functional improvement with regard to the Apple Watch. Apple states that it does not use these data for competition-relevant purposes and that they therefore are of no relevance to competition.[312] These statements are an obvious contradiction to the publicly available quote. Rather, the benefit that the collected activity, workout and health-related data have for the further development of the smartwatches themselves and for securing Apple's position in this market is explicitly outlined there.

v. Interim result: Market dominance smartwatches

(426) As a result, the Decision Division therefore assumes that Apple is also not exposed to any substantial competition within the meaning of Section 18 (1) no. 2 GWB on the market for smartwatches or has a paramount market position in relation to its competitors (Section 18 (1) no. 3 GWB). Apple's competitive scope of action is not effectively limited either by other smartwatch manufacturers or by the end consumers on the opposite market side. From a structural point of view, this is indicated by the persistently high market share in terms of value, which is stable and clearly above the presumption threshold for single market dominance. Apple also continuously has a significant market share lead over all other smartwatch manufacturers. Customer switching is difficult due to strong brand loyalty and close ties to the iPhone. This is also reflected in the parallel increase in market shares and the proportion of repeat buyers. The high price gaps to all other competitors while market shares increase are an expression of this scope of action which is not controlled by competition.

(427) In this respect, smartwatches that are not based on iOS are rather distant competitors that cannot exert sufficient competitive pressure on Apple. Apple's

311 https://www.apple.com/legal/privacy/data/en/improve-health-activity/#:~:text=Improve%20Health%20%26%20Activity%20sends%20activity,health%20and%20activity%2Drelated%20sensors [1 July 2022]

312 See Apple's comments on the Decision Division's draft decision of 5 January 2023, para. 100 (folios 3,228 et seq. of the case file)

outstanding market position is secured in the long term by considerable resources and privileged access to data, as Apple is able to use the associated potential on the market to its own advantage and not only secure but also expand its market position and profits.

(428) Apple has a dominant position regardless of whether the relevant market from the end customer's point of view comprises only smartwatches or smartwatches including operating systems. Even if the device and operating system are considered in an integrated manner, it is not apparent that Apple's competitive scope of action is effectively limited by other smartwatch manufacturers or by the end consumers on the opposite market side.

vi. By way of alternative: strong market position or position of power regarding smartwatches

(429) Even if Apple did not dominate the market for smartwatches within the meaning of Section 18 (1) nos. 2 or 3 GWB, there would in any case be no grounds to doubt that Apple has a strong market position or position of power in the market for smartwatches.

(430) As already explained, such a market position or position of power – to be located in the "grey area" of the classic concept of market dominance – can also be examined under Section 19a (1) sentence 2 no. 1 GWB. Moreover, it can in any case be taken into account as part of the necessary overall assessment within the scope of the examination under Section 19a (1) GWB (for more details on this see paras. (236) et seqq.). The criteria used by the Bundeskartellamt to examine Apple's dominant position on the market for smartwatches are all equally relevant.

(431) It can already be assumed that the market position is strong because both in terms of value and in terms of volume Apple has been the leading smartwatch producer for years (see paras. (405) et seqq.). This holds true for the world, Europe and also Germany.

(432) The characteristics discussed in the context of market dominance not only support the finding of market dominance, but even more so the finding of a strong market position (which in normative terms is below dominance).

(433) This finding does not depend on whether the relevant market from the end customer's point of view comprises only smartwatches or smartwatches including

the operating system.

(5) Apple's mobile operating systems

(434) Apple is active in the multi-sided markets for mobile operating systems on its devices (on the market definition see i.). However, with iOS, iPadOS, watchOS and tvOS, Apple is not a market participant for the licensing of mobile operating systems to device manufacturers (see ii. below). At any rate, Apple has a (technological) monopoly with regard to the operating systems on its own devices and is therefore without a competitor within the meaning of Section 18 no. 1 GWB (iii.). This monopoly position is also based on the close interlocking of hardware and software. Even when taking Google's Android into account, Apple is still not exposed to any substantial competition with regard to mobile operating systems (Section 18 (1) no. 2 GWB) and has a paramount market position in relation to its competitors (Section 18 (1) no. 3 GWB) (see iv. below). This applies also and especially when taking into account the market dominance criteria for multi-sided markets within the meaning of Section 18 (3a) GWB. If any, end users have alternative options by switching devices; app publishers generally serve both Apple's operating systems and Android anyway ("multihoming"). Even if Apple does not dominate the market for mobile operating systems, it certainly has a strong market position and a position of power on this market (see v.).

i. Market definition

(435) According to the online encyclopaedia Wikipedia, an operating system is a set of computer programs that manages the system resources of a computer, such as RAM, hard disks, input and output devices, and makes them available to application programs. The operating system thus forms the interface between the hardware components and the user's application software. Operating systems usually consist of a kernel (German: Kern), which manages the hardware of the computer, as well as special programs, which take over different tasks when starting the computer. These tasks include, among other things, loading device drivers. Operating systems are found in almost all types of computers, including

mobile devices.[313]

(436) A mobile operating system (MOS) is system software that controls the basic functions of smartphones, tablet PCs and other mobile devices and enables users to run applications and programs on these devices. Smart mobile operating systems typically provide a graphical user interface ("GUI"), application programming interfaces ("APIs"), and other auxiliary functions needed to operate a mobile device.[314]

(437) Operating systems are typical platform products.[315] They are characterised by network effects of a direct and indirect nature. In direct terms, users benefit from the fact that other users use the same operating system. In indirect terms, users benefit from an increasing number of software providers who program their software for the respective operating system. Conversely, these software providers also benefit from an increasing number of users. In the abuse proceedings against Microsoft, the European Commission identified significant indirect network effects on the markets for operating systems and regarded these as a significant market power factor.[316]

(438) In connection with the market definition of multi-sided markets, it is questionable whether the market is to be regarded as a uniform market encompassing both platform sides or as different markets. In view of the different needs of end users on the one hand and app publishers on the other, it is more likely in the present case that there are separate markets. In any case, i.e. also when adopting an integrated view regarding both market sides, Apple's mobile operating systems on the respective devices are either entirely without competitors (see the following section iii.), or in any case not exposed to any substantial competition (see the following section iv.), so that this question need not be decided for the purposes of this decision.

(439) In connection with this, it is also not relevant for the decision whether, from the

---

313 https://de.wikipedia.org/wiki/Betriebssystem [22 June 2022] or identically also https://www.esmcomputer.de/it-lexikon/betriebssystem/#:~:text=Ein%20Betriebssytem%2C%20auch%20OS%20(von,diese%20Anwendungsprogrammen%20zur%20Verf%C3%BCgung%20stellt. [22 June 2022]

314 European Commission, decision of 18 July 2018, *Google/Android* (AT.40099), paras. 79 et seq.

315 Bundeskartellamt, Working Paper Market Power of Platforms and Networks, June 2016, pp. 9 et seq.

316 Bundeskartellamt, Working Paper Market Power of Platforms and Networks, June 2016, p. 53 with reference to European Commission, decision of 24 March 2014 COMP/C-3/37.792 – *Microsoft*.

perspective of the end customers, the relevant market extends only to (the) mobile operating system(s) on Apple's end devices or whether it also includes the respective end devices on which the mobile operating systems are pre-installed and sold "as a package". Against the background of the arguments discussed in Section (1), the Decision Division is of the opinion that in the present case a primary/secondary market configuration must be assumed to exist and thus both the respective mobile device and the respective mobile operating system must be assigned to their own relevant product markets.

(440) Apple does not share this assessment and points out that due to the integrated offering of device, operating system and the App Store, the relevant market consists of "smart devices" or an "integrated hardware/software ecosystem". The arguments put forward by Apple in support of this view have already been discussed by the Decision Division in connection with the basic mechanics of primary and secondary markets (paras. (241) et seqq.) and in the context of the market definition of smartphones (paras. (265) et seqq.). In order to avoid repetition, reference can therefore be made here to the corresponding explanations.

(441) In the case of mobile operating systems, however, the question of the exact market definition is irrelevant, since even adopting an integrated view of device and operating system and a market consisting of operating system and mobile device, Apple's scope of competitive action is not effectively controlled by competitors in the Decision Division's opinion. In view of the close interlocking of device and operating system for the end customer as purchaser of the device, full reference can be made in this context to the information on the respective device market (see in detail Sections C.III.1.b) (2) to (4) above), which addresses the competitive relationship between Apple devices on the one hand and Android-based devices on the other. Adding the two mobile operating systems does not change the competitive assessment that Apple dominates the relevant markets (including the respective mobile operating systems).

(442) Operating systems that were programmed and are used for purposes other than the use on mobile devices are from the outset ruled out as alternatives due to the different product properties and purposes of use, and are therefore not discussed

in depth here.[317]

ii. Apple is not a market player for the licensing of mobile operating systems to device manufacturers

(443) The focus of Apple's business policy on a high degree of vertical integration, which goes hand in hand with the exclusion of third-party manufacturers with regard to Apple's mobile operating systems, is relevant to the question of whether Apple is at all active in a market for the manufacture and sale or the licensing of operating systems to device manufacturers. Since Apple uses its own mobile operating systems exclusively for its own devices and does not offer them to other device manufacturers as licensable operating systems, Apple is neither a hardware manufacturer buying nor a software provider offering licensable mobile operating systems. According to the Bundeskartellamt's decisional practice and case law, products and services manufactured for the company's own use are not normally taken into account when calculating the market volume and assessing the relevant markets.[318] This would be different only if the services were actually available to the market in the short term. However, there are no indications for this in the present case.

(444) The Decision Division, therefore, agrees with the European Commission's opinion in the Google/Android proceedings, according to which proprietary mobile operating systems do not belong to the market for licensable mobile operating systems.[319] It is also not to be expected in the future that Apple will offer its mobile operating systems on the market for licensing operating systems to third parties. Apple did not not provide any information to this effect.

(445) In the context of the European Commission's investigations in the above proceedings, Apple rather stated that, also in its view, iOS does not belong to the relevant market for licensable mobile operating systems and that iOS also does not limit the competitive scope of action of the suppliers of the licensable operating systems. Apple is quoted in the decision as follows:

---

317 See in this regard in the same line European Commission, decisions of 13 February 2012, *Google/Motorola* (M.6381), para. 29, of 4 December 2013, *Microsoft/Nokia* (M.7047) paras. 27 et seqq. as well as already 24 March 2004, *Microsoft* (COMP/C-3/37.792), paras. 324 et seq.

318 OLG Düsseldorf, decision of 22 December 2004, "*ÖPNV Hannove'*", WuW/E DE-R 1397, 1403,

319 European Commission, decision of 18 July 2018, *Google/Android* (AT.40099), paras. 238 et seqq.

"OSs that are not available for licensing by third-party OEMs should not be included in the relevant market. The non-licensable OSs do not constrain the competitive behaviour of licensable OSs. OEMs would not be able to switch to these non-licensable OSs in response to a SSNIP."[320]

(446) This assessment is confirmed by the Decision Division's findings. A well-known hardware manufacturer states:

"In the upstream market (where device manufacturers such as [...] are active), Android as a licensable operating system is distinct from operating systems used exclusively by vertically integrated developers (such as Apple iOS or Blackberry). These exclusive operating systems are not part of the same market as Android because they are not available for licensing to third-party device manufacturers."[321]

(447) Another hardware producer states:

"There are indeed only 2 operating systems with their associated ecosystems available on the market. As the Apple iOS is proprietary, Android OS is the only choice left available for a smartphone/tablet manufacturer like [...]."[322]

(448) As a result, Apple, with its mobile operating systems, is not a market participant for the licensing of operating systems to device manufacturers in the Decision Division's opinion.

---

320 European Commission, decision of 18 July 2018, *Google/Android* (AT.40099), para. 249.

321 See note "Evaluation of the survey of hardware manufacturers" – Annex 2 "Qualitative responses", p. 14.

322 See note "Evaluation of the survey of hardware manufacturers" – Annex 2 "Qualitative responses", p. 15.

iii. With its iOS platform, Apple is a monopolist vis-à-vis end customers and app publishers[323]

(449) Apple is a platform operator with iOS. The platform is an intermediary and enables direct interaction between the group of users on the one hand and the group of software developers/publishers on the other, with positive indirect network effects between the respective groups. In this respect, the fact that Apple is not active on the market for the licensing of operating systems to device manufacturers does not prevent iOS from being a platform or a market in the competition-law sense.

(450) The relevant exchange relationships between supply and demand (here the users on the one hand and the app publishers on the other) and the platform's focus as part of a business activity designed for profit-making purposes are the only decisive factors for a market to be characterised as multi-sided. Both characteristics are fulfilled. The benefit of an operating system increases for the end users if many programs are available for the system. At the same time, the attractiveness of the operating system for program developers increases if it is used by many end users and thus potential customers. For the operator of the platform and the market success of its business model – in this case Apple – it is crucial that it persuades all user groups to use the platform, e.g. the operating system. For this purpose, corresponding licence agreements are concluded by both the user and the app publisher. In its entirety, the focus on economic aspects is also manifested by the transfer of the respective mobile device including the mobile operating system to the end customer in return for payment and at least the indirect financing of iOS by the app publishers via the App Store, which is another multi-sided market (see Section C.III.1.b)(6)). To avoid repetition, reference is made to the information provided in connection with the significant extent of Apple's activities on these multi-sided markets (see paras. (178) et seqq.) for further conceptual explanations.

[323] In addition to iOS, the following explanations refer equally to the products iPadOS, watchOS and tvOS. For reasons of simplicity, only iOS is explicitly mentioned.

(451) Apple has technically excluded any competition for the use of mobile operating systems on its mobile devices. iOS is pre-installed on Apple's mobile devices and cannot be removed, let alone replaced, by an alternative operating system without in-depth computer knowledge and at the risk of losing the warranty. Hackers have obviously succeeded in installing the Linux variant Ubuntu on an iPhone in isolated cases.[324] However, the steps described in this context make it clear that this procedure is not suitable for the average user because of the special knowledge required.

(452) To install another system a so-called "jailbreak" is necessary. The pre-installed mobile operating system iOS is modified to obtain extended, so-called root access rights to internal functions and the file system. However, this is not possible in the devices' serial production condition. Apart from the fact that this procedure requires advanced IT knowledge, Apple also explicitly warns against installing software to hack iOS. The company notes that the unauthorised modification of iOS is a breach of the end user licence agreement for iOS and Apple may therefore refuse any service for an iPhone, iPad or iPod touch on which unauthorised software has been installed.[325]

(453) Against this background, it is hardly surprising that jailbreaks are not spreading significantly. [redacted].[326] Publicly available reports, however, assume that the shares are between 1.3% and 3.6% of all devices in circulation based on the number of installations of a popular software package used for a jailbreak.[327]

(454) Therefore, the fact that the operating system could theoretically be modified with the help of unauthorised software in order to obtain extended access rights to the operating system and then install a software management system that can be used to install any software, even software not approved by Apple, does not result in

---

324 https://www.mactechnews.de/news/article/Linux-auf-dem-iPhone-Kernel-Bastelei-bringt-Ubuntu-zum-Laufen-irgendwie-176781.html [8 February 2022]

325 https://support.apple.com/de-de/HT201954 [13 December 2021]

326 Apple's response of 23 August 2021 to the Decision Division's request for information dated 10 August 2021, folio 262 of the case file.

327 See, for example, https://techcrunch.com/2013/01/21/behind-the-scenes-of-the-iphone-5-jailbreak/ or also https://de.wikipedia.org/wiki/Jailbreak_(iOS) [13 December 2021]. Even if these figures refer to 2013, there is no evidence that the technical challenges described have become less complex over time, nor that the use of jailbreaks has increased.

any significant alternatives for end customers or app developers. Accordingly, Apple cannot cite this technically demanding circumvention as an alternative justified under competition law.

(455) As a result, there are no alternative options for end users to use alternative mobile operating systems on the iPhone they have already purchased. The end users' alternatives also determine those of the app publishers on the other side of the platform. App publishers can ultimately reach Apple users only through the iOS operating system, as end users do not tend to own both Android and Apple smartphones. In its final report Mobile Ecosystems, the CMA assumes, with reference to corresponding empirical studies, that 80% of all smartphone users own only one smartphone. Those few users who own more than one smartphone also tend to remain loyal to the respective operating system on the second or third device. Similar, albeit slightly lower retention rates are seen in connection with the use of tablets.[328]

iv. Market dominance also when taking Android into account

(456) Even when taking Google's Android into account, there is no substantial competition and Apple has a paramount market position within the meaning of Section 18 (1) no. 2 or no. 3 GWB. This applies both to the market side of end users and to the market side of app developers.

(457) Apple's iOS and Google's Android are in fact the only two remaining operating systems for mobile devices. 99% of all smartphones and tablets in Germany, the EU and worldwide run on one of the two mobile operating systems.[329] However, the two companies pursue different business strategies in this regard. While Google licenses its operating system to mobile device manufacturers (OEMs), Apple uses its iOS system exclusively on its own devices ("proprietary"). It is neither licensed to third parties nor is it possible or permissible to use another operating system on Apple's end devices. The survey of hardware manufacturers has shown accordingly that, apart from Huawei[330], all smartphone manufacturers

328 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1048746/MobileEcosystems_InterimReport.pdf paras. 3.21 et seqq. [8 August 2022]

329 https://gs.statcounter.com/os-market-share/mobile/worldwide [27 December 2021]

330 Huawei was accused of espionage in the wake of the trade dispute between China and the US. As a result, Huawei lost its Android licence and developed its own operating system.

except Apple use Google's Android operating system.

(458) The alternative options of the end users on the one hand and the publishers on the other hand are ultimately decisive for the purposes of the competitive assessment.

(459) From the end customer's point of view, Google's Android is only available as a further mobile operating system alongside iOS if the mobile end device is also changed. In this respect, the inclusion of Google's Android at the level of the operating systems requires simultaneous consideration of the mobile devices (no change of mobile operating system without a change of device). At least from the end customer's point of view, the considerations in connection with the competitive assessment of the end device markets dominated by Apple must therefore be taken into account. Adding the two mobile operating systems to the respective end devices does not change the competitive assessment that Apple dominates the relevant markets.

(460) From the perspective of app publishers, Google's Android is also not an alternative to Apple's iOS that could effectively limit Apple's competitive scope of action.

(461) The Decision Division's investigations have shown that for app publishers, the two operating systems cannot be regarded as substitutes, but are largely complementary. Almost 80% of app publishers develop their apps for both mobile operating systems anyway and publish them in the respective app stores at the same time (multihoming).

(462) These findings are consistent with those of the European Commission in the *Google/Android* proceedings. Against the background of internal Google documents, the Commission assumes that only around 40-50% of app publishers develop their software for both operating systems.[331] However, with reference to several studies, the Commission also points out that among the apps in high demand, the degree of coverage across both operating systems is significantly higher. Of the TOP 100 iOS apps, 92 are also available for Android, while 90 of the TOP 100 Android apps are also available for iOS.[332] Another study showed that all but one of the TOP 50 apps for iOS are also available for Android.[333]

---

331 European Commission, decision of 18 July 2018, *Google/Android* (AT.40099), para. 555 (1).
332 European Commission, decision of 18 July 2018, *Google/Android* (AT.40099), para. 555 (2).
333 European Commission, decision of 18 July 2018, *Google/Android* (AT.40099), para. 555 (3).

(463) The fact that a comparatively small number of apps are responsible for the majority of downloads in the App Store has been confirmed by the Decision Division's investigations. Thus, [90-100]% of downloads are accounted for by only around [<10]% of the total apps available.[334]

(464) From the app publishers' point of view, access to each of the two operating systems is therefore indispensable. Such configurations of "parallel dominance" are not a new competition-law concept for digital markets. They find their conceptual point of contact in the case law of the Federal Court of Justice in the "Reisestellenkarten" case, among others.[335] Referring to the ECJ's Magill decision, the Federal Court of Justice points out the construct of "parallel market dominance" and states in its headnote: "If several companies, by virtue of their position on an upstream market, have the possibility, alongside and independently of each other, to prevent effective competition on a downstream market, each of them may be dominant within the meaning of Article 82 EC."

(465) This also applies in consideration of the market dominance criteria for multi-sided markets within the meaning of Section 18 (3a) GWB.

(466) On the one hand, the lock-in effects and switching costs that make it difficult to switch mobile operating systems (Section 18 (3a) no. 2 GWB) – as described – are manifold. From the end customer's perspective, this applies equally to the operating system and the mobile devices because of the close linkage. The lock-in effects result not only from the high acquisition costs for the end device. The bundling of the various products and services of the Apple system made possible for users is also a contributory factor. The smooth interconnectivity of the various products and services when using the hardware and the standardisation of functions via uniform identifiers within the ecosystem further increase the synergy effects for users. Multihoming via several providers of such services, as offered by Apple, is not very attractive and hardly ever takes place. By designing the ecosystem as a closed one with very high user numbers, Apple counteracts the possibilities of third parties to reach Apple users in order to offer them their own

334 Basis for consideration: worldwide downloads of all apps retrievable from the German App Store on the reference date of 31 July 2021 between 1 January 2021-31 July 2021. The calculation is based on Apple's response of 26 August 2022 to the Decision Division's request for information of 10 August 2021, data set APL-BKartA_000001.txt.

335 Federal Court of Justice, decision of 3 March 2009, *Reisestellenkarte* (KZR 82/07), headnote b).

products, services and a combination of both. As a consequence, the markets for software and services are split up in relation to the app vendors; Apple users can only be reached via Apple´s hardware and Apple´s operating systems. To avoid repetition, reference is also made to the corresponding explanations in connection with smartphones, tablets and smartwatches.

(467) This also describes the direct and indirect network effects (Section 18 (3a) no. 1 GWB) that exist in connection with operating systems. (see para. (437)). As already shown, this is not contradicted by the fact that both iOS on the one hand and Android on the other have considerable direct and indirect network effects for their respective ecosystems. The stable development and spread of the two systems in the sense of a lasting coexistence is an indication that the network effects, which are also undoubtedly present in Android, are not capable of limiting the competitive scope of action enjoyed by Apple's iOS. On the contrary, they contribute to permanently securing Google's own position on the market for licensable mobile operating systems. According to the Commission's findings in the Google/Android proceedings, Google dominates the market for licensable mobile operating systems, among other things, because the market is characterised by considerable network effects. Google's market position cannot be contested by iOS because Apple does not license its operating systems.[336]

(468) Apple also enjoys considerable economies of scale in connection with network effects (Section 18 (3a) no. 3 GWB). The installed base alone of 1.8 billion active devices on which iOS or another proprietary operating system from Apple is installed demonstrates these economies of scale. It is also irrelevant in this context that Google's Android also benefits from significant economies of scale. Again, these economies of scale, in conjunction with the network effects described, contribute to self-reinforcing effects within the Google ecosystem. Multihoming hardly takes place. It is therefore not apparent that Apple's position will come under pressure from Google's economies of scale in connection with network effects.

(469) Finally, Apple's access to relevant data is also important in this context (Section 18 (3a) no. 4 GWB). It is precisely through the operation of its mobile operating systems that Apple has direct access to a wide range of usage-related data, both of its end customers and of its business partners, the app publishers. A description

336 European Commission, decision of 18 July 2018, *Google/Android* (AT.40099), paras. 464 et seqq.

and assessment of this outstanding access to data relevant for competition can be found below in Section C.III.4. Here, too, it is irrelevant that Google also enjoys privileged access to data. This is because the vast majority of customers use either an Android or an iOS device, or several devices of the same operating system category ("single homing", see para. (455)).

v. By way of alternative: strong market position or position of power regarding mobile operating systems

(470) Even if Apple does not dominate the market for mobile operating systems (on its devices) within the meaning of Section 18 (1) no. 1 GWB (no competitors) or nos. 2 or 3 (no substantial competition or paramount market position), there are in any case no grounds to doubt that Apple has a strong market position or position of power on the market for mobile operating systems, also and especially when taking into account Google's Android.

(471) As already explained, such a market position or position of power– to be located in the "grey area" of the classic concept of market dominance – can also be examined under Section 19a (1) sentence 2 no. 1 GWB. Furthermore, it can in any case be taken into account as part of the necessary overall assessment within the scope of the examination under Section 19a (1) GWB (for more details in this respect see paras. (236) et seqq.)

(472) From the end customer's point of view, as already explained, the competitive situation on these device markets is also relevant here because when taking Google's Android into consideration the integrated device level thus also has to be taken into account. In this respect, reference can also be made here to the comments made in connection with Apple's at least strong market position or position of power on the market for smartphones (paras. (357) et seqq.), tablets (para. (385)) and smartwatches (paras. (429) et seqq.). Taking both mobile operating systems into account does not change the competitive assessment because of the close interlocking of the devices with the operating systems. As a result, Apple also has at least a strong market position or position of power on these – hypothetical – integrated markets consisting of mobile end devices and mobile operating systems.

(473) Also with regard to the market side of the app publishers, Apple has at least a

strong market position or position of power. Since, according to the investigations, the app publishers must use both the iOS and Android operating systems for their business model to be successful (high rates of parallel supply, see para. (461)), a large number of app publishers are equally dependent on both Apple and Google. Such multiple dependencies are also not a novelty under competition law. The conceptual framework for such configurations "below market dominance" exists in German competition law in the cases of so-called top position or top group dependency within the framework of Section 20 (1) GWB (see Federal Court of Justice, judgment of 20 November 1975 – KZR 1/75, WuW/E 1391, 1394 – Rossignol-Ski; judgment of 22 January 1985 – KZR 35/83, WuW/E 2125, 2127 – Technics; judgment of 9 May 2000 – KZR 28/98, WuW/E DE-R 481, 482 – Designer-Polstermöbel).

(474) The finding of parallel market dominance and multiple dependencies is consistent with the assessments of various other state institutions. For example, the investigative report of the responsible subcommittee in the US House of Representatives also points to the lack of competitive interdependence:

> *"Although both Google Android and Apple iOS both have dominant positions in the mobile OS market, high switching costs and a lack of on-device competition mean that neither firm's market power is disciplined by the presence of the other."*[337]

(475) The British CMA concludes in its "Market Study final report Mobile Ecosystems":

> *"Based on the evidence reviewed, we found that both Apple and Google have substantial and entrenched market power in mobile operating systems."*[338]

337 https://judiciary.house.gov/uploadedfiles/competition_in_digital_markets.pdf p. 102 [7 February 2022]

338 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1048746/MobileEcosystems_InterimReport.pdf para. 3.191 [8 February 2022]

(6) App Store – Apple's distribution platform for software on iOS-devices

(476) With its App Store, Apple is active on the multi-sided market for the operation of software distribution platforms on its devices (on the market definition see i.). Apple is the only company to operate an app store on its devices and therefore also dominates the market for the operation of software distribution platforms on its own end devices. As in the case of operating systems, the company also has a monopoly there; Apple has no competitors within the meaning of Section 18 (1) no. 1 GWB. For both end users and app publishers, the use of alternative distribution and purchasing channels for software on Apple's mobile devices is technically impossible. Neither sideloading nor web apps offer any significant alternatives for end users and app publishers on Apple's mobile devices (see ii.). Furthermore, neither Google's Play Store (iii.) nor other (possibly complementary) digital distribution channels via alternative hardware (iv.) are a relevant alternative for app publishers that would allow them to choose not to distribute their offerings via the App Store. This applies also and especially when taking the criteria for dominance on multi-sided markets within the meaning of Section 18 (3a) GWB into account.

(477) In any case, however, Apple occupies a strong market position or position of power in the market for the operation of mobile software distribution platforms also and especially when taking account of Google's Play Store (see v.).

i. Market definition

(478) In addition to an operating system that runs the basic functions of the device (see above), smart mobile devices such as smartphones or tablets require additional software applications ("apps") in order to open up the device's central area of use for users and app publishers. The development of smart mobile devices therefore very soon led to the emergence of app stores, i.e. "digital distribution platforms consisting of online services and related apps, allowing users to download, install, and manage a variety of different apps from a single point."[339]

339 European Commission, decision of 18 July 2018, *Google/Android* (AT.40099), para. 86.

(479) With the App Store Apple operates a platform.[340] The platform is an intermediary and enables direct interaction between the group of users on the one hand and the group of app publishers on the other, with positive indirect network effects between the respective groups. The relevant exchange relationships between supply and demand (in this case users on the one hand and app publishers on the other) and the platform's focus as part of a business activity designed for profit-making purposes are decisive for its status as a market. Both characteristics are fulfilled. As a single and proprietary digital distribution platform for application software, the App Store brings together the supply of publishers and the demand of customers who own and use an iOS device. The more publishers can be found with their products in the App Store, the more attractive the iOS device or the App Store pre-installed on this device is for customers/users. Conversely, the more customers own an iOS device or the greater their willingness to pay, the more attractive the App Store sales channel or access to Apple customers is for app publishers. In order to avoid repetition, reference can be made to the explanations provided in connection with the significant extent of Apple's activities in these multi-sided markets (see paras. (189) et seqq.) for further details.

(480) Apple does not share the Decision Division's approach to defining the market and repeatedly points out that, in its view, the relevant market consists of "smart devices" or an "integrated hardware/software ecosystem" due to the integrated offering of device, operating system and app store. The arguments put forward by Apple in support of this view have already been discussed by the Decision Division in connection with the basic mechanics of primary and secondary markets (paras. (241) et seqq.) and in connection with defining the market for smartphones (paras. (262) et seqq.). In order to avoid repetition, reference can therefore be made here to the corresponding explanations.

(481) The App Store is installed on every iPhone, regardless of where the device is distributed. Access to the App Store and the commercial terms of its use also follow the same rules for both users and app publishers, regardless of the question in which regions the app can be installed or downloaded. The following findings are therefore not dependent on the geographic definitions of the markets.

---

340 Apple states on its German website: "For over a decade, the App Store has proved to be a safe and trusted place to discover and download apps. But the App Store is more than just a storefront – it's an innovative platform (emphasis added by the Decision Division) focused on bringing you amazing experiences." https://www.apple.com/de/app-store/ [1 July 2022]

ii. With the App Store on its end devices, Apple is a monopolist vis-à-vis end customers and app publishers

(482) Apple's App Store is pre-installed on the devices at the time of delivery as the only channel for users to purchase software. For the purpose of the competitive assessment of whether Apple dominates the market for the operation of the distribution platform on its mobile devices, the alternative options of the end users on the one hand and the publishers on the other hand are therefore decisive.

(483) As a proprietary platform, there are corresponding restrictions on the distribution of software via channels other than the App Store. Theoretically, it is possible for Apple customers to circumvent these usage restrictions by means of appropriate software and to modify the mobile operating system to obtain extended root access rights to internal functions and the file system ("jailbreak"). However, this is not possible in the devices' serial production condition. After the jailbreak, a software management program is usually installed, which can be used to install any software, even software not authorised by the manufacturer Apple ("sideloading"). [341] For details, please refer to the explanations provided in connection with mobile operating systems (see paras. (451) et seqq.).

(484) The restrictions on the user side are also reflected and confirmed by the Decision Division's investigations at the app publishers. The app publishers surveyed also believe that sideloading options made possible by jailbreaking are not an adequate alternative for the digital distribution of their software via the App Store.

(485) Over 90% of app publishers surveyed said sideloading was not a viable (65%) or poor (30%) alternative to distributing software in Apple's App Store. The rejection rates were clearest with regard to the criteria "visibility/availability" and "commercial relevance" (around 95% in each case). But also with regard to the "range of functions" and the "user experience", the vast majority of the app publishers surveyed (around 80% in each case) are of the opinion that sideloading cannot be used at all or that it is only poorly able to replace Apple's App Store. The chart below summarises the findings of the investigation.

[341] https://de.wikipedia.org/wiki/Jailbreak_(iOS) [15 December 2021]

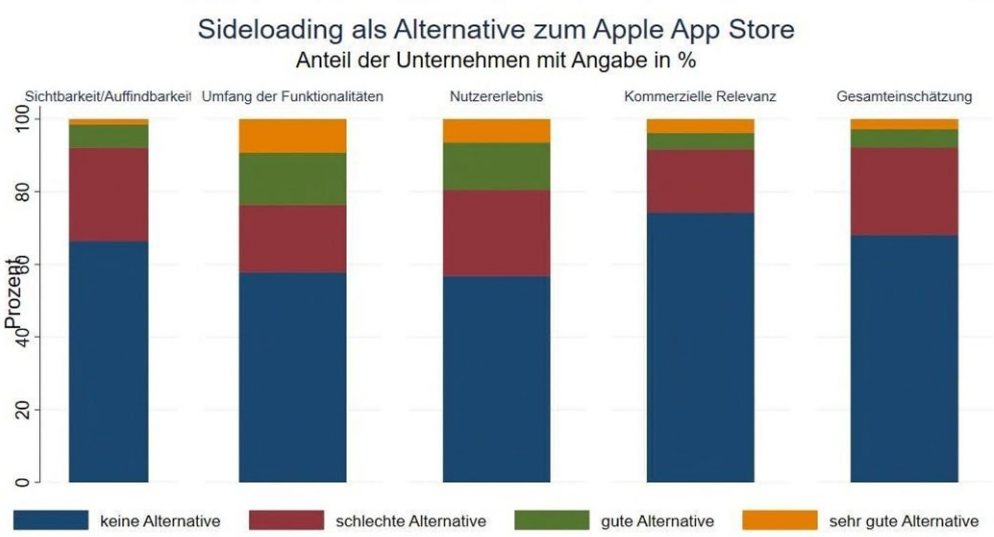

Figure 20 Investigation results app publisher sideloading[342]

(486) This finding is consistent with the findings of other competition authorities. In its "Mobile ecosystems Market study final report", for example, the British CMA notes the considerable technical challenges involved and the low level of use:

> *"[...] Therefore, the App Store does not face a competitive constraint from users sideloading apps."*[343]

(487) In its "Market Study into mobile app stores", the Dutch ACM also assumes that sideloading is, at best, a relevant alternative for the purchase of apps for customer groups with a high level of technical expertise:

> *"But with every new iOS that became available, jailbreaking became harder and harder, and nowadays, it is only an option for very skilled hackers or teams of hackers."*[344]

(488) The investigative report of the responsible subcommittee in the US House of Representatives also concludes that sideloading is not a relevant alternative to software distribution via app stores:

---

342 See note "Evaluation of the survey of app publishers" – Appendix 1 "Results of the quantitative evaluation", p. 15.

343 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1048746/MobileEcosystems_InterimReport.pdf para. 4,104 [26 January 2022].

344 https://www.acm.nl/sites/default/files/documents/market-study-into-mobile-app-stores.pdf pp. 46 et seqq. [26 January 2022]

> *"Similarly, the ability for consumers to sideload apps – installing apps without using an app store – does not discipline the dominance of Apple and Google in the mobile app store market. Apple does not permit users to sideload apps on iOS devices, and few consumers have the technical savvy to "jailbreak" an iOS device to sideload apps."*[345]

(489) As a result, so-called web apps are also not a relevant alternative for users of Apple's end devices.

(490) Web apps are applications that are provided via cloud or a server and can be accessed in the browser of any mobile device. Unlike "mobile" or "native apps", they are not programmed for a specific platform and are not installed and executed on the respective end devices. Web apps (from web application) are called up directly via the browser and work on any Internet-enabled device that supports this browser. Their programming is usually compatible across browsers. Web apps are usually developed on the basis of CSS, JavaScript or HTML5.[346]

(491) Web apps do not have the same range of functionalities as native apps. This applies, for example, to the integration of push messages, Bluetooth connectivity, offline data storage options, and access to personalised features such as the address book or calendar. These differences in the range of functionality mean that the user experience suffers compared to the native app.

(492) Apple itself obviously shares this assessment, as it states in the App Store Review Guidelines[347]:

> *"Your app should include features, content, and UI that elevate it beyond a repackaged website. If your app is not particularly useful, unique, or "app-like," it doesn't belong on the App Store."*

(493) The app publishers interviewed as part of the investigations by the Decision Division confirmed this by a large majority. They also believe that web apps are

345 https://judiciary.house.gov/uploadedfiles/competition_in_digital_markets.pdf p. 97 [7 February 2022]
346 https://www.ionos.de/digitalguide/websites/eb-entwicklung/verschiedene-app-formate-was-ist-a-web-app/ [22 January 2021]
347 https://developer.apple.com/app-store/review/guidelines/ Section 4.2 [12 January 2021].

not an adequate alternative for the digital distribution of their software.

(494) More than 80% of the app publishers surveyed stated in an overall assessment that web apps are not (40%) or only a poor alternative (40%) to selling software in Apple's App Store. This is particularly true with regard to visibility/availability, commercial relevance and user experience (around 80% each). But also with regard to the scope of functionality (more than 70%), the vast majority of app publishers surveyed are of the opinion that web apps cannot replace Apple's App Store at all or only poorly. The chart below summarises the results of the investigation.

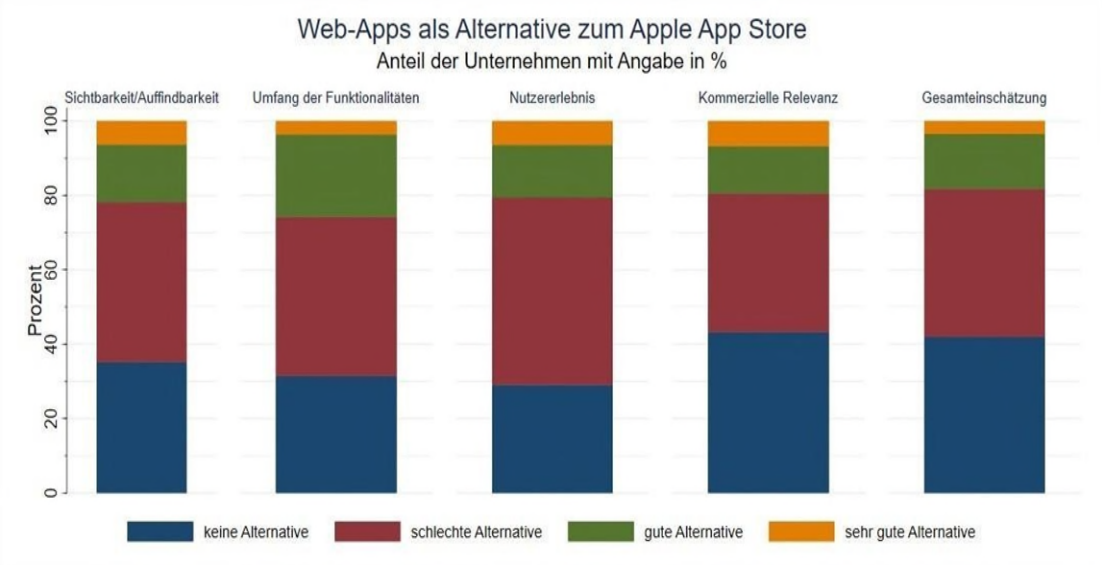

Figure 21 Investigation results app publisher web apps [348]

(495) In this respect, the results of the investigation confirm the assessment of other competition authorities. For example, the Dutch ACM found in its market survey "Mobile App Stores" that neither conventional websites nor web apps are alternatives to a native app.[349] In this context, the ACM refers to the largely static properties of a website and Apple's requirements for the minimum functionalities of an app.

(496) The ACM is also critical of web apps in terms of their interchangeability with a

348 See note "Evaluation of the survey of app publishers" – Appendix 1 "Results of the quantitative evaluation", p. 14.

349 Autoriteit Consument & Markt – Market Study into Mobile App Stores, 11 April 2019, pp. 43 et seqq., available online at: https://www.acm.nl/sites/default/files/documents/market-study-into-mobile-app-stores.pdf [12 December 2021].

native app from the perspective of developers and end customers. In the ACM's view, web apps cannot be seen as a realistic alternative to most native apps because their functionality and usability are limited compared to native apps, especially on iOS. The accessibility of end users is also significantly hampered, because there is no central distribution point like the App Store that consumers go to in order to search for web apps.

