

Appendix H: Apple's and Google's in-app purchase rules

1. The main way in which both Apple and Google monetise their app stores directly is through requirements on certain developers to use their proprietary payment systems to process in-app purchases made by users, such as paid for apps, features or content within an app, or subscriptions. Apple and Google charge a commission of up to 30% for these transactions.
2. We have heard several complaints from developers about the effects of having to use Apple's and Google's payment systems, which we consider in more detail in this appendix. The same concerns are also being separately considered by the CMA in the context of our competition enforcement case into Apple's App Store under the Competition Act 1998.¹

Background

Apple's and Google's in-app payment system rules

3. Both the App Store and Play Store require that certain in-app payments must be made using Apple IAP and Google Play's billing system respectively. For transactions which are handled by Apple IAP or Google Play's billing system, Apple and Google effectively act as the seller of the relevant in-app purchase and have the contractual link to the consumer. Payment is taken from the user by Apple or Google and then remitted to the app developer after Apple and Google have taken a commission.

Apple IAP

4. Apple's rules require that apps which offer 'digital' content, defined in Apple's guidelines as wanting 'to unlock features or functionality within your app,² (by way of example: subscriptions, in-game currencies, game levels, access to premium content, or unlocking a full version),' must exclusively use Apple's own system ('Apple IAP') for in-app related payments. Conversely, apps which provide physical goods and services outside of the app cannot use Apple IAP and are able to use a payment service provider (PSPs), such as Paypal or Apple Pay. Most of the payments made using Apple IAP are subject

¹ [Investigation into Apple AppStore](#). This investigation is ongoing and no decision has yet been made as to whether Apple has acted unlawfully. Competition Act investigations are based on different legal tests and standards of proof than the CMA's market studies. As such, while the market features and practices being considered are similar, any findings in this market study are without prejudice to the CMA's assessment under the Competition Act.

² Publicly available on Apple's website [App Store Review Guidelines - Apple Developer](#).

to a 30% commission collected by Apple. Apple applies a lower commission of 15% in certain limited circumstances:

- **Subscriptions after the first year:** for auto-renewing subscription purchases made by customers who have accrued greater than one year of paid subscription service, Apple's commission rate is reduced to 15% for all prices payable for each subsequent renewal.³
 - **Video Partner Program:** the program is available for apps featured in the Apple TV app and approved partners pay a 15% commission to Apple when users sign up using Apple IAP.⁴
 - **Small Business Program:** app developers that earned no more than \$1 million in developers' earnings (ie the amount after the deduction of the commission fee) on all of their apps in total in each of the previous year and the current calendar year and app developers new to the App Store can qualify for the program and a reduced commission of 15%. If a participating developer surpasses the \$1 million threshold, the standard commission rate will apply to future sales. If a developer's proceeds fall below the \$1 million threshold in a future calendar year, they can re-qualify for the 15% commission the year after.⁵
 - **News Partner Program:** app developers which are subscription news publications providing their content to Apple News in Apple News Format may qualify for the 15% commission rate on 'qualifying in-app purchase subscriptions.'⁶
5. Certain types of app offering digital content are not required to use Apple IAP. Most notably, a closed group of certain app types referred to as 'reader apps' (specifically: magazines, newspapers, books, audio, music, and video), are permitted to 'disable' the Apple IAP function. Reader apps which disable Apple IAP cannot then sell subscriptions or in-app content via the iOS device but can provide users with access to previously purchased content or subscriptions on a 'read-only' basis. In addition, it is possible for apps which offer 'multi-platform' services (apps that work across multiple platforms, such as iOS, Android, web browser, games consoles) to sell content on one platform that can then be accessed via their iOS app. Both reader apps and

³ See [Auto-renewable Subscriptions - App Store - Apple Developer](#). This subscription renewal reduced rate has applied since 2016.

⁴ See [Apple Video Partner Program - Apple Developer](#). The Video Partner Program has been effective since 2016.

⁵ See [App Store Small Business Program - Apple Developer](#). The Small Business Program has been effective since 1 January 2021. In August 2021 pursuant to the settlement in *Cameron et al v. Apple Inc.*, Apple agreed to maintain the program in its current structure for at least the next three years.

⁶ See [News Partner Program - Apple Developer](#). The News Partner Program was launched on 26 August 2021.

those offering multi-platform services are still subject to Apple's anti-steering rules, which are explained in the paragraph below.

6. In addition to the obligation to use Apple IAP, Apple has 'anti-steering' rules which restrict all app developers offering digital apps from referring, within the app, to other ways a user could pay for digital content, such as through a website. This means, for example, that app developers are restricted from informing users who are about to purchase a subscription via Apple IAP that there were better or cheaper alternative subscriptions available on the app developer's website that could also be used in the iOS app. Following enforcement action by Japan's Fair Trade Commission, Apple announced that it has changed its rules for reader apps. Since 30 March 2022, reader apps can apply for an External Link Account Entitlement permitting developers to include an in-app link to an external website for account creation and management purposes.⁷
7. Apple's anti-steering rules previously also restricted developers from communicating with iOS users outside the app (for example, via email) about other ways to make payments outside of the app, but in October 2021 Apple's rules were amended so that such communications are now permitted.