(497) The conclusions of the British CMA in its "Mobile ecosystem interim report" go in the same direction. The app publishers surveyed there also stated that web-based technologies often come with a limited range of functions and reduced performance:

> *"The evidence suggests that currently web apps place only a very limited constraint on the App Store within Apple's ecosystem [...]."*[350]

(498) The investigative report of the responsible subcommittee in the House of Representatives also reaches the conclusion that web apps are not a relevant alternative to software distribution via app stores:

> *"Web sites and web apps are not competitively significant alternatives to the dominant app stores on iOS and Android devices for distributing software to mobile devices. Apps provide a deeper, richer user experience and can provide additional functionality by accessing features within the mobile device's hardware and operating system, such as a camera or location services."*[351]

350 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1096277/Mobile_ecosystems_final_report_-_full_draft_-_FINAL.pdf, p. 115 [26 June 2022]

351 https://judiciary.house.gov/uploadedfiles/competition_in_digital_markets.pdf, p. 96 [8 February 2022]

iii. Market dominance also when taking into account Google's Play Store

(499) Even when taking into account Google's Play Store, there is no substantial competition or Apple's App Store has a dominant market position in the sense of Section 18 (1) no. 2 and no. 3 of the GWB. This applies both to the market side of the end users and to the market side of the app publishers.

(500) In the end, the alternative options of the end users on the one hand and the publishers on the other hand are decisive for the competitive assessment.

(501) As explained in connection with mobile operating systems (see paras. (459) et seqq.), from the end customer's point of view, Google's Play Store is only available as a further mobile software distribution platform alongside Apple's App Store if the mobile device is changed at the same time. In this respect, the inclusion of Google's Play Store at the level of software distribution platforms requires simultaneous consideration of the mobile devices (no change of distribution platform without a change of device). At least from the end customer's point of view, the considerations in connection with the competitive assessment of the end device market must therefore be taken into account. This is because the lock-in effects and switching costs that make such a switch more difficult (see Section 18 (3a) no. 2 GWB) are – as already outlined in connection with mobile end devices (paras. (291) et seqq. for smartphones), paras. (376) et seqq. for tablets and paras. (412) et seqq. for smartwatches) and the mobile operating systems (para. (466)) – manifold. To avoid repetition, reference can therefore be made at this point to the corresponding explanations.

(502) The same applies to direct and indirect network effects (Section 18 (3a) no. 1 GWB), which also exist in connection with software distribution platforms. This is not contradicted – as already described in the context of mobile operating systems – by the fact that both Apple's App Store on the one hand and Google's Play Store on the other have significant direct and indirect network effects for their respective ecosystems. The stable download and revenue development of both platforms for software distribution is an indication that the network effects which also exist with the Play Store are not able to limit the competitive scope of action of Apple's App Store. Rather, they spill into Google's ecosystem and reinforce themselves within

the system. In this way, they help to secure Google's own position on the market for software distribution platforms in the long term. According to the Commission's findings in the Google/Android proceedings, Google dominates the market for Android app stores because (among other things) the market is characterised by significant network effects.[352] Google's market position cannot be challenged by Apple's App Store.[353] The same applies the oher way round.

(503) Apple also enjoys considerable economies of scale in connection with network effects in the App Store (Section 18 (3a) no. 3 GWB). The installed base alone of 1.8 billion active devices on which the App Store is pre-installed and with regard to which there is no alternative demonstrates these economies of scale. In this context, it is irrelevant that Google's Play Store also benefits from considerable economies of scale. Again, these economies of scale, in conjunction with the network effects described above, contribute to self-reinforcing effects within the Google ecosystem. Multihoming hardly takes place. Therefore, even with regard to the two large platforms for software distribution on mobile devices, it is not apparent that Google's economies of scale in connection with network effects are putting Apple's position under pressure.

(504) Finally, Apple's access to relevant data is also decisive in connection with the App Store (Section 18 (3a) no. 4 GWB). It is precisely through the operation of the App Store that Apple has direct access to a wide range of data both of its end customers (e.g., on app purchases, in-app purchases, downloads) and of its business partners, the app publishers (e.g., on app purchases, in-app purchases, as well as metadata submitted in the App Store review process). A description and assessment of this outstanding access to data relevant for competition can be found below in Section C.III.4. In this context, it is not important either whether Google also has privileged access to data. This is because the vast majority of customers use either an Android or an iOS device, or several devices of the same operating system category ("single homing", see para. (455)).

(505) From the point of view of the app publishers, it is also not apparent that the Google Play Store is a relevant alternative to Apple's App Store. Almost 92% of the

352 European Commission, decision of 18 July 2018, *Google/Android* (AT.40099), paras. 638 et seqq.
353 European Commission, decision of 18 July 2018, *Google/Android* (AT.40099), paras. 652 et seqq.

publishers surveyed stated that they are already represented in both stores ("multihoming"). This finding is consistent with the investigation results of other competition authorities[354] as well as academic work in this area.[355] In addition, 83% of respondents stated that they also always publish their respective apps in parallel at the same time on both platforms.

(506) This parallel offer is also commercially reasonable and economically expedient. The expediency first results from the dichotomy of the two ecosystems. According to many app publishers surveyed, it would be a commercially risky undertaking to miss out on a large part of the value creation by offering a successful app within only one of the two ecosystems. This is certainly true for large parts of the world where Apple's devices are widely used and thus serve a substantial part of the respective market.

(507) Giving up the high sales in the Apple system in particular would be unreasonable from a commercial point of view. Apple customers are considered to be far more solvent and more willing to pay. According to publicly available statistics, user-funded revenue per download in Apple's App Store is around six times higher than in Google's Play Store.[356] As a result, Apple users are willing to a considerable extent, not only to download essentially free, ad-supported apps, but to make use of user-financed offers that are therefore more expensive in monetary terms. Accordingly, these different business models of the two corporations and the differentiated customer preferences indicate that, despite the relatively higher advertising revenues of Google in its own app store, it cannot be assumed that the App Store is a substitute for app publishers. For them, both systems are largely complementary to one another.

(508) The problem of lost revenue is also exacerbated for apps that are aimed at direct network effects on one market side, such as messenger or dating services. In these cases, the lack of accessibility of such networks on one of the two platforms

---

354 Google stated in the European Commission's Google/Android (AT.40099) proceedings: "App developers generally multi-home between the Play Store and the App Store and do not need to switch away from Google Android" [para. 303].

355 Geradin/Katsifis The Antitrust Case against the Apple App Store, Journal of Competition Law & Economics, 17(3), April 2021, p. 539.

356 See para. 165 and https://sensortower.com/blog/app-revenue-and-downloads-2021 [1 February 2022].

leads to significant negative effects among users on the other platform.[357]

(509) Against this background, Google's Play Store is also not an alternative for app publishers that exclusively serve iOS. Since customers can be reached predominantly via either Apple's App Store or Google's Play Store (single homing), the decision not to use the Apple platform or a respective change of the platform would result in the loss of most of the existing (more affluent) customers. In the Decision Division's view, this loss cannot be compensated by additional customers on the other platform. For example, only 20% of the app publishers surveyed who offer their products exclusively in Apple's App Store (only around 8% of the app publishers surveyed overall) stated that the app in question was previously also listed in Google's Play Store.[358]

(510) Apple points out that alternative distribution channels are available to most app publishers. In the company's view, this is already evident from the fact that there are a number of other digital distribution platforms apart from Apple.[359] However, the market relevance of such alternative distribution channels claimed by Apple does not exist. The investigations revealed that, within the app stores as a whole, only the Google Play Store accounts for a large share of app publishers' revenues, besides the App Store's share. On average, the App Store accounts for just under 60% of all app store revenues of the app publishers surveyed and the Google Play Store for just under 40%. Other app stores, which account for only 2-3% of the revenues in total, virtually don´t play any role.[360] Apple´s indication that at least 22 other digital distribution platforms launched between 2008 and 2011[361] therefore remains without practical relevance with regard to the distribution via app stores (for an assessment of alternative digital distribution channels, see Section iv. below).

(511) Particularly with respect to the Google Play Store it is not possible to draw the conclusion from the above that a significant portion of the revenues generated

---

357 See, for example, the Dutch Competition Authority ACM regarding dating platforms: https://www.acm.nl/sites/default/files/documents/summary-of-decision-on-abuse-of-dominant-position-by-apple.pdf, para. 11 [8 February 2022].

358 This means that only about 1.4% of the app publishers surveyed stated that they offered apps exclusively in the App Store and were not active in the Google Play Store at any time.

359 See Apple's comments on the Decision Division's draft decision of 5 January 2023, paras. 123 seqq. (folios 3,236 seq. of the case file)

360 See note "Evaluation of the survey of app publishers" – Appendix 1 "Results of the quantitative evaluation", p. 12.

361 See Apple's comments on the Decision Division's draft decision of 5 January 2023, paras. 123 seqq. (folio 3,235 of the case file)

through the App Store can be substituted by the revenues generated through Google's Play Store. Finally, Apple also notes in its comments on the Decision Division's draft decision that "the vast majority of developers of digital content and apps want to reach all potential users and do not focus their efforts solely on the Apple ecosystem."[362]

(512) The Decision Division's investigations also revealed that 68% of the app publishers surveyed do not see an interdependence between app prices in Apple's App Store and app prices in Google's Play Store. This also suggests that the degree of substitutability between both sales channels is very limited at best. The most important determinant of the pricing policy in Apple's App Store with regard to the competitive situation is the availability of other paid apps in Apple's App Store itself. Around 65% of app publishers attach great importance to this. The chart below summarises the results of the survey on this question.

(513) When asked whether the Google Play Store is an alternative to Apple's App Store, around half of the respondents answered "no alternative" or "poor alternative".[363]

362 See Apple's comments on the Decision Division's draft decision of 5 January 2023, para. 120 (folio 3,234 of the case file)

363 See note "Evaluation of the survey of app publishers" – Annex 1 "Results of the quantitative evaluation", p. 19.

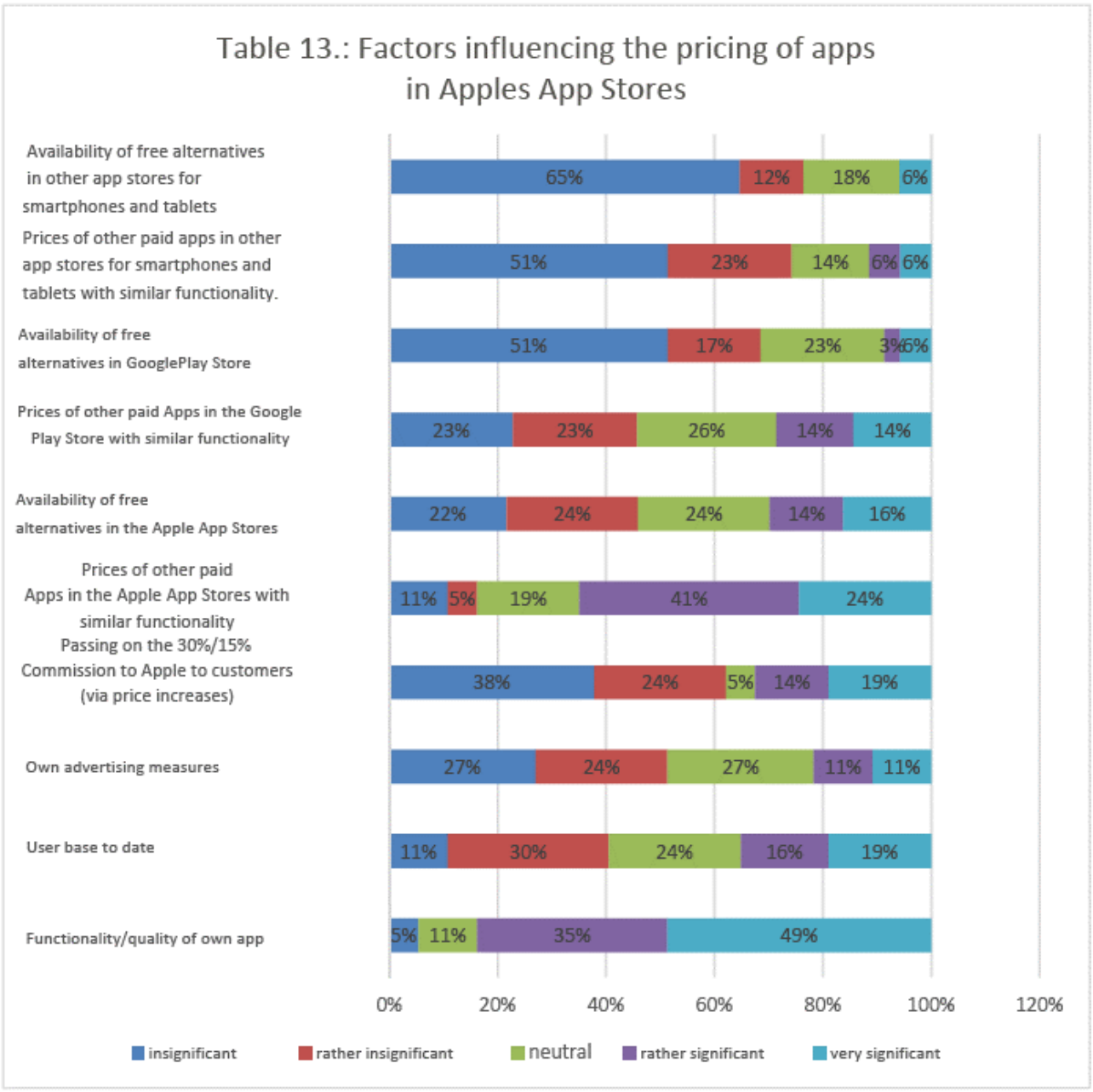

Figure 22 Investigation results app publisher pricing App Store[364]

(514) The companies that have denied interchangeability repeatedly and consistently point out that Apple customers cannot be reached through the Play Store due to single-homing:[365]

> *"For our apps to pay off, we need both channels. You can't reach Apple device users on any other device, so there are no alternatives*

364 See note "Evaluation of the survey of app publishers" – Annex 1 "Results of the quantitative evaluation", p. 25

365 See note "Evaluation of the survey of app publishers" – Annex 2 "Qualitative responses", pp. 34 et seqq.

for us to this very affluent target group."

"The apps are aimed at different audiences."

"For target groups that have an Apple device, neither Google nor other app platforms are a useful alternative. The lock-in effect of the respective platforms (e.g., photo files in the respective cloud, etc.) makes it virtually impossible to persuade a relevant number of these target groups to buy a different device with a different operating system. Therefore, other platforms as well as websites do not represent a significant alternative. Focusing on other platforms would have the effect of neglecting the target group of Apple end-device users."

"Due to the fact that Google Play is already a distribution channel for our app, this platform is not an alternative to the App Store, as iOS users cannot use it as a source of supply. Both platforms are equally important for our offering. Google Play has a larger user base, while the purchasing power per user is higher in the App Store."

"Both the Google Play Store and the Apple App Store are crucial for the distribution of [...] apps and for [...]'s access to mobile users. In this context, the Google Play Store is not really an alternative to the Apple App Store, but rather a supplement. [...]'s business relies on access to both ecosystems, as Apple iOS/iPadOS users can only be reached via the Apple App Store and Android users via the Google Play Store."

"The Google Play Store and other mobile app stores are not an alternative/substitute for the distribution of [...] apps to reach users with mobile iOS devices. [...] assumes that it is only in very rare cases that iOS users also own non-iOS mobile devices of the same type (smartphones or tablets) in parallel, on which other app stores could

be accessible for them. Conversely, the only meaningful way to reach iOS users from a business perspective is through the Apple App Store and iOS in-app purchases. It should be noted that iOS users represent a special and often particularly desirable customer group for many of [...] apps, as they usually have better financial resources (reflected, for example, in their ability to buy expensive iPhones instead of Android phones, which tend to be less expensive or offer newer technologies).”

(515) The companies that stated that the Google Play Store is a good or even very good alternative to Apple’s App Store added comments in many cases that suggest the question was interpreted more in terms of revenue distribution or purely technical interchangeability. For example, companies frequently added the comment *“No differences.”* or similar phrases such as *“No, no differences between iOS and Android.”* or *“No significant difference.”* were chosen. One company, which assumes that interchangeability is very good, stated that *“Google Play Store and Apple App Store are of equal importance in our company. We mostly develop for both platforms.”* Another company, although ticking that the Play Store is a good alternative, even stated*: “Google Play Store is a good and accessible product, but not an alternative for Apple users, as these two worlds are not compatible.”*[366]

(516) Overall, it appears that the companies that consider substitutability to be good to very good have interpreted this substitutability either more in terms of technology or according to their current sales distribution, but not in terms of the possibility of substitution under competition law.

(517) The finding that the Google Play Store is not a relevant fallback alternative to Apple’s App Store is supported by a number of other competition authorities and the results of their investigations. In its “Mobile ecosystem – Market study final report”, the British CMA summarises its findings with reference to app publishers and consumers:

“Overall, we have found that Apple and Google face a limited

366 See note “Evaluation of the survey of app publishers” – Annex 2 “Qualitative responses”, pp. 37 et seq.

constraint from each other in relation to the presence of each other's app stores. This is because:

- *The largest app developers accounting for most downloads are present on both the App Store and Play Store and would not delist from one of these app stores, due to the volume, value and uniqueness of users on each – this is particularly the case in relation to Apple, whose users on average spend more per year through Apple IAP than Android users spend through Google Play's billing system.*
- *Users generally do not have both iOS devices and Android devices. This means that an iOS user would need to purchase a new device in order to access the Play Store, and an Android user would need to purchase a new device in order to access the App Store. As found in Chapter 3, such switching is limited in practice and there are additional factors, such as the lack of transparency of app store conditions (eg the price, quality and range of apps), that make such switching unlikely in response to changes in the price or quality of apps available in different app stores."*[367]

(518) Both the investigative report of the relevant subcommittee in the US House of Representatives and the Dutch ACM in its market investigation "Mobile app stores" confirm this finding, citing the lack of interchangeability from the consumer's perspective:

"The App Store and the Play Store do not compete against one another. Android users cannot access the Apple App Store, and iOS users cannot access the Google Play Store, so the dominance of the Play Store is not constrained by the App Store and vice versa."[368]

And:

---

367 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1096277/Mobile_ecosystems_final_report_-_full_draft_-_FINAL.pdf, p. 128 [1 July 2022]

368 https://judiciary.house.gov/uploadedfiles/competition_in_digital_markets.pdf, p. 95 [8 February 2022]

"In conclusion, other app stores are not an alternative for iOS, because no other app stores are available on iOS."[369]

(519) From the perspective of app publishers, access to both Apple's App Store and Google's Play Store is thus indispensable. As already noted in the context of the related configuration on the markets for mobile operating systems, such configurations of "parallel market dominance" are not a new competition-law concept for digital markets. They find their conceptual starting point in the case law of the Federal Court of Justice in the "Reisestellenkarten" case, among others.[370] Referring to the ECJ's Magill decision, the Federal Court of Justice points out the construct of "parallel dominance" and states in its headnote: "If several undertakings, by virtue of their position on an upstream market, have the possibility, alongside and independently of each other, of preventing effective competition on a downstream market, each of them may be dominant within the meaning of Article 82 EC."

iv. Market dominance also when taking into account other digital software distribution channels

(520) The majority of the app publishers surveyed also ruled out other alternative (digital, possibly complementary) distribution channels as an alternative to distribution via Apple's App Store. Apple states that its App Store competes not only with other app stores, but also with software distribution platforms available via PCs and consoles, such as Xbox and PlayStation. In the company's view, these distribution channels represent relevant alternative sales channels for app publisher simply because it is evident from the distribution of sales that Apple's App Store as a whole only accounts for a moderate share of total sales of around [redacted].[371]

(521) Apple's claim is not confirmed by the investigation conducted. In each case, more than 95% of respondents stated that smart TV apps and game consoles are not at all or only poor alternatives for selling apps via Apple's App Store. Sales via the

369 https://www.acm.nl/sites/default/files/documents/marketstudy-into-mobile-app-stores.pdf, p. 51 [8 February 2022]

370 Federal Court of Justice, decision of 3 March 2009, *Reisestellenkarte* (KZR 82/07), headnote b).

371 See Apple's comments on the Decision Division's draft decision of 5 January 2023, paras. 123 et seqq. (folios 3,235 et seqq. of the case file).

companies' own websites (rejection rate of 75%) and the aggregated fallback solution of "other own sales systems" (rejection rate >85%) fared only slightly better.[372]

(522) In the Decision Division's opinion, these distribution channels ultimately also do not represent a relevant possibility for substitution with regard to the revenue generated via Apple's App Store. While the current revenue distribution may reflect the current "distribution mix" across all app publishers surveyed, it says little about whether one distribution channel can be substituted in whole or in part by the other.

(523) In addition, the companies surveyed state that the sale of software by app via Apple's and Google's app stores has become considerably more important. Almost 70% of respondents said that the relevance of Apple's App Store and Google's Play Store had increased over the past five years. No other sales channel achieved such high values. For example, only 8% of the app publishers surveyed indicated an increase in the importance of smart TV apps, while the figure for game consoles was only 2%. The development of Internet sales is assessed differently; 39% perceive it "as stagnating", but around 42% stated that the importance of sales via the Internet had increased.[373]

(524) In summary, Apple's claim that the investigations merely showed that it was economically more attractive and more sensible to offer an app (also) for iOS (devices) must therefore be rejected. In the company's view, they are not to be interpreted in the sense access to the App Store or iOS is indispensable.[374] Against the background of the results of the investigation with regard to the substitutability of the other distribution channels in the sense of alternatives relevant under competition law, the question of a business model's profitability at the level of individual companies is not relevant in this context.

(525) In this respect, the lack of interchangeability between the other distribution channels is also consistent with the findings of other competition authorities in the

---

372 See note "Evaluation of the survey of app publishers" – Annex 1 "Results of the quantitative evaluation", p. 19. It is also questionable whether self-distribution is part of the relevant market at all. See, for example, B9-55/21 Amazon, decision of 5 July 2022, paras. 117 et seqq.; Higher Regional Court of Dusseldorf, HRS VI-Kart 1/14 (V), decision of 9 January 2015, paras. 52 et seqq., B9-121/13, Booking, decision of 22 December 2015, paras. 143 et seqq.

373 See note "Evaluation of the survey of app publishers" – Annex 1 "Results of the quantitative evaluation", p. 9.

374 See Apple's comments on the Decision Division's draft decision of 5 January 2023, para. 126 (folio 3,236 of the case file).

matter. For example, the CMA assumes that there is complementarity rather than substitutability with regard to game consoles, PCs and smart TVs:

> *"We have also found that Apple and Google face a limited competitive constraint from alternative devices. These devices are primarily used for different purposes (eg native apps on mobile devices are used 'on the go') and are mainly viewed by users as complements rather than substitutes for the use of native apps. Consistent with this, generally, app developers did not consider their offerings on alternative devices to be substitutes for their offerings on mobile devices. In addition, there is limited evidence that users would switch away from purchasing content and features in native apps to purchasing it through these alternative devices or alternative channels (e.g. browsers on mobile devices)."*[375]

v. By way of alternative: strong market position or position of power regarding the App Store

(526) Even if Apple does not dominate the market for mobile software distribution platforms (on its devices) within the meaning of Section 18 (1) no. 1 GWB (no competitors) or no. 2 or 3 (no substantial competition, paramount market position), there are in any case no grounds to doubt that Apple has a strong market position or position of power on the market for mobile software distribution platforms, also and especially when taking into account Google's Play Store.

(527) As already explained, such a market position or position of power – to be located in the "grey area" of the classic concept of market dominance – can also be examined under Section 19a (1) sentence 2 no. 1 GWB. Furthermore, it can in any case be taken into account as part of the necessary overall assessment within the scope of the examination under Section 19a (1) GWB (for more details in this respect see paras. (236) et seqq.

(528) From the end customer's point of view, as already explained, the competitive situation on these device markets is also relevant because when taking Google's

375 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1096277/Mobile_ecosystems_final_report_-_full_draft_-_FINAL.pdf, para. 4,209 [1 July 2022]

Play Store into consideration the integrated device level thus also has to be taken into account. Without changing the device, it is not possible to change the mobile software platform. In this respect, reference can also be made at this point to the deliberations in connection with Apple's at least strong market position or position of power on the market for smartphones (paras. (357) et seqq.), tablets (para. (385)) and smartwatches (paras. (429) et seqq.). The indirect consideration of the two mobile platforms for software distribution does not change the competitive assessment in this context.

(529) With regard to the market side of the app publishers, Apple at least has a strong market position or position of power as already explained in connection with mobile operating systems. Since app publishers must be represented in both Apple's App Store and Google's Play Store for their business model to be successful (high shares of parallel supply, see para. (505)), a large number of app publishers are equally dependent on both Apple and Google. The conceptual framework for such configurations "below market dominance" exists in German competition law in the cases of so-called top position or top group dependency within the framework of Section 20 (1) GWB (see Federal Court of Justice, judgment of 20 November 1975 – KZR 1/75, WuW/E 1391, 1394 – Rossignol-Ski; judgment of 22 January 1985 – KZR 35/83, WuW/E 2125, 2127 – Technics; judgment of 9 May 2000 – KZR 28/98, WuW/E DE-R 481, 482 – Designer-Polstermöbel).

(530) Nevertheless, this finding does not rule out that app publishers (may) also sell products and services to end customers via various other channels in individual cases. For example, retailers who can also sell physical products via a website may tend to have greater interchangeability than a company that develops special apps for smartphones and tablets that are not designed to work on other devices or on other sales platforms. However, it must be taken into account in this context that the respective access to the Apple customer is guaranteed exclusively via Apple's software distribution platform. This access is not in a multiple, unrestricted competitive relationship with all possible other sales models and channels, even if alternative sales possibilities exist via other channels in individual cases.

c) Summary

(531) In the Decision Division's opinion, Apple dominates the hardware markets for smartphones, tablets and smartwatches within the meaning of 18 (1) no. 2 and no.

3 GWB. Apple is not exposed to any substantial competition on these markets or has a paramount market position in relation to its competitors.

(532) Apple's competitive scope of action on these markets is not effectively limited either by other hardware manufacturers or by the end users on the opposite market side.

(533) The structural characteristics are comparable in all three markets. Apple always has a consistently high market share in terms of value, which remains stable above the presumption threshold for single market dominance and is increasing over time. In all three markets, Apple also consistently has a significant market share lead over all other competitors. Customer churn is rare due to strong brand loyalty and high barriers to switching. The high and steadily widening price gaps compared with all other competitors are the market outcome of this scope of action which is not controlled by competition.

(534) Mobile devices based on other operating systems, mostly Android, are at best distant competitors who may exert competitive pressure on each other, but are unable to exert such pressure on Apple. Apple's outstanding market positions are secured in the long term by considerable resources and privileged access to data, as Apple is able to use the associated potential to its own advantage and not only secure but also expand its market positions and profits.

(535) Even if Apple did not dominate the hardware markets within the meaning of Section 18 (1) nos. 2 or 3 GWB, there would in any case be no grounds to doubt that Apple has a strong market position or position of power in each of these markets. As explained, such a market position or position of power – to be located in the "grey area" of the classic concept of market dominance – can also be examined under Section 19a (1) sentence 2 no. 1 GWB. In addition, it can in any case be taken into account as part of the necessary overall assessment within the scope of the examination under Section 19a (1) GWB (for more details in this respect see paras. (236) et seqq.). The criteria based on which the Bundeskartellamt examined Apple's dominant positions on these markets are all equally relevant.

(536) Apple is also the monopolist in terms of mobile operating systems and software distribution platforms on its respective mobile devices. For both end users and app publishers, the use of alternative mobile operating systems or app stores on Apple's mobile devices is technically impossible due to the focus on proprietary

software. According to the investigations, there are no alternatives for users and/or app publishers. Apple has no competitors on these markets within the meaning of Section 18 (1) no. 1 GWB.

(537) However, even when taking Google's Android and Play Store into account, there is no substantial competition on the markets for mobile operating systems and software distribution platforms, or Apple has a paramount market position within the meaning of Section 18 (1) no. 2 and no. 3 GWB. This applies both to the market side of the end users who have to change the underlying device in order to use the relevant alternatives, as well as to the market side of the app publishers, who for the most part offer apps for both mobile operating systems and software distribution platforms for commercially sensible and economically expedient reasons. In this respect, Apple and Google are "parallel market dominators" in the sense of the Federal Court of Justice's "Reisestellenkarten" case law and the ECJ's Magill decision.

(538) In relation to the two multi-sided markets, Apple also has, by way of an alternative, i.e. if the company does not have a dominant position, at least a strong market position or position of power. This also applies especially with regard to Google's activities in these areas, as the app publishers are in any case dependent on both Apple and Google in the sense of a top group dependency within the meaning of Section 20 (1) GWB.

(539) These and other products that make up the Apple ecosystem are able to tie customers permanently to the Apple system due to their at least strong market positions on the three levels (mobile devices – mobile operating systems – mobile software sales platform). Neither end customers nor app publishers have any relevant alternative options within this ecosystem. For end customers, the only potential alternative is to switch devices, which then inevitably includes both the mobile operating system and the software distribution platform. However, the corresponding switching behaviour – according to the findings of the investigation – is not very pronounced and is therefore unlikely to have an overall procompetitive effect. Precisely because these switches are rare, Apple customers cannot be reached by app publishers through a corresponding Android/Play Store product in the foreseeable future. Since this also applies vice versa, app publishers usually produce their apps for both Apple and Google.

2. Vertical integration and activities on otherwise related markets (Section 19a (1) sentence 2 no. 3 GWB)

(540) As shown in Section C.III.1, Apple is active in a number of different markets in which it is dominant or at least holds a strong or powerful position. Apple closely links these products through vertical integration or otherwise. This positioning with regard to business activities, which is accompanied by corresponding economies of scope and is tantamount to an ecosystem, contributes decisively to Apple's paramount significance for competition across markets within the meaning of Section 19a (1) sentence 2 no. 3 GWB.

a) Function of the criterion

(541) The criterion under Section 19a (1) sentence 2 no. 3 GWB aims at capturing the special features of digital ecosystems that arise from the vertical and/or conglomerate relationship of their products, services or offerings.[376]

(542) The term "digital ecosystem", which is frequently used in economic literature[377] and in competition policy[378], describes in particular a strategy in which the service provider bundles various products for its customers in a portfolio-like manner so that they can carry out as many activities as possible on its platform or within its "ecosystem". This also includes the formation of an ecosystem around a strong platform without any real coupling of services on the same platform, but users can be guided back and forth between services in the system. The various service

---

376 See explanatory memorandum to the 10th amendment to the GWB, see Bundestag printed paper 19/23492, p. 73.

377 Moore, Predators and Prey: A new Ecology of Competition, Harvard Business Review, May-June 1993, pp. 75-86 (p.76.); Jacobides/Cennamo/Gawer, Towards a theory of ecosystems, Strategic Management Journal, 2018, vol. 39(8), pp. 2255-2276 (p. 2264); Jacobides/Lianos, Ecosystems and Competition Law in Theory and Practice, UCL Centre for Law, Economics and Society Research Paper, January 2021, Table 1, pp. 9 et seq. (https://ssrn.com/abstract=3772366); Cremer/de Montjoye/Schweitzer, Competition Policy for the digital era, Report for the EU Commission, 2019, p. 34; Competition and Markets Authority, Online platforms and digital advertising – Market study final report, Appendix E: ecosystems of Google and Facebook, July 2020, para. 2 (https://www.gov.uk/cma cases/online-platforms-and-digital-advertising-market-study#final-report); M. Bourreau, A. de Streel, Digital Conglomerates and EU Competition Policy, 2019 (http://www.crid.be/pdf/public/8377.pdf); Fletcher, Digital competition policy: Are ecosystems different?, Note for the OECD Hearing on Competition Economics of Digital Ecosystems, December 2020, p. 2.

378 E.g. BMWi [ed.], A new competition framework for the digital economy – Report by the Commission 'Competition Law 4.0', 2019, p. 18, https://www.bmwk.de/Redaktion/EN/Publikationen/Wirtschaft/a-new-competition-framework-for-the-digital-economy.pdf?__blob=publicationFile&v=1 [27 January 2022].

offerings from the same provider aim to keep the user or end customer in the ecosystem. By designing the user relationship in this way, it may be more favourable for the user to stay in the ecosystem as switching costs become higher. In particular, bundling offers and customer loyalty programs are possible which offer various (digital) services of the ecosystem, often in a subscription, and give the user incentives to use as many offers as possible within the ecosystem without further additional costs and to dive deeper into the system.

(543) However, the condition of "connectedness" goes beyond user-side content-related connections and, in line with the protective purpose of Section 19a GWB, is aimed at whether vertical integration or other connections between the fields of activity of a company result in opportunities to achieve competitive advantages, be it in the form of controlling market access in already occupied business fields or in the form of expanding its activities into new business fields.[379] In the case of functional or value-added links between products, the ability of digital ecosystems to leverage resources and capabilities in different areas of activity represents a considerable potential risk in contrast to a mere conglomerate. At the same time, a broad ecosystem makes it possible in a special way to offer certain services without monetary payment or at very low prices by financing them through revenues generated elsewhere, for example through high prices for the sale of mobile hardware. The more closed an ecosystem is, the more difficult it is for current and potential competitors to remain in or enter the market, and the greater the scope for setting rules for the use of and access to the ecosystem.

(544) In addition, the criteria of vertical integration and activity on otherwise related markets are not weighted differently. Rather, they stand for the two perspectives "depth" and "breadth". Vertical integration is already a well-established concept in competition law as a way of opening up competitive scope. In the Internet economy, however, where the boundaries between "genuine" vertical integration and other connections that open up similar possibilities are blurring, it is precisely the latter that is of importance. As the explanatory memorandum to the GWB clearly shows, the aim of determining the scope of activities and offerings is to capture the potential for conglomerate effects, i.e., effects that are not (only) based

379 See also explanatory memorandum to the 10th amendment to the GWB, see Bundestag printed paper 19/23492, pp. 74 et seq.

on the combination of levels of the value chain that build on one another, but also effects that result from activities in different fields that are otherwise related to one another. In this respect, the explanatory memorandum to the GWB at one point mentions, for example, “special potential threats, in particular as a result of increased opportunities for vertical and conglomerate exploitation of economic power,”[380] and at another point even of the fact that “companies that operate digital platforms and networks can be of central importance for various markets due to the advantages of conglomerate structures and the occupation of key positions that are relevant for competition”.[381]

(545) Also in connection with the aspect of “vertical integration” to be examined under Section 19a (1) no. 3 GWB, Apple endeavours to reinterpret the standard regarding the analysis of potentials, which can be deduced from the explanatory memorandum, as the examination of a concrete risk situation and to mix the areas of application of subsections (1) and (2) with each other.

(546) In particular, Apple is of the opinion that the standard of examination in connection with Section 19a (1) no. 3 GWB is to demonstrate “a realistic threat of anticompetitive effects resulting from the vertical integration or conglomerate activities”[382] of the company. According to Apple, it must be specifically examined “whether certain advantages resulting from vertical integration or from activities on conglomerate markets in the digital sphere can be used for anticompetitive purposes in other markets.”[383] Apple states that this is not synonymous with the ability to achieve competitive advantages or to offer and combine several products/services as parts of an ecosystem.

(547) This cannot be accepted. Section 19a (1) GWB explicitly does not provide for a causal link between a position of power and abuse (on the two-stage structure, see also paras. (163) et seqq.). With regard to all criteria, the government’s explanatory memorandum states:

---

380 See explanatory memorandum to the 10th amendment to the GWB, Bundestag printed paper 19/23492, p. 73.

381 See explanatory memorandum to the 10th amendment to the GWB, Bundestag printed paper 19/23492, p. 73.

382 See Apple’s comments on the Decision Division’s draft decision of 5 January 2023, para. 134 (folio 3,239 of the case file).

383 See Apple’s comments on the Decision Division’s draft decision of 5 January 2023, para. 131 (folio 3,238 of the case file).

*"Sentence 2 formulates various, non-exhaustive criteria for determining a paramount significance for competition across markets, which reflects the competitive **potential of the company** as a whole."*[384] (emphasis added)

(548) However, it also states precisely with regard to the aspect of vertical integration:

*"In addition to the position in different markets, however, it is also relevant how these markets are interconnected and whether there are **opportunities** to achieve competitive advantages or even to control market access through vertical integration or other links between the fields of activity."*[385] (emphasis added)

(549) Accordingly, to affirm that a company has a position of power within the meaning of Section 19a (1) GWB it is sufficient that in the overall assessment the company has a corresponding strategic position of power and resources. However, the examination pursuant to Section 19a (1) GWB does not include considerations as to whether the company actually engages in conduct within the meaning of Section 19a (2) GWB due to its paramount significance for competition across markets. This would imply a causal link between the position of power and abuse, which is not explicitly provided for under Section 19a GWB.[386]

(550) The use of the scope of action resulting from the position of power within the meaning of Section 19a (1) GWB is not per se abusive. It is (only) the conduct listed enumeratively in Section 19a (2) GWB that is prohibited – and only if this prohibition has been "activated" and specified by a prohibition or cessation order. For this purpose, it is necessary to examine whether the company abuses its position of power by engaging in one or more of the practices conclusively listed

---

384 See government bill 10th amendment to the GWB, Bundestag printed paper 19/23492, pp. 74 et seq.

385 See government bill 10th amendment to the GWB, Bundestag printed paper 19/23492, p. 75.

386 See government bill 10th amendment to the GWB, see Bundestag printed paper 19/23492, p. 73 (below, last paragraph, emphasis in italics only here): "In accordance with the objective of the provision, the abusive practices in subsection (2) are aimed at such practices that *can be assumed* to have an increased potential to harm competition precisely when they are used by companies of paramount significance for competition across markets". This is especially true against the background of the adaptation of the wording of Section 19 GWB in the context of the 10th amendment the GWB to clarify the causality requirement, see government bill of the 10th amendment to the GWB, see Bundestag printed paper 19/23492, p. 70.

in Section 19a (2) GWB or if there is a corresponding risk of the company engaging in such practices for the first time or whether there is the risk of reoccurrence. The practices listed in Section 19a (2) GWB may show how the position of power identified in the course of the examination pursuant to Section 19a (1) GWB is expanded, deepened or secured, but there is no causality requirement between the position of power (subsection (1)) and its abuse (subsection (2)). The same applies accordingly to capturing the special features of digital ecosystems arising from the vertical and/or conglomerate relationship of their products, services or offers.

(551) Apple's range of products and services comprises vertically integrated or conglomerate products and services in this sense. In many cases, Apple is active on upstream or downstream market levels – i.e. vertically integrated in the classic sense – or in otherwise related – i.e. in any case conglomerate – business areas and can exploit corresponding economies of scope or occupy key positions in each case. Within the framework of an overall assessment of these diverse business activities it becomes clear that Apple occupies the entire value chain for high-quality mobile digital devices (including some of their components), the operating systems required to use these devices, and software distribution. This already broad range is supplemented by a number of services as well as software and service products.

(552) With its vertically integrated iOS and App Store platforms, Apple has a hybrid function: on the one hand, it is the operator of the (monopolistic) mobile operating systems and software distribution platform and the associated technical and operational intermediary services; on the other hand, it is itself a provider of software and services, which is associated with the risk of self-preferencing and leveraging strategies.[387]

(553) This fundamental, structure-related general threat situation is also not mitigated by the fact that Apple states that its offer of additional services or functions pursues the objective of "differentiating its own products from those of its competitors, increasing sales and satisfying its existing customers".[388] Apple's subjective goal

---

387 See also Schweitzer, Haucap, et al, Modernisierung der Missbrauchsaufsicht für marktmächtige Unternehmen – Endbericht, 2018, pp. 98 et seqq. for conceptual classification.

388 See Apple's comments on the Decision Division's draft decision of 5 January 2023, para. 133 (folio 3,238 of the case file).

pursued by the introduction of additional products or services is not relevant here with regard to the question of whether vertical integration or other links between the company's areas of activity create opportunities to achieve competitive advantages in already occupied business areas, up to and including the control of market accesses or the expansion of its activities into new business areas.

(554) Apple's business activities focus on various hardware products, first and foremost the iPhone. In conglomerate-horizontal terms, the iPhone is supplemented by various other digital end products, some of which are used in a complementary way, but also occasionally as "fringe substitutes". Apple enables this combined, integrated use of various hardware products through the concept of "continuity",[389] which seamlessly links these products (see b)).

(555) In vertical terms, Apple – again starting from its top-selling hardware products – is integrated both backwards (see c)) and forwards (see d)). In vertical terms, Apple has equipped all end devices with its own proprietary operating systems by way of backward software integration (c)(1)). In addition, Apple develops essential intermediate products itself – above all microchips – and is therefore also vertically integrated backward to a considerable extent with regard to hardware (c)(2)).

(556) Apple is – starting from its hardware devices – also vertically integrated forward with regard to software-based services. The software-based services relevant in this respect (d)(1)) include the subscription-financed media services business (i.), the proprietary operation of the App Store software distribution platform (ii.) as well as the company's own extremely broad range of software for a wide variety of applications (iii). Finally, Apple is also integrated forward in terms of the distribution and financing of digital devices. This is because Apple sells a significant proportion of its devices either through its own "flagship stores" or its own online store itself. In addition, Apple has recently started to offer its own financing services for the purchase of products (d)(2)).

b) Integration of devices with each other

(557) Around 50% of Apple's revenue is generated by its most important product, the iPhone. However, Apple also sells a range of other hardware devices, including

389 https://www.apple.com/de/macos/continuity/ [25 May 2022]

the iPad tablet computer, the Apple Watch smartwatch, the Mac, AirPods headphones, the HomePod speaker and the Apple TV set-top box. Overall, the hardware segment still accounts for around 80% of the company's revenue.

(558) Apple's top-selling hardware products are the market leaders in their respective markets, and in the Decision Division's opinion they even dominate these markets. They are sold by the millions. In the last five years, Apple has sold more than [150-250] million iPhones, around [40-50] million iPads, around [20-30] million Macs and around [15-25] million Apple Watches in Europe.[390] This gives Apple an extraordinarily broad base of "installed units", which is the foundation for customer access.

(559) Apple's hardware products generally serve different markets. They are often used in complementary relationships with each other. This applies, for example, to the combination of iPhone and AirPods or HomePod, which together enable cross-device music consumption with the full range of functions offered by Apple. The same applies to the combination of Apple Watch and iPhone. Without an iPhone, the use of an Apple Watch is only possible with a significantly reduced range of functions (see paras. (415) et seqq.).

(560) However, the devices' fields of application partly overlap, which means that the products can definitely be regarded as fringe substitutes for each other. For example, music and videos can be played on the iPhone as well as on the iPad or Mac.

(561) Apple enables its customers who use multiple Apple devices to seamlessly integrate the products under the "continuity" software concept.[391] The concept serves various areas of application, mostly when several Apple products are registered under one Apple ID (see paras. (114) et seqq.).

(562) With "AirDrop", files can be shared between Mac and iOS or iPadOS devices via a peer-to-peer[392] connection. The recipient is informed by a message that the file can be loaded. In addition, images, videos and texts can be copied and pasted

---

390 See Apple's response of 22 September 2021 to the Decision Division's request for information dated 10 August 2021, table 2.2, folio 382 of the case file.

391 https://www.apple.com/de/macos/continuity/ [25 May 2022]

392 In a peer-to-peer network, all network devices communicate equally. There is no central server. Data are downloaded and uploaded directly between the individual computers. https://www.giga.de/tipp/was- ist-peer-to-peer-einfach-erklaert/ [28 July 2022].

across devices between iPhone, iPad and Mac using the general clipboard (copy & paste). “Handoff” can also be used to continue or finish things on one device that were started on another. Handoff works with Apple’s Mail, Safari, Notes, Pages, Numbers, Keynote, Maps, Messages, Reminders, Calendar and Contacts software.

(563) With “Sidecar” the workspace can be enlarged and the iPad can be used as a second Mac display. The displays can be split or mirrored. With seamless control, Mac and iPad can be controlled in an integrated manner with a single keyboard or mouse. Using “AirPlay”, videos from the iPhone can also be played on an Apple device with a larger display.

(564) Apple Pay can be used to pay for purchases on the Internet via the Safari browser. The purchase on the shopping sites on the Mac can then be completed using Face ID or Touch ID on the iPhone or iPad. In addition, Touch ID can also be used on the MacBook Pro or MacBook Air or alternatively, the purchase can be confirmed on the Apple Watch by pressing the side button twice.

(565) With the Continuity Camera[393] it is possible to take a photograph or scan with the iPhone and then have it appear automatically on the Mac. The Continuity Camera works with Apple’s Finder, Mail, Messages, Notes, Pages, Keynote and Numbers software products.

(566) iPhone calls or messages can be answered or typed with the Mac, iPad or Apple Watch. The same is possible for outgoing calls/messages.

(567) Finally, Apple enables cross-device storage of photos, videos, documents and backups via iCloud. In addition, contacts, calendars, notes and reminders can be synchronised and stored across devices.[394]

(568) The examples clearly show that Apple enables the seamless use of different Apple devices in interaction through a series of tools that are summarised under the concept name “continuity”. This encourages users to perform as many activities as possible within the ecosystem. This also results in incentives for Apple users to purchase more devices from Apple and not from another manufacturer.

393 https://support.apple.com/de-de/HT209037 [22 July 2022]
394 https://support.apple.com/de-de/guide/iphone/iphde0f868fd/ios [22 May 2022]

c) Backward integration

(569) Based on Apple's top-selling hardware products, the company is vertically integrated backward to a considerable extent on both the software and hardware sides.

(1) Operating systems

(570) Apple achieves the described horizontal compatibility between the devices by deeply integrating the devices via their respective operating systems. Apple has complete control over these operating systems because it develops them itself, does not allow alternative operating systems on its devices and, conversely, does not license them to third parties. In this respect, they occupy a monopoly position on the respective devices (see paras. (482) et seqq.). This strategy distinguishes Apple from almost all other companies both in the PC sector and with regard to mobile devices.

(571) Apple's Macintosh computers at the beginning of the 1980s already ran exclusively on the company's own operating system, MacOS. The proprietary operating system is continuously developed, and updates are released regularly. The current version is MacOS 12 (Monterey). The same applies to mobile devices. Apple's iPhone was pre-installed with its own operating system (iOS) right from the start. iOS derivatives are installed on all other mobile devices. This applies to the iPad with iPadOS, Apple TV with tvOS, the Apple Watch with watchOS and the HomePod with audioOS. These "derived" versions are based on iOS[395], so the additional effort in development and updating should be manageable and economies of scale are easy to achieve. For example, until 2019, iPads and iPhones both ran on iOS. With the introduction of iPadOS, iPads no longer use iOS, but the operating system is still based on it. Through iPadOS, Apple can now give the iPad more iPad-specific features and adapt the conditions separately to the respective hardware.[396]

(572) By means of the pre-installed operating systems, Apple has exclusive access to a

395 https://appleinsider.com/articles/15/04/23/apple-watch-runs-most-of-ios-82-may-use-a5-equivalent-processor [7 August 2022]

396 https://support.apple.com/de-at/HT210394 [22 June 2022]

very large customer base. Apple specifies that the “installed base” – meaning the total number of active devices in circulation (on which the respective in-house operating system is preinstalled) – is currently around 2 billion worldwide.[397]

(573) A new version of iOS is released almost every year. Within each version, several updates are also released, which usually eliminate weak points and vulnerabilites, but also frequently introduce additional functions.[398] The same applies to the Mac. Since 2001, Apple has developed no fewer than 18 updates for macOS.[399]

(2) Hardware components

(574) Apple develops important components of its hardware itself. In this respect, Apple is also a partially backward-integrated company on the hardware side. This applies above all to the development of microprocessors.

(575) Apple now develops most of the microchips for its mobile devices and Mac computers itself. While chips from third-party suppliers were used in the iPhone at the beginning, chips from the A series developed in-house have been used in both the iPhone and the iPad since 2010. The first chip in the series, the A4, was introduced together with the 1st generation iPad and the iPhone 4. Meanwhile, the A15 Bionic is used in the current models.

(576) A similar development can be seen with the Mac. While Apple used Intel microchips in its computers for a long time, the company has been increasingly using its own M series, which was developed in-house especially for the Mac, in its personal computers since the end of 2020. Apple assumes that by the end of 2022, all Macs will be equipped with the M processor, which is now in the 2nd generation (M2).[400]

(577) Apple has backed its strategy of increasing backward integration in the form of in-house developments in this area by acquiring suitable companies from the semiconductor industry. The company is thus leveraging its great financial resources both through high investments in the area of in-house product development and through strategic company acquisitions, particularly for preliminary products or components for its own hardware or software offerings (see

397 https://www.apple.com/newsroom/2023/02/apple-reports-first-quarter-results/ [1 March 2023]
398 https://www.lifewire.com/ios-versions-4147730 [25 June 2022]
399 https://support.apple.com/de-de/HT201260 [25 June 2022]
400 https://www.apple.com/de/newsroom/2020/11/apple-unleashes-m1/ [22 June 2022]

Section 3.).

(578) Back in 2008, Apple took over the Californian semiconductor producer P.A. Semiconductor. Steve Jobs described the purpose of the acquisition as the tailored development of chips for Apple's products such as the iPod and the iPhone.[401] In the year 2010, Apple acquired chipmaker Intrinsity.[402] In 2019, Apple also acquired parts of Dialog Semiconductor, a British chipmaker. Key parts of the acquisition included employees, patents, and several sites.[403] Apple describes the core objective associated with the acquisition [redacted] In addition, the transaction [redacted].[404] Furthermore, Apple also acquired a majority stake in Intel's smartphone modem business in 2019. The USD 1 billion transaction included approximately 2,200 Intel employees, intellectual property, equipment, and contracts.[405]

(579) Apple's vertical integration in this context – for example in connection with the development of microchips – must always be viewed in two dimensions. On the one hand, the relationship to other chip manufacturers is relevant. While Apple knows the areas of application of the chips and the requirement categories of its own devices precisely and can concentrate on these, other chip manufacturers such as Intel or Qualcomm develop and produce for a range of hardware manufacturers and their different requirement profiles. Tim Millet, VP Platform Architecture at Apple, points out this fact in an interview with Der Spiegel:

> *"It took me a while to find my way around. It was completely different from the rest of Silicon Valley, where as a company that makes chips, you have to take care of several different targets. We don't have that problem; we know exactly what products we're developing something for."*

(580) On the other hand, the end product manufactured by Apple is ultimately relevant from the customer's point of view. The microchip is merely a component in this

401 https://www.wsj.com/articles/BL-BB-855 [22 June 2022]
402 https://www.nytimes.com/2010/04/28/technology/28apple.html [22 June 2022]
403 https://www.handelsblatt.com/unternehmen/it-medien/chipentwickler-dialog-semiconductor-rech-net-because-of-apple-deal-with-revenue-minus/24071218.html [28 June 2022]
404 Apple's response of 2 October 2021 to the Decision Division's request for information dated 10 August 2021, internal document file no. 00000241, folio 812 of the case file.
405 https://www.apple.com/de/newsroom/2019/07/appleto-acquire-the-majority-of-intels-smartphone-modem-business/ [22 June 2022]

regard. Bob Borchers, Vice President of Apple's Product Marketing, explains this in the same interview:

> *"We're already looking at what's going on, but we're not very concerned about the competitors and the chips they offer; after all, we don't sell chips, we sell products. Ultimately, it comes down to improving all the components of an iPhone in small steps. We want people to enjoy the food, not say, Oh, wow, that was the best tomato ever, but the rest of the salad isn't that great."*[406]

(581) Vertical integration is the decisive factor that makes it possible to focus on the end product in question. The closely coordinated interplay of microchip, hardware, operating system and application software provides Apple with competitive advantages through vertical integration at every relevant stage of value creation. This integration can be illustrated by the microchip M1 and its interaction with the Mac, the operating system macOS and the application software of Apple's own browser Safari.

406 https://www.spiegel.de/netzwelt/gadgets/applechipentwickler-tim-millet-wir-muessen-gut-darin- sein-nichts-zu-tun-a-476a8121-5546-496f-8e07-818de10bcc9a [27 June 2022]

Figure 23 Vertical integration

(582) When Apple introduced the M1 in autumn 2020, the company described the product as the "most powerful Apple chip ever and the first chip designed specifically for the Mac."[407] The chip is not only used in the Mac families (Mac mini, MacBook Air, MacBook Pro), but now also in the iPad Pro and iPad Air, taking advantage of considerable horizontal synergies. Furthermore, Apple has adapted its operating system for Macs to the new chip and thus uses considerable "vertical synergies". Apple writes about this:

> *"macOS Big Sur is engineered, down to its core, to take full advantage of all the capability and power of the M1, delivering a massive boost in performance, astonishing battery life, and even stronger security protections. With M1, things users do every day feel*

407 https://www.apple.com/de/newsroom/2020/11/apple-unleashes-m1/ [26 June 2022]

noticeably faster and smoother."

Finally, Apple can also optimally adapt its software to chip and device. For example, Apple states that the browser Safari is designed for this purpose:

> *"Browsing with Safari – which is already the world's fastest browser – is now up to 1.5x speedier at running JavaScript and nearly 2x more responsive."*

Independent analyses also conclude that the combination of processor, personal computer, operating system and application software from a single source generates considerable competitive advantages. The trade magazine Macwelt, for example, tested the Macbook Pro M1 and found[408]:

> *"Everything on this Macbook has crisp speed, including launching apps and opening and closing windows. In Safari, the speed is even more noticeable, with faster loading of web pages and smoother scrolling."*
>
> *[...]*
>
> *"If your primary apps are Apple apps, you're in luck, because Apple has updated its apps to take advantage of the M1."*

(583) But other manufacturers of key technologies used in Apple's devices, first and foremost the iPhone, which gave Apple access to relevant input factors, were also taken over and thus (vertically) integrated into the company. For the important area of the camera, Apple acquired Primesense, a manufacturer of 3D sensors, in the year 2015.[409] Also in the year 2015 and related to this, Apple purchased the motion capture specialist Faceshift.[410] Other acquisitions in this area in the year 2017 included the camera sensor manufacturer InVisage[411] and the indoor positioning

---

408 https://www.macwelt.de/international/MacbookPro-M1-im-Test-Apple-setzt-neue-Massstaebe-10924003.html [20 June 2022]

409 https://www.golem.de/news/3dsensoren-apple-bestaetigt-uebernahme-von-primesense-1311-102934.html [22 June 2022]

410 https://www.heise.de/macand-i/meldung/Apple-uebernimmt-3D-Spezialisten-Faceshift-3020103.html [23 June 2022]

411 https://techcrunch.com/2017/11/09/apple-has-acquired-imaging-sensor-startup-invisage-technologies/ [22 June 2022]

specialist FlyBy.[412]

(584) Other important areas in which Apple has integrated itself backwards, at least in part, by acquisition include the battery sector (Infinite Power Solutions 2013[413]), design technology (Ques Tek Innovations LLC, 2012[414]), display (LuxVue 2014[415]), loudspeaker (NanoScape AG 2015), and antenna (EMSCAN 2018, Blinksight 2018) technologies.

(585) What all transactions have in common is that they reduce Apple's dependency on central suppliers on the one hand, and on the other hand enable Apple to tailor the corresponding hardware to Apple's requirements at the same time. Both objectives are in line with the so-called "Cook Doctrine", which Tim Cook (then Chief Operating Officer) announced in a conference call in 2009 and which includes a clear statement with regard to the company's vertical integration:

> *"We believe that we need to own and control the primary technologies behind the products that we make, [...]."*[416]

(586) According to the recollections of Johny Srouij, Apple's Senior Vice President Hardware Technologies, Steve Jobs is said to have made similar comments back in the year 2007 in connection with the launch of the iPhone and with regard to the in-house development of microprocessors:

> *"Steve came to the conclusion that the only way for Apple to really differentiate and deliver something truly unique and truly great, you have to own your own silicon," [...] "You have to control and own it."*[417]

---

412 https://techcrunch.com/2016/01/29/apple-furthers-its-vr-plans-with-acquisition-of-flyby-media-makers-of-tech-that-sees-the-world-around-you/?guccounter=1&guce_referrer=aHR0cHM6Ly93d3cuZ29vZ2xlLmNvbS8&guce_referrer_sig=AQAAANBc61MQCbAXqzleIBwa_wwqEMxJM6fTKw9HUz7ca_8PP26Jsg8QjYQpnvXwYeZW72JYMrL2kCmWgiQgDBpT-8erMTG5crX46AxM0_aKXHTsY_SR2FMnra_D2LF_VctxZZU-vWtDI9pe9P4g-xWnBCOjzK6OgaAgYYsrG7_G6QuRa [26 June 2022]

413 https://www.marketscreener.com/quote/stock/APPL-INC-4849/news/Apple-Inc-acquired-Infinite-Power-Solutions-Inc-39133650/ [26 June 2022]

414 https://www.bizjournals.com/chicago/inno/stories/inno-insights/2017/02/15/inside-the-small-evans-ton-company-whose-tech-was.html [26 June 2022]

415 https://techcrunch.com/2014/05/02/apple-acquires-power-efficient-led-tech-company-luxvue/ [26 June 2022]

416 https://www.forbes.com/sites/patrickhull/2012/12/19/bevisionary-think-big/?sh=2425ffe03c17 [28 June 2022]

417 VP Hardware Technologies Johny Srouji in a Bloomberg interview, 2016 https://www.bloomberg.com/features/2016-johny-srouji-apple-chief-chipmaker/ [30 June 2022].

(587) Against this backdrop, proprietary developments such as microprocessors ensure that Apple succeeds in sustainably differentiating itself from the competition across all stages of the value chain from the user's perspective. This differentiation is achieved through the seamless integration of the individual elements involved in the end product – from the microprocessor to the application software (see Section d)(1) iii. below).

d) Forward integration

(588) Based on its end devices, Apple is also active downstream in a number of markets and in this respect is vertically integrated forward. This applies to both software and hardware markets.

(1) Software-based products and services

(589) Apple is – starting from its hardware devices – vertically integrated also forward. The relevant software-based services include the subscription-based media services Apple Music, Apple Arcade and Apple TV+ as well as the personalised fitness service Apple Fitness+, the news service Apple News+ and the online storage service iCloud+ (see i.). Furthermore, Apple is also integrated forward with respect to the operation of the App Store software distribution platform (see ii.). In addition, Apple develops and distributes a number of application software products on its devices itself (see iii.).

i. Subscription services

(590) Apple can leverage its broad device base to distribute its subscription-financed services, as it allows the company to address a large (potential) user base. For example, the Apple Arcade game service can only be played on the iPhone, iPad, Mac or Apple TV. Apple Music and Apple TV+ can in principle also be installed and used on third-party devices, but this rarely happens, as shown below.

(591) Apple said it was not able to break down the use of Apple Music by device class. Nevertheless, Apple states the number of downloads of the Apple Music app in Google's Play Store. This does not necessarily indicate a subscription, since Apple Music is usually also offered as a three-month free trial version. Nevertheless, the number of downloads on Android devices can be interpreted as a kind of upper

limit. In the first three quarters of 2021, Apple Music for Android was downloaded [<10] million times worldwide. This compares with around [100-200] million iPhones shipped worldwide on which Apple Music was pre-installed. In total, there were around [50-60] million subscriptions during this period.[418]

(592) Similar patterns underlie the use of Apple TV+. Here, too, it can be assumed that it is very predominantly used on Apple-owned devices as a result of vertical integration. The number of monthly log-ins on Apple devices was [1-2] billion between November 2019 and September 2021, whereas the number of log-ins on all other devices (smart TVs, game consoles, other set-top boxes) was around [100-200] million. In other words, the proportion of log-ins on Apple devices was just under [90-100]%. The ratio of first-time log-ins was roughly the same in the same period (around [300-400] million vs. [30-40] million).[419] First-time log-ins can therefore be interpreted as new customers.

(593) Apple has also bundled its Apple Music, Apple Arcade, Apple TV+, Apple Fitness+, and iCloud+ service products into the Apple One product bundle since the end of 2020. Apple One incentivises the subscription of all services by offering a lower price for this compared to individual subscriptions. The subscription figures for Apple One are developing dynamically. In addition, Apple One is predominantly used by users who had already used at least one Apple service before. As at 30 July 2021, only around [10-20]% of the world's Apple One users were not previously users of at least one of the four services Music, Arcade, TV+ or iCloud+.[420] As shown, these services are primarily used on Apple devices.

(594) The Apple Pay payment service is also linked to an Apple device or Apple's Safari browser. Without an iPhone or Apple Watch, it is not possible to set up Apple Pay or use it in shops, restaurants, or other point-of-sale establishments. On the Internet, the Safari browser is one of the prerequisites for using Apple Pay. The Apple Fitness+ service also requires an iOS device such as the Apple Watch, iPhone, iPad or Apple TV. In this respect, Apple can also use exclusive access to its user base, which already has one or more Apple device(s), in relation to these

418 See Apple's response of 14 October 2021 to the Decision Division's request for information dated 10 August 2021, table 4.1., folio 1,414 of the case file.

419 See Apple's response of 5 November 2021 to the Decision Division's request for information dated 10 August 2021, table 4.3.3, folio 1,484 of the case file.

420 See Apple's response of 5 November 2021 to the Decision Division's request for information dated 10 August 2021, table 4.5.2, folio 1,486 of the case file.

services from a vertical point of view.

(595) In addition, Apple Pay is the only mobile payment solution that can use the NFC "tap and go" function of iOS mobile devices for payments in shops. In the Apple Pay proceedings (AT.40452 Apple – Mobile Payments), the European Commission is investigating Apple's terms and conditions and its other measures to integrate Apple Pay into commercial apps and websites on iPhones and iPads, the restriction of access to the NFC (near field communication) "tap and go" function on iPhones for payments in online shops and retail stores, and alleged denials of access to Apple Pay.[421]

(596) Apple's services have developed very successfully overall in recent years. At the end of 2021, an aggregate of more than [700-800] million customers worldwide were using one or more subscription-financed services from Apple (such as iCloud+, Apple Music, Apple TV+ or Apple Arcade). The services are also developing very dynamically. In the past fiscal year alone, around [150-220] million customers have joined, and the number of users has [redacted] in the last five years.[422]

ii. Software distribution (App Store)

(597) Apple also operates the mobile software distribution platform, the App Store, itself. Software distribution is vertically downstream of operating systems and mobile devices. In this respect, Apple is also vertically integrated forward in terms of software distribution.

(598) In any case, with regard to the "digital" accessibility of Apple customers, the services of third parties can only be offered on the App Store distribution platform due to vertical integration. Apple has technically excluded any alternative software distribution on its devices (see Section C.III.1.b)(6)).

(599) This position of power held by Apple is additionally strengthened by the fact that the framework conditions under which markets for software distribution are created within the ecosystem are set by Apple itself. The associated technological and

421 https://ec.europa.eu/commission/presscorner/detail/de/ip_20_1075 [25 June 2022]

422 Apple's response of 22 January 2022 to the Decision Division's request for information dated 10 August 2021, internal document Financial Update Nov. 21, file 00001543, slide 43, folio 2,238 of the case file.

economic power to set rules means that Apple, with the App Store, has a considerable influence on access to third-party sales markets and thus ultimately even on the prospects of success of the respective business models.

(600) Apple denies that the App Store has any influence on the chances of success of third parties and maintains that there is no evidence of this and that the Decision Division has not demonstrated this.[423] However, Apple mentions elsewhere in its statement that "[redacted]"[424] In this respect, the Decision Division also assumes on the basis of this additional statement that this is accompanied by at least “a significant influence” on the development opportunities of these companies.

(601) For example, Apple retains a commission for App Store purchases when app publishers sell digital goods or services or goods or services consumed within the app – to the extent they are digital. This commission is 30%. This does not apply to sales in connection with subscriptions that run for longer than 12 months, where the commission is 15% after one year. Since 1 January 2021, Apple’s App Store Small Business Program has also been in effect, which reduces the commission for all app developers whose sales in the previous calendar year were less than USD 1 million to 15%.[425]

(602) The App Store has been pre-installed on every mobile device since 2008. As mentioned above, Apple currently has an installed base of at least 2 billion devices, the vast majority of which are iPhones. Vertical integration via device, operating system and software distribution gives Apple exclusive access to a very large number of affluent customers via the App Store.

(603) Against this backdrop, this business area is also developing very dynamically. In 2021, a total of almost [30-40] billion apps were downloaded from Apple’s iOS App

423 See Apple’s comments on the Decision Division’s draft decision of 5 January 2023, para. 136 (folio 3,239 of the case file).

424 See Apple’s comments on the Decision Division’s draft decision of 5 January 2023, para. 188 (folio 3,262 of the case file).

425 https://www.apple.com/de/newsroom/2020/11/appleannounces-app-store-small-business-program/ [8 February 2022]

Store.[426] This was associated with net revenue at Apple of USD [20-30] billion in the fiscal year 2021. In 2017, net revenue in the App Store was around USD [<10] billion.[427] This corresponds to an increase of more than [120-130]%.

(604) For a comprehensive assessment of Apple's potential to exercise rule-setting power with regard to access to the App Store, please refer to Section C.III.5.

iii. Application software

(605) Apple also develops and sells a number of software products on its own devices. Here, too, the vertical integration of device, operating system and software distribution guarantees access to end users.

(606) This mainly applies to mobile devices, i.e. the iPhone, the iPad and the Apple Watch. Apple states that no fewer than 25 Apple-owned apps are provided for the iPhone/iPad in the state of delivery on the basis of iOS 15.[428] Apple only pre-installs Apple-owned apps and not third-party apps. The apps are automatically installed with every new purchase and/or update of the operating system. A reset to the factory settings also leads to an installation of all apps again.[429]

(607) Apple's pre-installed apps achieve a considerable reach due to the devices' high penetration rate. As already mentioned, Apple currently has an installed base of more than 2 billion devices worldwide.

(608) Users also spend a disproportionate amount of time ("screen time") with Apple's own apps compared to third-party apps. Although Apple only offers a few dozen apps out of a total of more than [<5] million apps in the App Store, users who have agreed to send device analysis data to Apple in any case spend [30-40]% of their screen time with these apps. If you include the Safari browser, the share among these users is even just under [30-40]%.[430]

---

426 Apple's response of 22 September 2021 to the Decision Division's request for information dated 10 August 2021, table 3.3.1, folio 217 of the case file.

427 Apple's response of 22 September 2021 to the Decision Division's request for information dated 10 August 2021, table 2.3.4, folio 212 of the case file.

428 https://support.apple.com/de-de/guide/iphone/iph248b543ca/15.0/ios/15.0 [26 June 2022]

429 Bundeskartellamt, Sector Inquiry Mobile Apps, Final Report, July 2021 https://www.bundeskartellamt.de/SharedDocs/Publikation/EN/Sector%20Inquiries/Sector_Inquiry_Mobile_Apps.pdf;jsessionid=984DB6B1ED90F735C35CE3B8FF529486.1_cid362?__blob=publicationFile&v=2, p. 41 [22 June 2022].

430 Apple's response of 14 October 2021 to the Decision Division's request for information dated 10 August 2021, table 10.2, folio 1,436 of the case file.

(609) Furthermore, only a very small percentage of Apple users have changed their settings for the browser and the email program. These so-called "default" settings control which program is started on the smartphone/tablet when a file in or link to a website or email format is clicked. As at July 2021, only about [10-20]% of Apple users on iPhones and iPads had selected an alternative email program and even only about [<10]% of users had selected an alternative web browser to Apple's Safari browser as a default setting.[431]

(610) The fact that users use pre-installed apps frequently and extensively is to be ascribed to the so-called "default" effect[432]. This effect describes a cognitive distortion that is associated with a preference for the current (i.e., pre-installed) state among many users, since every change is associated with effort. The European Commission states in this regard in its Google/Android decision on the Google search engine pre-installed on Android:

> *"Users are unlikely to look for, download, and use alternative apps, at least when the app that is pre-installed, premium placed and/or set as default already delivers the required functionality to a satisfactory level. As Nokia indicated in relation to pre-installation: "Where a product is preloaded by default, consumers tend to stick to this product at the expense of competing products – even if the default product is inferior to competing products." In order to overcome the status quo bias and see users looking for alternatives, service providers need to convince users that their service is significantly better than the alternative that is already pre-installed, premium placed or set as default."*[433]

> *"As explained in Section 11.3.4.1.II, a significant number of users will not, however, download any competing general search app but rather use the general search app which is pre-installed on their GMS devices, Google Search. For example, on Windows Mobile devices – where Google's general search service is neither pre-installed nor set as default – Bing accounted for [50-60]% to [80-90]% of general*

431 Apple's response of 14 October 2021 to the Decision Division's request for information dated 10 August 2021, table 10.3.2, folio 1,437 of the case file.

432 https://www.anti-bias.eu/anti-bias-strategien/nudges-beispiele/default/ [22 May 2022]

433 European Commission, decision of 18 July 2018, *Google/Android* (AT.40099), para. 782.

search queries in 2014-2017 (see recital (793)).”[434]

(611) Apple believes the Decision Division’s statements regarding the “screentime” of Apple customers and the “default” settings were not sufficiently empirically verified, as only around 10% of Apple users had consented to the disclosure of device analysis data. In addition, in Apple’s view this sample is biased because these customers probably have a strong preference for Apple products and services.[435]

(612) Both arguments are not suitable to correct these supplementary findings of the Decision Division. On the one hand, a 10% random sample is considered very generous in empirical social research as a whole. For example, the Sunday question (“Which party would you vote for if the Bundestag election were held next Sunday?”) is answered, allowing for an acceptable margin of error, on the basis of a survey of only 1,000 eligible voters. In Germany, around 60 million citizens are currently eligible to vote. On the other hand, the willingness to share device analytics data does not necessarily indicate a strong affinity for Apple. It is also possible that users have an interest in improving products or are generally not very hesitant to share data. No submissions have been made in this regard, nor is any other information available.

(613) Apple is also (exclusively) vertically integrated forward with regard to its voice control software Siri, which is also pre-installed as part of iOS on every mobile device. Siri is the only way to control an Apple device by voice. Due to the high distribution and intensive, exclusive use, Apple can continuously improve Siri. From a horizontal perspective, Siri also enables the linking of Apple devices, such as the iPhone with the HomePod. In addition, Siri (in interplay with Apple’s Home app, which is also pre-installed) also allows setting up and controlling various third-party smart home devices that are integrated via Apple’s Home Kit, a software framework.[436]

(614) It is also noteworthy that in individual cases Apple even vertically integrates the relevant upstream products/components for Apple’s own app. In spring 2020, for example, Apple took over the weather service provider Dark Sky and integrated

---

434 European Commission, decision of 18 July 2018, *Google/Android* (AT.40099), para. 803.

435 See Apple’s comments on the Decision Division’s draft decision of 5 January 2023, para. 137 (folio 3,240 of the case file).

436 https://www.apple.com/de/ios/home/ [22 July 2022]

individual functionalities of the Dark Sky app directly into its own weather app. This not only entailed a switch from obtaining data and content from the provider Weather.com to Dark Sky obtaining such data and content itself, but also the discontinuation of the corresponding Android app and the abolition of interfaces for third-party developers.[437]

(615) As a result, the vertical integration of device, operating system and software through the associated possibility of (exclusively) pre-installing Apple's own software thus enables competitive advantages on the respective market for the software concerned.

(2) Sales and financing

(616) Apple is vertically integrated forward not only on the software side, but also with regard to hardware sales. This applies both to sales (off and online) and (more recently) to the financing of its hardware products.

(617) The share of revenue generated by Apple in overall direct sales (i.e. including all products) in the past financial year 2021 was [30-40]%.[438] Apple is also active in direct sales of its hardware products and is thus also partially vertically integrated in this respect. This applies to both traditional retailing and online retailing.

[redacted] In 2001, Apple opened the world's first Apple Store; the company now operates more than 500 stores worldwide, about half of them in the United States. In Germany, there are currently 16 retail shops.[439] The share of sales generated by Apple-owned shops was [<10]-[10-20]% before the pandemic, depending on the product category.[440] [redacted]

(619) According to media reports, Apple's flagship stores are among the top-selling shops in the world.[441] Apple operates its shops, which often have special

437 https://www.theverge.com/2021/6/10/22527878/darksky-apple-ios-app-website-api-shut-down-end-of-2022 [26 May 2022]

438 https://d18rn0p25nwr6d.cloudfront.net/CIK-0000320193/42ede86f-6518-450f-bc88- 60211bf39c6d.pdf p. 5 [20 June 2022]

439 https://www.apple.com/de/retail/storelist/ [20 June 2022]

440 Apple's response of 23 September 2021 to the Decision Division's request for information dated 10 August 2021, tables 7.1. and 7.2., folio 235 of the case file.

441 https://www.sueddeutsche.de/irtschaft/lukrative-apple-stores-groesste-ausbeute-pro-quadratme-ter-1.1521727 [20 June 2022]

architectural features, primarily in prime locations in large cities, such as Fifth Avenue in New York or the *Champs-Élysées* in Paris. In its flagship stores, Apple presents the entire range of its hardware innovations in an appealing atmosphere and can thus offer users a special "touch-and-feel" shopping experience.

(620) New products are presented in the flagship stores, and the staff are specially trained. Technical support service is provided at the "Genius Bar".[442] There are special "Today at Apple" events that offer project-oriented user training and are designed to help customers make better use of their products.[443]

(621) The company has been also operating its own online store via the Apple website since 1997. Depending on the product category, Apple sold up to [20-30]% of its end devices via its own online store in 2021.[444]

(622) In addition to sales, Apple also offers its own payment system along the value chain in the form of Apple Pay (see para. (101)). Furthermore, Apple has announced (initially exclusively for the USA) that it will expand its own payment service Apple Pay to include an instalment payment function.[445] Apple has stated that this credit financing option will be handled by the subsidiary Apple Financing LLC and that credit checks will be carried out on the customers. The company has the necessary state credit licences to be able to offer the function.[446]

(623) As a result, Apple, through its direct sales activities via the flagship stores and its own online shop as well as its activities in the area of payment systems & financing within the meaning of Section 19a (1) no. 3 GWB, is also vertically integrated forward to a considerable extent in this respect along the value chain of hardware products.

e) Summary

(624) Overall, it is clear that Apple's diverse business activities cover the entire value chain around digital devices and their use by end consumers. Starting with its

442 https://www.apple.com/de/retail/geniusbar/ [12 July 2022]
443 https://www.apple.com/de/today/ [12 July 2022]
444 Apple's response of 22 September 2021to the Decision Division's request for information dated 10 August 2021, tables 7.1. and 7.2., folio 235 of the case file.
445 https://www.apple.com/newsroom/2022/06/apple-unveils-new-ways-to-share-and-communicate-in-ios-16/ [21 June 2022]
446 https://www.bloomberg.com/news/articles/2022-06-08/apple-will-handle-the-lending-itself-with-new-pay-later-service [21 June 2022]

hardware products, first and foremost the iPhone, the company is vertically integrated both forwards and backwards to a considerable extent.

(625) Starting with essential primary products such as microchips, to the proprietary operating system, to the sale and financing of the hardware, Apple itself covers all relevant areas relating to its end devices and their application-related use through considerable vertical and conglomerate depth and breadth. In addition, there is the App Store for software distribution on the devices as well as a considerable range of additional software, services and service products.

(626) Based on a very broad user base, which tends to be willing to spend money, and which currently actively uses a total of around 2 billion devices worldwide, Apple can market these software-based offerings efficiently, for example, by pre-installing its apps and promoting its subscription services in a targeted manner. Apple's services are therefore rapidly gaining reach and profitability. The service division in which these offerings are marketed has for years contributed an increasing share to sales and above all – due to its extraordinarily high margin – to profits.

(627) Apple is thus a "prototype of a vertically integrated corporation" that understands how to ensure a seamless interlocking of these different elements through a profound vertical and conglomerate integration of its products and services, thus ideally tying the user to its ecosystem. With this in mind, Steve Jobs finally included this as an important point for a strategy meeting in his agenda back in 2010:

> *"[...] tie all of our products together, so we further lock customers into our ecosystem."*[447]

447 https://www.theverge.com/c/22611236/epic-v-apple-emails-project-liberty-app-store-schiller-sweeney cook jobs [28 June 2022]

3. Financial strength and access to other resources (Section 19a (1) sentence 2 no. 2 GWB)

(628) Apple's resources contribute to its paramount significance for competition across markets. This is because Apple's considerable financial strength and its substantial access to other resources enable it not only to successfully secure the position it has achieved in the long term, but also to expand it even further. This circumstance can have a negative impact on the innovative strength of competitors.

a) Function of the criterion

(629) Taking into account the special protective purpose of Section 19a GWB, Section 19a (1) sentence 2 no. 2 GWB deals with the question of the extent to which a company has financial strength or other resources that can be deployed across markets and confer a competitive advantage, i.e., the extent to which the deployment of financial strength or other resources is possible and suitable in individual cases to contribute to the expansion and/or safeguarding of an ecosystem and thus (as a reinforcing element) to its systemic importance. Ultimately, the factors "financial strength" and "other resources" are intended to cover all the capabilities available to a company, in particular also the respective potential for innovation.

(630) These factors are also taken into account because of the competitive self-reinforcing effect associated with their use: On the one hand, the great financial strength of large digital corporations results from the multiple uses of certain resources, as this in particular lowers the costs of market entry for the company. This enables increasingly better access to resources and ultimately a further increase in financial strength. On the other hand, the market entry barriers of competitors who have yet to acquire the relevant resources continue to rise, at least in relative terms, so that a competitive advantage that can no longer be made up can arise.

(631) In the context of digital business models, the often high scalability and economies

of scope of the business models and the low marginal costs[448] of an established market position mean that financial resources can be generated on a large scale. Such an advantage creates the possibility of buying off innovative competition through high investments or high-priced takeovers.

(632) Moreover, the mere presence of large digital corporations in certain markets can weaken access to financial resources for other companies, creating so-called "kill zones",[449] in which no one wants to invest. This can increase the barriers to market entry for third parties and lead to a reduction in the innovative drive, which is increasingly limited to defensive innovations by the norm addressee to protect the business model and, if any, to (merely) complementary offers by third parties.[450]

(633) As in the context of its overarching criticism of the application of the criteria under Section 19a (1) (and no. 2) GWB and analogously the topic area of vertical integration, Apple is of the opinion – also in connection with the considerations regarding "financial strength & resources" – that it must be proven within the framework of a market-related individual examination whether the respective resources are used to secure the ecosystem, to increase the barriers to market entry for third parties and to impede innovative competition by other companies.[451]

(634) As was already the case in connection with the purpose of the law in general (paras. (163) et seqq.), and also with regard to vertical integration in particular (paras. (545) et seqq.), reference can once again be made to the explanatory memorandum, which, in the Decision Division's opinion, clearly advocates for an analysis of potential, which also and especially applies in connection with the criterion of financial strength & resources. The explanatory memorandum reads as follows:

> *"Important indications for the existence of a paramount significance for competition across markets are first of all its [...] and its financial*

---

448 The low marginal costs may, in turn, be significantly related to the existence of "shareable inputs", i.e. input factors that can be used on several markets or in different business models. See also para (146).

449 BMWi, A new competition framework for the digital economy – Report by the Commission 'Competition Law 4.0', 2019, p. 65 with further references in fn. 174.

450 See Stigler Center, Stigler Committee on Digital Platforms – Final Report, 2019, p. 75; M. Bourreau, A. de Streel, Digital Conglomerates and EU Competition Policy, 2019, p. 21 with further references.

451 See Apple's comments on the Decision Division's draft decision of 5 January 2023, paras. 139 et seqq. (folio 3,241 of the case file).

strength or its access to other resources. In the digital sector in particular, it is not only the revenues generated that play a role. Criteria such as cash flow, profits over several years, return on sales, etc., can also be taken into account, as can user numbers, for example."

(635) While the explanatory memorandum spells out the concrete indicators that can be used to measure such financial strength and resource power, there is no justification for a "resource deployment test combined with competitive effects" as demanded by Apple.

b) Apple's financial resources

(636) Apple's financial resources are substantial. This assessment already results from the analysis of the financial key figures that are publicly accessible due to accounting and disclosure requirements.[452]

(637) In the last five financial years (2018-2022), Apple has achieved sales of more than USD 250 billion in each financial year, and in the last completed financial year sales were even around USD 400 billion. This makes Apple one of the world's top-selling companies.[453] In addition, Apple has been able to increase its sales by an average of almost 10% per year over the last five years. These extraordinarily high sales and sales increases already indicate the company's special financial strength within the meaning of Section 19a (1) sentence 2 no. 2 GWB.