Google Play's billing system

8. The rules for Google Play's billing system are broadly similar to Apple IAP. Google's payment rules state that Play-distributed apps 'requiring or accepting payment for access to in-app features or services, including any app functionality, digital content or goods' (eg digital items such as virtual currencies; subscription services; and app functionality or content (for example, an ad-free version of an app)) must use Google Play's billing system.⁸ Conversely, apps offering non-digital content cannot use Google Play's billing system and must use other payment solutions. Payments made using Google Play's billing system are then subject to a service fee, typically of 30%. Google applies a reduced 15% rate in limited circumstances:
 - From 1 July 2021 Google lowered the service fee to 15% for the first \$1 million of earnings for all app developers enrolled in the 15% service fee tier.⁹ For developers not enrolled in the 15% service fee tier by 1 July 2021, the service fee of 30% applies until enrolment has occurred.¹⁰

⁷ [Update on "reader" app distribution - Latest News - Apple Developer](#)

⁸ [Payments - Play Console Help \(google.com\)](#). See also [Monetisation and ads - Play Console Help \(google.com\)](#).

⁹ [Changes to Google Play's service fee in 2021 - Play Console Help](#) and [Android Developers Blog: Boosting developer success on Google Play \(googleblog.com\)](#)

¹⁰ See also [Changes to Google Play's service fee in 2021 - Play Console Help](#)

- From 1 January 2018, Google lowered its fee for subscriptions to 15% for subscribers who maintained a subscription service for more than 12 months. From 1 January 2022, Google reduced the service fee for all subscription products to 15%.¹¹
 - Google also announced changes to its 'Play Media Experience Program'. Developers may be eligible for a reduced fee based on high content costs.¹² A service fee of 15% would apply for apps primarily offering video, audio, or books in which users pay to consume content, and which meet the requirements of the program.¹³ Ebooks and on-demand music streaming services would be eligible for a service fee of 10%.¹⁴
9. The requirement to use Google Play's billing system also has exceptions:
- All 'Consumption only' apps,¹⁵ which offer services available across multiple platforms, are allowed to disable Google Play's billing system and offer users access to subscriptions or in-app content purchased on other platforms on a read-only basis. By way of contrast, as set out above, Apple only permits certain categories of apps to disable Apple IAP.
 - Google Play's anti-steering rules prevent app developers from providing users, within an app, with a direct link to a webpage containing an alternate payment method. They do not prevent app developers from using other means (such as email communications) to tell Android users about alternative payment options.
10. In some respects, Google's rules have become more closely aligned with Apple's over time. From 1 June 2022 all developers selling digital goods in their apps are required to solely use Google Play's billing system (and pay a service fee from a percentage of the purchase). Google has warned that any app developers not compliant by this date will be removed from the Play Store.¹⁶ Some parties told us that, prior to this update taking effect, some apps have given Android users alternative payment options for in-app purchases in addition to Google Play's billing system, but after the updates to the policy have taken effect, they will only be able to use Google Play's billing

¹¹ This was announced on 21 October 2021, see [Android Developers Blog: Evolving our business model to address developer needs \(googleblog.com\)](#)

¹² [Understanding Google Play's service fee - Play Console Help](#)

¹³ In June 2021, Google reduced its commission to 15% for apps primarily offering video, audio, or books in which users pay to consume content, as part of the Play Media Experience Program. See [Android Developers Blog: Continuing to boost developer success on Google Play \(googleblog.com\)](#) and [Play Media Experience Program | Google Play Console](#)

¹⁴ [Android Developers Blog: Evolving our business model to address developer needs \(googleblog.com\)](#)

¹⁵ Apps that do not enable users to purchase access to digital goods or services from within the app. [Understanding Google Play's payments policy - Play Console Help](#).

¹⁶ [Android Developers Blog: Listening to Developer Feedback to Improve Google Play \(googleblog.com\)](#); See also [Understanding Google Play's Payments policy - Play Console Help](#) last accessed on 10 May 2021.

system. The fact that certain app developers were using their own payment solutions to accept payments within their apps listed on the Play Store prior to this may explain why fewer app developers in general have to date complained about Google's payment rules.