(638) Also in terms of profit Apple has extraordinary financial strength. In the last five years, profits have increased by more than two thirds. In the 2021/2022 financial year, Apple ranked second among the world's largest companies by profit, with a profit of just under USD 95 billion.[454]

(639) The cash flow also mentioned in the explanatory memorandum as a suitable criterion for determining financial strength in the digital sector[455] represents the entire flow of a company's financial resources. A distinction is made between operating cash flow, cash flow from investing activities and cash flow from

452 https://investor.apple.com/sec-filings/default.aspx [21 January 2021]
453 https://fortune.com/global500/2021/search/ [24 January 2022]
454 Biggest companies by profit: https://de.statista.com/statis94,tik/daten/studie/164673/survey/profitable-companies---top-50-companies-worldwide-by-profit/ [12 March 2023].
455 See explanatory memorandum, Bundestag printed paper 19/23492, p. 75.

financing activities. Operating cash flow comprises the cash flow from the company's ordinary activities and is an indicator of liquidity and the ability to finance internally, i.e. the ability to finance from a company's own business activities without funds from outside. Apple's operating cash flow has increased by more than 50% from USD 77.4 billion in the 2018 financial year to USD 122 billion in the 2022 financial year ended September 2022.[456] This demonstrates Apple's large and steadily increasing scope for internal financing.

(640) In addition to the ability to finance internally, the ability to finance externally must also be taken into account when measuring financial strength. One indicator of this is free cash flow. It is used by both providers of debt and equity capital to assess earnings power. Free cash flow is calculated as the difference between operating cash flow and capital expenditures. It indicates the financial resources actually available to a company in order to pay out the claims of debt and equity providers. Creditors and shareholders use it to check creditworthiness or to assess the scope for repayments, dividend payments, capital repurchases or mergers and acquisitions. Apple's free cash flow has been consistently positive over the last five financial years, increasing by more than 70% from USD 64.1 billion in the 2018 financial year to USD 111.3 billion in 2022.[457]

(641) Finally, Apple regularly has very high levels of cash and cash equivalents. Cash and cash equivalents are significant in that they allow the company to act very quickly, for example in the case of acquisitions, when corresponding opportunities arise, without having to clarify complex financing issues beforehand. Apple's liquid assets ("cash, cash equivalents & marketable securities") amounted to around USD 183 billion at the end of the fiscal year 2022.[458] At the end of 2021, the rating agency Moody's used Apple's "exceptionally high liquidity" as one of the reasons to upgrade Apple to the top rating Aaa, a rating that only few companies receive. Moody's expects Apple to continue to have an "exceptionally strong liquidity profile" over the next 3-5 years.[459] A top rating from the leading rating agencies in

---

456 SEC FILING FORM 10K, FY 2022, https://d18rn0p25nwr6d.cloudfront.net/CIK-0000320193/42ede86f- 6518-450f-bc88-60211bf39c6d.pdf, p. 36.

457 SEC FILING FORM 10K, FY 2022, https://investor.apple.com/sec-filings/sec-filings-details/default.aspx?FilingId=16157374, p. 36, [1 March 2023]

458 SEC FILING FORM 10K, FY 2022, https://investor.apple.com/sec-filings/sec-filings-details/default.aspx?FilingId=16157374, p. 41, [1 March 2023]

459 https://www.bloomberg.com/news/articles/2021-12-21/apple-gets-top-credit-rating-from-moody-s-on-growth-prospects [24 January 2022]

turn enables very favourable borrowing.

(642) Finally, a meaningful indicator of a company's financial strength that can be expected in the future is its stock market value. The stock market value (also market capitalisation) is the arithmetical total value of the shares in circulation of a listed company. It reflects investors' expectations of future success in the form of the present value of a company's discounted future earnings.

(643) Apple is the most valuable company in the world in terms of stock market value. At the beginning of 2022, Apple became the first company in the world to break through the USD 3 trillion mark.[460] It was not until August 2020, just 16 months earlier, that Apple had become the first company in the world to reach the market capitalisation threshold of USD 2 trillion.[461]

c) Apple's other resources

(644) Beyond Apple's financial strength, its access to other resources also contributes to its paramount significance across markets. These include its user base and the value of the "Apple" brand.

(645) A broad user base, the importance of which is explicitly mentioned in the explanatory memorandum,[462] is particularly important with regard to Apple's activities across products and services. It enables Apple to expand its activities because current users of existing products and/or services can be more easily approached and acquired with regard to expansions or entirely new products and services. New products or services, which often tie in with existing products and/or services, can thus quickly gain reach. The broad user base also provides Apple with broad and deep data[463] about the users of its services and their behaviour.[464]

(646) Apple has an exceptionally strong user base worldwide and in Germany. At the end of the fourth quarter of the fiscal year 2021, Apple reported more than [<5] billion active Apple devices worldwide, including about [<5] billion iPhones, more

460 https://www.reuters.com/markets/europe/apple-gets-closer-3-trillion-market-value-2022-01-03/ [20 January 2022]
461 https://www.reuters.com/article/us-apple-stocks-idUSKCN25F1X9 [20 January 2022]
462 Government bill, GWB Digitalisation Act, Bundestag printed paper 19/23492, pp. 75 et seqq.
463 On the exclusive consideration of the data processing potential and the irrelevance of internal or statutory requirements and contractual agreements, see in more detail (693) et seqq.
464 On the importance of access to data relevant for competition see in detail Section 4.

than [250-350] million iPads, and about [100-200] million Macs.[465] In the last five years, Apple has sold [20-30] million iPhones, nearly [<10] million iPads, and about [<10] million Mac computers and a number of other products in large quantities in Germany alone.[466] The number of active devices worldwide exceeded the 2 billion mark at the beginning of 2023.

(647) In addition, numerous Apple services are becoming increasingly popular. At the end of the fourth quarter of 2021, the Apple Music streaming service had reached around [75-85] million paying subscribers[467] worldwide, of which around [<5] million were in Germany. Their number [redacted] since 2017.[468] The video-on-demand service Apple TV+ was even able [redacted] its user numbers in just one year between the beginning of 2020 and 2021: In Germany, from around [550,000-600,000] to [<5] million and from [10-20] million to more than [35-45] million subscriptions worldwide.[469]

(648) Apple links its services and products via the Apple ID so that users of a service can set up additional services quickly and easily. New products, which are often linked to existing services, can thus quickly gain reach. In Europe, there were around [100-200] million Apple IDs at the end of the third quarter of the fiscal year 2021, with Germany alone accounting for around [20-30] million IDs.[470]

(649) In addition, the "Apple" brand has a high degree of recognition and thus qualifies as a significant asset, the importance of which also supports the assumption of paramount significance for competition across markets. A strong brand can have several functions. Among other things, it serves as an orientation aid for the consumer within a wide range of products and services, differentiates the company's own product range from that of its competitors, provides the consumer

---

465 Apple's response of 22 January 2022 to the Decision Division's request for information dated 10 August 2021, internal document Financial Update Nov. 21, file 00001543, slides 19, 26, and 33, folios 2,214, 2,221, and 2,226 of the case file.

466 See Apple's response of 22 September 2021 to the Decision Division's request for information dated 10 August 2021, sheet 2.1., folio 210 of the case file.

467 Apple's response of 22 January 2022 to the Decision Division's request for information dated 10 August 2021, internal document Financial Update Nov. 21, file 00001543, slide 42, folio 2,237 of the case file.

468 See Apple's response of 22 September 2021 to the Decision Division's request for information dated 10 August 2021, sheet 4.1, folio 220 of the case file.

469 See Apple's response of 22 September 2021 to the request for information dated 10 August 2021, sheet 4.3., folio 222 of the case file.

470 See Apple's response of 5 November 2021 to the request for information dated 10 August 2021, sheet 5, folios 1,489 et seq. of the case file.

with additional information (e.g. on quality), represents an emotional anchor, creates trust and thus offers the opportunity for customer loyalty.[471] Brands can thus have a far-reaching influence on the awareness and purchasing behaviour of customers.

(650) As part of the annual "Best Global Brands" ranking by the international brand consultancy Interbrand, Apple was in 2022 once again ranked the world's most valuable brand, just like in the previous two years. According to Interbrand, Apple has increased its brand value by around one fifth to USD 482 billion. Apple is also consistently ranked among the top brands in similar rankings, such as the "Global Top 100 Brand Corporations" by the European Brand Institute in Vienna, in which Apple topped the rankings in both 2022 and 2021.

d) Use of resources

(651) Apple's financial strength and its access to other resources contribute to Apple's paramount significance for competition across markets. In particular, Apple can use the funds at its disposal for high investments in research and development, in various (new) business areas and for company acquisitions. Overall, Apple can thus not only successfully secure its achieved position across markets in the long term, but also expand it even further, thus affecting the innovative strength of its competitors.

(652) Investments in research and development are particularly important in digital markets, which are characterised by innovation. Successful investments in research and development, for example to further develop existing products and business areas, help to secure and expand an existing market position. If research and development results in corresponding innovations, new markets can also be opened up.

(1) Research & development and personnel

(653) Apple invests extensively in research and development. The corresponding expenditures nearly doubled from USD 14.2 billion in the 2018 financial year over

---

471 Gabler Wirtschaftslexikon, "Marke", Prof. Dr. Franz-Rudolf Esch, online: https://wirtschaftslexikon.gabler.de/definition/marke-36974 [4 November 2021].

a five-year period and were USD 26.3 billion in the 2022 financial year ended in September 2022.[472] This is also a significant investment of financial resources in research and development, even when compared to the world's 50 most innovative companies. Apple ranked first in the annual innovation rankings of the Boston Consulting Group (BCG) in both 2020 and 2021.[473]

(654) As a result, Apple has seen significant headcount growth in recent years, particularly in areas strongly characterised by research. The total number of full-time equivalents worldwide grew from just under [100,000-200,000] in the year 2017 to more than [100,000-200,000] in the year 2021, an increase of around [20-30]%. The strongest growth rates were recorded by the research-driven business units "Hardware Technologies" ([<10,000] to [10,000-20,000], + [50-150]%) and "Software Engineering" ([<10,000] to [10,000-20,000], + [50-150]%).[474] Both areas thus grew around [redacted] as fast as the company as a whole. Apple states accordingly in its 2021 Annual Report:

> *"The year-over-year growth in R&D expense in 2021 was driven primarily by increases in headcount-related expenses, R&D-related professional services and infrastructure-related costs. The Company continues to believe that focused investments in R&D are critical to its future growth and competitive position in the marketplace, and to the development of new and updated products and services that are central to the Company's core business strategy."*[475]

(655) Apple is still looking for numerous employees for both areas, software and hardware. For the hardware division, as at 29 August 2022 Apple was advertising more than 2,800 vacancies on its website. The area of hardware, in turn, is divided into 17 subcategories. For example, 239 advertisements were posted for the "Camera Technology" area alone as at the above-mentioned reporting date. A

---

472 https://www.statista.com/statistics/273006/apple-expenses-for-research-and-development/ [22 January 2022]

473 https://web-assets.bcg.com/bc/fe/f74e5e0d48e3b36a15a0c016c354/bcg-most-innovative-companies-2021-apr-2021-v5.pdf [22 January 2021]

474 Apple's response of 2 October 2021 to the request for information dated 10 August 2021, sheet 6.2, folio 415 of the case file.

475 https://d18rn0p25nwr6d.cloudfront.net/CIK-0000320193/42ede86f-6518-450f-bc88-60211bf39c6d.pdf, p. 26 [21 January 2022]

further 2,500 employees are being sought for the Software & Services area, which in turn is divided into ten subcategories.

(656) One of the most important research areas, which includes both hardware and software topics, is “Machine Learning and Artificial Intelligence (“AI”)”. Apple is currently looking for almost 500 additional employees for this area. Apple regularly provides information on its website about the research results that the company would like to share in the area of “Machine Learning & AI”.[476] According to the website, Apple employees currently [as at 29 August 2022] have published about 290 scientific articles on this topic on the Apple homepage, often created in scientific co-operations with the world’s leading universities. Apple currently has cooperative relationships with 47 universities, including such prestigious universities as Harvard, MIT, Stanford, Berkeley, Cambridge, and Oxford.[477]

(2) Corporate acquisitions

(657) In addition, Apple has in the past systematically used its financial resources to make a number of corporate acquisitions. Apple has acquired well over [50-100] companies in the last decade. In 2019, Apple’s CEO Tim Cook gave an interview to the US television network CNBC in which he stated that “*Apple buys a new company every 2 to 3 weeks, primarily looking for talent and intellectual property.*”[478] In July 2020, Tim Cook explained Apple’s acquisition strategy with the catchphrase: “*Apple buys innovation, not competitors”.* He added that Apple buys companies that have technology or products that often become part of the iPhone: “*[...] our approach on acquisitions has been to buy companies where we have challenges, and IP, and then make them a feature of the phone*”.[479]

(658) Several cases illustrate how Apple has repeatedly used its financial and other resources, its large user base and the recognition of its brand, sometimes in combination with each other, to expand its business areas and/or improve existing products and services.

---

476 https://machinelearning.apple.com/research/ [29 August 2022]
477 https://machinelearning.apple.com/research/ [29 August 2022]
478 https://www.cnbc.com/2019/05/06/applebuys-a-company-every-few-weeks-says-ceo-tim-cook.html [22 January 2022]
479 https://www.cnbc.com/2020/07/31/timcook-contrasts-apple-ma-with-other-big-tech.html [22 January 2022]

(659) The question of the extent to which the use of financial strength or other resources enables Apple to secure or expand its ecosystem is not a matter – as Apple believes[480] – of whether the company has actually in its favour. In this respect, the current findings point to differentiated results. In the area of music streaming services (see (3) below), Spotify was the market leader by a wide margin before Apple entered the market. Spotify and Apple together now account for just under half of the global market.[481] In the area of video streaming services (see (4)), the three leading companies Amazon, Netflix and Disney account for a good 70% in Germany. Apples market share is below 5%.[482]

(3) Example Apple Music

(660) Apple acquired Beats Music, a music streaming provider, and Beats Electronics, a headphone manufacturer, in 2014 for a purchase price of USD 3.2 billion. The acquisition enabled Apple to (belatedly) enter the field of music streaming after Steve Jobs had apparently underestimated the business model's prospects of success for a long time.[483] At the time of acquisition, Beats Music had only 88,000 paying subscribers.

(661) Apple launched the music streaming service Apple Music in quick succession on the basis of Beats in the summer of 2015. By the end of the same year, Apple Music already had 6.5 million paying subscribers. In 2016, just one year later, the number of users tripled to 20 million customers; another 16 months later in April 2018, the number of users doubled again to 40 million; by June 2020, Apple Music had 72 million subscribers.[484] This growth in the music streaming market is without precedent. Even the corresponding growth rates of the current market leader

---

480 See Apple's comments on the Decision Division's draft decision of 5 January 2023, paras. 142 et seqq. (folios 3,241 et seq. of the case file).

481 https://de.statista.com/statistik/daten/studie/671214/umfrage/marktanteile-der-musikstreaming-an-bidder-worldwide/#:~:text=In%20place%20two%20followed%20Apple,a%20market%20share%20of%2015%20percent.&text=The%20number%20of%20monthly%20active,paid%20premium%2DAfforts%20of%20Spotify [1 September 2022]

482 https://de.statista.com/statistik/daten/studie/1318810/umfrage/marktanteile-von-streamingdienstenbei-neu-abgeschlossenen-abos-in-deutschland/ [29 October 2022]

483 See, for example, the interview in Rolling Stone 2003: "*We told them the music subscription services they were pushing were going to fail. [...] Here's why: People don't want to buy their music as a subscription. They bought 45s, then they bought LPs, they bought cassettes, they bought 8-tracks, then they bought CDs. They're going to want to buy downloads."* https://www.rollingstone.com/culture/culture-news/steve-jobs-rolling-stones-2003-interview-243284/ [26 January 2022]

484 https://www.statista.com/statistics/604959/number-of-apple-music-subscribers/ [26 January 2022]

Spotify between Q3 2015 and Q4 2016 (from 24 to 48 million customers, +100%) and between 2016 and Q2 2018 (to 83 million customers, +72%) were significantly lower.[485]

(662) Apple's strong growth in music streaming has been significantly accelerated by a number of factors that can be attributed to Apple's financial and other resources. These include a rapidly growing and loyal user base and their strong ties to the Apple ecosystem, that can extend to lock-in effects, as well as Apple's financial strength.

(663) Access to a large number of users is of particular importance here – as already explained. This is because Apple can roll out expansions of existing offerings and new services to a large audience from the outset and quickly achieve substantial reach, making it easier to expand business activities. This access enables Apple to secure and expand its own ecosystem when pre-installing its own services and apps.

(664) Apple Music is pre-installed on every newly shipped mobile device (iPhones and iPads), and Apple Music was rolled out to the entire number of active devices in circulation with every iOS update. In the years following the launch of Apple Music in 2015 and 2016 alone, Apple sold more than 400 million iPhones[486] and more than 90 million iPads[487] worldwide. Apple thus had and still has exclusive access to a considerable number of potential customers and opportunities to expand its digital ecosystem or even secure its incontestability.

(665) On the other hand, Apple accompanied the product launch of Apple Music with considerable price discounts. These include, for example, three-month free trial subscriptions, which were not only placed on the market for the product launch, but repeatedly since then – especially in conjunction with the purchase of Apple hardware. Currently, for example, purchasers of AirPods or Beats products are offered a six-month free trial subscription.[488] Such a loss of revenue is in itself only bearable against the background of considerable financial performance. In

485 https://de.statista.com/statistik/daten/studie/812303/umfrage/monatlich-aktive-nutzer-von-spotify-premium-worldwide/ [22 January 2022]

486 https://de.statista.com/statistik/daten/studie/12743/umfrage/absatz-von-apple-iphones-seit-dem-jahr-2007-nach-quartalen/ [22 December 2021]

487 https://de.statista.com/statistik/daten/studie/165489/umfrage/weltweiter-absatz-von-apple-ipads-nach-quartalen-seit-2010/ [22 December 2021]

488 https://offers.applemusic.apple/de-de/six-month-offer [26 January 2022]

addition, Apple creates incentives for the combined use of its products and services.

(666) Even after the market launch of Apple Music Apple made further acquisitions in the music sector. In the year 2016, Apple acquired employees and patents from the insolvent British company Omnifone. Omnifone was an independent provider of cloud-based music services for consumer electronics vendors, mobile carriers and Internet service providers. In the year 2018, Apple acquired, among others, Shazam, a provider of music recognition software[489] and Platoon[490], a so-called A&R (Artist & Repertoire) company that specialises in discovering aspiring artists. Finally, in August 2021, Apple acquired Primephonic, a renowned streaming service for classical music, which went offline immediately afterwards in September 2021.[491] Two years later, Apple announced the launch of its own app "Apple Music Classical" for the end of March 2023.[492]

(4) Example Apple TV+

(667) Apple has used the advantages of significant resources not only for its entry into music streaming. Another example of the relevance of Apple's strong resources in connection with its entry into a previously unserved market is Apple TV+.

(668) Even though the market launch of the Apple TV+ video streaming service was not preceded by any acquisition of companies with a corresponding focus, as far as can be seen, Apple prepared this by signing up corresponding top personnel. In addition, Apple invested heavily in the creation of its own content.

(669) In June 2017, Apple hired Jamie Ehrlicht and Zack Van Amburg. Both had previously held senior positions at Sony Pictures, where they were responsible for such successful formats as Breaking Bad, Better Call Saul and The Crown. Eddi Cue, Apple's senior vice president of Internet Software and Services, was quoted in the company's press release as saying, "Jamie and Zack are two of the most talented TV executives in the world and have been instrumental in making this the

489 See for details European Commission, decision of 6 September 2018, *Apple/Shazam* (M.8788).
490 https://techcrunch.com/2018/12/07/apple-platoon/ [26 January 2022]
491 https://www.apple.com/de/newsroom/2021/08/appleacquires-classical-music-streaming-service-primephonic/ [26 January 2022]
492 https://www.backstagepro.de/thema/apple-veroeffentlicht-apple-music-classical-eine-streaming-app-for-classical-music-2023-03-20-sxLdFXF2mt [21 March 2023]

golden age of television. We have exciting plans in store for customers and can't wait for them to bring their expertise to Apple – there is much more to come."

(670) In August of the same year, Apple hired Matt Cherniss, former president of television station WGN America.[493] In October 2017, Apple poached Morgan Wandell from Amazon Studios. He is responsible for "International and Creative Development, Worldwide Video" at Apple.[494] Apple subsequently hired three more high-level executives from Amazon Studios.[495]

(671) Apple was not only prepared to invest considerable sums in hiring top personnel. The production of content, i.e., films, series, documentaries, and TV shows, which Apple produces in-house, also required high expenditures in order to be competitive, and continues to do so. The Financial Times reported that Apple spent a total of USD 6 billion to launch the service – compared with Netflix's start-up budget in 2013, Apple's budget was around two to three times as high.

(672) Also in connection with the launch of Apple TV+, Apple was able to leverage its broad, loyal and affluent user base to grow rapidly. As with Apple Music, the Apple TV+ service was pre-installed via the Apple TV app on every device shipped. In the two years following the launch of Apple TV+, Apple sold approximately 440 million iPhones[496] and approximately 110 million iPads[497] worldwide in 2020 and 2021, all with the Apple TV app pre-installed, from which the Apple TV+ streaming service can be obtained.

(673) In order to gain a foothold in this market, which is already served by Netflix, Amazon Prime, Disney+, HBO and other companies, Apple also heavily subsidised its video streaming service at market launch. A far-reaching "free" strategy for market entry is only possible for a company with large financial resources. From the launch of the service, Apple offered a free one-year subscription to any purchaser of certain hardware products (iPhone, iPad, Apple

493 https://deadline.com/2017/08/matt-cherniss-apple-head-of-development-1202149694/ [26 January 2022]
494 https://deadline.com/2017/10/amazon-morgan-wandell-joins-apple-international-development-tv-1202192153/ [26 January 2022]
495 https://www.maclife.de/new/apple-raeubert-bei-amazon-fuehrungspersonal-filmgeschaeft-wech-selt-10099119.html [25 January 2022]
496 https://de.statista.com/statistik/daten/studie/12743/umfrage/absatz-von-apple-iphones-seit-dem-jahr-2007-nach-quartalen/ [1 March 2022]
497 https://de.statista.com/statistik/daten/studie/165489/umfrage/weltweiter-absatz-von-apple-ipads-nach-quartalen-seit-2010/ [1 March 2022]

TV, iPod Touch or Mac). Apple initially extended the free trial year, which was to end on 1 November 2020, until 28 February 2021, but then announced in mid-January 2021 that it would extend it a second time until 31 July 2021. In mid-June 2021, Apple added a notice on its website advising customers that new users subscribing after 30 June 2021 would only receive a free subscription for three months instead of the trial year.[498]

(674) This strategy obviously paid off. Immediately after its market launch (Q4, fiscal year 2019), Apple TV+ already had around [<10] million users worldwide, only around [<10] million of whom were paid subscribers. One year later, the number of users had already almost [redacted] to around [30-40] million, whereas the number of paying users had "only" grown by around [70-80]% (to just under [<10] million). At the end of the subsidy phase, i.e. in July 2021, the situation was fundamentally different. While the total number of subscriptions increased by only around [<10] million, or just under [<10]%, compared with the end of 2020, the number of paid subscriptions increased [redacted] to just under [10-20] million users. The share of paid subscriptions in all subscriptions averaged only [<10]% in the quarters 4/2019 to 2/2021, rising sharply to almost [30-40]% in the subsequent quarter 3/2021. In Germany, on average only around [<10]% of subscribers were full payers up to June 2021; after the discontinuation of free one-year trial subscriptions, this proportion rose to around [20-30]%.[499]

(675) The lost revenue that Apple had "cross-subsidised" in total on a global basis in the preceding quarters from the end of 2019 to mid-2021 amounts to a purely arithmetical sum of more than USD [<5] billion.[500]

(676) The Apple TV+ example thus also shows that Apple's extraordinarily strong resource base means that the company can provide the resources required to enter a market – in this case the labour market – without difficulty and that thanks to its broad and financially strong user base it can subsequently turn the product launch into a success within a very short time.

---

498 https://www.macerkopf.de/2021/06/15/appl-tv-zukuenftig-nur-noch-3-kostenlose-testmonate-bei-hardware purchase/ [25 January 2022]

499 Apple's response of 2 October 2021 to the request for information dated 10 August 2021, sheet 4.3, folio 399 of the case file.

500 Calculated from number of all subscriptions minus paid subscriptions multiplied by the monthly amount of USD 4.99 for a total of seven quarters.

(5) Example Touch ID and Face ID

(677) In recent years, Apple has also acquired a number of companies whose technology has subsequently been integrated into several Apple devices, thus enabling a broad range of applications ("shareable input"). This applies, for example, to the area of security technology in connection with access rights to mobile devices.

(678) While mobile devices such as smartphones or tablets could initially be unlocked using a security code, biometric methods such as the fingerprint scanner (Touch ID at Apple) and later facial recognition (Face ID at Apple) became more common over time. Apple used Touch ID for the first time on the iPhone 5s in 2013. This was preceded by the acquisition of the company AuthenTec in 2012 for USD 356 million.[501] AuthenTec was a company that specialised in security systems such as fingerprint recognition. Apple subsequently used the technology not only on iPhones but also on iPads and the Mac.

(679) Only a few years later, with the iPhone X in autumn 2017, Apple introduced Face ID, the face recognition system that was to replace Touch ID. In 2010, Apple had already acquired the Swedish company Polar Rose, a specialist in the field of face recognition software[502]. In the year 2013, Apple also bought the Israeli company Primesense, a provider of 3D sensors. In 2015, Faceshift was added, a virtual reality start-up that had developed a technology enabling the recognition of facial expressions in real time.[503] Face ID is used not only on the iPhone, but also on the iPad Pro.

e) Summary

(680) Apple's resources are considerable. To begin with, this applies to all the usual key figures that accurately reflect Apple's financial strength. For example, its revenue, profit, liquidity, cash flow and stock market value are unparalleled, both in comparison to other global technology companies and in comparison to all other listed companies. Apple's other resources, such as its broad, affluent user base

501 https://www.reuters.com/article/usauthentec-acquisition-apple-idUSBRE86Q0KD20120727 [24 January 2022]

502 https://techcrunch.com/2010/09/20/apple-buys-polar-rose-for-a-rumoured-22-million/ [22 January 2022]

503 https://www.businessinsider.com/applereportedly-acquires-virtual-reality-startup-faceshift-star-wars-2015-11 [25 January 2022]

and high brand value, also contribute to Apple's paramount significance for competition across markets.

(681) Apple can use the funds available to it for high investments in research and development, in various (new) business areas and for company acquisitions. Overall, Apple thus has the potential to not only successfully secure its position it has achieved across markets in the long term, but also to expand it even further and thus impair the innovative strength of its competitors.

4. Access to data relevant for competition (Section 19a (1) sentence 2 no. 4 GWB)

(682) Apple's paramount significance for competition across markets is also based on its excellent access to data relevant for competition within the meaning of Section 19a (1) sentence 2 no. 4 GWB (on the function of the criterion see a).). This access is made possible by the company's potential to collect and process data across services and devices within its own closed ecosystem (see 2.). For Apple's position in competition this data access is essential because Apple has the potential to shape data access for itself and third parties at several stages of the value chain in such a way that this can be used to expand its own product range and thus influence competition on the merits with other companies (see 3.).

a) Function of the condition

(683) The condition of Section 19a (1) sentence 2 no. 4 GWB can be of considerable relevance for the examination of a company's paramount significance for competition across markets.[504]

(684) Access to data relevant for competition plays a special role in the digital economy.[505] In particular, data is of great importance as a resource for the formation and reinforcement of digital ecosystems. The term data is to be

504 The explanatory memorandum refers in several places to the importance of data in connection with Section 19a GWB, see explanatory memorandum to the 10th amendment to the GWB, see Bundestag printed paper 19/23492, pp. 74 et seq.

505 See explanatory memorandum to the 10th amendment to the GWB, see Bundestag printed paper 19/23492, p. 75.

understood broadly here and ultimately encompasses any information.[506] Many digital business models are based on personal data, i.e. information relating to an identified or identifiable natural person (Article 4 no. 1 GDPR).[507] In addition, however, non-personal data can also have considerable cross-market relevance for an ecosystem.

(685) The criterion under Section 19a (1) sentence 2 no. 4 GWB is, in contrast to the identical wording in Section 18 (3a) no. 4 GWB, not to be understood in market-related terms; instead, access to data relevant for competition is to be examined in a cross-market sense. For the classification of the criterion as a factor of paramount significance for competition across markets, it is significant that the data are typically "shareable input" that can be used across services and devices.[508] If there is the possibility of using data across different areas, it can be a "staple" for connecting markets or services into a cross-market system.[509] The generation and commercial processing of data can be an aspect that, incidentally, ties together quite different business areas and can establish overarching positions of power. The possibility of using data across markets can affect competition in various ways: If, for example, it is possible to combine data generated by the use of different services, this can provide additional information for the development of new services that would not be available to the same extent or in the same quality if the different data sets were analysed separately.[510] This effect is reinforced by the use of machine learning methods, which offer high added value especially when applied to large[511] or high-quality[512] data sets. Additional importance is

---

506 There is no generally accepted definition of the term "data". In the following, the term is broadly understood as any information or its representation, often in combination with it being stored in digital form on a computer or other structures such as computing centres, see Autorité de la Concurrence, Bundeskartellamt, Competition Law and Data, 10 May 2016, https://www.bundeskartellamt.de/SharedDocs/Publikation/DE/Berichte/Big%20Data%20Papier.pdf?__blob=publicationFile&v=2, p. 4 [24 February 2022]

507 Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of individuals with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation), OJ no. L 119, 4 May 2016, p. 1.

508 See M. Bourreau, A. de Streel, Digital Conglomerates and EU Competition Policy, 2019, p. 11.

509 See Schweitzer, Haucap, et al, Modernization of Abuse Supervision for Companies with Market Power – Final Report, 2018, p. 41.

510 Report of Vestager Advisors Crémer/de Montjoye/Schweitzer, Competition Policy for the Digital Era, 2019, p. 33.

511 Parker/Petroupolos/Van Alstyne, Digital platforms and antitrust, Bruegel Working Paper 06/2020, p. 6 (https://www.bruegel.org/wp-content/uploads/2020/11/WP-2020-06-1.pdf).

512 See Bundeskartellamt, B7-61/21, decision of 30 December 2021, para. 148.

attached to improved personalisation through the collected data within an ecosystem. This can optimise existing products and develop new ones that are tailored to the specific needs of users. This can facilitate the development of new markets.[513] However, the deep integration of products can also lead to users extensively using the expanded possibilities of switching between the various services of the ecosystem, which makes them less and less likely to leave the ecosystem – which in turn improves the company's access to data. This can support the self-reinforcing effects of network effects and raise market entry barriers.[514]

(686) Data access – especially detailed insights into user behaviour – can also enable companies to identify which potential competitors pose a threat and effectively fend off advancing competition by blocking or snapping up competitors or strategically growing the company.[515] At the same time, in particular in connection with any potential "double roles" resulting from the integration of different business areas within the ecosystem, it can be possible that data collected in one place, e.g. about transactions of third-party companies elsewhere are used for the company's own benefit in competition (possibly with the same third parties).[516]

(687) Cross-market access to data can also be used to create personalised product offers and optimise targeted advertising, which can make an important contribution to business success. In the event of overlapping use of different services, the corresponding user data can be combined and the extensive user profiles thus obtained can be used for targeted offers or advertising. Targeting can be continuously refined and in turn generate new data about the user.[517]

---

513 See BMWi, A new competition framework for the digital economy – Report by the Commission 'Competition Law 4.0', 2019, p. 18, https://www.bmwk.de/Redaktion/EN/Publikationen/Wirtschaft/a-new-competition-framework-for-the-digital-economy.pdf?__blob=publicationFile&v=1. [31 January 2022]

514 See Federal Court of Justice, decision of 23 June 2020, KVR 69/19, paras. 94 et seq. – Facebook.

515 See also Bundeskartellamt, decision of 6 February 2019, B6-22/16 – Facebook, para. 745 ("However, the additional device-related data associated with these services [Oculus and Masquerade], which can provide information about user behaviour on the devices with regard to online websites and apps, including those of competitors, is of great value even with a relatively small user base, since successful applications from competitors can be identified at an early stage"), para. 785 ("by spying on user behaviour in the case of competing offers in order to ward off advancing competition").

516 See, e.g., COM proceedings against Amazon regarding the use of marketplace seller data by Amazon (COMP 40.462) or DMA-E of 15 December 2020, EC 43-45.

517 See, e.g., Bundeskartellamt, decision of 6 February 2019, B6-22/16 – Facebook, paras. 482, 488, 492; https://www.amazon.science/the-history-of-amazons-recommendation-algorithm [18 March 2022]

b) Sources of Apple's access to data relevant for competition

(688) Apple has deep and broad access to personal and non-personal data through its own closed ecosystem, which contributes significantly to the company's significance for competition across markets.

(689) Through the deep integration of the identification codes which uniquely identify a user, such as the Apple ID and serial numbers and other device identification numbers, in the operating system, in its apps and services, Apple is in principle in a position to record user behaviour to a considerable extent on a personal basis. Depending on the purpose of the processing, Apple stores personal data or converts it into non-personal data.

(690) According to Article 4 no. 1 GDPR, personal data is any information relating to an identified or identifiable natural person. An identifiable natural person is one who can be identified directly or indirectly (by association with an identifier such as a name or an identification number).[518] Personal data can be transformed into non-personal data by anonymisation, which removes the link to a specific person, or by aggregation with the personal data of other persons, which makes the level of observation more abstract by looking at a group of persons. Furthermore, many data are originally non-personal data that have no connection with a natural person (e.g., data on the properties of an app).[519] Any differences in the economic or competitive value and the significance of the existence of information in person-related form or in non-person-related form after anonymisation/aggregation depend, among other things, on the need for and purpose of the data. Personalised offers generally have to draw on personal data. For example, depending on the design, market monitoring of trends and general usage behaviour detached from a specific person can take place equally effective on the basis of anonymised aggregated data.

(691) Apple's business model is characterised by a profound interconnection of hardware, operating systems, software and services, which allows users uninterrupted, convenient and easy access to user profiles and data between

518 See Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 (General Data Protection Regulation) (OJ EU L 119/1 of 4 May 2016), Article 4 sentence 1 no. 1.

519 See Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 (General Data Protection Regulation) (OJ EU L 119/1 of 4 May 2016), para. 26.

hardware devices. Access to personal data in particular enables Apple to optimise and further develop the interconnection and parallel use of services and hardware products in the ecosystem. This is made technically possible by Apple's ability to use unique identifiers that can be used to forward data between the company's various offerings in connection with the data exchange options users have set themselves.

(692) In the context of Section 19a (1) GWB, only the potential for accessing data is decisive for superior access to data relevant for competition (see (1)). Apple collects data at various levels of the value chain served by its products or complementary products ((2)). Apple has the ability to *process* data unambiguously and comprehensively across sources within and between these value creation levels ((3)).

(1) Exclusive consideration of the data processing potential

(693) In view of the protective purpose of the provision, which is to address the potential threats posed in particular by the vertical and conglomerate exploitation of economic power, the abstract possibilities arising from the company's structurally determined position of power are crucial in the context of Section 19a (1) GWB.[520] Apple's potential in the area of data processing is therefore decisive.

(694) Apple does not share this legal opinion and criticises this conceptual examination approach. According to Apple, an assessment of Apple's competitive advantages resulting from the access to data must be made on the basis of the actual data processing currently taking place and the relevance of this data for the company's current business model. In Apple's view, the Decision Division has to prove that the company is actually put in a position to engage in conduct within the meaning of Section 19a (2) GWB due to its paramount significance for competition across markets. Apple says that the company itself has in fact limited its data collection to the necessary minimum for the protection of privacy and granted its users extensive possibilities to influence this. Deviations from this self-imposed restriction in relation to its users are (according to Apple) uneconomic for Apple, since the protection of its users' privacy is an essential feature of its own economic

520 See explanatory memorandum, Bundestag printed paper 19/23492, pp. 73, 78 top.

success. Apple is of the view that insofar as the company does not actually use its data access, it cannot have any competitive relevance.[521]

(695) As already discussed in connection with the criteria “vertical integration” and “resources available”, the Decision Division does not follow this view. This is because Apple also fails to recognise the two-step regulatory mechanism of Section 19a GWB in connection with the issue of “data access”. The examination of the status as norm addressee of Section 19a (1) GWB focuses on the structural cross-market possibilities (“capabilities”) available to the company. The object of the examination is thus the structural potential resulting from these cross-market capabilities to exercise economic power, close markets and restrict the competitive process opportunities of third parties.

(696) The declaratory decision under Section 19a (1) GWB, however, is not accompanied by a detailed analysis of the actual conduct, the associated effects, the incentives by which the company is governed or even concrete competitive threats. The analysis of concrete conduct is reserved for Section 19a (2) GWB; it is carried out on a case-by-case basis, detached from the examination of the status as norm addressee pursuant to Section 19a (1) GWB. All this applies – once again – also with regard to access to data relevant for competition within the meaning of Section 19a (1) no. 4 GWB.

(697) Section 19a (1) GWB does not provide for the dismantling of this examination structure, which – as demanded by Apple – would result in an application-related hypothetical analysis of all conceivable behaviours and the data required in each case. The legislative materials therefore only speak of potential competitive threats or damage and of the companies’ competitive potential, which are reflected in the structural factors.[522] An examination that goes beyond this, based on behaviour or even effects, would also run counter to the purpose of accelerating the proceedings, which also and especially plays an important role with regard to the status as norm addressee.

(698) From this perspective, it is therefore largely irrelevant in the context of the proceedings at hand whether Apple (currently) unilaterally restricts its data

---

521 See Apple’s comments on the Decision Division’s draft decision of 5 January 2023, paras. 149 et seqq., folios 3,243 et seqq. of the case file.

522 See explanatory memorandum, Bundestag printed paper 19/23492, pp. 73, 74 et seq.; resolution recommendation, Bundestag printed paper 19/25868, p. 113.

processing possibilities by limiting data collection on the system side or by allowing users to make choices about the collection of some data. This also applies to the company's decisions about which data are currently stored in a personalised manner and which are transformed into non-personal data through anonymisation or aggregation prior to storage and/or processing. All this does not change the potential that Apple has in competition due to its access to data.

(699) Apple submits that the efforts of the company with regard to protecting its users' privacy are not adequately acknowledged by the Decision Division. In the company's view, these efforts include, for example, the storage and processing of data exclusively on the users' devices ("on device processing"). Compared to storing and processing the data on Apple servers, Apple says that it therefore has no or, at most, limited access to these data. According to Apple, the same applies to data that Apple only stores in encrypted form on the devices or on its servers. Apple states that it reduces the data it sends to Apple's servers to a necessary minimum and/or uses techniques such as "differential privacy" and the anonymous collection of data to minimise the data in data flows and to protect the privacy of users. Apple further states that for certain data, such as location data and device analytics data, users have the choice to make their own well-informed decision about whether to submit the data to Apple. Apple says that it does not systematically and comprehensively collect data, especially personal data, in order to monitor activities within the Apple ecosystem and, on this basis, to create and use user profiles for advertising purposes for example.[523]

(700) The Decision Division has taken note of the corporate data protection efforts outlined by Apple. However, it neither investigated these points at Apple nor verified them objectively on the basis of other sources, as they are not relevant to the question of data access within the meaning of Section 19a (1) no. 4 GWB. This is because for the question of whether Apple actually has access to data relevant for competition, it is not relevant whether these are (currently) stored on devices or on Apple's servers, whether they are encrypted by Apple, or whether Apple (currently) grants users a partial user-side objection option. These arguments also have no relativising function in the sense of a "balancing clause" with respect to

523 See Apple's comments on the Decision Division's draft decision of 5 January 2023, paras. 154 et seqq., folios 3,246 et seqq.; Annex 2 to Apple's comments on the Decision Division's draft decision of 23 December 2022, folios 3,085 et seqq. of the case file.