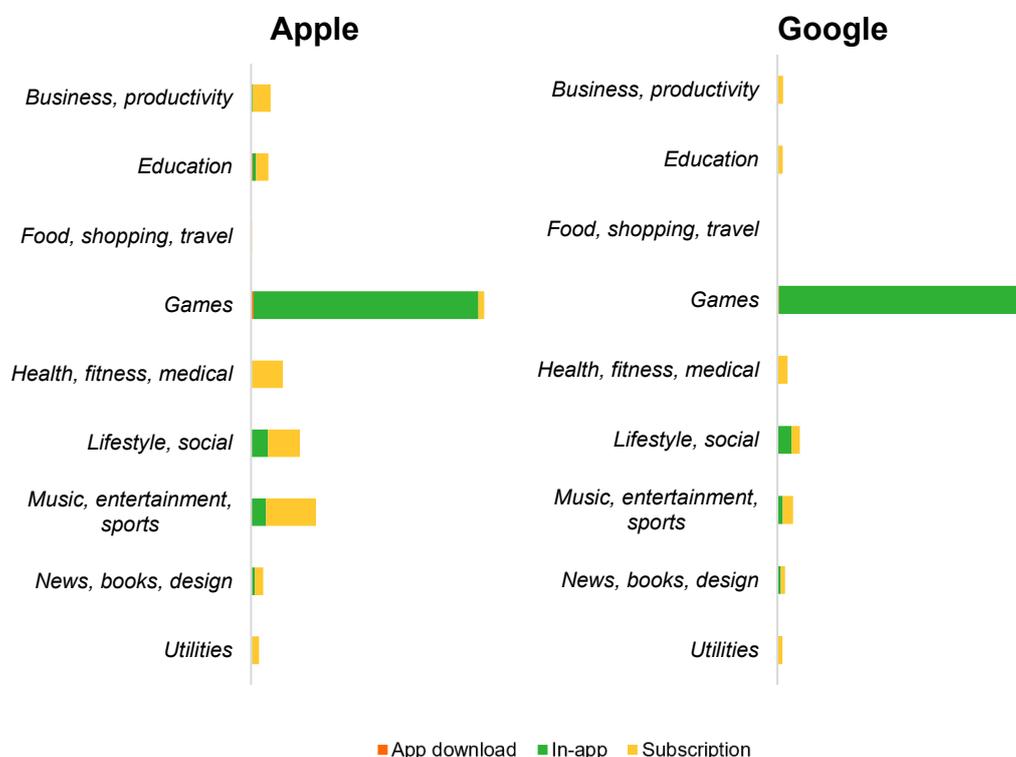
How different app monetisation models are affected by in-app purchase rules

11. As noted above, only apps which offer 'digital' content consumed within the app, such as mobile games, are required to use Apple's and Google's payment systems. Apps which are used as a distribution channel for 'physical' products or services consumed outside the app, such as eCommerce or travel, cannot use Apple's and Google's in-app payment systems and do not pay a commission.
12. Some app developers have told us that the distinction between 'digital' and 'physical' is not always clear. For example, Match Group has submitted that dating services are considered as 'digital' and are obliged to use Apple IAP, while apps that offer what is, in Match Group's view, a similar function, such as Uber, can use their own payment solution as the transaction is considered by Apple to be 'physical'. Match Group submits that in both cases the actual service is consumed outside the app while the actual transaction of connecting two users occurs within the app.
13. For apps that do offer 'digital' content, only apps that directly monetise content within the app are affected. This includes:
 - paid apps, which require a one-off upfront payment to download and use the app;
 - subscription-funded apps, which require users to sign up to a rolling subscription to access the app; and
 - apps offering paid in-app content, which require users to make in-app payments to access specific additional content or functionality.
14. Wholly 'ad-funded' apps, which are offered to users for free and then funded by the sale of advertising inventory shown to users within the app, do not use Apple's and Google's payment systems and do not pay a commission to Apple or Google.
15. Apple's and Google's app store revenues are derived from a small proportion of apps. To assess revenue concentration we considered the proportion of apps that accounted for 90% of the commissions received by Apple. This was [less than 10%] in the UK in 2021. Similarly, in the same period, [less than

10%] of the apps using Google Play’s billing system accounted for 90% of the total service fee revenue on apps (including Play pass) received by Google.

16. Figure H.1 below shows the distribution of Apple’s and Google’s app store net revenues¹⁷ across category of app.

Figure H.1: Apple IAP net revenue and Google Play’s service fee revenue by app category in the UK 2021



Source: CMA analysis of Apple’s and Google’s data.¹⁸ Bars for Apple and for Google are not on the same scale so cannot be compared directly.

17. App store revenues are concentrated in mobile gaming, which, in the UK in 2021, accounted for [over half] of Apple IAP revenues and [over half] of Google Play’s billing system revenues on apps (including Play pass). The majority of Apple’s and Google’s app store revenues are derived from payments for one-off in-app features or content, such as a particular item purchased within a game experience, rather than for ongoing subscriptions. For the UK in 2021, [over half] of Apple IAP and Google Play’s service fee revenues came from these one-off in-app payments, which are largely used in mobile gaming. The remaining app distribution revenues are derived largely from subscriptions.

¹⁷ That is, the revenue that Apple/Google retain from transactions made through their payments systems in the UK.

¹⁸ Categories have been grouped by the CMA for illustrative purposes.

Apple's and Google's rationale for app store payment rules

Collection of commission

18. Both Apple and Google argue that the obligation to use their payment systems is necessary for them to collect commission for the sales that developers make as a result of distributing apps through Apple's and Google's app stores. For example, Apple submitted that the commission that it charges on in-app payments is not a fee for using Apple IAP, but that the requirement to use Apple IAP is so that it can collect a commission on eligible developer sales to iOS users. Apple submitted that the commission supports the overall App Store infrastructure and ecosystem, which facilitates the plethora of functions (including technology, customer connection and customer trust) that must be in place to lead to an in-app purchase in the first place.
19. Google also submitted that its payment policy enables the Play Store to collect its service fee in a way that aligns Google's success with developer success, since Google makes money only when developers of certain apps successfully sell their apps, in-app content, or subscriptions to users.
20. Both Apple and Google argue that requiring that certain apps use their payment systems is the most efficient way for them to charge a commission and recoup the investments they have made in relation to their app stores:
 - Apple submitted that if developers did not use Apple IAP to process their in-app sales, Apple would have no effective way of tracking when transactions that are subject to its commission take place, or of calculating and collecting the money it is owed by hundreds of thousands of developers on those sales.
 - Google submitted that if it was no longer able to collect fees by requiring developers to use Google Play's billing system, and instead required third parties to report their revenues and pay an invoice for 15% or 30% thereof, there would be scope for abuse and fraud, potentially giving rise to audits, disputes and litigation.
21. Apple has argued that its IAP-related guidelines and rules are not unique to Apple but are in line with the business models and rules of many other digital marketplaces.¹⁹