Apple's excellent access to data.

(701) In any case, Apple has the option, at least technically, of making unilateral and, if necessary, also short-term changes to the scope and design of data processing as part of the regular updates to its operating systems and software and the changes to its IT systems, hardware products and terms of use, and of using its access to data relevant for competition to a greater or lesser extent in accordance with its own corporate strategy. Restrictions in this regard are ultimately only imposed by legal regulations such as those governing data protection. The expansion of Apple's activities with personalised advertising in the App Store and – as already done in some countries – in the apps Apple Stocks and Apple News also shows that even if data processing of personal data is restricted, commercialisation of user data, e.g. by using them to offer personalised advertising, is possible.

(702) To evaluate Apple's access to data relevant for competition, the authority focuses on the key elements of the access structure with the most important products and services, and classifies their cross-market significance in terms of the breadth and depth of data access. Exclusively for illustrative purposes, observed or alleged behaviours are also presented in order to exemplify possible competition-related effects of the potential. However, Apple's potential in accessing data with possible competitive relevance is by no means exhausted by these illustrative examples.

(2) Access to data

(703) Apple has access to data in its ecosystem from various data sources due to its vertical integration and as a result of the intensive use of smart mobile hardware devices by its customers.

(704) On the one hand, a fundamental distinction can be drawn between hardware products and operating systems (e.g., iPhone and iOS). Since data access at the level of the end devices is predominantly controlled by the mobile operating system installed on them, these are considered together here (i.). On the other hand, software products and apps (ii.), the App Store (iii.) and other services offered (iv.) serve as data sources. There are close relationships between the aforementioned data sources in the collection of data.

(705) In addition to obtaining data from its own sources, Apple obtains data from third-

party sources such as other individuals (e.g., when invited to use an Apple service), third-party companies such as mobile carriers, or other Apple partner companies, for example in the area of fraud prevention.[524] However, according to the information available to the Decision Division to date, third-party sources currently play a subordinate role in Apple's access to data. An exception to this are data that the company receives from app publishers for the submission of apps for the App Store. These data may be relevant for the company's own product and service portfolio and may give the company competitive advantages (see paras. (872) et seqq.).

(706) Apple is of the opinion that the Decision Division ignores the fact that Apple's data access is often subject to the user's consent. Since the vast majority of Apple users refuse to consent, the company holds that data access is not extensive.[525] This cannot be accepted for several reasons. On the one hand, only some of the overall data are subject to consent, for example Apple's device analysis data. According to Apple, only around [10-20]% of Apple customers have actually consented to the use of these data, but in view of an "installed base" of currently around 2 billion devices, this still corresponds to an accessible device base of around [100-200] million units worldwide. In addition, Apple can unilaterally change, abolish or extend this consent requirement at any time within the scope of the law.

i. Hardware products and operating systems

(707) Through hardware products such as the iPhone, iPad, Apple Watch or Macs and pre-installed proprietary operating systems, Apple receives – as shown below – a wide range of data about device users. The following gives examples of different data categories, which Apple currently collects or may collect on the operating system level according to its own statements. The Decision Division does not make any statements as to whether these data are always actually collected, whether user consent is required for this, where these data are stored or processed, whether these data are encrypted, for which (further) purposes Apple uses or does not use these data and whether the data are affected by special measures taken

524 Apple Privacy Policy in the version of 27 October 2021, see. https://www.apple.com/legal/privacy/pdfs/apple-privacy-policy-en-ww.pdf, [31 January 2022].

525 See Apple's comments on the Decision Division's draft decision of 5 January 2023, paras. 161 et seqq., folio 3,248.

by Apple to protect privacy.

(708) The use of the above-mentioned Apple products, among others, with the corresponding operating systems is subject to the mandatory setup and use of the Apple ID, with which Apple can uniquely identify users. The full name, date of birth, email address and telephone number must be entered. A credit card number is also requested during setup, but it is not mandatory to provide this information to complete registration.[526] Apple uses the full name to determine the gender of the person.[527]

(709) The use of "smart" hardware products such as iPhones, iPads, Apple Watches and Macs generates a large amount of usage data about the hardware and the operating system. The usage data of the apps used is collected regardless of the respective publisher, including, for example, the identity of the apps used and the time a user has spent in them.[528] Apple points out in its statement that these data are limited to the start of the respective app and the time spent in the app. In addition, the company points out that users have the option not to provide data and statistics to Apple and send them to third parties. Finally, Apple states that the respective app publisher also receives this information.[529] From the perspective of the Decision Division, the latter is only relevant insofar as the respective publisher of one or more third-party apps is not deprived of this information, but Apple has this information for all [<5] million apps in the App Store.

(710) Precise locations and movements of users can be recorded via GPS, Bluetooth, WLAN and mobile radio signals. For example, they are used to identify special locations (home, workplace) for the user, provide location-dependent notes (e.g., whether the user has to leave the location to reach an appointment at another location on time) or personalised suggestions (e.g., restaurants in the vicinity).[530] According to reports[531], built-in sensors, e.g. in the iPhone[532], can be used to

526 https://support.apple.com/de-de/HT204316 [1 February 2022]
527 https://www.apple.com/uk/legal/privacy/data/en/apple-advertising/ [1 February 2022]
528 https://www.apple.com/de/legal/privacy/data/de/app-analytics/, https://support.apple.com/de-en/HT208982 [17 February 2022]
529 See Apple's comments on the Decision Division's draft decision of 5 January 2023, para. 162, folio 3,248.
530 https://www.apple.com/de/legal/privacy/data/de/location-services/, https://www.apple.com/de/legal/privacy/data/en/find-my/ [16 February 2022]
531 https://developer.apple.com/documentation/coremotion [17 February 2022]
532 https://www.mysk.blog/2021/10/24/accelerometer-ios/, https://institutions.newscientist.com/ar-

determine whether and how a user is moving (accelerometer and gyrometer), how many steps a user is taking (pedometer), and, together with other sensors, on which floor of a building a user is (air pressure sensor) or with which people a user is in a vehicle, irrespective of the use of specific apps. Via camera and fingerprint sensors, biometric data such as facial data for facial recognition and fingerprints can be collected by Apple and assigned to users.[533] With regard to the user's movement data, Apple also refers to the user's consent requirement and to storage on the device.[534] To avoid repetition, reference can be made to paras. (694) et seqq.

(711) Furthermore, device information such as device identification numbers and information about the device such as the browser type used or the operating system installed is accessed at operating system level.[535] Device identification numbers are important for identifying user behaviour and linking hardware products, apps and services, among other things (see paras. (540) et seqq.). Apple describes these access options described in the analysis of potential as unrealistic and in this context points to the considerable investments that the company says it has made to ensure the protection of its users' privacy.[536] The submission does not elaborate further at this point, but essentially repeats the accusation that the Decision Division's conceptual examination approach is incorrect with regard to the application of Section 19a (1) GWB. In this respect, reference can be made to the reply in paras. (694) et seqq.

ii. Software products

(712) Through a wide range of (extensively pre-installed) apps and software, Apple says it currently has access to around 14 categories of personal and non-personal

---

ticle/2152366-phone-sensors-can-save-lives-by-revealing-what-floor-you-are-on/, https://www.edn.com/air-pressure-sensors-in-smartphones-transforming-navigation-and-fitness-tracking/, https://www.forbes.com/sites/zakdoffman/2021/10/23/apple-iphone-users-delete-facebook- app-after-new-tracking-warning/ [17 Febraury 2022]

533 https://support.apple.com/de-de/HT208108, https://support.apple.com/de-de/HT201371 [17 February 2022]

534 See Apple's comments on the Decision Division's draft decision of 5 January 2023, para. 162, folio 3,249 of the case file.

535 Apple Privacy Policy in the version of 27 October 2021, https://www.apple.com/legal/privacy/pdfs/apple-privacy-policy-en-ww.pdf [31 January 2022]

536 See Apple's comments on the Decision Division's draft decision of 5 January 2023, para. 162, folio 3,249.

data.[537]

(713) In the following examples are given of various data categories which Apple, according to its own statements, currently collects or may collect on the level of its software products. The Decision Division does not make any statements as to whether these data are in fact always collected, whether user consent is required for this, whether and where these data are stored or processed, whether and how these data are encrypted, for which (further) purposes Apple uses or does not use these data and whether the data are affected by special measures taken by Apple to protect privacy. Apple's access includes in particular the following data (selected examples):

(714) Via address book (Contacts app), phone function (Phone app), text messages (Messages app), emails (Mail app) and video telephony (FaceTime app) contact lists, message content, and metadata about communications can be collected.[538]

(715) The Siri voice recognition software, which is deeply integrated into the operating system, allows users to communicate with Apple devices via voice input. This can include voice recordings or transcriptions of them, contact names, nicknames of address book contacts, relationships between people, interests in music and podcasts, and names of devices belonging to family members or in the smart home.[539]

(716) The Maps service can be used, for example, to collect searches for services, locations and route information. Unless location data are already collected in the operating system itself, many map service functionalities require the sharing of location data.[540]

(717) Insofar as in connection with the collection of communication, voice recognition and map service data Apple refers to the considerable efforts and investments made by the company in connection with data minimisation and privacy protection, reference can be made to paras (694) et seqq. in order to avoid repetition.

(718) In the Safari web browser, visited websites and set bookmarks can be monitored. The data are used, for example, to automatically fill in Internet addresses in the

537 https://www.apple.com/de/privacy/labels/ [17 February 2022]
538 https://www.apple.com/de/privacy/labels/ [17 February 2022]
539 https://www.apple.com/de/legal/privacy/data/de/ask-siri-dictation/ [25 February 2022]
540 https://www.apple.com/de/privacy/labels/ [17 February 2022]

address bar, and can be stored in iCloud and synchronised between the user's various devices if the corresponding function is activated.[541] Apple points out that Safari was designed in such a way that it does not collect any personal data. In addition, it states that the data are not sent to Apple's servers.[542] In this context, however, Apple states on its corporate website: "If the webpage was not viewed in Private Browsing mode, then Safari will also send the webpage's address to Apple. Apple will store the address for up to five years to improve Apple's products, services, and technologies."[543]

(719) The Health app not only uses the data collected by the operating system and the devices, such as movement, pulse, heart activity, and oxygen content of the user's blood. The app's functionality can also be enhanced and improved by storing additional personal health data. This includes weight, height, blood type, gender, and skin type, which are not directly derived from the sensor measurements.[544] With regard to Apple's remark on storage on the devices and end-to-end encryption,[545] reference can also be made here to paras. (694) et seqq. for the purpose of avoiding repetition. For the question of whether Apple actually has access to data relevant for competition in the sense of a structural potential, it is not relevant whether these are (currently) stored on devices or on Apple's servers, whether they are encrypted by Apple, or whether Apple (currently) grants users a partial user-side objection option.

iii. App Store

(720) In the following examples are given of various data categories that Apple states are currently or can be collected at the App Store level. The Decision Division does not make any statements as to whether these data are in fact always collected, whether user consent is required for this, where these data are stored or processed, whether these data are encrypted, for which (further) purposes Apple uses or does not use these data, and whether the data are affected by special

541 https://www.apple.com/de/legal/privacy/data/de/safari/ [17 February 2022]
542 See Apple's comments on the Decision Division's draft decision of 5 January 2023, para. 162, folio 3,249.
543 https://www.apple.com/de/legal/privacy/data/de/safari/ [17 February 2022]
544 https://www.apple.com/de/legal/privacy/data/de/improve-health-activity/ [17 February 2022]
545 See Apple's comments on the Decision Division's draft decision of 5 January 2023, para. 162, folio 3,249 et seq.

measures taken by Apple to protect privacy.

(721) Through the App Store as a platform where the two sides of the market, users and app publishers, meet, Apple can collect data about both groups as well as about their exchange with each other on the platform.

(722) With respect to App Store users, Apple can monitor contact information, app search histories and app purchases, in-app purchases and App Store navigation behaviour, and collect payment information such as credit card numbers.

(723) As the operator of the platform, Apple can record the economic success of app publishers and their apps via downloads and, in the case of providers of digital goods and services, via purchases and in-app purchases by users in the App Store, as Apple both technically enables downloads and provides its own payment system IAP for app publishers. Apple receives further, non-personal data about app publishers in the App Store in the review process even before the apps are published: this includes the apps submitted for review and meta data (name, app description, description of the business model, screenshots, use of in-app purchases, app category, etc.).[546]

(724) Apple states that it does not process most of the potentially available data for competitive purposes at all. Apple is also of the opinion that, in connection with data access via the App Store, the Decision Division disregards the fact that Apple – according to the company – prevents data from being passed on via various areas of work within the company. This is said to apply to both data arising from app use as well as for billing data related to the use of IAP.[547]

(725) In the Decision Division's view, this argument is also based on an incorrect understanding of the regulatory mechanics between Section 19a (1) GWB on the one hand and Section 19a (2) GWB on the other. If one follows Apple's interpretation of the two provisions and their relationship to each other, then the Decision Division would be required to clarify which data Apple is actually processing from the large pool of available data, for which competitive purpose Apple is actually using these data and whether this is to be classified as conduct that may be in violation of competition law in order to clarify whether the company

546 See Apple App Store Review Guidelines, no. 3.1. and 2.5.1. in the version of 22 ctober 2021, available at https://developer.apple.com/app-store/review/guidelines/ [24 February 2022].

547 See Apple's comments on the Decision Division's draft decision of 5 January 2023, para. 169, folio 3,252 of the case file.

is a norm addressee in the present case. If Apple then stops this data processing and/or argues, as in this case, that a corresponding data processing is prevented by the company's internal organisational form by means of so-called "Chinese walls", then following this line of argument there would be no room to apply Section 19a (1) no. 4 GWB at all. However, in the context of the examination of Section 19a (1) no. 4 GWB, the potential for access to data must be taken into account. How the collected data are used in detail by Apple and whether this actually influences competition is not relevant at this point.

(726) If one were to follow Apple's line of argument, it would depend exclusively on the company's conduct and would thus fall within its sphere of influence whether or not data access within the meaning of Section 19a (1) no. 4 GWB could be shown to exist. It requires no further explanation that such a view on the provision's intervention threshold does not correspond to the legislators' intention. Whether or not a company is of significance for competition across markets cannot be measured by whether or not Chinese walls are erected in the company itself to prevent the flow of information or how successful these measures are in preventing the respective flow of information.

iv. Services

(727) Apple also has access to a wide range of data resulting from the use of its services. This also includes data that are directly stored on users' devices when they use apps, but which can be sent to Apple servers for purposes such as backing up and synchronising personal files. In the following examples are given of various data categories that Apple itself states that it currently collects or can collect under certain circumstances at the level of its services. The Decision Division does not make any statements as to whether these data are in fact always collected, whether user consent is required for this, where these data are stored or processed, whether these data are encrypted, for which (further) purposes Apple uses or does not use these data and whether the data are affected by special measures taken by Apple to protect privacy.

(728) The iCloud service allows users to store personal files such as photos, videos, folders and documents on Apple's servers for use and synchronisation on different devices. Such synchronisation can also be carried out for data from a number of

apps offered by the company, which are initially stored only on the users devices. The service can also be used to store backup copies of devices.[548] Data from third-party developers' apps can also be stored in Apple's iCloud via the CloudKit API.[549]

(729) Apple receives information about purchased and consumed content via the Apple Music, Apple TV+, Apple Books and Apple Arcade services. These personal usage data allow Apple, among other things, to deduct users' interests and are therefore also used to personalise the services, for example to be able to make music recommendations in Apple Music.[550]

(3) Data processing across sources

(730) Apple has various identification codes to identify a user or a device across sources and thus to be able to assign data collected from various sources to the user or the device. With access to the Apple ID and other device identification numbers such as device serial numbers, it is possible for Apple to collect data from various devices, apps and services of the company, usually without uncertainties, and to assign them uniquely to a user or a device.

(731) From the user's point of view, the Apple ID is the central means of identification on Apple devices. Once users have logged in with the Apple ID, they can use apps and services such as iCloud, App Store, iMessage and Facetime across devices. As a so-called unique identifier, the Apple ID enables the company to uniquely identify a person and the activities performed by him or her. Thus, partly subject to the corresponding user consent, contact, payment and security information (e.g. location data), address books, calendars, photos, documents, health data, browser data and other app data can be linked to the Apple ID and stored and processed on Apple servers, among other things to enable data backups and to synchronise data between devices. The amount of data passed on in this way can be influenced in part by the frequency of use of the individual apps and services as well as the privacy settings. Setting up an Apple ID is mandatory. Without the Apple ID, it is not possible to either set up an Apple device or to use an Apple service.

---

548 https://www.apple.com/de/icloud/ [17 February 2022]

549 https://developer.apple.com/icloud/cloudkit/ [17 February 2022]

550 See Apple Privacy Policy in the version of 27 October 2021, see https://www.apple.com/legal/privacy/pdfs/apple-privacy-policy-de-ww.pdf [31 January 2022]

(732) Incidentally, this is not contradicted by Apple pointing out the fact that these data are only passed on to Apple if the user has activated this feature in iCloud so that the various Apple services function properly.[551] A high proportion of Apple users have activated iCloud for a number of services. For photos, contacts, calendar, reminders and iCloud backup, more than [60-70]% of iCloud users have activated the service in each case. The total number of iCloud users is around [40-50] million in Germany and more than [<10] billion worldwide.[552]

[redacted]Apple also provides serial numbers and other device identification numbers that can be used to uniquely identify users' devices. The hardware identification numbers, such as the serial number of the respective device, can be linked to the Apple ID. This enables Apple to identify, among other things, which devices are used by a user. For example, after logging in to an iPhone with their Apple ID, users can see in the device settings on which devices they are logged in with their Apple ID.[553] Device identification numbers can be used to collect and assign information about the hardware and operating system specifications, performance statistics and usage data, among other things, in a device-specific manner[redacted]

(734) The potential for data processing across sources is particularly evident in Apple's cross-device, cross-app and cross-service privacy policy.[555] Apple generally makes users give the company the possibility to process the aforementioned categories of data in its various services.

c) Importance of data access for Apple's competitive position

(735) Apple's control over data processing in its own ecosystem, as well as the size of the ecosystem in terms of the number of users and integrated devices, contribute significantly to the company's paramount significance for competition across

551 See Apple's comments on the Decision Division's draft decision of 5 January 2023, para. 162, folios 3,251 et seqq. of the case file.

552 Apple's response of 2 October 2021 to the Decision Division's request for information dated 10 August 2021, sheet 4.4., folio 400 of the case file.

553 See https://support.apple.com/en-us/HT205064 [26 January 2023]

554 See letter from Apple dated 7 July 2021, p. 8, folio 48 of the case file.

555 Apple Privacy Policy in the version of 27 October 2021, see https://www.apple.com/legal/privacy/pdfs/apple-privacy-policy-de-ww.pdf [31 January 2022]

markets.

(736) Apple has extensive options how to carry out data processing in its own ecosystem (see (1)). The competitive relevance of these data results from the considerable breadth and depth of data to which Apple has access (2). Data access is reinforced by the business model based on the comprehensive networking of devices, software and services and is subject to a pull effect on the user side (3). Extensive access to data enhances the company's capacity to continuously develop products and further expand its own range of services, as well as to move into new fields of activity (4).

(1) Data processing in the ecosystem is subject to Apple's decisions

(737) Apple is largely in control of what data are collected and to what extent at the various stages of the value chain in its own ecosystem, and for which parts of these data users are given the option of refusing data collection or use.

(738) Apple admits to itself the right to process extensive data from its various devices, software and services across sources. Under certain circumstances, this also includes the right to pass on personal data about users to service providers, partner companies, developers and publishers and third parties such as mobile phone companies and public authorities, but these data are not passed on "to third parties for their own marketing purposes".[556]

(739) In this context, it is also technically possible for Apple to make substantial and in partial changes to the extent and design of data processing. This is done in the context of regular updates to its operating systems and software, as well as changes to its IT systems, its hardware products and the terms of use specified by Apple. For example, the measures for the advertised privacy protection were gradually introduced or revised.

(2) Broad and deep data access

(740) Apple has particularly broad and deep access to data in its ecosystem and can constantly expand this. The paramount cross-market significance of this access is fed by the breadth and depth of the possibilities for combining data from different

[556] Apple Privacy Policy in the version of 27 October 2021, see https://www.apple.com/legal/privacy/pdfs/apple-privacy-policy-en-ww.pdf [31 January 2022]

sources and the enormous size of the ecosystem in terms of the devices and users integrated into it.

(741) The breadth of the data refers to the number of observations available on the data collected by Apple. A broader data set here means that information is available on a very large number of users, and comparatively more data are available per service or in total across all services. The term data depth, on the other hand, describes the quality of the data, which can be expressed in terms of the overall amount of data available on a unique user, their timeliness, accuracy, and/or level of detail or granularity. A "deep" data set accordingly means that there are comparatively more, qualitatively better, more current, more accurate, and/or more detailed or granular data per user.[557]

(742) Apple also has a substantial scope of action with regard to the breadth and depth of the data that its products collect and process. Fixed limits are ultimately set on the extent and depth of data collection solely by legal obligations and regulations regarding data processing (e.g., to fulfil tax and reporting obligations)[558] or the restriction thereof (e.g. by data protection legislation such as the GDPR in the European Union or European and national competition law).

i. Breadth of data access

(743) Apple has particularly broad access to data through its own ecosystem. This is fed from various sources. In addition to the growth through new users and the migration of further device categories used by existing customers to take advantage of the ecosystem, Apple can continuously increase the possibilities of its access to (additional) data sources through new product categories. Between the beginning of 2016 and the beginning of 2023 alone, the stock of active devices, i.e. according to Apple's definition of devices that have connected to Apple servers or services at least once in the last 90 days,[559] has nearly doubled from about 1

---

557 On the terms data breadth and data depth, see Krämer, Schnurr, Micova (Centre on Regulation in Europe), The Role of Data for Digital Markets Contestability, September 2020, pp. 55 et seq.

558 Apple Privacy Policy in the version of 27 October 2021, see https://www.apple.com/legal/privacy/pdfs/apple-privacy-policy-en-ww.pdf [31 January 2022]

559 See letter from Apple dated 7 July 2021, p. 9, folio 48 of the case file.

billion to about 2 billion devices worldwide.[560]

(744) Apple's extensive range of apps on its smartphones, tablets and smartwatches also gives it broad access to user-generated data from many apps. Around 40 of the company's apps are pre-installed on iPhones.[561] Since the introduction of the iPhone, the number of pre-installed apps has increased steadily over time and doubled overall.

(745) As already explained, the pre-installation of apps on devices leads to considerable commercial advantages for Apple due to the so-called "default effect" (see in detail paras. (608) et seqq.). The investigations of other European competition authorities also point in the same direction. For example, in surveys conducted by the Dutch competition authority ACM, the app publishers pointed out that this behaviour was further exacerbated for preinstalled apps from Apple (and Google on Android smartphones) by the fact that they had better interoperability with the operating system.[562] Investigations conducted by the Decision Division at Apple for selected apps confirm the advantages of pre-installation and showed that pre-installed apps from Apple are used by a large number of iPhone/iPad users, in some cases by the vast majority of users.[563] Furthermore, as far as could be determined, a significant proportion of users synchronise the data generated in Apple apps via iCloud, which means that these data are stored on Apple's servers.[564] The pre-installation thus increases Apple's access to data and reduces it for other app publishers, insofar as their apps are used less frequently due to the pre-installation of Apple's apps. The increase in data generated in this way can then potentially be used for the introduction of new products and the improvement of existing ones, thus offering Apple advantages.

---

560 https://venturebeat.com/2016/01/26/apple-says-it-now-has-1-billion-active-devices/, https://www.macrumors.com/2018/02/01/apple-now-has-1-3-billion-active-devices-worldwide/, https://www.theverge.com/2019/1/29/18202736/apple-devices-ios-earnings-q1-2019, https://9to5mac.com/2020/01/28/apple-hits-1-5-billion-active-devices-with-80-of-recent-iphonesand-ipads-running-ios-13/, https://www.theverge.com/2021/1/27/22253162/iphone-users-total-number-billion-apple-tim-cook-q1-2021, https://www.theverge.com/2022/1/28/22906071/apple-1-8-billion-active-devices-stats [24 February 2022]; 2017 value estimated by linear interpolation of 2016 and 2018 values.

561 https://en.wikipedia.org/wiki/Pre-installed_iOS_apps [18 February 2022]

562 See ACM "Market study into mobile app stores", 2019, p. 84.

563 Apple's response of 2 October 2021 to the Decision Division's request for information dated 10 August 2021, sheet 10.3.3, folio 422 of the case file.

564 Apple's response of 2 October 2021 to the Decision Division's request for information dated 10 August 2021, sheet 5.4, folio 408 of the case file.

(746) As the only provider of an app store on iOS devices, Apple also has comprehensive insight into user behaviour and user preferences through the possibility of recording the installation of apps on its devices. Due to the expansion of the user base and the intensifying use of smartphones in particular, the number of (observed) app installations has increased steadily in recent years (see Figure 24 below). Via device usage statistics and through the frequency and length of use of third-party apps, Apple also has the possibility, at least for users who have consented to the passing on of these usage statistics, to monitor commercially and competitively sensitive data of other companies to a significant extent (see also paras. (776) et seqq.).[565]

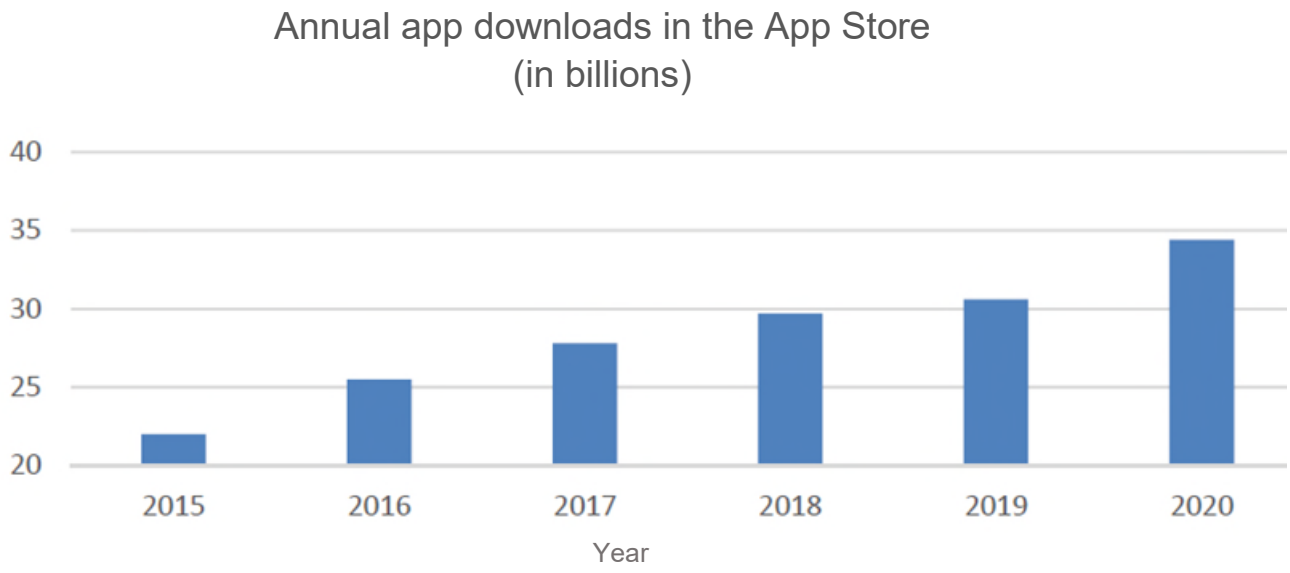

Figure 24 App Store downloads 2015-2020 Source: BusinessofApps[566]

ii. Depth of data access

(747) Through its extensive product portfolio, Apple has not only broad but also deep access to its users' data.

(748) According to the results of the survey of hardware manufacturers, Apple has a significantly more extensive product portfolio in the area of hardware, software and services than other manufacturers of smartphones, computers, tablets and smartwatches. The chart below highlights these three dimensions for smartphone manufacturers with a global market share above 5%. The chart shows for the three

565 See, e.g., https://www.washingtonpost.com/technology/2019/09/05/how-apple-uses-its-app-store-copy-best-ideas/ [26 June 2022]; see Figure 25.

566 https://www.businessofapps.com/data/app-statistics/ [14 March 2022]

areas of hardware, software and services for a selected product range[567] the percentage of offers provided by Apple's competitors in each category compared with Apple, which is 100% in each category. The analysis shows that apart from Huawei[568] none of the smartphone manufacturers listed here with a global market share of more than 5% has a similarly extensive product portfolio as Apple.

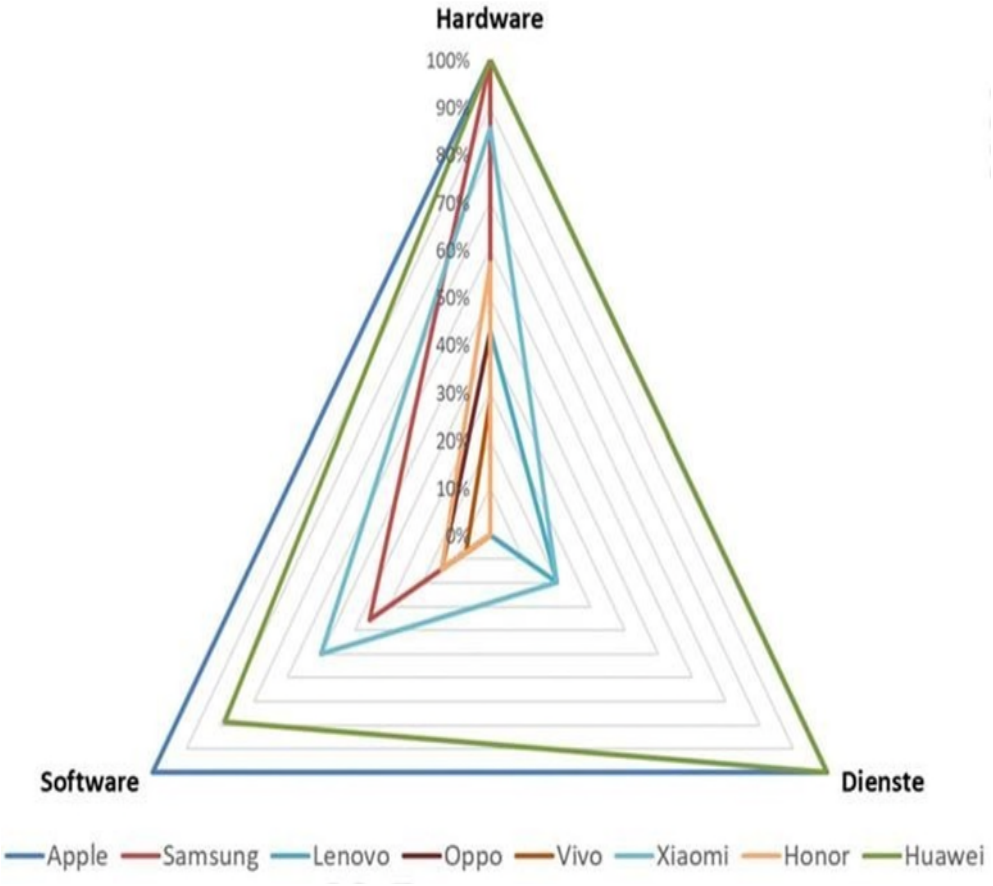

Figure 25: Fields of activity of Apple and its main smartphone competitors, source: own illustration

(749) Apple's deep access to data is also based, among other things, on its ability to collect information and user activities in the ecosystem at the various levels of the value chain and along complementary products as personal data at its own discretion. This potential can be described for purely illustrative purposes by Apple's extensive collection of personal data – as evident in Apple's privacy policy and related

567 See note "Evaluation of the survey of hardware manufacturers" – Annex 1 "Results of the quantitative evaluation", pp. 30 et seq.

568 Due to the US sanctions against Huawei, however, the company has lost a great deal of importance outside China in recent years and in 2020 only had market shares in the [0-5]% range in Europe and Germany. For all results, see note "Evaluation of the survey of hardware manufacturers" – Annex 1 "Results of the quantitative evaluation", pp. 7 et seqq.

documents.

(750) Personal data collected by Apple include, but are not limited to, account data (e.g., Apple ID, email, registered devices, age), device information (e.g., device serial numbers), contact data (name, address, phone number, family member data), payment data (e.g., bank account and payment card information), transaction data (e.g., purchases on Apple platforms), usage data (e.g., browsing history, app launches, search history, product interactivity), location data, health data, fitness data, and financial data (e.g., information on salary, income, and assets).[569] The personal collection of a wide range of data is the basis for this deep access to the characteristics, activities and interests of the users of the ecosystem.

(751) Apple's deep access to user data is also fed by the high usage intensity of its devices. According to Apple, iPhone users used their smartphones for almost [<10] hours a day, or [200-300] minutes to be precise, in July 2021. Of these, they spent an average of [<100] minutes ([30-40]% of the time) in Apple's own apps (including device settings), with the remaining [100-200] minutes ([60-70]% of the time) spent in other companies' apps. The voice recognition software Siri was used on [80-90] million iPhones worldwide every week between the beginning of May and the end of June 2021, and on around [<10] million iPhones in Germany. On iPhones on which Siri was used during this period, an average of [<10] entries were made per week and device worldwide, and an average of [<10] entries in Germany.[570] Apple points out that these figures are subject to uncertainties.[571]

(752) The depth of Apple's potential data access is also based on the length of observation, i.e. the period of time during which Apple can capture the behaviour of its users. This is because the longer a person's actions are captured and stored within the limits of what is legally possible, the deeper the insights that can be gained into interests and consumer behaviour. For example, of the approximately

---

569 Apple Privacy Policy in the version of 27 October 2021, see https://www.apple.com/legal/privacy/pdfs/apple-privacy-policy-en-ww.pdf [31 January 2022

570 Apple's response of 2 October 2021 to the Decision Division's request for information dated 10 August 2021, sheets 10.1.3. and 10.1.4., folio 420 of the casefile.

571 Apple's response of 5 November 2021 to the Decision Division's request for information dated 10 August 2021, sheet 10.2, folio 1,502 of the case file. The usage figures are subject to uncertainties as they are based on data only from users who have not objected to the sharing of device usage data. To the extent that users who do not share their anonymised device usage data with Apple exhibit significantly different usage behaviour, the values determined may be distorted with respect to the overall user base. See Apple's response of 11 October 2021, folio 1,363 of the case file.

[20-30] million Apple accounts currently active in Germany, around [redacted] were created in 2016 or earlier.[572] Therefore, Apple had in any case the ability to collect data unambiguously assigned to its users for a considerable part of its users which used the same Apple IDs over a number of years. Apple will probably continue to have this ability in the future.

Figure 26: Source: Apple[573], own representation

(753) Apple rejects the assumption of having "deep" data access because according to Apple it is based on the false premise that Apple creates individual user profiles and collects data on user behaviour for the entire duration of the existence of an Apple ID.[574] In the first place, it should be noted that the Decision Division did not make such a statement. In particular, the Decision Division does neither at this

572 Apple's response of 5 November 2021 to the Decision Division's request for information dated 10 August 2021, sheet 5.1., folio 1,489 of the case file.

573 Apple's response of 5 November 2021 to the Decision Division's request for information dated 10 August 2021, sheet 5.4., folios 1,489 et seq. of the case file.

574 See Apple's comments on the Decision Division's draft decision of 5 January 2023, para. 171, folio 3,253 of the case file.

point nor during the examination of Section 19a (1) GWB make a statement about the extent to which Apple actually uses its potential data access to create user profiles. However, Apple's claim that it does not collect these data or does not do so systematically is in any case contradicted by the fact that users can track their entire app purchases on their devices for more than a decade. Due to this, apps purchased in the App Store several years ago can be downloaded repeatedly without purchasing them again.

(3) Successive relocation of user activities to Apple's closed ecosystem

(754) Apple's business model pursues the goal of comprehensively connecting its products. This increases both the incentives for users to remain in the ecosystem and the barriers to switching to alternative offerings outside the ecosystem. This further improves data access both in breadth and depth.

(755) Apple's business model incentivises users to use a variety of the company's products to take full advantage of synergies and complementarities, and to exchange devices, apps, and services from competitors for Apple products. For example, Apple actively promotes its products' capabilities for uninterrupted integration and synchronisation, pointing out that iPads can be used to extend the desktop of Macs and that Macs can be unlocked with Apple Watches.[575] Commentators see this deep integration as a quality feature and competitive advantage over competing products from other manufacturers.[576] Using the complementarity of Apple products in the first step leads to a shift of user data and user activities into Apple's ecosystem. It is considered closed because Apple alone can control how the ecosystem is designed and which company gets access to it and in what way through its control over the operating system and hardware. This gradual shift of user activities and user data to Apple's closed ecosystem is accompanied by increasing barriers to switching.[577] This is also facilitated by the fact that third-party apps and services may be able to offer their own services (e.g. cloud storage services) in the Apple ecosystem, but often cannot realise the same

575 https://www.apple.com/macos/continuity/ [18 February 2022]

576 https://www.inc.com/jason-aten/google-is-trying-really-hard-to-make-you-forget-best-reason-to-buy-an-iphone-theres-just-1-problem.html, https://www.digitaltrends.com/mobile/after-nine-years-and-roid-windows-switching-apple-ecosystem/, https://techjourneyman.com/blog/apple-ecosystem-explained/ [18 February 2022]

577 See CMA, "Mobile ecosystems Market study final report, 10 June 2022", pp. 28 et seqq.; ACM "Market study into mobile app stores", 2019, p. 55.

functionalities and depth of integration. For a large number of users, available alternatives to Apple's deeply integrated apps and services are therefore not useful substitutes, or at best only to a limited extent.

(756) One source of Apple's data processing potential is the possibility of pre-installing its own new apps (see above). This pre-installation of its own apps and services by Apple on its devices and their increased use due to the "default bias" expands Apple's access to data as described. At the same time, data access for competitors is limited by a corresponding reduction in demand for competing offers. This shift is reinforced by a lack or limitation of interoperability or incomplete data transfer to competing third-party apps, which creates a kind of lock-in in Apple products for Apple users due to the switching barriers.

(757) For example, the introduction of the messaging app iMessage on Android was discussed several times by Apple's management, but repeatedly rejected, as this would reduce the dependency on Apple products and make it easier for "iPhone families" to equip their own children with Android smartphones.[578] This also indicates that the pre-installation of apps by Apple increases the pull to Apple products and further expands data access for Apple.

(758) The Dutch and the British competition authorities also conclude that the barriers to transferring the data generated in the Apple ecosystem to competitor products contribute to the barriers to switching out of the ecosystem and further increase the potential for data processing in the future.[579] The high barriers to switching (see in detail paras. (311) et seqq.) insofar are said to lead to an increase in the barriers to market entry for competitors, as this means that a significant part of the market cannot effectively be contested.[580] As a result, a lock-in of users in the ecosystem is likely to cause a self-reinforcing and ever-increasing path of dependency, which increases the potential for user exploitation.[581]

(4) Importance of data for the improvement and expansion of offerings and expansion into new fields of activity

578 See internal email from Craig Federighi, 8 April 2013, disclosed in Epic Games, Inc. vs Apple Inc. lawsuit, https://embed.documentcloud.org/documents/21043920-2013-april-fede-righi-and-schiller-tell-cue-not-to-bring-imessage-to-android-lockin/#document/p2 [14 March 2022].

579 See ACM "Market study into mobile app stores", 2019, pp. 55 et seq.

580 See CMA, "Mobile ecosystems Market study final report, 10 June 2022", pp. 56-66.

581 See ACM "Market study into mobile app stores", 2019, p. 56.

(759) Apple's potential for deep and broad access to data from existing products helps the company to identify trends and emerging services from potential competitors and to update existing and develop new products. In addition, the data access potential enables the company to move into new business areas. There is a trend toward greater use of the data generated in the hardware business for purposes other than ensuring the primary functionality of the devices, as demonstrated by the marketing of personalised advertising.