¹⁹ Including the Google Play Store, Amazon Appstore, Samsung Galaxy Store, Microsoft Store, Xbox Live Store, Sony PlayStation Store and Nintendo eShop.

22. However, an app developer has argued that there are viable alternative methods, commonly used elsewhere, which would enable the app store provider to obtain fair compensation. For example, Apple or Google could allow developers to use their own payment solutions and then report transactions made through these payment systems at regular intervals. This developer noted that similar reporting obligations (accompanied with audit rights) are standard practice when it comes to calculating royalties for IP licensing. Alternatively, or in addition, the app store provider could be notified in near real-time whenever a transaction takes place via a third-party payment system through the use of an API, in a similar way to those currently used by Apple to inform developers when transactions are carried out through Apple IAP.
23. In response to recent legislative changes in the country, Google announced that in South Korea,²⁰ developers will be able to add an alternative in-app payment option, alongside Google Play's billing system, for their mobile and tablet users.²¹ In this announcement Google stated that it still intends to collect its commission from developers who sell digital content, but will deduct 4% when a user selects a developer's alternative in-app billing system, to account for the developer's costs in supporting it. Similarly, it has been reported, although not confirmed by Apple, that Apple plans to allow developers in South Korea to use a third-party payment system, with payments subject to a commission fee 4 percentage points lower than Apple's fee for Apple IAP. This suggests that both Apple and Google have found technical solutions that enable them to track in-app transactions where a third-party payment system is used, in order to collect their commission.
24. As noted in Chapter 4, a requirement to use a platform's payment system for in-app purchases for some digital goods is not unique to Apple and Google; the Xbox Store for Consoles, Steam and the Amazon App Store also require users to use the platform's proprietary payment system for in-app purchases. Some other platforms do not implement such restrictions. The Epic Games Store, Samsung Galaxy Store and Microsoft Store for Windows offer their proprietary payment systems for in-app purchases but do not mandate the use of such systems.
25. Although Apple has referred to other platforms where use of a payment system operated by the platform owner is mandated, a simple comparison of requirements against other platforms is not necessarily informative. First, the rules of some platform owners are stricter than others in terms of the extent to

²⁰ <https://developers-kr.googleblog.com/2021/11/enabling-alternative-billing-in-korea-en.html>

²¹ <https://support.google.com/googleplay/android-developer/answer/9858738>

which their payment systems are required to be used. Further and in any event, the lack of competition faced by Apple's and Google's app stores means that their restrictions on the use of alternative payment options are of particular concern, for the reasons set out further below.

User benefits

26. Both Apple and Google argue that use of their payment systems also results in user benefits, in that they provide users with a convenient and secure way of buying and managing digital content from third-party developers. For example, Apple submitted that Apple IAP allows an iOS user to buy digital content within the app on an Apple device using the payment credentials the user has already registered with Apple and with the convenience of a few clicks. It said that this gives users of iOS devices a seamless, frictionless and safe way to buy digital content from third-party developers through the App Store. Apple further submitted that Apple IAP provides the following benefits and features: Family Sharing and Ask to Buy;²² clear and conspicuous pricing;²³ biometric authentication;²⁴ email receipts and purchase history;²⁵ Report a Problem and refunds;²⁶ restore purchase;²⁷ manage and cancel subscriptions;²⁸ fraud prevention.²⁹
27. Apple's and Google's app store payment systems may be uniquely well-placed to deliver some of these benefits, particularly those which are connected to overall usage of the mobile device. The convenience of being able to use a single set of payment details and deal with a single trusted point of contact for payments appears to be an important benefit on which certain users may place significant value. In addition, app developers are also likely

²² Apple's Family Sharing feature allows consumers to share their app purchases content, and services with other members of their family. The Ask to Buy capability provided in Family Sharing allows parents to approve all app downloads, app purchases, and Apple IAP purchases made by their children.

²³ An Apple IAP purchase cannot be completed until the consumer is shown a pricing sheet, which clearly discloses the price of the item, and the account and payment method that will be charged. For subscription items the pricing sheet displays the renewal schedule and the duration of any free trial or promotional price.

²⁴ After a customer reviews the pricing sheet, Apple confirms that the consumer wants to go ahead with the purchase via the consumer's fingerprint on Touch ID-enabled devices, or the consumer's face on Face ID-enabled devices.

²⁵ All Apple IAP purchases are recorded on a comprehensive email receipt. In addition, all Apple IAP purchases are included in a centralised Purchase History menu that consumers can reference at any time.

²⁶ Consumers can report an issue with a purchase and request a refund from Apple by accessing the Report a Problem menu from an email receipt or on the web. This allows users to deal with a single point of contact and with a company of Apple's reputation.

²⁷ Apple's commerce system enables the completion or restoration of purchases, whether in situations where either a user hit the "buy" button for an Apple IAP purchase and the developer did not deliver the content for some technical reason, or where the user wants to transfer an app and in-app purchased content onto a new Apple device.

²⁸ All information about Apple IAP subscriptions is contained in a centralised menu so that consumers can keep track of their charges and can easily cancel subscriptions if they so wish.

²⁹ Apple IAP data is analysed by Apple's extensive fraud analysis engine, providing Apple with data which it can use to root out scams and unscrupulous developers.

to indirectly benefit from users having greater confidence in placing transactions through Apple's and Google's app stores.

28. However, as noted further below, many similar user benefits as well as other potential benefits can also be provided by alternative payment solutions. We note that non-digital apps are prohibited from using Apple's and Google's payment systems and are able to nevertheless process in-app transactions with little apparent negative consequences. Additionally, as we set out further below, the evidence from app developers suggests that alternative payment systems offer users several benefits that Apple's and Google's payment systems currently do not, such as greater flexibility in the pricing structures and payment methods offered to consumers and the ability to manage refunds directly.

Application of restrictions to apps selling digital content

29. Apple and Google present similar reasons for why apps offering physical goods and services do not need to use their payments system.
30. Apple submitted that the primary reason why Apple IAP does not apply to apps offering physical goods and services is because Apple 'lacks the ability to verify the delivery of physical goods and services to the customer when performance of the transaction between the app developer and the user takes place outside of the device.' Apple further submitted that the need to comply with consumer legislation, including product liability rules, as well as local tax codes across the 175 countries where the App Store is present would increase the complexity, expense and transactional risk to the App Store business.
31. Google submitted that 'sales of physical goods or services present unique challenges. The sale of physical goods or services present potential liability concerns.' Google further submitted that it is not able to track whether a transaction relating to physical goods has been fulfilled and so cannot provide the same level of developer support for the sale of physical goods and services, for example in minimising refund abuse, compared to digital goods and services.
32. While Apple and Google did not submit this as part of their rationale for only requiring apps that sell digital content to use their payment systems, some other stakeholders have speculated that Apple and Google may not be able to charge a 30% commission to apps that sell physical goods and services as these often have low margin business models and would be unable to pay such a commission.

Potential harm to competition resulting from in-app purchase rules

33. As set out in Chapter 4, our view is that Apple and Google have market power in relation to native app distribution. This market power allows Apple and Google unilaterally to set rules for their app stores, including requirements for certain app transactions to be processed through their own payment systems, and limits developers' ability to refer to payment options outside of the app, as referred to above.
34. App developers have raised several concerns about how they are affected by this. Many expressed concerns about the level of the commissions, which we considered in Chapter 4. In this section we have considered the following possible harms arising from the payment system rules:
- the requirements for in-app purchases to be made through Apple and Google mean that app developers cannot choose alternatives for processing payments for digital content that better meet their needs;
 - the requirements for in-app purchases to be made through Apple and Google mean that developers are 'disintermediated' from their users in certain respects;
 - the requirements for in-app purchases to be made through Apple and Google (and the commission payable to Apple and Google for these transactions) distort competition between Apple's and Google's own apps and rival apps;
 - the requirement for in-app purchases to be made through Apple and Google may cause billing issues for users who switch between iOS and Android devices and vice versa; and
 - the anti-steering rules prevent developers from informing users of the fact that there may be alternative ways to pay for content outside of an app, limiting their ability to make informed choices and drive effective competition between distribution channels.
35. Our assessment in the section below focuses primarily on Apple IAP, as we have received most complaints about Apple's rules in relation to the use of Apple IAP. This may reflect the fact that certain app developers have been giving Android users alternative payment options for in-app purchases in addition to Google Play's billing system, as explained above. As set out below, we have also considered and sought evidence from app developers on how these issues apply to Google Play's billing system and have highlighted the similarities and differences. In addition, as noted above, Apple's and

Google's payment system rules are developing and several changes have been announced at various points over the course of this market study. Consequently the evidence and views from app developers are likely to reflect this evolving picture.