(760) The data access potential is exemplified by the following examples. Through its control of the App Store and the IAP payment system, Apple has the ability to gain deep insights into the distribution and commercial success of third-party apps. Device usage statistics also allow the company to record how often third-party apps are opened and how long they are used.[582] Complaints have been voiced by app publishers vis-à-vis the UK competition authority that Apple uses these data to identify popular products and functions and then publish its own products with similar functionalities.[583] Because of the frequency of this alleged behaviour by Apple, it is commonly known under the term "sherlocking."[584] Consistent with these statements, Philip Shoemaker, Apple's director of App Store Review[585] from 2009 to 2016, stated, according to media reports, that during his time at Apple, data on the usage time of apps from other companies were used by Apple executives to gain "inspiration" for Apple's own products.[586] Mr Shoemaker's statements are disputed by Apple.[587] At a hearing of the US Senate Subcommittee on Competition Policy, Antitrust, and Consumer Rights, Kyle Andeer, Apple's Chief Compliance Officer, answered the question of whether Apple effectively protected or protects competition-related data of other manufacturers' apps in such general terms that Senator Richard Blumenthal interpreted the answer as a "no".[588] Apple states that

---

582 https://developer.apple.com/app-store/measuring-app-performance/, https://support.apple.com/dede/HT208982 [21 February 2022]; Apple's response of 5 November 2021 to the Decision Division's request for information dated 10 August 2021, sheet 10.2, folio 1,502 of the case file.

583 See CMA, "Mobile ecosystems Market study final report, 10 June 2022", pp. 212 et seq.

584 See also https://judiciary.house.gov/uploadedfiles/competition_in_digital_markets.pdf, pp. 361-364.

585 Before apps are published in the App Store, app publishers must submit them to Apple for review. Apple then decides whether to publish or reject the apps.

586 https://www.washingtonpost.com/technology/2019/09/05/how-apple-uses-its-app-store-copy-best-ideas/ [21 February 2022]

587 CMA, "Mobile ecosystems Market study final report, 10 June 2022", pp. 212 et seq.

588 See video recording of hearing, available at https://www.judiciary.senate.gov/mee-tings/antitrust-applied-examining-competition-in-app-stores; see also: https://tech-

Senator Blumenthal deliberately misunderstood and misinterpreted Kyle Andeer.[589]

(761) According to public statements made by Apple's employees, the company is increasingly using its access to data to achieve product improvements with the help of machine learning and artificial intelligence on the devices. As far as possible, it is said that machine learning is performed on the devices themselves and not sent to servers for analysis. Since the iPhones 8 and X, microprocessors specially developed for machine learning/artificial intelligence have been built into the smartphones with the Apple Neural Engine for these purposes.[590] The deep and broad access to data creates competitive advantages for Apple, as it enables the company to offer functionalities and fields of application that competitors cannot create or use in the same way on the company's devices. Furthermore, for Apple the data used for this purpose and the data generated from the use of these functionalities and application fields also offer further access potential with processing options for additional purposes.

(762) In extending the business of offering personalised advertising, Apple can benefit from its ability to combine a large amount of in-depth data about a large number of users (data breadth) from a variety of high-reach sources. Apple's use of data largely generated for personalised advertising illustrates the competitive potential that Apple's access to data offers the company. The basis for this is the Apple Search Ads advertising service introduced in 2016 and expanded in 2017.[591] Previously, Apple offered an advertising service from 2010 with the iAd App Network, which was, however, discontinued in 2016.[592] With Apple Search Ads, app publishers can buy advertising space for their apps via auctions, on which personalised ads can be displayed as the first result among search results in the

---

crunch.com/2021/04/21/apple-and-google-pressed-in-antitrust-hearing-on-whether-app-stores-share-data-with-product-development-teams/ [21 February 2022].

589 See Apple's comments on the Decision Division's draft decision of 5 January 2023, fn. 86, folio 3,253 of the case file.

590 https://arstechnica.com/gadgets/2020/08/apple-explains-how-it-uses-machine-learning-across-ios-and-soon-macos/ [21 February 2022]

591 https://techcrunch.com/2016/06/20/apple-invites-developers-to-test-the-new-app-store-search-ads/, https://techcrunch.com/2017/12/05/apple-introduces-a-new-pay-per-install-ad-product-called-search-ads-basic/ [21 February 2022]

592 https://appleinsider.com/articles/16/01/15/apple-to-shut-down-iad-app-network-on-june-30 [22 February 2022]

App Store after searching. In May 2021, an additional advertising space was also introduced in the App Store search, which displays advertisements even before users have entered search terms.[593] The advertising business was also expanded beyond the App Store at the end of 2019; since then, personalised advertising has also been displayed in the Apple apps Apple News and Stocks in some countries.[594]

(763) Personalised advertising is an important component for success on the advertising markets. Apple accordingly uses its potential in accessing data to market personalised advertising. In particular broad, deep and cross-source data access can improve the knowledge about the interests and preferences of users as recipients of advertising and enables Apple to predict their buying behaviour with a relatively high degree of accuracy. The greater the knowledge about the interests and preferences of clearly identified users, the more targeted the advertising can be adapted to these user characteristics.

(764) For the realisation of personalised advertising in the App Store and in some countries in the apps Apple News and Stocks, Apple uses account information of the Apple ID (name [to possibly deduct the gender if this is not stored directly], age, devices registered with Apple ID), download, transaction and subscription data on music, films, books, TV shows and apps (including in-app purchases), searches and navigation behaviour in the App Store and device usage data (e.g., number of times an app is opened, reading behaviour in the Apple News and Stocks apps, and user interaction behaviour with ads realised by Apple), provided that the users has given their prior consent.[595] Apple may obtain the data used to serve the personalised ads from its access to data from a variety of sources, including the operating system (information on number of times apps are opened, Apple ID information), its apps, and the App Store.

---

593 https://techcrunch.com/2021/05/05/apple-expands-its-ad-business-with-a-new-app-store-ad-slot/ [21 February 2022]

594 See https://developer.apple.com/apple-news/ [21 March 2022]. In Germany, the two apps Apple News and Stocks do not yet display any advertising, but the German-language privacy notice of Apple News already contains the relevant information on such an offer, see https://www.apple.com/de/legal/privacy/data/de/apple-news/ [21 March 2022].

595 See https://searchads.apple.com/de/privacy, https://www.apple.com/de/legal/privacy/data/de/apple-advertising/ [21 February 2022]: Unlike in other countries, personalised advertising is not yet offered in Apple News and Stocks in Germany, but the company's German website already contains the relevant data protection information.

(765) Through its privileged access to identification numbers, Apple has the ability to combine data from different sources within its ecosystem without the uncertainties to which other app publishers are usually subject. Accordingly, Apple promotes its advertising services by saying that "seamless integration of hardware, software and services allows us to provide […] results you can trust".[596] In view of the enormous breadth and depth of data to which Apple has access, the company, unlike other companies, does not have to rely on third-party tracking for user tracking, i.e., it does not have to rely on third-party data to complete data on user profiles for the placement of personalised advertisements.

(766) Apple contests that it creates individual user profiles for personalised advertising. Apple states that it does not collect, analyse, or use data about the interests and preferences of uniquely identified users and does not target ads to individual users based on identifiable user profiles.[597] Since Apple states at the same point that ads can be targeted to user groups of more than 5,000 people if the user positively opts in to personalised advertising and that third-party developers can select parameters such as gender, location, and intensity of use of their respective app for the purpose of advertising their app, it is in any case not questionable that Apple offers personalised advertising stemming from its data access. How this personalisation is technically carried out, for example through the creation of individual user profiles, can be left open here.

(767) Apple also points out to its users that their name, address, age, gender, registered devices, downloads of music, films, books, TV shows and apps, in-app purchases and subscriptions, topics and categories in the apps "Apple Stocks" and "Apple News", and interactions with other ads can be used to assign an individual user to an advertising-relevant segment.[598] It is not apparent that such an assignment is fundamentally different from the formation of an individual user profile with regard to the ability to offer personalised advertising.

(768) Due to the strong increase in Apple's advertising activities, the company was able to show significant associated revenue growth in this area. For example, due to

---

596 See https://searchads.apple.com/de/our-approach [22 February 2022].

597 See Apple's comments on the Decision Division's draft decision of 5 January 2023, para. 173, folio 3,253 of the case file.

598 https://www.apple.com/de/legal/privacy/data/de/apple-advertising/ [14 March 2023]

Apple Search Ads alone, Apple was able to increase its advertising revenue by over [500-600]% to USD [<5] billion between the fiscal year 2017 and the first three quarters of the fiscal year 2021 (27 September 2020-26 June 2021).[599]

(769) According to press reports, the introduction of the App Tracking Transparency Framework (ATTF) at the end of April 2021 on iOS devices with operating system version 14.5, which makes the data collection of other companies on iPhones and iPads subject to additional requirements, has led to a significant shift in advertising budgets in favour of Apple: Between April 2021 and September 2021 alone, the ATTF is estimated to have doubled the share of advertising realised by Apple in the area of new app installations on iOS devices. While the share of app installations achieved on iOS devices through clicks on advertising realised by Apple out of all app installations achieved on iOS devices due to clicks on advertising was still below 10% in October 2019, this share increased to about 60% by September 2021.[600]

(770) Apple does not deny these growth rates, but holds that its growth rates in the advertising segment are not due to its superior data access, but to a growing awareness in the advertising industry. The latter, according to Apple, has recognised that the conventional approach of the advertising industry that is built on the exploitation of user unawareness for massive data collection based on detailed, individual user profiles is unsustainable. Furthermore, Apple holds that its growth rates are to be set against those of the established players in the industry. It then is said to become clear that Apple remains a small player.[601]

(771) Irrespective of this, the growth rates of Apple's advertising activities are in any case considerable. The motivation of other players in the advertising industry does not change the fact that Apple also offers its services drawing on data used for personalised advertising.

(772) It is also true that corporations such as Meta and Google, whose business model

---

599 Apple's response of 2 October 2021to the Decision Division's request for information dated 10 August 2021, sheet 2.3.4, folio 384 of the case file.

600 https://www.ft.com/content/074b881f-a931-4986-888e-2ac53e286b9d, https://www.forbes.com/sites/johnkoetsier/2021/10/19/apples-ad-network-is-the-biggest-beneficiary-of-apples-new-marke-ting-rules-report/?sh=785c110c77a0 [22 February 2022]

601 See Apple's comments on the Decision Division's draft decision of 5 January 2023, para. 173, folio 3,255 seqq. of the case file.

is primarily based on online advertising, currently generate far higher revenues in absolute figures from advertising. However, this does not change Apple's extraordinarily high growth rates – even in comparison with them. While the expenses on online advertising increased by around a third in 2021,[602] Apple's advertising revenue grew by more than [redacted] as described above.

d) Result

(773) Overall, it is clear that Apple's paramount significance for competition across markets is also based on its excellent access to data relevant for competition.

(774) This access is made possible by the company's ability to collect and process data across services and devices within its own closed ecosystem. This data access is also significant for Apple's competitive position, as Apple is able to shape access to and processing of data for itself and third parties at several levels of the value chain in such a way that it can be used to expand its product range and thus influence competition with other companies.

(775) On the basis of this access to data, Apple can further develop and expand its own product range in competition with other companies and enter new fields of activity. Overall, Apple's access to data relevant for competition therefore contributes significantly to the company's significance for competition across markets.

5. Relevance of Apple's activities for third-party access to supply and sales markets and the related influence on the business activities of third parties (Section 19a (1) sentence 2 no. 5 GWB)

(776) Apple's activities, in particular as a provider of mobile hardware, mobile operating systems and the App Store as a distribution platform, are of considerable relevance for third parties' access to supply and sales markets. Apple operates a comprehensive digital ecosystem with a high market significance not only in Germany, but also in Europe and worldwide. This ecosystem offers a large number of different products and services that occupy key positions for the interaction and use of Internet-based business models and offerings. In its own ecosystem, based

602 https://de.statista.com/statistik/daten/studie/185637/umfrage/prognose-der-entwicklung-der-ausgaben-fuer-online-werbung-weltweit/ [9 March 2023]

on which Apple has dominant or strong market positions at all vertically connected levels from hardware to the operating system to the App Store as a digital sales platform, the company has sole control over whether and how other providers and users interact with this ecosystem. This is also characterised by the bundling of the ecosystem's various products and services that is made possible for users, combined with strong lock-in effects and high barriers to switching. The criterion of Section 19a (1) sentence 2 no. 5 GWB only requires the relevance of the norm addressee's activity for the access of third parties to supply and sales markets, not market power going beyond this. This threshold is fulfilled in the present case. The combination of a key position in a largely proprietary, closed system and special user retention results in the special possibility for Apple to influence the business activities of third parties. This contributes to a large extent to Apple's paramount significance for competition across markets.

a) Function of the criterion

(777) The relevance of the entrepreneurial activity for the access of third parties to supply and sales markets and the associated influence on the business activities of third parties are mentioned in Section 19a (1) sentence 2 no. 5 GWB as aspects of which particular account is to be taken when determining the paramount significance for competition across markets. Dependencies on the part of other market participants and the resulting opportunities to shape the competitive process according to one's own ideas or to distort it for one's own benefit may be an essential characteristic of the status as addressee of Section 19a (1) GWB.[603]

(778) The criterion focuses on the (potential) business customers of a norm addressee and aims in particular at a company's so-called "intermediation power"[604] or "rule-setting power"[605] as an aspect of cross-market significance. The concept of intermediation power is originally derived from the market dominance factor described in Section 18 (3b) GWB for multi-sided markets, but for the purposes of Section 19a (1) sentence 2 no. 5 GWB it is to be understood in a broader, cross-

603 See explanatory memorandum to the 10th amendment to the GWB, Bundestag printed paper 19/23492, p. 73.

604 See explanatory memorandum to the 10th amendment to the GWB, Bundestag printed paper 19/23492, p. 75.

605 See resolution recommendation on the 10th amendment to the GWB, Bundestag printed paper 19/25868, p. 115 on the theory of harm of Section 19a (1) sentence 2 no. 5 GWB, which is based on the wording of Section 19a (2) sentence 1 no. 2 GWB.

market sense. This feature, too, is thus primarily intended to capture the danger that individual digital companies can become gatekeepers controlling access to their users by expanding their range of products and services or creating their own ecosystems.

(779) Intermediary activities can generally take a wide variety of forms. As in the case of trading or booking platforms, it can consist of arranging specific transactions. However, it can also involve the provision of information or the creation of attention in the run-up to such transactions, as is the case with search engines or advertising platforms. A characteristic feature is that the intermediary can select or prioritise the offers and information and determine how they are presented. If this activity is sufficiently important, the company can thus exert a significant influence on the visibility of third-party offerings and their access to customers.

(780) Insofar as third-party providers are dependent on access to these users, e.g. for the marketing or sale of their products, e.g. because the users use the ecosystem exclusively or at least predominantly, these digital corporations have a considerable power to set the rules for the third-party providers and can dictate the terms of access to them.[606]

(781) In this context – contrary to Apple's opinion – it is not important to define sales and supply markets[607] or even to define whether Apple devices or Apple users in themselves constitute specific relevant sales or supply markets, which Apple denies.[608] Contrary to Apple's opinion, an elaborated market definition under competition law is not a prerequisite for rule-setting power within the meaning of Section 19a (1) sentence 2 no. 5 GWB.[609]

(782) On the other hand, Apple's comments on the draft decision appear to be aiming for a further shift in scale with regard to the criterion of rule-setting power under Section 19a (1) sentence 2 no. 5 GWB. For example, Apple criticises the fact that the Decision Division repeatedly mentions the "large relevance of access for

606 Cf. *BMWi* (ed.), A new competition framework for the digital economy; Report by the Commission 'Competition Law 4.0', p. 22.

607 See Apple's comments on the Decision Division's draft decision of 5 January 2023, paras. 176 and 179 (folios 3,254 et seq.; folio 3,257 of the case file)

608 See Apple's comments on the Decision Division's draft decision of 5 January 2023, para. 179 (folios 3,257 et seq. of the case file)

609 See Apple's comments on the Decision Division's draft decision of 5 January 2023, para. 179 (folios 3,257 et seq. of the case file)

various market participants" without, however, having ascertained in each case that third parties actually commercially rely or are dependent on access to Apple customers.[610]

(783) As already explained, Section 19a (1) sentence 2 no. 5 GWB covers the power to set rules as a factor of significance for competition across markets, and from a conceptional point of view it is simply not based on a market-related approach, let alone on an approach based on device types or user groups. Instead, it expands the scope of application of market-related intermediation power and is not – contrary to Apple's view – to be artificially narrowed to a market concept based on general control of abusive practices.

(784) Specifically, Apple's activities across markets in the present case influence the company's rule-setting power in the sense that Apple grants access to sales and supply markets as part of access to its ecosystem and to the users of that system. Apples rule-setting power needs to be assessed against the background that Apple due to its ecosystem wants to keep customers in its own system and its own services. The rules by means of which Apple grants third parties access to its users and to downstream supply and sales markets are all the more important. Section 19a (1) sentence 2 no. 5 GWB contains the requirement to have influence on the business activities of third parties, but not – as Apple believes – to have a far-reaching market-related position of power, such as in Section 18 (3b) GWB. Moreover, this is not contradicted by the fact that the companies addressed are confronted with Apple's rule-setting power in their business activities on their respective markets. It requires no further explanation that mobile telecommunication providers must adhere to Apple's rule-setting power in view of the importance of Apple's products for their mobile telecommunications offers (paras. (822) et seqq.). The same applies to app publishers (paras. (792) et seqq.), advertisers (paras. (805) et seqq.) and hardware manufacturers (paras. (817) et seqq.).

(785) The only relevant characteristic of the rule-setting power under Section 19a (1) sentence 2 no. 5 GWB is that Apple, as the operator of the ecosystem, can select or prioritise offers and determine the framework conditions for their availability, functionalities, presentation or ranking. If this activity is relevant for third parties,

610 See Apple's comments on the Decision Division's draft decision of 5 January 2023, paras. 177, 180 et seqq. (folios 3,255, 3,258 et seq. of the case file)

Apple can have a significant influence on the visibility of third parties' offers and their access to customers. Having said this, Apple is the addressee when determining a potential rule-setting power within the meaning of Section 19a (1) sentence 2 no. 5 GWB with regard to the customer group of iOS users.

(786) Even if, within the framework of all conceivable scenarios of rule-setting power, various cases of bilateral dependencies may also exist as subcategories in the narrower sense of competition law, this is not relevant. As described above, rule-setting power may also consist in an extensive control of access to users of the ecosystem or in a shift of the value creation into the ecosystem.

(787) "Rule-setting power" therefore to begin with refers to the possibility of dictating the conditions under which companies can use the ecosystem's offerings. In addition, however, setting the rules can also be understood as "regulating" market access and the competitive conditions created by the platforms within the ecosystem. Since within the system – e.g. within large trading platforms or a proprietary operating system – significant sales and supply channels can emerge which are indispensable for companies and whose framework and participation conditions, including for example the characteristics of the products, their visibility or certain sales strategies, have been set from the outset by the ecosystem and its various areas.

(788) Apple is of great importance for the access of app publishers, device manufacturers, content providers, advertisers, advertising service providers and mobile telecommunication providers to sales and supply markets, as Apple devices have a high penetration rate and certain customer groups can only be reached exclusively or predominantly via Apple devices (see 2.). By controlling the App Store, the technical interfaces and the access of third parties to advertising data on its devices as well as their configuration for mobile telecommunications Apple has the opportunity to influence the business activities of the aforementioned companies (see 3.).

b) Relevance of Apple's activities for third-party market access

(789) Apple is of great importance for the access of app publishers, device

manufacturers, content providers, advertisers, advertising service providers, and mobile telecommunication providers to a variety of sales and supply markets. This importance stems from the size of Apple's ecosystem, its closed nature as well as its broad user base. One facet of this closed structure is the fact that third parties have no or only a limited possibility of reaching users of Apple devices outside of these devices, or at least in a targeted manner. The reason for this is first of all that Apple's closed ecosystem creates an incentive for its users to largely use Apple products in order to achieve the full benefits, such as seamless interconnectivity and synchronisation of data across different devices and services (see paras. (754) et seqq. as well as (561) et seqq.). Furthermore, users switching out of the ecosystem also face significant switching barriers that lead to lock-in effects in favour of Apple. Finally, Apple customers show a high level of loyalty to Apple (see paras. (291) et seqq. and paras. (754) et seqq.)

(790) Taken together, the size and closed nature of the ecosystem mean that a large number of customers cannot be reached or can only be reached inadequately via alternative sales channels and that necessary or significant pre-products in connection with the realisation of offers from these users cannot be obtained by other means.

(791) The players for whom Apple's activities are of great relevance in terms of their access to sales and supply markets include, in particular, app publishers (see (1)), hardware manufacturers (see (2)), advertisers, content providers and advertising service providers (see (3)), and mobile telecommunications providers (see (4)).

(1) App publishers

(792) Apple is important for app publishers' access to customers on Apple devices and beyond on mobile devices in general.

(793) Mobile devices are of great importance as a sales channel for many companies, so that they often become active as app publishers on mobile devices by publishing apps. The importance of app stores as a digital sales channel for app publishers continues to grow over time. The group of app publishers is very heterogeneous and active in a variety of markets. They include companies whose apps can be used to purchase physical goods (e.g., fashion retailers) and services (e.g., driving services) over the Internet. This also includes companies that

produce digital goods (e.g., game apps) or offer digital services (e.g., cloud storage services) as well as companies that support other sales channels through apps on mobile devices (e.g., information and interaction offerings from banks and insurance companies). From the perspective of app manufacturers, the App Store is not interchangeable with other sales channels and is therefore indispensable (see paras. (499) et seqq. and paras. (520) et seqq.). However, it must be taken into account that the power to set rules within the meaning of Section 19a (1) sentence 2 no. 5 GWB requires an influence on the business activities of third parties, but does not require – contrary to Apple's opinion – a more far-reaching market-related position of power, such as in Section 18 (3b) GWB.

(794) Apple's importance for the business activities of app publishers is reflected in the size of the revenues that app publishers realise from apps on Apple mobile devices. Publicly available sources indicate the amount of revenue generated from digital goods and services, physical goods and services, and advertising of free apps on Apple mobile devices.

(795) The sale of digital goods and services alone generated revenues of an estimated USD 133 billion for mobile devices worldwide in 2021 via the two most important app stores, Apple App Store and Google Play Store. Apple's App Store accounted for approximately 63% of this. App stores have shown continuous strong growth in terms of revenue from digital goods and services since their inception. According to estimates, revenue generated from digital goods and services in Apple's App Store has increased from approximately USD 28.6 billion in 2016 to approximately USD 85 billion in 2021, nearly tripling in five years. [611]

611 https://www.businessofapps.com/data/app-revenues/ [18 July 2022].

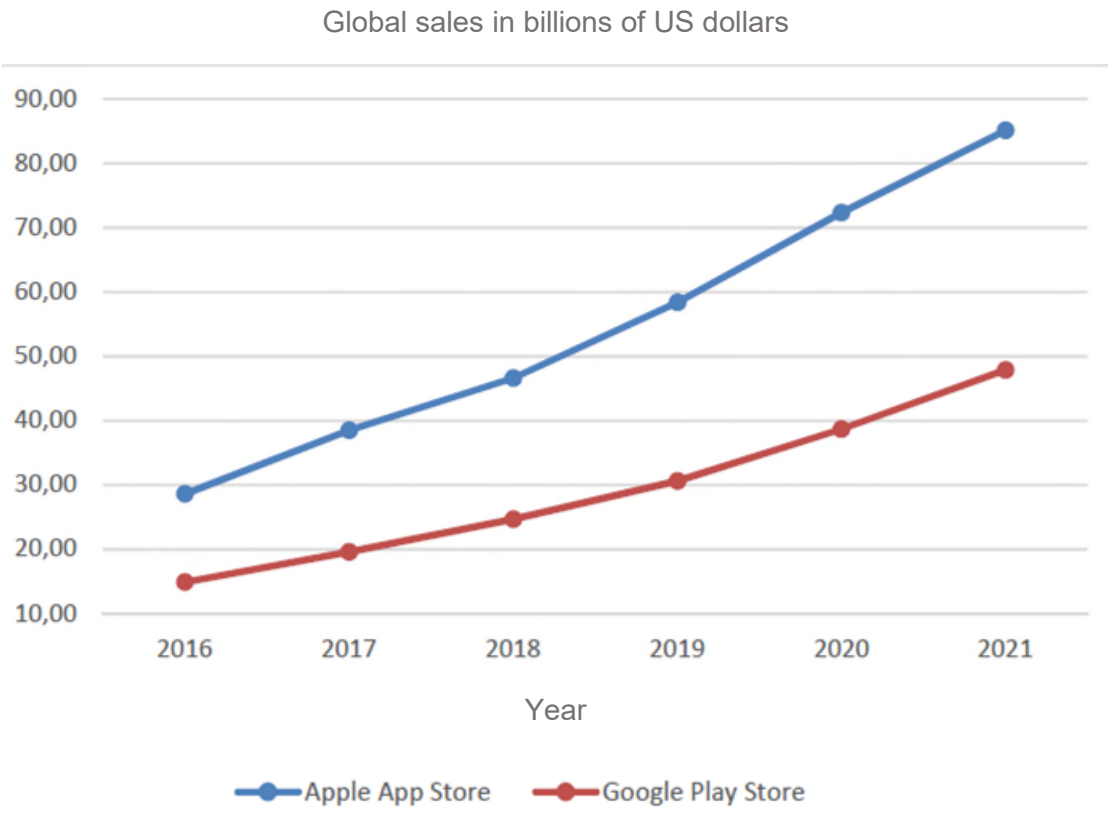

Figure 27 App Store revenue, source: BusinessofApps[612]

(796) It should be noted that the revenue of around USD 85 billion generated worldwide by the App Store with digital goods and services only reflects its economic significance for third parties to a limited extent. On the one hand, these revenue figures only include revenue from "digital goods and services" as defined by Apple. However, as at September 2021, around 82% of the apps in the App Store did not generate any revenue from digital goods and services,[613] so their value creation is not included in the figures stated for the App Store. These apps include apps that sell physical goods or services. They also do not include apps financed by advertising or apps that are available free of charge (financed by taxpayers' money or other financial resources) and generate economic benefits (e.g. Corona-Warn-App, productivity-enhancing apps for companies that are made

612 Ibid.

613 https://www.statista.com/statistics/1269868/distribution-of-apps-worldwide-by-monetization-method/ [18 July 2022]. A similar picture emerges from the Decision Division's investigations. As at 31 July 2021, [80-85]% of all apps that were also available in the App Store in Germany for iPhones and/or iPads did not contain any content subject to commissions (purchase price, in-app purchases, subscriptions), see note "Documentation of sampling for survey of app publishers in the Apple App Store", p. 3.

available to employees free of charge).

(797) Through the apps downloaded from Apple's App Store for iPhones and iPads, providers of physical goods and services generated global sales with a turnover of around USD 500 billion in 2020. This was the conclusion of a commissioned study published in June 2021 by the consulting firm Analysis Group for Apple.[614]

Category	Billings and Sales ($ Billion)	Annual Change
Digital Goods and Services**	$86	+41%
Physical Goods and Services	$511	+24%
In-App Advertising***	$46	+4%
Total	**$643**	**+24%**

Figure 28 App Store economy, source: Analysis Group[615]

(798) Access to customers on Apple devices is also of great importance for app publishers who do not generate revenue through user financing. According to estimates, revenues of around USD 46 billion were generated worldwide in 2020 with in-app advertising on iPhones and iPads.[616]

(799) In total, this results in revenue of around USD 643 billion worldwide in 2020 generated in connection with the Apple App Store on iPhones and iPads.[617] This is roughly equivalent to the entire gross domestic product of Poland or Sweden in 2021. The two countries took the 21st and 22nd place among the world's largest economies in 2021.[618] These figures do not yet include the monetary value of the above-mentioned apps that are financed from other sources (possibly only for a limited group of people) and can be downloaded free of charge (e.g. Corona-Warn-App).

(800) In its investigations the Decision Division asked about the importance of the App

614 Analysis Group (2021), A Global Perspective on the Apple App Store Ecosystem https://www.apple.com/newsroom/pdfs/apple-app-store-study-2020.pdf [18 July 2022].
615 Ibid.
616 Ibid.
617 Ibid.
618 World Bank, https://databank.worldbank.org/data/download/GDP.pdf [18 July 2022]

Store for app publishers based in Germany.

(801) The share of revenues (both digital and physical goods and services) generated in 2020 in Apple's App Store as a percentage of all revenues in all app stores averaged around 61% globally for the companies surveyed.[619] Although the app publishers surveyed represent a wide range of companies with very heterogeneous business models, 70% of respondents concordantly stated that the importance of the App Store as a sales channel for their company had increased rather strongly or very strongly since 2017. A similar increase in importance was only attested to Google's Play Store.

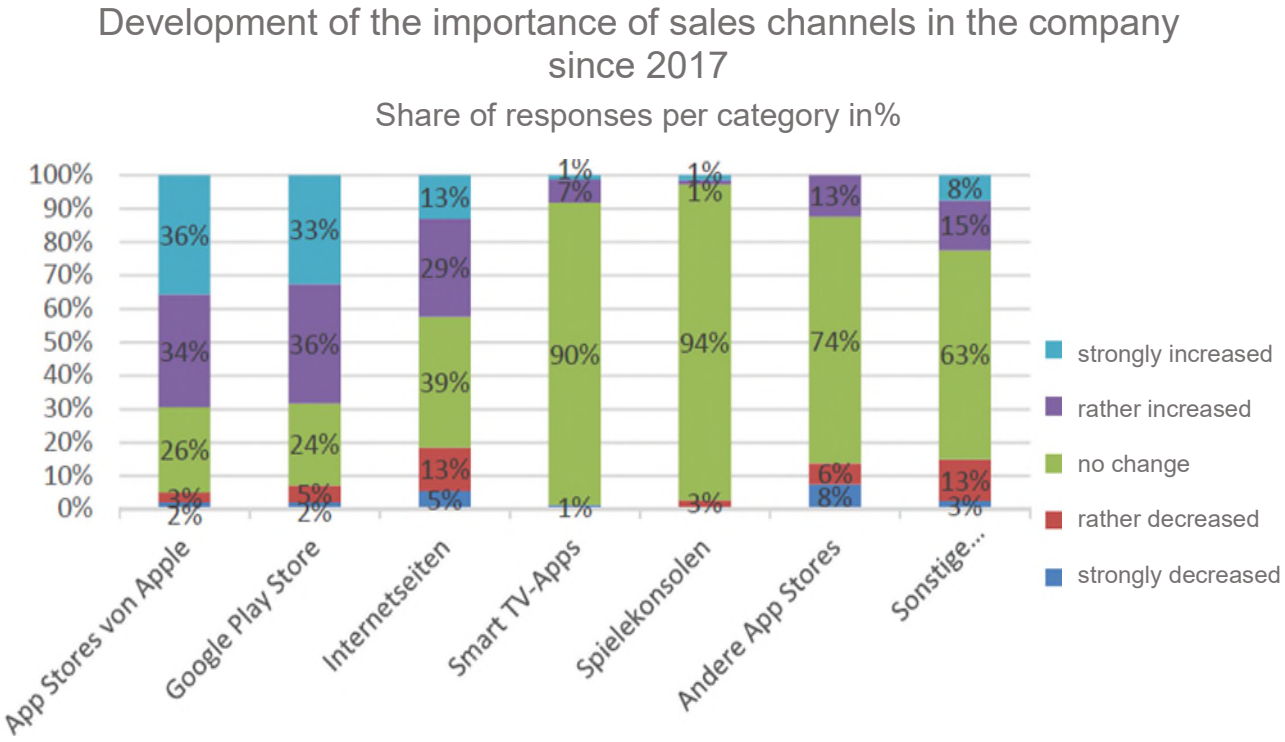

Figure 29 Development sales channels[620]

(802) The survey also revealed that the App Store is of considerable importance to a large number of companies for accessing sales markets. For the companies surveyed, other sales channels represent no or only poor alternatives to sales in Apple's App Store. Internet sites and app sales in the Google Play Store were most likely to be seen as alternatives. However, according to further results of the

619 See note "Evaluation of the survey of hardware manufacturers" – Annex 1 "Results of the quantitative evaluation", p. 12.

620 See note "Evaluation of the survey of hardware manufacturers" – Annex 1 "Results of the quantitative evaluation", p. 9.

survey, the Google Play Store is not a substitute in terms of reaching Apple's customers, but rather predominantly a complement that is aimed at an end customer group in a different ecosystem (see paras. (482), (476) et seqq.). In the context of increasing digitalisation and the shift of processes and business to the Internet, especially to mobile applications, it is also to be expected that the growth in revenue generated directly or indirectly via the App Store observed in recent years will continue.

(803) The German-based companies surveyed by the Decision Division that are active in the sale of digital goods and services via apps on smartphones stated that, on an unweighted average, they generated around 50% of their total global revenues via smartphone and tablet apps in 2020. It should be noted that depending on the business model, this share of a company can also be significantly higher. Apple's App Store was the most important app store for smartphone and tablet apps in 2020 for the German app publishers surveyed, with a share of around 61% of all revenues generated by the sale of digital goods and services in all app stores for smartphones and tablets.[621]

(804) Even though the average share of revenue accounted for by the Apple App Store is currently "only" 30% overall, the investigations have shown on the one hand that app-related sales are growing dynamically, while the other sales channels are becoming increasingly less important. On the other hand, these other distribution channels are for the most part not a substitute for but rather a complement to Apple's App Store (see paras. (499) et seqq. and (520) et seqq. respectively).

(2) Advertisers, content providers, advertising service providers

(805) Apple is also important for advertisers' and content providers' access to customers on mobile devices. As the operator of the ecosystem, Apple can select or prioritise offers and determine the framework conditions for access to Apple users as addressees of advertising measures. Given the relevance of these activities for third parties, Apple can exert a significant influence on their visibility and customer access. According to these criteria, Apple is also important for advertising service providers who are active in the provision of digital advertising on behalf of

621 See note "Evaluation of the survey of hardware manufacturers" – Annex 1 "Results of the quantitative evaluation", p. 12.

advertisers and content providers.

(806) For content providers (e.g. media publishers with websites as a distribution channel) where advertisers place ads, access to Apple users is important. This is also true for advertisers who place ads with app publishers and content providers to reach potential customers with Apple devices in various sales markets. It is estimated that in 2022 around 62% of all advertising expenses will be spent on advertising via the Internet (search-based advertising, banner advertising, video advertising, online classifieds).[622] Digital advertising is therefore of outstanding importance compared to other forms of advertising such as TV, radio and print advertising. The reasons for the success of digital advertising include the enormous spread of smartphones, tablets and computers and the intensity of their use, as well as the opportunity to target advertising at the relevant customer groups.[623]

(807) Apple users are often not reachable via other digital sales channels due to the complementary use of iPhones, iPads, Apple Watches, and Macs and the closed ecosystem (see paras. (754) et seqq.), which makes access via Apple devices very important for advertisers. In 2020, advertisers spent around USD 46 billion worldwide on in-app advertising on Apple mobile devices (see above).[624]

(808) Apple's importance for advertisers and content providers is also evident from its market penetration in the area of smartphones, tablets, and laptops/computers. In June 2022, around 51% of all website visits in Europe were made via mobile devices; in Germany, the figure was 52%.[625] Apple devices accounted for around 32% of all website visits from smartphones in Europe, compared with 36% in Germany.[626]

(809) With the high proportion of website visits originating from Apple devices, Apple

---

622 Zenith, "Advertising Expenditure Forecasts June 2022", published at https://www.statista.com/statistics/376260/global-ad-spend-distribution-by-medium/ [18 July 2022].

623 See, e.g., OECD (2021), Competition in digital advertising markets, http://www.oecd.org/daf/competi-tion/competition-in-digital-advertising-markets-2020.pdf [20 July 2022].

624 Analysis Group (2021), A Global Perspective on the Apple App Store Ecosystem https://www.apple.com/newsroom/pdfs/apple-app-store-study-2020.pdf [18 July 2022].

625 https://gs.statcounter.com/platform-market-share/desktop-mobile/europe, https://gs.statcounter.com/platform-market-share/desktop-mobile/germany [20 July 2022]

626 https://gs.statcounter.com/platform-market-share/desktop-mobile/europe, https://gs.statcounter.com/platform-market-share/desktop-mobile/germany [20 July 2022]

with its Safari browser and WebKit[627] is also relevant for content providers without their own app (see paras. (507) et seqq.). Content providers are affected, among other things, by the compatibility of Safari and WebKit with web standards for displaying web pages, as well as by preferences and setting options of the Safari web browser with regard to the web pages' data processing options for the purpose of displaying personalised advertising, e.g., by the blocking of third-party cookies.[628]

(810) Another key factor for advertisers and content providers is the screen time of users. On mobile devices, this is primarily attributable to the use of apps, whereas the possibility to reach customer groups on smartphones via web browsers is limited. It is estimated that smartphone users worldwide spent only 7.5% of their screen time in web browsers in 2021, while 92.5% was spent within apps.[629]

(811) The Decision Division's investigations confirm this result for Germany. Based on device analytics data provided by Apple, it emerges that German iPhone users who had shared their device analytics data with Apple spent [90-100]% of their screen time in apps in July 2021, and only [<10]% in web browsers. Within web browsers, in turn, these users spent [80-90]% of screen time in Apple's own web browser Safari. Here, the screen time spent on iPhones is significant. In July 2021, these iPhone users in Germany spent almost [<10] hours a day using the iPhone.[630] Looking at the world as a whole, the amount of time spent using

---

627 Browser engines are basically responsible for converting web page code into a visual representation desired by web page users. WebKit is a browser engine developed under the supervision of Apple. WebKit JavaScript executes JavaScript code in the web browser in cooperation with WebKit. See https://en.wikipedia.org/wiki/WebKit, https://en.wikipedia.org/wiki/Browser_engine [4 May 2022]. Since not all web browsers and browser engines display web page code in the same way, web page operators usually correct their web pages to the most widely used web browsers to ensure that the web pages are compatible with the web browsers. JavaScript is a programming language that, along with HTML and CSS, is considered to be one of the core technologies of the World Wide Web and is widely used. JavaScript enables more dynamic and interactive web pages than HTML and is therefore very important for web apps, see https://en.wikipedia.org/wiki/JavaScript [4 May 2022].

628 https://webkit.org/blog/10218/full-third-party-cookie-blocking-and-more/ [15 September 2022]. Third-party cookies store information from third parties on users' devices when they visit websites, often for the purpose of realising personalised advertising. Content providers can use personalised advertising on their websites to generate revenue to finance the content they provide, see Bundeskartellamt, Sector inquiry into online advertising – discussion report, para. 255, available at https://www.bundeskartellamt.de/SharedDocs/Publikation/DE/Sektoruntersuchungen/Sektoruntersuchung_Online_Werbung_Diskussionsbericht_lang.pdf?__blob=publicationFile&v=4.

629 https://datareportal.com/reports/digital-2022-time-spent-with-connected-tech [20 July 2022]

630 Apple's response of 5 November 2021 to the Division of Decision's request for information dated 10 August 2021, sheet 10.2, folio 1,502 of the case file.

smartphones in general in 2021 amounted to an estimated average of 4 hours and 48 minutes per day.[631]

(812) For the same reasons as for advertisers, access to the Apple ecosystem and thus to Apple customers is also very important for advertising service providers (so-called ad tech companies) to access numerous sales and supply markets. Advertising service providers can be contracted by advertisers and providers of advertising space (e.g., app publishers, content providers such as media publishers with websites) for the placement of advertising as well as associated performance measurement and fraud prevention. Accordingly, they are part of the value chain through which approximately USD 46 billion was generated for in-app advertising on Apple devices in 2020.[632] Furthermore, advertising service providers are also involved in advertising displayed on web pages accessed from Apple devices via web browsers. In the realisation of non-search digital screen advertising, a variety of players may be involved at different technical levels. Markets, market players and types of interaction depend on the type of advertising served, the supply of advertising space and the technical realisation.[633] On Apple devices, the business activities and business opportunities of advertising service providers depend to a considerable extent on the data access that Apple grants them (indirectly via the app publishers) or, in any case, are significantly influenced by it (see in detail paras. (897) et seqq.).