Choice of payment service processor

36. Apple's and Google's rules on in-app purchase effectively combine the provision of a distribution platform to app developers through their app stores with a payment service for in-app transactions. The result of using Apple IAP and Google Play's billing system, is that Apple and Google effectively become the direct seller for the relevant transactions.
37. For transactions processed via Apple IAP, Apple becomes the 'merchant of record' for the transaction. Apple uses third-party acquirers to assist in processing payments facilitated by Apple IAP.
38. Google is similarly the 'merchant of record' for transactions made via Google Play's billing system but uses third-party processors and acquirers for the processing and front-line collection of funds.³⁰
39. A key impact of this is that app developers cannot use other third-party options for the processing of in-app payments. In the absence of Apple's and Google's payment system requirements, app developers would be able to choose third parties referred to as 'payment service providers' or PSPs (such as Adyen, PayPal and Stripe) to process in-app payments, which would mean that: (i) an app developer could choose to act as the direct seller for the payment transaction, with a third-party PSP processing the transaction on their behalf; and (ii) app developers and ultimately their users would benefit from greater competition between PSPs to provide them services in relation to in-app transactions. Such services might include both the services required to process payments, for example via the card networks, or through other means such as carrier billing, and various other software services to collect the payment at the point of sale and detect fraud and analyse transaction data.
40. Most of the large app developers that responded to our requests for information said that Apple's and Google's payment systems are in various ways limited compared to the alternative payment solutions available from PSPs. Almost all developers said that they would not use Apple's or Google's payment systems if they were not required to. Some highlighted the difference in commission between Apple's and Google's systems and third-party PSPs as the main reason. However, many stated that the alternative payment

³⁰ [Merchant of Record - Play Console Help \(google.com\)](#). See also section 3.3 of DDA

solutions they used elsewhere were preferable, irrespective of the commission, as they offered greater flexibility and functionality and enabled the developer to offer a more consistent user experience across platforms.

41. For example, several app developers told us that use of Apple IAP means they are denied various aspects of pricing flexibility that would be available if they contracted with a third-party PSP:
- Apple requires that developers choose among pre-defined price tiers, limiting the precision with which developers are able to price their products and, in some cases, resulting in pricing discrepancies across different channels. In addition, tiers are fixed across currencies which forces developers to use the implied exchange rates set by Apple.
 - Developers are limited in how they can offer bundled app subscriptions (in other words subscriptions to multiple apps offered together for a discount). Similarly, app developers are unable to offer additional paid features or promotions to existing subscribers or extend the length of free trial periods.
 - Apple does not allow app developers to target discounts or promotions to specific groups of users, for example by offering student discounts or discounts to users who have used a free version of an app for a specific period of time.
 - Apple IAP does not support scalable license-based models which can be used by multiple users (for example for business users).
 - Apple only allows a maximum of 10,000 products to be made available within an app using Apple IAP. This restricts the ability of apps with a greater number of SKUs to offer 'a la carte' purchases rather than subscriptions.
42. With respect to pricing flexibility, Apple submitted that it considers the options available to developers are very flexible and provide developers with considerable choice and freedom to determine their own business offerings and that it is constantly engaging with users and developers to make improvements to the App Store. For example, Apple has announced plans to expand the number of price points available to developers for subscriptions and has recently launched subscription offer codes.³¹
43. Most app developers submitted that Google Play's billing system was similar to Apple IAP with respect to the pricing flexibility allowed, when it is required

³¹ See: <https://www.apple.com/newsroom/2021/08/apple-us-developers-agree-to-app-store-updates/>

to be used. Some responded that they were currently required to use Apple IAP and not Google Play's billing system, but that this was anticipated to change when Google more strictly enforces its rules in March 2022. A few noted relatively minor differences in the flexibility offered by Google compared to Apple. For example, one developer responded that Google provides a more robust and flexible set of tools and functionality than Apple to manage aspects of Apple IAP processing, for example, providing developers more flexibility than Apple in setting and adjusting tax rates.

44. Several app developers also submitted that use of Apple IAP deprives developers of the ability to offer users certain payment options. For example, some highlighted that Apple IAP does not support carrier billing. One app developer responded that it is prevented from using alternative payment methods and that it is also required to adopt Apple's grace periods of 60 days over its own shorter defaults, increasing the potential for fraud (as customers remain entitled to the benefits, they purchased during this grace period). Two developers submitted that the obligation to use Apple IAP prevented developers from being able to provide an alternative in the event that Apple IAP malfunctions, as one alleged had happened frequently in the past.
45. The requirement to use Apple's and Google's payment systems, rather than third-party PSPs, means that developers are less able to engage directly with users and take actions to improve transaction completion rates. One developer submitted that in the event a payment is declined, it does not know why the payment could not be processed and therefore feels it is unable to helpfully respond. We heard from one billing provider that its service could employ specific prompts to encourage users with insufficient funds to 'top up' as a means of improving completion rates.
46. Some developers also submitted that the obligation to use Apple's and Google's payment systems resulted in additional implementation costs for the developer. Some told us that implementing the promotional features that Apple IAP does support requires substantial engineering time and resources to build the necessary integrations. One developer submitted further that the impact of the coding requirements was particularly acute for its cloud-based service, as absent the Apple IAP requirement the same code could run off-device on the server, regardless of the user's device. In addition, some app developers submitted that separate business units are required to manage Apple IAP payments, and the developer is unable to operate a single billing solution or its own payment infrastructure across multiple channels.
47. Apps which are required to use Apple's and Google's in-app payment systems do not have the benefit of competition between providers of payment systems. Based on the above, **it appears that in the absence of the**

requirement to use Apple’s and Google’s systems, app developers would be able to choose, often bespoke, payment solutions that better meet their needs and those of their users, and that there would be a greater incentive for PSPs to innovate in payment solutions specifically designed for in-app payments.

Control over relationship between developers and users

48. As explained above, Apple and Google act as the direct seller in relation to Apple IAP and Google Play’s billing system’s transactions. This means they are responsible for key aspects of the sales process such as processing customer payments, refunds, and subscription cancellations. We discuss consumer experiences in cancelling subscriptions and requesting refunds in Appendix K.
49. Most developers we contacted who used Apple IAP responded that this made it more difficult for refund requests to be resolved effectively. For example:
- Several developers responded that Apple IAP limits the ability of developers to directly interact with customers and resolve certain service issues. This means that developers are less able to explain what has gone wrong with a purchase or how to use newly acquired content or approach customers with a special offer where the experience has not been satisfactory.
 - Several developers responded that for Apple IAP transactions, Apple does not always provide the information necessary to allow developers to reverse the purchase of content when a refund is requested or identify requests for repeated free trials. This has the potential to create incentives for refund fraud.
 - Epic Games submitted that Apple has little insight into the complex Apple IAP issues that customers present to it and so is ill-equipped to deal with refund requests itself. Epic asserted, for example, that Apple has no means of verifying claims by customers that errors in apps render their in-app purchases obsolete, and that as a result, Apple applies blanket rules for refunds which cause some customers to be treated unfairly and historically also allowed for fraudulent claims to be refunded.
50. Several developers also submitted that the lack of control developers had over refunds caused customer confusion as it was not clear to customers where to seek support depending on their service issue. Developers are unable to resolve issues relating to Apple IAP transactions, such as refund requests, and would need to refer such requests to Apple. Many of these

customers reportedly view transactions as occurring between them and the developer and express frustration when the developer cannot resolve their concerns.

51. One app developer submitted survey evidence (based on global rather than just UK users) which showed that only around [10-20]% of users on iOS reported positive satisfaction for refund requests, compared to around [70-80]% of users on its website or on Android (where the majority of users use the billing solution offered by the developer).
52. App developers also submitted that Apple IAP limits the information available to developers about their customers and thereby restricts their ability to improve their services and compete effectively. Several developers explained that using Apple IAP meant that they received limited transaction or payment data and so were unable to identify specific customers or use this information to improve their services. For example:
 - Spotify submitted that Apple does not provide user-level information on cancellation and payment related errors in a timely fashion to enable it to better understand its own customers and adopt pro-competitive initiatives to win over customers.
 - Match Group submitted that Apple does not provide it with data that could be used to customise its offers to particular users, provide a better customer experience and enhance platform safety by allowing Match Group access to additional tools it could use to detect fraud, scammers and underage users.
 - One app developer submitted that the way Apple has set up Apple IAP does not allow developers to conduct A/B tests on their own users to be able to determine the appropriate price to charge in different geographies.
 - One app developer submitted that Apple does not provide data about the revenue generated by promotions and sales until long after the fact, and this data is often too generalised to ascertain what, if any, effect the promotion or sale has had.
53. Apple submitted that the App Store uses a variety of information to determine if a refund request should be approved, including consumption data,³² that developers can send to the App Store in response to a refund request notification through its new Consumption API, if the customer has provided consent. In addition, when Apple receives a customer complaint, the

³² Information about a user's consumption of a consumable in-app purchase.

AppleCare support team encourages the customer to communicate directly with developer. If the customer remains unsatisfied then Apple may refund the purchase. Apple subsequently sends a refund server notification to the developer, indicating the reasons for the refund.

54. App developer views regarding the effect of Google Play's billing system on the relationship between developers and their customers were more mixed. Some told us that Apple's and Google's payment policies were largely the same and had the same effects, but others submitted that Google Play's billing system allows developers greater control over cancelling subscriptions or directly issuing refunds. Some submitted that Google Play's billing system provides information at a transaction level (though the data it provides is still limited).
55. Overall, the evidence we have received from app developers suggests that Apple's in-app purchase rules may make it harder for app developers to interact directly with their customers and receive valuable data necessary for them to improve their services. Google Play's payment system may have a similar effect, especially as more app developers are required to use Google Play Billing exclusively from June 2022. We recognise that some users may value the option of being able to transact with a single trusted party, such as Apple or Google. However, as discussed below, our view is that it is likely that these benefits could also be achieved if users are given choice over whether to use Apple's and Google's sales systems or an alternative payment option that allows them to transact directly with developers.

Effects on competition between apps

56. The requirements to use Apple's and Google's payment systems also have the potential to distort downstream competition between apps. This is because these requirements affect digital apps that wish to monetise directly but do not affect other apps, such as those that have ad-funded business models or those that are operated by Apple and Google. This may put rivals to Apple's and Google's first-party apps at a competitive disadvantage. As discussed above, Apple and Google operate several apps that directly compete with app developers. Several developers that compete directly with Apple's and Google's apps have told us that being subject to the 30% commission places them at a significant disadvantage when competing with Apple and Google.
57. Some of these developers have chosen to absorb the cost of commission rather than pass it on to downstream customers. However, these developers then have fewer resources to invest in research and development to improve their product. Other developers have passed it on to customers, either wholly

or in part. For example, it is the CMA's understanding that Amazon Music charges customers using iOS devices a monthly subscription fee of £10.99 (instead of the £9.99 monthly fee it charges customers subscribing using other devices),^{33 34} compared to Apple Music which is offered at £9.99 per month.³⁵ Spotify submitted that it was forced to pass on the Apple IAP commission in full when it was implemented in June 2014, increasing its price to £12.99 per month (again compared to Apple Music offered at £9.99 per month). In May 2016 Spotify subsequently chose to cease using Apple IAP, becoming a Reader app under the Reader rule, though it has told us that this also negatively impacted its competitiveness against Apple.