(813) Access to Apple devices is also important for providers of search-based advertising (especially search engines) as providers of special websites. The importance of this results in particular from the possibilities of directing Apple users to the search engine (e.g. by pre-setting the search engine for search terms in the address bar of the web browser or in dedicated search fields in the browser bar) as well as due to the data generated or retrievable during the use of web browsers of Apple devices. [redacted]

631 https://datareportal.com/reports/digital-2022-time-spent-with-connected-tech [20 July 2022]

632 Analysis Group (2021), A Global Perspective on the Apple App Store Ecosystem https://www.apple.com/newsroom/pdfs/apple-app-store-study-2020.pdf [18 July 2022].

633 See Bundeskartellamt Office, Sector inquiry into online advertising – discussion report, paras. 52 et seqq., available at https://www.bundeskartellamt.de/SharedDocs/Publikation/DE/Sektoruntersuchungen/Sektoruntersuchung_Online_Werbung_Diskussionsbericht_lang.pdf?__blob=publicationFile&v=4

[redacted].[634] Market analysts estimate that payments increased from USD 10 billion in 2020 to approximately USD 15 billion in 2021.[635] [redacted]

(814) Apple believes that it does not occupy an "intermediary position" between the companies in the advertising industry and Apple customers and that Apple therefore cannot be of any relevance for the access of these companies to supply and sales markets from the outset. Thus, according to Apple it cannot have any influence on the business activities of third parties within the meaning of this provision.[637]

(815) Irrespective of the obvious importance of Apple for advertisers' access to Apple customers, it is irrelevant at this point whether and to what extent Apple also occupies an intermediary position between companies in the advertising industry and Apple end customers with respect to specific exchange relationships. Even if Section 19a (1) sentence 2 no. 5 GWB focuses on the so-called intermediation power of platforms, according to the explanatory memorandum, its application is not limited to these scenarios. This is already supported by the wording of the provision, which – unlike the other provisions that refer to the concept of intermediation power (Section 18 (3b) GWB and Section 20 (1) sentence 2 GWB) – refers to the "influence on the business activities of third parties" in its second half-sentence. Moreover, it is not required that the business activity needs to be conducted on multi-sided markets.[638] Rather, the term "influence" should also cover the (mere) setting of rules on platforms and within ecosystems.[639]

---

634 Apple's response of 5 November 2021 to the Decision Division's request for information dated 10 August 2021, sheet 11, folio 1,507 of the case file.

635 See, e.g., https://www.forbes.com/sites/johanmoreno/2021/08/27/google-estimated-to-be-paying-15- billion-to-remain-default-search-engine-on-safari/?sh=2f895b5e669b [22 July 2022].

636 Apple's response of 5 November 2021 to the Decision Division's request for information dated 10 August 2021, sheet 11. folio 1,507 of the case file.

637 See Apple's comments on the Decision Division's draft decision of 5 January 2023, para. 183 (folios 3,259 et seq. of the case file)

638 See also the corresponding wording of Section 19a (2) sentence 1 no. 2 GWB, which is based on the wording of Section 19a (1) sentence 2 no. 5 GWB.

639 Accordingly, pursuant to the introduction of the explanatory memorandum on the objective of Section 19a, the aim of Section 19a GWB is to "even better target possible anti-competitive effects and threats to competition in the area of digital ecosystems in which individual companies occupy a so-called gatekeeper function", see government bill of the 10th amendment to the GWB, Bundestag

(816) This understanding is additionally confirmed by the introduction of Section 19a (2) sentence 1 no. 2 GWB within the course of the parliamentary procedure. This provision was developed with the aim to cover situations of abuse of power that are not linked to an intermediary position or where there is no competitive relationship.[640] This expressly aims to also cover the specific potential for harm that exists where the incontestability of digital ecosystems is secured through measures of obstruction, explicitly also through the (mere) setting of rules.[641] Against this backdrop, Section 19a (1) sentence 2 no. 5 GWB focuses not only on specific intermediary positions or intermediary relationships, but also on the "digital ecosystem" as a whole as a problematic (intermediary) entity which is active across markets, because it controls access to its users, on which third parties may be dependent.[642] Furthermore, it may "regulate" the markets that are created or take place within the ecosystem by setting the framework conditions from the outset.[643]

(3) Hardware manufacturers

(817) Apple is also important for hardware manufacturers' access to those customers who use the hardware manufacturers' products in conjunction with Apple devices.

(818) Apple devices can be used with numerous products from other companies. Examples include headphones, smartwatches, fitness trackers, voice-controlled speakers, televisions and stereos (via Apple AirPlay), cars (CarPlay), smart home devices (via Apple HomeKit), and localisation devices that interact electronically with Apple devices. Apple's importance for other hardware manufacturers whose products can be used in conjunction with Apple devices is due to the high market penetration of Apple devices and the above-average high purchasing power and

printed paper 19/23492, p. 73. In this explanatory memorandum, the term gatekeeper is used exclusively in the cited passage. In other contexts, the term gatekeeper tends to be assigned to individual platforms, see e.g. Report of the Commission Competition Law 4.0, 2019, p. 49 (with further references).

640 Recommendation resolution on the 10th amendment to the GWB, Bundestag printed paper 19/25868, p. 115.

641 Recommendation resolution on the 10th amendment to the GWB, Bundestag printed paper 19/25868, p. 115.

642 See BMWi, A new competition framework for the digital economy – Report by the Commission 'Competition Law 4.0', 2019, p. 22.

643 Dolata, Apple, Amazon, Google, Facebook, Microsoft: Market concentration – competition – innovation strategies, 2017, p. 10.

willingness to pay of Apple customers (see paras. (284) et seqq. in connection with smartphones). A comparable picture emerges for tablets (see paras. (373) et seq.) and smartwatches (see paras. (410) et seq.).

(819) In this context, for hardware manufacturers, cooperation with Apple and the importance of Apple for the sales of their own devices increase to the same extent as users of Apple devices are (potential) buyers of devices from other manufacturers. For example, sales of fitness trackers, which generally cannot be used by Apple users in a meaningful way without an iPhone connection, are likely to depend heavily on its functionality with Apple devices. For car manufacturers who also want to attract the large group of customers who own Apple devices with their products, ensuring functionality of their products with Apple devices is likely to offer significant sales advantages.

(820) According to Apple, the application of Section 19a (1) sentence 2 no. 5 GWB also requires an intermediary relationship with regard to a possible rule-setting power vis-à-vis the hardware manufacturers, which, according to Apple, does not exist with regard to the hardware manufacturers who are interested in extensive interoperability with Apple products.[644]

(821) The Decision Division does not share Apple's view that Section 19a (1) no. 5 GWB is limited to pure intermediary relationships given the wording of the provision and its purpose. To avoid repetition, reference can be made to paras. (815) et seq.

(4) Mobile telecommunications providers

(822) Apple is also important for mobile telecommunications providers to offer mobile telecommunication services to consumers as well as business customers.

(823) The iPhone in particular is important for mobile telecommunications providers in Germany in terms of providing their own product range. In bundled offers the smartphones are normally also sold when new contracts are signed as well as when existing fixed-term contracts are extended. In Germany, around [35-40]% of all smartphone mobile contracts were sold via bundled offers in the first three quarters of 2021; in the business customer segment, the figure was as high as [45-

644 Apple's comments on the Decision Division's draft decision of 5 January 2023, para. 183 (folio 3,260 of the case file)

50]%.[645]

(824) Apple devices account for a significant proportion of demand for mobile telecommunications services hardware due to their significant sales shares, their above-average length of use, and the brand loyalty of their users. The proportion of iPhones in active use among smartphones in Germany can be estimated from the proportion of website visits originating from smartphones and attributable to Apple devices. This share was 36% in Germany in July 2022.[646]

(825) The Decision Division's findings confirm that, on average, iPhone users generate the highest revenues per user for mobile telecommunications providers in Germany and are therefore of particular economic importance for mobile telecommunications providers. This also applies in particular to the revenue with business customers, where Apple devices are used particularly frequently, as shown above.[647]

(826) In addition, it is important for mobile telecommunications providers to be able to realise trouble-free and complete functionality of their mobile telecommunications services with the relevant Apple products, in particular the iPhone, in order to sell their mobile telecommunications services to consumers and business customers.

(827) Apple is of the opinion that an intermediary position is also required for the application of Section 19a (1) sentence 2 no. 5 GWB with respect to mobile telecommunication providers, which, according to Apple, does not exist vis-à-vis the mobile telecommunications providers that sell Apple products.[648]

(828) With reference to the wording of the provision and its purpose, the Decision Division expressly does not take the view that Section 19a (1) no. 5 GWB is limited to pure intermediary relationships. To avoid repetition, reference can be made at this point to paras. (815) seq. and (820) seq.

---

645 See here and in the following note "Quantitative evaluation of the survey of telecommunications providers", p. 3.

646 https://gs.statcounter.com/vendor-market-share/mobile/europe, https://gs.statcounter.com/vendor-market-share/mobile/germany [20 July 2022]

647 See here and in the following note "Quantitative evaluation of the survey of telecommunications providers", p. 5.

648 See Apple's comments on the Decision Division's draft decision of 5 January 2023, para. 183 (folio 3,260 of the case file).

c) Apple's activities influencing the business activities of third parties

(829) Through its control over its devices and the iOS operating system, Apple can shape the terms of other companies' access to Apple devices and determine how other devices and services work with Apple devices. These opportunities offer Apple the potential to influence the business activities of app publishers, device manufacturers, advertisers, content providers, advertising service providers and mobile telecommunications providers.

(830) First, Apple controls the publication of apps on Apple devices with the App Store and can thus influence the business activities of app publishers (see (1)).

(831) In addition, Apple controls the ability of app publishers to offer apps and the scope of their services on its devices as well as the interoperability of other device manufacturers' devices to work with its products via technical interfaces. In this way, Apple can technically influence the business activities of app publishers and device manufacturers (see (2)).

(832) Furthermore, Apple also regulates access to user data for the purposes of personalised advertising on its devices and can thereby influence the business activities of app publishers, content providers, advertisers and advertising service providers (see (3)).

(833) Finally, Apple shapes the configuration and use of mobile telecommunications services on its devices with mobile modules and can thus influence the business of mobile telecommunications providers (see (4)).

(1) Operation of the App Store

(834) Through the App Store, Apple has the ability to control the publishing of apps on Apple devices and thus influence the business of app publishers.

(835) This potential results first of all from the establishment and operation of the App Store as the only installation option for apps in Apple's ecosystem, with which Apple assumes an (exclusive) intermediary position between app publishers and their customers (see i.). As the operator of the App Store, Apple has the ability to unilaterally impose contractual terms and conditions that must be complied with to publish apps in the App Store and to decide on their enforcement (see (838)). Finally, Apple can decide how apps are made visible and displayed in the App

Store (see ii.).

i. App Store as exclusive access channel to customers for app publishers on Apple devices

(836) The App Store is the sole distribution channel for apps on Apple's devices. This gives Apple full control over the publication and visibility of apps on iPhones.

(837) This possibility arises for Apple from its simultaneous control over hardware (iPhone) and operating system (iOS). This allows Apple to pre-install the App Store on all relevant Apple devices and technically prevent the installation of apps via other channels. Apple is therefore a monopolist over app publishers with regard to the distribution of apps to customers on Apple devices. The company assumes an intermediary position between app publishers and their customers, and controls app distribution in full (see paras. (482) et seqq.). In addition to the option of preventing the publication of apps within its own App Store, Apple also has the technical option of removing third-party apps that have already been published from the App Store at any time and without the prior consent of the companies concerned.

(838) **Unilateral specification of contractual terms and conditions and their enforcement**

(839) As the operator of the App Store, Apple is able to unilaterally determine the contractual terms and conditions under which apps can be published in the App Store. In addition, the company can unilaterally control compliance with the rules and enforce them.

(840) This is accompanied by a strong rule-setting power for Apple vis-à-vis app publishers, which is not controlled from a competitive point of view by alternative options for app publishers (see paras. (482) et seqq.). This gives Apple the possibility to unilaterally impose the conditions of access to the App Store on app publishers. Moreover, Apple alone decides on the enforcement of access rules, as it technically controls the App Store.

(841) Apple's ability to use this rule-setting power to unilaterally impose access regulations can be illustrated by the contractual conditions that Apple has imposed

on app publishers for access to the App Store.

(842) Within the framework of private autonomy, companies, and thus also Apple, are in principle free to regulate business relationships with other companies by standardised contractual conditions in order to avoid constant new contractual negotiations. In this respect, Apple also rightly points out that the standardisation of access rules per se can be common if individual negotiations with possibly millions of App Store developers would be practically unfeasible.[649] However, this in itself is not a justification for exercising rule-setting power if the corresponding rules restrict the business activities of the contractual partners and their access to customers.

(843) In particular, due to the significant power imbalance to the detriment of the contractual partners, Apple has the possibility, by means of standardised contractual conditions, to pass on as many risks as possible to its contractual partners, to structure its business relationships with a large number of business partners in its favour and thus also to gain advantages over competitors who do not have such a position of power. This applies all the more as Apple is of considerable significance for access to sales and supply markets and, because of this gatekeeper position, a business relationship involving the contracts concluded is unavoidable for third companies, even if these contractual terms and conditions as a whole or individual provisions are disadvantageous for them. This potential for unilateral rule-setting arises, among other things, from the following conditions and obligations for access to the App Store.

(844) Before apps are published in the App Store, app publishers must agree to Apple's unilaterally specified terms and conditions. These terms and conditions contain requirements for access to the App Store, specifications for the functionalities of apps and the fees to be paid to Apple. Before an app is published, and before any update to an app is published, the app or update must be submitted by the app publisher to Apple for review and must be approved by Apple. Apple then checks whether the respective app or update complies with the rules set out by Apple in the App Store Review Guidelines. If this is not the case, the app is rejected.[650]

649 See Apple's comments on the Decision Division's draft decision of 5 January 2023, para. 193 (folio 3,265 et seq. of the case file).

650 https://developer.apple.com/app-store/review/guidelines/ [3 May 2022]

According to Apple, it is possible to contact the app review team if there is any uncertainty about the reason for rejection and to ask questions or submit further information.[651] If the rejection cannot be overcome in this way, however, the corresponding objection is subjected to an internal Apple review process.[652] An app that has already been approved by Apple for publication in the App Store can be removed from the App Store at any time at a later date if it violates the terms of the agreement, which may change over time.

(845) Apple's unilateral terms and conditions for app publishers include the Apple Developer Program License Agreement[653] and the associated Schedules 1, 2 and 3[654] that app publishers must comply with in order to publish their apps. In the Schedules, Apple sets out the terms and conditions for Apple's distribution of apps through the App Store and requires publishers of apps with certain functionalities and monetisation models to pay commissions to Apple.

(846) In addition, Apple also influences app publishers through further guidelines[655] that include further rules, specifications and suggestions for the use of individual functions or services. In particular, this relates to the App Store Review Guidelines[656], which take up essential requirements from other sources, interpret them and expand them with regard to Apple's handling of submitted apps for publication in the App Store. Violations of the App Store Review Guidelines expressly entitle Apple to terminate the intermediary agreement and thus to remove the app from the App Store (Section 6.3. Schedule 1, Section 7.3 Schedule 2 and Section 7.3. Schedule 3 of the Apple Developer Program License Agreement (version dated 6 June 2022)).

---

651 https://developer.apple.com/app-store/review/guidelines/#after-you-submit [3 May 2022]

652 https://judiciary.house.gov/uploadedfiles/competition_in_digital_markets.pdf, p. 372.

653 See version of 6 June 2022 (including Schedule 1), https://developer.apple.com/support/downloads/terms/apple-developer-program/Apple-Developer-Program-License-Agreement-20220606-English.pdf. [8 September 2022]; latest version available at https://developer.apple.com/en/support/terms/.

654 For Schedules 2 and 3, see version of 25 February 2022, https://developer.apple.com/support/downloads/terms/schedules/Schedule-2-and-3-20220225-English.pdf [8 September 2022]; latest version available at https://developer.apple.com/de/support/terms/. Schedule 1 regulates the conditions for arranging the provision of free apps, while Schedules 2 and 3 deal with arranging the provision of fee-based apps, see Sections 7.1 and 7.2 of the Apple Developer Program License Agreement (version of 6 June 2022).

655 See App Store Identity Guidelines, App Store Promo Artwork Guidelines, Human Interface Guidelines, Apple Wallet Guidelines, Apple Pay Marketing Guidelines, https://developer.apple.com/app-store/guidelines/ [12 May 2022].

656 https://developer.apple.com/app-store/review/guidelines/ [3 May 2022]

(847) Apple reserves the right to revise the App Store Review Guidelines at any time, and indicates itself several times in the guidelines that it may do so at short notice on the basis of individual apps ("new apps presenting new questions may result in new rules at any time").[657] Apple also grants itself the right in the guidelines to freely reject apps that it disapproves of due to the "quality of the app experience" or the opinions represented in apps. Thus in the "Introduction" section of the guidelines it reads as follows: *"We will reject apps for any content or behavior that we believe is over the line. What line, you ask? Well, as a Supreme Court Justice once said, "I'll know it when I see it". And we think that you will also know it when you cross it."*[658]

(848) According to the investigations, Apple does not offer app publishers the opportunity to enter into negotiations with the company about the conditions for access to the App Store, which are set unilaterally anyway. Without exception, the app publishers surveyed by the Bundeskartellamt stated that no negotiations had taken place on the Apple Developer Program License Agreement, which app publishers are obliged to sign, or on the level of commissions.[659] App publishers with requests for change frequently stated that Apple did not name any contact persons for negotiations, that the app publishers had no negotiating power vis-à-vis Apple and therefore the attempt to negotiate was futile, or that it was generally known that no concessions could be expected from Apple. These are examples of what was said by various app publishers:

- *"There are no negotiations with Apple. Either I do what Apple wants, or I can't release any more updates or my app gets kicked out of the App Store altogether."*
- *"There's nothing to negotiate if you ever want to publish."*
- *"We are completely dependent on Apple to make our app available to customers.*

657 See the "Introduction" of the App Store Review Guidelines [9 May 2022]. See also section "After You Submit" on app review: "If your app has been rejected and you have questions or would like to provide additional information, please use App Store Connect to communicate directly with the App Review team. This may help get your app on the store, and it can help us improve the App Review process or identify a need for clarity in our policies."

658 Ibid.

659 See note "Evaluation of the survey of app publishers" – Appendix 2 "Qualitative responses", pp. 26 et seqq. Furthermore, 96% of the companies surveyed stated that there were no negotiations on non-price-related provisions in the licensing program or the App Store Guidelines. The remaining 4% indicated in supplementary comments that they had received information on the guidelines as part of the review process. However, these are also unilateral specifications.

Negotiation is futile and not possible from our position. Apple would have no motivation to go for it."

- *"Apple was not willing to negotiate with us here. Acceptance of the terms is [a prerequisite] for publication in the App Store. As the availability in the App Store is an essential prerequisite for widespread use of the app, there was no real alternative to [acceptance]."*
- *"Apple's market power would make that a less than promising exercise."*
- *"As of now, we haven't negotiated with Apple yet, because on the one hand there is no individual customer support from Apple and on the other hand we don't have a contact person to turn to. In addition, the contracts are standard click contracts that you have to accept when you create an account."*
- *"In order to publish an app, the terms of use must be agreed to and the Apple review process must be undergone. Apple decides whether the app will be uploaded to the App Store or not (there is occasional contact with the Apple team for queries, there is no negotiation)."*
- *"There was no way (despite attempts) to identify a contact person with whom real negotiations would have been possible. Only very general operational statements/support could be obtained."*
- *"On the part of Apple, no negotiation is accepted. I do not know of any market participant who would have negotiated with Apple on individual points."*[660]

(849) Apple's power to set rules with regard to the app publishers' access to the App Store can affect different aspects. For example, Apple has the power to set rules with regard to the design of apps on its devices in general and with regard to individual functionalities. Apple also has the power to determine business models of apps published on its devices and to decide on charging commissions for offering and distributing apps. Finally, Apple can set rules regarding the possibilities of communication with app users via apps.

(850) Apple points out that the rules in its App Store pursue certain goals or purposes. For example, the App Store rules are pointed out to ensure user confidence in Apple's security and data protection standards; this is said to be also to the benefit

660 See note "Evaluation of the survey of app publishers" – Appendix 2 "Qualitative responses", pp. 54 et seqq.

of app publishers. In addition, according to Apple, the App Store rules are an important distinguishing feature for Apple in competition with other ecosystems.[661]

(851) The Decision Division does not principally question this information, but has not reviewed it in detail due to the lack of relevance. This is because Section 19a (1) GWB does not imply a value judgment with regard to individual rules set by the norm addressee. Rather, on the basis of this provision, it is only determined that the norm addressee can set such rules unilaterally (assessment of potentials). Further, in contrast to Section 19a (2) GWB, Section 19a (1) GWB is not open to a process of weighting a trade-off in the sense of an objective justification.

(852) Apple also points out that it has a strong incentive to create and maintain a diverse and vibrant universe of app publishers. As part of this, Apple says that it undertakes a range of activities and makes considerable investments in the App Store. According to Apple, this included the hosting of developer forums and conferences, developing various software tools, providing access to OS beta releases, and helping large organisations develop and distribute proprietary apps for internal organisational use.[662]

(853) The Decision Division also principally does not question the fact that Apple carries out these activities; partly, these are publicly documented and objectively verifiable. However, it holds that the description of these activities is fully compatible with determining that Apple has the ability to set rules and that there is no contradiction between these two aspects.

Specifications for display and functionalities within apps

(854) Apple can set rules on how apps can be advertised in the App Store. Furthermore, Apple has the option to set requirements for the implementation of individual functionalities within apps.

(855) In Section 2 of the App Store Review Guidelines, Apple imposes a number of requirements on app publishers regarding technical functionality, technical design, presentation to consumers and Apple's app review teams, as well as on the compatibility of apps with other products. The guidelines touch on aspects of

661 See Apple's comments on the Decision Division's draft decision of 5 January 2023, paras. 185-187 (folio 3,261 et seq. of the case file)

662 See Apple's comments on the Decision Division's draft decision of 5 January 2023, paras. 189-192 (folios 3,262-3,265 et seq. of the case file)

quality control in the App Store, among other things, but also restrict app publishers' technical access to functionalities and resources on Apple devices as Apple sees fit.

(856) For the review process, app publishers must submit extensive metadata[663] for inspection and presentation in the App Store after publication. In addition to the name of the app, this also includes descriptions of the functions, screenshots, information on data processing by the app for the Apple Privacy Labels[664], the app category, an age rating, and keywords for finding the app in the App Store.

(857) Apple prohibits app publishers from using Apple's private APIs in Section 2.5.1 of the App Store Review Guidelines. App publishers must disclose to Apple which APIs and frameworks[665] they use. Apple-provided frameworks and APIs may not be used for purposes other than those intended by Apple. Apple's private APIs, which the company reserves for itself to improve the functionality of its own apps, may not be used by other app publishers. App publishers are instructed to remove frameworks, APIs and other technologies from their apps that are no longer further developed/supported by Apple. The guidelines enforce the technical restrictions imposed on third parties (see paras. (888) et seqq.) at the level of app distribution on Apple devices.

(858) In Section 2.5.6, Apple requires app publishers to use the WebKit and WebKit JavaScript provided by Apple to offer web browsing functionalities, e.g. in web browsers and email programs.

(859) Apple reserves the right, pursuant to Section 2.8 of the Apple Developer Program License Agreement, to modify, suspend, or discontinue any Apple Service (such as APIs, software, and services) used by app publishers at any time and without notice. Apple also reserves the right to deny app publishers access, limit access, or terminate granted privileged access to otherwise private APIs.[666]

---

663 Metadata or metainformation is structured data that contains information about other data, see e.g. https://www.digitalxo.de/metadaten/ [4 May 2022].

664 To inform users about data collection and use before they download the app from the App Store, apps must use a label system developed by Apple that is displayed on the app's download page in the App Store. https://developer.apple.com/app-store/app-privacy-details/ [4 May 2022]

665 Frameworks are collections of functions that can be used to perform specific tasks. Frameworks can structure the necessary tasks and simplify their "solution" for developers, see, e.g., https://javascript.plainenglish.io/in-plain-english-what-are-api-library-and-framework-ba5e879ab9da [25 May 2022].

666 See Apple Developer Program License Agreement of 13 December 2021, Section 2.8 "Apple

Business models and collection of commissions

(860) Apple has the ability to set rules regarding the permission of specific business models that apps distributed in the App Store may pursue. In addition, Apple has rule-setting power with respect to the collection and amount of payments as well as commissions that accrue for offering and selling apps in the App Store.

(861) For example, Apple provides app publishers with extensive specifications on business models in general and individual commercial decisions, including the commission payments to be paid to Apple, in particular in Sections 3. “Business”, 4. “Design”, and 5. “Legal” of the App Store Review Guidelines.

(862) In Section 3, “Business”, Apple provides app publishers with detailed specifications with respect to which types of apps under which conditions must use Apple’s own payment system IAP in order to realise payment transactions. On the one hand, Apple thus determines which business models must pay a commission to Apple when selling in the company’s App Store, and on the other hand, it also determines which business models may be pursued with apps in the App Store without paying Apple a revenue share.

(863) With the introduction of the App Store in 2008, Apple decided to charge a commission for certain types of user-funded apps, which, at least at the time of the App Store’s introduction, was primarily intended to cover the App Store’s costs, according to Apple’s statements.[667] The commission is only levied on apps that offer “digital goods and services” whose content is consumed on devices. According to Apple’s definition, these are apps that can be purchased for a one-time fee as well as apps for which, after purchase or free download, in-app purchases can be made later or paid subscriptions can be taken out in the app. In contrast, apps that are completely free of charge and those that are used to purchase physical goods in the “real world” are excluded from Apple’s collection of commissions.

(864) As a result, Apple’s monetisation of the App Store is very asymmetrical: around

---

reserves the right to change, suspend, deprecate, deny, limit, or disable access to the Apple Services, or any part thereof, at any time without notice (including but not limited to revoking entitlements or changing any APIs in the Apple Software that enable access to the Services or not providing You with an entitlement).”

667 See https://judiciary.house.gov/uploadedfiles/competition_in_digital_markets.pdf, p. 344.

93% of all apps in the App Store can be downloaded free of charge by users and are therefore not subject to commissions.[668] Conversely, a small proportion of app publishers bear the entire performance-based commission that Apple charges in the App Store. The selective collection and the magnitude of Apple's commission has therefore been a constant point of conflict between Apple and app publishers in recent years. Complaints by well-known companies such as Spotify, MatchGroup (Tinder), and Rakuten (Kobo) to competition authorities, as well as civil lawsuits such as the one filed by Epic Games against Apple exemplify this conflict. [669] Apple has changed and differentiated its rules and regulations regarding the collection and amount of commissions several times.

(865) Currently, Apple charges a commission for apps that offer "digital" goods, services, and content and defines them as apps that unlock "features or functionality within [the] app (by way of example: subscriptions, in-game currencies, game levels, access to premium content, or unlocking a full version)".[670] A restriction in this regard is imposed to "reader" apps, which allow users to access previously purchased content or subscriptions (according to Apple, this only includes magazines, newspapers, books, audio, music and video content). According to Section 3.1.1. of the App Store Review Guidelines, "reader" apps – in contrast to all other "digital" goods and services apps as defined by Apple – may offer external links to their own websites in the app upon application to Apple. Users can then use these links to purchase content for use in the app, bypassing IAP and the associated commissions. Apps that offer physical goods and services that are "consumed outside the app" are not subject to the obligation to use IAP and the associated commissions for Apple.

(866) The exclusive use of IAP in the covered apps as well as the specific amount of commissions retained by Apple on sales by app publishers is set out in the "Fee-Based App Agreement (Schedule 2 and 3 of the Apple Developer Program License Agreement)", which app publishers must accept together with the Apple

668 https://www.businessofapps.com/data/app-revenues/ [18 July 2022]

669 https://www.businessinsider.com/apple-faces-second-eu-antitrust-complaint-rakuten-2020-6, https://www.acm.nl/sites/default/files/documents/summary-of-decision-on-abuse-of-dominant-position-by-apple.pdf, https://cand.uscourts.gov/cases-e-filing/cases-of-interest/epic-games-inc-v-apple-inc/ [15 September 2022]

670 See App Store Review Guidelines Section 3.1.1. "If you want to unlock features or functionality within your app, (by way of example: subscriptions, in-game currencies, game levels, access to premium content, or unlocking a full version), you must use in-app purchase."

Developer Program License Agreement in order to publish apps in the App Store offering paid digital goods and services. According to the agreement, Apple generally charges a 30% commission on content subject to commissions. Apple provides for three exceptions to this. First, in the case of subscription-based content subject to commissions, the commission payable to Apple on the revenue generated with an end customer is reduced from 30% to 15% for all further payment periods if the subscription has already existed for one year.[671] Second, app publishers that meet the criteria of the "App Store Small Business Program" can achieve a reduction of the commission to be paid to Apple to 15%. For this to happen, they must not have generated more than USD 1 million in App Store revenue, net of Apple commissions and taxes, in the previous calendar year. Once this revenue threshold is exceeded, all further revenues are subject to a 30% commission. A new reduction requires re-qualification for the program with associated lead times, during which commissions of 30% must be paid to Apple.[672] Third, in 2016, Apple introduced the "Apple Video Partner Program", which provides for a 15% commission on revenue generated from subscriptions and add-on purchases for apps from eligible "premium subscription video entertainment providers" that have joined the program.[673]

(867) Furthermore, there are various regulations which are obviously aimed at preventing possibilities for circumventing the collection of Apple's commission. Section 4.7 prohibits app publishers from publishing apps in the App Store if their main purpose is distributing code not contained in the app (e.g. HTML5-based games on the web that can be executed in a web browser), they function as a shop or have a shop-like interface. If such shop features are not present, all code publishers whose code is relied upon in an app must also join the Apple Developer Program, enter into the Apple Developer Program License Agreement, use IAP, and pay commissions to Apple. Games may only be streamed on Apple devices[674] in accordance with Section 4.9 if the externally stored and executed games follow

671 See Apple App Store Developer Program Schedules 2 and 3, Section 3.4 (a), version of 25 February 2022, https://developer.apple.com/app-store/review/guidelines/ [21 May 2022].

672 Ibid, Section 3.4 (b); https://developer.apple.com/app-store/small-business-program/ [12 May 2022].

673 https://developer.apple.com/programs/video-partner/ [12 May 2022]

674 In cloud gaming/game streaming, games are stored and run on external servers and the image is transmitted to the user's screen, which is also controlled from there. This differentiates streaming from the regular form of game execution, where the game files are usually stored and executed entirely on the user's local device.

the App Store Review Guidelines and use IAP for purchases, thus paying commissions directly to Apple. Section 3.3.2 (i) prohibits apps from providing interfaces that display other publishers' apps, extensions, or plug-ins similar to Apple's App Store. Section 2.5.2 prohibits app publishers from offering apps that download, install or execute code and apps that modify the features and functionality of the app. Publishers of apps with user-generated content must comply with Section 1.2.1 and ensure that this content is not a native app that changes the app's features and functionality. Furthermore, the user-generated content must use IAP for payment transactions within the apps and Apple must be given its corresponding share in the revenues.

(868) Finally, Apple regulates in its App Store Review Guidelines the conditions under which app publishers can serve personalised ads. For example, in Section 5.1.2 of the App Store Review Guidelines, Apple requires app publishers to integrate Apple's App Tracking Transparency Framework (ATTF) into apps via the APIs provided for the purpose of combining data across companies. In this way, Apple controls the selection architecture with which app publishers must obtain consent to this data collection (see paras. (897) et seqq.).

Communication between app publishers and app users

(869) Finally, Apple has the ability to set rules regarding app publishers' communications with app users in the context of distributing apps on Apple devices.

(870) For example, app publishers are prohibited from communicating in the apps via alternative purchase and payment methods on the basis of Section 3.1.3 of the App Store Review Guidelines. The so-called "reader" apps are subject to a merely limited prohibition in this regard. "Reader" apps may set a link to an external website (of the service). This possibility requires special review and approval by Apple, which is implemented via the "External Link Account Entitlement" and which is linked to further conditions. However, even "reader" apps may not point out within the app that the same content can be purchased on the external website at a lower price and with other payment systems than directly in the app with Apple's payment service IAP.[675] As part of an out-of-court settlement, in which Apple agreed to pay USD 100 million to settle a class action lawsuit by American app

675 https://developer.apple.com/support/reader-apps/ [25 July 2022]

publishers, Apple agreed, among other things, to allow very limited communication about cheaper alternative purchase methods. Since then, app publishers have been allowed to inform users who have actively entered email addresses and/or phone numbers in the apps about alternative payment methods if they have agreed to receive marketing communications.[676]

(871) Apple requires app publishers to implement its own "Sign in with Apple" login service (Section 4.8 of the App Store Review Guidelines) if an app publisher also offers other third-party login services such as those offered by Facebook, Google, Twitter, LinkedIn, Amazon or WeChat in its app. Exceptions exist, for example, with regard to specific account systems from the education sector or in connection with government-backed identification systems. Apple reserves the right to unilaterally deactivate the "Sign in with Apple" service at any time for any reason for publishers of apps and websites.[677] If Apple disables its authentication service for an app or website, all users who use this app or website with the Apple ID will no longer be able to log in and thus use the app/website.[678]

(872) A large number of competition law proceedings and studies point to Apple's rule-setting power in connection with the App Store. Even if the Decision Division does not assess these proceedings and complaints from a competition law perspective in detail due to their lack of relevance[679], a number of market participants and competition authorities attribute considerable relevance to Apple's rule-setting power with regard to the access to supply and sales markets for the business activities of other companies.

(873) A number of proceedings are or have been conducted against Apple by various competition authorities and in civil courts on account of the conditions of access to the App Store and the commissions charged. The complaints focus on aspects of exploitative abuse and exclusionary conduct, including possible self-preferencing over competing companies in favour of Apple's own services.

---

676 https://www.apple.com/newsroom/2021/08/apple-us-developers-agree-to-app-store-updates/, https://arstechnica.com/tech-policy/2021/08/apple-will-finally-let-devs-tell-users-about-non-app-store-purchase-options/ [25 July 2022]

677 https://developer.apple.com/sign-in-with-apple/usage-guidelines-for-websites-and-other-platforms/ [9 May 2022]

678 https://blog.anylist.com/2020/06/sign-in-with-apple/, https://www.wired.com/story/single-sign-on-facebook-google-apple/ [9 May 2022]

679 See Apple's comments on the Decision Division's draft decision of 5 January 2023, para. 193 (folios 3,266 et seq. of the case file)

(874) The European Commission is currently conducting various proceedings in connection with Apple's App Store: The "Spotify" proceedings deal with the markets downstream of the App Store in the area of music streaming (AT.40437), another proceeding deals with the distribution of e-books/audio-books (AT.45452). In addition, the Commission is generally looking into the terms and conditions and the obligation to use IAP (AT.40716). On 24 August 2021, the Dutch ACM imposed an obligation on Apple for abusing a dominant position in App Store services in the area of dating apps in the Netherlands to tolerate other payment systems as an alternative to IAP.[680] Further proceedings on the App Store terms and conditions and the structure of the IAP obligation are currently pending before the CMA of the United Kingdom, the Competition Commission of India, and the Russian Federal Antimonopoly Service or have recently been terminated with the finding that Apple is in violation of competition law rules.[681] The Japan Fair Trade Commission, Japan's competition authority, closed a case against Apple in September 2021 after Apple committed to changes in payment services and the mandatory use of IAP with the associated commissions for "reader" apps.[682]

(875) Lawsuits relating to Apple's App Store are also pending before civil courts. For example, a civil class action filed in June 2019 by US app publishers, which was directed against the levying of a 30% commission for low-revenue publishers, was ended by settlement. Among other things, Apple agreed to maintain the App Store Small Business Program established for low-revenue app publishers in November 2020 with the option to reduce the Apple commission to 15% for at least three years. Furthermore, Apple agreed to allow app publishers to communicate with their users, e.g. via email, about payment options for content (where possible) outside the App Store (without using IAP and incurring commissions for Apple).[683]

---

680 https://www.acm.nl/sites/default/files/documents/summaryof-decision-on-abuse-of-dominant-position-by-apple.pdf [12 May 2022]

681 https://www.gov.uk/cma-cases/investigation-into-apple-appstore,https://www.reuters.com/technology/exclusive-apple-hit-with-antitrust-case-india-over-in-app-payments-issues-2021-09-02/, https://globalcompetitionreview.com/financial-services/russia-launches-abuse-probe-apple, [25 July 2022], https://www.reuters.com/technology/apple-pays-121-mln-fine-alleged-app-market-a-buse-russia-antimonopoly-service-2023-02-27/ [15 March 2023]

682 https://www.apple.com/newsroom/2021/0"/japan-fair-trade-commission-closes-app-store-investigation/ [12 May 2022]

683 https://www.apple.com/newsroom/2021/08/apple-us-developers-agree-to-app-store-updates/, https://de.scribd.com/document/540467235/Preliminary-Approval-of-Settlement-in-Cameron-v-Apple [12 May 2022]

In another US civil action brought by the game developer Epic Games, a violation of California competition law was established in the first instance. According to the decision, Apple's general prohibition on app publishers to inform app customers by means of a link in the app or direct customer communication, e.g. by email, of alternative (cheaper) payment options for making purchases outside of Apple's IAP payment system or of the availability of the offer at other points of sale ("anti-steering rule") is detrimental to competition and not objectively justified.[684]

(876) In addition, the CMA is currently examining the initiation of proceedings on the basis of preliminary competition concerns based on a sector investigation in connection with Apple's rules on the distribution of apps by app publishers. On the one hand, this concerns Apple's obligation imposed on other manufacturers to use Apple's WebKit in their own web browsers. On the other hand, Apple's restrictions on providers of cloud gaming services are being considered.[685]

ii. Visibility of apps in the App Store

(877) Apple has the ability to influence the visibility and success of apps in the App Store by shaping the way in which offerings are displayed.

(878) As the hitherto sole and central location for the installation of apps on Apple devices (see paras. (482) et seqq.), the App Store plays a central role in the visibility of apps on Apple devices. Through its sole control over the App Store, Apple has rule-setting power over how apps can be discovered or found. Apple has the ability to significantly influence the visibility of apps in various ways. For example, Apple can design and change the way the algorithms work, with which generic search results are displayed. Apple can exert further influence through the search suggestions displayed while search words are entered as well as through which the apps are displayed in the "Today", "Games" and "Apps" tabs.

(879) The order in which apps are displayed on the home, search results and category pages is of particular importance for apps to be found in the App Store. With this, Apple has the possibility to significantly influence the downloads/revenues of apps

684 See United States District Court Northern District of California, Epic Games, Inc. vs Apple Inc, Case 4:20-cv-05640-YGR, https://www.documentcloud.org/documents/21060696-epic-v-apple-ruling.

685 See CMA, "Mobile ecosystems Market study final report, 10 June 2022"; https://www.gov.uk/government/news/cma-plans-market-investigation-into-mobile-browsers-and-cloud-gaming [14 September 2022].

and app publishers in the App Store. In a 2017 study, the CMA found that when search results were displayed by online search services on mobile devices and smartphones in particular, over 70% of clicks fell on the first three search results displayed. Such consumer behaviour is known as behavioural bias in various contexts and is referred to by the terms “salience” and “position bias”.[686]

(880) Furthermore, Apple can influence the visibility of apps and any subsequent app installations on Apple devices by designing the way Apple Search Ads work and by marketing contextualised and personalised advertising in the App Store (see paras. (759) et seqq.).

(881) Apple’s rule-setting power with regard to the visibility of apps in the App Store can be exemplified by the design and structure of the App Store.