58. Several developers have also suggested that their ability to compete with Apple's and Google's apps is also affected by the lack of control over their relationship with customers, for example in managing refunds and accessing transactional data, as described above. In addition, some developers have also raised the concern that use of their sales systems means Apple and Google have access to valuable data about app transactions, which it can use to compete with them and target which apps to develop, as discussed above in the section on the collection and use of commercially sensitive information.
59. In this regard, we note that the European Commission has sent a Statement of Objections to Apple expressing its preliminary view that Apple's rules distort competition in the market for music streaming services by raising the costs of competing music streaming app developers.³⁶
60. Based on the above, we consider that the requirements to use Apple's and Google's payment systems (and pay the associated commission) for in-app payments on apps that compete downstream with Apple and Google – in circumstances where Apple's and Google's own apps do not pay a commission on equivalent in-app payments – may raise particular concerns, in light of their potential to raise the costs of their rivals and create a potential competitive disadvantage.

Impact of in-app purchase rules on ease of user switching between mobile ecosystems

61. Several developers have suggested that Apple's and Google's payment systems may make it more difficult for users to switch between iOS and Android, due to challenges in transferring subscriptions across mobile

³³ <https://apps.apple.com/gb/app/amazon-music-songs-podcasts/id510855668>

³⁴ <https://www.amazon.co.uk/b?ie=UTF8&node=11741995031>

³⁵ <https://www.apple.com/uk/apple-music/>

³⁶ https://ec.europa.eu/commission/presscorner/detail/en/ip_21_2061

devices. This is because users may find it more difficult to access or manage subscriptions taken out through Apple IAP once they have switched to an Android device (and vice versa).

62. The potential of issues with managing subscriptions across devices to act as a barrier to switching is discussed in detail in Appendix D. The evidence gathered suggests that most users do not perceive managing subscriptions across devices after switching operating system as a barrier to their switching decision. Only a small proportion of respondents to our survey referred to concerns on losing paid-for subscriptions and in-app content as a reason for not switching. Furthermore, the survey evidence suggests that most users are satisfied with the process of managing and accessing paid-for subscriptions when switching.
63. However, given only [10-20]% of iOS users have at least one subscription to a third-party app this might be a greater actual concern for the subset of users with a subscription. Overall, our view is that the requirement to use Apple's and Google's payment systems (rather than those of a third-party) may cause billing issues for users with subscriptions when they switch between iOS and Android devices.

Impact of anti-steering rules

64. As noted above, Apple's and Google's current anti-steering rules restrict app developers from including any information or link within an app to alternative ways for making purchases 'off app' – for example, a link to a webpage containing a payment flow. This is particularly relevant to apps that are available on multiple platforms. Further, Apple's rules also previously restricted developers from using other means (such as email communications) to tell iOS users about alternative payment options, until they were amended in October 2021.
65. Almost all the app developers we contacted who use Apple IAP and have apps available on multiple platforms have confirmed that the anti-steering rules prevent them from advertising to customers within a native app that cheaper or alternative purchase options are available outside the iOS app, such as via the developers' website.
66. As a general point, the ability for users to make informed choices is important in driving effective competition between distribution channels. A possible concern is that the anti-steering rules may mean that users are unaware of alternative, possibly lower cost options for purchasing outside of an app. For example, iOS users may choose to take out subscriptions via Apple IAP

because they are unaware that prices available through alternative channels are cheaper than those offered via Apple IAP.

67. On the other hand, both Apple and Google argue that the anti-steering rules are necessary to prevent developers from deliberately encouraging customers to circumvent their payment systems at the point of purchase, after they have accessed an app and its content through their app stores. In their view, the anti-steering rules are a way of preventing other distribution channels from free riding on their investments. Apple further submits that other platforms, such as Spotify's SoundBetter, eBay and 1stdibs.com, have similar policies.
68. Given that Apple and Google charge a commission for app distribution through the in-app purchases made through their app stores, we consider that anti-steering rules may be justified to the extent that they prevent the circumvention of this commission by app developers at the point of purchase. However, anti-steering rules may be harmful to competition between distribution channels if they go beyond this, for example by restricting developers' communications with customers outside of their apps.

Conclusions on the impact of Apple's and Google's payment system restrictions

69. Many of the potential harms identified above could be avoided if app developers were able to choose third party PSPs and transact directly with users. We consider that there would be viable alternative methods for Apple and Google to collect a commission for their app stores, while also allowing developers to choose alternative in-app payment mechanisms, which do not give rise to the potential harms to competition outlined above.³⁷ It is not clear that these alternatives would be prohibitively costly or challenging to implement and it would appear that both Apple and Google have the ability to effectively enforce against any requirements that they impose through the use of their app review processes.

³⁷ For example, this may include reporting obligations (accompanied by audit rights) or the use of an API that notifies Apple and Google of transactions in real time.