(882) In the App Store, apps can be found in different ways. First, apps can be discovered generically by using the search function. A distinction can be made between categorical and navigational search queries. Categorical search queries search for categories of apps (e.g. search term “shopping” for apps from providers of physical goods). For navigational search queries, the names of apps are searched for in order to get to the App Store page of the product searched for (e.g. “CovPass” for the Robert Koch Institute app of the same name).[687] After entering the search term, a list of generic search results sorted by “relevance” appears in the App Store below an app advertising space that can be purchased by auction from Apple via Apple Search Ads. Apple states that relevance is based on a number of factors, including the app name, keywords, and the primary category to which the app belongs (metadata that the app publishers stored when submitting the app to the App Store).[688] Furthermore, Apple states that it also uses observed user behaviour (download numbers and the number and level of app ratings). Apple also displays “recommended” search terms while users are entering a search term, so that they can “find what they are looking for” (“customers are shown suggested terms to help them find what they're looking for”), as well as commonly used search terms (“trending searches”) in a short period before the

686 See CMA study, “Online search: consumer and firm behavior”, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/607077/online-search-litera- ture-review-7-april-2017.pdf [16 May 2022].

687 See CMA, “Mobile ecosystems Market study final report, 10 June 2022”, p. 203.

688 https://developer.apple.com/app-store/discoverability/ [16 May 2022]

search.[689]

(883) In May 2021, another non-search advertising space was introduced in the App Store search, where app publishers can display personalised ads (if not deactivated by the user). There, an app ad appears below the keyword entry field before a search entry is made. As an alternative form of discovery, users can search for apps in the more than 20 app categories. Here, too, the apps are sorted into a category based on a primary and a secondary app category selected by the app publisher when the app is published in the App Store. Furthermore, Apple offers a special page called “Today”, curated by Apple, in which several apps are presented daily and which can be accessed under a tab within the App Store. In addition, Apple presents further overview pages for “Games” on the one hand and all other “Apps” on the other hand by calling up their own tabs, in which a selection of apps is displayed based on various criteria (selected by Apple).[690]

(884) It follows from all this that Apple can influence the visibility of apps in its App Store via various means of influence.

(885) This is also the conclusion reached by the CMA, which in its sector inquiry into mobile ecosystems has investigated the relative importance of different sources of app installations in the UK between June 2020 and May 2021. Generic search results accounted for between 60-70% of all App Store downloads during the period, making them by far the most important form of app discovery. The second most important form of app discovery, with a download share of between 20% and 30%, was the use of links within apps that led to the App Store page of the respective app (e.g. by “clicking” on an advertising banner for a game within another, ad-supported game). Clicks on links within websites accounted for another 10-20% of installations. The categories of advertising with Apple Search Ads, browsing the App Store tabs “Today”, “Games”, and other “Apps”, as well as app clips[691] accounted for the remaining downloads, although each of these only

689 Ibid.

690 Ibid.

691 App clips can be used to quickly access specific functions of an app without the app having to be installed. For example, scanning an “app clip code” or a QR code with an iPhone camera or wirelessly scanning an “NFC tag”/code with the NFC sensor can perform a certain task (e.g., ordering a coffee in a restaurant). After executing the functionality, the app clip recommends the user to install the regular app with full functionality. See https://support.apple.com/de-en/guide/iphone/iphb3a73ec53/ios, https://developer.apple.com/documentation/app_clips.

accounted for between 0-5% of downloads.[692]

(886) According to its own investigation, the CMA came to the conclusion that Apple has the ability to display monetised apps more often in the search results or increase the visibility of monetised apps in the App Store where the company profits from commissions. This also applies to the presentation of apps from other app publishers in the (curated) discovery pages "Today", "Games", and "Apps". This could create an incentive for app publishers to switch their business model to paid apps in order to be more easily found in the App Store. Furthermore, this could lead to higher prices for consumers and lower incentives for innovation in the app sector.[693] With regard to curated app store discovery pages, the Australian ACCC concluded in a study that although only 16% of apps in the Australian app store (must) use the IAP payment system, in 2020 88% of apps that featured at least once in one of the three discovery pages in the Australian App Store contained fee-based in-app purchases.[694]

(887) Although Apple confirms that it determines the search algorithm in the App Store, the company holds that this algorithm does not give preference to Apple's own apps.[695] From the Decision Division's perspective, this statement also clearly illustrates the dichotomy between the two provisions. While within the context of Section 19a (1) GWB the mere potential of a particular company to use certain structural advantages in its favour by unilaterally setting rules is assessed, Section 19a (2) GWB lays down the legislative foundation for authorities to take up certain actual conduct, such as a possible discrimination of third parties. Only the assessment of a company's potential is relevant here: Apple does not deny that it determines the search algorithm in the App Store.

(2) Access to technical interfaces

(888) Apple also has the ability to provide technical interfaces on its devices that are necessary for certain functions of apps and the interoperability of devices with Apple devices. This is accompanied by Apple's power to set the rules for accessing

692 See CMA, "Mobile ecosystems Market study final report, 10 June 2022", pp. 202-203.
693 See CMA, "Mobile ecosystems Market study final report, 10 June 2022", p. 206.
694 See ACCC, "Digital platform services inquiry interim report no. 2 – App marketplaces March 2021", p. 97.
695 Apple's comments on the Decision Division's draft decision of 5 January 2023, para. 194 (folio 3,266 of the case file).

the technical interfaces and on how to implement the functionalities that can be realised through them, which can have an impact on the business activities of app publishers and device manufacturers.

(889) Apple's control over its hardware and proprietary iOS operating system gives it the ability to determine the extent to which app publishers and device manufacturers can access hardware components and functions and data of the operating system.

(890) The so-called APIs (application programming interfaces) play a central role in this. These are technical interfaces that enable developers, for example, to access hardware components of the devices (such as the camera), other apps or services, and data on the device (such as app usage statistics stored on the devices). APIs are specific software and, as a technical interface for data access as well as data exchange, are of central importance to "collaboration" between hardware and apps or between different apps on the devices.[696]

(891) By controlling the technical interfaces required for this, Apple can determine according to its own rules which types of access to device components and operating system functions are granted to app publishers and device manufacturers.

(892) Apple determines the extent to which other companies can use specific functionalities of the devices that are usable by Apple itself, or can access data stored on Apple devices. APIs that Apple allows third parties to use are known as public APIs. However, Apple does not make all available APIs accessible to third parties as public APIs, but uses some of them exclusively. This means that Apple reserves certain data access options and functionalities that are advantageous or even necessary for the successful operation of certain types of apps, e.g. for certain functions. These APIs are referred to as private APIs.[697] They are not documented by Apple for app publishers and their use is generally prohibited for app publishers in the App Store Guidelines.[698] If app publishers want to post apps that use private APIs to the App Store, they are rejected after going through the

---

696 See ACM "Market study into mobile app stores", 2019, p. 59; https://developer.apple.com/documentation/avfoundation/cameras_and_media_capture, https://developer.apple.com/documentation/screentime [31 January 2022].

697 https://decode.agency/article/app-store-rejection/ [22 February 2022]

698 See Apple App Store Review Guidelines, Section 2.5.1. in the version of 22 October 2021, available at https://developer.apple.com/app-store/review/guidelines/ [24 February 2022].

App Store review process.[699] According to reports from app publishers and the media, Apple has only made exceptions to its own rules for individual app publishers in the past and allowed them to use private APIs.[700] Apple itself also appears to give selected app publishers the opportunity to apply to Apple for the use of some selected private APIs. This includes, for example, a private API for the use of CarPlay, with which certain functions of an iPhone can be used in motor vehicles. In the case of CarPlay, at any rate, Apple does not disclose the "pre-defined criteria" according to which it assesses whether access is granted.[701]

(893) For app publishers and device manufacturers in particular, access to Apple's technical interfaces has an impact on the possibilities and limits of their own business activities in connection with Apple devices. Apple's control over the development and granting of access thus gives the company the possibility to exert significant influence on the functionality of specific apps and device types, their competitiveness and the access of third parties to customers. On the one hand, Apple can exert influence directly by providing or withdrawing technical access to an API. On the other hand, Apple can influence or, in extreme cases, prevent the functionality of other manufacturers' apps by changing the way an API works. Furthermore, Apple has the possibility to influence the business activities of app publishers by changing the practice regarding the tolerated use of APIs when reviewing the approval of apps submitted by app publishers in the App Store. To the extent that Apple offers its own apps and services, the company has the possibility to use control over third-party access to APIs also to secure competitive advantages in the sense of self-preferencing. In addition, Apple can influence competition between different app publishers by granting privileged access to its own private APIs only to individual app publishers or by applying different standards of tolerance in the use of APIs.[702]

---

699 https://decode.agency/article/app-store-rejection/ [22 February 2022]; https://www.itrobes.com/why-app- store-rejects-mobile-apps/ [23 February 2022]

700 See CMA, "Mobile ecosystems Market study interim report, 14 December 2021", pp. 262, 266; https://9to5mac.com/2017/10/05/uber-removing-private-ios-api/, https://www.heise.de/news/iPad-special-rights-for-zoom-app-6041850.html. [22 February 2022]; https://www.macrumors.com/2021/05/06/apple-hulu-special-api-access/ [17 March 2022].

701 See https://developer.apple.com/documentation/carplay/requesting_carplay_entitlements [12 May 2022].

702 The CMA reaches similar conclusions about Apple's potential in its market study on mobile ecosystems. See CMA, "Mobile ecosystems Market study final report, 10 June 2022", pp. 264, 282, 313, 322.

(894) The view held by Apple that, by gaining access to Apple's interfaces, third parties can only operate their businesses in a "more effective" manner or generate additional revenue to their already established businesses, but that this third-party access is not of significance as required under Section 19a (1) sentence 2 no. 5 GWB, is not relevant in this context.[703] Neither does the wording of this provision call for such a standard, nor does this accommodate the market conditions and the market dynamics. A large number of supplementary devices has become impossible to use without a connection to iOS on the one hand and/or Google's Android on the other hand. Examples include the entire audio/video/hifi sector and the rapidly growing segment of home automation products.

(895) Apple's potential and possible power to influence the business activities of third parties and their access to customers by controlling access to its APIs is already being examined by other competition authorities.[704] For example, the European Commission is currently examining the exclusive use of private APIs by Apple for access to NFC chips installed on newer iPhones and Apple Watches as a hardware resource in the AT.40452 proceedings. The NFC chips are used to implement Apple's payment service Apple Pay, which allows contactless payment at cash registers using an iPhone, for example. Apple does not make the necessary private APIs available to other app publishers, or only to a limited extent. According to the Commission, this may mean that competitors (e.g. banks and payment service providers) offering mobile payment services, for example, cannot implement similar offerings to reach users of the Apple platform or to enable their own customers to use an already established offering on Apple devices.

(896) If this were true, Apple Pay would largely remain the only mobile payment method for iPhone and iPad owners for the time being, and competition in this area would be limited at best. With regard to Apple's failure to open up the interface to other companies, the European Commission has come to the preliminary conclusion that

---

703 See Apple's comments on the Decision Division's on draft decision of 5 January 2023, para. 179 (folio 3,257 of the case file)

704 The Decision Division also received indications about the importance of Apple's APIs from the device manufacturers interviewed. Two smartwatch manufacturers claimed that they could not implement the same functionalities on their own products as offered by Apple on the Apple Watch due to the lack of APIs provided by Apple. As a result, both manufacturers feel that they are competitively disadvantaged vis-à-vis Apple. See note "Evaluation of the survey of hardware manufacturers" – Annex 2 "Qualitative responses", pp. 22 et seqq.; Garmin's response of 1 August 2022 (investigation file hardware manufacturers).

this constitutes a violation of European competition law and that Apple's behaviour safeguards its dominant position on the market for mobile wallets on iOS devices.[705]

(3) Access to user data for advertising purposes

(897) Apple also has the ability on its devices to determine how user data can be accessed for advertising purposes.

(898) Apple can implement technical restrictions on companies' access to user data on its devices and delegate the decision about this access to the users via the iOS operating system. These user data can be used for the purposes of personalised advertising. For this purpose, Apple can assign unique identification numbers for devices and control access to these identification numbers. In addition, the company can use its rule-setting power in the App Store to enforce the technical restrictions and complement them with further measures.

(899) In the field of advertising, access to user data is particularly important for the realisation of personalised advertising. The possibilities for displaying personalised advertising increase with the information available about a person and his or her interests. To create an advertising profile about a user, the user is often observed across different apps and websites for the purpose of displaying personalised advertising, and data from various sources are combined. Such a combination of data requires access to identifiers that uniquely identify devices (and thus indirectly the users behind them) via various data sources such as apps, websites and data sets from different companies. On mobile devices, the operating systems currently assign unique identification numbers for devices that can be used to combine data in this way.

(900) Apple's ability to control access to user data for advertising purposes on its devices can be exemplified by its provision of identifiers for advertising purposes and the

---

705 See https://ec.europa.eu/commission/presscorner/detail/en/ip_22_2764 [2 May 2022]. In Germany, access to the NFC interface was legislatively opened up to potential civil access claims in 2019. Further measures with regard to fees by Apple for the use of Apple Pay, which have been characterised by third parties as excessive, have since been under discussion, see https://www.heise.de/news/Bundestag-will-Apple-Pay-Monopol-knacken-6111327.html [17 March 2022].

App Tracking Transparency Framework (ATTF).

(901) Since 2012, Apple has been providing the Identifier for Advertisers (IDFA) as part of its operating system, a unique device identification number specifically for advertising purposes.[706] The identifier is used by app publishers, content providers, advertisers, and advertising agents to assign a user's data from various apps and other sources to a specific device and then combine them. According to the definition created by Apple in iOS in the device settings under settings-privacy-tracking, this "tracking" means the cross-company logging and combination of data and their use for advertising purposes. In April 2021, Apple introduced the ATTF with the iOS 14.5, iPadOS 14.5 and tvOS 14.5 updates for iPhone, iPad and Apple TV. Apple does not conclusively determine third-party access to the IDFA itself. Instead, it provides users with choice architectures through which they can control the companies' access to the IDFA. Through the ATTF, access to an app user's data in the area of "tracking" is made dependent on the user's additional explicit consent. According to this, the user must consent to the tracking in a pop-up dialogue whose content is largely specified by Apple (opt-in model). The pop-up usually appears when an app is opened for the first time. In the event of rejection, Apple devices do not make a usable IDFA available to app publishers via the operating system and app publishers are not allowed to take any alternative technical measures to uniquely identify devices for advertising purposes, in accordance with the App Store Review Guidelines. Apple itself does apparently not use the IDFA, as it uses, according to the information available, other identifiers that are only available to Apple for its own personalised advertising.

(902) In May 2022, the Decision Division initiated proceedings under Section 19a (2) GWB and Article 102 TFEU to review Apple's tracking rules and the ATTF. In particular, it is investigating the initial suspicion that these rules could favour Apple's own offers and/or hinder other companies.

(4) Configuration of mobile services and supply of devices

(903) Apple controls how Apple devices are configured for the use of mobile telecommunications services and which mobile telecommunications services are

706 Previously, another unique device identifier, the Unique Device Identifier (UDID), had been used by third parties, see https://www.businessinsider.com/ifa-apples-iphonetracking-in-ios-6- 2012-10.

activated on its devices for a mobile telecommunications provider. Furthermore, Apple can decide which mobile telecommunications provider it supplies directly with Apple devices so that they can offer their mobile telecommunications services to their customers in a bundle with the respective devices. Both give Apple the ability to influence the operations of mobile telecommunications providers. The Decision Division's findings based on the investigations conducted also show Apple's potential to set rules in this regard.

(904) Before a device can establish a connection with a mobile telecommunications network and use it, the device must be configured accordingly and, if necessary, the use of individual mobile telecommunications services must be activated on the device. To do this, a user usually first has to insert a physical chip card from a mobile telecommunications provider, the SIM card (Subscriber Identity Module), into a device. The basic network configuration can then be carried out by identifying the mobile telecommunications provider using the user's unique identification number stored on the card, the International Mobile Subscriber Identity (IMSI). Basic functions such as mobile Internet, MMS and tethering (for mobile hotspots) can thus be configured and used directly via the access point network (APN) information contained on the SIM card. However, many additional network configurations that are necessary for using other mobile services cannot be stored on the SIM card and have to be transferred to the device by other means (see below). If Apple has stored the network configuration of the mobile telecommunications provider in its operating system, it can access this via the IMSI after identifying the mobile telecommunications provider and automatically configure the device accordingly. Alternatively, Apple can automatically download the network configuration to the device and use it to set up the mobile services.[707]

(905) Mobile services for which additional configurations must be stored on the devices

[707] See on this and on the technical explanations below: B9-1-21-29 "MVNO Europe/Apple", folios 35 et seqq.

include Voice over LTE, Voice over Wifi and Voice over New Radio.[708],[709] In some cases, these must be additionally activated by Apple; storing a configuration is not sufficient in all cases. Devices must also be configured to use the Apple-specific Visual Voicemail service. Apple's iMessage and Face Time services also require the devices to be configured with the services of the mobile telecommunications providers for smooth activation.

(906) In addition, no physical SIM card can be inserted on the Apple Watch in the version with a mobile telecommunications module; instead, the user profile must be stored on an embedded Subscriber Identity Module (eSIM). To do this, the network configurations must be downloaded from an SM-DP+ server, which are at the disposal of the mobile telecommunications providers. Apple's iPhone and Apple Watch are highly integrated with each other. A user can operate both devices with a common phone number, among other things, in order to be easily reachable and to be recognisable to its counterpart. However, mobile telecommunications providers must be enabled by Apple via an "entitlement server" for such functionality.[710]

(907) Apple stores the network configurations and the settings for activating mobile telecommunications services on its devices and servers via so-called "carrier bundles". Via these carrier bundles, Apple can control the configuration of its devices with a mobile telecommunications module for the use of mobile telecommunications services as described above. This gives Apple the ability to determine how mobile telecommunications providers can store their network configurations on Apple devices. In addition, Apple can decide via the operating system which of the mobile telecommunications functionalities that a mobile telecommunications provider wants to offer its customers can be used on Apple devices.

---

708 Voice over Wifi enables mobile phone users to make voice calls automatically via a connection in a WLAN network in situations where mobile reception is not available or the connection is poor. This guarantees that phone calls are possible or of better quality even with poor connections. Similar to Voice over LTE, Voice over New Radio makes it possible to avoid having to rely on old 2G/3G mobile telecommunications standards for voice telephony. Voice over New Radio (Voice over LTE) uses a 5G (LTE) mobile network for the radio link. This increases voice quality and reduces the power consumption of the device during the call.

709 See B9-1-21-29 "MVNO Europe/Apple", folio 55; 1&1's response to the request for information of 16 November 2021, question 9, investigation file telecommunications providers; https://support.apple.com/en/HT204040; https://support.apple.com/de-de/HT201270 [13 June 2022].

710 See B9-1-21-29 "MVNO Europe", pp. 65 et seqq.

(908) Apple's control over carrier bundles has implications for the business activities of mobile telecommunications companies. This is because Apple provides carrier bundles on its devices, at least for the most part, only for the services of mobile telecommunications providers that enter into commercial agreements with Apple. Smaller virtual mobile network operators have stated that they are not able to meet the conditions demanded by Apple and therefore cannot ensure the smooth and complete functioning of their services on Apple devices via carrier bundles.[711] In their view, carrier bundles are, however, of considerable importance to mobile telecommunications providers for access to their end customers.[712] Workarounds for network configurations that in some cases exist are error-prone for Apple users whose mobile telecommunications provider cannot use carrier bundles. As a result, they hold that smaller virtual mobile network operators without carrier bundles are not able to offer features such as Visual Voicemail, VoWifi, and in some cases VoLTE to their end customers on Apple devices. For other features such as iMessage, Face-Time and eSIMs, activation issues with customers have been reported. The limited functionality of Apple devices without a carrier bundle leads to competitive disadvantages from the point of view of the mobile telecommunications providers concerned. Especially in competition for consumers with a high willingness to pay and business customers, large mobile telecommunications companies which received carrier bundles from Apple by concluding commercial agreements have an advantage in their view.[713]

(909) The Decision Division's investigations also showed that Apple can have a considerable influence on the business activities of the mobile telecommunications companies by supplying mobile telecommunications providers with its mobile devices, in particular the iPhone. This potential arises from the significance of Apple's devices for the sale of mobile services by mobile telecommunications providers, as outlined above. In this context, the major mobile telecommunications providers in Germany surveyed by the Decision Division also stated that they all feared a significant negative impact on their business activities in the event of a

711 See B9-1-21-29, folio 54 and folios 65 et seqq.

712 See 1&1's response to question 4 of the request for information of 16 November 2021, investigation file telecommunications providers; B9-1- 21-29 "MVNO Europe/Apple", folios 69 et seqq.

713 See B9-1-21-29, "MVNO Europe/Apple", folio 69.

hypothetical termination of their cooperation with Apple.[714]

d) Summary

(910) Apple's activities, in particular as a provider of mobile hardware, mobile operating systems and the App Store as a mobile software distribution platform, are of considerable significance for third parties' access to supply and sales markets. This results in the possibility for Apple to influence the business activities of third parties. As shown, this possibility of exerting influence exists not only with regard to app publishers, but also with regard to hardware manufacturers, mobile telecommunications providers, and a number of market participants in the advertising industry, such as, for example, publishers, content providers, advertisers, and advertising service providers.

(911) Apple's potential to influence the business activities of third parties results from its control over its devices in addition to the respective proprietary mobile operating system. This is the starting point for Apple's activities, through which such influence can be exerted. The App Store as the only possibility to obtain apps on Apple devices provides Apple with the power to set the rules for accessing its ecosystem. This rule-setting power affects the app publishers themselves as they have no alternative to reaching users of Apple devices. Furthermore, by controlling the technical interfaces and mobile network configurations, Apple can influence the possibilities and limits of device manufacturers and mobile telecommunications providers to sell their own products to users of Apple devices. Finally, Apple can influence the access to advertising data that is relevant for competition for app publishers, content providers, advertisers and advertising service providers, e.g. by configuring the devices to the effect that users themselves have to consent to data access.

(912) The ability to influence the business activities of third parties gives Apple the opportunity to benefit economically from the rule-setting power. Apple has the opportunity to participate in the economic success of other companies within its ecosystem in various ways and to influence the success of other companies within

714 Responses of Deutsche Telekom, 1&1, Vodafone and Telefónica to question 4 of the Decision Division's request for information of 16 November 2021, investigation file telecommunications providers.

its ecosystem. In doing so, individual companies can experience advantages but also disadvantages compared to their competitors within the ecosystem. In addition, Apple holds a hybrid position with regard to a number of devices, apps and services, in which the company's products compete with the offerings of other companies in Apple's ecosystem. In particular this hybrid position gives Apple the opportunities and incentives to use its strong position to its own advantage.

6. Overall assessment

(913) Based on an overall assessment of all circumstances relevant in this individual case, it must be concluded that Apple is of paramount significance for competition across markets within the meaning of Section 19a (1) GWB.

(914) On the basis of the above findings on the criteria to be taken into account under Section 19a (1) sentence 2 nos. 1 to 5 GWB to determine a company's paramount significance for competition across markets, it is apparent that Apple has the characteristics of a company which the legislators intended to capture with special abuse control pursuant to Section 19a GWB. These are companies that often – although not necessarily – hold a dominant position on individual platform or network markets and also have resources and a strategic position that enable them to exert considerable influence on the business activities of third parties or to expand their own business activities into ever new markets and sectors.[715] As a result, they have a position of power with the corresponding competitive potential, which gives them a scope of action across market boundaries that is not sufficiently controlled by competition.

(915) The starting point for this position of power, which is not sufficiently controlled by competition, is the combination of Apple's dominant positions on the hardware markets for smartphones, tablets and smartwatches and its monopoly positions on the respective downstream multi-sided markets for mobile operating systems and software distribution platforms on its devices (Section 19a (1) sentence 2 no. 1).

(916) The structural characteristics are comparable in all three markets for mobile devices. Apple always has a consistently high market share in terms of value, which remains stable above the presumption threshold for single market

715 See explanatory memorandum to the 10th amendment to the GWB, Bundestag printed paper 19/23492, p. 73.

dominance and is increasing over time. In all three markets, Apple also consistently has a considerable market share lead over all other competitors. Customers rarely switch to other providers due to strong brand loyalty and high barriers to switching. The high and constantly widening price gaps compared to all other competitors are an expression of this scope of action which is not sufficiently controlled by competition.

(917) Products based on other operating systems, mostly Android, are at best distant competitors that may exert competitive pressure on each other, but are unable to exert any significant pressure on Apple. Apple's dominant positions are secured by considerable resources and privileged access to data, because Apple is able to use the associated potential to its own advantage and not only secure but also further expand its market positions and profits.

(918) On its mobile devices, Apple is also a monopolist with regard to both mobile operating systems on Apple devices and the operation of software distribution platforms (App Store). For both end users and app publishers, the use of alternative mobile operating systems or app stores on Apple's mobile devices is technically impossible due to the proprietary focus. According to the investigations, there are no alternative options for users and/or app publishers. Apple is without a competitor on these markets within the meaning of Section 18 (1) no. 1 GWB.

(919) Even if Apple did not dominate the respective markets within the meaning of Section 18 (1) GWB, there would in any case be no grounds to doubt that Apple has a strong market position or position of power on these markets. As explained above, such a market position or position of power – which lies in the "grey area" of the classic concept of market dominance – can also be examined under Section 19a (1) sentence 2 no. 1 GWB. In addition, it can be taken into account in any case within the framework of the necessary overall assessment in the examination pursuant to Section 19a (1) GWB. The criteria used by the Bundeskartellamt to examine Apple's dominant positions on these markets in this scenario are all equally relevant.

(920) Market dominance exists irrespective of whether, at least with regard to the end users on the opposite side of the market, a single market for hardware and the associated operating system is assumed to exist or whether the operating systems for smartphones, tablets, and smartwatches each constitute separate relevant

product markets distinct from the hardware.

(921) Both sides of the market – end users and app publishers – are also deprived of any alternative because Apple has closely linked its mobile end devices via the respective proprietary operating systems and the company's own mobile distribution platform for software by way of vertical integration within the meaning of Section 19a (1) sentence 2 no. 3 GWB.

(922) With its range of products and services, Apple is also active in many cases at upstream or downstream market levels or in conglomerate business areas within the meaning of the GWB and can thus exploit corresponding economies of scope and occupy key positions.

(923) Apple's business activities cover the entire value chain relating to digital end devices and their use by end consumers. Starting with its hardware products, first and foremost the iPhone, the company is vertically integrated both forwards and backwards to a considerable extent.

(924) Based on a very broad and comparatively high-spending user base, which currently actively uses a total of around 2 billion devices worldwide, Apple can distribute its offerings efficiently, for example, by pre-installing its apps and advertising its subscription services in a targeted manner. Apple's services are therefore rapidly gaining reach and profitability. The service area, in which these offerings are bundled, has for years contributed an increasing share to the company's revenue and above all – due to its extraordinarily high margin – to its profit.

(925) Apple is thus a "prototype of a vertically integrated corporation" that knows how to ensure a seamless meshing of these different elements through a deep integration of its products and services, thus keeping the user within its ecosystem.

(926) Apple's activities, particularly as an integrated provider of mobile hardware, mobile operating systems and the App Store as a mobile software distribution platform, each with at least a strong market position, are of considerable significance for third-party access to supply and sales markets. This results in the possibility for Apple to influence the business activities of third parties (Section19a (1) sentence 2 no. 5 GWB).

(927) This possibility to exert influence does not only exist with regard to app publishers;

it is also of considerable relevance for hardware manufacturers, mobile telecommunications providers, and market participants in the advertising industry, such as publishers, content providers, advertisers, and advertising service providers.

(928) Apple's potential to influence the business activities of third parties arises from its key position in a largely proprietary, vertically and conglomerately integrated system. Apple's activities, through which such influence can be exerted, are based on the devices and the respective proprietary mobile operating system. The App Store, as the only way to obtain apps on Apple devices, places Apple in the role of intermediary between app publishers and end customers. Apple controls third parties' access to Apple customers and shapes this access according to its rules and its economic framework conditions.

(929) Furthermore, by controlling technical interfaces and mobile telecommunications configurations, Apple can determine the possibilities and limits of device manufacturers and mobile telecommunications providers to sell their own products that are purchased or sold in connection with Apple devices. Finally, Apple can determine access to advertising data for advertising purposes for app publishers, content providers, advertisers and advertising service providers via the operating system and App Store. Apple users with above-average spending power can hardly be reached by the advertising industry outside the Apple ecosystem, but they form an important customer group.

(930) Another factor contributing to Apple's paramount cross-market significance is the fact that the company has a hybrid function with its mobile operating systems and the App Store. On the one hand, Apple is the operator of the proprietary mobile operating systems and software distribution platform and the associated technical and operational intermediary services, but on the other hand the company is also active as a provider of software and services, with the possibility and associated risk of employing self-preferencing and leveraging strategies.

(931) This cross-market significance and rule-setting power of Apple, which spans across several vertically integrated levels of the value chain, is secured and underpinned by its superior availability of resources (Section 19a (1) sentence 2 no. 2 GWB) and privileged access to data relevant for competition (Section 19a (1) sentence 2 no. 4 GWB).

(932) Apple's resources are substantial. All financial key figures and developments, starting from the determined sales and sales increases, to the observed profits and profit increases, to a cash flow of over USD 100 billion and very high liquid assets, which give Apple a top rating, paint a picture of outstanding financial strength. In terms of stock market value, Apple is one of the most valuable companies in the world. But its resource strength is not limited to its access to substantial financial resources. Apple can draw on a broad user base and the strong value of the "Apple" brand. The company can, and in fact does, make very targeted use of its resources to expand its ecosystem, either by investing heavily in R&D, continuously increasing its number of staff in pioneering business areas or acquiring companies with a particular focus on technologies for the expansion of business areas or improvement of existing services or products. All in all, this allows Apple not only to successfully secure the position it has achieved across markets in the long term, but also to expand it even further, thereby impairing the innovative strength of its competitors.

(933) Finally, Apple's excellent access to data relevant form competition also contributes to its paramount significance for competition across markets.

(934) This access is enabled by the company's ability to collect and process data across services and devices within its own closed ecosystem. This access to data is also significant for Apple's competitive position, as Apple is able to arrange access to and the processing of data for itself and third parties at multiple levels of value creation in such a way that this can be used to expand its product range and thereby influence competition with other companies.

(935) Based on this access to data, Apple has the potential to further develop and expand its own product range in competition with other companies and to enter new fields of activity. Overall, Apple's access to data relevant for competition therefore contributes significantly to the company's paramount significance for competition across markets.

D. Limitation in time

(936) The validity of the decision is limited to five years from the date on which it becomes final (Section 19a (1) sentence 3 GWB).

E. Discretion

(937) The decision determining Apple's status as addressee of Section 19a (1) GWB is made in the exercise of due discretion. It is proportionate and free of discretionary errors.

(938) Section 19a GWB is intended to bring about a long-lasting, positive change in the competitive situation on the markets affected.[716] The determination of Apple's status as norm addressee is a basic prerequisite for being able to even issue a decision under Section 19a (2) GWB, which may remedy actually existing, corresponding competitive problems. In the present case, there are indications that the actions and threats described in Section 19a (2) GWB may be relevant for Apple as the addressee of a corresponding procedure. Accordingly, the Bundeskartellamt has already initiated proceedings against Apple based on Section 19a (2) GWB (case no. B9-54/22). Against this backdrop, the declaratory decision pursuant to Section 19a (1) GWB issued in the present case is suitable as a prerequisite for the authority to intervene pursuant to Section 19a (2) GWB to achieve the purpose of the norm.

(939) Overall, Section 19a GWB allows the Bundeskartellamt to take more effective and targeted action against conduct that realises the above-mentioned potential threats to competition. A milder, equally suitable means of intervention is not apparent in the present case. With regard to some of Apple's conduct that can be stopped under Section 19a (2) GWB, it may also be possible to issue decisions under Sections 19, 20 GWB or Articles 101, 102 TFEU with similar regulatory content. However, an intervention under the latter provisions is not a milder means than an intervention under Section 19a (2) GWB. A fortiori, the present decision is clearly milder than a possible decision under the latter provisions, since it does not initially impose any requirements regarding Apple's conduct, but is limited to a mere determination that Section 19a (1) GWB applies to Apple.

(940) Issuing the declaratory decision against Apple is also appropriate, i.e. its intended purpose is not disproportionate to the severity of the intervention associated with the decision. It is true that the declaratory decision constitutes an onerous

716 Government bill of the 10th amendment to the GWB, Bundestag printed paper 19/23492, p. 75.

administrative act for Apple. However, as it does not contain a legal consequence, the extent of direct intervention is minor. In view of the lasting, positive change in the competitive situation on the markets affected that is ultimately intended, the intervention is also appropriate in the present case.

(941) In addition, in accordance with Section 19a (1) sentence 3 GWB, the validity of the decision is limited to five years from the day on which it becomes final. At present, it cannot be assumed that the competitive conditions described above will change significantly to the disadvantage of Apple's position of power during this period without intervention by the competition authorities. Apple's growth, as measured by devices sold, installed base, user numbers, and various economic metrics such as revenue, profit, and cash flow, has continued unabated for years. The Covid pandemic has not impacted this growth; on the contrary, it has helped it. There are currently no indications of events that could have a significant adverse effect on Apple's operations in the next five years. If the competitive situation should change in the long term, there is also the option of rescinding or revoking the decision. This also applies to the possible effects of regulation at the European level by the DMA, as mentioned by Apple. At present, it is not foreseeable which of Apple's services will be designated as core platform services, which are an important gateway for business users to end users, in the context of designation proceedings by the European Commission, and when this will happen. Although some of Apple's core platform services may meet the presumption thresholds of Article 3 (2) DMA, it is not foreseeable whether and, if so, for which services Apple will present substantiated arguments against the designation decision, which will lead to a so-called market investigation pursuant to Article 17 DMA, or, whether Apple will take legal action against the decision, and which delays this will entail. Even if some of Apple's services were to be designated by the European Commission in the near future, the obligations provided for in Articles 5 et seqq. of the DMA would in any case only have to be complied with in relation to the designated services. In addition, it currently also remains unclear whether and, if so, what effects a designation decision will have on the competitive relationships in individual cases. In this respect, it cannot be assumed that in exercising its discretion the Decision

Division has erred in law due to these circumstances, as Apple believes.[717]

(942) The determination that Section 19a (1) GWB applies to Apple also corresponds to a dutiful exercise of the discretion granted. Apple's position of economic power across markets particularly provides the foundation for threats to competition in digital markets that Section 19a GWB is intended to address. The still increasing number of active mobile devices, which have a deep impact on the everyday lives of most people, the considerable activity on platform and other markets, which gives Apple a position to set rules vis-à-vis other companies, and a large number of digital services with high user numbers, as well as the breadth and depth of its access to data and other relevant resources are matched in their entirety only by a few companies.

(943) The urgency of a determination under Section 19a (1) GWB against Apple in particular is also demonstrated by the proceedings that the Bundeskartellamt has already initiated against Apple on the basis of specific suspicions that certain practices fulfil the requirements of Section 19a (2) GWB. The Bundeskartellamt has received further complaints. In addition, the Bundeskartellamt is aware of proceedings initiated by other competition authorities relating to conduct by Apple which could possibly be conducted in a similar way in Germany and which may also be addressable under Section 19a (2) GWB. These suspicions and indications illustrate the special risk situation with regard to competition problems caused by Apple's paramount significance for competition across markets.

(944) In the exercise of its discretion, the Decision Division addresses the decision to Apple Inc., Cupertino, USA, and to Apple GmbH, Munich. Apple Inc. is the parent company of the Apple corporation and therefore a suitable addressee of the determination of the status as addressee of Section 19a (1) GWB, which covers the entire group. In addition, the group is able to exert influence on all affiliated companies and to work towards compliance with the obligations associated with its status as addressee of the provision. Since Section 19a GWB is a national provision that has direct effects for the Apple corporation in Germany, the German subsidiary is particularly affected by the decision, so that it is expedient to also issue the decision to Apple's German subsidiary.

---

717 See Apple's comments on the Decision Division's draft decision of 5 January 2023, paras. 213 seqq., folio 3,273 of the case file.

F. Fees

(945) The decision on fees is based on Section 62 (1) sentence 1 and sentence 2 no. 2 GWB. Pursuant to Section 62 (2) sentence 1 GWB, the amount of the fee is determined by the personnel and material expenses of the Decision Division and the economic significance of the proceedings. Pursuant to Section 62 (2) sentence 2 no. 2 GWB, the fee rates may not exceed EUR 25,000 in the case of Section 19a GWB. If the competition authority's personnel or material expenses are exceptionally high in an individual case, taking into account the economic value of the action subject to the fee, the fee may be doubled pursuant to Section 62 (2) sentence 3 GWB. Pursuant to Section 62 (2) sentence 4 GWB, the calculated fee may be reduced to one tenth on equitable grounds.

(946) The subject of these proceedings is to determine Apple's paramount significance for competition across markets. This results in particular from Apple's key position as the operator of a comprehensive digital ecosystem with a high significance for competition not only in Germany, but also in Europe and worldwide. Apple operates this ecosystem based on its central hardware products through the vertically integrated levels of its own proprietary operating systems, the Apple App Store, which is the only digital software distribution platform available on devices to date, and a large number of other products and services. In this system, the company occupies key positions across the market for the interaction and use of digital business models and offerings linked to a special commitment of its users across all levels of the Apple system's value chain. In this system, the company occupies key positions across markets for the interaction and use of digital business models and offerings while specifically tying its users across all levels of the Apple system's supply chain. In view of these circumstances, the economic significance of the proceedings must be classified as significantly above average.

(947) In order to ensure that the determination is substantiated adequately, comprehensive investigations had to be carried out, which resulted in personnel and material expenses that were considerably above average. Particularly in view of the extraordinary breadth and significance of Apple's business activities, wide-ranging and in-depth investigations had to be conducted. In addition to the comprehensive investigations concerning Apple itself, this also included surveying companies from various business sectors, i.e. app publishers, hardware

manufacturers and mobile telecommunications providers. In addition, extensive research and analyses based on sources such as annual reports, sector investigations, industry studies and media reports were carried out. The associated administrative expense justifies the full utilisation of the statutory fee framework in this case, taking into account the economic significance of the proceedings, which is considerably above average.

(948) Pursuant to Section 62 (6) sentence 1 no. 2 alt. 2 GWB in conjunction with Section 62 (1) sentence 2 no. 2 GWB, the parties against whom the competition authority has issued the decision are liable to pay this fee. They are jointly and severally liable pursuant to Section 62 (6) sentence 3 GWB.

(949) The fee is due upon service of this decision and is to be paid within one month after service to the following account:

Bundeskasse – Dienstort Trier
Deutsche Bundesbank, Filiale Saarbrücken
IBAN: DE81 5900 0000 0059 0010 20
BIC: MARKDEF 1590

Please indicate the following cash reference number as the purpose of payment:

810600461007

Please note that your payment cannot be processed without indicating the cash reference number.

If the fee has not been paid by the expiry of one month from the date of service, a late payment surcharge of one percent of the overdue amount will be levied for each month commenced. Bank charges are generally incurred for transfers from abroad. In such cases, it must be ensured that the Bundeskartellamt's account is credited with the full fee.

G. Information on the right to appeal

An appeal may be lodged against this decision. It must be filed with the Bundeskartellamt, Bonn, within one month of service of the decision. However, it is sufficient if the appeal is received by the court of appeal, the Federal Court of Justice, Karlsruhe, within this period.

The appeal must be substantiated. The statement of the grounds of appeal must be filed with the Bundeskartellamt or the court of appeal. The time limit for filing the grounds of appeal is two months. It commences with the service of the contested decision and may be extended upon request by the chairperson of the court of appeal. The grounds of appeal must contain a statement of the extent to which the decision is contested and its amendment or revocation is requested, and state the facts and evidence – including any new facts and evidence – on which the appeal is based.

The parties must be represented by a lawyer for the filing and substantiation of the appeal.

Krueger Holin Bergs

[The associate member is absent on business and thus not able to sign the decision].

You are informed that the full text of the decision will be published on the Internet. You are therefore requested to inform the Decision Division in writing within seven days of service of this decision whether the decision contains trade or business secrets which are to be deleted before publication. Please provide reasons why the deletions you may wish to make are trade or business secrets. If the competent Decision Division does not receive any message from you within seven days, the Bundeskartellamt will assume that this decision does not contain any trade or business secrets and will publish it.